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Docket #(s): W-02500A-10-0382

Exhibit #: A7-A11

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To: Docket Control

Date: November 17, 2011

Re: Goodman Water Company / Rates
W-02500A-10-0382
Volumes I through V, Concluded
July 26 through November 1, 2011

STATUS OF ORIGINAL EXHIBITS

EXHIBITS FILED WITH DOCKET CONTROL

Goodman Water Company (A Exhibits)

1 through 23

James Schoemperlen (JS Exhibits)

8, 9, 21, 41 through 44, 51, 52

Lawrence Wawrzyniak (LW Exhibits)

1 through 6, 8, 9

Staff (S Exhibits)

1 through 4, 7 through 15

Residential Utility Consumer Office (RUCO Exhibits)

1 through 3, 5 through 14

EXHIBITS RETURNED TO PARTIES

James Schoemperlen (JS Exhibits)

1-2	Not utilized
3-4	Not offered [by design or oversight]
4a	Not utilized
4b	Not offered [by design or oversight]
5	Not offered [by design or oversight]
5a	Not utilized
6	Not utilized
7	Not offered [by design or oversight]
10	Not offered [by design or oversight]
12-14	Not offered [by design or oversight]
15	Not utilized
16	Not offered [by design or oversight]
17	Not utilized
20	Not utilized
20b	Not utilized
22-23	Not utilized
25-38	Not utilized
38a	Not utilized
39a-c	Not utilized
40	Not utilized
46a	Not offered [by design or oversight]

Lawrence Wawrzyniak (LW Exhibits)

7 Not utilized

Residential Utility Consumer Office (RUCO Exhibits)

4 Withdrawn

EXHIBITS TO BE PROVIDED

Staff (S Exhibits)

- 5 Marlin Scott's Calculation of the 1,800 customers; to be provided by Staff (see page 600 of transcript)
- 6 Third step of Marlin Scott's calculation from MSJ-1; to be provided by Staff (see page 600 of transcript)

EXHIBITS NOT UTILIZED
Not given to court reporter

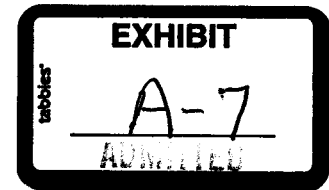
James Schoemperlen (JS Exhibits)

11, 18, 19, 20a, 24, 45, 47-50

Copy to:

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Mr. Robert J. Metli, Goodman Water Co.
Ms. Bridget A. Humphrey, Staff
Mr. Daniel Pozefsky, RUCO
Mr. Lawrence Wawrzyniak, Intervenor
Mr. James Schoemperlen, Intervenor

Exhibit A-7



May 2, 2011
Rebuttal Testimony
Thomas J. Bourassa
Cost of Capital

July 26-28, 2011 ACC Hearing
Goodman Water Company
Docket No. W-02500A-10-0382

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5
6 **BEFORE THE ARIZONA CORPORATION COMMISSION**

7
8 IN THE MATTER OF THE APPLICATION
OF GOODMAN WATER COMPANY, AN
9 ARIZONA CORPORATION, FOR (i) A
10 DETERMINATION OF THE FAIR VALUE
OF ITS UTILITY PLANT AND PROPERTY
11 AND (ii) AN INCREASE IN ITS WATER
RATES AND CHARGES FOR UTILITY
12 SERVICE BASED THEREON.

DOCKET NO. W-02500A-10-0382

13
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16
17 **REBUTTAL TESTIMONY OF**

18 **THOMAS J. BOURASSA**

19 **ON BEHALF OF GOODMAN WATER COMPANY**

20 **(COST OF CAPITAL)**

21
22
23 **May 2, 2011**
24
25
26

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1 I. INTRODUCTION AND PURPOSE OF TESTIMONY.

2 Q1. PLEASE STATE YOUR NAME AND ADDRESS.

3 A1. My name is Thomas J. Bourassa. My business address is 139 W. Wood Drive,
4 Phoenix, Arizona 85029.

5 Q2. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?

6 A2. I am testifying on behalf of the applicant, Goodman Water Company ("GWC" or
7 the "Company").
8

9 Q3. ARE YOU THE SAME THOMAS J. BOURASSA THAT FILED DIRECT
10 TESTIMONY IN THIS DOCKET?

11 A3. Yes, my direct testimony was presented in two volumes. My background
12 information and qualifications are set forth in the rate base and revenue
13 requirement volume of my direct testimony.
14

15 Q4. DID YOU ALSO PREPARE REBUTTAL TESTIMONY ON THOSE ISSUES
16 IN THIS DOCKET?

17 A4. Yes, my rebuttal testimony on rate base, income statement, revenue requirement
18 and rate design is being filed in a separate volume at the same time as this
19 testimony.
20

21 I. SUMMARY OF REBUTTAL TESTIMONY AND THE PROPOSED COST
22 OF CAPITAL FOR THE COMPANY

23 A. Summary of Company's Rebuttal Recommendation

24 Q5. WHAT IS THE PURPOSE OF THIS VOLUME OF YOUR REBUTTAL
25 TESTIMONY?

26 A5. I will provide updates of my cost of capital analysis and recommended rate of

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return using more recent financial data. I also will provide rebuttal as appropriate to the direct testimony of Staff witness Juan Manrique, RUCO witness William Rigsby, and Intervener witness Mr. Schoemperlen.

Q6. HOW HAS THE INDICATED RETURN ON EQUITY CHANGED SINCE THE DIRECT FILING WAS MADE LAST JUNE?

A6. The cost of equity has decreased somewhat, as indicated by the Discounted Cash Flow ("DCF") model and the Capital Asset Pricing Model ("CAPM"). The table below summarizes the results of my updated analysis using those models:

<u>Method</u>	<u>Low</u>	<u>High</u>	<u>Midpoint</u>
Range DCF Constant Growth Estimates	8.7%	9.5%	9.1%
Range of CAPM Estimates	<u>10.2%</u>	<u>13.4%</u>	<u>11.8%</u>
Average of DCF and CAPM midpoint estimates	<u>9.4%</u>	<u>11.4%</u>	<u>10.3%</u>
Financial Risk Adjustment	-0.7%	-0.7%	-0.7%
Specific Company Risk Premium	<u>1.0%</u>	<u>1.0%</u>	<u>1.0%</u>
Indicated Cost of Equity	9.7%	11.7%	10.7%

The schedules containing my updated cost of capital analysis are attached to this rebuttal testimony. Also attached six rebuttal exhibits, which is discussed below.

While my updated cost of capital analysis indicates a 10.7 percent return on equity, I am recommending a cost of equity at the lower end of the range indicated. My recommendation of a 10.2 percent ROE balances my judgment about the degree of financial and business risk associated with an investment in GWC as well as consideration of the current economic environment and the Company's desire to help reduce the impact on rate payers.

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Q7. HAVE YOU UPDATED YOUR COST OF EQUITY ESTIMATE FOR GWC USING DUFF&PHELPS SIZE STUDY DATA?

A7. Yes. Please see Rebuttal Exhibit TJB-COC-RB1. I have included cost of equity estimates for the water sample companies. These estimates have been adjusted for leverage (financial risk) differences between the companies in the size portfolios contained in the study and the water sample companies and GWC. Further, like the Build-up Method cost of equity estimate using the *Morningstar* data, the cost of equity estimates includes a water industry risk premium adjustment.¹ Based on various measures of size the results are as follows²:

<u>Stock Symbol</u>	<u>Company</u>	<u>Cost of Equity</u>
AWR	American States Water Co.	12.26%
WTR	Aqua America	10.39%
CWT	California Water Services Group	12.52%
CTWS	Connecticut Water Services	13.97%
MSEX	Middlesex Water Company	13.39%
SJW	SJW Corp.	13.47%
	Average	12.67%
	Goodman Water Company	18.20%

The updated 12.67 percent average for the water utility sample is in the range of my CAPM estimates. My CAPM estimate of 11.8 percent (mid-point) for the sample water utilities and my overall recommendation of 10.2 percent for GWC is

¹ Note that the risk premium for the water utility industry is negative indicating that water utilities are less risky than the market as a whole.

² See Exhibit TJB-COC-DT1, Table 7.

1 very conservative compared to the analysis based upon the Duff and Phelps Study
2 data. It also shows that my size premium used in my cost of capital analysis of
3 100 basis points is likely far too low and should be much higher. Even accounting
4 for differences in financial risk due to differences in the capital structures, the
5 indicated cost of equity for GWC based on the *Duff & Phelps* study is over 553
6 basis points higher than the sample water companies.

7
8 **Q8. HAVE YOU CHANGED THE ANALYSIS?**

9 A8. Yes. The 2011 Duff and Phelps Study improved the method of computing
10 unlevered risk premia and added smoothed unlevered risk premia. These
11 improvements eliminated a step from direct analysis by allowing me to compute
12 the unlevered risk premia for the sample water utilities and GWC directly rather
13 than first computing the levered risk premia and then unlevering the risk premia.

14
15 **Q9. YOU ACCOUNTED FOR THE FACT THAT THE WATER UTILITY
16 INDUSTRY IS LESS RISKY THAN THE MARKET?**

17 A9. Yes. Based on the industry data, each of above estimates are based on the Duff and
18 Phelps Study is adjusted downward for the water utility industry risk. As shown in
19 Table 5 of Rebuttal Exhibit TJB-COC-RB1, the appropriate downward financial
20 risk adjustment is approximately 300 basis points.

21
22 **Q10. WHAT WAS THE ASSUMED GENERAL MARKET RISK PREMIUM
23 YOU ASSSUMED IN YOUR SIZE STUDY?**

24 A10. 4.4 percent, as shown in Table 5 of Rebuttal Exhibit TJB-COC-RB1. The general
25 market risk premium is based upon equity risk premiums from 1963 to 2010. The
26 long-horizon equity risk premia as determined by Morningstar is 6.7 percent.

1 Morningstar's long-horizon equity risk premium is based upon equity risk premia
2 from 1926 to 2010.

3
4 **Q8. IN YOUR DIRECT TESTMONY YOU ESTIMATED A SIZE PREMIUM**
5 **DIFFERENCE BETWEEN GWC AND THE PUBLICLY TRADED WATER**
6 **UTILITIES OF ONLY 90 BASIS POINTS. WHY IS THE REBUTTAL**
7 **DIFFERENCE MUCH HIGHER?**

8 A8. Because I found a computation error in my direct analysis. When this error is
9 corrected the difference is 486 basis points, not 90 basis points, between GWC and
10 the average of the publicly traded water utilities.

11
12 **Q9. PLEASE SUMMARIZE YOUR RECOMMENDED REBUTTAL COST OF**
13 **DEBT AND EQUITY, AND YOUR RECOMMENDED REBUTTAL RATE**
14 **OF RETURN ON RATE BASE.**

15 A9. The Company's recommended capital structure consists of approximately 18.3
16 percent debt and 81.7 percent common equity as shown on Rebuttal Schedule D-1.
17 Based on my updated cost of capital analysis, I am recommending a cost of equity
18 of 10.2 percent. Based on my 10.2 percent recommended cost of equity and an 8.5
19 percent cost of debt, the Company's weighted average cost of capital ("WACC") is
20 9.89 percent, as shown on Rebuttal Schedule D-1.

21
22 **Q10. WHY IS YOUR COST OF EQUITY RECOMMENDATION LOWER IN**
23 **YOU REBUTTAL THAN IN YOUR DIRECT TESTIMONY?**

24 A10. My lower cost of equity recommendation is the result of a combination of number
25 of factors. These include: 1) lower consensus estimates of long-term interest rates
26

1 which are used in my CAPM estimates; 2) lower estimates of growth for the water
2 utility stocks used in my DCF model; and 3) a lower estimate of the current market
3 risk premium used in my current market risk premium CAPM estimate. These
4 changes have all been impacted by the change in the economic and market
5 conditions and forward-looking expectations of both the economy and the water
6 utility industry.

7
8 **Q11. HOW HAVE ECONOMIC CONDITIONS CHANGED SINCE YOU**
9 **PREPARED YOUR COST OF CAPITAL ANALYSIS IN AUGUST 2010?**

10 A11. During the past seven months, both the economy and the financial markets have
11 improved. The unemployment rate has dropped to 9.5 percent to 9.2 percent. The
12 economy (real GDP) grew by an annualized rate of 3.1 percent in the fourth quarter
13 of 2010 compared to 1.7 percent in the third quarter of 2010. The real GDP growth
14 for the first quarter of 2010 was recently reported by at an annualized rate of only
15 1.8 percent lower than the expected 3.1 percent . For the rest of 2010, the
16 economy is expected to grow at a modest 3.0 percent to 3.5 percent. Economists
17 do continue to express concerns over the federal deficits and the high federal debt,
18 rising oil prices and food prices, and sluggish housing starts and existing home
19 sales, which are all risks to future economic growth.

20
21 **Q12. HOW HAS THE ANALYSTS OUTLOOK FOR THE WATER UTILITY**
22 **INDUSTRY CHANGED SINCE YOU PREPARED YOUR COST OF**
23 **CAPITAL ANALYSIS IN AUGUST 2010?**

24 A12. The outlook for the Water Utility Industry hasn't changed much other than the
25 recent earnings reports were disappointing. *Value Line* continues the theme that
26 despite a more business friendly regulatory environment for the water utility

1 companies, the Water Utility Industry has lost any luster from a growth
2 perspective. Further, *Value Line* believes there are better options for investors
3 looking to add income producing stocks to their portfolios. They suggest that the
4 average Electric Utility stock generates better income. *Value Line* also identifies
5 concerns over infrastructure costs to replace rapidly decaying infrastructures while
6 at the same time most in this group are strapped for cash. The additional shares or
7 debt offerings from financing these costs are likely to increase financial risk and/or
8 dilute shareholder gains moving ahead.³

9
10 **B. Summary of the Staff, RUCO, and Schoemperlen Recommendations.**

11 **Q13. PLEASE SUMMARIZE THE RESPECTIVE RECOMMENDATIONS OF**
12 **STAFF, RUCO, AND SCHOEMPERLEN FOR THE RATE OF RETURN**
13 **ON FAIR VALUE RATE BASE.**

14 **A13.** Staff is recommending a capital structure consisting of 18.4 percent debt and 81.6
15 percent equity.⁴ Staff determined a cost of equity of 9.1 percent based on the
16 average cost of equity produced by its DCF and CAPM models.⁵ Staff did not
17 consider firm size and firm-specific risks in its analysis. Staff also determined the
18 cost of debt to be 8.5 percent.⁶ Based on its 18.4 percent debt and 81.6 percent
19 equity capital structure, Staff determined the WACC for GWC to be 9.0 percent.⁷

20 RUCO also did not consider firm-size and firm-specific risks other than
21 financial risk. RUCO determined its recommended cost of equity of 9.0 percent
22

23 ³ *Value Line*, April 21, 2011.

24 ⁴ See Direct Testimony of Juan C. Manrique ("Manrique Dt.") at 33.

25 ⁵ *Id.*

26 ⁶ *Id.*

⁷ *Id.*

1 based on the results its DCF and CAPM methods.⁸ But, RUCO also recommends a
2 hypothetical capital structure of 40 percent debt and 60 percent equity and a
3 hypothetical cost of debt of 6.13%.⁹ Based on its hypothetical 40 percent debt and
4 60 percent equity capital structure, RUCO determined the WACC for GWC to be
5 7.85 percent.¹⁰ The hypothetical capital structure and hypothetical debt results in an
6 effective overall return on equity of only 6.6 percent. This return is clearly
7 inadequate and does not meet the just and reasonable standards as set out in *Hope*
8 and *Bluefield*.¹¹

9 Mr. Schoemperlen recommends a cost of equity of 8.0 percent.¹² Like
10 RUCO, Mr. Schoemperlen recommends a hypothetical capital structure of 40
11 percent debt and 60 percent equity. Mr. Schoemperlen recommends a cost of debt
12 of 5.82 percent which is comprised of 18.3 percent debt at a cost of 8.5 percent and
13 20.6 percent debt at a cost of 3.68 percent. Based on his hypothetical 40 percent
14 debt and 60 percent equity capital structure, Mr. Schoemperlen determined the
15 WACC for GWC to be 7.16 percent.¹³ The hypothetical capital structure and
16 hypothetical debt results in an effective overall return on equity of only 5.87
17 percent under Mr. Schoemperlen's approach. Like RUCO's low effective return
18 on equity, the 5.87 is clearly inadequate and does not meet the just and reasonable
19 standards as set out in *Hope* and *Bluefield*.

20
21 **Q14. PLEASE SUMMARIZE THE PARTIES RESPECTIVE COST OF EQUITY**

22 ⁸ See Direct Testimony of William A. Rigsby Dt. ("Rigsby Dt.") at 7.

23 ⁹ *Id.*

24 ¹⁰ *Id.*

25 ¹¹ Bourassa Dt. at 13-24.

26 ¹² See Direct Testimony of James Schoemperlen ("Schoemperlen Dt.") at 30.

¹³ *Id.*

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ESTIMATES AND RECOMMENDATIONS.

A14. The respective parties' cost of equity recommendations are summarized below:

<u>Party</u>	<u>DCF</u>	<u>CAPM</u>	<u>Average</u>	<u>Recommended</u>
GWC	9.8%	12.6%	10.7%	10.2%
Staff	9.0%	9.1%	9.1%	9.1%
RUCO	9.2%	5.85%	7.52%	9.0%
Intervener – Schoemperlen				8.0%

Q15. THE COST OF EQUITY RECOMMENDATION OF RUCO DIFFERS SIGNIFICANTLY FROM THE ESTIMATES PRODUCED BY RUCO'S DCF MODEL AND CAPM MODEL. PLEASE COMMENT.

A15. RUCO proposes a cost of capital of 9.0 percent, even though RUCO's models produce an indicated cost of equity of 7.52 percent. This would make sense if RUCO intends to recognize GWC's smaller size, lack of liquidity and other firm-specific risks. The explanation given by Mr. Rigsby for his higher recommendation was that he believed the 9.0 percent would cover any investor concerns regarding any unique business risk associated with GWC.¹⁴

Q16. DESPITE MR. RIGSBY'S RECOMMENDATION OF 9.0 PERCENT, MR. RIGSBY'S PROPOSED A HYPOTHETICAL CAPITAL STRUCTURE FOR GWC WHICH RESULTS IN AN EFFECTIVE RATE OF RETURN ON EQUITY OF 6.6 PERCENT LESS THAN MR. RIGSBY'S COST OF EQUITY ESTIMATE OF 7.52 PERCENT. PLEASE COMMENT.

A16. I will discuss RUCO's effective rate of return on equity of 6.6 percent later in my

¹⁴ Rigsby Dt. at 52.

1 testimony. For now, the average of Mr. Rigsby's DCF and CAPM estimates,
2 which are based on data for large, publicly traded utilities, is 7.52 percent. Even
3 though Mr. Rigsby appears to generous in recommending a 9.0 percent return, Mr.
4 Rigsby is effectively providing a return to the equity holders of GWC that is less
5 than the cost of equity indicated by his models. It is apparent that RUCO has
6 manipulated the Company's capital structure and the cost of debt in order to
7 ultimately provide a 6.6 percent return on equity. This sleight-of-hand should be
8 seen by the Commission as an obvious manipulation of models, consistent with
9 RUCO's "results-oriented" rate making methodologies as noted by this
10 Commission in Decision No. 69164.¹⁵

11
12 **Q17. MR. BOURASSA, YOU AREN'T DISCOURAGING RUCO FROM**
13 **SUGGESTING A HIGHER ROE THAN ITS MODELS INDICATE, ARE**
14 **YOU?**

15 **A17.** Absolutely not, but it is hard to take comfort from RUCO making it seem like they
16 are being generous by offering a higher ROE than their model indicates, when in
17 fact they are simply being confiscatory and manipulating cost of capital theory. It is
18 a "wolf in sheep's clothing" approach. Mr. Rigsby should instead use reasonable
19 comparators, apply the models as they are meant to be applied, and then make his
20 upward adjustments for company specific risk as necessary.

21
22 **Q18. MR. SCHOEMPERLEN HAS RECOMMENDED AN EQUITY RETURN OF**
23 **8.0 PERCENT, HOWEVER, MR. SHOEMPERLEN ALSO PROPOSES A**
24 **HYPOTHETICAL CAPITAL STRUCTURE FOR GWC WHICH RESULTS**

25
26 ¹⁵ *Black Mountain Sewer Corporation*, Decision No. 69164 (Dec. 5, 2006) at 19-20.

1 IN AN EFFECTIVE RATE OF RETURN ON EQUITY OF 5.87 PERCENT;
2 LESS THAN MR. SHOEMPLERLEN'S COST OF EQUITY ESTIMATE OF
3 8.0 PERCENT. PLEASE COMMENT.

4 A18. I will discuss Mr. Schoemperlen's effective rate of return on equity of 5.87 percent
5 later in my testimony. For now I simply observe that, like RUCO, Mr.
6 Schoemperlen's recommendations are results-oriented and should be rejected.

7
8 **Q19. HOW DO THE PARTIES' RECOMMENDATIONS COMPARE TO**
9 **OTHER FORECASTS OF COMMON EQUITY RETURNS?**

10 A19. *Value Line*, a reputable publication that has been used by the Company, Staff, and
11 RUCO cost of capital witnesses, publishes forecasts of returns on common equity
12 for larger publicly traded companies. These water utilities are included in my
13 sample group and in Staff's sample group. *Value Line* (April 22, 2011) projects the
14 following returns on equity for those utilities:

15	American States Water	12.5%
16	Aqua America	13.0%
17	California Water	10.0%
18	SJW Corp.	<u>7.5%</u>
19	Average	10.8%

20 Just as important, the currently authorized ROE's for the sample water utility
21 companies as reported by AUS Utility Reports (April 2011) average 10.14 percent
22 and are as follows:

23		
24	American States Water	10.20%
25	Aqua America	10.33%
26	California Water	10.20%

1	Connecticut Water	9.75%
2	Middlesex Water	10.15%
3	SJW Corp.	<u>10.20%</u>
4	Average	10.14%

5 In addition, all of the sample water utilities are significantly larger than GWC. As
6 I have discussed it is well documented that investment risk increases as the firm
7 size decreases, all else remaining constant.¹⁶ AUS Utility Reports (April 2011)
8 reports the following information for these utilities (in millions of dollars):

9		<u>Net Plant</u>	<u>Revenue</u>
10	American States Water	\$ 855.0	\$ 400.8
11	Aqua America	\$3,469.3	\$ 726.1
12	California Water	\$1,270.2	\$ 460.4
13	Connecticut Water	\$ 344.2	\$ 68.1
14	Middlesex Water	\$ 398.7	\$ 102.7
15	SJW Corp.	<u>\$ 692.4</u>	<u>\$ 215.6</u>
16	Average	\$1,171.6	\$ 329.0

17 The average net plant for these utilities are over 248 times that of GWC and the
18 average total revenues are over 574 times that of GWC. Moreover, most of these
19 utilities operate in jurisdictions such as California and Pennsylvania that use
20 projected or partially projected test years, and authorize surcharges and other cost
21 recovery mechanisms which allow the recovery of increases in costs outside a
22 general rate case. Therefore, not only because of size, for which the empirical data
23 from Duff and Phelps and Ibbotson among others support, these large publicly
24 traded utilities are less risky than GWC.

25
26 ¹⁶ Bourassa Dt. at 39-40.

1 The foregoing data on expected book returns, authorized returns, and
2 measures of size provides an unbiased indication that the Staff, RUCO, and Mr.
3 Schoemperlen recommendations for GWC are simply too low and should not be
4 adopted by the Commission.

5
6 **Q20. THE COMMISSION AUTHORIZED SAHUARITA WATER COMPANY A**
7 **10.3 PERCENT RETURN ON EQUITY IN ITS RECENT RATE CASE.**
8 **PLEASE COMMENT.**

9 A20. The Commission recently authorized Sahuarita Water Company ("SWC") a 10.3
10 percent return on equity in Decision 72117 (February 11, 2011).¹⁷ SWC is nearly 5
11 times the size of GWC in terms of net plant and over 4.4 times the size of GWC in
12 terms of revenues. Further, its rates will be in effect roughly during the same time
13 frame as Goodman Water Company. The Company cannot compete for capital
14 with such low recommendations by the other parties not only with respect to SWC
15 but with respect to the large publicly traded water utility companies.

16
17 **Q21. WERE YOU SURPRIZED BY STAFF'S RECOMMENDATION OF 9.1**
18 **PERCENT?**

19 A21. Yes. Given the recently authorized 10.3 percent return on equity Staff
20 recommended in the Sahuarita Water rate case. I realize that Staff's cost of capital
21 analysis for Sahuarita Water Company was performed back in 2010, but it seemed
22 to me to be very low. Since Staff prepared its cost of capital analysis, Value Line
23 has published new reports for the water utility industry for April 21, 2011. I
24 therefore updated the Staff models to April 21, 2011. Based on the updated Staff

25
26 ¹⁷ Decision 72177 (February 11, 2011) at 30.

1 models, the current indicated cost of equity is at least 9.6 percent.
2

3 **II. REBUTTAL TO STAFF'S COST OF CAPITAL ANALYSIS, TESTIMONY**
4 **AND RECOMMENDATIONS**

5 **A. Updates to Staff's Models**
6

7 **Q22. HAVE YOU UPDATED THE STAFF MODELS AS OF APRIL 22, 2011?**

8 A22. Yes. The indicated cost of equity is 9.6 percent. While I believe that 9.6
9 percent is still too low, the 9.6 percent is 50 basis points higher than Staff's analysis from
10 January 2011. I have attached the results of an updated analysis using the Staff models at
11 Rebuttal Exhibit TJB-COC-RB2.

12
13 **B. Rebuttal to Staff's Criticisms of Analysts' Estimates of Growth**

14 **Q22. MR. MANRIQUE CRITICIZES YOU FOR GIVING MORE WEIGHT TO**
15 **ANALYSTS' ESTIMATES THAN TO HISTORICAL GROWTH RATES.**
16 **HOW DO YOU RESPOND?**

17 A22. First, it is important to note that Mr. Manrique does not reject analyst estimates of
18 growth; he just disagrees with the amount of weight I gave these estimates.¹⁸ Staff
19 gives 50 percent weight to analysts' estimates and 50 percent weight to historical
20 growth data. So the dispute between Mr. Manrique and me comes down to
21 something between 50 percent and my "greater" emphasis. In my direct testimony
22 I explained why a weight greater than 50 percent should be given to analysts'
23 estimates.¹⁹
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25 ¹⁸ Manrique Dt. at 38.

26 ¹⁹ See Direct Testimony of Thomas J. Bourassa – Cost of Capital ("Bourassa COC Dt.") at 29-32.

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Q23. WHAT ABOUT MR. MANRIQUE'S ASSERTION THAT ANALYSTS' ESTIMATES ARE "OVERLY OPTIMISTIC"?

A23. I refer back to my direct testimony at page 28. Gordon, Gordon, and Gould conducted a study and found analyst forecasts of growth outperformed three measures of historical growth. They explain that this result should be expected because analysts would consider historical data in making future projections. In their own formal study, the authors concluded:

We have compared the accuracy of four methods for estimating the growth component of the discounted cash flow yield on a share: past growth in earnings (KEGR), past growth in dividends (KDGR), past retention growth rate (KBRG), and forecasts of growth by security analysts (KFRG). ... For our sample of utility shares, KFRG performed well, with KBRG, KDGR, and KEGR following in that order, and with KEGR a distant fourth....

Before closing, we have three observations to make. First, the superior performance by KFRG should come as no surprise. All four estimates of growth rely upon past data, but in the case of KFRG a larger body of past data is used, filtered through a group of security analysts who adjust for abnormalities that are not considered relevant for future growth....²⁰

As I have testified, to the extent that past results provide useful indications of future growth prospects, analysts' forecasts of growth would already incorporate that information.²¹ In addition, a stock's current price already reflects known historic information on that company, including its past dividend and earnings history.²² If investors rely on analysts' growth rate forecasts, those are the relevant

²⁰ David A. Gordon, Myron J. Gordon and Lawrence I. Gould, "Choice Among Methods of Estimating Share Yield," *Journal of Portfolio Management* (Spring 1989) 50-55.

²¹ Bourassa COC Dt. at 30.

²² *Id.*

1 forecasts for determining equity costs.

2

3 **Q24. HAS MR. MANRIQUE OFFERED ANY EVIDENCE THAT INVESTORS**
4 **DO NOT RELY ON ANALYST ESTIMATES?**

5 A24. No. Nor Does Mr. Manrique does not offer any evidence on the extent investors
6 rely on historical growth or on analyst estimates of future growth. Mr. Manrique
7 offers no quantitative or conceptual argument to rebut the conclusions of Gordon,
8 Gordon, and Gould, and offers no evidence that any of the measures of past growth
9 he has used – historical EPS, historical DPS, historical sustainable growth –
10 provides a better forecast of future growth for utilities than analysts’ estimates of
11 growth. Mr. Manrique is using Staff’s inputs into the DCF model mechanically
12 without considering the reasons for using those inputs. Unfortunately, Staff’s
13 inputs gives less weight to the best estimate of future growth in in an effort to drive
14 down the cost of equity.

15

16 **Q25. DOESN'T MR. MANRIQUE'S TESTIMONY ON PAGE 38 REFERENCING**
17 **PROFESSOR GORDON'S REMARKS AT THE 30TH ANNUAL FORUM OF**
18 **THE SOCIETY OF UTILITY AND REGULATORY FINANCIAL**
19 **ANALYSTS CONTRADICT WHAT THE AUTHORS HAVE**
20 **CONCLUDED?**

21 A25. No. In the quoted remarks, Professor Gordon does not say anything about past
22 growth rates. There is no guidance on which past growth rates (EPS, DPS, or book
23 value) should be used, if any, or what weight past growth rates should be given
24 when estimating the growth rate in the DCF model. That is the issue. Mr.
25 Manrique agrees that “Professor Gordon would temper the typically higher

26

1 analysts' growth rates with the typically lower GNP growth rate."²³ I am sure Mr.
2 Manrique would also agree that I have tempered my estimate by considering past
3 growth rates that are well below the long-term GNP (or GDP) growth rate.²⁴
4

5 **Q26. DOES MR. MANRIQUE ADMIT THAT ANALYST ESTIMATES**
6 **CONSIDER PAST GROWTH RATES?**

7 A26. Yes.²⁵ He also states that investors rely "to some extent on past growth as well."²⁶
8 That is true, but he does not demonstrate the extent to which investors rely on past
9 growth rates – he simply states that they are considered. Again, if analysts'
10 estimates already consider past growth, then Staff vastly overstates the impact of
11 past growth rates in its DCF model. It is, basically, a type of "double-counting"
12 that produces extremely low results.
13

14 **Q27. DO YOU HAVE FURTHER REBUTTAL TO MR. MANRIQUE'S**
15 **"OVERLY OPTIMISTIC" TESTIMONY?**

16 A27. Yes. For my second specific response to the assertion that analysts' estimates are
17 "overly optimistic," I point to *Value Line*. *Value Line* is in the business of selling
18 information to investors, and all of the parties have relied on *Value Line* in their
19 cost of equity estimates. *Value Line* has every incentive to provide accurate
20 forecasts to encourage investors to continue to subscribe to its publications. *Value*
21 *Line* does not sell stock and has no incentive to bias upward its buy/sell
22 recommendations and estimates of future growth. *Zacks* and *Morningstar* provide

23 ²³ Manrique Dt. at 39.

24 ²⁴ See Rebuttal Schedule D.4-4, column 5. The average of historical growth rates is 4.45%. The
long-term GDP growth rate is 6.6% as shown on Staff's Schedule JCM-9.

25 ²⁵ Manrique at 38.

26 ²⁶ *Id.*

1 similar investment services. Neither markets stock – they sell information, which
2 won't be purchased if it is inaccurate or biased. *Yahoo Finance* is a free service,
3 but it does not earn commissions from the sales of stock. In sum, Mr. Manrique's
4 testimony is simply wrong. None of these services has any reason to provide
5 inaccurate information to its users. But, more importantly, whether the estimates
6 by *Value Line*, *Morningstar*, *Zacks*, or *Yahoo Finance* turn out to be inaccurate is
7 irrelevant. The importance of analyst estimates is that they reflect widely held
8 investor expectations.

9
10 **Q28. DO YOU HAVE ANY FURTHER COMMENTS ON THE TOPIC OF**
11 **STAFF'S DCF GROWTH ESTIMATES, MR. BOURASSA?**

12 A28. Yes. I am attaching a copy of document filed with the public utilities commission
13 in a 2005 California rate case at Rebuttal Exhibit TJB-COC-RB3. This document
14 was prepared by Mr. Gary Hayes, a witness for San Diego and Electric Company.
15 It lists a number of sources that further contradict Mr. Manrique's claim that
16 analysts typically make upwardly biased forecasts of growth.

17 Additionally, to further support the use of analyst forecasts of growth, Dr.
18 Morin states:

19 Because of the dominance of institutional investors and their
20 influence on individual investors, analysts' forecasts of long-
21 run growth rates provide a sound basis for estimating required
22 returns. Financial analysts exert a strong influence on the
23 expectations of many investors who do not possess the
24 resources to make their own forecasts, that is, they are a cause
25 of g. *The accuracy of these forecasts in the sense of whether*
26 *they turn out to be correct is not at issue here, as long as they*
reflect widely held expectations. As long as the forecasts are
typical and/or influential in that they are consistent with
current stock price levels, they are relevant. The use of
analysts' forecasts in the DCF model is sometimes denounced
on the grounds that it is difficult to forecast earnings and
dividends for only one year, let alone for longer time periods.
This objection is unfounded, however, because it is present

1 *investor expectations that are being priced; it is the consensus*
2 *forecast that is embedded in price and therefore, in required*
3 *return, and not the future as it will turn out to be.*²⁷

4 Dr. Myron Gordon, the same Professor Gordon Mr. Manrique quotes in his
5 testimony as the “father” of the standard regulatory version of the DCF model
6 utilized by Mr. Manrique and myself in the instant case, has also recognized the
7 significance of analysts’ forecasts of growth in EPS in a speech he gave in March
8 1990 before the Institute for Quantitative Research and Finance. He said:

9 We have seen that earnings and growth estimates by security
10 analysts were found by Malkiel and Cragg to be superior to
11 data obtained from financial statements for the explanation of
12 variation in price among common stocks. ... *Estimates by*
13 *security analysts available from sources such as IBES are*
14 *far superior to the data available to Malkiel and Cragg.* Eq
15 (7) is not as elegant as Eq (4), but it has a good deal more
16 intuitive appeal. It says that investors buy earnings, but what
17 they will pay for a dollar of earnings increases with the extent
18 to which the earnings are reflected in the dividend or in
19 appreciation through growth.²⁸ (*emphasis added*)

20 Professor Gordon recognized that total return is largely affected by the terminal
21 price, which is mostly affected by earnings (hence the common use of
22 price/earnings multiples in evaluating stock prices).

23 As noted by Dr. Gordon, studies performed by Cragg and Malkiel
24 demonstrate that analysts’ forecasts are superior to historical growth rate
25 extrapolations. These studies show that:

26 Efficient market hypotheses suggest that valuation should reflect the
information available to investors. Insofar as analysts’ forecasts are
more precise than other types we should therefore expect their
differences from other measures to be reflected in the market. It is

²⁷ Roger A. Morin. *New Regulatory Finance* (2006) 298 (emphasis added).

²⁸ Gordon, Myron J., “Pricing of Common Stocks”, Seminar (March 27, 1990) at 12-13.

1 therefore noteworthy that our regression results do support the
2 hypothesis that analysts' forecasts are needed even when calculated
3 growth rates are available. As we noted when we described the data,
4 *security analysts do not use simple mechanical methods to obtain*
5 *their evaluations of companies.* The growth-rate figures we
6 obtained were distilled from careful examination of all aspects of the
7 companies' records, evaluation of contingencies to which they might
8 be subject, and whatever information about their prospects the
9 analysts could glean from the companies themselves from other
10 sources. *It is therefore notable that the results of their efforts are*
11 *found to be so much more relevant to the valuation than the*
12 *various simpler and more "objective" alternatives that we tried.*²⁹
13 *(emphasis added)*

14 Vander Weide and Carleton further note:

15 [O]ur studies affirm the superiority of analyst's forecasts over simple
16 historical growth extrapolations in the stock price formation process.
17 Indirectly, this finding lends support to the use of valuation models
18 whose input includes expected growth rates.³⁰

19 **Q29. THAT'S A LOT OF EXPERT COMMENTARY, BUT WHAT DOES IT ALL**
20 **MEAN IN THIS CASE?**

21 A29. It means that the level of accuracy of analysts' forecasts is an after-the-fact
22 evaluation with little relevance to the issues at hand here. What really matters is
23 that analysts' forecasts strongly influence investors and hence the market prices
24 they are willing to pay for stocks. Therefore, they should play a prominent role in
25 a proper equity cost determination. Staff, however, has failed to give these
26 forecasts sufficient weight in its analysis. Even Mr. Dreman, who Mr. Manrique
relies on³¹, admits that:

27 ²⁹ John G. Cragg and Burton G. Malkiel, "Expectations and the Structure of Share Prices"
28 *National Bureau of Economic Research* (University of Chicago Press, 1982) Chapter 4.

29 ³⁰ James H. Vander Weide and Willard T. Carleton, "Investor Growth Expectations: Analysts vs.
30 History" (*The Journal of Portfolio Management*, Spring 1988) 78-82.

31 ³¹ Manrique Dt. at 36.

1 We have also seen that in spite of high error rates being
2 recognized for decades, neither analysts nor investors who
3 religiously depend on them have altered their methods in any
4 way.³²

4 This is my point. If investors rely on analysts' growth rate forecasts, those
5 forecasts should be used to determine the cost of equity, proportionate to investor
6 reliance, and not in a manner that depresses the import of that reliance. Analysts'
7 growth rates influence the prices investors will pay for stocks and thus impact the
8 dividend yields. The dividend yields change until the sum of the dividend yield
9 plus the growth rate equals investors' perceived cost of equity. Had the growth
10 forecasts been lower – as Mr. Manrique suggests they should be – the stock prices
11 would be lower and dividend yields would be higher, but there would not
12 necessarily be any difference in the ultimate estimate of the cost of equity.

13
14
15 **Q30. HOW DO YOU RESPOND TO MR. MANRIQUE'S REFERENCE TO**
16 **PROFESSOR JEREMY SIEGEL?**

17 A30. Mr. Manrique's reliance on the quote from Jeremy Siegel that "dividends and not
18 earnings are meaningful" is puzzling.³³ The DCF model assumes, among other
19 things, that a firm will have a stable dividend payout policy and a stable return on
20 the book value of its stock. Thus, it is assumed that the stock's price, its book
21 value, dividends paid, and earnings all grow at the same rate. While it is
22 appropriate to make such assumptions for forecasting purposes, these assumptions
23 are frequently violated when examining historical data. As it turns out, the

24
25 ³² David Dreman, *Contrarian Investment Strategies: The Next Generation* 115-116 (Simon &
Schuster 1998).

26 ³³ Manrique Dt. at 39-40.

1 historical growth in the stock price, book value, dividends, and earnings for the
2 water utility industry has not been the same.³⁴ Estimates of long-term growth rates
3 should take this into account. Furthermore, I have not used earnings in my DCF
4 model; I used earnings growth as a proxy for growth. Earnings generate the funds
5 used to pay dividends. Growth in earnings provides more cash flows from which
6 dividends are paid. As a consequence, earnings growth is obviously extremely
7 important to investors, and is therefore an entirely appropriate proxy for growth in
8 the DCF model.

9 Of course, I would also note that I don't disagree with Professor Siegel that
10 the price of a stock is always equal to the present value of all future cash flows. In
11 that regard, I am sure Professor Siegel would agree that future cash flows would
12 not only include dividends but the future sales price of the stock. I would also add
13 that an investment in the stock of a publicly traded utility is much more liquid than
14 an investment in GWC. If investors are unhappy with the return provided by a
15 publicly traded stock they can sell the stock within minutes. Whereas, an
16 investment in GWC does not provide the same level of liquidity. This lack of
17 liquidity creates additional investment risk.

18
19 **Q31. DO YOU HAVE ANY FURTHER RESPONSE TO MR. MANRIQUE**
20 **REGARDING THE ISSUE OF USING ANALYSTS' FORECASTS AND**
21 **THE APPROPRIATE WEIGHT THEY SHOULD BE GIVEN?**

22 **A31.** Yes, I have one more comment. I find Mr. Manrique's reliance on a quotation
23 from Dr. Burton G. Malkiel is somewhat confusing. Dr. Malkiel is the Chemical
24 Bank Chairman's Professor of Economics at Princeton University and author of the

25
26 ³⁴ See Rebuttal Schedule D.4-3 and Rebuttal Schedule D.4-4.

1 widely read national bestseller book on investing entitled, "A Random Walk Down
2 Wall Street." Mr. Manrique quotes Dr. Malkiel's apparent criticism of analysts'
3 estimates. Yet, in November 2002, Professor Malkiel affirmed his belief in the
4 superiority of analysts' earnings forecasts when he testified before the South
5 Carolina PUC:

6
7 With all the publicity given to tainted analysts' forecasts and
8 investigations instituted by the New York Attorney General,
9 the National Association of Securities Dealers, and the
10 Securities & Exchange Commission, I believe the upward
11 bias that existed in the late 1990s has indeed diminished. In
12 summary, I believe that current analysts' forecasts are more
13 reliable than they were during the late 1990s. *Therefore,*
14 *analysts' forecasts remain the proper tool to use in*
15 *performing a Gordon Model DCF analysis.*³⁵ (emphasis
16 added)

17 I believe that Dr. Malkiel's testimony should eliminate any disagreement on this
18 issue.

19 **C. Firm Specific Risk**

20 **Q32. IS MR. MANRIQUE CORRECT THAT PRIOR COMMISSION**
21 **DECISIONS DID NOT FIND A FIRM SIZE PHENOMENON FOR**
22 **REGULATED UTILITIES?**

23 **A32.** Yes, Mr. Manrique is correct, although the Commission's failure to recognize that
24 small firms are riskier than large firms - despite an abundance of empirical
25 financial evidence indicating otherwise - is another reason why it is more risky for
26 smaller utilities to do business in Arizona. Frankly, I am astonished that the
Commission does not recognize what the rest of the financial world already does.

³⁵ See Rebuttal testimony of Dr. Burton G. Malkiel, South Carolina Electric and Gas Co., Docket No. 2002-223-E, pp. 16-17 (emphasis added).

1 This head-in-the-sand mentality is both frustrating and disturbing. Putting that
2 aside, there are many reasons why smaller utilities are more risk than larger
3 utilities. I have discussed these reasons extensively in my direct testimony and will
4 not repeat that testimony here.³⁶ The simple fact is that a rational investor is not
5 going to view an equity investment in GWC as having the same risk as the
6 purchase of publicly traded stock in a substantially larger utility such as Aqua
7 America, American States Water or California Water Service.

8 The bottom line is that if the differences in risk between small utilities like
9 GWC and the large, publicly traded water utilities used to estimate the cost of
10 equity are ignored, GWC's equity cost will be understated and unreasonable.

11
12 **Q33. IS FIRM SIZE A UNIQUE RISK?**

13 A33. No. The firm size is a systematic risk factor.³⁷ We know that based on empirical
14 financial data that the firm size phenomenon is real. Moreover, we know that the
15 capital asset pricing model is incomplete and does not fully account for the higher
16 returns on small company stocks. In other words, the higher risks associated with
17 smaller firms is not fully accounted for by beta.

18 With respect to the relationship between firm size and return, *Morningstar* states³⁸:

19
20 One of the most remarkable discoveries of modern finance is
21 that of a relationship between firm size and return. The
22 relationship cuts across the entire size spectrum but is most
23 evident among smaller companies which have higher returns
24 than larger ones. Many studies have looked at the effect of
25 firm size and return...

24 ³⁶ Bourassa COC Dt. at 15-21.

25 ³⁷ Shannon P. Pratt and Roger J. Grabowski. *Cost of Capital: Applications and Examples, Fourth Edition*. John Wiley and Sons, 2010. p. 56.

26 ³⁸ Morningstar, *Ibbotson SBBI 2010 Valuation Yearbook*, at 85.

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With respect to the CAPM, *Morningstar* states³⁹:

The firm size phenomenon is remarkable in several ways. First, the greater risk of small stocks does not, in the context of the capital asset pricing model (CAPM), fully account for their higher returns over the long term. In the CAPM only systematic, or beta risk, is rewarded; small company stocks have had returns in excess of those implied by their betas.

Q34. DO INVESTORS CONSIDER SMALL FIRM RISKS AS WELL AS REGULATORY RISKS?

A34. Of course. Contrary to Mr. Manrique's assertions, the investment related to such factors as firm size and Arizona's regulatory environment are important to investors. These risks are not captured by the market data of the water utility proxy group Staff uses to estimate the cost of equity for GWC. None of the utilities in Staff's water proxy group are of comparable size to GWC.⁴⁰ In fact, GWC is but a small fraction of the size of the water utilities in Staff's proxy group. And none of the water utilities in Staff's water proxy group operate exclusively in Arizona and are subject to this jurisdiction's regulatory requirements and policies.⁴¹

Q35. HOW DO YOU RESPOND TO MR. MANRIQUE'S ASSERTION THAT THE ARIZONA REGULATORY ENVIRONMENT IS NO LESS FAVORABLE THAN THE REGULATORY ENVIRONMENTS FACED BY THE SAMPLE UTILITIES?

A35. I disagree with him. Mr. Manrique testifies that the regulatory environment in Arizona has many "attractive attributes," including the ability to seek accounting

³⁹ *Morningstar* at 89.

⁴⁰ Bourassa COC Dt. at 17.

⁴¹ *Id.* at 16-22.

1 orders, the recognition of known and measurable changes, the wide use of hook-up
2 fees, and regulatory responsiveness, such as the approval of arsenic recovery
3 mechanisms and arsenic remedial surcharge mechanisms.⁴² I will address each of
4 the alleged "attractive attributes" Mr. Manrique has identified.

5
6 **Q36. LET'S START WITH ACCOUNTING ORDERS. ARE ACCOUNTING**
7 **ORDERS AN "ATTRACTIVE ATTRIBUTE" OF REGULATION IN**
8 **ARIZONA?**

9 A36. No. I have no reason to believe that regulatory mechanisms similar to accounting
10 orders are not available to any of the sample water utilities in the regulatory
11 jurisdictions in which they operate. Therefore, accounting orders do not make
12 Arizona attractive to investors relative to other investments. Besides, the nature of
13 accounting orders limits their attractiveness.

14
15 **Q37. WHAT DO YOU MEAN?**

16 A37. In Arizona, accounting orders are narrowly tailored for specific circumstances and
17 generally only allow utilities to track certain, specified costs. No rate recovery is
18 authorized or assured by such orders. Rather, accounting orders issued by this
19 Commission postpone consideration of any cost recovery until a future rate case.

20
21 **Q38. WHAT ABOUT THE RECOGNITION OF "KNOWN AND**
22 **MEASURABLE" CHANGES?**

23 A38. Again, this is not a regulatory attribute unique to Arizona. In fact, I am not aware
24 of any jurisdictions that utilize an historic test year where adjustments based on
25

26 ⁴² Manrique Dt. at 41.

1 known and measurable changes cannot be made to either the test year rate base or
2 to test year revenue and expenses in order to make the test year a more "normal"
3 representation of the costs of service during the period in which the rates will be in
4 effect. Arguably, the failure to allow such changes would be unlawful.

5 In contrast, California, in which three of the six sample water companies
6 (American States, California Water, and SJW Corp.) primarily operate, uses future
7 test years in setting rates. Under that state's rate making system, future expenses
8 can be increased to reflect expected changes including projected inflation, revenues
9 can be adjusted to reflect expected future erosion of revenues from water
10 conservation, and future expected capital investment can be recognized in rate
11 base. This regulatory approach is more attractive to investors than the simple
12 recognition of known and measurable changes to an historical test year.

13 Moreover, California allows adjuster mechanisms that permit utilities to
14 recover increases in purchased power and purchased water costs due to increases
15 rates charged by power and water providers. More recently, in connection with
16 implementing conservation-oriented rate structures, California has authorized water
17 revenue adjustment mechanisms to be implemented in order to offset revenue
18 erosion due to conservation. In some cases, California allows utilities to file for
19 adjustment mechanisms when unexpected significant capital investment has to be
20 made. By allowing revenues to change between rate cases to match known
21 increases in investment and operating expenses, utilities are given a reasonable
22 chance to earn their authorized return.

23 In contrast, adjuster mechanisms for purchased water and purchased power
24 have been uniformly opposed by Staff over the past decade, and they have denied
25 by the Commission.⁴³ And, I don't believe that I have ever seen a revenue

26 ⁴³ See, e.g. *Chaparral City Water Company*, Decision 68176 (Sept. 30, 2005); *Arizona Water*

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conservation adjustment adopted by the Commission for an Arizona water utility with inverted-tier rates designed to encourage water conservation.

Q39. DIDN'T THE COMMISSION PROVIDE ARSENIC COST RECOVERY MECHANISMS IN THE PAST?

A39. To some extent. But generally these mechanisms have only for allowed recovery of debt service costs not capital and depreciation. That was beneficial, particularly for utilities that could not cash flow the debt service without this mechanism in place. However, these mechanisms did not include recovery of increases in operating and maintenance costs associated with the arsenic facilities. And, the Commission has made it clear that such mechanisms were special cases intended to address extraordinary circumstances, and their approval did not establish a precedent for adjuster mechanisms in general. Thus, while approval of the ACRMs was certainly helpful to the water utilities that obtained them, they do not make Arizona's regulatory environment more attractive to investors than other jurisdictions, which routinely authorize cost recovery mechanisms.

Q40. ARE THERE ANY OTHER "ATTRACTIVE ATTRIBUTES" THAT MAKE OTHER JURISDICTIONS ATTRACTIVE RELATIVE TO ARIZONA?

A40. Yes. For instance, as I discussed in my direct testimony, in many states in which Aqua America operates, utilities are permitted to implement surcharges to recover additional depreciation and capital costs outside the context of a rate case.⁴⁴ Aqua America also operates in jurisdictions that allow utilities to implement rates before

Company (Eastern Group), Decision No. 66849 (March 19, 2004).

⁴⁴ Bourassa COC Dt at 19-20.

1 a final decision in a rate case.⁴⁵ In addition, in certain states in which Aqua
2 America operates, utilities are allowed surcharges to reflect changes in certain costs
3 until such time as the costs are incorporated into base rates.⁴⁶ Pennsylvania allows
4 water utilities to collect a distribution system improvement charge ("DISC") for the
5 replacement of mains, storage tanks and other distribution system infrastructure.
6 Similarly, Middlesex operates utilities in Delaware, which also allows for the
7 implementation of a DISC for the recovery of depreciation and capital costs outside
8 the context of a rate case. Delaware also allows plant expected to be constructed
9 within three years from the end of the test period to be included in rate base. These
10 attributes are attractive to investors, and none of them are available in Arizona.

11
12 **Q41. HOW DO YOU RESPOND TO MR. MANRIQUE'S TESTIMONY ON**
13 **PAGE 41 THAT INVESTORS CONTINUE TO ACQUIRE ARIZONA**
14 **UTILITIES AND INVEST CAPITAL IN ARIZONA SO THERE IS NO**
15 **REASON TO BELIEVE CAPITAL INVESTED IN ARIZONA IS AT A**
16 **DISADVANTAGE?**

17 A41. I am aware of several Arizona utilities⁴⁷ who have expressed concerns over their
18 ability to attract capital in Arizona. Two prominent publicly traded companies
19 have abandoned Arizona; American Water Works recently sold Arizona-American
20 Water Company and American States Water recently sold Chaparral City Water
21 Company. The concerns over capital attraction are directly related to the returns
22 provided and the regulatory environment in Arizona. But that isn't the point. We

23
24 ⁴⁵ *Id.*

25 ⁴⁶ *Id.*

26 ⁴⁷ e.g. Arizona-American Water Company, Arizona Water Company, American States Water
Company, Algonquin Power & Utilities Corp.

1 are attempting to develop a fair and reasonable return on invested capital and,
2 ultimately, rate of return on rate base. The Commission has broad discretion, and
3 may choose to use historic test years with limited out-of-period adjustments, refuse
4 to approve adjuster mechanisms for water and wastewater utilities, and impose
5 inverted-tier water rates without considering the impact on the utility's revenues.
6 But if it does choose to adopt these policies, it cannot also ignore the impact on
7 investment risk. The criteria established by the Supreme Court in decisions such as
8 *Bluefield Water Works* apply in Arizona too.

9
10 **Q42. ARE YOU AWARE OF ANY STUDIES THAT SUPPORT YOUR**
11 **TESTIMONY THAT ARIZONA IS NOT AN ATTRACTIVE**
12 **REGULATORY ENVIRONMENT?**

13 A42. Yes. Standard and Poor's, for example, issued a report in November 2008 that
14 ranked Arizona among the least credit supportive regulatory environments.⁴⁸ A
15 more recent example is the Janney Capital Markets ("Janney") ranking of water
16 utility regulation and valuation which places Arizona at the bottom of the list. A
17 copy of the Janney report is attached at Rebuttal Exhibit TJB-COC-RB4. Investors
18 do recognize the overall effect of the unfavorable regulatory environment here in
19 Arizona.

20
21 **Q43. IS THERE A WAY TO PRECISELY QUANTIFY THE EFFECT OF THESE**
22 **ADDITIONAL RISKS (OTHER THAN FIRM SIZE) ON THE RETURN**
23 **REQUIRED BY AN INVESTOR?**

24 A43. No. But that does not justify ignoring the differences between the sample utilities

25 ⁴⁸ Assessing U.S. Utility Regulatory Environments, Rating Directs, Standard and Poor's
26 (November 7, 2008).

1 and GWC, as Staff proposes.

2
3 **Q44. HAVE YOU USED A COMPANY SPECIFIC RISK PREMIUM IN YOUR**
4 **COST OF CAPITAL ANALYSIS?**

5 A44. No. I have only considered firm-size which is not a unique risk but a risk that is
6 reflected in the market for small firms.⁴⁹

7
8 **Q45. PLEASE RESPOND TO MR. MANRIQUE'S TESTIMONY ON PAGE 42**
9 **THAT REGULATORY RISK IS A FIRM-SPECIFIC RISK AND**
10 **INVESTORS CANNOT EXPECT TO BE COMPENSATED FOR FIRM-**
11 **SPECIFIC RISKS.**

12 A45. As I already testified, firm size is not a firm-specific risk. I will also say that
13 business risk, which is priced by the market, is also not firm-specific. We develop
14 proxy groups for the water utility industry based on this premise. But, to assume
15 the business risk of the large publicly traded water utilities is the same as that for
16 GWC is nonsense. Never-the-less Mr. Manrique's assertion is undermined by the
17 fact that the *Bluefield* standard requires the return on equity be commensurate with
18 returns on enterprises with comparable risks (the "comparable earning standard").
19 The impact of the various factors on investment risk that I have discussed
20 throughout my testimony, such as small size, construction risk, regulatory risk, lack
21 of diversification, small customer base, liquidity risk, etc., are factors which make
22 GWC more risky and therefore not comparable to the large publicly traded water
23 companies.

24 Mr. Manrique does not dispute the data contained in Morningstar or Duff

25
26 ⁴⁹ Pratt at 56.

1 and Phelps supporting small company risk premiums.⁵⁰ It also stands to reason that
2 GWC would have higher beta than the sample water companies.⁵¹ Mr. Manrique
3 admits that smaller companies tend to have higher betas than larger companies due
4 to larger variations in earnings and thus making smaller companies more risky.⁵²
5 Yet, Mr. Manrique blindly accepts that the average beta of the much larger publicly
6 traded water utilities as the beta for GWC.

7
8 **Q46. ON PAGE 42 OF HIS TESTIMONY MR. MANRIQUE STATES THAT**
9 **THERE IS NO ACCEPTED ANALYSIS THAT DEMONSTRATES THAT**
10 **UTILITIES ARE SUBJECT TO THE SAME SIZE DEPENDENT BETAS AS**
11 **THE MARKET. PLEASE RESPOND.**

12 A46. I find it ironic that Mr. Manrique essentially admits that the Staff's often cited
13 Annie Wong study⁵³ does not prove that a firm size effect does not exist in the
14 regulated utility industry. It would appear that the Commission's reliance in the
15 Black Mountain Sewer Company rate case⁵⁴ on Staff's unequivocal assertion that
16 the firm size phenomenon does not exist for regulated utilities was unwarranted.⁵⁵
17 That said, Mr. Manrique's dismissal of the fact that smaller companies are more
18 risky than larger companies with respect to utilities defies the empirical financial
19 evidence and rational investor behavior. In Mr. Manrique's world, the evidence
20 and rational investor behavior cease to exist for utility investments. Risks that

21 ⁵⁰ Small company risk premiums are the risk premiums not explained by the higher betas for
22 small companies.

23 ⁵¹ Bourassa COC Dt. at 31-32.

24 ⁵² Manrique Dt. at 42.

25 ⁵³ Wong, Annie. "Utility Stocks and the Size Effect: An Empirical Analysis." *Journal of the*
26 *Midwest Finance Association*. 1993. Pp. 95-101.

⁵⁴ See Docket No. SW-02361A-08-0609.

⁵⁵ Manrique Dt. at 42-43.

1 would obviously be considered by any rational investor such as liquidity risk and
2 other risks of small business investments are simply ignored by Mr. Manrique.
3 Would a rational investor really regard an equity investment in GWC as presenting
4 less risk than an equity investment in Aqua America or in Connecticut Water
5 Services, which have AA- and A bond ratings, respectively? The answer is a
6 resounding "no".
7

8 **Q47. PLEASE RESPOND TO MR. MANRIQUE'S TESTIMONY ON PAGE 40**
9 **REGARDING YOUR USE OF A 5-YEAR TIME PERIOD TO MEASURE**
10 **HISTORICAL GROWTH RATES.**

11 A47. Mr. Manrique criticizes my use of 5 years of historical data to estimate growth. I
12 can provide similar criticism of Mr. Manrique's decision to use 10 years of
13 historical data. A 10-year period includes one period of economic expansion and
14 two periods of economic recession. I believe a 5-year historical time period is more
15 appropriate because it includes one recent period of economic expansion and one
16 period of economic recession. Regardless of the time period, however, past growth
17 rates can be misleading because past growth rates may reflect changes in relevant
18 variables that may not be expected to continue in the future. Value Line reports
19 both 5- and 10-year historical growth in earnings, dividends, book value, cash flow,
20 and revenues. Long-term analysts' forecasts are reported for 5-year periods. This
21 information would not be reported unless it represented value to investors, whether
22 for informational, forecasting, or analytical purposes.
23

24 **Q46. WOULD IT HAVE MATTERED IF YOU USED 10-YEAR HISTORICAL**
25 **DATA IN YOUR ANALYSIS?**

26 A46. For all practical purposes, my 5-year and 10-year estimates of growth as well as

1 my overall cost of equity in the instant case would have been about the same.

2
3 **III. REBUTTAL TO RUCO'S COST OF CAPITAL ANALYSIS, TESTIMONY**
4 **AND RECOMMENDATIONS**

5 **A. Proxies Used to Develop Cost of Equity**

6 **Q47. IS MR. RIGSBY'S SAMPLE GROUP DIFFERENT THAN THE**
7 **COMPANY'S AND STAFF'S SAMPLE?**

8 A47. Yes. Mr. Rigsby uses three publicly traded water utilities. He used the three
9 largest water utilities out of the six water utilities that I have used, the same ones
10 Staff typically uses when performing its cost of capital analysis.

11
12 **Q48. DO YOU HAVE ANY CONCERNS REAGRDNING MR. RIGSBY'S WATER**
13 **PROXY GROUP?**

14 A48. Yes. It is limited to only 3 companies (American States Water, Aqua America, and
15 California Water Company). Mr. Rigsby ignores the three other water utilities
16 used by both Staff and myself (Connecticut Water, Middlesex Water, and SJW
17 Corp.). More than three water companies are followed by Value Line. Mr. Rigsby
18 states that he does not use these companies because Value Line does not provide
19 the same type of forward-looking information (i.e. long-term estimates of return on
20 common equity, and share growth).⁵⁶

21
22 **Q49. DOES THIS PREVENT THESE COMPANIES FROM BEING USED IN A**
23 **PROXY GROUP?**

24 A49. Clearly, no. Both Staff and the Company utilize these companies in their respective
25

26 ⁵⁶ Rigsby Dt. at 20.

1 proxy groups. Despite the lack of some forward-looking information, beta's and
2 historical information are available from Value Line. Further, forward looking
3 estimates for earnings are available from Zacks, Morningstar, and Yahoo Finance.
4

5 **Q50. ARE THERE CURRENTLY FORWARD LOOKING ESTIMATES OF**
6 **LONG-TERM RETURNS ON COMMON EQUITY AND SHARE GROWTH**
7 **FOR SJW CORP. FROM VALUE LINE?**

8 A50. Yes.⁵⁷
9

10 **Q51. DOES MR. RIGSBY ALSO USE GAS DISTRIBUTION COMPANIES TO**
11 **DEVELOP HIS ESTIMATE OF THE COST OF EQUITY?**

12 A51. Yes, this helps to overcome his small water utility sample. Mr. Rigsby uses 9
13 natural gas companies. However, the sample gas utilities he uses are less risky and
14 therefore not comparable to water utilities. His sample water companies, for
15 example, have an average beta of 0.72, while his sample gas companies have an
16 average beta of just 0.66.⁵⁸ That means that the equity cost for the water utility
17 sample is greater than the gas utilities sample, based on their relative riskiness.
18 Even though the water utility sample has more systematic risk than the gas utility
19 sample, Mr. Rigsby assumes that the gas utilities and water utility have the same
20 systematic risk and are directly comparable. They are not.
21

22 **Q52. CAN GAS UTILITIES BE USED TO ESTIMATE GWC'S COST OF**
23 **EQUITY?**

24 A52. Yes, but it is only fair and proper to use gas companies if the results produced by

25 ⁵⁷ See *Value Line* Ratings and Reports, April 22, 2011.

26 ⁵⁸ See RUCO Schedule WAR-7, page 1 of 2.

1 the DCF and CAPM models are adjusted upward to reflect the water utilities'
2 additional risk. Mr. Rigsby made no such adjustment.

3
4 **Q53. HAS THIS ISSUE EVER COME UP BEFORE?**

5 A53. Yes. In several prior cases, water utilities presented evidence of the cost of equity
6 using financial data for a similar group of publicly traded gas companies, which at
7 that time had a higher average beta than the water utility sample. In rejecting this
8 evidence, the Commission adopted Staff's argument that because the water utility
9 sample had a lower average beta than the gas utility sample, the cost of equity for
10 the water utility should be lower.⁵⁹

11 For example, in Arizona Water Company's Eastern Group rate case, Staff
12 determined, based on an analysis using the CAPM, that the cost of equity for the
13 sample gas utility group was approximately 100 basis points higher than the water
14 utility sample group based on the average betas for each industry proxy.⁶⁰ The
15 water utility sample had an average beta of 0.59, while the gas utility sample had
16 an average beta of 0.69. Therefore, Staff's cost of capital witness in that case, Mr.
17 Joel Reiker, testified that its estimate of the gas utilities' cost of equity "would
18 require a *significant downward adjustment*" to make the two industry groups
19 comparable in terms of market risk.⁶¹ Here, in contrast, a significant upward
20 adjustment to the gas utility sample's average cost of equity is necessary to make
21 the gas utility sample comparable to RUCO's water utility sample.

22
23 ⁵⁹ *Arizona Water Company (Eastern Group)*, Decision No. 66849 (March 19, 2004) at 21; *see also*
Arizona-American Water Company Decision No. 67093 (June 30, 2004) at 27.

24 ⁶⁰ Staff estimated that the cost of equity for the gas utilities was 10.4% using the CAPM, while the cost of
25 equity for the water utilities was 9.4% – a difference of 100 basis points. *See* Direct Testimony of Joel M.
Reiker, Docket No. W-01445A-02-0619 (filed July 8, 2003), Sch. JMR-7, Sch. JMR- 18.

26 ⁶¹ Direct Testimony of Joel M. Reiker, Docket No. W-01445A-02-0619 (filed July 8, 2003) at 26 (*italics*
original). *See also* Decision No. 66849 at 21.

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Q54. CAN YOU QUANTIFY THE ADJUSTMENT NEEDED IN THIS CASE TO MAKE THE GAS UTILITIES SAMPLE COMPARABLE TO THE WATER UTILITIES SAMPLE?

A54. Yes. By averaging the results of his equity cost estimate for the water utility sample with his equity cost estimate for the gas utility sample, Mr. Rigsby has depressed the cost of equity estimates. For example, the average of Mr. Rigsby's CAPM estimates for the water companies and gas companies are 6.0 percent and 5.7 percent, respectively. This is a 30 basis point difference, which reflects the relative riskiness of the two sample groups.

Q55. HOW WOULD YOU FACTOR IN THE DIFFERENCE IN RISK INDICATED BY THE AVERAGE BETA OF EACH UTILITY GROUP IF YOU WERE TO USE THE GAS UTILITIES?

A55. By using the CAPM, as Staff did in the Arizona Water Company case. As I explained above, the difference between the results produced by Mr. Rigsby's CAPM model is 30 basis points. Because of the method used by Mr. Rigsby to implement the CAPM, however, 30 basis points understates the required adjustment to properly reflect the gas utilities' lower investment risk. If my method and inputs are used instead, similar to the method used in the aforementioned Arizona Water Eastern Group case, the risk differential is 110 basis points, calculated as follows:

	<u>Rf</u>	+	<u>Beta</u>	X	<u>Rp</u>	=	<u>K</u>
Historic MRP – Gas	5.1%		0.66		6.7%		9.5%
Current MRP – Gas	5.1%		0.66		10.9%		<u>12.3%</u>
Average Gas Utility Sample							<u>10.9%</u>

Average Water Utility Sample ⁶²	11.8%
Difference/Risk	1.1%
Adjustment	

Given this difference, it is clearly inappropriate to simply average the gas utilities' equity cost with the water utilities' equity cost, as Mr. Rigsby has done. This error assumes that an average gas utility has the same investment risk as an average water utility, which is simply not the case at the present time. As a result, Mr. Rigsby's use of gas utilities depresses the cost of equity for GWC.

Q56. ARE THERE ANY OTHER INDICATIONS, BASED ON RUCO'S GAS UTILITY SAMPLE, THAT GWC'S COST OF EQUITY IS CONSIDERABLY HIGHER THAN THE RECOMMENDATIONS OF RUCO AND STAFF?

A56. Yes. The Commission recently authorized a 10.0 percent return on equity for Southwest Gas Corporation.⁶³ In April 2010, the Commission adopted a 9.5 percent return in equity in the rate case for UNS Gas.⁶⁴ So, recent decisions on cost of equity for gas companies have averaged 9.75 percent. The water utility sample group has significantly more market risk than the gas utility sample group, and therefore has a higher cost of equity. The indicated cost of equity for GWC, based on the Commission's recent decision for Southwest Gas and for UNS Gas, is 10.85 percent (9.75% + 1.1%, as shown above). That equity cost is substantially higher than the cost of equity produced by Mr. Rigsby's models, 7.54 percent, or the 9.0 percent equity return he has recommended for GWC. Again, it is apparent

⁶² See Rebuttal Schedule D-4.12.

⁶³ Decision No. 70665 (Dec. 24, 2008).

⁶⁴ Decision No. 71263 (April 14, 2010).

1 that something is wrong with the methods and inputs Mr. Rigsby has used in this
2 case.

3 **B. Criticisms of RUCO's Implementation of the CAPM**

4 **Q57. WHAT OTHER CONCERNS DO YOU HAVE WITH RESPECT TO MR.**
5 **RIGBY'S CAPM ANALYSIS?**

6 A57. I have five other concerns with respect to Mr. Rigsby's CAPM analysis. First,
7 Mr. Rigsby employs a geometric average in calculating the market risk premium in
8 his CAPM. His choice to use geometric average depresses his cost of equity
9 estimate downward. As various finance experts have explained, an arithmetic
10 average is the correct approach to use in estimating the cost of capital.⁶⁵ In fact,
11 the CAPM was developed on the premise of expected returns being averages and
12 risk being measured with the standard deviation. As Dr. Morin states:

13 Since the [standard deviation] is estimated around the
14 arithmetic average, and not the geometric average, it is logical
15 to stay with arithmetic averages to estimate the market risk
16 premium. In fact, annual returns are uncorrelated over time,
17 and the objective is to estimate the market risk premium for
18 the next year, the arithmetic average is the best unbiased
19 estimate of the premium.⁶⁶

20 My attachment at Rebuttal Exhibit TJB-COC-RB5 includes an excerpt from Dr.
21 Roger Morin's textbook on regulatory finance, which provides a detailed
22 discussion of this issue. Dr. Morin cites several academic studies that explain what
23 the arithmetic average is and why it's the correct average to adopt when relying on
24 past data. The conclusion of the financial experts is that while the geometric mean
25 is useful in comparing what happened in the past, it should not be used to

26 ⁶⁵ Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance Chapter 7 (7th ed. 2003);
Morin, *supra* at 156-157; Ibbotson *SBBI 2009 Valuation Yearbook* 56-58.

⁶⁶ *Morin, supra*, at 156-157.

1 determine estimates of expected future returns, future growth rates, or market risk
2 premiums.

3
4 **Q58. WHAT IS YOUR SECOND CONCERN?**

5 A58. Second, Mr. Rigsby incorrectly uses the U.S. Treasury total returns rather than
6 income returns. As I explained in my direct testimony, the market risk premium is
7 calculated by subtracting the risk-free rate from the market return.⁶⁷ As shown on
8 Schedule WAR-7, at page 2, attached to Mr. Rigsby's direct testimony, the total
9 return used to calculate the market risk premium was 6.3 percent (11.8% total
10 return of large company stocks minus 5.5% total return of intermediate government
11 bonds). This was the average total return on an intermediate-term Treasury (1926-
12 2011) as published in the *2010 Ibbotson SBBI Valuation Edition Yearbook* (Table
13 2-1). By contrast, the average income return for an intermediate-term Treasury
14 security was 4.7 percent and the market risk premium using this figure would be
15 7.1 percent (11.8% total return of large company stocks minus 4.7% income return
16 of intermediate government bonds) – 70 basis points higher.

17 The reason that an average income return must be used, rather than the
18 average total return, is very simple. The CAPM is a risk premium methodology
19 that is based on the premise that an investor expects to earn a return equal to the
20 return on a risk-free investment, plus a premium for assuming additional risk that is
21 proportional to the security's market risk (i.e., its beta). U.S. Treasuries are
22 commonly used as a proxy for the risk-free rate because they are backed by the
23 United States government, effectively eliminating default risk. The income return
24 is the portion of the total return that results from the bond's periodic cash flow, i.e.,

25
26 ⁶⁷ Bourassa Dt. at 30.

1 the interest payments. The income return provides an unbiased estimate of the
2 riskless rate of return because an investor can hold the Treasury security to
3 maturity and receive fixed interest payments with no capital loss or capital gain. If
4 the total return on a Treasury security is used instead, additional risk is injected
5 into the CAPM estimate, which is inconsistent with treating the security as a
6 riskless asset.

7 As explained by *Ibbotson*:

8 Another point to keep in mind when calculating the equity
9 risk premium is that the income return on the appropriate-
10 horizon Treasury security, rather than the total return, is used
11 in the calculation. The total return is comprised of three
12 return components: the income return, the capital appreciation
13 return, and the reinvestment return. The income return is
14 defined as the portion of the total return that results from a
15 periodic cash flow or, in this case, the bond coupon payment.
16 The capital appreciation return results from the price change
17 of a bond over a specific period. Bond prices generally
18 change in reaction to unexpected fluctuations in yields.
19 Reinvestment return is the return on a given month's
20 investment income when reinvested into the same asset class
21 in the subsequent months of the year. The income return is
22 thus used in the estimation of the equity risk premium
23 because it represents the truly riskless portion of the return.⁶⁸

17 As a consequence of incorrectly using U.S. Treasury total returns as well as
18 geometric average, RUCO's CAPM estimate dramatically understates the cost of
19 equity for the water utility sample. If an intermediate-term Treasury security is
20 used as the proxy for the risk-free rate of return, the market risk premium would
21 increase from 6.3 percent to 7.1 percent using the conceptually correct arithmetic
22 averages.

23 **Q59. WHAT IS YOUR THIRD CONCERN IN THIS AREA?**

24 A59. Mr. Rigsby incorrectly uses a 5-year U.S. Treasury rate as his risk-free rate. This
25

26 ⁶⁸ *Ibbotson* at 55.

1 depresses Mr. Rigsby's CAPM cost of equity estimates. Use of a short-term
2 treasury rate is conceptually incorrect. As Dr. Morin states:

3
4 At the conceptual level, because common stock is a long-term
5 investment and because cash flows to investors in the form of
6 dividends last indefinitely, the yield on very long-term
7 government bonds, namely the 30-year Treasury bonds, is the
8 best measure of the risk free rate for use in the CAPM and
9 risk premium methods. The expected stock return is based
10 upon long-term cash flows, regardless of an individual's
11 holding period. Utility asset investments generally have long-
12 term useful lives and should be correspondingly matched with
13 longer-term maturity financing instruments. Moreover, short-
14 term Treasury bill yields reflect the impact of factors different
15 from those influencing the yields on longer term securities
16 such as common stock.⁶⁹

17 Currently, the difference in yields between a 5-year U.S. Treasury and a 30-year
18 U.S Treasury is over 230 basis points.

19 **Q60. WHAT ARE THE FACTORS THAT MAKE USE OF SHORTER TERM**
20 **RATES DIFFERENT?**

21 A60. According to Dr. Morin, "short-term rates are volatile, fluctuate widely, and are
22 subject to more random disturbances than long-term rates leading to volatile and
23 unreliable equity returns."⁷⁰ He goes on to state that "on grounds of stability and
24 consistency, the yields on long-term Treasury bonds match more closely with
25 expected common stock returns."⁷¹ For example, the Federal Reserve has
26 announced that it will continue to hold interest rates down to support economic
 recovery, resulting in extremely low short- and intermediate-term Treasury rates --

⁶⁹ Morin at 151-152.

⁷⁰ *Id.* at 152.

⁷¹ *Id.*

1 precisely the type of manipulation that Dr. Morin warns of in his text on regulatory
2 finance, quoted above.⁷²

3
4 **Q61. WHAT IS THE FOURTH PROBLEM WITH MR. RIGSBY'S CAPM**
5 **ESTIMATES?**

6 A61. Mr. Rigsby has ignored current market risk. This Commission has consistently
7 approved the use of a current market risk premium in implementing the CAPM in
8 water and wastewater utility rate cases. For example, in the Chaparral City's 2005
9 rate case,⁷³ the Commission adopted Staff's recommended cost of equity, which
10 used an historic market risk premium and a current market risk premium in
11 implementing the CAPM.⁷⁴ In this case, Mr. Manrique has developed his CAPM
12 estimate using a current market risk premium.⁷⁵ Ignoring current market risk,
13 RUCO has relied exclusively on incorrectly calculated historic market risk
14 premiums.

15 Changes in the current market risk premium have been a significant factor in
16 the cost of equity authorized by the Commission for water and wastewater utilities.
17 In Arizona Water Company's Eastern Group case, filed in 2002, Staff computed a
18 current market risk premium of 13.1 percent in its CAPM estimate, and relied on
19 that market risk premium in estimating a cost of equity of 9.2 percent, using the
20 same six sample water utilities.⁷⁶ At that time, the country was in the midst of a
21 recession, and, according to Staff, interest rates had fallen to the lowest levels since

22 ⁷² See, e.g., Blue Chip Financial Forecasts, April 1, 2011.

23 ⁷³ *Chaparral City Water Company*, Decision No. 68176 (September 30, 2005).

24 ⁷⁴ See Direct Testimony of Alejandro Ramirez, Docket No. W-02113A-04-0616 (March 22, 2005);
Surrebuttal Testimony of Alejandro Ramirez, Docket No. W-02113A-04-0616 (May 5, 2005).

25 ⁷⁵ Manrique Dt. at 29, Sch. JMC-3.

26 ⁷⁶ Decision No. 66849 at 21 (March 19, 2004); see also Direct Testimony of Joel M. Reiker, Docket No.
W-01445A-02-0619, 24-25 (July 8, 2003).

1 the 1950s.⁷⁷ Moreover, the average beta of Staff's water utility sample group was
2 only 0.59 at that time, indicating that investment risk for the water utility industry
3 was low relative to the market.⁷⁸

4 Two years later, Arizona Water Company filed a rate case for its Western
5 Group systems. Interest rates had increased from the levels in 2003, and the
6 average beta of the Staff's sample utilities had increased as well, indicating greater
7 investment risk. However, Staff's cost of equity estimate was virtually identical to
8 the Eastern Group case, 9.1 percent.⁷⁹ The primary reason was that Staff's current
9 market risk premium had dropped from 13.1 percent to 7.8 percent.⁸⁰ The
10 Commission, in adopting Staff's CAPM estimate, relied on this change, explaining
11 that "while interest rates have gone up, the cost of equity for the market as a whole
12 has decreased, while the cost of equity for utilities has remained relatively
13 stable."⁸¹

14 Even more recently, in Black Mountain Sewer Corporation's rate case, the
15 Commission relied on a further decline in the current market risk premium to
16 support Staff's recommended 9.6 percent cost of equity.⁸² In that case, interest
17 rates and the average beta of the sample group were even higher than 2003 levels,
18 and while the result produced by Staff's models was higher, the increase was not as
19 large as would be expected.⁸³ The reason was that the current market risk premium

20 ⁷⁷ See Direct Testimony of Joel M. Reiker, Docket No. W-01445A-02-0619, 5 (July 8, 2003).

21 ⁷⁸ See Direct Testimony of Joel M. Reiker, Docket No. W-01445A-02-0619, 23 (July 8, 2003); see also
Decision No. 66849 at 20.

22 ⁷⁹ Surrebuttal Testimony of Alejandro Ramirez, Docket No. W-01445A-04-0650, Sch. AXR-8 (May 25,
23 2005).

24 ⁸⁰ *Id.*

25 ⁸¹ *Arizona Water Co. (Western Group)*, Decision No. 68302 (Nov. 14, 2005).

26 ⁸² *Black Mountain Sewer Corp.*, Decision No. 69164 (Dec. 5, 2006).

⁸³ In the Black Mountain case, the intermediate-term Treasury used by Staff in its CAPM was 4.8 percent,
while the average beta of Staff's sample group was 0.74. Surrebuttal Testimony of Pedro M. Chaves,

1 had decreased to only 5.7 percent, reducing the result produced by the CAPM.
2 Thus, while interest rates increased and the investment risk of the water utility
3 sample had increased, Staff explained that those increases were offset by a decline
4 in the current market risk premium, indicating that the overall risk of the market
5 had declined.⁸⁴

6 As these decisions show, not only has the Commission consistently
7 considered the current market risk premium, but changes in the current market risk
8 premium have had a major impact on the cost of equity, offsetting changes in
9 interest rates and water utility betas in recent cases. Even Mr. Rigsby
10 acknowledged the importance of considering current market conditions in
11 determining the cost of equity:

12
13 Consideration of the economic environment is necessary
14 because trends in interest rates, present and projected levels
15 of inflation, and the overall state of the U.S. economy
16 determine the rate of return that investors earn on their
17 invested funds. Each of these factors represent potential risks
18 that must be weighed when estimating the cost of equity
19 capital for a regulated utility and are, most often, the same
20 factors considered by individuals who are also investing in
21 non-regulated entities.⁸⁵

22
23 In light of the current volatility in the financial markets, the failure to
24 consider current market risk grossly distorts the CAPM result. As previously
25 stated, Staff normally utilizes the current market risk premium in its CAPM
26

23 Docket No. SW-02361A-05-0657, Sch. PMC-2 (May 4, 2006). In Arizona Water's Eastern Group case, in
24 contrast, the intermediate-term Treasury used by Staff in its CAPM was 3.3 percent, while the average
25 beta of Staff's sample group was 0.59. Direct Testimony of Joel M. Reiker, Docket No. W-01445A-02-
26 0619, Sch. JMR-7 (July 8, 2003).

⁸⁴ *Black Mountain Sewer Corp.*, Decision No. 69164 at 25-26 (Dec. 5, 2006).

⁸⁵ Rigsby Dt. at 38-39.

1 estimate, and Mr. Manrique has done so again in this case. Consequently, RUCO's
2 use of two historic market risk premiums (one of which is conceptually wrong for
3 the reasons given previously) without considering the impact of current market risk
4 on investor expectations invalidates RUCO's cost of equity estimate.

5
6 **Q62. WHAT IS YOUR FIFTH CONCERN WITH MR. RIGSBY'S CAPM**
7 **ANALYSIS?**

8 A62. Fifth, and perhaps most importantly, two out of the four of Mr. Rigsby's CAPM
9 estimates (one for water and two for the gas utilities), as well as his overall CAPM
10 result, are below the current cost of Baa investment grade bonds. The current cost
11 of investment grade bonds is 6.0 percent.⁸⁶ The following are the results of
12 Mr. Rigsby's CAPM as shown on WAR-1, page 3 of 3:

13
14 Geometric mean CAPM estimate - water companies 5.35%
15 Arithmetic mean CAPM estimate - water companies 6.64%
16 Geometric mean CAPM estimate - gas companies 5.10%
17 Arithmetic mean CAPM estimate - gas companies 6.29%
18 Overall CAPM result 5.85%

19 A simple reality check should have caused Mr. Rigsby to question his inputs to the
20 CAPM. This further illustrates that RUCO's methods are not only biased
21 downward, but should not be used.

22
23 **C. Criticisms of RUCO's Use of Hypothetical Capital Structure and**
24 **Hypothetical Cost of Debt**

25
26 ⁸⁶ Federal Reserve, April 21, 2011.

1 Q63. WHY DOES MR. RIGSBY RECOMMEND A HYPOTHETICAL CAPITAL
2 STRUCTURE?

3 A63. Mr. Rigsby explains that he recommends a hypothetical capital structure in cases
4 where the utility has a capital structure containing 100 percent equity or does not
5 have third party debt with a financial institution or bondholders that rate payers
6 could benefit from.⁸⁷

7
8 Q64. DOES THIS EXPLANATION COMPORT WITH YOUR PAST
9 EXPERIENCE WITH RUCO.

10 A64. Not entirely. While I believe that Mr. Rigsby has proposed a hypothetical capital
11 structure in some instances where there was a capital structure consisting of 100
12 percent equity, I do not recall any case where Mr. Rigsby used the excuse of the
13 lack of third part debt. In a recent rate case for Rio Rico Utilities ("RRUI"), Mr.
14 Rigsby explained that his hypothetical capital structure was intended to account for
15 RRUI's lower financial risk as compared to his sample of publicly traded water
16 companies.⁸⁸ In that case, RRUI had a 100% equity capital structure. Mr. Rigsby
17 also explained in the Litchfield Park Service Company ("LPSCo") rate case that
18 absent any debt, he typically recommends a hypothetical capital structure. In an
19 exchange with LPSCo's counsel during hearing he provided the following response
20 regarding a 40 percent debt and 60 percent equity hypothetical capital structure:

21
22 Q. Do you agree with Mr. Sorensen that such a capital structure is an
23 appropriate capital structure for a water or sewer utility in Arizona?
24

25 ⁸⁷ Rigsby Dt at 51.

26 ⁸⁸ See Direct Testimony of William A. Rigsby, Docket No. WS-02676A-09-0257, at 51.

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A. Well, absent any debt, typically what I will recommend is a 60/40 capital structure, as I did in Gold Canyon. Okay? And the reason for that is it provides the company with a little bit additional equity capital in the structure in order to help to alleviate any investor or any investor perceptions of business risk or risk that is unique to that particular company. In this case, Litchfield Park, as I said, does have actual debt. And so *when I was making my decisions on capital structure and so forth, typically what I do is, if a company actually has legitimate debt, what I will do is I will typically go ahead and recommend that actual capital structure.* Okay? Typically I don't recommend anything, *I don't recommend any hypothetical capital structures unless we are looking at extremes, in other words, capital structures that are comprised entirely of common equity or, on the other hand, entirely debt.*⁸⁹ [emphasis added]

So, Mr. Rigsby's cited reason for his hypothetical capital structure as being the lack of third party debt is new to me. Mr. Rigsby does not dispute there is actual debt in the capital structure of GWC. He apparently does not like the fact that the Company's lender is an affiliate, E.C. Development.⁹⁰ It seems to me that Mr. Rigsby's real problem is with the interest rate on this debt, not the actual debt itself.⁹¹

⁸⁹ Hearing Transcript- Litchfield Park Service Company, Docket No. SW-01428A-09-0103, etc. Vol. V, pages 975-976.
⁹⁰ Rigsby Dt. at 53-54.
⁹¹ Rigsby Dt. at 55.

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Q65. DID RUCO RECOMMEND A 40 PERCENT DEBT 60 PERCENT EQUITY HYPOTHETICAL CAPITAL STRUCTURE FOR LPSCO IN LPSCO'S RECENT RATE CASE?

A65. No.⁹² LPSCo had about the same level of debt and equity as does GWC at about 18 percent debt and 82 percent equity.⁹³

Q66. WOULDN'T THE SOLUTION TO THE ISSUE WITH RESPECT TO AFFILIATE DEBT BE TO SIMPLY RECOMMEND AN INTEREST RATE THAT IS MORE AGREEABLE TO RUCO?

A66. Yes. That would have made the most sense. GWC already has debt in its capital structure and, while I disagree with Mr. Rigsby's recommend interest rate, he has never-the-less recommended an interest rate he believes is appropriate. In the end there would be no need for Mr. Rigsby to recommended a hypothetical capital structure since, as he admits, he typically recommends a hypothetical capital structure when there is no debt. In other words, when there is actual debt in the capital structure there is no need for a hypothetical capital structure. Instead, Mr. Rigsby recommends a hypothetical capital structure which effectively reclassifies 21 percent of the Company's equity capital to low cost debt. It is apparent that Mr. Rigsby seeks to lower the recommended return to the lowest possible result, not the most appropriate result from an objective analytical perspective. In reality, Mr. Rigsby's hypothetical capital structure in and of itself increases the risk to investors, and no amount of manipulation of the percentages of debt and equity can

⁹² See Direct Testimony of William A. Rigsby in Docket No. , Docket No. SW-01428A-09-0103, etc, at 52.

⁹³ *Id.*

1 compensate for that risk.

2

3 **Q67. PLEASE EXPLAIN WHAT YOU MEAN, MR. BOURASSA.**

4 A67. Put bluntly, the use of a hypothetical capital structure in this instance is
5 confiscatory. By recommending a capital structure that assumes a higher amount
6 of debt for rate making than actually exists, Mr. Rigsby effectively turns the
7 investor's equity investment into debt and then provides a return on that equity
8 investment equal to only 6.13 percent (Mr. Rigsby's recommended cost of debt).

9 The lower return on equity investment resulting from the shift of equity
10 capital to debt produces a 6.6 percent effective return on equity.

11

12 **Q68. PLEASE ELABORATE ON HOW YOU DETERMINED THE EFFECTIVE**
13 **6.6 PERCENT RETURN ON EQUITY.**

14 A68. RUCO recommends an operating income of \$135,754.⁹⁴ Deducting RUCO's
15 interest expense of \$42,378⁹⁵ produces a net income of \$93,378 (\$135,754 -
16 \$42,378). RUCO also recommends a rate base of \$1,729,190.⁹⁶ The actual
17 proportion of equity that is funding RUCO's rate base is \$ \$1,412,748 (\$1,729,190
18 rate base x 81.7% actual equity in GWC's capital structure). The effective equity
19 return is therefore 6.6 percent (\$93,378 / \$1,412,748).

20

21 **Q69. PLEASE CONTINUE.**

22 A69. In short, it is no secret why RUCO proposes a hypothetical capital structure.
23 RUCO seek to obtain a dramatically lower return on equity; far lower than the 7.54

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⁹⁴ See RUCO Schedule TJC-1, page 1 of 2.

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⁹⁵ See RUCO Schedule TJC-1, page 2 of 2.

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⁹⁶ See RUCO Schedule TJC-1, page 1 of 2.

1 percent indicated by Mr. Rigsby's DCF and CAPM and his recommendation of 9.0
2 percent. For this reason, Mr. Rigsby's recommended cost of equity of 9.0 percent
3 is pure fiction.

4
5 **Q70. DOESN'T GWC HAVE LOWER FINANCIAL RISK COMPARED TO THE**
6 **PUBLICLY TRADED UTILITIES BY HAVING LESS DEBT IN ITS**
7 **ACTUAL CAPITAL STRUCTURE?**

8 A70. Yes. In fact, I have accounted for this in my analysis.⁹⁷ I have also accounted for
9 size risk which effectively offsets the lower financial risk of GWC. In any case,
10 based upon an effective equity return of 6.6 percent, the implied RUCO downward
11 financial risk adjustment is 240 basis points (9.0% minus 6.6%). I computed a
12 financial risk adjustment using the Hamada method of 70 basis points.⁹⁸ Given
13 RUCO models, the RUCO financial risk adjustment would be less than 70 basis
14 points using the Hamada method. By any measure, a 240 basis point financial risk
15 adjustment is excessive and unwarranted at to GWC.

16
17 **Q71. ARE DOWNWARD ADJUSTMENTS TO THE COST OF EQUITY FOR**
18 **FINANCIAL RISK COMMON?**

19 A71. No. Whether an adjustment is made often depends on whether a reasonable return
20 on equity is afforded to the utility based on consideration of all of the evidence in
21 the case. In some cases, even though the Hamada formula indicates a higher
22 downward adjustment, the adjustment to the cost of equity is less than what may be
23 indicated by the Hamada formula. In the Bella Vista Water Company case,⁹⁹ for

24 ⁹⁷ Bourassa COC Dt. at 41.

25 ⁹⁸ See Rebuttal Schedule D-4.13.

26 ⁹⁹ Decision No. 65350 (November 1, 2002).

1 example, the Hamada formula indicated an 89 basis point reduction to the cost of
2 equity which would have resulted in an 8.4 percent return on equity. However,
3 Staff did not recommend an 8.4 percent cost of equity, but rather recommended the
4 low end of its cost of equity range of 9.1 percent to 9.5 percent.¹⁰⁰ The
5 Commission ultimately adopted Staff's recommended 9.1 percent equity return.¹⁰¹
6 In the prior Black Mountain Sewer Company rate case,¹⁰² Staff's cost of equity
7 analysis produced an indicated cost of equity of 9.60 percent (before adjusting for
8 financial risk). Staff's calculated financial risk adjustment using the Hamada
9 formula was 50 basis points, but Staff did not recommend a downward adjustment
10 in that case.¹⁰³ Ultimately, the Commission adopted a 9.6 percent return on
11 equity.¹⁰⁴

12 In the instant case, Staff is not recommending a downward financial risk
13 adjustment.

14
15 **Q72. WHY NOT?**

16 A72. I am not sure. Staff has testified in the past for small companies that do not have
17 access to the capital markets. In those situations Staff does not recommend a
18 financial risk adjustment.

19 Whatever the rationale for Staff's recommendation in the instant case, the
20 bottom line is that adjustments for financial risk must be used cautiously.
21 Consideration must always be given to whether the result is fair and reasonable

22 ¹⁰⁰ See Direct Testimony of William S. Reiker, Docket No. W-02465A-01-0776. 26-27 (April 29, 2002).

23 ¹⁰¹ See Decision No. 65350 at 23.

24 ¹⁰² See Decision No. 69164 (December 5, 2006).

25 ¹⁰³ See Surrebuttal Testimony of Pedro M. Chaves, Docket SW-02361A-05-0657, Sch. PMC-2 (May 4, 2006).

26 ¹⁰⁴ Decision No. 69164 at 27.

1 under the circumstances. One reason for this is that cost of capital analyses are
2 based on financial data large, publicly traded water companies, which are not
3 directly comparable to relatively small water and sewer utilities in Arizona.¹⁰⁵
4 GWC also has more zero cost capital in its capitalization than the large publicly
5 traded water utilities. All things being equal, the higher proportion of zero cost
6 capital results in a lower capital cost per dollar of plant investment being reflected
7 in rate base. This, in turn, results in less rate impact which ultimately benefits rate
8 payers. But, as I testified in my rate base testimony, the higher proportions of zero
9 cost capital do not come without risk to the Company.¹⁰⁶ There are also
10 considerations regarding comparable earnings requirements set forth in the *Hope*
11 and *Bluefield* cases.
12

13 **Q73. CAN YOU DEMONSTRATE THAT GWC HAS A LESS RATE IMPACT**
14 **THAN THE PUBLICLY TRADED UTILITIES DUE TO ITS HIGHER**
15 **PROPORTION OF ZERO COST CAPITAL IN ITS TOTAL**
16 **CAPITALIZATION?**

17 **A73.** Yes. I have illustrated this in a schedule attached hereto as Rebuttal Exhibit TJB-
18 COC-RB6. To make things more relevant to the instant case, I assumed my
19 recommended debt cost of 8.5 percent and equity cost 10.2 percent for GWC and
20 for my sample water utilities I assumed a debt cost equal to the average debt cost of
21 the sample water utilities, or 5.75 percent, and an equity cost equal to the average
22 currently authorized returns of the sample water utilities, or 10.1 percent. As
23 shown the impact on the revenue requirement from recognized rate base
24 investment for my sample water utilities is \$9.92 while that for GWC is \$8.99 –

25 ¹⁰⁵ Bourassa Dt. at 31-32.

26 ¹⁰⁶ Bourassa Rb. at 24-25.

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The cost is 10 percent more for the sample water utilities than for GWC even at higher debt cost and higher equity cost for GWC. In order for the cost per \$100 of rate base to be the same for both the water sample group and GWC, the cost of equity would need to be increased to about 11.5 percent (keeping the debt cost at 8.5%). Thus, equity costs below 11.5 percent will have a benefit to GWC rate payers over that of the sample water group even at the higher debt cost for GWC. This makes sense because based upon total capitalization, the water utility sample group has a overall weighted cost of 6.12 percent while the overall weighted cost for GWC is much lower at 5.63 percent. It should be quite clear by now that despite GWC's lower proportion of debt in the capital structure and its higher debt cost, rate payers ultimately benefit from GWC's capitalization mix. The Commission should not countenance manipulation of the return or the revenue requirement through the use of hypothetical capital structures and hypothetical debt, as RUCO proposes.

Q74. WILL GOODMAN WATER COMPANY HAVE SUFFICIENT EARNINGS TO PAY DIVIDENDS AT A LEVEL COMPARABLE TO THE PUBLICLY TRADED WATER UTILITY COMPANIES?

A74. No. In fact, in order for the Company to pay dividends the payout ratio will need to be above 100 percent of earnings. The computations are shown below:

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<u>Perspective 1 – Based Upon Rate Base</u>		
[1]	Total Rate Base Investment per RUCO	\$ 1,729,190
[2]	Actual % Equity per D-1	81.73%
[3]	Book Value of Equity [1] x[2]	\$ 1,413,267
[4]	Expected Dividend Yield per D-4.7	3.53%
[5]	Current market-to-book ratio publicly traded water utilities	1.90
[6]	Book Value Dividend Yield [4] x [5]	6.71%
[7]	Cash Dividend [3] x[6]	\$ 94,788
[8]	RUCO Recommended Operating Income	\$ 135,754
[9]	Less: Annual Interest Expense from D-2	(\$43,133)
[10]	Earnings Available for Dividends [8] - [9]	\$ 92,621
[11]	Less: Dividends [7]	\$ (94,788)
[12]	Retained Earnings [10] - [11]	\$ (2,167)
[13]	Pay-out ratio [11]/[10]	102%

A payout ratio of over 100 percent is not sustainable.

Q75. IN REALITY ISN'T IT MUCH WORSE THAN THIS FROM THE PERSPECTIVE THAT THE TOTAL INVESTED CAPITAL OF GWC IS NEARLY 2.3 MILLION; AND, DOESN'T A UTILITY HAVE TO SUPPORT THAT CAPITAL WITH ITS EARNINGS?

A75. Yes and yes. Let me address the first part of the question. The total invested equity capital in GWC is \$2,269,765 as shown on Rebuttal Schedule D-1. Because of RUCO's recommendation to disallow plant investment in the instant case, there is a large and significant discrepancy between rate base and invested capital. With respect to the second part of the question, all invested capital must be supported as each dollar of capital has an earnings requirement. Whether each dollar is recognized in rate base it never-the-less has capital costs and these costs must be absorbed by earnings from existing investments. When there is a discrepancy

1 between invested capital and rate base, there exists the real possibility of severe
 2 losses. As Dr. Morin states:

3
 4 The totality of a company's capital has to be
 5 serviced... Therefore, the allowed rate of return on common
 6 equity is applicable to the total common equity component of
 7 the total investments of the utility company. Anything less
 8 than that has the direct and immediate effect of reducing
 9 common equity return below the level needed to meet the
 10 capital attraction and the comparable earnings standards
 11 articulated in the Hope and Bluefield decisions. To apply an
 12 allowed rate of return to a rate base that does not maintain the
 13 integrity of that capital does not enable the company to attract
 14 capital.¹⁰⁷

15 A second perspective reflecting invested equity capital and using computations
 16 similar to the previous analysis shows that the Company will have a pay-out ratio
 17 of over 160 percent of earnings. These computations are shown below:

<u>Perspective 2 - Based Upon Equity Investment</u>		
[1]	Total Capital per D-1	\$ 2,777,216
[2]	% Equity per D-1	81.73%
[3]	Book Value of Equity [1] x[2]	\$ 2,269,819
[4]	Expected Dividend Yield per D-4.8	3.53%
[5]	Current market-to-book ratio publicly traded water utilities	1.90
[6]	Book Value Dividend Yield [4] x [5]	6.71%
[7]	Cash Dividend [3] x[6]	\$ 146,630
[8]	RUCO Recommended Operating Income	\$ 135,754
[9]	Less: Annual Interest Expense from D-2	<u>(\$43,133)</u>
[10]	Earnings Available for Dividends [8] - [9]	\$ 92,621
[11]	Less: Dividends [7]	<u>\$ (152,237)</u>
[12]	Retained Earnings [10] - [11]	\$ (59,616)
[13]	Pay-out ratio [11]/[10]	164%

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 26 ¹⁰⁷ Morin at 497-498.

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Again, a payout ratio of over 100 percent is not sustainable.

Q76. WHAT IS THE 5 YEAR AVERAGE PAYOUT RATIO OF THE PUBLICLY TRADED WATER UTILITIES?

A76. The 5 year historical average payout ratio of the publicly traded water utilities is about 74 percent.

Q77. WHAT WOULD HAPPEN TO THE VALUE OF AN INVESTMENT IN GWC IF GWC PAID DIVIDENDS AT THE PROPORTION OF EARNINGS COMPARABLE TO THE PUBLICLY TRADED UTILITIES?

A77. The value of the equity investment in GWC would necessarily decrease. If GWC paid out 74 percent of its net earnings so that it is comparable to the publicly traded water utilities, it would pay dividends totaling about \$68,539 (\$92,621 times 74 percent). However, this would translate to a dividend yield of only 2.4 percent (\$68,359 cash divided by \$1,413,267 book equity times 1.9 market-book ratio) under the first perspective shown above ("Perspective 1") and 1.6 percent (\$68,539 cash dividend divided by \$2,269,819 book equity times 1.9 market-book ratio) under the second perspective shown above ("Perspective 2"). However, investors expect a dividend yield of 3.53 percent, so the value of an investment in GWC would need to decrease to \$1,967,875 million (\$69,466 divided by 3.53 percent) compared to a market value of \$2,685,207 under Perspective 1 and decrease to \$1,967,875 (\$69,466 divided by 3.53 percent) compared to a market value of \$4,312,656 (\$2,269,819 times 1.9) under Perspective 2 in order for investors to receive a 3.53 percent dividend yield. In other words, GWC investors will lose

1 approximately \$717,332 (\$1,967,875 minus \$2,685,207) to \$2,344,781 (\$4,312,656
2 minus \$1,967,875) of investment value depending on the perspective. No matter
3 how you look at it, GWC's investors will lose a significant amount of investment
4 value. The market-to-book ratios would drop precipitously from the 1.9 of the
5 publicly traded water utilities to 1.4 (\$1,967,875 divided by \$1,413,267) or to 0.87
6 (\$1,967,875 divided by \$2,269,819) under Perspective 2.

7
8 **Q78. WHAT WOULD THE RATE OF RETURN THAT IS APPLIED TO RUCO'S**
9 **PROPOSED RATE BASE NEED TO BE IN ORDER FOR THE COMPANY**
10 **TO BE COMPARABLE TO THE PUBLICLY TRADED WATER**
11 **COMPANIES?**

12 A78. 9.9 percent. Let me explain. Under Perspective 1, if GWC has a payout ratio of
13 74 percent, then it must have earnings after interest of about \$128,149 (\$1,413,267
14 book equity investment in rate base times 6.71% book dividend yield divided by 74
15 percent). Adding back interest of \$43,133 to the \$128,149 results in a required
16 operating income of \$171,282. RUCO's proposed rate base is \$1,729,190¹⁰⁸, so the
17 return required is 9.9 percent (\$171,282 divided by \$1,729,190).

18
19 **Q79. WHAT DOES THE RETURN ON EQUITY NEED TO BE IN ORDER TO**
20 **PRODUCE A 9.9 PERCENT OVERALL RETURN UNDER PERSPECTIVE**
21 **1 AND RUCO'S HYPOTHETICAL CAPITAL STRUCTURE?**

22 A79. 12.42 percent. This can be found by first subtracting the weighted cost of debt
23 from the 9.8 percent return to get the weighted cost of equity then dividing the
24 weighted cost of equity by the percentage of equity in RUCO's hypothetical capital
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26 ¹⁰⁸ See RUCO Schedule TJC-1, page 1 of 2.

1 structure. The weighted cost of debt based upon RUCO's hypothetical capital
2 structure and the weighted cost of debt is 2.45 percent (6.13% times 40%) and the
3 percentage of equity in the hypothetical capital structure is 60 percent. So, the
4 computation is ((9.9% minus 2.45%) divided by 60%).
5

6 **Q80. PLEASE CONTINUE.**

7 A80. Under Perspective 2 the overall return applied to RUCO's rate base would need to
8 be 14.4 percent in order to have a payout ratio of 74 percent Under Perspective 2,
9 if GWC has a payout ratio of 74 percent, then it must have earnings after interest of
10 about \$205,817 (\$2,269,819 book equity investment times 6.71% book dividend
11 yield divided by 74 percent). Adding back interest of \$43,133 to the \$205,817
12 results in a required operating income of \$248,950. RUCO's proposed rate base is
13 \$1,729,190¹⁰⁹, so the return required is 14.4 percent (\$248,950 divided by
14 \$1,729,190).
15

16 **Q81. WHAT DOES THE RETURN ON EQUITY NEED TO BE IN ORDER TO**
17 **PRODUCE A 14.4 PERCENT OVERALL RETURN UNDER**
18 **PERSPECTIVE 2?**

19 A81. 19.91 percent. Again, this can be found by first subtracting the weight cost of debt
20 from the 11.3 percent return to get the weighted cost of equity , and then dividing
21 the weighted cost of equity by the percentage of equity in RUCO's hypothetical
22 capital structure. The weighted cost of debt based upon the actual capital structure
23 and RUCO's cost of debt is 2.45 percent (6.13% times 40%) and the percentage of
24 equity in the hypothetical capital structure is 60 percent. So, the computation is
25

26 ¹⁰⁹ See RUCO Schedule TJC-1, page 1 of 2.

1 ((14.4% minus 2.45%) divided by 60%).

2 Either way you look at it, Mr. Rigsby's recommended return on equity of
3 9.0 percent fails the comparable earnings test and the capital attraction standards
4 set forth in *Hope* and *Bluefield*, contrary to his assertions.¹¹⁰

5
6 **Q82. PLEASE COMMENT ON MR. RIGSBY'S HYPOTHETICAL COST OF**
7 **DEBT.**

8 A82. As already mentioned, Mr. Rigsby's hypothetical cost of debt, applicable to 40
9 percent of his hypothetical capital structure, is 6.13 percent. He bases this debt
10 cost on the average weighted cost of debt for the large, publicly traded water
11 utilities in his water proxy group.¹¹¹ As I previously discussed, those water utilities
12 have, on average, net plant of \$1.17 billion and revenue of \$329 million.
13 Moreover, because of their size and the fact that they issue debt in the public
14 markets, most of these utilities have published bond ratings. Mr. Rigsby assumes
15 that GWC could raise debt capital at the same cost as these entities. I seriously
16 doubt that it could.

17
18 **Q83. PLEASE RESPOND TO MR. RIGSBY'S TESTIMONY THAT THE**
19 **COMPANY COULD HAVE OBTAINED WATER INFRASTRUCTURE**
20 **AND FINANCING AUTHORITY DEBT AT A COST OF ONLY 3.86%.**

21 A83. Just because the Water Infrastructure and Financing Authority ("WIFA") stated to
22 Mr. Rigsby that its current rates are as low as 3.86 percent does not mean the
23 WIFA would have approved a loan for GWC at 3.86 percent or under acceptable
24 terms. As I understand it, the 3.86 percent rate is for a program under the Clean

25 ¹¹⁰ Rigsby Dt. at 6-7.

26 ¹¹¹ Rigsby Dt. at 52.

1 Water State Revolving Fund ("CWSRF") and available to systems designated as
2 "Disadvantaged Community" and which qualify as a "Colonia Community"
3 through the federal government. A colonia is any identifiable community in the
4 U.S.-Mexico border regions of Arizona, California, New Mexico, and Texas that is
5 determined to be a colonia on the basis of objective criteria, including lack of a
6 potable water supply, inadequate sewage systems, and a shortage of decent, safe,
7 and sanitary housing. Rates for loans under the Drinking Water Revolving Fund
8 ("DWRF") currently range from 4.2 percent to 5.25 percent.

9 But, regardless of the interest rates available, there are a number of factors
10 which have a bearing on whether or not a system pursues a loan. They include: the
11 requirements for plant replacement reserve funds; debt reserve and coverage ratio
12 requirements; restrictions on dividends; encumbrances of water plant assets; legal,
13 accounting, engineering and other costs related to obtaining the debt financing;
14 "Buy America" stipulations; loan monitoring and reporting requirements; and,
15 personal guarantees of the owners. Restrictive loan covenants can have a dramatic
16 impact on the investment risk to equity holders, particularly when cash flows must
17 be diverted to restricted funds, and, either as a consequence of a cash flow
18 diversion to restricted funds or by loan requirements, dividends are restricted or
19 suspended, and personal guarantees are required. So, a seemingly low interest rate
20 on a loan often does not come without costs and risks to equity capital.

21
22 **Q84. DIDN'T THE COMPANY INVESTIGATE OBTAINING A WIFA LOAN IN**
23 **2009?**

24 A84. Yes. Upon investigation the Company was not only very concerned about the
25 WIFA requirements, but also the perceived limited availability of the WIFA funds
26 given the nature of the plant being funded and the size of the request for funds. In

1 the end, the Company did not pursue the loan.

2 **Q85. WHAT WERE SOME OF THE WIFA REQUIREMENTS THAT CAUSED**
3 **CONCERN?**

4 A85. WIFA requires debt reserve and plant reserve replacement fund payments to be
5 made in addition to the debt service payments. These required payments have a
6 significant impact on available cash flows. There were also concerns over the
7 "Buy America" provisions which the Company believed were not only overly
8 burdensome but would have added a significant cost to construction. Further, the
9 legal and other costs to close the loan were estimated to be substantial. Finally,
10 there were concerns over restrictions on dividends and requirements for personal
11 guarantees from the owners.

12

13 **Q86. DOES THE LOAN WITH E.C. DEVELOPMENT CONTAIN**
14 **RESTRICTIVE LOAN COVENANTS (E.G. DEBT RESERVE**
15 **REQUIREMENTS, PERSONAL GUARANTEES, DIVIDEND**
16 **RESTRICTIONS, "BUY AMERICA" PROVISIONS, ETC)?**

17 A86. No. Further, the only closing costs were the cost of an appraisal and some legal
18 costs totaling less than \$4,300.

19

20 **Q87. WHAT ABOUT THE INTEREST RATE OF 8.5 PERCENT?**

21 A87. The Company obtained the loan in early 2008. During that time investment grade
22 bonds yields were in the range of about 6.5 percent to 7.0 percent. Given the
23 Company's size, financial history and the credit market conditions at the time, the
24 Company was advised that a premium of 150 to 200 basis points was required. In
25 early 2008, Baa investment bond yields were in the range of about 6.4 to 6.7
26 percent. It turns out that investment grade bond yields averaged 7.44 percent for

1 2008 and peaked at over 9 percent. It also turns out that investment grade bond
 2 yields for 2009 averaged 7.29 percent. Remember too, small businesses had
 3 extreme difficulty obtaining loans during this period. To some extent, the tight
 4 credit markets for small businesses still exist today. Banks are still reeling over the
 5 bad residential and commercial loans that they made before the financial crisis and
 6 remain credit risk-adverse. So, the 8.5 percent rate was and is reasonable under the
 7 circumstances irrespective of any affiliate relationship.

8
 9 **Q88. WHAT ARE THE WEIGHTED COSTS OF DEBT FOR THE PUBLICLY**
 10 **TRADED UTILITIES?**

11 A88. The publicly traded water utilities overall weighted costs of debt range from 4.7
 12 percent to 6.9 percent based upon their respective 2010 Form 10K's. The weighted
 13 debt cost and the range of debt cost for each utilities notes/debentures is listed
 14 below:

<u>Company</u>	<u>Overall Weighted Cost of Debt</u>	<u>Max. Interest Rate on Debt</u>	<u>Min. Interest Rate on Debt</u>
American States Water AWR)	6.93%	9.56%	0.00%
Aqua America (WTR)	5.25%	10.40%	0.00%
California Water (CWT)	6.14%	9.86%	4.58%
Connecticut Water (CTWS)	4.79%	5.13%	4.00%
Middlesex Water (MSEX)	4.72%	8.05%	0.00%
SJW Corp. (SJW)	6.49%	9.45%	2.50%
Average	5.72%	8.74%	1.85%

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 23 I have attached hereto as Rebuttal Exhibit RJB-COC-RB5 the relevant page(s)
 24 from the Form 10K's detailing each utility's long-term debt obligations.

25 As you can see from the table above there is a fairly wide range of overall
 26

1 weighted costs of debt among the water utilities. For each individual utility, there
2 is an even wider range of debt costs (interest rates) among the various utility's
3 individual notes and debentures. These wide ranges exist for many reasons which
4 include but are not limited to: 1) the credit market conditions at the time; 2) the
5 type of debt (secured v. unsecured, senior v. subordinated); 3) the term (length) of
6 the loan; 4) the credit rating and credit risks of the utility; 5) the amount of existing
7 debt; and 6) the amount of new debt. One of the key aspects of the publicly traded
8 water utility debt is that there are many individual notes/debentures of varying
9 smaller amounts that comprise the totality of debt. Because publicly traded utilities
10 have access to the capital markets, they have some degree of flexibility as to when
11 they acquire additional debt capital and can sometimes wait for better credit market
12 conditions. But, because water (and wastewater) utilities are capital intensive and
13 require significant amounts of plant in order to serve the ongoing needs of their
14 customers, the windows of opportunity for timing capital needs with optimum
15 market conditions are narrow or may not exist at all. In this light it is not
16 surprising to see the wide range of interest rates on the individual notes/debentures
17 of the water utilities. The reason is simple. Despite access to the markets, utilities
18 often do not control when the additional capital needs may arise or the credit
19 conditions when the capital is needed. As I stated earlier, GWC acquired its debt
20 capital in early 2008 when debt costs were relatively high and the credit markets
21 were tighter. Given that GWC does not have access to the credit markets and in
22 light of the data in the table above as well as the foregoing discussion, the cost of
23 debt of 8.5 percent should be considered reasonable.

24
25
26

Q89. INVESTMENT GRADE BONDS ARE CURRENTLY AT ABOUT 6.0 PERCENT. DO YOU HAVE A COMMENT?

1 A89. Yes. Using the same criteria of a 150 to 200 basis point premium, I would price a
2 current loan absent restrictive covenants and personal guarantees for small
3 companies like GWC at 7.5 percent to 8.0 percent, not much less than the 8.5
4 percent. Of course, I am not sure you would even find a willing lender with no
5 debt convenient restrictions or the requirement to provide personal guarantee even
6 at the 8.5 percent rate.

7 The Company has recently made inquiries at several banks, to attempt to
8 refinance the existing debt. Based on my experience, I am not optimistic for two
9 reasons. First, banks tend to want to finance for shorter periods of time for plant
10 and equipment especially for water and wastewater utility plant – typically less
11 than 7 years. Second, personal guarantees of the owners are typically required.
12 Personal guaranteed for smaller firms is almost a given. If personal guarantees are
13 not provided by the owners, then the banks will not provide the loan.

14
15 **D. Criticisms of RUCO's Implementation of the DCF**

16 **Q90. DO YOU HAVE ANY CONCERNS REGARDING MR. RIGSBY'S DCF**
17 **ESTIMATES?**

18 A90. Yes. RUCO's method of estimating his growth rates is subjective and cannot be
19 verified or replicated, in contrast to the methods I use. In his DCF model,
20 Mr. Rigsby relies on projected sustainable growth in order to estimate the dividend
21 growth rate. The difference, however, is that the key inputs necessary to estimate
22 the internal or retention growth rate are not disclosed by Mr. Rigsby.

23
24 **Q91. WHAT ARE THOSE INPUTS?**

25 A91. Internal or retention growth is the expected growth in dividends due to the
26

1 retention of earnings. Retention growth is dependent on the percentage of earnings
2 retained (the retention ratio) and the expected return on common equity that is
3 applied to the retained earnings. Thus, the internal growth rate formula is:

4
$$\text{Retention growth rate} = br$$

5 Where: b = the retention ratio (1-dividend payout ratio)

6 r = the expected return on common equity

7 The problem with Mr. Rigsby's implementation of this formula is that he does not
8 disclose the retention ratio or the expected return on common equity used to
9 calculate the retention growth rate. As a result, it is impossible to verify the
10 accuracy of his calculation of internal growth (br).

11 Mr. Rigsby lists various sources of data,¹¹² and he also attaches various
12 materials to his direct testimony. But there is no explanation of how any of these
13 materials were actually used. This approach effectively allows Mr. Rigsby to
14 simply select a growth rate that falls somewhere within a broad range and cannot
15 be verified.

16
17 **IV. REBUTTAL TO MR. SCHOEMPERLEN'S COST OF CAPITAL**
18 **ANALYSIS, TESTIMONY AND RECOMMENDATIONS**

19 **A. Response to Criticisms on the Proxies Used to Develop Cost of Equity**

20 **Q92. ON PAGE 11, 16, 30 and 31 OF HIS TESTIMONY, MR. SCHOEMPERLEN**
21 **ACCUSES YOU OF "CHERRY PICKING" THE SAMPLE WATER**
22 **COMPANIES YOU USED IN YOUR PROXY GROUP. PLEASE**
23 **COMMENT.**

24 **A92. First, let me say that I did not "cherry pick" the publicly traded water utilities used**
25

26 ¹¹² Rigsby Dt. at 23-24.

1 on my proxy group. The six water utilities in my proxy group are the same six
2 water utilities that Staff uses and has used for many years. RUCO uses three of the
3 six water utilities.
4

5 **Q93. BRIEFLY, WHY IS PROXY GROUP NECESSARY IN A COST OF**
6 **CAPITAL ANALYSIS AND HOW IS IT SELECTED?**

7 A93. The comparable earnings standard set forth in the *Hope* and *Bluefield* decisions
8 require the rate of return afforded to utilities be similar to the return in businesses
9 with similar or comparable risks.¹¹³ A proxy group of companies with comparable
10 risk is therefore the starting point in a cost of capital analysis.

11 There are two broad approaches to choosing a proxy group.¹¹⁴ The first
12 approach consists of selecting pure-play companies that are directly comparable in
13 risk to the subject utility. The companies are chosen using strict criteria with an
14 attempt to identify companies with the same investment risk as the subject utility.
15 There are several qualitative measures that influence investors' assessment of risk
16 which can be used to screen companies. These include SIC classification, bond
17 ratings, beta risk, business risk scores, size, percentage of revenues from regulated
18 operations, common equity ratio, geographical location, etc.¹¹⁵

19 The second approach is to select as large group of utilities as possible that is
20 representative of the utility industry average and make adjustments for any
21 difference between the subject utility and the industry average. Whether one
22 employs the direct approach or the indirect approach, the selection of companies
23 for a proxy group always raises the question of whether it is possible to select a

24 ¹¹³ Bourassa Dt. at 13-14.

25 ¹¹⁴ *Morin* at 400,

26 ¹¹⁵ *Id.*

1 group that are of comparable risk. Further, there is always the question of
2 identifying any differences in investment risk. The electric, natural gas, and water
3 utility industries have witnessed numerous takeovers, restructuring, corporate
4 reorganizations, unbundling, and increased competition over the last decade or so
5 which has made selections of proxy groups more difficult.¹¹⁶

6 The Company, Staff and RUCO approaches are indirect methods. The
7 water companies selected derive the vast majority of their revenues from regulated
8 operations. As shown in Rebuttal Schedule D-4.2, the six water utilities on average
9 derive over 90 percent of the revenues from regulated activities. These companies
10 were also chosen because they are publicly traded, are not in financial distress, and
11 there is a sufficiently long financial and market history from which to perform an
12 analysis. American Water Works, for example, was not used though it is publicly
13 traded and derives 89 percent of its revenues from regulated activities. This is
14 because American Water Works (AWK) only became a publicly traded entity in
15 2006 so arguably there is insufficient financial and market history at this time
16 to perform a robust and meaningful analysis. Pennichuck Corporation (PNNW) which
17 also was not used is another example of a company that is not a good proxy
18 company candidate. PNNW has been in merger negotiations with the City of
19 Nashua and its stock price is heavily influenced by the pending merger.

20 The bottom line is that the water utility companies in my proxy group are
21 considered representative of the average of the industry. And, as I have stated
22 throughout my testimony, must be adjusted for differences in investment risk.

23 **Q94. DOES MR. SCHOEMPERLEN IDENTIFY ANY WATER UTILITY**
24 **COMPANIES WHICH YOU SHOULD NOT HAVE USED AND/OR ANY**

25
26 ¹¹⁶ *Id.*

1 WATER UTILITIES YOU SHOULD HAVE USED IN YOUR PROXY
2 GROUP?

3 A94. No.
4

5 A. Criticisms of Mr. Schoemperlen's Recommended Cost of Equity

6 Q95. HOW DOES MR. SCHOEMPLEREN ARRIVE AT A COST OF EQUITY
7 OF 8.0 PERCENT?

8 A95. I am not completely sure. He does not perform any generally recognized approach
9 to estimating the cost of capital by developing a comparable proxy group and then
10 performing an analysis using the DCF, CAPM, Comparable Earnings or Risk
11 Premium approach. It appears that Mr. Schoemperlen takes my DCF estimates of
12 7.0 percent and 7.4 percent that reflected only historical and projected dividend per
13 share ("DPS") growth¹¹⁷ and added a risk premium of 1 percent.¹¹⁸
14

15 Q96. WHAT'S WRONG WITH THIS APPROACH?

16 A96. There are at least two major problems with Mr. Schoemperlen's approach. First,
17 he relies on only one method, the DCF. When measuring the cost of equity, which
18 involves measuring investor expectations, no single method provides a foolproof
19 and meaningful solution. Each method has underlying assumptions and requires
20 the exercise of considerable judgment on the reasonableness of those assumptions.
21 Second, he relies on only two methods of estimating investor expectations for
22 growth, namely historical and projected DPS growth. I do not use projected DPS
23 growth because there are analyst estimates for dividend growth for only three of
24 the six sample companies. Further, only one source (Value Line) provides

25 ¹¹⁷ Bourassa Dt. at 29.

26 ¹¹⁸ Schoemperlen Dt. at 30.

1 projected DPS growth estimates. The wide availability of earnings growth
2 estimates compared to dividend growth estimates indicates a greater reliance by
3 investors on earnings rather than dividends for their investment decisions. Finally,
4 the indicated costs of equity were at or below the forecasts of yields on Baa
5 investment grade bonds which makes no sense.¹¹⁹ It may be Mr. Schoemperlen's
6 judgment that only historical and projected DPS growth matters, but there is a
7 plethora of empirical evidence that show that investors simply do not rely on one
8 or two measures of growth. As I stated earlier, it turns out that studies indicate that
9 earning per share ("EPS") growth, and in particular analysts estimates of EPS
10 growth, is the best measure of growth and DPS growth was the least preferable
11 measure of growth.¹²⁰
12

13 **Q97. IF ADOPTED, WOULD AN 8.0 PERCENT RETURN ON EQUITY BE**
14 **CONSISTENT WITH RECENT COMMISSION DECISIONS?**

15 A97. No. As I testified to earlier, Sahuarita Water Company (Decision 72177, February
16 11, 2011) was authorized a 10.3 percent return. In a recent case for Bella Vista
17 Water Company (Decision 72251, dated April 7, 2011) the Commission authorized
18 at 9.5 percent return on equity. It should be noted that in that case the 9.5 percent
19 return on equity was after an implied downward financial risk adjustment of 100
20 basis points.¹²¹ So, the implied return on equity before any financial risk
21 adjustment was 10.5 percent.
22
23

24 ¹¹⁹ Bourassa Dt. at 29.

25 ¹²⁰ David A. Gordon, Myron J. Gordon and Lawrence I. Gould, "Choice Among Methods of
Estimating Share Yield," *Journal of Portfolio Management* (Spring 1989) 50-55.

26 ¹²¹ Decision 72551 at 32.

1 B. Criticisms of Mr. Schoemperlen's Recommended Hypothetical Capital
2 Structure and Hypothetical Cost of debt

3
4 **Q98. WHY DOES MR. SCHOEMPERLEN RECOMMEND A HYPOTHETICAL**
5 **CAPITAL STRUCTURE?**

6 A98. According to Mr. Schoemperlen that Company's current capital structure is not
7 prudent.¹²² He believes the Company should have a least 40 percent debt in order
8 to minimize the cost of capital.¹²³ However, he provides no evidence that a 40
9 percent debt ratio would actually minimize the capital costs for a small firm like
10 GWC. Let me explain. Financial theory does suggest there is an optimal capital
11 structure for a given firm.¹²⁴ That is, a capital structure that minimizes the weighted
12 average cost of capital. In simple terms, because of the lower cost of debt
13 compared to equity capital and the deductibility of interest, a firm can achieve a
14 lower overall cost of capital when debt is added. But, as the level of debt
15 increases, the cost of equity increases as the risks to equity holders increases. I
16 discussed this in my direct testimony.¹²⁵ At a certain point, as the level of debt
17 increases the costs of debt also increase which then raises the total capital costs
18 above optimal levels. Financial theory provides limited guidance on what an
19 optimal capital structure should be.¹²⁶ Studies have shown that there is a range of
20 debt to equity levels in a firm's capital structure in which the average cost of
21 capital does not change appreciably.¹²⁷

22 ¹²² Schoemperlen Dt. at 22.

23 ¹²³ *Id.*

24 ¹²⁴ *Morin* at 465.

25 ¹²⁵ Bourassa Dt. at 21-22.

26 ¹²⁶ *Id.* at 471.

¹²⁷ *Id.*

1 The imputation of a hypothetical capital structure which is different from
2 the actual capital structure implies the existence of an optimal capital structure for
3 a particular firm. But, the hypothetical capital structure must be such that the cost
4 and tax benefits of debt do not outweigh the increased equity costs. One could
5 argue that since the publicly traded water utilities have about 50 percent debt in
6 their capital structures that a 50/50 weighting of debt and equity should be applied
7 to all water utilities regardless of size or whether they have access to the capital
8 markets. This view is incorrect for many reasons.

9 First, the large publicly traded utilities have access to the capital markets
10 whereas small firms like GWC do not. Second, many of the large public utilities
11 have credit ratings which add confidence to credit markets which in turn keeps the
12 costs of debt reasonable over a wider range of levels of debt. Third, as I stated in
13 my direct testimony, smaller firms cannot support the same levels of debt in their
14 capital structure.¹²⁸ Smaller companies typically have greater variability in their
15 earnings which makes them more risky. This variability impacts the risk not only
16 to equity holders but to debt holders in small firms as well.

17 The bottom line is that the optimal levels of debt for small firms are not the
18 same as larger firms, and the relationship between changes in the capital structure
19 and the cost of capital are quite different. The overall cost of capital for a large
20 firm, for example, may be minimized and may not change appreciably in the range
21 of debt levels of 30 to 50 percent whereas that for a small firm may be minimized
22 and may not change appreciably from 20 to 40 percent. Above these ranges of
23 levels of debt, the cost of capital begins to increase as the costs and tax benefits of
24 debt outweigh the increased capital costs.

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26 ¹²⁸ Bourassa Dt. at 22.

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Q99. PLEASE COMMENT ON MR. SCHOEMPLERLEN'S RECOMMENDED COST OF DEBT.

A99. Mr. Schoemperlen reclassifies 20.6 percent of equity investment to debt and recommends a cost of 3.86 percent on this debt. Mr. Schoemperlen based the 3.86 percent on the rate available under certain loan programs from WIFA. Putting that aside, this debt comprises 51.5 percent of the total debt. In addition, Mr. Schoemperlen retains 18.4 percent of the Company's existing debt at a cost of 8.5 percent. This debt comprises 49.5 percent of the total debt. Thus, the overall cost of debt is 5.82 percent (51.5 percent times 3.86 percent plus 49.5 percent times 8.5 percent).

Q100. DO YOU HAVE ANY ADDITIONAL COMMENTS REGARDING WIFA DEBT?

A100. No. I have previously testified on WIFA debt and the debt in general for small companies like GWC. At this point, I would simply observe that reclassifying 21 percent of GWC's equity investment to debt capital and then providing a 3.86 percent return on that equity is unwarranted and confiscatory.

Q101. IS A DEBT COST OF 5.85 PERCENT REASONABLE FOR A SMALL COMPANY LIKE GWC?

A101. No. The 5.82 is lower than the cost of Baa investment grade bonds. GWC has no bond rating and no access to the credit markets, as do the large publicly traded utilities. GWC could not borrow at the same terms and interest rates of the large publicly traded water utilities.

1 Q102. PLEASE ELABORATE ON HOW YOU DETERMINED THAT THE
2 EFFECTIVE RETURN TO GWC UNDER MR. SCHOEMPERLEN'S
3 RECOMMENDATION FOR A HYPOTHETICAL CAPITAL STRUCTURE,
4 A HYPOTHETICAL COST OF DEBT OF 5.82 PERCENT, AND AN 8.0
5 PERCENT RETURN ON EQUITY WOULD RESULT IN AN EFFECTIVE
6 RATE OF RETURN ON EQUITY OF 5.87 PERCENT.

7 A102. Mr. Schoemperlen recommends an operating income of \$64,878.¹²⁹ Deducting the
8 synchronized interest expense of \$21,399 (recommended rate base of \$906,756
9 times weighted cost of debt of 2.36 percent)¹³⁰ produces a net income of \$43,480
10 (\$64,878 - \$21,399). Mr. Schoemperlen also recommends a rate base of
11 \$906,756.¹³¹ The actual proportion of equity that is funding Mr. Schoemperlen's
12 rate base is \$740,818 (\$906,756 rate base x 81.7% actual equity in GWC's capital
13 structure). The effective equity return is therefore 5.87 percent (\$93,378 /
14 \$740,818).

15
16 Q103. ISN'T THE CURRENT COST OF INVESTMENT GRADE BONDS ABOUT
17 6.0 PERCENT; AND, ISN'T THIS HIGHER THAN MR.
18 SCHOEMPERLEN'S EFFECTIVE COTS OF EQUITY?

19 A103. Yes.¹³² Mr. Schoemperlen's recommendation translates to a cost of equity which
20 absolutely makes absolute no sense. Mr. Schoemperlen obtains a dramatically
21 lower return on equity through his hypothetical capital structure and hypothetical
22 debt cost; far lower than his recommendation of 8.0 percent. Like Mr. Rigsby's 9.0

23
24 ¹²⁹ See Schoemperlen Table 3 on page 25.

25 ¹³⁰ See Schoemperlen Table 3 on page 25.

26 ¹³¹ See Schoemperlen Table 3 on page 25..

¹³² Federal Reserve, April 21, 2011.

1 percent, Mr. Schoemperlen's recommended cost of equity of 8.0 percent is pure
2 fiction.

3
4 **Q104. WILL GOODMAN WATER COMPANY HAVE SUFFICIENT EARNINGS**
5 **TO PAY DIVIDENDS AT A LEVEL COMPARABLE TO THE PUBLICLY**
6 **TRADED WATER UTILITY COMPANIES?**

7 A104. No. Like the analysis provide earlier, we can look at this in two ways: 1) from the
8 perspective of actual equity financing Mr. Schoemperlen's proposed rate base
9 (Perspective 1); and 2) from the perspective of actual equity investment in GWC
10 (Perspective 2). Either way, the Company will have insufficient earnings to pay
11 dividends comparable to the publicly traded utilities. In fact, in order for the
12 Company to pay dividends the payout ratio will need to be well above 100 percent
13 of earnings depending on one's perspective. The computations for Perspective 1
14 are shown below:

<u>Perspective 1 – Based Upon Rate Base</u>		
[1]	Total Rate Base Per Shoemperlen	\$ 906,756
[2]	% Equity per D-1	81.73%
[3]	Book Value of Equity [1] x[2]	\$ 740,818
[4]	Expected Dividend Yield per D-4.7	3.53%
[5]	Current market-to-book ratio publicly traded water utilities	1.90
[6]	Book Value Dividend Yield [4] x [5]	6.71%
[7]	Cash Dividend [3] x[6]	\$ 49,709
[8]	Schoemperlen Recommended Operating Income	\$ 64,878
[9]	Less: Annual Interest Expense from D-2	(\$43,133)
[10]	Earnings Available for Dividends [8] - [9]	\$ 31,953
[11]	Less: Dividends [7]	\$ (49,709)
[12]	Retained Earnings [10] - [11]	\$ (17,756)
[13]	Payout ratio [11]/[10]	156%

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The computations for Perspective 2 are shown below:

<u>Perspective 2 - Based Upon Equity Investment</u>		
[1]	Total Capital per D-1	\$ 2,777,216
[2]	% Equity per D-1	81.73%
[3]	Book Value of Equity [1] x[2]	\$ 2,269,819
[4]	Expected Dividend Yield per D-4.8	3.53%
[5]	Current market-to-book ratio publicly traded water utilities	1.90
[6]	Book Value Dividend Yield [4] x [5]	6.71%
[7]	Cash Dividend [3] x[6]	\$ 146,630
[8]	RUCO Recommended Operating Income	\$ 64,878
[9]	Less: Annual Interest Expense from D-2	(\$43,133)
[10]	Earnings Available for Dividends [8] - [9]	\$ 31,953
[11]	Less: Dividends [7]	\$ (146,630)
[12]	Retained Earnings [10] - [11]	\$ (114,677)
[13]	Payout ratio [11]/[10]	459%

Neither of these payout ratios are sustainable and are much higher than the publicly traded water utility payout ratios.

Q105. WHAT WOULD HAPPEN TO THE VALUE OF AN INVESTMENT IN GWC IF THE GWC PAID DIVIDENDS AT THE PROPORTION OF EARNINGS COMPARABLE TO THE PUBLICLY TRADED UTILITIES?

A105. The value of an equity investment would necessarily decrease. If GWC paid out

1 74 percent of its net earnings so that it is comparable to the publicly traded water
2 utilities, it would pay dividends totaling about \$23,645 (\$31,953 times 74 percent).
3 However, this would translate to a dividend yield of only 1.7 percent (\$23,645 cash
4 divided by \$1,413,267 book equity times 1.9 market-book ratio) under the first
5 perspective shown above (Perspective 1) and 1.0 percent (\$23,645 cash dividend
6 divided by \$2,269,819 book equity times 1.9 market-book ratio) under the second
7 perspective shown above (Perspective 2). However, investors expect a dividend
8 yield of 3.53 percent, so the value of an investment in GWC would need to
9 decrease to \$905,184 (\$31,953 divided by 3.53 percent) compared to a market
10 value of \$2,826,534 (\$1,413,267 times 1.9) under Perspective 1 and decrease to
11 \$905,184 (\$31,953 divided by 3.53 percent) compared to a market value of
12 \$4,312,656 (\$2,269,819 times 1.9) under Perspective 2 in order for investors to
13 receive a 3.53 percent dividend yield. In other words, GWC investors will lose
14 approximately \$1,911,350 (\$905,184 minus \$2,826,534) to \$3,407,472 (\$905,184
15 minus \$4,312,656) of investment value depending on the perspective. No matter
16 how you look at it, GWC's investors will lose a significant amount of investment
17 value. The market-to-book ratios would drop precipitously from the 1.9 of the
18 publicly traded water utilities to 0.64 (\$905,184 divided by \$1,413,267) or to 0.21
19 (\$905,184 divided by \$4,312,656) under Perspective 2.

20
21 **Q106. WHAT WOULD THE RATE OF RETURN THAT IS APPLIED TO MR.**
22 **SCHOEMPERLEN'S PROPOSED RATE BASE NEED TO BE IN ORDER**
23 **FOR THE COMPANY TO BE COMPARABLE TO THE PUBLICLY**
24 **TRADED WATER COMPANIES?**

25 A106. 12.16 percent. Let me explain. Under Perspective 1, if GWC has a payout ratio of
26 74 percent, then it must have earnings after interest of about \$67,174 (\$740,818

1 book equity investment in rate base times 6.71% book dividend yield divided by 74
2 percent). Adding back interest of \$43,133 to the \$110,307 results in a required
3 operating income of \$110,307. Mr. Schoemperlen's proposed rate base is
4 \$906,756¹³³, so the return required is 12.16 percent (\$110,307 million divided by
5 \$906,756).
6

7 **Q107. WHAT DOES THE RETURN ON EQUITY NEED TO BE IN ORDER TO**
8 **PRODUCE A 12.16 PERCENT OVERALL RETURN UNDER**
9 **PERSPECTIVE 1?**

10 A107. 16.33 percent. This can be found by first subtracting the weighted cost of debt
11 from the 12.16 percent return to get the weighted cost of equity then dividing the
12 weighted cost of equity by the percentage of equity in Mr. Schoemperlen's
13 hypothetical capital structure. The weighted cost of debt based upon the
14 hypothetical capital structure and the cost of debt is 2.36 percent (5.82% times
15 40%) and the percentage of equity in the hypothetical capital structure is 60
16 percent. So, the computation is ((12.16% minus 2.34%) divided by 60%).
17

18 **Q108. PLEASE CONTINUE.**

19 A108. Under Perspective 2 the overall return applied to Mr. Schoemperlen's rate base
20 would need to be 27.47 percent in order to have a payout ratio of 74 percent
21 Under Perspective 2, if GWC has a payout ratio of 74 percent, then it must have
22 earnings after interest of about \$205,817 (\$2,269,819 book equity investment times
23 6.71% book dividend yield divided by 74 percent). Adding back interest of
24 \$43,133 to the \$205,817 results in a required operating income of \$248,950. Mr.
25

26 ¹³³ See Schoemperlen Table 3 on page 25.

1 Schoemperlen's proposed rate base is \$905,756¹³⁴, so the return required is 27.47
2 percent (\$248,950 million divided by \$905,756).
3

4 **Q109. WHAT DOES THE RETURN ON EQUITY NEED TO BE IN ORDER TO**
5 **PRODUCE A 27.47 PERCENT OVERALL RETURN UNDER**
6 **PERSPECTIVE 2?**

7 A109. 41.88 percent. Again, this can be found by first subtracting the weight cost of debt
8 from the 27.47 percent return to get the weighted cost of equity then dividing the
9 weighted cost of equity by the percentage of equity in the capital structure. The
10 weighted cost of debt based upon the actual capital structure and Mr.
11 Schoemperlen's cost of debt is 2.34 percent (5.82% times 40%) and the percentage
12 of equity in the hypothetical capital structure is 60 percent. So, the computation is
13 ((27.47% minus 2.34%) divided by 60%).
14

15 **Q110. IN REALITY ISN'T PERSPECTIVE 2 THE MOST REVELANT WITH**
16 **RESPECT TO THE ADEQUACY OF EARNINGS AND THE**
17 **COMPARABLITY OF EARNINGS TO THE PUBLICLY TRADED**
18 **UTILITY COMPANIES?**

19 A110. Yes. Again, the total invested equity capital in GWC is \$2,269,765 as shown on
20 Rebuttal Schedule D-1. Because of Mr. Schoemperlen's recommendation to
21 disallow plant investment in the instant case, there is a large and significant
22 discrepancy between rate base and invested capital. As I stated earlier, all invested
23 capital must be supported as each dollar of capital has an earnings requirement. I
24 discussed this subject in depth earlier in my testimony and will not repeat that
25 testimony here. That said, either way you look at it, Mr. Schoemperlen's
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¹³⁴ See Schoemperlen Table 3 on page 25.

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recommended return on equity of 8.0 percent fails the comparable earnings test and the capital attraction standards set forth in *Hope* and *Bluefield*.

Q111. DOES THAT CONCLUDE YOUR REBUTTAL TESTIMONY ON COST OF CAPITAL?

A111. Yes. Although my silence on any issue not discussed herein does not necessarily constitute agreement with Staff, RUCO, or Mr. Schoemperlen.

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

**THOMAS J. BOURASSA
REBUTTAL TESTIMONY
(COST OF CAPITAL)
May 2, 2011**

EXHIBIT TJB-COC-RB1

Goodman Water Company
COST OF EQUITY (COE) USING RISK PREMIUM BUILD-UP METHOD

TABLE 1

Company	Measures of size (Millions)					
	MV Equity ¹	Book Equity ¹	MVIC ¹	5 Yr Avg. Net Income	Total Assets ²	5 Yr Avg. EBITDA ³
1. American States	\$ 636	\$ 359	\$ 936	\$ 27	\$ 1,192	\$ 115
2. Aqua America	\$ 3,011	\$ 1,174	\$ 4,543	\$ 103	\$ 4,072	\$ 396
3. California Water	\$ 764	\$ 435	\$ 1,243	\$ 35	\$ 1,692	\$ 117
4. Connecticut Water	\$ 220	\$ 114	\$ 332	\$ 9	\$ 425	\$ 22
5. Middlesex	\$ 289	\$ 174	\$ 422	\$ 12	\$ 489	\$ 37
6. SJW Corp.	\$ 427	\$ 256	\$ 723	\$ 24	\$ 935	\$ 84
Goodman Water Company	\$ 4.3	\$ 2.3	\$ 4.8	\$ 0.0	\$ 4.9	\$ 0.3
	(Estimate)		(Estimate)			

¹ From Value Line data (12/31/2010)

² From Zacks Investment Research. From E-1 for subject utility.

³ Net Income. From Zacks Investment Research and Company ACC reports

Company	Net Income Data				
	2010	2009	2008	2007	Average
American States	\$ 33.2	\$ 29.5	\$ 22.0	\$ 28.0	\$ 23.1
Aqua America	\$ 124.0	\$ 104.4	\$ 97.9	\$ 95.0	\$ 92.0
California Water	\$ 37.7	\$ 40.6	\$ 39.8	\$ 31.2	\$ 25.6
Connecticut Water	\$ 9.8	\$ 10.2	\$ 9.4	\$ 8.8	\$ 7.0
Middlesex	\$ 14.3	\$ 10.0	\$ 12.2	\$ 11.8	\$ 10.0
SJW Corp.	\$ 24.4	\$ 15.2	\$ 21.5	\$ 19.3	\$ 38.6
Goodman Water Company	\$ -	\$ -	\$ -	\$ 0.1	\$ -

Net Income data for publicly traded water utilities from Zacks Investment Research and/or Yahoo Finance

⁴ Earnings before Interest, Taxes, Depreciation and Amortization (EBITDA). From Zacks Investment Research and Company ACC reports.

Company	EBITDA Data				
	2010	2009	2008	2007	Average
American States	\$ 134.4	\$ 122.6	\$ 105.9	\$ 102.8	\$ 111.6
Aqua America	\$ 473.2	\$ 415.2	\$ 384.7	\$ 364.5	\$ 340.8
California Water	\$ 155.7	\$ 125.5	\$ 122.1	\$ 95.6	\$ 86.9
Connecticut Water	\$ 22.5	\$ 20.3	\$ 21.1	\$ 27.9	\$ 17.4
Middlesex	\$ 43.3	\$ 34.6	\$ 38.6	\$ 36.6	\$ 34.1
SJW Corp.	\$ 75.4	\$ 93.5	\$ 99.7	\$ 77.7	\$ 73.5
Goodman Water Company	\$ 0.3	\$ 0.4	\$ 0.3	\$ 0.3	\$ 0.1

EBITDA data for publicly traded water utilities from Zacks Investment Research and/or Yahoo Finance

EBITDA data for subject utility from E-1 and/or ACC reports

Goodman Water Company
 COST OF EQUITY (COE) USING RISK PREMIUM BUILD-UP METHOD

TABLE 2

MRP_{ms} Estimates Using Duff & Phelps Study (Unlevered)

Assumes 100% Equity and 0% debt

Data Smoothing with Regression Analysis

Smoothed Premium (RP_{ms}) = Constant + X Coefficients * Log(Relevant Metric)

$$RP_{unlevered} = RP_{levered} - W_d W_e (\beta_u - \beta_d) RP_{market}$$

Where β_u = unlevered portfolio beta

β_d = debt beta, assumed to be 0.1

W_d = percentage of debt in capital structure

W_e = percentage of equity in capital structure

RP_{levered} = levered realized risk premium

Constant

X Coefficient(s)

MV Equity (Table C-1)	Book Equity (Table C-2)	MVIC (Table C-4)	5 Yr Avg. Net Income (Table C-3)	Total Assets (Table C-5)	5 Yr Avg. EBITDA (Table C-6)
18.617%	15.902%	18.978%	13.719%	17.948%	15.173%
-3.314%	-2.693%	-3.298%	-2.751%	-2.953%	-2.829%

MRP _{ms} (unlevered)		MRP _{ms} (unlevered)		MRP _{ms} (unlevered)	
MV Equity	Book Equity	MVIC	5 Yr Avg. Net Income	Total Assets	5 Yr Avg. EBITDA
9.33%	9.02%	9.18%	9.77%	8.86%	9.34%
7.09%	7.64%	6.92%	8.19%	7.29%	7.83%
9.06%	8.80%	8.77%	9.47%	8.41%	9.32%
10.86%	10.37%	10.67%	11.09%	10.19%	11.39%
10.46%	9.87%	10.32%	10.78%	10.01%	10.72%
9.90%	9.42%	9.55%	9.93%	9.17%	9.73%

Symbol
AWR
WTR
CWT
CTWS
MSEX
SJW

Company

- American States
- Aqua America
- California Water
- Connecticut Water
- Middlesex
- SJW Corp.

Average (unlevered)

Goodman Water Company

Implied Size Premium for Goodman over publicly traded water utilities

9.45%	9.18%	9.23%	9.87%	8.99%	9.41%
16.52%	14.94%	16.73%	18.10%	15.90%	16.82%
					7.10%

Goodman Water Company
 COST OF EQUITY (COE) USING RISK PREMIUM BUILD-UP METHOD

TABLE 3

Unlevered Portfolio Beta
 (from Duff & Phelps RP Study - Table C)

Company	Unlevered Portfolio Beta (β_u)							Average
	(Table C-1)	(Table C-2)	(Table C-4)	(Table C-3)	(Table C-5)	(Table C-6)	(Table C-6)	
1. American States	0.97	0.96	0.95	0.96	0.94	0.97	0.96	
2. Aqua America	0.87	0.85	0.85	0.87	0.83	0.81	0.85	
3. California Water	0.94	0.95	0.95	0.94	0.92	0.95	0.94	
4. Connecticut Water	0.96	1.00	0.97	0.97	0.99	1.03	0.99	
5. Middlesex	0.98	1.00	0.98	0.97	0.99	0.99	0.99	
6. SJW Corp.	0.95	0.98	0.98	0.96	0.96	0.95	0.96	
Average	0.95	0.96	0.95	0.95	0.94	0.95	0.95	
Goodman Water Company	0.95	0.99	1.00	1.01	1.05	1.03	1.01	

Symbol
 AWR
 WTR
 CWT
 CTWS
 MSEX
 SJW

Goodman Water Company
 COST OF EQUITY (COE) USING RISK PREMIUM BUILD-UP METHOD

TABLE 4

MRP Estimates Using Duff & Phelps Study (Relevered)

Relevered Realized Risk Premium

$$RP_{\text{relevered}} = RP_{\text{unlevered}} + W_d W_e (\beta_U - \beta_d) RP_{\text{market}}$$

Where β_U = unlevered portfolio beta

β_d = debt beta, assumed to be 0.1

W_d = percentage of debt in capital structure

W_e = percentage of equity in capital structure

$RP_{\text{unlevered}}$ = unlevered realized risk premium from Table 2

RP_{market} = general equity risk premium for the market since 1963 (4.4%)

	Symbol	MRP _{mts} (Relevered)									
		W _d /W _e	MV Equity	Book Equity	MVIC	5 Yr Avg. Net Income	Total Assets	5 Yr Avg. EBITDA	Average		
1.	American States	47.1%	11.13%	10.81%	10.94%	11.56%	10.61%	11.14%	11.03%		
2.	Aqua America	50.9%	8.81%	9.31%	8.59%	9.91%	8.92%	9.41%	9.16%		
3.	California Water	62.7%	11.38%	11.14%	11.12%	11.79%	10.68%	11.67%	11.30%		
4.	Connecticut Water	50.8%	12.78%	12.38%	12.61%	13.04%	12.18%	13.46%	12.74%		
5.	Middlesex	46.4%	12.26%	11.71%	12.11%	12.56%	11.82%	12.54%	12.17%		
6.	SJW Corp.	69.2%	12.49%	12.10%	12.23%	12.55%	11.79%	12.32%	12.25%		
	Average MRP (Relevered)	54.53%	11.47%	11.24%	11.27%	11.90%	11.00%	11.76%	11.44%		
	Goodman Water Company	11.81%	16.96%	15.41%	17.20%	18.57%	16.40%	17.31%	16.97%		

Goodman Water Company
 COST OF EQUITY (COE) USING RISK PREMIUM BUILD-UP METHOD

Equity Risk Premium Adjustment and Other metrics used in Build-up Method

TABLE 5

[1] Estimate of Current Market Risk Premium (RP_{market})	4.40%
[2] Risk Premium Assumed in Duff & Phelps Study (1963-2009)	4.40%
[3] Equity Risk Premium Adjustment ((1) - [2])	0.00%
[4] Average MRP (relevered) for publicly traded water companies (from Table 4)	11.44%
[5] MRP (relevered) for publicly traded water companies (RP_{m+*}) ([3] + [4])	11.44%
[6] Equity Risk Premium Adjustment ([3])	0.00%
[7] Average MRP (relevered) for subject utility company (from Table 4)	16.97%
[8] MRP (relevered) for subject utility company (RP_{m+*}) ([6] + [7])	16.97%
[9] Industry Risk Premium (From Ibbotson for SIC 494 Water Supply Industry Table 3-5)	-4.59%
[10] Adjustment Factor to Industry Risk Premium ([2] / 6.7% ¹)	0.6567
[11] Adjusted Industry Risk Premium (R_i) ([9] x [10])	-3.01%
[12] Risk Free Rate (Ibbotson LT U.S. Treasury Yield) (R_f) ²	4.24%

¹ From Ibbotson S&P 2011 Valuation Edition Yearbook. Long-Horizon Equity Risk Premium (1926-2010)

² 20 year U.S. Treasury Bond Yield at April 21, 2011. Federal Reserve.

Goodman Water Company
 COST OF EQUITY (COE) USING RISK PREMIUM BUILD-UP METHOD

TABLE 6

Cost of Equity (COE) Estimate using Build-up Method

$$E(R_i) = R_f + RP_{m+s} + RP_i + RP_u$$

Where:

$E(R_i)$ = Expected (indicated) rate of return

R_f = Risk-free rate of return. See Table 5.

RP_{m+s} = Market risk premium including size premium. See Table 4.

RP_i = Industry risk premium (adjusted) See Table 5.

RP_u = Company-specific risk premium

R_f =	See Table 4	Publicly Traded
RP_{m+s} =	See Table 4	Water
RP_i =	-3.01%	Utilities
RP_u =	0.00%	Goodman Water

Indicated COE $E(R_i)$

	MV	Book	5 Yr Avg. Net Income	Total Assets	5 Yr Avg. EBITDA	Average
1. American States	12.36%	12.03%	12.78%	11.83%	12.37%	12.26%
2. Aqua America	10.04%	10.54%	11.14%	10.15%	10.64%	10.39%
3. California Water	12.61%	12.37%	13.02%	11.90%	12.89%	12.52%
4. Connecticut Water	14.00%	13.61%	14.26%	13.40%	14.69%	13.97%
5. Middlesex	13.48%	12.93%	13.78%	13.05%	13.76%	13.39%
6. SJW Corp.	13.71%	13.32%	13.78%	13.02%	13.55%	13.47%
Average COE estimate	12.70%	12.47%	13.13%	12.23%	12.98%	12.67%
Goodman Water Company	18.19%	16.63%	19.80%	17.62%	18.53%	18.20%

Symbol
 AWR
 WTR
 CWT
 CTWS
 MSEX
 SJW

Company

1. American States
2. Aqua America
3. California Water
4. Connecticut Water
5. Middlesex
6. SJW Corp.

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

**THOMAS J. BOURASSA
REBUTTAL TESTIMONY
(COST OF CAPITAL)**

May 2, 2011

EXHIBIT TJB-COC-RB2

Goodman Water Company Cost of Capital Calculation
Final Cost of Equity Estimates
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]
DCF Method				
Constant Growth DCF Estimate		$\frac{D_1}{P_0}^1$	+	g^2
Multi-Stage DCF Estimate		3.4%	+	5.4%
Average of DCF Estimates				k
				8.8%
				<u>9.9%</u>
				9.4%
CAPM Method				
Historical Market Risk Premium ³	R_f	β^5	x	$(R_M)^6$
Current Market Risk Premium ⁴	2.8%	0.76	x	7.2% ⁶
Average of CAPM Estimates	4.5%	0.76	x	9.0% ⁷
				k
				8.2%
				<u>11.3%</u>
				9.8%
			Average	
			Financial risk adjustment	9.6%
			Total	9.6%

1 MSN Money and Value Line
 2 Schedule JCM-8
 3 Risk-free rate (Rf) for 5, 7, and 10 year Treasury rates from the U.S. Treasury Department at www.ustreas.gov
 4 Risk-free rate (Rf) for 30 Year Treasury bond rate from the U.S. Treasury Department at www.ustreas.gov
 5 Value Line
 6 Historical Market Risk Premium (Rp) calculated from Ibbotson Associates S&P 500 2009 Yearbook data
 7 Testimony

Goodman Water Company Cost of Capital Calculation
Average Capital Structure of Sample Water Utilities

[A]	[B]	[C]	[D]
<u>Company</u>	<u>Debt</u>	<u>Common Equity</u>	<u>Total</u>
American States Water	44.5%	55.5%	100.0%
California Water	52.1%	47.9%	100.0%
Aqua America	56.4%	43.6%	100.0%
Connecticut Water	49.8%	50.2%	100.0%
Middlesex Water	44.5%	55.5%	100.0%
SJW Corp	<u>52.4%</u>	<u>47.6%</u>	<u>100.0%</u>
Average Sample Water Utilities	49.9%	50.1%	100.0%
GWC - Actual Capital Structure	18.6%	81.4%	100.0%

Source:
Sample Water Companies from Value Line

Goodman Water Company Cost of Capital Calculation
Growth in Earnings and Dividends
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]
<u>Company</u>	Dividends Per Share 2000 to 2010 <u>DPS¹</u>	Dividends Per Share Projected <u>DPS¹</u>	Earnings Per Share 2000 to 2010 <u>EPS^{1,2}</u>	Earnings Per Share Projected <u>EPS¹</u>
American States Water	1.9%	3.7%	5.8%	2.9%
California Water	0.8%	3.0%	3.3%	5.4%
Aqua America	7.7%	6.0%	6.7%	8.4%
Connecticut Water	1.5%	No Projection	2.4%	No Projection
Middlesex Water	1.8%	No Projection	2.4%	No Projection
SJW Corp	<u>5.2%</u>	<u>3.8%</u>	<u>3.8%</u>	<u>9.1%</u>
Average Sample Water Utilities	3.2%	4.1%	4.1%	6.5%

¹ Value Line

² Negative values are inconsistent with the DCF, accordingly, they are excluded from the average.

Goodman Water Company Cost of Capital Calculation
Sustainable Growth
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]
Company	Retention Growth 2001 to 2010 br	Retention Growth Projected br	Stock Financing Growth vs	Sustainable Growth 2001 to 2010 br + vs	Sustainable Growth Projected br + vs
American States Water	3.3%	6.7%	1.8%	5.1%	8.5%
California Water	2.1%	4.2%	3.9%	6.0%	8.1%
Aqua America	4.6%	5.5%	4.3%	8.9%	9.8%
Connecticut Water	2.5%	No Projection	0.9%	3.4%	No Projection
Middlesex Water	1.4%	No Projection	4.0%	5.4%	No Projection
SJW Corp	4.0%	No Projection	1.4%	5.4%	No Projection
Average Sample Water Utilities	3.0%	5.5%	2.7%	5.7%	8.8%

[B]: Value Line
[C]: Value Line
[D]: Value Line and MSN Money
[E]: [B]+[D]
[F]: [C]+[D]

Goodman Water Company Cost of Capital Calculation
 Selected Financial Data of Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]	[G]
Company	Symbol	Spot Price 4/21/2011	Book Value	Mkt To Book	Value Line Beta	Raw Beta
American States Water	AWR	34.39	20.26	1.7	0.75	0.60
California Water	CWT	36.73	20.91	1.8	0.65	0.45
Aqua America	WTR	21.82	8.51	2.6	0.70	0.52
Connecticut Water	CTWS	25.27	13.05	1.9	0.80	0.67
Middlesex Water	MSEX	18.50	11.13	1.7	0.75	0.60
SJW Corp	SJW	22.96	13.75	1.7	0.90	0.82
Average				1.9	0.76	0.61

[C]: Msn Money

[D]: Value Line

[E]: [C] / [D]

[F]: Value Line

[G]: (-0.35 + [F]) / 0.67

Goodman Water Company Cost of Capital Calculation
Calculation of Expected Infinite Annual Growth in Dividends
Sample Water Utilities

[A]	[B]
<u>Description</u>	g
DPS Growth - Historical ¹	3.2%
DPS Growth - Projected ¹	4.1%
EPS Growth - Historical ¹	4.1%
EPS Growth - Projected ¹	6.5%
Sustainable Growth - Historical ²	5.7%
<u>Sustainable Growth - Projected²</u>	<u>8.8%</u>
Average	5.4%

¹ Schedule JCM-5

² Schedule JCM-6

Goodman Water Company Cost of Capital Calculation
 Multi-Stage DCF Estimates
 Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]	[H]	[I]
Company	Current Mkt. Price (P_0) ¹ 4/21/2011	Projected Dividends ² (Stage 1 growth) (D_t)				Stage 2 growth ³ (g_n)	Equity Cost Estimate (K) ⁴
		d_1	d_2	d_3	d_4		
American States Water	34.4	1.10	1.16	1.22	1.28	6.6%	9.7%
California Water	36.7	1.25	1.32	1.39	1.47	6.6%	9.9%
Aqua America	21.8	0.62	0.66	0.69	0.73	6.6%	9.4%
Connecticut Water	25.3	0.97	1.02	1.08	1.14	6.6%	10.3%
Middlesex Water	18.5	0.76	0.80	0.84	0.89	6.6%	10.6%
SJW Corp	23.0	0.72	0.76	0.80	0.84	6.6%	9.6%

Average 9.9%

Where: P_0 = current stock price
 D_t = dividends expected during stage 1
 K = cost of equity
 n = years of non - constant growth
 D_n = dividend expected in year n
 g_n = constant rate of growth expected after year n

1 [B] see Schedule JCM-7
 2 Derived from Value Line Information
 3 Average annual growth in GDP 1929 - 2009 in current dollars.
 4 Internal Rate of Return of Projected Dividends

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

**THOMAS J. BOURASSA
REBUTTAL TESTIMONY
(COST OF CAPITAL)**

May 2, 2011

EXHIBIT TJB-COC-RB3

Application No.: 07-05-007
Exhibit No.: _____
Witness: Gary H. Hayes
Date: August 28, 2007

Exhibit <u>4-D</u>
CPUC Proceeding <u>A-07-05-007-27.16</u>
Sponsor/Witness <u>SDGE/ HAYS</u>
Date Ident. <u>8/28/07</u> Recd. <u>9/11/07</u>
Michael J. Galvin Administrative Law Judge

Application No. 07-05-007
Exhibit No. SDGE-5

SAN DIEGO GAS & ELECTRIC COMPANY
PREPARED REBUTTAL TESTIMONY OF
GARY H. HAYES

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

August 28, 2007

Appendix B

Analyst Growth-Forecast Research

This survey, prepared at the request of SDG&E by Dr. James H. Vander Weide, Research Professor of Finance and Economics at Duke University, summarizes nine articles that address whether analysts' growth forecasts are overly optimistic. Seven of the nine articles reviewed find no evidence that analysts' growth forecasts are overly optimistic. Two find evidence of optimism, but also conclude that optimism has been declining significantly over time. Of these two studies, one finds that analysts' forecasts for the S&P 500 are pessimistic for the last four years of the study. The summaries are listed in chronological order.

Crichfield, T., Thomas Dyckman and Josef Lakonishok (1978). "An evaluation of security analysts' forecasts." *The Accounting Review* 53(3): 651-668.

The authors study the ability of security analyst to provide unbiased estimates of earnings per share and compare analysts' forecasts to forecasts made using simple statistical models based on historical EPS data. Their study is based on data during the period 1967 - 1976 from the *Earnings Forecaster* published by Standard & Poor's, and the final sample consists of 46 firms. The authors conclude that the analysts perform well in terms of forecast accuracy when compared to the forecasts produced by five statistical models. Their tests also support the hypothesis that analysts predict EPS changes without significant systematic bias.

Elton, E. J., Martin J. Gruber and Mustafa N. Gultekin (1984). "Professional expectations: accuracy and diagnosis of errors." *Journal of Financial and Quantitative Analysis* 19(4): 351-363.

The authors examine five questions regarding analysts' EPS forecasts: (1) what is the size and pattern of analysts' errors; (2) what is the source of errors; (3) are some firms more difficult to predict than others; and (4) is there an association between errors in forecasts and divergence of analysts' estimates. The authors use the I/B/E/S database of earnings forecasts for a sample of 414 firms for the three years 1976 through 1978, and they compare the I/B/E/S forecasts to actual earnings for each of the next two years. The authors conclude that analysts were accurate in estimating the average level of growth in

earnings for all stocks in the sample. However, analysts did have greater divergence of opinion for some industries, and the diversion in analysts' opinions is positively related to forecast error.

Givoly, D., and Josef Lakonishok (1984). "Properties of analysts' forecasts of earnings: a review and analysis of the research." *Journal of Accounting Literature* 3: 119-148.

Givoly and Lakonishok review the status of the research on security analysts' forecasts up to 1984, and they conclude that: (1) the performance of analysts' forecasts is in general superior to that of statistical models, a result that is consistent with a rational market for forecasting services, where the higher costs of financial analysts' forecasts is compensated with better performance; and (2) financial analysts' forecasts incorporate the past history of realizations and predictions in an unbiased manner.

Brown, L. D. (1997). "Analyst forecasting errors: additional evidence." *Financial Analysts Journal* November/December: 81-88.

Using data from I/B/E/S for the period 1985 - 1996, Brown studies whether: (1) analysts' forecasts are optimistic; (2) potential optimistic bias is constant over time; and (3) analysts' forecasting errors are smaller for S&P 500 firms, firms with large market capitalization, firms with greater analyst following, and firms in particular industries. For the entire period, Brown finds that model and median values of analysts' forecast errors are zero, but mean errors are negative. He finds that the negative mean forecast error results from a relatively small number of large forecast errors, indicating that these errors are associated with large accounting write-offs for a small number of firms in certain years. In addition, he finds that: (1) the mean analyst forecast error decreases significantly over the period of his study; and (2) optimistic bias of mean forecasts for S&P 500 firms is significantly less than optimistic bias for all firms, and, indeed, analysts for S&P 500 firms are, on average, pessimistic for the years 1993 - 1996; (3) optimistic bias is less for large firms than for small firms; and (4) optimistic bias is less for firms in certain industries compared to other industries, with the best forecasts for the following industries: food and related products, transportation equipment, communications, and electric, gas, sanitary services.

Keane, M. P., and David E. Runkle (1998). "Are financial analysts' forecasts of corporate profits rational." *The Journal of Political Economy* 106(4): 768-805.

Keane and Runkle demonstrate that previous inferences regarding analyst optimism are strongly affected by correlation in analyst forecast errors across forecasts and firms and by unexpected accounting write-offs and special charges. They develop a new estimator of bias that gives correct statistical inference when forecast errors are correlated, and they show that previous studies' failure to account for correlation led to a conclusion that analysts are optimistic. Using an I/B/E/S database over the period 1983 - 1991, they also demonstrate that a correct test for analyst optimism leads to the conclusion that analysts are unbiased.

In addition to problems caused by correlation in analysts' earnings forecasts, the authors also address the problems caused by unanticipated accounting accruals. Similar to Abarbanell (2003), they demonstrate that statistical tests of optimism are distorted by discretionary special accounting charges in the forecast period. Failure to adjust for discretionary special accounting charges in the company sample under study distorts statistical results in the direction of favoring the conclusion of biased analysts' forecasts. The authors conclude that the evidence in their paper strongly supports the view that professional stock market analysts make rational forecasts of earnings per share for the companies they follow.

Abarbanell, J., and Reuven Lehavy (2003). "Biased forecasts or biased earnings? The role of reported earnings in explaining apparent bias and over/underreaction in analysts' earnings forecasts." *Journal of Accounting & Economics* 36: 105-146.

Abarbanell and Lehavy investigate whether the apparent bias in analysts' earnings forecasts that appears in some research studies is explained by large accounting write-offs and special charges made by a small number of sample firms. The Abarbanell/Lehavy study is based on a large database of consensus earnings forecasts provided by Zacks for the period 1985 – 1998. When Abarbanell/Lehavy examine the distribution of analysts' forecast errors over this time period, they find that the only statistical indication that supports the argument for analyst optimism is a fairly large negative mean forecast error. In contrast, the median error is zero, suggesting unbiased forecasts, while the percentage of positive errors is significantly greater than the percentage of negative errors (48 percent versus 40 percent), suggesting apparent analyst pessimism. Similar to Brown (1997), Abarbanell/Lehavy explain this phenomenon by observing that the left tail (the optimistic tail of the distribution) contains significantly more extreme errors of greater magnitude than the right tail (the pessimistic tail) of the distribution. Abarbanell/Lehavy's conclusion is supported by a correlation study that examines the relationship between extreme negative forecast errors with extreme negative unexpected accruals. The correlation study indicates a direct connection between the extreme errors in the left tail of the error distribution and unexpected accounting accruals. Once the effect of accounting accruals is removed the study, Abarbanell/Lehavy find that the mean forecast error becomes zero, indicating that there is no tendency for analysts' forecasts to be optimistic.

Ciccone, S. J. (2005). "Trends in analyst earnings forecast properties." *International Review of Financial Analysis* 14: 1-22.

Ciccone examines trends in analysts forecast dispersion, error, and optimism using First Call 120,022 quarterly observations from 1990 – 2001. He finds that analyst optimism declined significantly over the period of his study and that analysts' forecasts for profitable firms became pessimistic in the last several years of his study period. He concludes that analyst optimism is no longer an issue and that, "[i]f anything, analysts have a new concern: earnings pessimism for profit firms."

Clarke, J., Stephen P. Ferris, Narayanan Jayaraman, and Jinsoo Lee (2006). "Are analyst recommendations biased? Evidence from corporate bankruptcies." *Journal of Financial and Quantitative Analysis* 41(1): 169-196.

The authors test whether a bias exists in analysts' recommendations for firms that filed for bankruptcy in the period 1995 – 2001. Their database consists of a final set of 289 firms that filed for bankruptcy during this period and that have I/B/E/S analysts' forecasts. As a comparison sample, the authors identify a matching group of firms with the same SIC code and that have a similar likelihood of bankruptcy as measured by the Altman z-score. The authors test for optimism by comparing the analysts' recommendations for the companies in the bankrupt group to the matched sample of companies in the non-bankrupt group in five categories—strong buy, buy, hold, under-perform, and sell. They find that, on average, analysts' recommendations are significantly lower for the companies that eventually go bankrupt than for the matched companies that do not file for bankruptcy. From this comparison, the authors conclude that the hypothesis that analysts' recommendations are optimistic should be rejected.

Yang, R., and Yaw M. Mensah (2006). "The effect of the SEC's regulation fair disclosure on analyst forecast attributes." *Journal of Financial Regulation and Compliance* 14(2): 192-209.

Regulation fair disclosure ("Reg. FD"), issued on October 23, 2000, prohibits selective disclosure of material non-public information to financial analysts, institutional investors, and others prior to making it available to the general public. Before the implementation of Reg. FD, most conference calls with analysts were accessible only to certain analysts and institutional investors. The authors examine whether Reg. FD has influenced analysts' earnings forecast accuracy and forecast dispersion for companies that routinely conduct conference calls as well as for companies that do not conduct conference calls. Using I/B/E/S forecast data for the period October 1998 through September 2002 and 12,806 firm-quarter observations in pre-Reg FD period and 13,104 firm-quarter observations in the post-Reg FD period, the authors examine the descriptive statistics of analysts' forecast errors in the pre-Reg. FD and post-Reg. FD environments. They conclude that Reg. FD had little influence on analysts' forecast errors: the mean forecast error was approximately zero in both the pre-and post-Reg. FD periods.

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

**THOMAS J. BOURASSA
REBUTTAL TESTIMONY
(COST OF CAPITAL)**

May 2, 2011

EXHIBIT TJB-COC-RB4



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Water Utilities

April 20, 2011

Introducing the Janney RCI: Our Ranking of Water Utility Regulation & Valuation

Janney Water Journal - April 2011

INVESTMENT CONCLUSION:

Having followed the water utility industry for years and - like many others - danced delicately around the issue of comparing state regulatory environments, we decided the time has come for a transparent, quantitative ranking system. Indeed, we believe regulatory climate is the single most important factor driving shareholder returns for water utilities, and that a clear scoring system on this key issue substantially demystifies the investment decision making process. With this in mind, we introduce our Janney Regulatory Climate Indicator (RCI), which assigns a numerical score to each state of relevance for the water utility peer group based upon key factors such as Returns on Equity and the existence (or lack thereof) of progressive regulatory mechanisms such as DSIC and Future Test Years. While we recognize that no such system is perfect and any attempt to tackle the issue will be controversial (hence the Street's historical reticence to do so), our system is transparent, easily understandable, and accurately depicts the relative attractiveness of various regulatory jurisdictions. In any event, we believe even detractors will find the Janney RCI a useful, refreshing step in the right direction toward a more open and candid discourse on the issue. Below we offer several key take-aways from our inaugural RCI rankings, and in the following pages we summarize our methodology and detail our findings.

KEY POINTS:

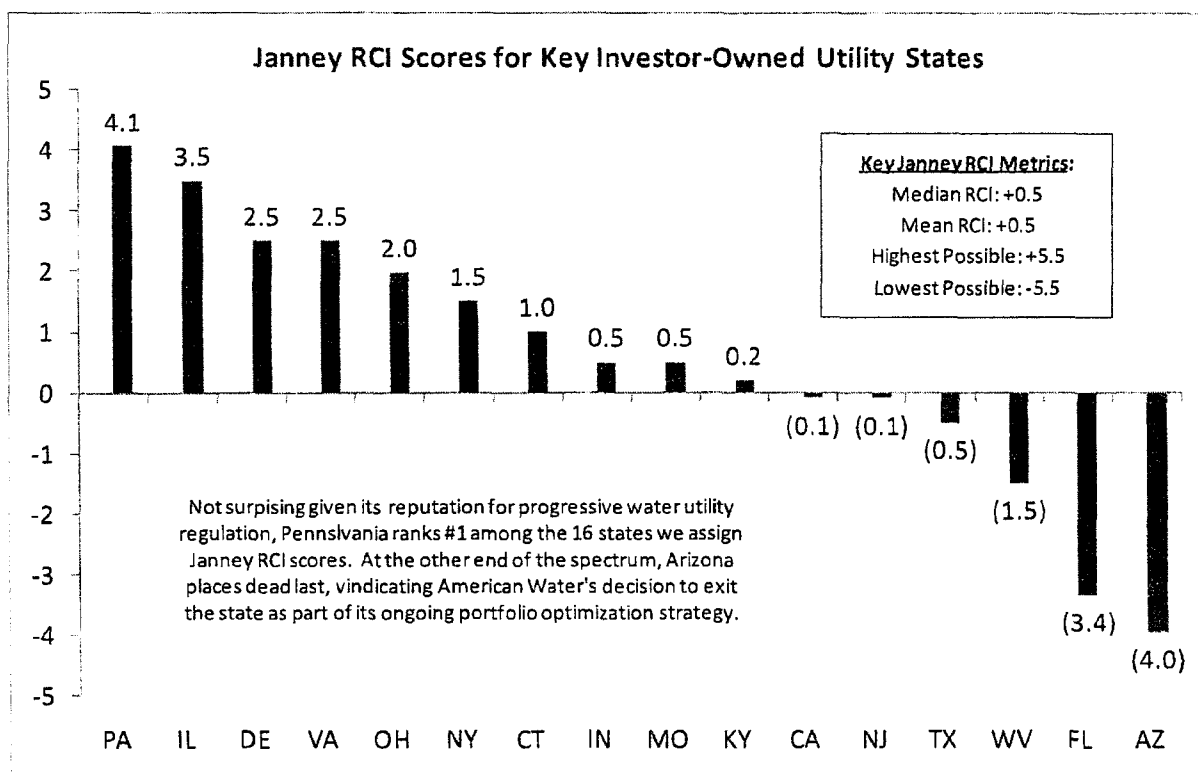
- **The States: PA on top as expected, but some surprises down the league table.** Not surprising given the PA PUC's near unanimous reputation as the most progressive of the state utility commissions on water issues, Pennsylvania ranks #1 of the 16 key states with a Janney RCI score of 4.1 (out of a possible range of -5.5 to +5.5). Among other key states - Illinois ranks #2 (RCI: 3.5), Delaware #3 (RCI: 2.5), Connecticut #7 (RCI: 1.0), California and New Jersey tie for #11 (RCI: -0.1), and Texas ranks #13 (RCI: -0.5). For detailed rankings and inputs see table on page 6.
- **American Water (AWK-BUY): RCI reinforces AWK as our top water utility idea.** Among the anxieties of this type of analysis is the fear that the results will contradict one's previously held views, but our 100% objectively designed system reinforces AWK as the most compelling stock idea in the space. While the company's weighted-average RCI (1.2) lies below key peer Aqua America (2.6), our implied fair value analysis suggests the valuation disconnect between the two companies more than reflects this. In addition, the potential implementation of a DSIC in New Jersey (20% of regulated revenue) represents a potentially significant regulatory catalyst.
- **Aqua America (WTR-Neutral): Premium valuation justified, but upside limited.** With its strong position in top-ranked Pennsylvania and diversified mix of additional states, Aqua America's RCI score (2.6) is second to only Pennsylvania pure-play York Water Company (YORW-BUY). Still, our RCI-based implied fair value analysis indicates that WTR's premium valuation appropriately reflects the company's favorable regulatory exposure, and upside remains limited. Overall, Aqua America remains the "best-of-breed" player in the investor-owned water utility space, and we believe any meaningful pullback in WTR shares should be viewed as buying opportunity.
- **California: CA regulation sub-par already, and uncertainty continues to loom.** While water utility regulation has improved in recent years, the state lacks key regulatory mechanisms and remains a below average capital destination in our view. Overall, we continue to believe that the discount valuations currently assigned to California-centric utilities American States Water Company (AWR-Neutral) and California Water Service Company (CWT-Neutral), appropriately reflect the fact that California regulation (though improved from years ago) remains so-so at best and that recent changes to the CA Public Utility Commission heighten uncertainty going forward.

Equity Research
Industry Report

Research Analyst Certifications and Important Disclosures
are on pages 7 - 8 of this report

JANNEY RCI: NOT PERFECT, BUT A USEFUL PIECE OF THE PUZZLE

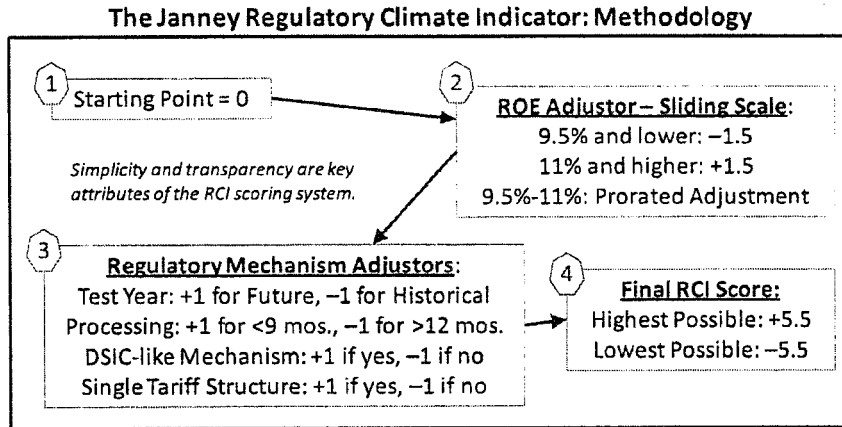
After following the water utility industry for more than five years and frequently speaking with investors frustrated by the difficulty of comparing regulatory environments, we believe the time is right for a simple, easy to understand system for making these comparisons. While we recognize that no such system is perfect, we are firm believers in not allowing the “perfect to be the enemy of the good” and therefore launch our Janney Regulatory Climate Indicator (RCI). Predictable given its attempt to quantify the unquantifiable, the RCI has its flaws, but we believe it will provide a useful tool for investors as they formulate a mosaic of the space. Our RCI scoring system, described in more detail on page 3, essentially starts each state at a baseline score of “0”, applies an adjustment factor based upon recent awarded returns on equity (the higher the better), and then further adjusts this figure depending on whether a state has implemented key progressive regulatory mechanisms (DSIC, future test year, single tariff, etc).



As mentioned above, we realize that no rating system of this type is perfect, and we acknowledge the inevitable criticisms that will come from states (and companies operating therein) ranking poorly. Still, inputs to the Janney RCI formula were carefully deliberated with an eye toward favoring those states whose regulatory systems facilitate strong returns on capital and investment outperformance, and the RCI rankings pass a key sanity check in that the rankings correspond with the more informal pecking order of state regulatory environment we've arrived at after years of following the space. For example, the state of Pennsylvania places #1 in the rankings with an RCI score of 4.1 while Arizona places dead last with an RCI of -4 (note that possible RCI scores range from -5.5 to +5.5). Given that Pennsylvania is universally regarded as the most progressive regulatory jurisdiction in the nation and that major publicly-traded companies like American Water (AWK-BUY) and American States Water (AWR-Neutral) have been exiting Arizona, these outcomes confirm the soundness of the Janney RCI scoring methodology.

JANNEY RCI: SUMMARY OF METHODOLOGY

In designing a system for quantifying the relative attractiveness of various state regulatory systems, we adhere to the maxim that “less is more” and deliberately favor elegance over complexity. Although a more intricate approach would have benefits, we believe a simple, transparent system sacrifices little in the way of accuracy while possessing the key advantage of being easily understandable.



Step-by-Step RCI Calculation:

- 1. Starting Point.** All states are created equal, beginning the process with a baseline score of 0.
- 2. Allowed Return on Equity Adjustment.** The first, and most significant, adjustment to the baseline score of 0 is the ROE adjustor. Using an average of recent awarded ROEs in the state, the baseline score is adjusted to reflect the attractiveness of returns on capital. States with ROEs of 9.5% and below have 1.5 points subtracted from the baseline, while states with ROEs of 11% and above have 1.5 points added to their baseline score. States with ROEs in between 9.5% and 11% receive a pro-rated adjustment according to their position in this range, with any state exactly at the midpoint of 10.25% receiving no adjustment to the starting point.
- 3. Regulatory Mechanism Adjustments.** The next set of adjustments takes into account whether a state has in place key regulatory mechanisms that we believe reduce regulatory lag or otherwise improve the investment climate. These simple +1/-1 adjustments are as follows:
 - +1 if a state has in place a DSIC, -1 if not.
 - +1 point if a Future Test Year is used, -1 if Historical (0 for Historical/Updated).
 - +1 if rate cases must be processed in 9 months or less, -1 if 12 months or more.
 - +1 if a state has in place single tariff rate structures, -1 if not.
- 4. Summation = Final RCI Score.** After all adjustments have been made to the initial starting point of 0, the end result is the Janney RCI score. The highest possible RCI score is +5.5 (0 + 1.5 for an 11% ROE + 1 for DSIC + 1 for Future Test Year + 1 for 9 month rate case processing + 1 for Single Tariff = 5.5). Conversely, the lowest possible score is -5.50. Interpreting RCI scores is easy: higher scores denote states with more capital-friendly regulatory environments.

JANNEY RCI: A LOOK AT KEY REGULATED TERRITORIES

Pennsylvania: The Gold Standard (#1 of 16). With its reputation for progressive regulation and status as a preferred capital destination, it's not surprising that Pennsylvania places #1 among the states included in our RCI rankings. A number of factors contribute to Pennsylvania's status as the gold standard in water utility regulation, but the key driver is that the Pennsylvania Public Utility Commission holds true to a simple concept: grant highly competitive allowed returns on capital and minimize the drag that the regulatory process creates on realized returns. The importance of the latter part of this equation cannot be understated, and the PA PUC has a long history of open mindedness toward forward-looking, creative regulatory mechanisms on this front. A notable example is that the state pioneered the Distribution System Improvement Charge (DSIC), which has long been viewed as an industry best practice and is increasingly seen by investors as a baseline standard of an acceptable regulatory environment.

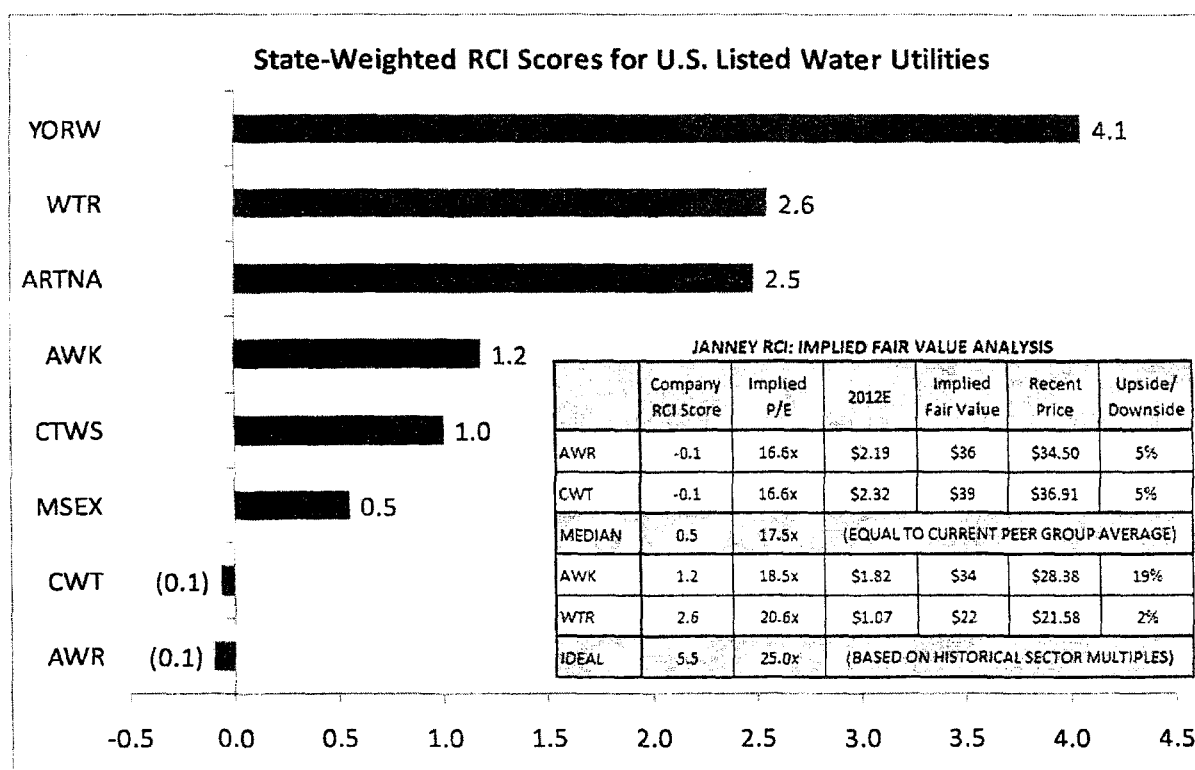
Connecticut: WICA Changes the Game (#7 of 16). Long viewed as a challenging place for regulated water utilities to do business, Connecticut's Department of Public Utility Control has been slowly evolving toward a more progressive regulatory approach in recent years. The cornerstone of the state's gradual positive trajectory was the adoption of an infrastructure surcharge mechanism, dubbed the Water Infrastructure and Conservation Charge (aka "WICA"), implemented in 2007. While granted returns on equity remain sub-par (Connecticut Water's latest granted ROE was 9.75%), the WICA closes the gap meaningfully between granted and realized returns, and is a significant driver of Connecticut's placing above the median in our RCI rankings. With the WICA and other regulatory best-practices (single tariff billing, prompt rate case processing) in place, only Connecticut's non-competitive ROEs (CT ranks dead last on this metric) keep the state from moving into the upper echelon of regulatory jurisdictions.

New Jersey: Late-Blooming Up & Comer (#11 of 16). Also viewed historically as a difficult regulatory environment, New Jersey looks likely to follow Connecticut's path of adopting (albeit belatedly) a DSIC-like mechanism. With comment sessions ongoing, we believe the Board of Public Utilities is likely to adopt a surcharge mechanism in the near-term, and that this would be a significant step in the right direction that would make New Jersey much more attractive from a capital allocation perspective. Indeed, given the significant impact of regulatory lag on realized returns in New Jersey and the fact that granted returns on equity are actually quite competitive (recent allowed ROEs have been in the 10.3% range), adoption of a DSIC-like system would (depending on the exact terms) immediately vault New Jersey into the top echelon of water regulatory jurisdictions. Given its prevalence in the industry (AWK, MSEX, and WTR all have significant NJ operations), New Jersey is a key state to watch going forward.

California: Is Decoupling a *Good* Thing? (#12 of 16). California water utility regulation is a case of good news/bad news, with the CA Public Utility Commission progressive on some key issues (eg. a true future test year) but notably behind the times on others (eg. no DSIC). Ironically, one of the supposed crowning achievements in CA water regulation – so-called "decoupling" – is counterproductive in our view and emblematic of the CPUC getting "too cute" rather than sticking with tried and true best practices with proven results in other states. By allegedly mitigating some of the "risk" associated with operating a water utility business in California, decoupling opens the door to the argument that lower returns are appropriate. In addition, the sheer complexity of the "balancing accounts" used to implement the system has proven a turn-off for investors. Ultimately, we believe the recently revamped CPUC would be well advised to focus on the basics, such as improving ROEs and implementing a DSIC mechanism.

STATES ARE INTERESTING, BUT HOW DO THE COMPANIES STACK UP?

While the Janney RCI is designed as a tool for comparing regulation on a state-by-state basis, the trend in recent years among water utilities has been toward greater geographic diversification. Therefore in order to use the RCI to compare the regulatory mix of individual companies, below assign company-specific RCI scores using a weighted average based on the percentage of regulated revenue each company derives from various states. Not surprisingly, the tails of this analysis are those companies with concentrated exposure to individual regulatory jurisdictions. Of course, this can work out for better or worse depending on which state(s) each company is levered to. York Water (YORW-BUY), for example, is at the head of the class with an RCI score of 4.1 – a product of its being the lone pure-play on top-ranked PA. At the other end of the spectrum, American States Water (AWR) and California Water (CWT) score poorly on this metric, a function of their concentrated exposure to California, whose RCI lies below the median.



Meanwhile, those investor-owned water utilities boasting more diversified state regulatory exposure – most notably BUY-rated American Water Works (serving 20 states) and Neutral-rated Aqua America (serving 12 states) – lie somewhere in between the single-state utility extremes. Aqua America's heavy footprint in Pennsylvania enables the company to garner a significant edge over American Water Works, which comes as no surprise given that investors historically value WTR shares at a significant premium not only to AWK but also to most others in the peer group. Middlesex Water's (MSEX-BUY) weighted RCI score looks so-so at best, but we would note that the New Jersey Board of Public Utilities is actively considering a DSIC-like surcharge mechanism, which would provide Middlesex an RCI boost given the company's heavy exposure to New Jersey (75% of revenue). A NJ DSIC would also accrue to American Water's benefit given that the company derives more than 20% of regulated revenue from New Jersey.

JANNEY REGAULATORY CLIMATE INDICATOR: METHODOLOGY, STATE DETAIL AND LEAGUE TABLE

REG. ELEMENT	GRANTED ROE	TEST YEAR	PROCESSING	DSIC	SINGLE TARIFF		RCI SCORE	RCI RANK
					Yes = +1	No = -1		
RCI PARAMETERS	Sliding Scale 9.5% & Below = -1.5 11% & Above = +1.5	Future = +1 Historical/Updated = 0 Historical = -1	<9 mos. = +1 9-12 mos. = 0 >12 mos./None = -1	Yes = +1 No = -1	Yes = +1 No = -1	Yes = +1 No = -1		
PENNSYLVANIA	1.1	1	0	1	1	1	4.1	1
ILLINOIS	0.5	1	0	1	1	1	3.5	2
DELAWARE	-0.5	0	1	1	1	1	2.5	3
VIRGINIA	0.5	1	1	-1	1	1	2.5	3
OHIO	0.0	0	0	1	1	1	2.0	5
NEW YORK	-0.5	0	0	1	1	1	1.5	6
CONNECTICUT	-1.0	-1	1	1	1	1	1.0	7
INDIANA	-0.5	-1	0	1	1	1	0.5	8
MISSOURI	-0.5	-1	0	1	1	1	0.5	8
KENTUCKY	-0.8	1	0	-1	1	1	0.2	10
CALIFORNIA	-0.1	1	-1	-1	1	1	-0.1	11
NEW JERSEY	-0.1	0	0	-1	1	1	-0.1	11
TEXAS	1.5	-1	-1	-1	1	1	-0.5	13
WEST VIRGINIA	-0.5	-1	0	-1	1	1	-1.5	14
FLORIDA	-0.3	-1	0	-1	1	-1	-3.4	15
ARIZONA	-1.0	-1	0	-1	1	-1	-4.0	16

Source: Janney Capital Markets, Company Reports, State Regulatory Agencies

IMPORTANT DISCLOSURES

Research Analyst Certification

I, Ryan M. Connors, the Primarily Responsible Analyst for this research report, hereby certify that all of the views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views I expressed in this research report.

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BUY: Janney expects that the subject company will appreciate in value. Additionally, we expect that the subject company will outperform comparable companies within its sector.

NEUTRAL: Janney believes that the subject company is fairly valued and will perform in line with comparable companies within its sector. Investors may add to current positions on short-term weakness and sell on strength as the valuations or fundamentals become more or less attractive.

SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

Janney Montgomery Scott Ratings Distribution as of March 31, 2011

Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [B]	185	53	15	8
NEUTRAL [N]	160	45	9	6
SELL [S]	8	2	0	0

***Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.**

Other Disclosures

Investment opinions are based on each stock's 6-12 month return potential. Our ratings are not based on formal price targets, however our analysts will discuss fair value and/or target price ranges in research reports. Decisions to buy or sell a stock should be based on the investor's investment objectives and risk tolerance and should not rely solely on the rating. Investors should read carefully the entire research report, which provides a more complete discussion of the analyst's views.

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

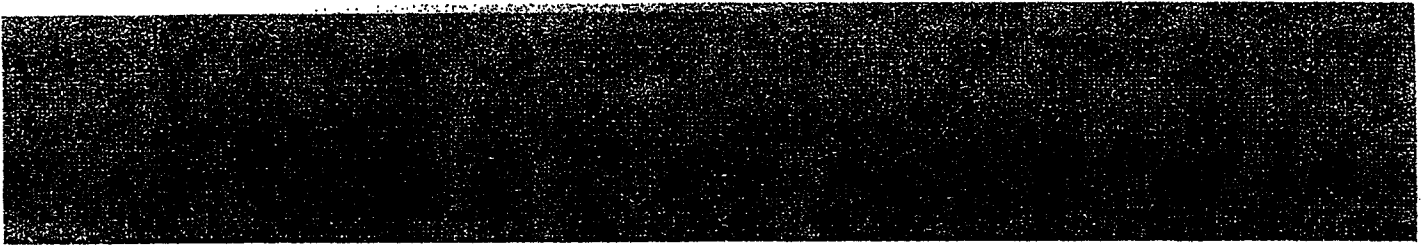
**THOMAS J. BOURASSA
REBUTTAL TESTIMONY
(COST OF CAPITAL)**

May 2, 2011

EXHIBIT TJB-COC-RB5

**NEW
REGULATORY
FINANCE**

Roger A. Morin, PhD



Appendix 4-A

Arithmetic versus Geometric Means in Estimating the Cost of Capital

The use of the arithmetic mean appears counter-intuitive at first glance, because we commonly use the geometric mean return to measure the average annual achieved return over some time period. For example, the long-term performance of a portfolio is frequently assessed using the geometric mean return.

But performance appraisal is one thing, and cost of capital estimation is another matter entirely. In estimating the cost of capital, the goal is to obtain the rate of return that investors expect, that is, a target rate of return. On average, investors expect to achieve their target return. This target expected return is in effect an arithmetic average. The achieved or retrospective return is the geometric average. In statistical parlance, the arithmetic average is the unbiased measure of the expected value of repeated observations of a random variable, not the geometric mean. This appendix formally illustrates that only arithmetic averages can be used as estimates of cost of capital, and that the geometric mean is not an appropriate measure of cost of capital.

The geometric mean answers the question of what constant return you would have had to achieve in each year to have your investment growth match the return achieved by the stock market. The arithmetic mean answers the question of what growth rate is the best estimate of the future amount of money that will be produced by continually reinvesting in the stock market. It is the rate of return which, compounded over multiple periods, gives the mean of the probability distribution of ending wealth.

While the geometric mean is the best estimate of performance over a long period of time, this does not contradict the statement that the arithmetic mean compounded over the number of years that an investment is held provides the best estimate of the ending wealth value of the investment. The reason is that an investment with uncertain returns will have a higher ending wealth value than an investment which simply earns (with certainty) its compound or geometric rate of return every year. In other words, more money, or terminal wealth, is gained by the occurrence of higher than expected returns than is lost by lower than expected returns.

In capital markets, where returns are a probability distribution, the answer that takes account of uncertainty, the arithmetic mean, is the correct one for estimating discount rates and the cost of capital.

While the geometric mean is appropriate when measuring performance over a long time period, it is incorrect when estimating a risk premium to compute the cost of capital.

TABLE 4A-1
GEOMETRIC VS. ARITHMETIC RETURNS

	Stock A	Stock B
1996	50.0%	11.61%
1997	-54.7%	11.61%
1998	98.5%	11.61%
1999	42.2%	11.61%
2000	-32.3%	11.61%
2001	-39.2%	11.61%
2002	153.2%	11.61%
2003	-10.0%	11.61%
2004	38.9%	11.61%
2005	20.0%	11.61%
Standard Deviation	64.9%	0.0%
Arithmetic Mean	26.7%	11.6%
Geometric Mean	11.6%	11.6%

Theory

The geometric mean measures the magnitude of the returns, as the investor starts with one portfolio and ends with another. It does not measure the variability of the journey, as does the arithmetic mean. The geometric mean is backward looking. There is no difference in the geometric mean of two stocks or portfolios, one of which is highly volatile and the other of which is absolutely stable. The arithmetic mean, on the other hand, is forward-looking in that it does impound the volatility of the stocks.

To illustrate, Table 4A-1 shows the historical returns of two stocks, the first one is highly volatile with a standard deviation of returns of 65% while the second one has a zero standard deviation. It makes no sense intuitively that the geometric mean is the correct measure of return, one that implies that both stocks are equally risky since they have the same geometric mean. No rational investor would consider the first stock equally as risky as the second stock. Every financial model to calculate the cost of capital recognizes that investors are risk-averse and avoid risk unless they are adequately compensated for undertaking it. It is more consistent to use the mean that fully impounds risk (arithmetic mean) than the one from which risk has been removed (geometric mean). In short, the arithmetic mean recognizes the uncertainty in the stock market while the geometric mean removes the uncertainty by smoothing over annual differences.

Empirical Evidence

If both the geometric and arithmetic mean returns over the 1926–2004 data are regressed against the standard deviation of returns for the firms in the

deciles, the arithmetic mean outperforms the geometric mean in this statistical regression. Moreover, the constant of arithmetic mean regression matches the average Treasury bond rate and therefore makes economic sense while the constant for the geometric mean matches nothing in particular. This is simply because the geometric mean is stripped of volatility information and, as a result, does a poor job of forecasting returns based on volatility.

The following illustration is frequently invoked in defense of the geometric mean. Suppose that a stock's performance over a two-year period is representative of the probability distribution, doubling in one year ($r_1 = 100\%$) and halving in the next ($r_2 = -50\%$). The stock's price ends up exactly where it started, and the geometric average annual return over the two-year period, r_g , is zero:

$$\begin{aligned} 1 + r_g &= [(1 + r_1)(1 + r_2)]^{1/2} \\ &= [(1 + 1)(1 - .50)]^{1/2} = 1 \\ r_g &= 0 \end{aligned}$$

confirming that a zero year-by-year return would have replicated the total return earned on the stock. The expected annual future rate of return on the stock is not zero, however. It is the arithmetic average of 100% and -50%, $(100 - 50)/2 = 25\%$. There are two equally likely outcomes per dollar invested: either a gain of \$1 when $r = 100\%$ or a loss of \$0.50 when $r = -50\%$. The expected profit is $(\$1 - \$0.50)/2 = \$0.25$ for a 25% expected rate of return. The profit in the good year more than offsets the loss in the bad year, despite the fact that the geometric return is zero. The arithmetic average return thus provides the best guide to expected future returns.

What Academics Have to Say

Bodie, Kane, and Marcus (2005) cite:

Which is the superior measure of investment performance, the arithmetic average or the geometric average? The geometric average has considerable appeal because it represents the constant rate of return we would have needed to earn in each year to match actual performance over some past investment period. It is an excellent measure of *past* performance. However, if our focus is on future performance, then the arithmetic average is the statistic of interest because it is an unbiased estimate of the portfolio's expected future return (assuming, of course, that the expected return does not change over time). In contrast, because the geometric return over a sample period is always less than the arithmetic mean,

it constitutes a downward-biased estimator of the stock's expected return in any future year.

Again, the arithmetic average is the better guide to future performance.

Another way of stating the Bodie, Kane, Marcus argument in favor of the arithmetic mean is that it is the best estimate of the future value of the return distribution because it represents the expected value of the distribution. It is most useful for determining the central tendency of a distribution at a particular time, that is, for cross-sectional analysis. The geometric mean, on the other hand, is best suited for measuring an investment's compound rate of return over time, that is, for time-series analysis. This is the same argument made by Ibbotson Associates (2005) where it is shown, using probability theory, that future terminal wealth is given by compounding the arithmetic mean, and not the geometric mean. In other words, if we accept the past as prologue, the best estimate of a future year's return based on a random distribution of the prior years' returns is the arithmetic average. Statistically, it is our best guess for the holding-period return in a given year.

Brigham and Ehrhardt (2005) in their widely used corporate finance text point out that the arithmetic average is more consistent with CAPM theory, as one of its key underpinning assumptions is that investors are supposed to focus, in their portfolio decisions, upon returns in the next period and the standard deviation of this return. To the extent that this next period is one year, the preference for the arithmetic mean, which derives from a set of single one-year period returns, follows. It is also noteworthy that one of the crucial assumptions inherent in the CAPM is that investors are single-period expected utility of terminal wealth maximizers who choose among alternative portfolios on the basis of each portfolio's expected return and standard deviation.

Brealey, Myers, and Allen (2006) in their leading graduate textbook in corporate finance opt strongly for the arithmetic mean. The authors illustrate the distinction between arithmetic and geometric averages and conclude that arithmetic averages are appropriate when estimating the cost of capital:

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

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

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

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

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

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

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

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

The average compound annual return on Big Oil stock would be

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

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

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

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

(Richard A. Brealey, Stewart C. Myers, and Paul Allen, *Principles of Corporate Finance*, 8th Edition, Irwin McGraw-Hill, 2006, page 156-7.)

The widely cited Ibbotson Associates publication also contains a detailed and rigorous discussion of the impropriety of using geometric averages in estimating the cost of capital.¹²

¹² Ibbotson Associates, *Stocks, Bonds, Bills, and Inflation, 2005 Yearbook, Valuation Edition*, page 75.

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

The argument for using the arithmetic average is quite straightforward. In looking at projected cash flows, the equity risk premium that should be employed is the equity risk premium that is expected to actually be incurred over the future time periods.

The best estimate of the expected value of a variable that has behaved randomly in the past is the average (or arithmetic mean) of its past values.

In their widely publicized research on the market risk premium, Dimson, Marsh and Staunton (2002) state

The arithmetic mean of a sequence of different returns is always larger than the geometric mean. To see this, consider equally likely returns of +25 and -20 percent. Their arithmetic mean is 2½ percent, since $(25 - 20)/2 = 2½$. Their geometric mean is zero, since $(1 + 25/100) \times (1 - 20/100) - 1 = 0$. But which mean is the right one for discounting risky expected future cash flows? For forward-looking decisions, the arithmetic mean is the appropriate measure.

To verify that the arithmetic mean is the correct choice, we can use the 2½ percent required return to value the investment we just described. A \$1 stake would offer equal probabilities of receiving back \$1.25 or \$0.80. To value this, we discount the cash flows at the arithmetic mean rate of 2½ percent. The present values are respectively $\$1.25/1.015 = \1.22 and $\$0.80/1.025 = \0.78 , each with equal probability, so the value is $\$1.22 \times \frac{1}{2} + \$0.80 \times \frac{1}{2} = \1.00 . If there were a sequence of equally likely returns of +25 and -20 percent, the geometric mean return will eventually converge on zero. The 2½ percent forward-looking arithmetic mean is required to compensate for the year-to-year volatility of returns.

Lastly, on the practical side, Bruner, Eades, Harris, and Higgins (1998) found that 71% of the texts and tradebooks in their extensive survey of practice supported use of an arithmetic mean for estimation of the cost of equity.

Mean Reversion Argument

Some academics have argued that if stock returns were expected to revert to a trend, this would suggest the use of a geometric mean since the geometric mean is, by definition, an estimate of a smoothed long-run trend increment. These same academics have argued that the historical estimate of the market risk premium ("MRP") is upward-biased by the buoyant performance of the stock market prior to 2002, and because of the extraordinary and unusually high realized MRPs in those years, investors expect a return to lower MRPs in the future, bringing the average MRP to a more "normal" level.

The presence or absence of mean reversion is an empirical issue. The empirical findings are weak and highly contradictory; the empirical evidence is inconclusive and unconvincing, certainly not enough to support the "mean reversion" hypothesis. The weight of the empirical evidence on this issue is that the more sophisticated tests of mean reversion in the MRP demonstrate that the realized MRP over the last 75 years or so was almost perfectly free of mean reversion, and had no statistically identifiable time trend. It is also noteworthy that most of these studies were performed prior to the stock market's debacle in 2000–2002, years of extraordinary and unusually low realized MRPs. The stock market's dismal performance of 2000–2002 has certainly taken the wind out of the mean reversion school's sails.

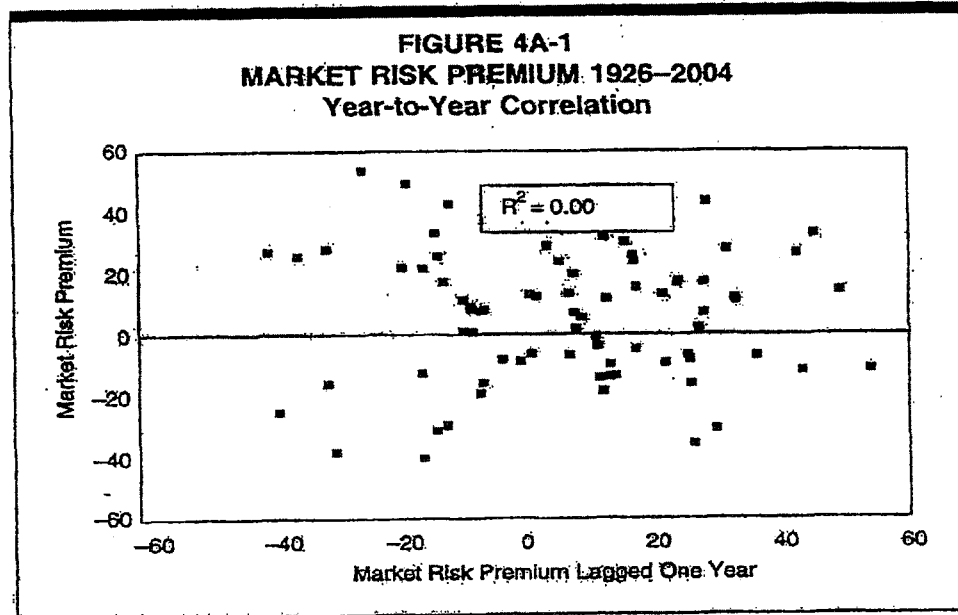
An examination of historical MRPs reveals that the MRP is random with no observable pattern. To the extent that the estimated historical equity risk premium follows what is known in statistics as a random walk, one should expect the equity risk premium to remain at its historical mean. Therefore, the best estimate of the future risk premium is the historical mean.

Ibbotson Associates (2005) find no evidence that the market price of risk or the amount of risk in common stocks has changed over time:

Our own empirical evidence suggests that the yearly difference between the stock market total return and the U.S. Treasury bond income return in any particular year is random . . . there is no discernible pattern in the realized equity risk premium. (Ibbotson Associates, *Stocks, Bonds, Bills, and Inflation, 2005 Yearbook, Valuation Edition*, pages 74–75)

In statistical parlance, there is no significant serial correlation in successive annual market risk premiums, that is, no trend. Ibbotson Associates go on to state that it is reasonable to assume that these quantities will remain stable in the future (*Id.*):

The best estimate of the expected value of a variable that has behaved randomly in the past is the average (or arithmetic mean)



of its past values. (Ibbotson Associates, *Stocks, Bonds, Bills, and Inflation, 2004 Yearbook, Valuation Edition*, page 75)

Nowhere is it suggested by Ibbotson Associates that the market risk premium has declined over time.

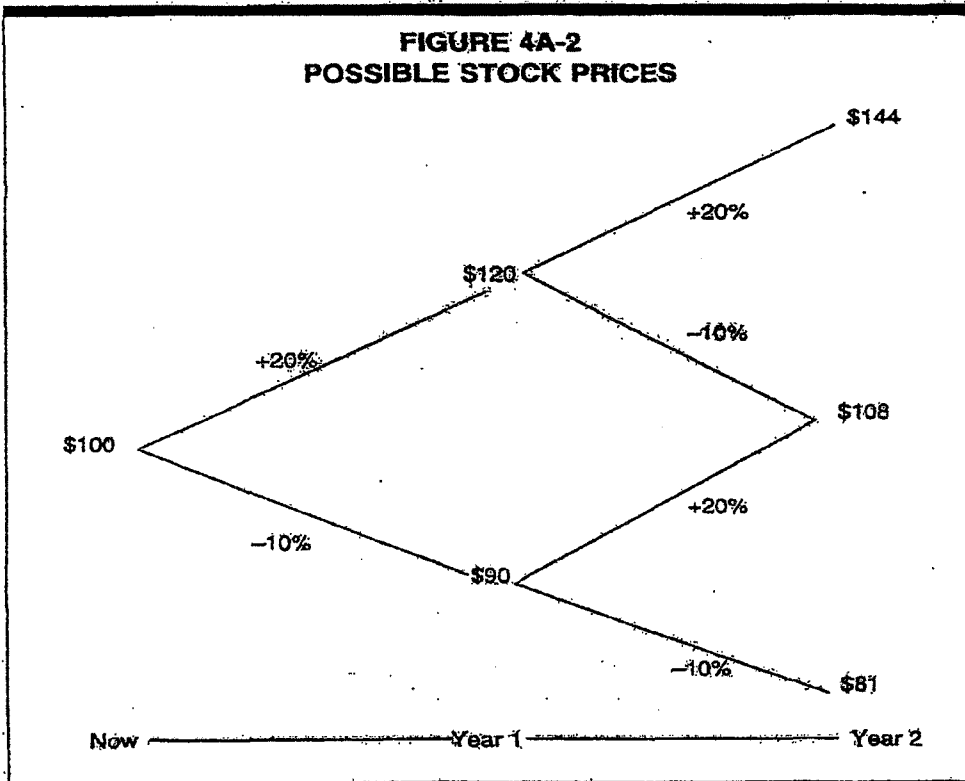
Because there is little evidence that the MRP has changed over time, it is reasonable to assume that these quantities will remain stable in the future. Figure 4A-1 shows the relationship, or the lack of relationship, between year-to-year MRPs reported in the Ibbotson Associates Valuation Yearbook, 2005 edition, for the 1926-2004 period. The relationship is virtually absent, as indicated by the low R^2 of zero between successive MRPs. In other words, there is no history in successive MRPs as indicated by the zero serial correlation coefficient.

In short, the determination of the cost of capital with the CAPM requires an unbiased estimate of the expected annual return. The expected arithmetic return provides the appropriate measure for this purpose.

Formal Demonstration

This section shows why arithmetic rather than geometric means should be used for forecasting, discounting, and estimating the cost of capital.¹³ By

¹³ This section is adapted from a similar treatments and demonstration in Brealey, Myers, and Allen (2006) and Ibbotson Associates (2005).



definition, the cost of equity capital is the annual discount rate that equates the discounted value of expected future cash flows (from dividends and the sale of the stock at the end of the investor's investment horizon) to the current market price of a share in the firm. The discount rate that equates the discounted value of future expected dividends and the end of period expected stock price to the current stock price is a prospective arithmetic, rather than a prospective geometric, mean rate of return. Since future dividends and stock prices cannot be predicted with certainty, the "expected" annual rate of return that investors require is an average "target" percentage rate around which the actual, year-by-year returns will vary. This target rate is, in effect, an arithmetic average.

A numerical illustration will clarify this important point. Consider a non-dividend paying stock trading for \$100 which has, in every year, an equal chance of appreciating by 20% or declining by 10%. Thus, after one year, there is an equal chance that the stock's price will be \$120 and an equal chance the price will be \$90. Figure 4A-2 presents all possible eventualities after two periods have elapsed (the rates of return are presented at the end of the lines in the diagram).

The possible stock prices are shown in the following table.

TABLE 4A-2 STOCK PRICES AFTER TWO PERIODS	
Price	Chance
\$144	1 chance in 4
\$108	2 chances in 4
\$ 81	1 chance in 4

The expected future stock price after two periods is then:

$$1/4 (\$144) + 2/4 (\$108) + 1/4 (\$81) = \$110.25$$

The cost of equity capital is calculated as the discount rate that equates the present value of the future expected cash flows to the current stock price. In the present simple example, the only cash flow is the gain from selling the stock after two periods have elapsed. Thus, using the expected stock price of \$110.25 calculated above, the expected rate of return is that r , which solves the following equation:

$$\text{Current Stock Price} = \frac{\text{Expected Stock Price}}{(1 + r)^2}$$

The factor $(1 + r)^2$ discounts the expected stock price to the present. Substituting the numerical values, we have:

$$\$100 = \frac{\$110.25}{(1 + r)^2}$$

$$r = 5\%$$

Thus, the cost of equity capital is 5%. This 5% cost of equity capital is equal to the prospective arithmetic mean rate of return, which is the probability-weighted average single period rate of return on equity. Since in every period there is an equal chance that the stock's return will be 20% or -10%, the probability-weighted average is:

$$1/2 (20\%) + 1/2 (-10\%) = 5\%$$

However, the 5% cost of equity capital is not equal to the prospective geometric mean rate of return, which is a probability-weighted average of the possible compounded rates of return over the two periods. Now consider the prospective geometric mean rate of return. Table 4A-3 shows the possible compounded rates of return over two periods, and the probability of each.

Thus, the prospective geometric mean rate of return is:

$$1/4 (20\%) + 2/4 (3.92\%) + 1/4 (-10\%) = 4.46\%$$

Price	Chance	Compounded Return
\$144	1 chance in 4	20.00%
\$108	2 chances in 4	3.92%
\$ 81	1 chance in 4	-10.00%

This return is not equal to the 5% cost of equity capital.

The example can easily be extended to include the case of a dividend-paying company and will reach the same conclusion: the implied discount rate calculated in the DCF model is an expected arithmetic rather than an expected geometric mean rate of return.

The foregoing analysis shows that it is erroneous to use a prospective multi-year geometric mean rate of return as a "target" rate of return for each year of the period. If, for example, investors currently require an expected future rate of return on an investment of 13% each year, then 13% is the appropriate annual rate of return on equity for ratemaking purposes. Consequently, in using a risk premium approach for the purposes of rate of return regulation, the single-year annual required rate of return should be estimated using arithmetic mean risk premiums.

It should be pointed out that the use of the arithmetic mean does not imply an investment holding period of one year. Rather, it is premised on the uncertainty with respect to each year's return during the holding period, however many years that may be. When computing the arithmetic average of historic annual returns in order to calculate the average return (expected value of the return), every achieved return outcome is one possible future outcome for each year the security will be held. Each historic return has an equal probability of occurring during each year of the holding period. The resulting expected value of the risk premium is the arithmetic average of all of the past premiums considered, regardless of the length of the expected holding period.

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

**THOMAS J. BOURASSA
REBUTTAL TESTIMONY
(COST OF CAPITAL)**

May 2, 2011

EXHIBIT TJB-COC-RB6

Goodman Water Company
Comparison of Total Capitalization and Return \$ Impact on Revenue Requirement

	Proxy Group Average Percentage	Cost	Weighted Cost	Goodman Water Company	Cost	Weighted Cost
<u>Total Capitalization</u>						
[1] Refundable Advances for Construction (AIAC)	8.78%	0.0%	0.0%	43.07%	0.0%	0.0%
[2] Contributions-in-aid of Construction (CIAC)	13.79%	0.0%	0.0%	0.00%	0.0%	0.0%
[2] Debt	38.82%	5.7%	2.2%	10.39%	8.5%	0.9%
[3] Equity (Common and Preferred)	38.60%	10.1%	3.9%	46.53%	10.2%	4.7%
[4] Totals	<u>100.00%</u>		<u>6.12%</u>	<u>100.00%</u>		<u>5.63%</u>

	Proxy Group Average Percentage	Cost	Weighted Average Cost WACC	Goodman Water Company	Cost	Weighted Average Cost WACC
<u>Capital Structure</u>						
[5] Debt ¹	50.2%	5.7%	2.9%	23.1%	8.5%	2.0%
[6] Equity ²	49.8%	10.1%	5.0%	76.9%	10.2%	7.8%
[7] Totals	<u>100.0%</u>		<u>7.9%</u>	<u>100.0%</u>		<u>9.8%</u>

	Proxy Group	Goodman Water Company
<u>Rate Base (per \$100 of capitalization)</u>		
[8] Net Plant-in-service	\$ 100.00	\$ 100.00
[9] AIAC	(8.78)	(43.07)
[10] CIAC	\$(13.79)	\$ -
[11] Implied Rate Base (per \$100) ³	\$ 77.43	\$ 56.93
[12] WACC	7.9%	9.8%
[13] Required Return [12] x [11]	\$ 6.12	\$ 5.58
[14] Tax Factor ⁴	1.6207	1.6103
[15] Total \$ Impact [13] x [14]	\$ 9.92	\$ 8.99

Goodman Water Company
Comparison of Total Capitalization
(in 1,000 dollars)
Based up data at 12/31/2010

	American States Water	Aqua America	California Water	Connecticut Water	Middlesex Water	SJW Water	Proxy Group Averages	Goodman Water
	%	%	%	%	%	%		
Refundable Advances for Construction (AIAC)	\$ 76,325	\$ 66,966	\$ 186,899	\$ 36,719	\$ 21,621	\$ 68,352	8.78%	\$ 2,101
	9.2%	9.2%	2.1%	15.1%	11.5%	5.6%		
Contributions-in-aid of Construction (CIAC)	\$ 95,460	\$ 444,107	\$ 136,356	\$ 55,761	\$ 49,698	\$ 121,803	13.79%	\$ -
	11.2%	13.7%	11.0%	17.5%	12.9%	12.9%		
Debt	\$ 299,839	\$ 1,560,389	\$ 481,561	\$ 111,675	\$ 138,286	\$ 295,704	38.82%	\$ 507
	35.2%	48.1%	38.8%	35.1%	35.8%	35.8%		
Equity	\$ 377,541	\$ 1,174,254	\$ 435,526	\$ 113,963	\$ 176,646	\$ 255,032	38.60%	\$ 2,270
	44.4%	36.2%	35.1%	35.8%	45.7%	34.4%		
Total	\$ 851,165	\$ 3,245,716	\$ 1,240,342	\$ 318,118	\$ 386,251	\$ 740,891	100.00%	\$ 4,878
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		
Debt	\$ 299,839	\$ 1,560,389	\$ 481,561	\$ 111,675	\$ 138,286	\$ 295,704	50.15%	\$ 507
	44.3%	57.1%	52.5%	49.5%	43.9%	43.9%		
Equity	\$ 377,541	\$ 1,174,254	\$ 435,526	\$ 113,963	\$ 176,646	\$ 255,032	49.85%	\$ 2,270
	55.7%	42.9%	47.5%	50.5%	56.1%	56.1%		
Total	\$ 677,380	\$ 2,734,643	\$ 917,087	\$ 225,638	\$ 314,932	\$ 550,736	100.00%	\$ 2,777
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		

Source: 2010 10K

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

**THOMAS J. BOURASSA
REBUTTAL TESTIMONY
(COST OF CAPITAL)**

May 2, 2011

SCHEDULES

**Goodman Water Company
Summary of Results**

**Exhibit
Schedule D-4.1**

Line No.	<u>Method</u>	<u>Low</u>	<u>High</u>	<u>Midpoint</u>
1				
2				
3				
4				
5				
6	Range DCF Constant Growth Estimates ¹	8.7%	9.5%	9.1%
7				
8	Range of CAPM Estimates ²	10.2%	13.4%	11.8%
9				
10				
11	Average of DCF and CAPM midpoint estimates	9.4%	11.4%	10.4%
12				
13				
14	Financial Risk Adjustment ³	-0.7%	-0.7%	-0.7%
15				
16	Small Company Risk Premium ⁴	1.0%	1.0%	1.0%
17				
18	Indicated Cost of Equity	9.7%	11.7%	10.7%
19				
20				
21				
22	Recommended Cost of Equity			10.2%
23				
24				
25				
26				
27				
28				
29				

¹ See Schedule D-4-8

² See Schedule D-4.12

³ See Schedule D-4.16

⁴ See testimony.

Goodman Water Company
Selected Characteristics of Sample Group of Water Utilities

Exhibit
Schedule D-4.2

Line No.	Company ¹	% Water Revenues	Operating Revenues (millions)	Net Plant (millions)	S&P Bond Rating	Moody's Bond Rating	Allowed ROE
1	1. American States	73%	\$ 400.8	\$ 855.0	A+	A2	10.20
2	2. Aqua America	98%	\$ 726.1	\$ 3,469.3	AA-	NR	10.33
3	3. California Water	94%	\$ 460.4	\$ 1,270.2	AA-	NR	10.20
4	4. Connecticut Water	99%	\$ 68.1	\$ 344.2	A	NR	9.75
5	5. Middlesex	90%	\$ 102.7	\$ 398.7	A	NR	10.15
6	6. SJW Corp.	96%	\$ 215.6	\$ 692.4	A	NR	10.20
7	Average	92%	\$ 329.0	\$ 1,171.6			10.14
8	Goodman Water Company	100%	\$ 0.6	\$ 4.7	NR	NR	
9	(as of December 31, 2009)						

¹AUS Utility Reports (April 2011).

Line No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

**Goodman Water Company
Capital Structures**

**Exhibit
Schedule D-4.3**

No.	Company	Book Value ¹		Market Value ¹	
		Long-Term Debt	Common Equity	Long-Term Debt	Common Equity
1	1. American States	45.5%	54.5%	32.0%	68.0%
2	2. Aqua America	56.6%	43.4%	33.7%	66.3%
3	3. California Water	52.4%	47.6%	38.5%	61.5%
4	4. Connecticut Water	49.6%	50.4%	33.7%	66.3%
5	5. Middlesex	43.5%	56.5%	31.7%	68.3%
6	6. SJW Corp.	53.6%	46.4%	40.9%	59.1%
7	Average	50.2%	49.8%	35.1%	64.9%
8	Goodman Water Company ²	18.3%	81.7%	N/A	N/A
9	(Adjusted as of December 31, 2009)				

¹ Value Line Analyzer Data (April 21, 2011)

² Adjusted Per Schedule D-1

Goodman Water Company
Comparisons of Past and Future Estimates of Growth

Line No.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
1							
2							
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29							

Five-year historical average annual changes

Company	Price ¹	Book Value ²	EPS ²	DPS ²	Average Col 1-4	Average Future Growth ³	Average of Future and Historical Growth Col 5-6
1. American States	4.19%	5.00%	8.50%	2.50%	5.05%	7.00%	6.02%
2. Aqua America	NMF	7.00%	4.50%	8.00%	6.50%	7.44%	6.97%
3. California Water	1.41%	5.50%	6.50%	1.00%	3.60%	5.25%	4.43%
4. Connecticut Water	5.97%	3.00%	1.50%	1.50%	2.99%	3.50%	3.25%
5. Middlesex	4.69%	5.50%	4.50%	1.50%	4.05%	3.00%	3.52%
6. SJW Corp.	1.57%	6.50%	NM	5.50%	4.52%	9.67%	7.09%
GROUP AVERAGE	3.56%	5.42%	5.10%	3.33%	4.45%	5.98%	5.21%
GROUP MEDIAN	4.19%	5.50%	4.50%	2.00%	4.28%	6.13%	5.22%

¹ Average of changes in annual stock prices ending on December 31 through 2010. Data from Yahoo Finance website.

² Value Line Analyzer Data, April 21, 2011

³ See Schedule D-4.6.

Exhibit
Schedule D-4.5

Goodman Water Company
Comparisons of Past and Future Estimates of Growth

Line No.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
	Price ¹	Book Value ²	EPS ²	DPS ²	Average Col 1-4	Average Future Growth ³	Average of Future and Historical Growth Col 5-6
3	<u>Ten-year historical average annual changes</u>						
4	Company	Value ²	EPS ²	DPS ²	Average Col 1-4	Average Future Growth ³	Average of Future and Historical Growth Col 5-6
5	1. American States	4.50%	4.00%	1.50%	3.94%	7.00%	5.47%
6	2. Aqua America	9.00%	6.50%	7.50%	7.48%	7.44%	7.46%
7	3. California Water	4.50%	3.00%	1.00%	3.60%	5.25%	4.43%
8	4. Connecticut Water	4.00%	1.00%	1.50%	3.05%	3.50%	3.27%
9	5. Middlesex	4.50%	2.50%	2.00%	3.37%	3.00%	3.19%
10	6. SJW Corp.	6.00%	2.00%	5.00%	4.34%	9.67%	7.01%
11							
12							
13							
14	GROUP AVERAGE	5.42%	3.17%	3.08%	4.30%	5.98%	5.14%
15	GROUP MEDIAN	5.72%	2.75%	1.75%	3.77%	6.13%	4.95%
16							
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23							
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25							
26							
27							
28							

¹ Average of changes in annual stock prices ending December 31, 2010. Data from Yahoo Finance website.

² Value Line Analyzer Data, April 21, 2011

³ See Rejoinder Schedule D-4.6.

Goodman Water Company
Analysts Forecasts of Earnings Per Share Growth

Exhibit
Schedule D-4.6

Line No.	[1]	[2]	[3]	[4]	[5]	ESTIMATES OF EARNINGS GROWTH			Average Growth (G) (Cols 1-4) ²
						Zacks ¹	Morningstar ¹	Yahoo ¹	
6	Company								
7	1. American States	11.00%	4.00%	6.00%	7.00%				7.00%
8	2. Aqua America	6.50%	7.50%	6.75%	9.00%				7.44%
9	3. California Water		4.00%	8.25%	3.50%				5.25%
10	4. Connecticut Water	4.00%	3.00%	3.00%	4.00%				3.50%
11	5. Middlesex	3.00%	3.00%	3.00%	3.00%				3.00%
12	6. SJW Corp.		9.00%	14.00%	6.00%				9.67%
15	GROUP AVERAGE	6.13%	5.08%	6.83%	5.42%				5.98%
16	GROUP MEDIAN								6.13%

¹ Data as of April 21, 2011

² Where no data available or single estimate, average of other utilities assumed to estimate for utility.

Exhibit
Schedule D-4.7

Goodman Water Company
Current Dividend Yields for Water Utility Sample Group

Line No.	Company	Current Stock Price (P ₀) ¹	Current Dividend (D ₀) ¹	Current Dividend Yield (D ₀ /P ₀) ¹	Average Annual Dividend Yield (D ₀ /P ₀) ^{1,2}
1	1. American States	\$ 34.39	\$ 1.08	3.14%	2.94%
2	2. Aqua America	\$ 21.82	\$ 0.63	2.89%	3.09%
3	3. California Water	\$ 36.73	\$ 1.23	3.35%	3.07%
4	4. Connecticut Water	\$ 25.27	\$ 0.94	3.70%	4.11%
5	5. Middlesex	\$ 18.50	\$ 0.73	3.95%	4.71%
6	6. SJW Corp.	\$ 22.96	\$ 0.69	3.01%	2.84%
7	Average			3.34%	3.46%
8	Median			3.24%	3.08%

¹ Value Line Analyzer Data. Stock prices as of April 21, 2011.

² Average Annual Dividend is dividends declared per share for a year divided by the average annual price of the stock in the same year, expressed as a percentage. For comparison purposes only.

Goodman Water Company
Discounted Cash Flow Analysis
DCF Constant Growth

Exhibit
Schedule D-4.8

Line No.	[1] Average Spot Dividend Yield $(D_0/P_0)^1$	[2] Expected Dividend Yield $(D_1/P_0)^2$	[3] Growth (g)	[4] Indicated Cost of Equity $k = \text{Div Yld} + g$ (Cols 2+3)
8	DCF - Past and Future Growth	3.34%	5.21% ³	8.7%
10	DCF - Future Growth	3.34%	5.98% ⁴	9.5%
13	Average	3.34%	5.59%	9.1%

¹ Spot Dividend Yield = D_0/P_0 . See Schedule D-4.7.

² Expected Dividend Yield = $D_1/P_0 = D_0/P_0 * (1+g)$.

³ Growth rate (g). Average of Past and Future Growth. See Schedule D-4.4, column 7

⁴ Growth rate (g). Average of Analyst Estimates Future Growth. See Schedule D-4.6.

Line No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

Goodman Water Company
Market Betas

Exhibit
Schedule D-4.9

Line No.	Company	Beta (β) ¹
1	American States	0.75
2	Aqua America	0.65
3	California Water	0.70
4	Connecticut Water	0.80
5	Middlesex	0.75
6	SJW Corp.	0.90
7		
8		
9	Average	0.76
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

¹ Value Line Investment Analyzer data (April 21, 2011)

Note: Beta is a relative measure of the historical sensitivity of a stock's price to overall fluctuations in the New York Stock Exchange Composite Index. A Beta of 1.50 indicates a stock tends to rise (or fall) 50% more than the New York Stock Exchange Composite Index. The "Beta coefficient" is derived from a regression analysis of the relationship between weekly percent-age changes in the price of a stock and weekly percentage changes in the NYSE Index over a period of five years. In the case of shorter price histories, a smaller time period is used, but two years is the minimum. The Betas are adjusted for their long-term tendency to converge toward 1.00.

Goodman Water Company
Forecasts of Long-Term Interest Rates
2011-2012

Exhibit
Schedule D-4.10

Line No.	Description	<u>2012</u>	<u>2013</u>	<u>Average</u>
1				
2				
3				
4				
5				
6	Blue Chip Consensus Forecasts ¹	4.9%	5.2%	5.1%
7				
8	Value Line ²	4.9%	5.2%	5.1%
9				
10	Average			5.1%
11				
12				
13				
14				

¹ Dec 2010 Blue Chip Financial Forecasts consensus forecast of 30 Year U.S. Treasury

² Value Line Quarterly forecast, dated February 25, 2011, Long-term Treasury

Line No. 1
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Exhibit
Schedule D-4.11

Goodman Water Company
Computation of Current Market Risk Premium

Line No.	Month	Dividend Yield (D _t /P ₀) ¹	Expected Dividend Yield (D _t /P ₀) ²	+ Growth (g) ³	= Expected Market Return (k)	-	Monthly Average 30 Year Treasury Rate ⁴	=	Market Risk Premium (MRP)
1									
2									
3									
4	Dec 2009	2.56%	2.88%	+ 12.58%	= 15.46%	-	4.35%	=	11.11%
5	Jan 2010	2.64%	3.00%	+ 13.71%	= 16.71%	-	4.48%	=	12.23%
6	Feb	2.59%	2.97%	+ 14.65%	= 17.62%	-	4.48%	=	13.14%
7	Mar	2.44%	2.75%	+ 12.69%	= 15.44%	-	4.48%	=	10.96%
8	April	2.36%	2.63%	+ 11.61%	= 14.24%	-	4.69%	=	9.55%
9	May	2.61%	3.00%	+ 14.80%	= 17.80%	-	4.29%	=	13.51%
10	June	2.79%	3.30%	+ 18.20%	= 21.50%	-	4.13%	=	17.37%
11	July	2.61%	3.03%	+ 15.95%	= 18.98%	-	3.99%	=	14.99%
12	Aug	2.65%	3.10%	+ 16.83%	= 19.93%	-	3.80%	=	16.13%
13	Sept	2.55%	2.93%	+ 15.01%	= 17.94%	-	3.77%	=	14.17%
14	Oct	2.49%	2.85%	+ 14.31%	= 17.16%	-	3.87%	=	13.29%
15	Nov	2.43%	2.74%	+ 12.89%	= 15.63%	-	4.19%	=	11.44%
16	Dec 2010	2.37%	2.65%	+ 11.61%	= 14.26%	-	4.42%	=	9.84%
17	Jan 2011	2.34%	2.60%	+ 11.10%	= 13.70%	-	4.52%	=	9.18%
18	Feb	2.41%	2.73%	+ 13.16%	= 15.89%	-	4.65%	=	11.24%
19	Mar	2.35%	2.64%	+ 12.33%	= 14.97%	-	4.51%	=	10.46%
20									
21	Recommended	2.37%	2.66%	+ 12.20%	= 14.85%	-	4.56%	=	10.91%
22									
23	<u>Short-term Trends</u>								
24	Recent Twelve Months Avg	2.50%	2.85%	+ 13.98%	= 16.83%	-	4.24%	=	12.60%
25	Recent Nine Months Avg	2.47%	2.81%	+ 13.69%	= 16.49%	-	4.19%	=	12.30%
26	Recent Six Months Avg	2.40%	2.70%	+ 12.57%	= 15.27%	-	4.36%	=	10.91%
27	Recent Three Months Avg	2.37%	2.66%	+ 12.20%	= 14.85%	-	4.56%	=	10.29%
28									
29									

¹ Average Current Dividend Yield (D_t/P₀) of dividend paying stocks. Data from Value Line Investment Analyzer Software Data - Value Line 1700 Stocks

² Expected Dividend Yield (D_t/P₀) equals average current dividend yield (D₀/P₀) times one plus growth rate(g).

³ Average 3-5 year price appreciation (annualized). Data from Value Line Investment Analyzer Software Data - Value Line 1700 Stocks

⁴ Monthly average 30 year U.S. Treasury. Federal Reserve.

**Goodman Water Company
Capital Asset Pricing Model (CAPM)**

**Exhibit
Schedule D-4.12**

Line No.									
1		Rf ¹	+	beta ³	x	Rp	=	k	
2									
3		5.1%	+	0.76	x	6.7%	=	10.2%	
4									
5		5.1%	+	0.76	x	10.9%	=	13.4%	
6									
7									11.8%
8									
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Historical Market Risk Premium CAPM

Current Market Risk Premium CAPM

Average

¹ Forecasts of long-term treasury yields. See Schedule D-4.10.

² Value Line Investment Analyzer data. See Schedule D-4.9.

³ Historical Market Risk Premium from (Rp) MorningStar S&P 500 2011 Valuation Yearbook Table A-1 Long-Horizon ERP 1926-2010

⁴ Computed using DCF constant growth method to determine current market return on Value Line 1700 stocks and CAPM with beta of 1.0 to compute Current Market Risk Premium (Rp). See Schedule D-4.11.

Goodman Water Company
Financial Risk Computation

Exhibit
Schedule D-4.13

Line No.							
1	CAPM						
2	Historical Market Risk Premium	Rf	+	β	x	(Rp)	k
3	Current Market Risk Premium	5.1%	+	0.76	x	6.7%	10.2%
4		5.1%	+	0.76	x	10.9%	13.4%
5							
6	Average						11.8%
7							
8							
9	CAPM Relevered Beta						
10	Historical Market Risk Premium	Rf	+	β	x	(Rp)	k
11	Current Market Risk Premium	5.1%	+	0.68	x	6.7%	9.7%
12		5.1%	+	0.68	x	10.9%	12.5%
13							
14	Average						11.1%
15							
16	Financial Risk Adjustment						<u><u>-0.7%</u></u>
17							

¹ Forecast of long-term treasury yields. See Schedule D-4.10
² Value Line Investment Analyzer data. See Schedule D-4.9
³ Historical Market Risk Premium from (Rp) MorningStar S&P 500 2011 Valuation Yearbook Table A-1 Long-Horizon ERP 1926-2010
⁴ Computed using DCF constant growth method to determine current market return on Value Line 1700 stocks and CAPM with beta of 1.0 to compute Current Market Risk Premium (Rp). See Schedule D-4.11
⁵ Relevered beta found on Schedule D-4.15

Exhibit
Schedule D-4.14

Goodman Water Company
Financial Risk Computation
Unlevered Beta

Line No.	Company	VL Beta β_L^1	Raw Beta $\frac{Raw \beta_L^2}{Raw \beta_L^2}$	Tax Rate t^3	MV Debt $\frac{D^4}{E^4}$	MV Equity $\frac{E^4}{E^4}$	Unlevered Raw Beta β_{UL}^5
1	American States	0.75	0.63	41.0%	32.0%	68.0%	0.49
2	Aqua America	0.65	0.48	39.2%	33.7%	66.3%	0.37
3	California Water	0.70	0.55	39.5%	38.5%	61.5%	0.40
4	Connecticut Water	0.80	0.70	51.2%	33.7%	66.3%	0.56
5	Middlesex	0.75	0.63	32.1%	31.7%	68.3%	0.48
6	SJW Corp.	0.90	0.85	26.9%	40.9%	59.1%	0.56
11							
12							
13	Sample Water Utilitie:	0.76	0.64	38.3%	35.1%	64.9%	0.48
14							
15							
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20							
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23							
24							
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30							

¹ Value Line Investment Analyzer data. See Schedule D-4.13

² Value Line uses the historical data of the stock, but assumes that a security's beta moves toward the market average over time. The formula is as follows:

Adjusted beta = .33 + (.67) * Raw beta

³ Raw Beta = (VL beta - .33)/(.67)

⁴ Effective tax rates for year ended December 31, 2010.

⁵ See Schedule D-4.3

⁶ Raw $B_U = Raw \beta_L / (1 + (1-t)D/E)$

Exhibit
Schedule D-4.15

Goodman Water Company
Financial Risk Computation
Relevered Beta

	Unlevered Raw Beta β_{UL}^1	MV Book Debt BD^2	MV Equity Capital EC^2	Tax Rate t^3	Relevered Raw Beta $\beta_{RL} = \beta_U (1 + (1-t)BD/EC)$	VL Adjusted Relevered Beta β_{RL}
1	0.48	10.6%	89.4%	37.81%	0.52	0.68
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26						

¹ Unlevered Beta from Schedule D-4.14.

² Capital Structure of Company (Projected)

	BV (in Thousands)	MV (in Thousands)	MV %
Long-term Debt	\$ 507	\$ 507	10.60%
Preferred Stock	-	-	0.0%
Common Stock	\$ 2,270	\$ 4,298	89.4%
Total Capital	\$ 2,777	\$ 4,806	100.0%

(a) Current market-to-book ratio of sample water utilities. See work papers.

³ Current Tax rate based on test year ending 12/31/2009. See Schedule D-1.

Goodman Water Company
Size Premium¹

Exhibit
Schedule D-4.16

Line No.	Beta(β)	Size Premium	Risk Premium for Small Water Utilities ⁷
1			
2			
3			
4			
5			
6	1.13	1.00%	
7			
8	1.26	1.64%	
9			
10	1.51	3.00%	
11			
12	1.64	4.74%	2.37%
13			
14			
15			
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Risk Premium for Small Water Utilities

Estimated Risk Premium for small water utilities⁶

0.99%

¹ Data from Table 7-11 of Morningstar, *Ibbotson S&P 500 2011 Valuation Yearbook*.
² Mid-Cap companies includes companies with market capitalization between \$1,779 million and \$6,794 million.
³ Low-Cap companies includes companies with market capitalization between \$478 million and \$1,776 million.
⁴ Micro-Cap companies includes companies with market capitalization less than \$477 million.
⁵ Decile 10 includes companies with market capitalization between \$1.2 million and \$235 million.
⁶ From Table 2, Thomas M. Zepp, "Utility Stocks and the Size Effect Revisited," *The Quarterly Review of Economics and Finance*, 43 (2003), 578-582.
⁷ Computed as the weighted differences between the Decile 10 risk premium and the indicated risk premiums for the sample water utilities as shown below. Excludes risk due to differences in beta.

Market Cap.	(Millions)	Class	Size Premium	Difference to Decile 10	Weight	Weighted Size Premium
1.	\$ 636	Low-Cap	1.76%	2.98%	0.1666667	0.50%
2.	\$ 3,011	Mid-Cap	1.10%	3.64%	0.1666667	0.61%
3.	\$ 764	Low-Cap	1.76%	2.98%	0.1666667	0.50%
4.	\$ 220	Decile 10	4.78%	-0.04%	0.1666667	-0.01%
5.	\$ 289	Micro-Cap	3.07%	1.67%	0.1666667	0.28%
6.	\$ 427	Low-Cap	1.76%	2.98%	0.1666667	0.50%
Weighted Size Premium for Small Companies						2.37%

Exhibit A-8



May 2, 2011

Rebuttal Testimony

Michael J. Naifeh

**July 26-28, 2011 ACC Hearing
Goodman Water Company
Docket No. W-02500A-10-0382**

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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF)
GOODMAN WATER COMPANY, AN ARIZONA) DOCKET NO. W-02500A-10-0382
CORPORATION, FOR (i) A DETERMINATION)
OF THE FAIR VALUE OF ITS UTILITY PLANT)
AND PROPERTY AND (ii) AN INCREASE IN) PREPARED REBUTTAL
ITS WATER RATES AND CHARGES FOR) TESTIMONY
UTILITY SERVICE BASED THEREON.)

REBUTTAL TESTIMONY OF

MICHAEL J. NAIFEH

ON BEHALF OF GOODMAN WATER COMPANY

May 2, 2011

Lawrence V. Robertson, Jr.
Attorney at Law
P. O. Box 1448
Tubac, Arizona 85646
(520) 398-0411

**REBUTTAL TESTIMONY
OF
MICHAEL J. NAIFEH**

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Q.1 Please state your name, business affiliation and business address.

A.1 My name is Michael J. Naifeh. I am the owner of MJN Enterprises, Inc., a company which provides real estate appraisal and consulting services to a wide range of clients. The company's offices are located at 6061 East Grant Road, Suite 212, Tucson, Arizona, 85712.

Q.2 Are you the same Michael J. Naifeh who prepared a Summary Appraisal Report Market Value Opinions of Underlying Land (a Fractional Interest Appraisal) of Four Parcels Within the Eagle Crest Ranch Subdivision, as of June 26, 2008 ("2008 Appraisal") for Goodman Water Company, Inc. ("Company")?

A.2 Yes, I am. Since I will be referring to the 2008 Appraisal from time-to-time in connection with my Rebuttal Testimony, a copy of the same is attached to this Rebuttal Testimony as Appendix "A."

Q.3 Before we begin with a discussion of the 2008 Appraisal and the circumstances surrounding your preparation of the same, I would like to ask you a few questions regarding your educational background and your professional experience.

To begin, please describe your educational background.

A.3 I graduated from the University of Arizona in 1980 with a BS/BA and a dual concentration in accounting and real estate. I completed and passed examinations for all the necessary Appraisal Institute courses and experience review to achieve the MAI designation of the Appraisal Institute. MAI stands for Member of the Appraisal Institute. The purpose and role of the Appraisal Institute is to improve appraisal professionalism and practices. In addition to numerous classes, one must also prepare what is essentially a master's thesis

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1 called a demonstration appraisal report and also successfully pass the comprehensive exam
2 which is somewhat similar to the CPA exam.

3 I have undertaken public service, serving approximately 3.5 years on the Arizona
4 State Board of Appraisal ("Board") which is the regulatory board for appraisers in the State
5 of Arizona. I served as Vice Chairman my first year, and Chairperson my second year. The
6 functions of the Board include approving educational offerings, disciplinary actions, and, as
7 a subset of disciplinary action, helping appraisers improve their professional practice.

8
9 **Q.4 Please describe your professional experience, with particular emphasis upon your
10 qualifications and experience as a real estate appraiser.**

11 A.4 I have been appraising real estate since May, 1980, or for over 30 years. The scope of my
12 practice typically excludes owner occupied single family dwellings, and it includes
13 counseling, mortgage loan appraisals, litigation appraisals, and valuation for tax and
14 acquisition/disposition purposes.

15 Through the course of my career I have appraised a wide variety of properties
16 throughout the state of Arizona. Examples of higher profile appraisals include assisting the
17 GSA in an appraisal of the DeConcini Federal Courthouse in downtown Tucson, appraising
18 some closed schools for Tucson Unified School District No. 1, and appraising some of the
19 highest priced Desert Ridge parcels near route 101 and Tatum Boulevard in the
20 metropolitan Phoenix area, which were thereafter auctioned by the Arizona State Land
21 Department. In addition, I recently appraised a ridgeline property for a wind farm which
22 will be on state land. I also recently appraised the largest Greek monastery outside of
23 Greece, which is located near Florence, Arizona.

24
25 **Q.5 The initials "MAI" and "CRE" appear after your name in the 2008 Appraisal. What
26 does the designation "MAI" mean, and what is required of an individual in order to
27 qualify for such a designation?**

28 **Q.5** As previously indicated, the designation MAI means Member of the Appraisal Institute.

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Q.6 Do all real estate appraisers possess the “MAI” designation; and, why do you believe possession of that designation is important and of value?

A.6 Only about 12,000 appraisers hold the MAI designation worldwide. The MAI designation is challenging to achieve and takes several years of experience. The MAI designation is important and valuable because it demonstrates commitment to a higher standard of appraisal practice that is further bound by a commitment to a code of ethics, including subjecting any of my appraisals to peer review.

Q.7 What does the designation “CRE” mean, and what is required of an individual in order to qualify for that designation?

A.7 CRE stands for Counselor of Real Estate. The CRE designation is not awarded by passing classes or taking tests. It is awarded only to individuals who are invited by their peers into the membership of the Counselors of Real Estate after at least 10 years of exemplary service in their field of expertise. The organization focuses on counseling, public service and collegially working together.

Q.8 Do all real estate appraisers possess the “CRE” designation; and, why do you believe possession of that designation is important and of value?

A.8 There are about 1,200 CRE members worldwide. In order to be invited to join, one must have at least 10 years of experience with a significant focus on counseling within their real estate discipline. Members of the organization do an extensive background check, look at both consulting work product, and personally interview the nominee. Invitation to the Counselors of Real Estate is not by application, it is by nomination. I was nominated by Sanders K. Solot, MAI, CRE.

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1 **Q.9 In connection with the preparation of your Rebuttal Testimony, I requested that you**
2 **provide a representative list of the types of past and present clients for whom you and**
3 **MJN Enterprises, Inc. have provided services, and an indication of the types of**
4 **services provided. Have you had an opportunity to prepare such a list?**

5 A.9 Yes, the list attached to this Rebuttal Testimony as Appendix "B" is a partial list of clients
6 including lenders, brokers, attorneys, and government and non-profit agencies.
7

8 **Q.10 What is the purpose of your Rebuttal Testimony in this proceeding?**

9 A.10 The Company has asked me to provide Rebuttal Testimony responding to the criticisms of
10 the 2008 Appraisal and me which are set forth in the March 21, 2011 prepared Direct
11 Testimony of Commission Staff witness Gary T. McMurry at page 7, lines 6-7 and page 9,
12 line 16-page 10, line 12. I was retained by the Company to prepare an appraisal on June
13 11, 2008. My understanding as to the purpose of the appraisal was for asset management
14 decision purposes, which included valuing the four (4) parcels which were to be conveyed
15 to the water company. I did not know that the results of my appraisal might be used in
16 connection with a water rate case. Regardless, such information would have had no
17 influence on my value conclusions as set forth in the appraisal.
18

19 **Q.11 Please generally describe the appraisal methodology you selected for the 2008**
20 **Appraisal, and the reason(s) why you selected that particular methodology.**

21 A.11 The best appraisal methodology for vacant land is the sales comparison approach, which is
22 what I used in this case. There was sufficient data available in market from which to
23 develop the sales comparison approach. I inspected the property. I observed the market
24 area by looking around the area including not only Eagle Crest Ranch but also the
25 surrounding area and developments. Public records were researched and sales were
26 confirmed and analyzed. Thereafter, I developed opinions of value for each of the parcels
27 and issued the report. Carolyn Van Hazel, an appraiser who had assisted me with
28 numerous land appraisals for almost 10 years at that point in time, also assisted me in the

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1 development of the Appraisal. Because there were water system improvements on the
2 parcels, a "fractional interest" as to only the land was set forth in order to avoid misleading
3 the reader.

4
5 **Q.12 Please describe the type(s) of data or information you relied upon in arriving at the**
6 **opinion(s) as to land valuation reflected in the 2008 Appraisal; and, also describe how**
7 **you obtained the data or information on which you relied.**

8 A.12 Data research included public records, assessor's records, information from CoStar Comps
9 and Properties, MLS, information from real estate brokers and developers, secondary data
10 sources, and, as I stated previously, visual inspection.

11
12 **Q.13 What were the 2008 land valuations for Parcels 1, 2, 3 and 4 as a result of your**
13 **appraisal activity?**

14 A.13 \$180,000, \$60,000, \$150,000 and \$100,000 for Parcels 1, 2, 3 and 4, respectively.

15
16 **Q.14 Why did you use calendar year 2008?**

17 A.14 I prepared an appraisal as of the then current date of value, June 26, 2008, based upon my
18 discussion with the client. No other date of value was requested.

19
20 **Q.15 The title of the 2008 Appraisal includes, in parenthesis, the words "A Fractional**
21 **Interest Appraisal," and you used that phrase a moment ago in response to a previous**
22 **question. What does that mean?**

23 A.15 I was contracted to appraise only the land. The land underlies water company
24 improvements. In order to avoid being misleading and to emphasize that the water system
25 improvements are excluded, I state several times in the report that the appraisal was a
26 "fractional interest" appraisal, that is, only as to only the land value. This is a typical
27 process used in many instances. For example, a Chili's Restaurant building is subject to a
28 ground lease and the ground rent is coming up for renewal. The Chili's building would be

1 excluded and only the land would be appraised. Since the Chili's Restaurant building is
2 excluded for the purposes of setting a land value to determine the ground rent, this would
3 be a "fractional interest" appraisal as to land value only.
4

5 **Q.16 Does the use of those words in any manner suggest that there are entities or persons in**
6 **addition to the Company who have an ownership interest in the four (4) parcels of**
7 **real estate which are the subject of the 2008 Appraisal?**

8 A.16 No, it does not. According to public records presented in the appraisal report, the Company
9 owned the land in question. Suggesting other entities or persons in addition to the property
10 owner have an ownership interest in the parcels, based upon the phrase "fractional interest
11 as to land value only," would constitute a misinterpretation or lack of understanding of the
12 appraisal and the appraisal process. If other entities have an interest, that interest would
13 have been disclosed in the ownership section.
14

15 **Q.17 What appraisal regulations and/or guidelines are applicable to the type of appraisal**
16 **you prepared in this instance for the Company?**

17 A.17 Guidelines applicable to the appraisal that I prepared are the Uniform Standards of
18 Professional Appraisal Practice ("USPAP"). The Certification correctly cites USPAP
19 effective January 1, 2008. There were no supplemental standards necessary to complete this
20 assignment.
21

22 **Q.18 Have you read that portion of Mr. McMurry's March 21, 2011 prepared Direct**
23 **Testimony which is critical of both the 2008 Appraisal and you?**

24 A.18 Yes, I have read that portion as well as the remainder of his prepared Direct Testimony
25 relating to land values for the four (4) real estate parcels in question. In that regard, it is my
26 understanding that other Company witnesses will be filing Rebuttal Testimony addressing
27 other aspects of Mr. McMurry's testimony on land values.
28

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1 Q.19 At page 8, lines 6-7 of his prepared Direct Testimony, Mr. McMurry states

2 ". . . the land appraisal used to value the transaction was
3 conducted by an appraiser that was not independent from the
4 Company. . ."

5 At page 10, lines 5-12 of Mr. McMurry's testimony, the following question and answer
6 appear:

7 **"Is the appraiser's financial interest in the transaction relevant?**

8 Yes. An appraiser's evaluation of a property's value should be an
9 independent market-based assessment. In this case, the appraiser's
10 financial interest in the underlying participants creates a potential
11 conflict of interest. There are both appraisal guidelines and Federal
12 Deposit Insurance Corporation regulations that require that an
13 appraiser have no interest, financial or otherwise, in the property or
14 the transaction. The appraiser's proper disclosure of a financial
15 interest does not resolve the conflict of interest caused by the lack of
16 independence; accordingly, the appraisal's reliability is called into
17 question."

18 **Against that background, please specifically describe and quantify the nature of the
19 business relationship between you and Alexander Sears, a shareholder in the
20 Company. As you are aware, Mr. McMurry refers to that relationship at page 10,
21 lines 1-3 of his Direct Testimony.**

22 A.19 Throughout my appraisal career, I have spoken to Mr. Sears and Mr. Shiner numerous
23 times to obtain market information and confirm sales data. I have also done this with other
24 subdivision and community developers over the course of my appraisal practice as it is a
25 necessary step in the preparation of certain real estate appraisals. Over those same 30 years,
26 I have prepared less than 5 appraisals directly for Sears Financial as a direct client. I may
27 have prepared others in connection with appraisal assignments from financial institutions
28 for lending purposes. However, I keep records by client name, not land owner name.

In late 2005, I spoke with Mr. Sears regarding property in Flagstaff that I was
putting an investment group together to buy. Mr. Sears, through an entity known as D&D
Investment West, L.L.C. ("D&D Investment"), invested approximately \$300,000 in a total
project investment of \$19,000,000. Additional funds have been invested for carrying costs

1 and to liquidate a \$750,000 loan on one of the two parcels acquired. Mr. Sears through
2 D&D Investment has less than a 2% interest in the property. The property consists of 325
3 acres of vacant land in Flagstaff, Arizona, being planned for a traditional neighborhood
4 development-style planned community. It is currently in the entitlement (rezoning) phase.
5

6 **Q.20 Please discuss why you believe the nature of the business relationship between entities**
7 **in which you and Mr. Sears have a financial interest does not create a conflict of**
8 **interest vis-à-vis your preparation of the 2008 Appraisal and the conclusions as to**
9 **valuation you reached.**

10 A.20 First, prior to taking the assignment, I discussed my assignment conditions with Mr. Sears.
11 In that regard, I specifically stated that I was required to make a full disclosure in the
12 appraisal that we both had a common investment interest in a different property than what
13 was being appraised. Second, prior to accepting the assignment, I confirmed that I would
14 be appraising only land and that I would give him an unbiased, disinterested opinion of
15 market value for each of the four (4) parcels; and, the language in the first and fourth
16 paragraphs of my July 3, 2008 transmittal letter to the Company contains an express
17 acknowledgment to that effect. Neither Mr. Sears nor anyone else related to the property
18 owner influenced my appraisal. Third, in my appraisal I certified that the appraisal was
19 unbiased and that the assignment was not based on a requested minimum valuation or a
20 specific valuation.

21 Moreover, Mr. Sears' entity that invested in the Flagstaff transaction owns less than
22 a 2% interest. Mr. Sears has not been a "high volume" appraisal client through my
23 appraisal career. Finally, USPAP permits an appraiser to appraise a property or transaction
24 in which an appraiser has an interest, direct or indirect, financial or otherwise, as long as
25 the appraiser affirms that he has no bias and provides proper disclosure in the certification.
26 I have no interest in the subject four (4) parcels and the investment by D&D Investment in
27 the Flagstaff project is quite small. The less than 2% minority interest of Mr. Sears, again,
28

1 had no bearing upon the 2008 Appraisal other than to occasion my disclosure of the same
2 and my affirmation that there was an absence of bias.

3
4 **Q.21 In the Certification set forth at page 39 of the 2008 Appraisal, you also indicate that in**
5 **preparing the appraisal, as well as in conducting all related activities, you complied**
6 **with the Uniform Standards of Professional Appraisal Practice (“USPAP”), is that**
7 **correct?**

8 A.21 Yes, and I did in fact comply with the Uniform Standards of Professional Appraisal
9 Practice in effect at the time of the appraisal.

10
11 **Q.22 Why do you believe the USPAP to be applicable to the 2008 Appraisal?**

12 A.22 USPAP is applicable to an appraisal assignment because value opinions were developed
13 (Standard Rule 1) and reported (Standard Rule 2). The development of value opinions is
14 consistent with “the act or process of developing an opinion of value as defined under the
15 USPAP definitions.”

16
17 **Q.23 Are the “Federal Deposit Insurance Corporation regulations” to which Mr. McMurry**
18 **refers to at page 10, line 9 of his testimony applicable to the 2008 Appraisal?**

19 A.23 No.

20
21 **Q.24 Why not?**

22 A.24 The Federal Deposit Insurance Corporation (“FDIC”) regulations referred to by Mr.
23 McMurray are not applicable. The subject property was not appraised for a federally
24 related transaction. The FDIC regulations represent “supplemental standards” required for
25 appraisals to be properly prepared for financial institution underwriting decisions. These
26 regulations are not applicable to this 2008 Appraisal.

27 In that regard, it has occurred to me that a sentence included in my July 3, 2008
28 letter transmitting the 2008 Appraisal to the Company may have caused some confusion.

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More specifically, the following sentence appears as the second sentence within the first paragraph of that letter:

“This Evaluation Report closely adheres to the Interagency Appraisal and Evaluation Guidelines issues October 28, 1994.”

This sentence is one that I typically include in reports where such guidelines are in fact applicable to the appraisal assignment in question. In this instance, those guidelines were not applicable and my inclusion of the above-quoted sentence in my standard form of transmittal letter to the client was inadvertent upon my part and erroneous. Accordingly, I apologize for any confusion that such inclusion might have occasioned.

Q.25 Were you offended by Mr. McMurry’s testimony that the “appraisal’s reliability is called into question,” as well as his implied suggestion that the reliability of your professionalism and impartiality should be questioned as well?

A.25 Yes, I was and am deeply offended by that testimony and suggestion. I do not know at this time how acquainted Mr. McMurry is with the field of real estate appraisals, but I would respectfully submit that it is at best naïve upon his part to suggest that I would jeopardize a professional reputation and credentials I have acquired over 30 years in the field of real estate appraisal for any single assignment fee, including a fee in this instance of \$2,000. When I read Mr. McMurry’s testimony, it appears that he read the appraisal. However, I question whether or not he understood the appraisal. I also am not sure whether or not he understood how offensive his tone and insulting his words were to me. I have been practicing as a real estate appraiser for over 30 years. Instead of leaping to conclusions, Mr. McMurry could have sought out professional advice as to whether or not the appraisal was well prepared and the value opinions were appropriately developed, but he did not. Secondly, Mr. McMurry could have submitted data requests through his attorney for an explanation of the appraisal and posed questions directly to me for response through the Company’s attorney including whether or not there was any bias. However, he did not. Further, before Mr. McMurry rendered his conclusion as to my work product, just like any

1 other professional, he should have undertaken sufficient investigation to form a reasonable
2 conclusion, but he did not. As a consequence, I am extremely disappointed in Mr.
3 McMurry's lack of diligence and his subsequent testimony that unfairly, inaccurately, and
4 misleadingly characterizes my actions as an appraiser.

5
6 **Q.26 At page 8, line 7 of his prepared Direct Testimony, Mr. McMurry asserts that "the**
7 **[2008] appraisal was flawed." Aside from the subsequent discussion in his testimony**
8 **of what he perceived to be a "potential conflict of interest" upon your part, did he in**
9 **any manner discuss any "flaws" in the appraisal methodology you used or the data or**
10 **information upon which you relied?**

11 **A.26** Other than suggesting that the parcels in question should have been valued on the basis of
12 land values in earlier years, he did not discuss or imply any "flaws" in my appraisal
13 methodology or the data or information upon which I relied.

14
15 **Q.27 Do you have an opinion as to the years which should have been used as between the**
16 **testimony of Mr. McMurry and you?**

17 **A.27** No, I do not. It appears that the answer to that question may depend on the meaning of the
18 phrase "devoted to public service," as used by Mr. McMurry. I will defer to others to
19 resolve that issue.

20 My 2008 Appraisal was based upon directions received from the Company at the
21 time of my retention. However, it is my understanding that another Company witness will
22 be presenting Rebuttal Testimony on land values for the four (4) parcels in question using
23 the years of 2003, 2004 and 2007 suggested by Mr. McMurry.

24
25 **Q.28 Do you believe that it is appropriate to use land values reflected in the records of the**
26 **Pinal County Assessor, for the purpose of establishing actual market values for the**
27 **four (4) parcels in question, setting aside the question of the year(s) to be used?**
28

1 A.28 Absolutely not, because, first of all, the values are set one year prior. For example, the
2 2008 Assessor's valuations are set as of January 2007. Secondly, they are based on a mass
3 valuation system and, while the statutes state that the ad valorem values are to be market
4 values, typically they are set somewhere between 60% and 80% of market value. However,
5 experience has shown there are extremes even to the range of 20% to over 200% of actual
6 market value.

7 Indeed, using the Assessor's ad valorem value is a reckless approach to valuing
8 individual properties.

9 **Q.29 Does this conclude your Rebuttal Testimony?**

10 A.29 Yes, it does.

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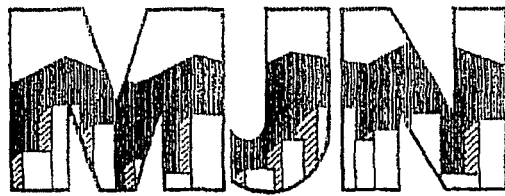
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**Goodman Water Company
Docket No. W-02500A-10-0382**

**MICHAEL J. NAIFEH
REBUTTAL TESTIMONY**

May 2, 2011

APPENDIX A



MJN ENTERPRISES INC.
REAL ESTATE APPRAISERS & CONSULTANTS

A SUMMARY APPRAISAL REPORT
DEVELOPING MARKET VALUE OPINIONS OF
THE UNDERLYING LAND (A FRACTIONAL INTEREST APPRAISAL) OF

FOUR PARCELS
WITHIN THE EAGLE CREST RANCH SUBDIVISION

LOCATED

SOUTHEAST OF STATE ROUTE 77
AND SADDLEBROOKE BOULEVARD

IN

PINAL COUNTY, ARIZONA

AS OF:

JUNE 26, 2008

FOR:

MS. JACKIE ZILIOX, SECRETARY
GOODMAN WATER COMPANY
6340 NORTH CAMPBELL AVENUE, SUITE 278
TUCSON, AZ 85718

BY:

MICHAEL J. NAIFEH, MAI, CRE
MJN ENTERPRISES, INC.
6061 EAST GRANT ROAD, SUITE 121
TUCSON, AZ 85712

Summary of Important Conclusions

Date and Scope

Date of Value Opinion: June 26, 2008
Effective Date of the Report: July 3, 2008
Purpose: Develop market value opinions of the underlying land (a fractional interest appraisal) of the four subject parcels
Intended Use: Asset management decisions

Property Data

Site Size: Parcel 1: 0.72 ac.
Parcel 2: 0.25 ac.
Parcel 3: 0.63 ac.
Parcel 4: 0.39 ac.
(per Pinal County Assessor & Legal Descriptions)
Location: The four subject sites are located within the Eagle Crest Ranch Subdivision located southeast of State Route 77 and Saddlebrooke Blvd. in Pinal County, AZ
Zoning:

Highest & Best Use

Highest & Best Use as if vacant: Parcels 1 & 2: Commercial development as part of a larger development parcel
Parcels 3 & 4: Single family residential development

Market Value Opinions

ESTIMATED MARKET VALUE OF THE SUBJECT SITES, A FRACTIONAL INTEREST AS TO LAND VALUE ONLY, AS IF VACANT, FEE SIMPLE INTEREST, REAL ESTATE ONLY:

PARCEL 1:..... \$180,000
PARCEL 2:..... \$60,000
PARCEL 3:..... \$150,000
PARCEL 4:..... \$100,000



MJN ENTERPRISES INC.
REAL ESTATE APPRAISERS & CONSULTANTS

July 3, 2008

Ms. Jackie Ziliox, Secretary
Goodman Water Company
6340 N. Campbell Ave., Ste. 278
Tucson, AZ 85718

Re: Summary Appraisal Report (Evaluation) of four parcels within the Eagle Crest Ranch Subdivision located southeast of State Route 77 and Saddlebrooke Blvd. in Pinal County, Arizona

MJN File No.: 08-L-109

Dear Ms. Ziliox:

As requested, I have evaluated the property identified above as of June 26, 2008. This Evaluation Report closely adheres to the Interagency Appraisal and Evaluation Guidelines issued October 28, 1994. This evaluation also follows the Uniform Standards of Professional Appraisal Practice. The evaluation is for the internal use of Sears Financial Corporation (the sole intended user) and may not be used by any other parties except those named herein. It is disclosed within this report, as well as the appraisal contract, that an affiliate of Sears Financial Corporation, D&D Investments, has a minority investment in PBH Flagstaff Holdings, LLC, of which the signing appraiser, Mr. Michael J. Naifeh, is also a member. Because the ownership interest is small (+/-2%) and because the appraiser is not being used for a federally related transaction, the client and the appraiser mutually agree and acknowledge that this has no influence whatsoever on either the appraiser's independence or the value conclusion.

Property Identification

The property that is the subject of this report consists of four sites within the Eagle Crest Ranch Subdivision. The sites are currently improved with water well infrastructure, but only the underlying land is valued within this appraisal. The subject sites are referred to as Parcels 1 thru 4. The orientation of the sites is displayed in the map which follows. Eagle Crest Ranch is located southeast of State Route 77 and Saddlebrooke Boulevard in Pinal County, AZ. The legal descriptions were provided by the client. The individual parcels are more accurately described as follows:

- Parcel 1:* The west side of Eagle Crest Ranch Blvd., south of Eagle Ranch Rd.
- Parcel 2:* The west side of Eagle Crest Ranch Blvd, northeast of the intersection with State Route 77
- Parcel 3:* Northeast of the cul-de-sac at the intersection of Eagle Mountain Dr. and Eagle Ridge Drive.
- Parcel 4:* The south side of Mountain Shadow Dr., east of Rock Ledge Loop

Figure 1: Parcel Orientation Map

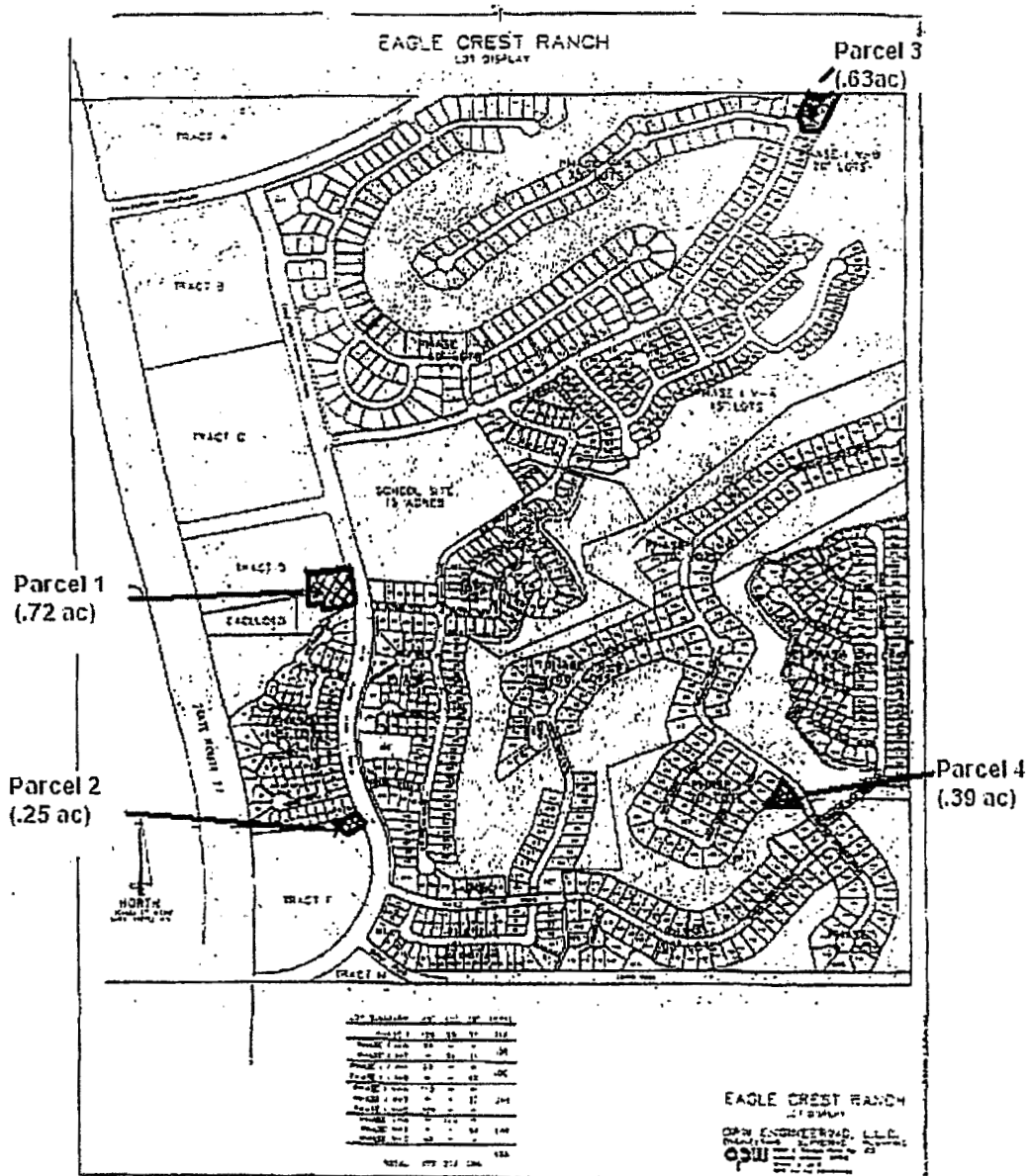


Figure 2: Legal Description

LEGAL DESCRIPTION

EXHIBIT "ONE"

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF PIMA, STATE OF ARIZONA, AND IS DESCRIBED AS FOLLOWS:

Parcel No. 1: (Water Plant # 1) .72 acres

Tract A, of EAGLE CREST RANCH I, according to the plat of record in the office of the County Recorder of Pinal County, Arizona, recorded in Cabinet D of Maps, Slide 34.

Parcel No. 2: (Water Plant # 4) .39 acres

Tract B, of EAGLE CREST RANCH I, according to the plat of record in the office of the County Recorder of Pinal County, Arizona, recorded in Cabinet D of Maps, Slide 34.

Parcel No. 3: (Water Plant # 3) .63 acres

Tract E, of EAGLE CREST RANCH IV-A, according to the plat of record in the office of the County Recorder of Pinal County, Arizona, recorded in Cabinet G of Maps, Slide 83.

Parcel No. 4: (Water Plant # 2) .25 acres

All of that portion of the Southwest Quarter of Section 32, Township 10 South, Range 14 East, Gila and Salt River Base and Meridian, Pinal County, Arizona, being a portion of Eagle Crest Ranch Tracts "A" through "N" and Common Area "A" (Private Streets), a subdivision of Pinal County, Arizona, recorded in Cabinet "C" in Slide 173 on October 25, 2000, more particularly described as follows:

Commencing at the Southeast corner of Tract "D" of said Eagle Crest Ranch Tracts "A" through "N" as it adjoins Tract "E" and Eagle Crest Ranch Boulevard, said point falling on a curve from which the radius bears South 83 degrees 55 minutes 51 seconds West;

Thence Northorly along said curve to the left on the Westerly right-of-way of Eagle Crest Ranch Boulevard, having a radius of 1150.00 feet and a central angle of 03 degrees 36 minutes 30 seconds, an arc distance of 72.42 feet to the POINT OF BEGINNING;

Thence departing said curve, West, on a non-tangent line, a distance of 36.10 feet;

Thence South 45 degrees 00 minutes 00 seconds West, a distance of 92.02 feet;

Thence West, a distance of 46.69 feet;

Thence North 10 degrees 49 minutes 04 seconds West, a distance of 60.09 feet;

Thence South 79 degrees 10 minutes 56 seconds West, a distance of 75.26 feet;

Thence North, a distance of 113.17 feet:

Thence East, a distance of 213.60 feet to a point on the Westerly right-of-way of said Eagle Crest Ranch Boulevard;

Thence South 12 degrees 56 minutes 33 seconds East along said Westerly right-of-way, a distance of 29.49 feet to a point of curvature;

Thence Southerly along said curve to the right, having a radius of 1150.00 feet and a central angle of 03 degrees 15 minutes 55 seconds, an arc distance of 65.54 feet to the POINT OF BEGINNING:

Figure 3: Assessor's Record Map – Parcels 1 & 2

SEC. 32 TN.10S RG.14E

This is a true and correct copy of the original map as shown on file with the Assessor's Office, and the same is hereby certified to be a true and correct copy of the original map as shown on file with the Assessor's Office.

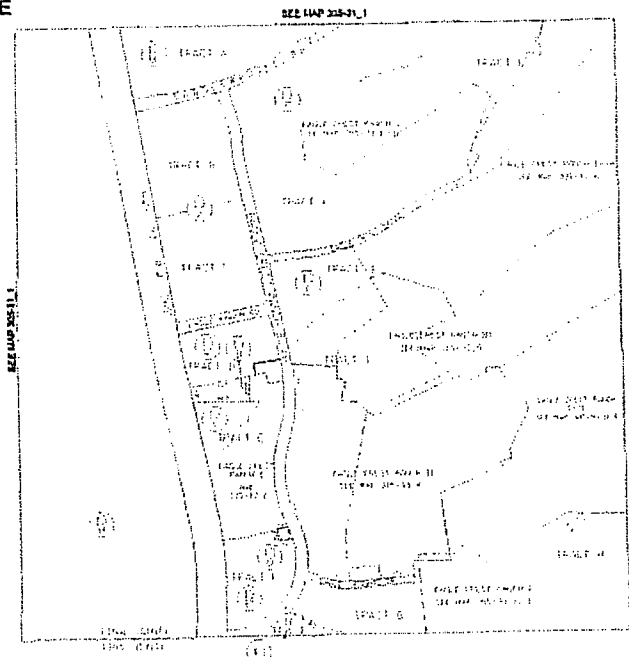


Figure 4: Assessor's Record Map - Parcel 3

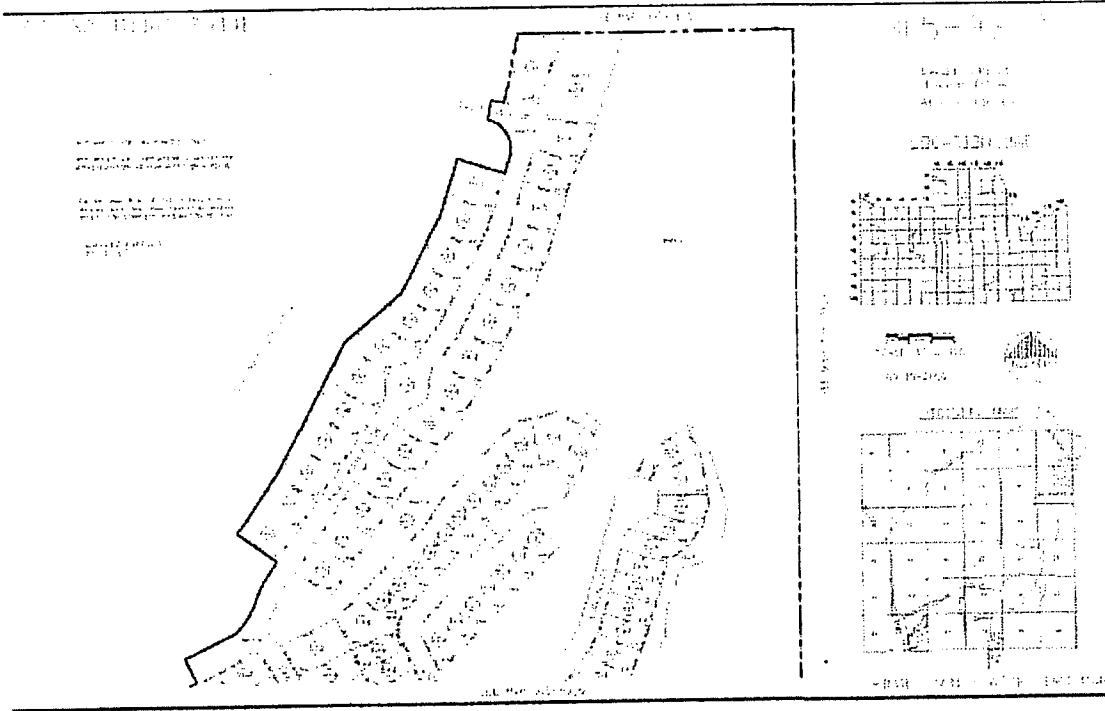
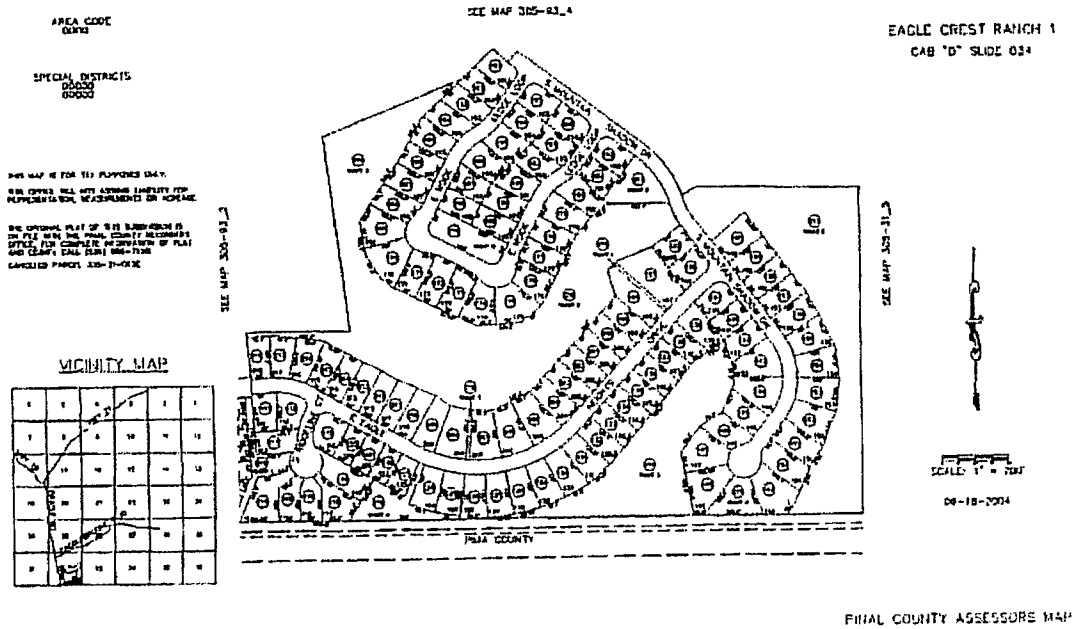


Figure 5: Assessor's Record Map - Parcel 4

SEC. 32 TN.10S RG.14E

305-93_3



Property Rights Appraised

Fee simple interest in the underlying land (a fractional interest appraisal)

Appraisal Problem to be Solved

The purpose of this evaluation is to provide current market value opinions of the four subject sites, a fractional interest appraisal as to land value only. Therefore, the "as is" value is not estimated. The subject parcels are valued in accordance with their highest and best use and not as infrastructure sites for the Goodman Water Company. However, it is a hypothetical condition of this report that the infrastructure contained within the subject sites is located elsewhere within the subdivision development.

Date of Value Opinion and Conclusions

June 26, 2008

Effective Date of Report

July 3, 2008

Intended Use of Opinions and Conclusions

Asset management decisions including valuing the land donations to the water company.

Client / Intended User

Sears Financial Corporation/Goodman Water Company

Type of Report

Summary

Extraordinary Assumptions

An extraordinary assumption is an assumption, directly related to a specific assignment, which, if found to be false, could alter the appraiser's opinions or conclusions. Extraordinary assumptions presume as fact otherwise uncertain information about physical, legal, or economic characteristics of the subject property; or about conditions external to the property such as market conditions or trends; or about the integrity of data used in an analysis. An extraordinary assumption may be used in an assignment only if:

- it is required to properly develop credible opinions and conclusions;
- the appraiser has a reasonable basis for the extraordinary assumption;
- use of the extraordinary assumption results in a credible analysis; and
- the appraiser complies with the disclosure requirements set forth in USPAP for extraordinary assumptions. (USPAP, 2008 ed.)

The following extraordinary assumptions apply in this report

- none

Hypothetical Conditions

A hypothetical condition is that which is contrary to what exists but is supposed for the purpose of analysis. Hypothetical conditions assume conditions contrary to known facts about physical, legal, or economic characteristics of the subject property; or about

conditions external to the property, such as market conditions or trends; or about the integrity of data used in an analysis. A hypothetical condition may be used in an assignment only if:

- use of the hypothetical condition is clearly required for legal purposes, for purposes of reasonable analysis, or for purposes of comparison;
- use of the hypothetical condition results in a credible analysis; and
- the appraiser complies with the disclosure requirements set forth in USPAP for hypothetical conditions. (USPAP, 2008 ed.)

The following hypothetical conditions apply in this report

- **The subject parcels are valued as if vacant without the water infrastructure improvements on the sites. The infrastructure exists elsewhere within the subdivision development.**

Definition of Value

Market value is defined as the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus.

Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby: a) buyer and seller are typically motivated; b) both parties are well informed or well advised, and each acting in what they consider their own best interest; c) a reasonable time is allowed for exposure to the open market; d) payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and e) the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale. 12 CFR 34.42(g) (2008).

Scope of the Assignment

This summary appraisal report is a recapitulation of the appraiser's data, analyses, and conclusions. Supporting documentation is retained in the appraiser's file and is available to the client during regular business hours, if required.

As part of this appraisal assignment, the appraiser made a number of independent investigations and analyses. Data retained in office files, which are updated regularly, was relied on. Public records were checked to verify information.

The market area was observed and the contents of this report express the appraiser's opinion of what was found and observed. A search for data in the market area of the subject is accomplished first. If there is inadequate data for comparison, the search is then expanded into other markets. A site inspection was made on June 26, 2008.

All market data was gathered from one or more of the following sources: CoStar Comps, affidavit of property value, Tucson MLS, and commercial real estate brokers and/or agents.

Secondary data was compiled from the Metropolitan Tucson Land Use Study (MTLUS) and STDBOnline. The appraiser did not develop the cost and income approaches as these are unnecessary for a credible opinion of value and there is sufficient sales data available to develop a credible appraisal.

I inspected the subject sites. Carolyn Van Hazel assisted in data research and wrote the initial draft of this report with my consultation. I made revisions in subsequent drafts, prior to issuing the final report, such that the report represents my work product.

Property Ownership

Title to the subject parcels is currently vested in Goodman Water Company, LLC. The vesting information is presented in the following table:

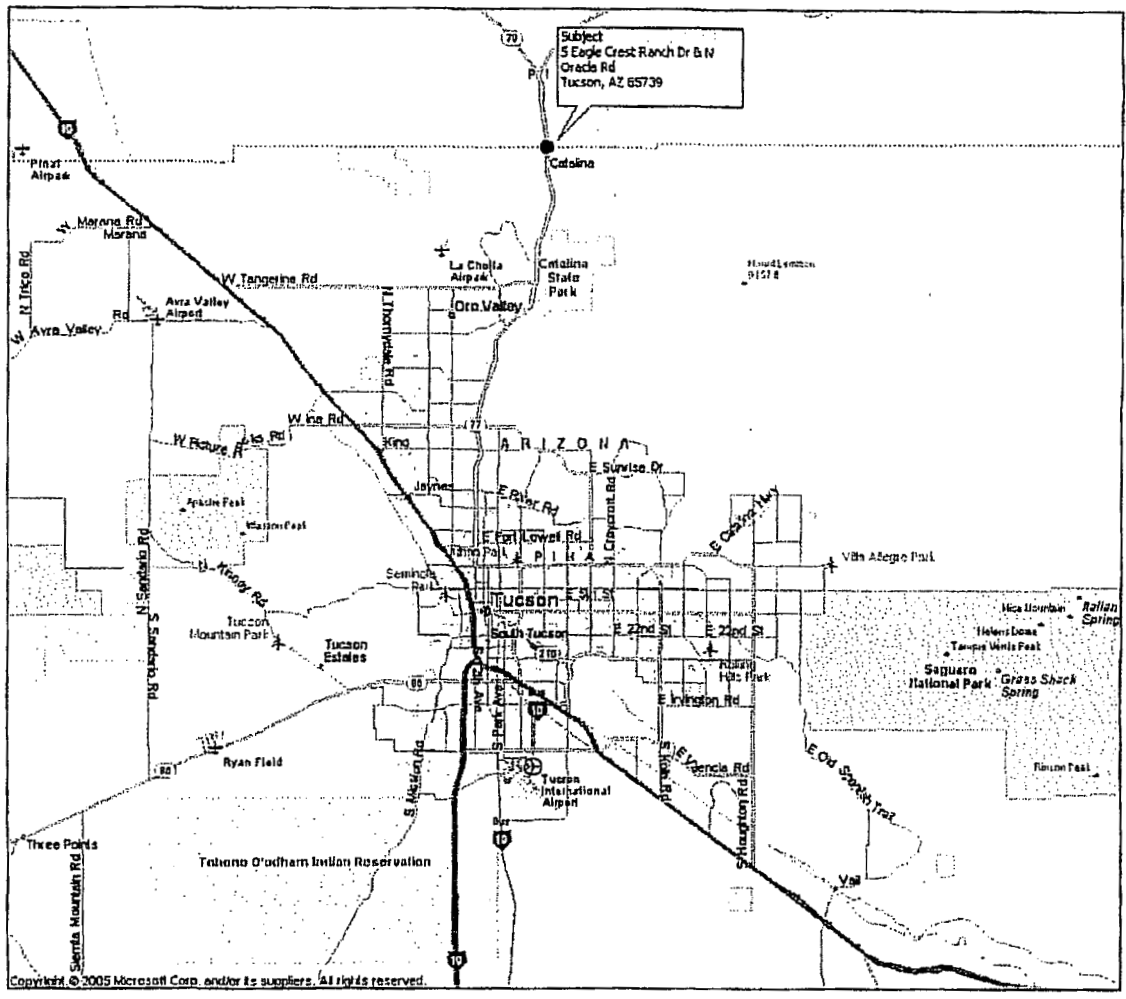
Parcels	Document No.	Recording Date
1, 3, 4	2008-042476	May 5, 2008
2	2008-042477	May 5, 2008

The parcels are not currently listed or under contract for sale.

Market Area Data

The subject is located within metropolitan Tucson, Arizona. Tucson as a whole is experiencing unprecedented robust growth in all market sectors. The recently overheated residential market from 2004/2005 has slowed down. The recovered industrial market continues to improve but appears to have plateaued. Office space is gradually being absorbed, but the market is still somewhat overbuilt in the CBD. The retail market has improved but is still tenuous due to the entry of "category killer" stores. Overall, the Tucson community remains strong with good population growing demand for services.

Figure 6: Market Area Map



The subject is located adjacent north of the Pima County / Pinal County line, but derives its influence from the Tucson market. The subject parcels are located within northwest metropolitan Tucson and are in an established path of growth area. The boundaries are the Rillito Creek on the south, First Avenue and Pusch Ridge on the east, the Santa Cruz wash on the west, and just north of the Pinal County line on the north. The future of the neighborhood appears sound over the long term but economically uncertain at this time. The roads are somewhat congested. Pygmy Owl habitat concerns previously impeded some developments in the path of growth and induced some development beyond the growth path. Improvements which have enhanced the accessibility of the region include the extension of Tangerine Road to Oracle Road along with a concrete bridge over the Canada Del Oro Wash.

Active residential development is underway within the neighborhood where all utilities and zoning are available. Sites lacking all utilities for development are deemed less desirable evident from purchase prices. While residential development sites are actively sought, the sites lacking all utilities encounter a somewhat speculative appeal. Residential land sites

with all utilities available generally indicate a stable price trend, whereas the price trend for speculative sites remains somewhat tenuous. Multi-family development has been active, but some developments have exceeded affordability, and the market has mixed perceptions. This is illustrated by rents and vacancy statistics. Condominium conversions have increased volatility.

Residential support services are following the trend of residential development with a newer Fry's (formerly Smith's) store at the northeast corner of La Canada Drive and Lambert Lane. Albertsons (closing), Home Depot, Fry's and Target have opened stores at Oracle Road and First Avenue. Albertsons opened stores at River and La Canada, La Cholla and Ina, and First and Oracle. Bashas' anchors a newer center at Thornydale and Cortaro Farms Road. Kohl's, Sprouts, and a Wal-Mart Neighborhood Market anchor an expanded center at the southwest corner of Oracle and Magee Roads. Wal-Mart opened a store adjacent north of the renovated and re-tenanted Foothills Center. A community center under construction at Tangerine and Oracle will reportedly be anchored by Wal-Mart. Pima Community College developed a northwest satellite campus at Magee and Shannon Roads.

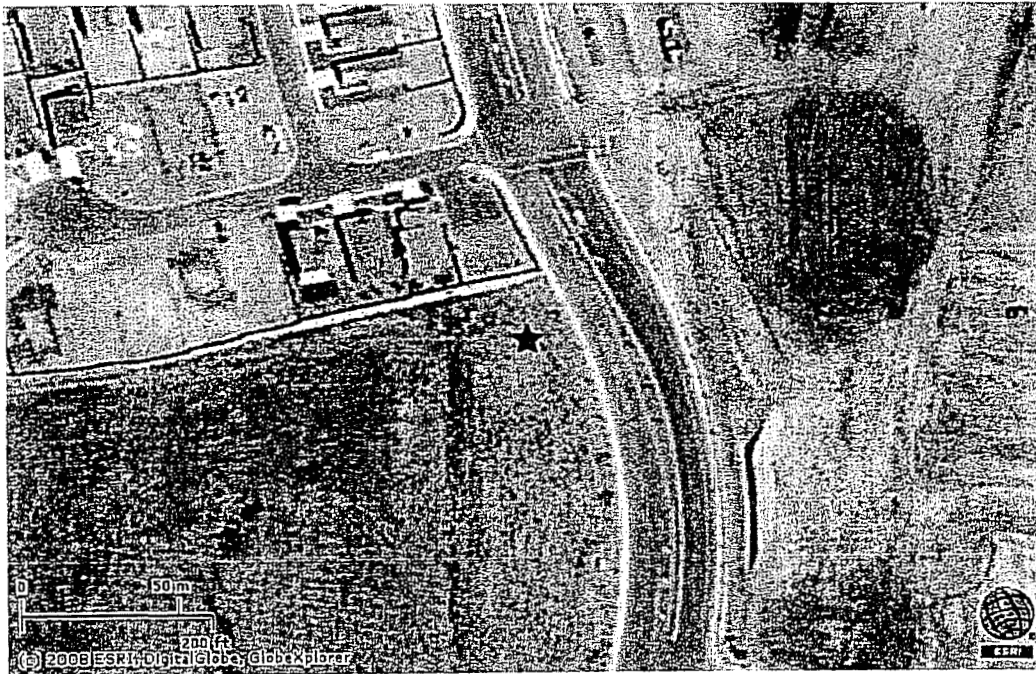
Land Description

Figure 7: Aerial View

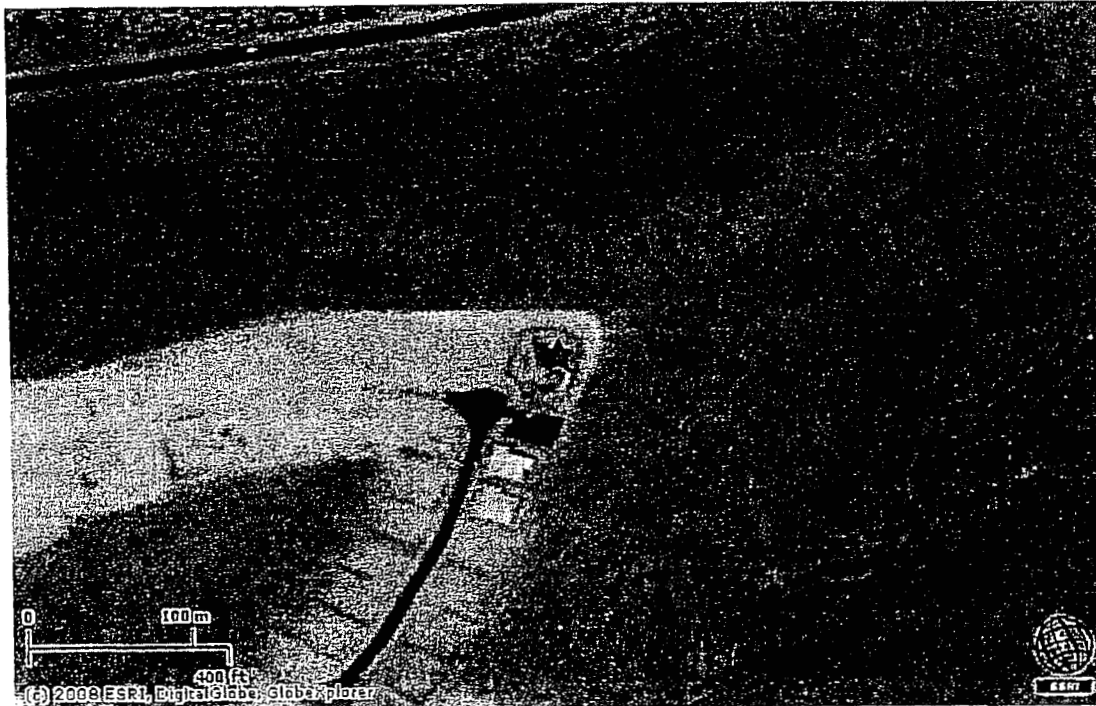
Parcel 1:



Parcel 2:



Parcel 3:



Parcel 4:



Subject Four sites within the Eagle Crest Ranch Subdivision improved with water well infrastructure

Location The Eagle Crest Ranch Subdivision is located southeast of State Route 77 and Saddlebrooke Blvd. The individual parcels are more accurately described as follows:

Parcel 1: The west side of Eagle Crest Ranch Blvd., south of Eagle Ranch Rd.

Parcel 2: The west side of Eagle Crest Ranch Blvd, northeast of the intersection with State Route 77

Parcel 3: North east of the cul-de-sac at the intersection of Eagle Mountain Dr. and Eagle Ridge Drive.

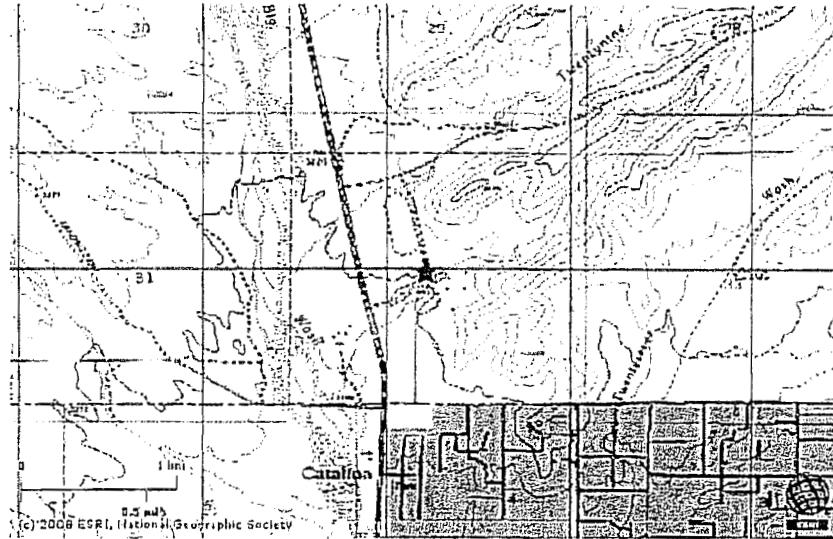
Parcel 4: The south side of Mountain Shadow Dr., east of Rock Ledge Loop

Shape The parcels have irregular, yet functional shapes

Size Parcel 1: .72 acres; 31,363 S.F.
Parcel 2: .25 acres; 10,890 S.F.
Parcel 3: .63 acres; 27,443 S.F.
Parcel 4: .39 acres; 16,988 S.F.

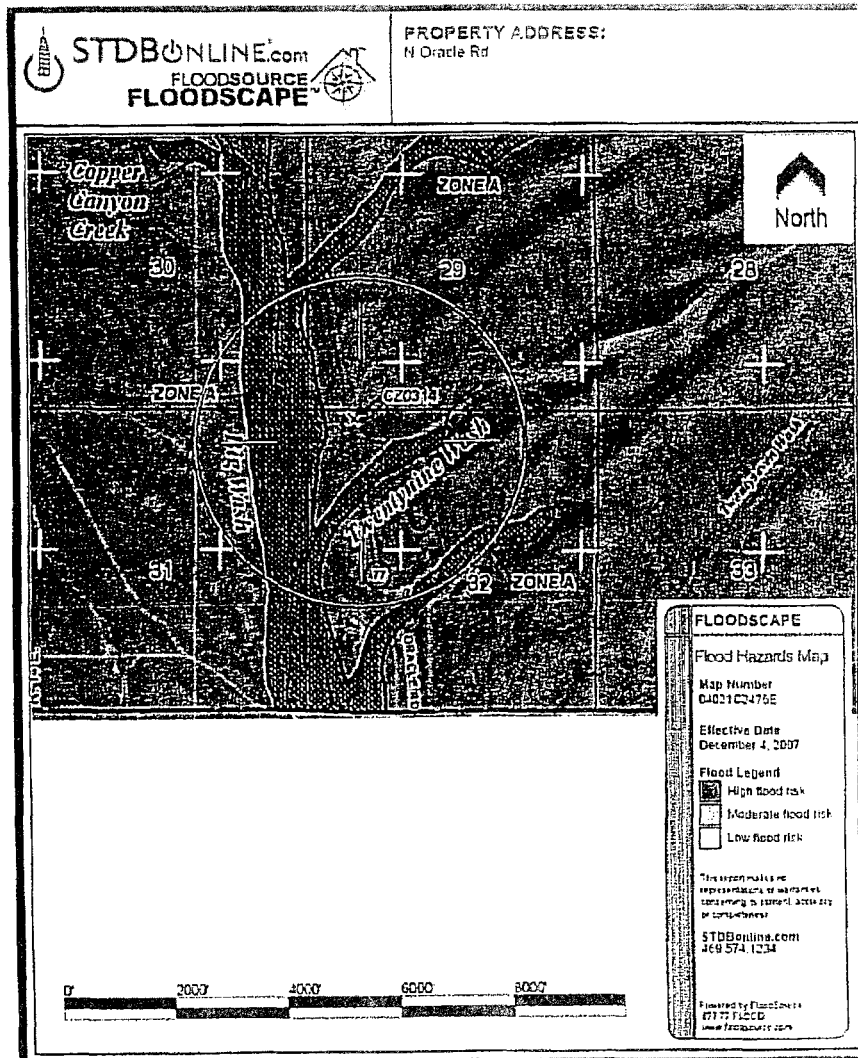
Topography All of the parcels are level and at finish grade. Parcel 1 is slightly

below grade from surrounding land parcels. Parcel 2 is above grade from the adjacent commercial land and below grade from the adjacent residential parcels. Parcels 3 and 4 are above grade from the surrounding parcels and offer panoramic views of the Catalina Mountains and the city lights.



Hydrology

The sites appear to generally be located within Zone X, outside of the 100-year floodplain, FIRM Panel 2475K, dated December 4, 2007. Parcels 1 and 2 could be partially within Zone A, subject to 100-year flooding. Parcel 1 appears to have a natural detention/retention area created somewhat from the larger parcel. Hydrology mitigation and/or flood insurance would possibly be required if the sites were to be developed according to their highest and best use.



Access

Parcels 1 and 2 are located along Eagle Crest Ranch Blvd, the spine road which traverses the subdivision. Eagle Crest Ranch Blvd. is median divided four lane collector street with vertical concrete curbs, bike lanes, and sidewalks. Parcel 3 is located at the cul-de-sac intersection of Eagle Ridge Drive and Eagle Mountain Drive, while Parcel 4 is located along Mountain Shadow Drive. All of these streets are asphalt paved two lane neighborhood streets with sidewalks along one side. The access road to Parcel 4 is somewhat steep which might possibly limit access to the pad, although the site appears big enough to orientate it with a typical size house in mitigation.

Visibility

Parcels 1 and 2 have good visibility when taken in the context of the larger commercial parcels. Parcels 3 and 4 have good locations for residential parcels with panoramic views of the Catalina Mountains and city lights.

Utilities	All available and underground.
Surrounding Uses	Parcel 1: Larger commercial land parcel to the north and west, residential dwellings to the south and east. Parcel 2: The larger commercial land parcel to the south and west, and residential dwellings to the north and east. Parcel 3: Residential dwellings to the west and northwest, vacant land to the north, east and south. Parcel 4: Vacant common area land to the south and east. Residential dwellings to the north and west,
Easements	A title report was not provided. The appraisal assumes typical access and utility easements and CC&R's that do not affect the site adversely.
Environmental	It is unknown whether PCBs are in electrical transformers. According to the AZDEQ Map, the site is not within a Superfund or WQARF designated area.
Site Improvements	The parcels are improved with water well infrastructure. However, only the underlying land is considered within the appraisal and the parcels are valued as if vacant.
Zoning	
Conclusion	The sites are functional and adaptable to typical subdivision development.

Figure 8: ADEQ Map

Superfund Program Sites Outside of Metropolitan Phoenix and Tucson

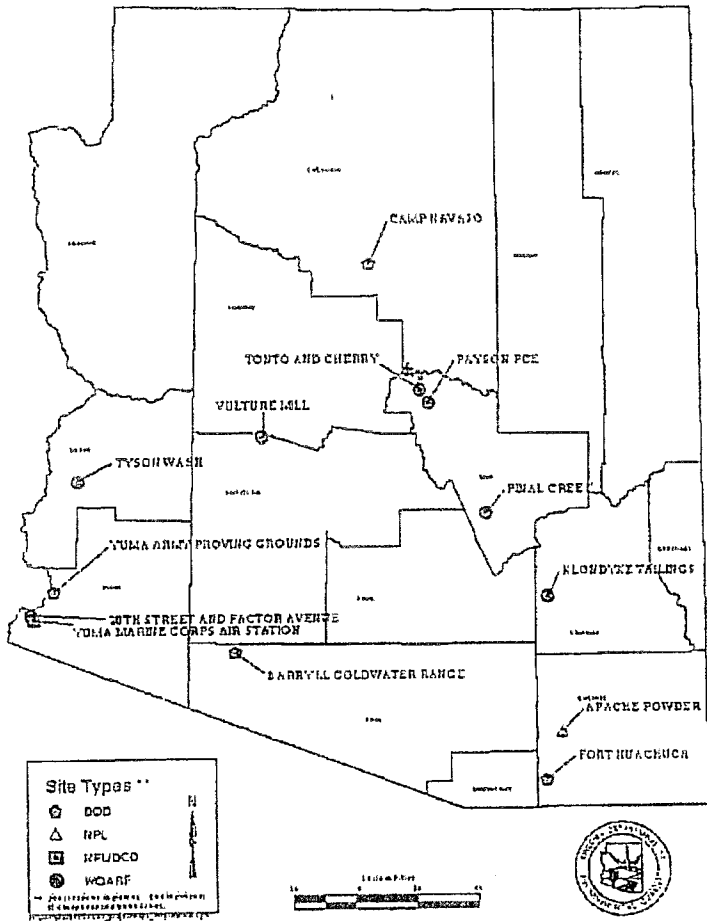
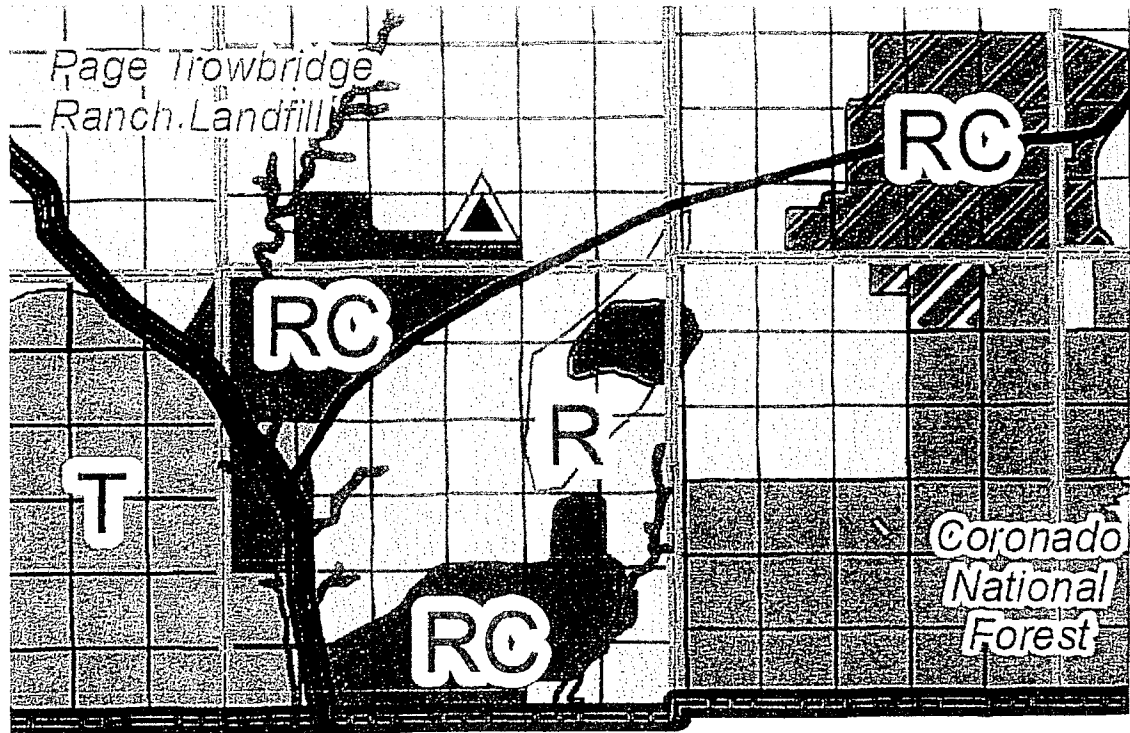


Figure 9: Comprehensive Land Use Map



Legend

Current Land Use

	AIRPORT RESERVE
	ARAVAIPA RESERVE
	COMMERCIAL ACTIVITY CENTER
	CORRIDOR MIX
	DEVELOPMENT SENSITIVE
	FOOTHILL
	INDUSTRIAL
	INTERCHANGE MIX
	MINING
	NATURAL RESOURCES
	RURAL
	SEMI RURAL
	RURAL COMMUNITY
	TRANSITIONAL
	UNDESIGNATED
	URBAN

Tax Data

The subject parcels assessed information is presented in the following table:

Parcel No.	Tax Code No.	2008 FCV	2008 LV	2007 Taxes	Assd. Ratio	Parcel Size	Subject %
1	Part of 305-31-013W	\$279,600	\$86,831	\$405.82	16%	9.32 ac.	7.70%
2	305-31-013Q	\$60,924	\$34,927	\$705.26	23%	.25 ac.	100%
3	305-93-604	\$500	\$272	N/Av	16%	.63 ac.	100%
4	Part of 305-93-219	\$109,680	\$63,857	\$2,665.22	16%	27.42	1.42%

The parcels are in Tax Area Code 0204, which has the following tax rate history:

Tax Area	Primary Rate	Secondary Rate	Total Rate
0204			
2007	\$9.2167	\$2.4726	\$11.6893

The parcels are not assessed in accordance with their highest and best use. If the parcels were developed in accordance with their highest and best uses, the ad valorem values would increase dramatically. The ratio of Parcel 2 should be appealed.

SUBJECT PHOTOGRAPHS



Photo 1: Street scene looking north on Oracle Road



Photo 2: Street scene looking south on Oracle Road

PARCEL 1

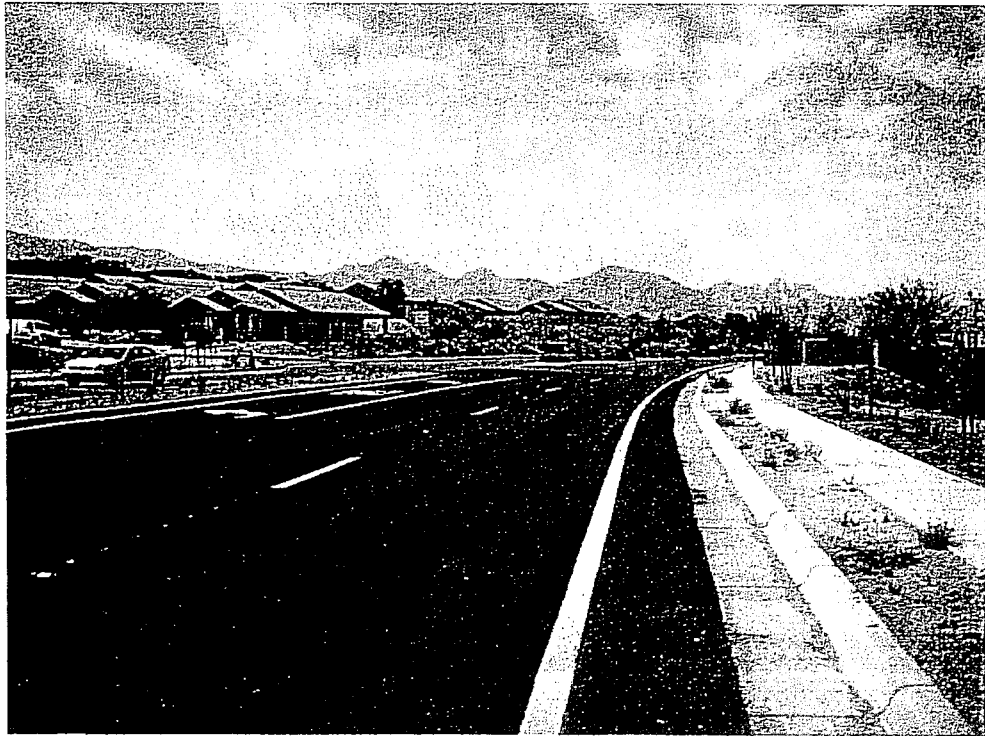


Photo 3: Street scene looking south on Eagle Crest Ranch Boulevard



Photo 4: Street scene looking north on Eagle Crest Ranch Boulevard



Photo 5: Looking northwest through the site

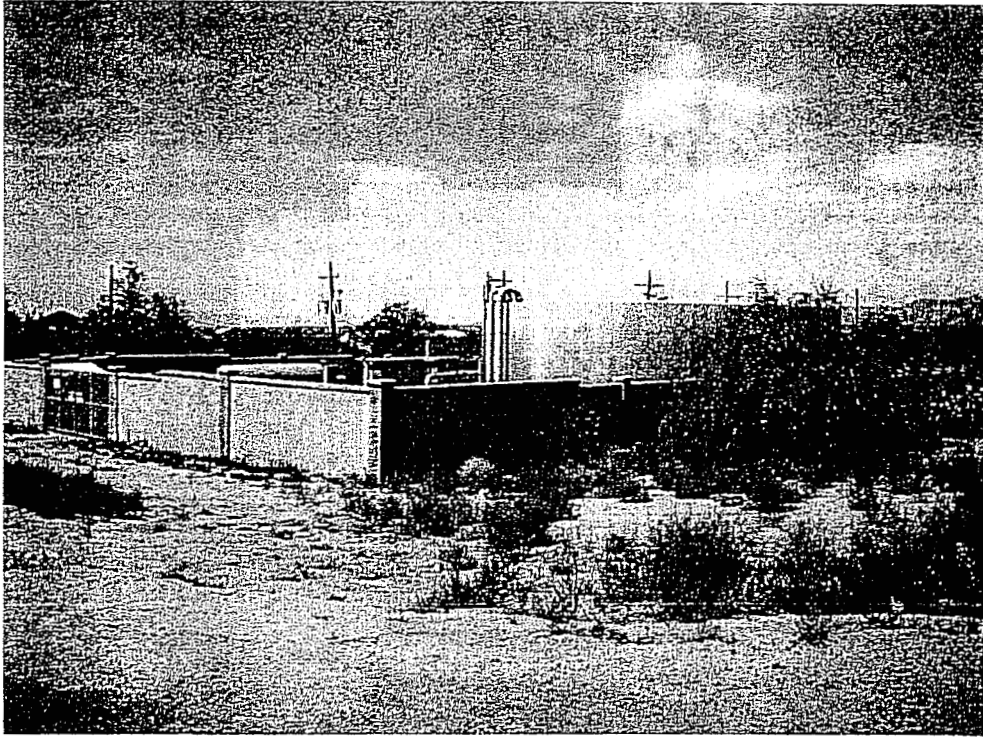


Photo 6: Looking southwest through the site

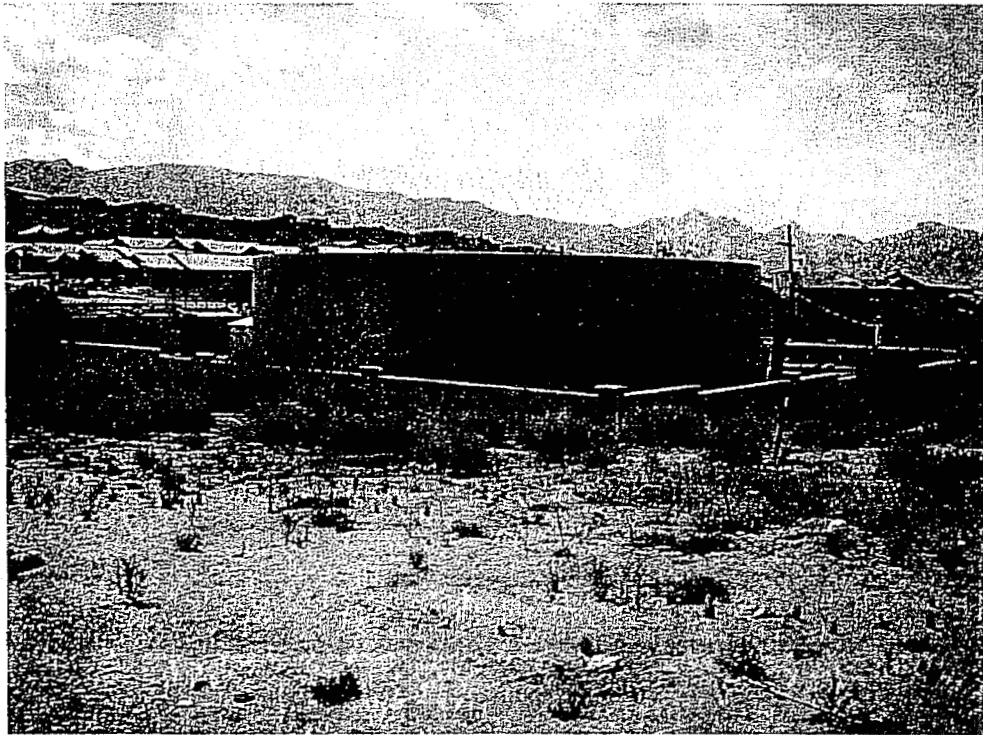


Photo 7: Looking southeast through the site

PARCEL 2

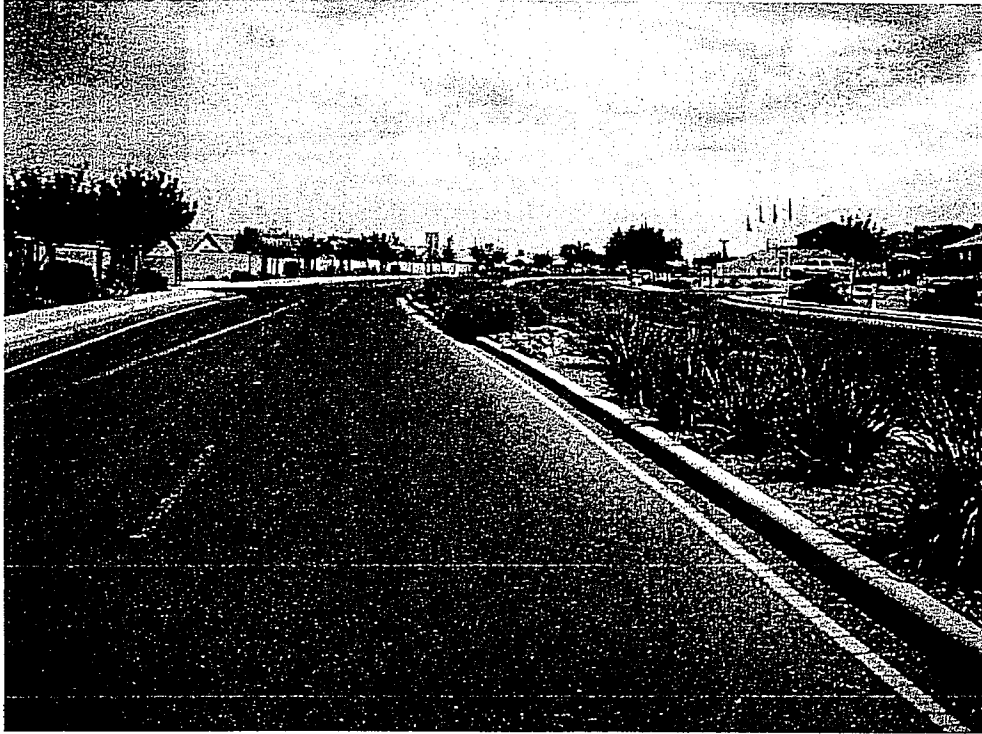


Photo 8: Street scene looking north on Eagle Crest Ranch boulevard

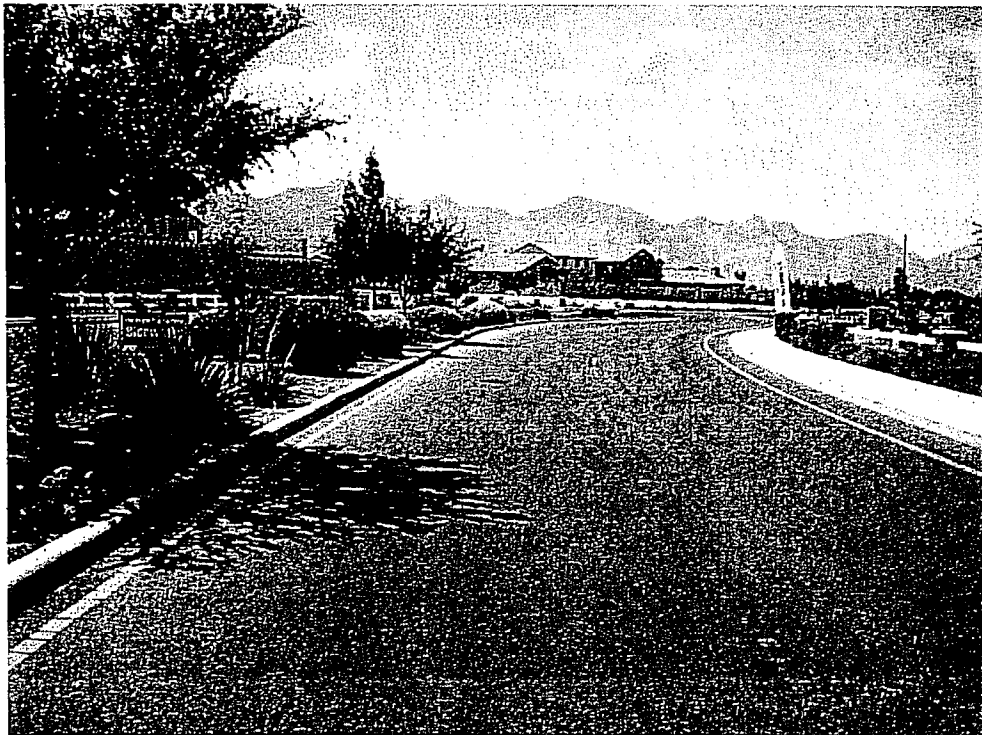


Photo 9: Street scene looking south on Eagle Crest Ranch Boulevard

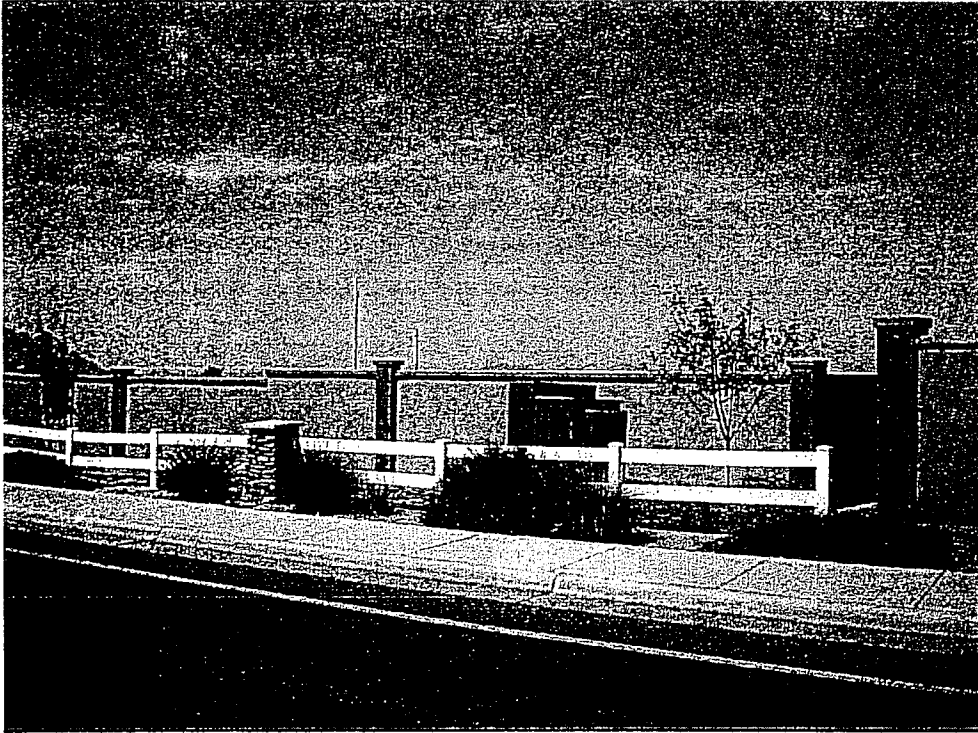


Photo 10: Looking southwest through the site



Photo 11: Looking northwest through the site



Photo 12: Looking northeast through the site

PARCEL 3

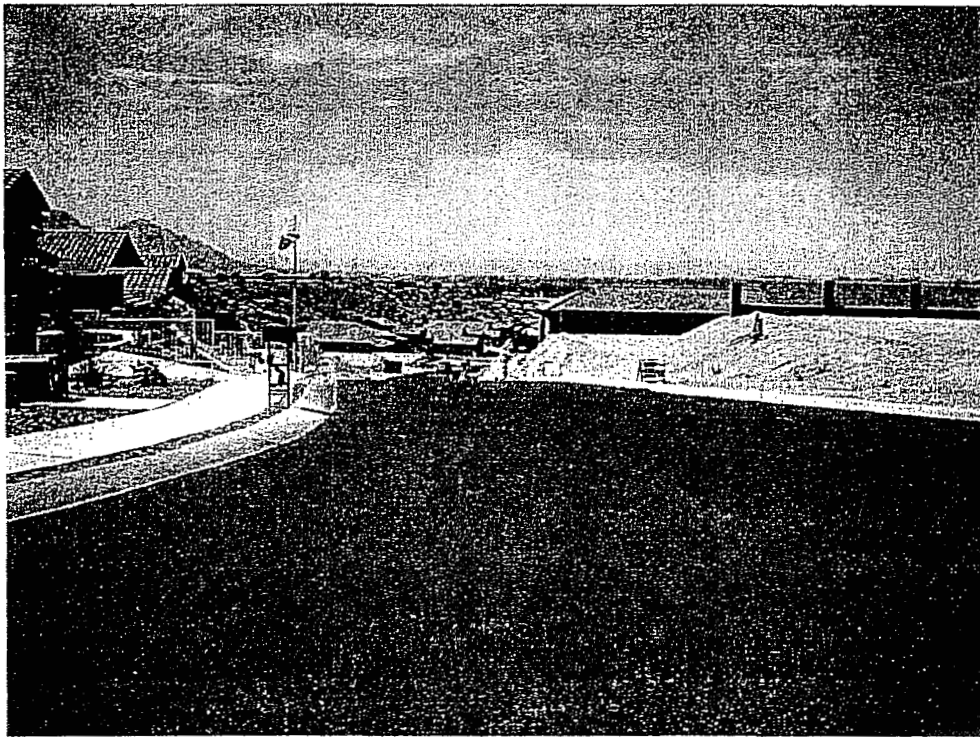


Photo 13: Street scene looking west on Eagle Mountain Drive

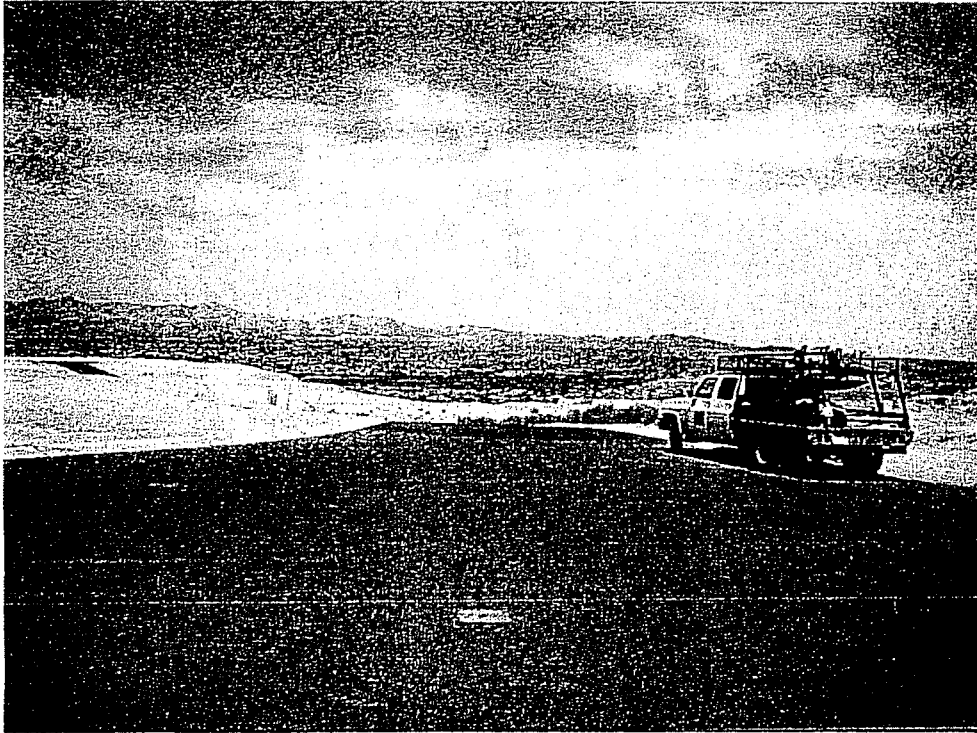


Photo 14: Street scene looking northwest on Eagle Ridge Drive

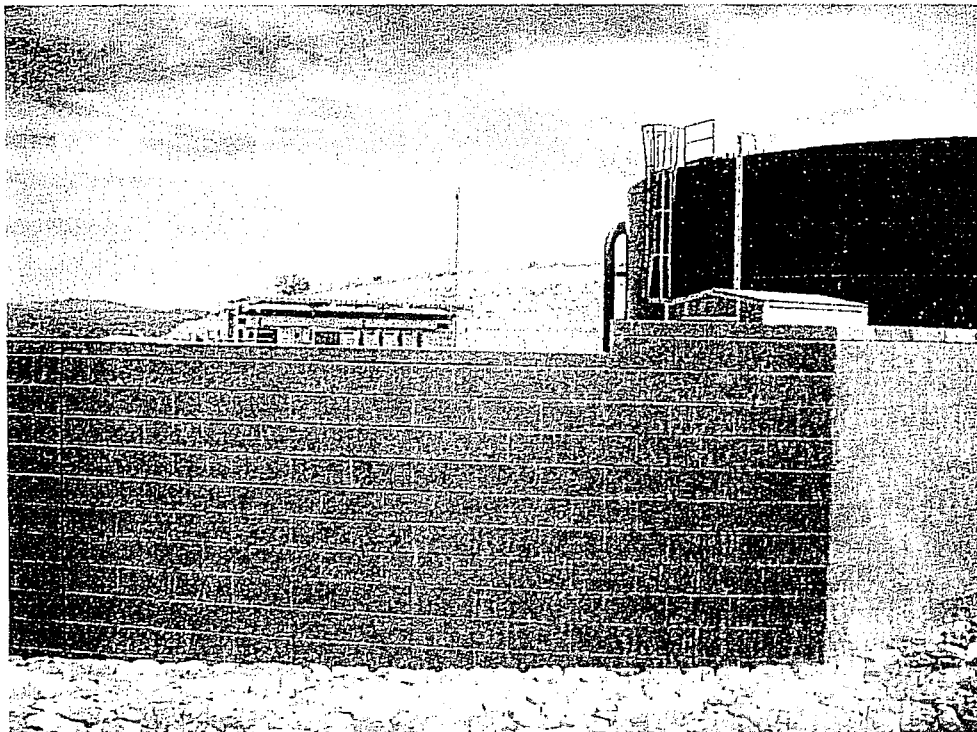


Photo 15: Looking northeasterly through the site

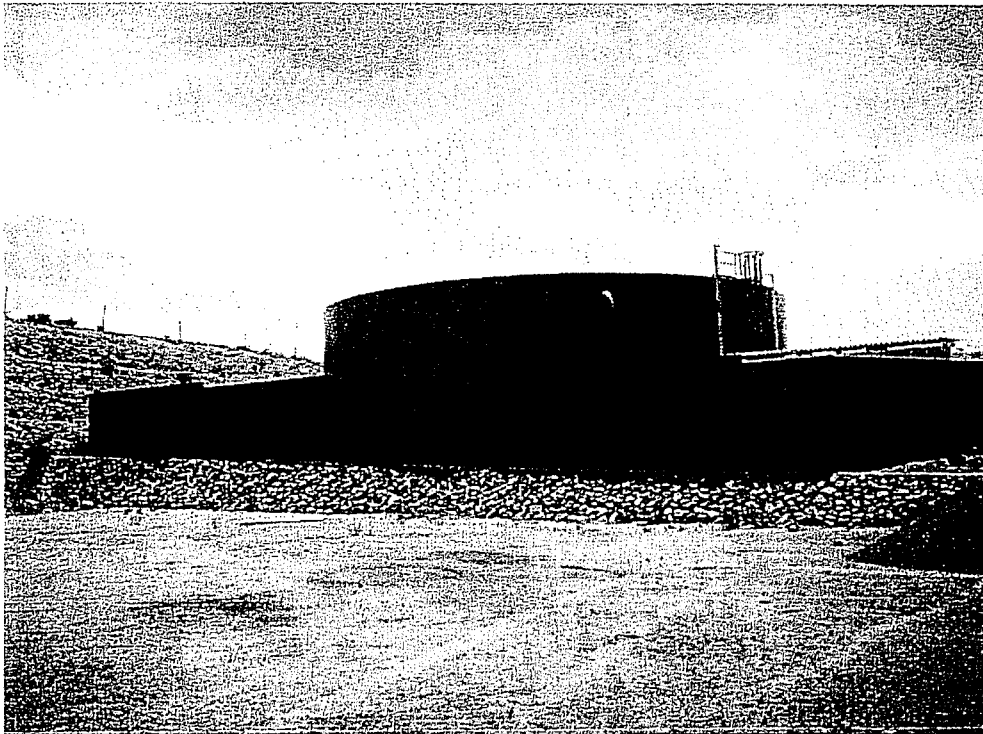


Photo 16: Looking southeasterly through the site



Photo 17: Panoramic view of the Catalina Mountains to the south from the site

PARCEL 4

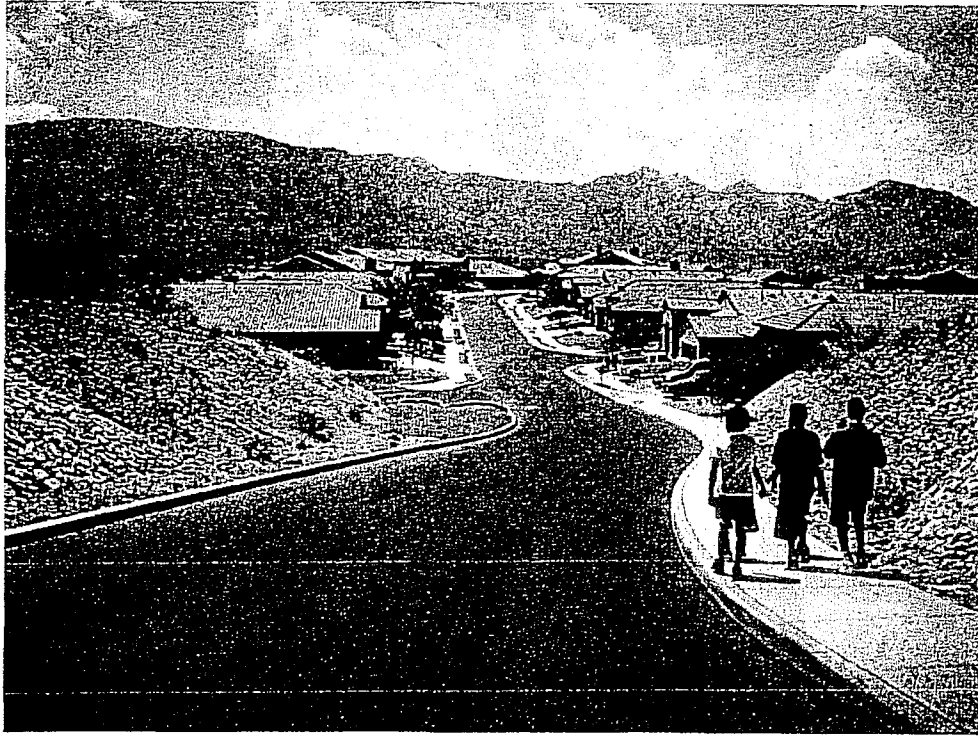


Photo 18: Street scene looking south on Mountain Shadow Drive

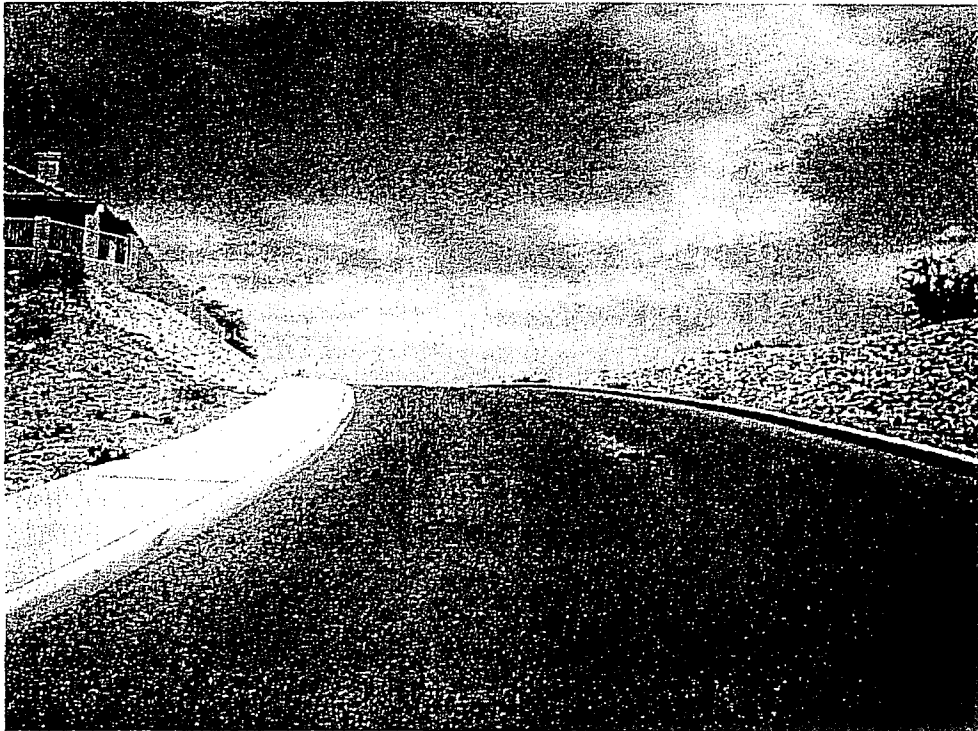


Photo 19: Street scene looking north on Mountain Shadow Drive

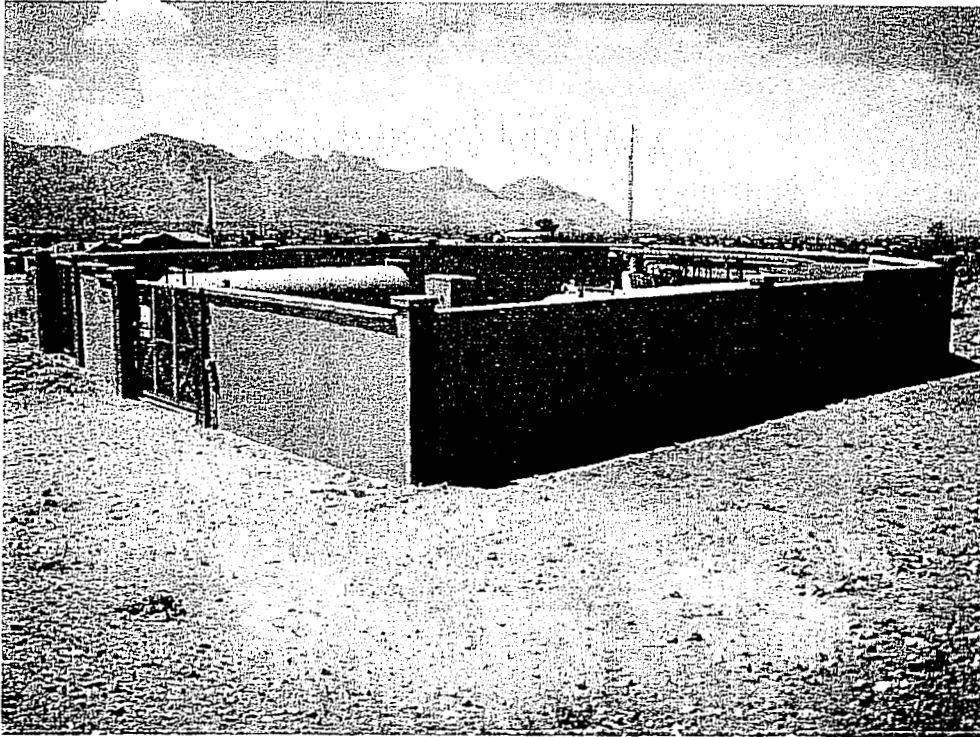


Photo 20: Looking southwest through the site

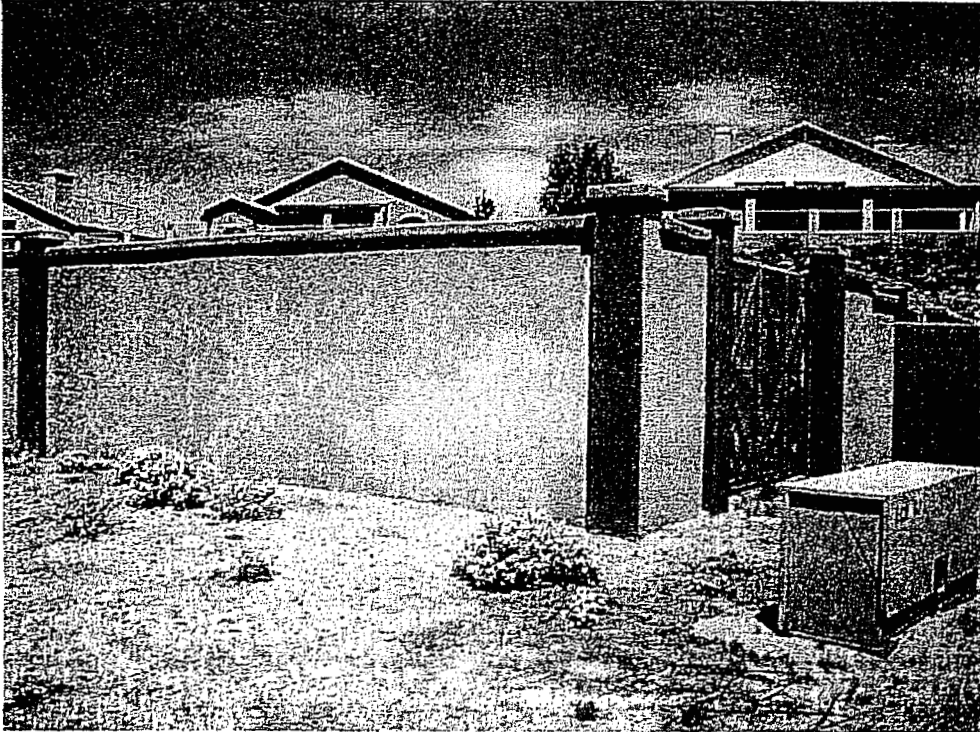


Photo 21: Looking northwest through the site

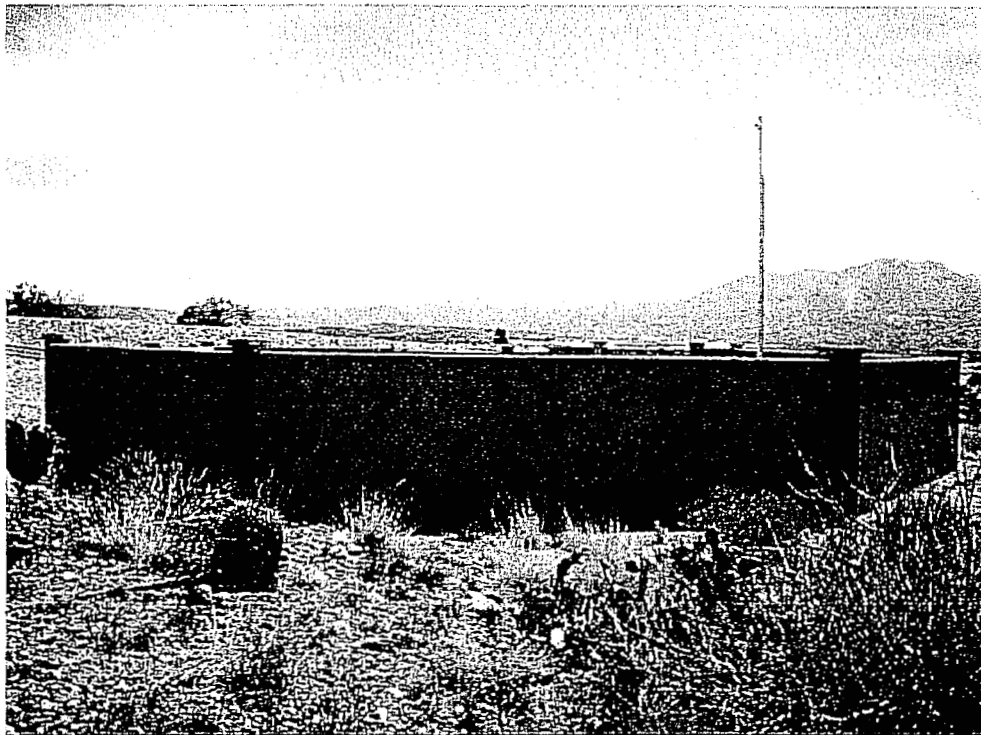


Photo 22: Looking northeast through the site



Photo 23: Looking southeasterly, observing panoramic mountain views to the south

Market Overview

Demographic statistics from *STDBOnline* are in the addenda and indicate a generally stable locale. The *MTLUS* statistics for the retail and single family markets are in the addenda and are also summarized below. The subject is located in District 4, Oro Valley / Catalina. Marketing and exposure times are one year or less. The retail market appears to be undersupplied based on the low vacancy rates and the low district capture of inventory (2.1%) compared to the high district capture of permits (53.3%). However, the large supply of permitted inventory coming online soon will help to balance the market. The single family market appears to be stable where percentage growth mirrors the community overall.

Figure 10: Retail Snapshot

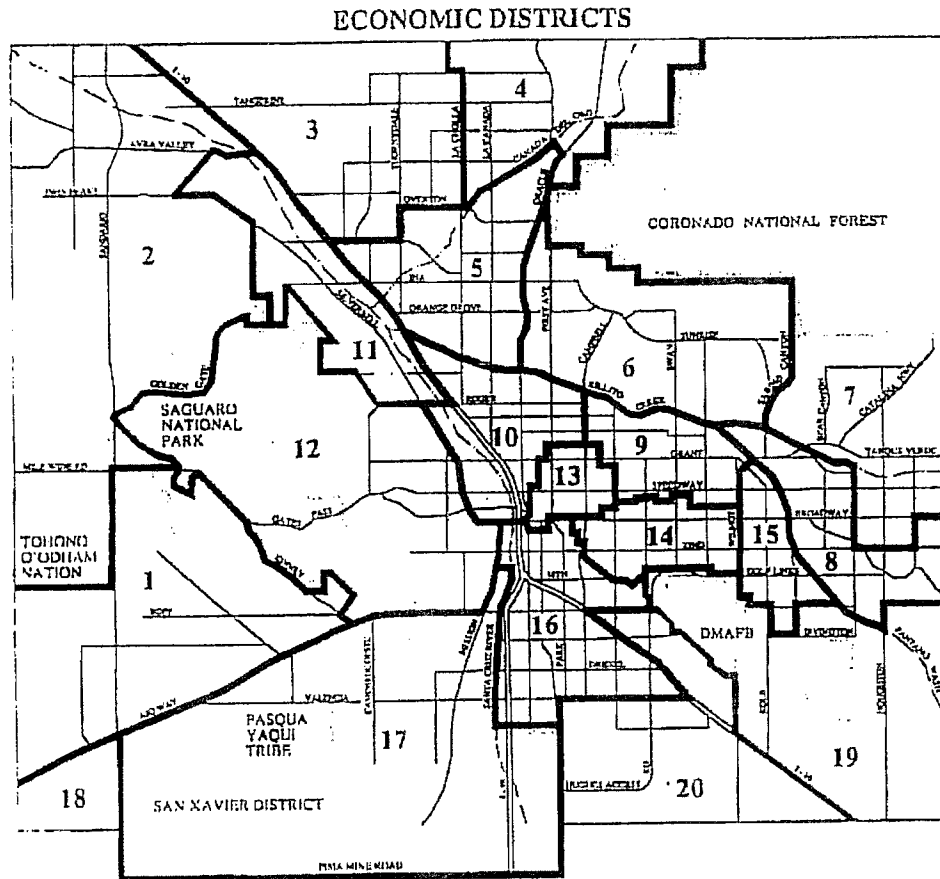
MTLUS Retail Snapshot Q4 2007

	Tucson Metro			District 4		
	Total	Street-side	Shop. Ctr.	Total	Street-side	Shop. Ctr.
Centers (#)	216		216	9		9
% District Capture				4.2%		
Establishments (#)	9,809	5,338	4,471	239	98	141
% District Capture				2.4%	1.8%	3.2%
Vacant (#)	1,119	544	575	24	5	19
% District Capture				2.1%	0.9%	3.3%
Inventory (S.F.)	43,294,596	17,938,157	25,356,439	924,840	239,108	685,732
% District Capture				2.1%	1.3%	2.7%
Vacancy (S.F.)	3,447,452	1,504,533	1,942,919	45,521	6,544	38,977
% Vacancy	8.0%	8.4%	7.7%	4.9%	2.7%	5.7%
% District Capture				1.3%	0.4%	2.0%
Ann. Absorption (S.F.)	641,694	52,211	589,483	75,014	14,637	60,377
% District Capture				11.7%	28.0%	10.2%
Ann. Supply Inc. (S.F.)	685,742	122,930	562,812	109,957	16,485	93,472
% District Capture				16.0%	13.4%	16.6%
Permits (6 mos.) (S.F.)	765,466			407,857		
% District Capture				53.3%		

Figure 11: Single Family Snapshot

MTLUS Single-family Snapshot
Q4 2007

	Tucson Metro	District 4
Inventory (units)	246,877	19,925
% District Capture		8.1%
Ann. Permits (units)	4,846	482
% Growth	2.0%	2.4%
% District Capture		9.9%



Highest & Best Use

Highest and best use is a market driven concept that focuses on market forces as each relates to the subject site, identifying the most profitable and competitive use to which the property can be put. For this assignment, the appraiser has considered the following factors in determining the highest and best use of the subject property: legally permissible, physically possible, financially reasonable and maximally productive.

After examining the facts in the preceding sections of this appraisal report, the following can be summarized regarding the subjects' most probable uses:

- Current zoning of the site permits a variety of commercial uses for Parcels 1 & 2 and single family residential uses for Parcels 3 & 4.
- There do not appear to be any physical limitations that would prohibit development of the subject sites other than size.
- The subject's immediate neighborhood is dominated by residential uses with supporting office and commercial uses.
- The area in which the subject sites are located enjoys an adequate transportation system via arterial streets.

After considering all the various factors, the highest and best use of Subject Parcels 1 and 2 is for commercial development in conjunction with the larger surrounding commercial parcels. The highest and best use for the Subject Parcels 3 and 4 is for single family residential development.

The appraisal process typically involves three traditional valuation approaches: cost, income capitalization and sales comparison. For this evaluation, only the sales comparison approach will be utilized. The Subject Parcels 1 and 2 have a highest and best use to be developed commercially in conjunction with a larger development parcel. Therefore, these parcels will be compared to larger commercial land sales and a price will be allocated on a per square foot basis. Parcels 3 and 4 are valued per lot.

Sales Comparison Approach – Parcels 1 & 2

A search of the entire Tucson metropolitan area for sales of comparable properties was conducted. Similar sales were located in the subject's general neighborhood and competing areas. The sales are compared to the subject Parcels 1 & 2 "as if vacant" and part of a larger commercial development. The larger development parcel for Parcel 1 is located at the southwest corner of Eagle Ranch Rd. and Eagle Crest Ranch Blvd. and is contained within tax parcel no. 305-31-013W. The larger development parcel contains approximately 9.32 acres. The larger parcel for Parcel 2 contains approximately 10.55 acres within tax parcel no's: 305-31-013P and -013Q. The larger parcel is located at the northwest corner of State Route 77 (Oracle Rd) and Eagle Crest Ranch Blvd.

The sales tabulation is a summary of five of the most recent comparable transactions. The properties are competitive uses to the subject. Based on the sales summarized in the table, a unit value of \$5.75/S.F. is appropriate for the underlying land of Parcels 1 and 2, as part of a larger commercial development parcel. Calculations follow:

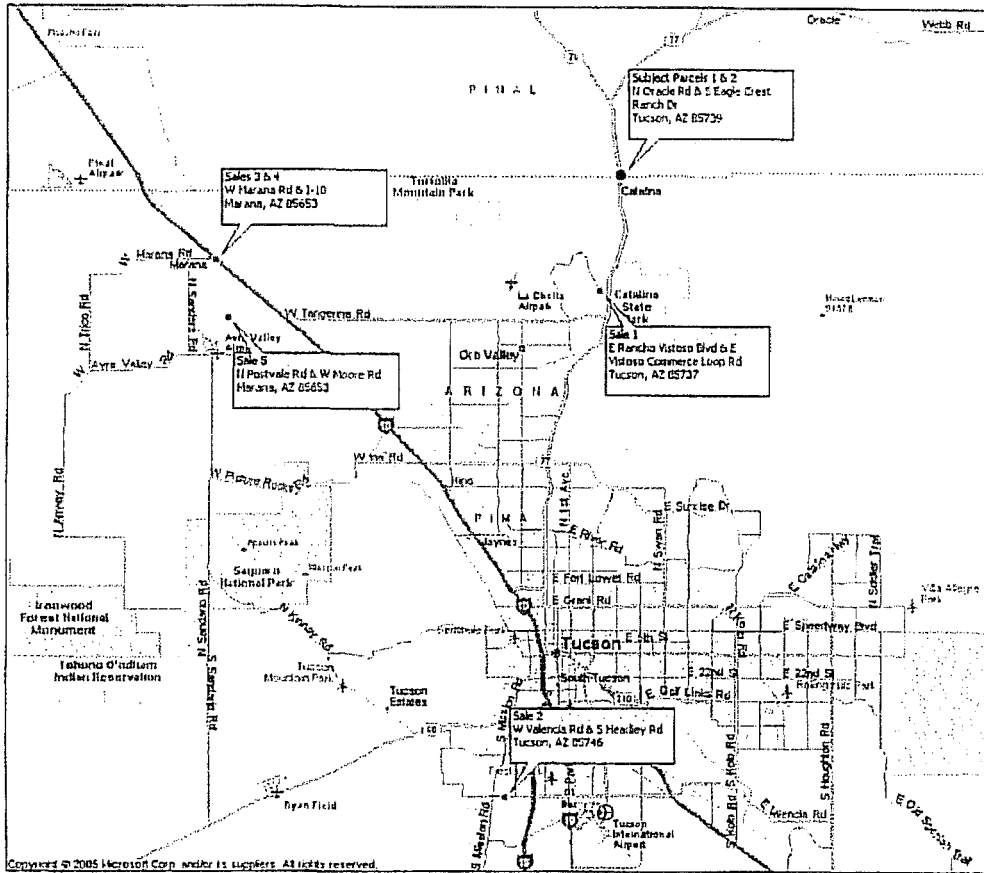
<u>Parcel</u>	<u>Site Area</u>		<u>Value/S.F.</u>	<u>Indicated Value</u>
1	31,363 S.F.	x	\$5.75	\$180,337
			Rounded to:	\$180,000
2	10,890 S.F.	x	\$5.75	\$62,618
			Rounded to:	\$60,000

Figure 12: Comparable Commercial Land Sales – Parcels 1 & 2

LAND SALE ADJUSTMENT GRID					
	Sale 1	Sale 2	Sale 3	Sale 4	Sale 5
Location	NW of Rancho Vistoso Blvd. & Oracle Rd.	SWc Valencia & Headley Rd	SW of Marana Rd. & I-10	NWc of Marana Rd. & I-10	S/s Tangerine Farms, W of Postvale Rd
Date	Jan-07	Mar-07	Sep-07	Jan-08	Feb-08
Adjusted Sales Price*	\$3,735,000	\$3,000,000	\$5,350,692	\$7,720,000	\$3,200,000
Land SF	661,676	495,713	1,126,462	1,810,789	853,776
Land Acres	15.19	11.38	25.86	41.57	19.60
Zoning	PAD, Oro Valley	C-1, Tucson	NC, Marana	C, Marana	VC, Marana
Intended Use	Office Park/ Planned Unit Development	Auto dealership with possible retail	Mixed Use Commercial	Power Center	Walgreen's anchored center
Sale Price/SF	\$5.64	\$6.05	\$4.75	\$4.26	\$3.75
Property Rights Conveyed	0	0	0	0	0
Conditions of Sale	0	-20%	0	0	0
Market Conditions	+10%	+5%	0	0	0
Base Adjusted Price	\$6.21	\$5.08	\$4.75	\$4.26	\$3.75
Location	-10%	+10%	+15%	+15%	+25%
Physical Characteristics	0	0	0	0	0
Size	0	0	+5%	+10%	+5%
Shape	0	0	0	+10%	0
Utility	0	0	0	0	+25%
Zoning/Use	0	0	0	0	0
Non Realty Components	0	0	0	0	0
Indicated Value/S.F.	\$5.59	\$5.59	\$5.70	\$5.76	\$5.81

*Where applicable, price adjusted for cash equivalency, and expenditures required immediately after sale.

Figure 13: Sales Location Map

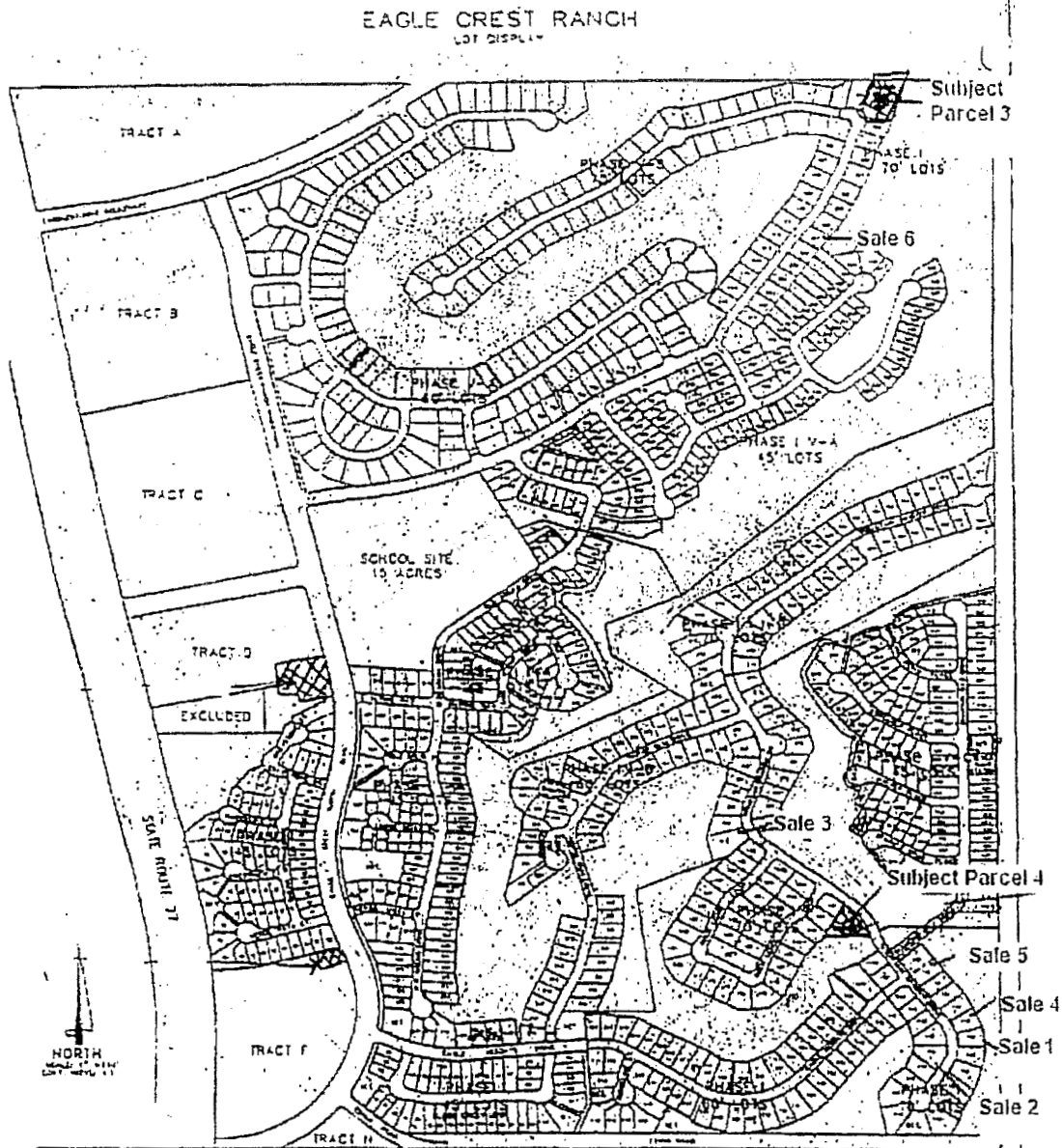


Sales Comparison Approach – Parcels 3 & 4

A search of the entire Tucson metropolitan area for sales of comparable properties was conducted. Nearby vacant comparable residential lot sales were not discovered as finished lots are sold with a house. Value of the underlying land is obtained by applying a land allocation to the overall sales prices of single family homes within the Eagle Crest Ranch Subdivision. A survey of subdivision developers indicates a land to building ratio of 25% for single family homes in similar subdivisions. Following is a tabulation of recent single family home sales in the Eagle Crest Ranch Subdivision:

Sale No.	Sale Date	Subdivision	Lot No.	Sale Price	Lot Size	Imp. Size
1	4/07	Eagle Crest Ranch	154	\$480,000	.23 ac.	3,612
2	8/07	Eagle Crest Ranch	144	\$439,000	.28 ac.	2,319
3	8/07	Eagle Crest Ranch	357	\$367,500	.43 ac.	2,711
4	9/07	Eagle Crest Ranch	155	\$435,000	.23 ac.	3,612
5	12/07	Eagle Crest Ranch	159	\$340,000	.21 ac.	2,318
6	3/08	Eagle Crest Ranch	597	\$345,000	.21 ac.	2,057

Figure 14: Sales Location Map



All of the sales selected are nearby to the subject Parcels 3 and 4, abut open space, and enjoy above average views, as well as larger lot sizes. The sales average \$401,083, say \$400,000. Applying a 25% land allocation yields an estimated lot value of \$100,000 for Parcel 4, as if vacant and valued in accordance with its highest and best use. An additional lot premium of \$50,000 is added to Parcel 3 to reflect its superior views and larger lot size. Therefore, the estimated value of Parcel 3 is \$150,000, as if vacant and valued in accordance with its highest and best use.

Reconciliation

Only the sales comparison approach is applied, and this approach best reflects buyer and seller actions. Based upon all of the information, data and analyses contained in the report, it is my opinion the market value of the underlying land of each subject site, as of June 26, 2008, is properly expressed at:

ESTIMATED MARKET VALUE OF THE SUBJECT SITES, A FRACTIONAL INTEREST AS TO LAND VALUE ONLY, AS IF VACANT, FEE SIMPLE INTEREST, REAL ESTATE ONLY:

PARCEL 1:.....	\$180,000
PARCEL 2:.....	\$60,000
PARCEL 3:.....	\$150,000
PARCEL 4:.....	\$100,000

Estimate of Exposure Time / Marketing Time

3 to 6 months. The estimated construction time is 3 months.

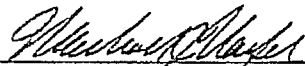
My Certification, the Contingent & Limiting Conditions and my current Qualifications follow.

Your attention is directed to the data and discussions contained in this summary appraisal report and to the pertinent exhibits.

I do hereby certify that, to the best of my knowledge and belief, all statements and opinions contained in this appraisal report are correct. This transmittal letter is not valid for any purpose unless accompanied by the 58-page appraisal referred to herein. The appraisal report and this letter of transmittal are subject to the limiting conditions as set forth in the appraisal report under the heading "Contingent and Limiting Conditions" and to such other specific and limiting conditions as set forth by the appraiser in the appraisal report.

In order to guarantee authenticity of this report, the designated appraiser has imprinted this letter of transmittal with an embossed seal. Any copy without same is not a certified copy and the appraisers assume no responsibility or liability for such a report.

Respectfully submitted,
MJN Enterprises, Inc.

By 
Michael J. Naifeh, MAI, CRE
Certified General
Real Estate Appraiser
State of Arizona
Certificate No. 30276

Certification

I certify that, to the best of my knowledge:

- the statements of fact contained in this report are true and correct.
- the reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions, and conclusions.
- the appraisal assignment was not based on a requested minimum valuation, a specific valuation, or the approval of the loan.
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved.
- my compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.
- my analyses, opinions, and conclusions were developed, and this report has been prepared in conformity with, the Uniform Standards of Professional Appraisal Practice.
- the undersigned hereby acknowledge that they have the appropriate education and experience to complete the assignment in a competent manner. The reader is referred to the appraisers' Statement of Qualifications.
- Michael J. Naifeh has made a personal inspection of the property that is the subject of this report.
- no one provided significant professional assistance to the person(s) signing this report, except as provided hereafter. Carolyn Van Hazel provided significant assistance in the preparation of this appraisal.
- The "Estimate of Market Value" in the appraisal report is not based in whole or in part upon the race, color, or national origin of the prospective owners or occupants of the property appraised, or upon the race, color, or national origin of the present owners or occupants of the properties in the vicinity of the property appraised.
- the reported analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and the Standards of Professional Practice of the Appraisal Institute.


The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.

As of the date of this report, I, Michael J. Naifeh, MAI, have completed the requirements under the continuing education program of the Appraisal Institute.

All conclusions and opinions concerning the real estate that are set forth in the appraisal report were prepared by the Appraisers whose signature(s) appears on the appraisal report, unless indicated as "Review Appraiser."

No change of any item in the appraisal report shall be made by anyone other than the Appraiser(s), and the Appraiser(s) shall have no responsibility for any such unauthorized change.

This summary appraisal report is prepared in conformance with the Uniform Standards of Professional Appraisal Practice.



Michael J. Naifeh, MAI, CRE
Certified General
Real Estate Appraiser
State of Arizona
Certificate No. 30276

Contingent and Limiting Conditions

The certification of the Appraiser appearing in the appraisal report is subject to the following conditions, and to such other specific and limiting conditions as are set forth by the Appraiser in the appraisal report.

This report is prepared for our client. This report or any portion thereof is for the exclusive use of the client and is not intended to be used, sold, transferred, given, or relied on by any other person than the client without the prior, expressed written permission of the authors, as set forth within the Limiting Conditions contained in this report. Possession of this appraisal, or a copy thereof, does not carry with it the right of publication. The appraisal may not be used for any purpose by any person other than the client without prior written consent of the appraiser. Neither all nor any part of the contents of this appraisal (especially any conclusions as to value, the identity of the appraiser, or the firm with which the appraiser is connected) shall be disseminated to the public through advertising, public relations, news, sales, or other media without the prior written consent and approval of the appraiser.

The Appraiser assumes no responsibility for matters of a legal nature affecting the property appraised or the title thereto, nor does the Appraiser render any opinion as to the title, which is assumed to be good and marketable. No Owner's Title Policy has been furnished to the Appraiser. The property is appraised as though under responsible ownership, competent management, and adequate marketing typical for that type of property.

The Appraiser has made no survey of the property. Any sketch or map in the appraisal report may show approximate dimensions and is included for illustrative purposes only. It is the responsibility of a certified engineer, architect, or registered surveyor to show by a site plan the exact location of the subject property or any improvements or any proposed improvements thereon, or the exact measurements or calculations of estimated area of the site. In the absence of such a survey, the appraiser may have used Tax Assessor's maps or other maps provided by the client which may not represent the exact measurements of the subject property or other comparable information used to estimate the value of the subject property. Any variation in dimensions or calculations based thereon may alter the estimates of value contained within the appraisal.

The plot plans and illustrative material in this appraisal are included only to assist the reader in visualizing the property.

The property is appraised free and clear of any or all liens or encumbrances unless otherwise stated.

Responsible ownership and competent property management are assumed.

It is assumed that there is full compliance with all applicable federal, state, and local environmental regulations and laws unless noncompliance is stated, defined and considered in the appraisal.

It is assumed that all required licenses, certificates of occupancy, consents, or other legislative or administrative authority from any local, state, or national government or private entity or organization have been or can be obtained or renewed for any use upon which the value estimate contained in this appraisal is based.

It is assumed that the utilization of the land and improvements is within the boundaries or property lines of the property described and that there is no encroachment or trespass unless noted in the appraisal.

In estimating the value of the subject property and in analyzing comparable information, the appraisers have relied upon information from public and private planning agencies as to the potential use of land or improved properties. This information may include, but is not limited to, Area Plans, Neighborhood Plans, Zoning Plans and Ordinances, Transportation Plans, and the like. In the estimate of market value, the appraiser may consider the extent to which a knowledgeable and informed purchaser or seller, as of the date of the appraisal, would reflect the reasonable probability of changes in such land uses becoming actualized in the future. To the extent that these plans may change, the value estimates of this appraisal may also change.

In the absence of a professional Engineer's Feasibility Study, information regarding the existence of utilities is made only from a visual inspection of the site. The Appraiser assumes no responsibility for the actual availability of utilities, their capacity, or any other problem which may result from a condition involving utilities. The respective companies, governmental agencies or entities should be contacted directly by concerned persons.

The Appraiser is not required to give testimony or appear in court because of having made the appraisal with reference to the property in question, unless prior arrangements have been made and confirmed in writing.

Any allocation of the valuation in the appraisal report between land and improvements applies only under the stated program of utilization. The separate valuations for land and improvements must not be used in conjunction with any other appraisal and are invalid if so used.

The Appraiser assumes that there are no hidden or unapparent conditions of the property, subsoil, potential flooding hazards, hydrology, or structures, which would render it more or less valuable. The Appraiser assumes no responsibility for such conditions, or for engineering which might be required to discover such factors. To the extent that published data from public agencies is available on the above, the Appraiser has made an effort to consult this information.

Unless otherwise stated within our report, the existence of hazardous material, which may or may not be present within or on the property, will not be considered by us. The Appraiser assumes, and the client warrants, that no such materials adversely affect the utility, usability, or developability of the property to the best of their knowledge. The appraisers are not qualified to detect such substances. The presence of substances such as asbestos, ur-ca-formaldehyde foam insulation, radon gas, or other potentially hazardous materials may affect the value of the property. The value estimate has been predicated on

the assumption that there is no such material on or in the property that would cause a loss in value. No responsibility will be assumed for any such conditions, or for any expertise or engineering knowledge required to discover them. The client is urged to retain an expert in this field, if desired. If at a later time hazardous materials or substances are discovered, we reserve the right, for an additional agreed-upon fee, to re-analyze and re-appraise said property, taking into account the discovery of such factor or factors and their effects on the value of the subject property.

Information, estimates, and opinions furnished to the Appraiser and contained in the appraisal report were obtained from sources considered reliable and believed to be true and correct. However, no responsibility for accuracy of such items furnished to the Appraiser can be attributed to the Appraiser.

In this appraisal assignment, the existence of potentially hazardous material used in the construction or maintenance of the building, such as the presence of urea formaldehyde foam insulation, and/or existence of toxic waste or radon gas, which may or may not be present on this property, has not been considered. The appraiser is not qualified to detect such substances. We suggest that the client retain an expert in this field, if desired.

The appraiser has not detected or knows of any substance relating to environmental health that would affect the market value of the subject property.

Disclosures of the contents of the appraisal report by the Appraiser are governed by the Bylaws and Regulations of the professional appraisal organizations with which the Appraiser is affiliated.

On all appraisals which are undertaken subject to satisfactory completion of, alterations of, or repairs to improvements, the appraisal report and value conclusions contained in it are contingent upon completion of the improvements or of the repairs thereto or alterations thereof in a workmanlike manner.

This is a Summary Appraisal Report which is intended to comply with the reporting requirements set forth under Standard Rule 2-2(b) of the Uniform Standards of Professional Appraisal Practice for a Summary Appraisal Report. As such, it might not include full discussions of the data, reasoning, and analyses that were used in the appraisal process to develop the appraiser's opinion of value. Supporting documentation concerning the data, reasoning, and analyses is retained in the appraiser's file. The information contained in this report is specific to the needs of the client and for the intended use stated in this report. The appraiser is not responsible for unauthorized use of this report.

The information contained in this report is specific to the needs of the client and for the intended use stated in this report. The appraiser is not responsible for unauthorized use of this report.

There were no other specific and/or limiting conditions associated with this appraisal for the subject property except what has been previously mentioned above.

The use of this report or its analysis and conclusions by the client or any other party constitutes acceptance of all the above limiting conditions.

Qualifications of the Appraiser

Michael J. Naifeh

Experience

- Includes valuation of most types of urban real property and interest in real property; i.e., single and multi-family residential, commercial, industrial, and vacant land. Experience also includes special-purpose properties, feasibility studies, property tax appeals, lease fee and leasehold interest, and counseling.
- Employed as a Fee Appraiser with Sanders K. Solot and Associates, Tucson, Arizona, from May 1980 through April 1983.
- Employed as a Fee Appraiser with Mahoney, Cole and Associates, Tucson, Arizona, from May 1983 through May 1988.
- Currently President and Principal Appraiser, MJN Enterprises, Inc.

Professional Education

Successful completion of examinations for the following Appraisal Institute courses:

- Real Estate Appraisal Principles, and Basic Valuation Procedures, December, 1979 (formerly Course 1A, now Courses 110 and 120)
- Capitalization Theory & Techniques, Part 1, March, 1980; Parts 2 and 3, June, 1983; attended again, January, 1988 (formerly Course 1B, now Courses 310 and 510)
- Case Studies and Valuation Analysis and Report Writing, February, 1984 (formerly Course 2, now Courses 540 and 550)
- Standards of Professional Practice, May, 1984; attended again October, 1990, June, 2001 (formerly Course 2 Part 3, now Courses 410 and 420)
- Litigation Valuation, June, 1991 (formerly Course 4)
- Real Estate Investment Analysis, June, 1982 (formerly Course 6)
- Market Analysis, March, 1985; attended Highest and Best Use and Market Analysis, June, 1994 (formerly Course 10, now Course 520)
- Attended Advanced Sales Comparison and Cost Approaches, February, 1996, Course 530
- Attended various seminars such as Case Studies and Litigation Valuation

Professional Memberships

- Member of the Counselors of Real Estate (CRE), Certification Number 2387. The CRE designation is awarded only to those individuals who are invited by their peers into the membership of the Counselors of Real Estate.
- Member, Appraisal Institute, (MAI), Certificate Number 7812. As of the date of this report, I, Michael J. Naifeh, have completed the requirements under the continuing education program of the Appraisal Institute.
- Certified General Real Estate Appraiser, State of Arizona Certificate No. 30276.
- Registered Property Tax Agent in the State of Arizona
- Licensed Real Estate Salesman, State of Arizona

Formal Education

Bachelor of Science Degree, University of Arizona, 1980.

Concentration: Accounting and Real Estate

Public Service

- Appointed to the Arizona State Board of Appraisal January, 2000.
- Served as Vice Chairperson in 2000 and Chairperson in 2001.
- Reappointed for a second term January, 2002.

Scope of Appraisal Practice

Appraisal practice is classified into five categories:

- Mortgage Loan Appraisal
- Taxation Valuation
- Eminent Domain Appraisal
- Market Value for Private Negotiation Purposes
- Counseling

Clientele includes governmental agencies, corporate organizations, development companies, and financial institutions.

Addenda

Figure 15: Appraisal Contract



June 9, 2008

Ms. Jackie Ziliox
Chief Executive Officer
Sears Financial Corporation
6340 N. Campbell Ave., Suite 278
Tucson, AZ 85718

Re: Summary appraisal of the vacant land, 4 sites located in Eagle Crest Ranch, Pima County, Arizona

Sent by fax: 529-8012
Sent by e-mail: Jackie.z@comcast.net

Dear Ms Ziliox:

I am submitting this proposal for a summary appraisal on the property referenced above. The purpose of this assignment is to develop market value opinions of the individual sites as to their highest and best use and not as infrastructure sites for the Goodman Water Company.

The summary appraisal report will contain abbreviated descriptions of the market area and the sites, and will discuss pertinent market conditions and their effects on the value of each property. The appraisal report also will contain a summary of supporting factual data and analyses necessary to substantiate my opinions of value, as well as pertinent exhibits and photographs. The sales comparison approach will be developed as it is necessary for a credible value opinion. The intended use is for asset management decisions including possible donation to the water company. The intended user is the client.

Please provide maps with site sizes or surveys, zoning conditions, and master plan documents. The scope of the work will include tabulation of comparable sales verified by public records, similar to an "evaluation" report often prepared for banks on diminimus properties (diminimus properties are generally properties with financing under \$250,000). Prior to issuing this letter, I explained the scope of services to you as you are a knowledgeable user of appraisal services.

Please be advised that I am disclosing/will disclose, both in this contract letter and in the appraisal report, that an affiliate of Sears Financial Corporation, D&D Investments, has a

6061 East Grant Road, Tucson, Arizona 85712
(520) 321-0000 FAX (520) 290-5293

minority investment in PBH Flagstaff Holdings, LLC of which I am also a member. Because the interest owned is small (+/- 2%) and because the appraisal is not being used for a federally related transaction, by executing this letter, we mutually agree and acknowledge that this will have no influence whatsoever on both my independence and the value opinions.

My certification on the appraisal report will be subject to the limiting conditions set forth in the enclosed three-page document entitled "Contingent and Limiting Conditions" and to other specific and limiting conditions which will be set forth in the appraisal report.

The total fee for the appraisal will not exceed \$2,000. Upon the receipt of this mutually-executed agreement, the appraisal will be completed in 3 weeks.

The client hereby agrees to pay an 18% per annum finance charge on any unpaid balance of the fee if payment is not received when due. Accounts which must be assigned to an outside agency for collection will be assessed a \$200.00 service charge. In case legal action is instituted to collect a past due balance, the above-named client promises to pay collection costs and such additional sums as the court may adjudge reasonable such as court costs, attorney fees, service of process, and any other costs necessary to effect judgment and enforce payment. Please make all checks payable to MJN Enterprises, Inc. If this agreement is not signed by the client and returned to the appraisers within seven days from the above date, the fees set forth herein may be subject to change. Further, the above-quoted fee agreement is subject to change by the appraisers upon inspection of the property or upon change in the client's requested services. Appraisers shall notify the client of any such change in fees prior to commencement of the work.

The parties agree that the estimated fee does not include any services or expenses other than those as set forth above. For example, post appraisal consultation, appearance at legal proceedings, research, analysis, preparation, and testimony for depositions or court appearances for any legal proceedings are not included services, unless specifically set forth above. Any such additional services requested by the client and expensus occasioned thereby are subject to an additional fee to be billed at \$200.00 per hour, excepting expert witness testimony and testimony within depositions which are billed at \$250 per hour.

Your acceptance of this proposal, as confirmed by your signature on this letter, will acknowledge your understanding and agreement with the terms of this assignment as set forth in this letter, including the document entitled "Contingent and Limiting Conditions."

This contract is made solely with MJN Enterprises, Inc., an independent corporation.

If these terms expressed in this letter are acceptable to you, please date and sign this original letter and return it to me, together with your check covering the retainer fee made payable to MJN Enterprises, Inc. I am enclosing a signed copy of this letter for your records.

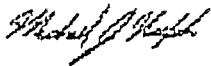
If any provision of this agreement is determined to be void or unenforceable by any court of proper jurisdiction, such determination shall not affect any other provision of this agreement held to be enforceable and all such enforceable provisions shall remain in full force and effect. Any actions or proceedings brought by anyone relating to or arising out of this agreement shall be brought in a court of proper jurisdiction in Pima County, Arizona. It is agreed that this agreement and the performance hereunder and all suits and legal proceedings hereunder shall be construed in accordance with and pursuant to the laws of the State of Arizona. This agreement represents the entire agreement between the parties and supersedes all prior written or oral agreements, negotiations, or representations.

This agreement shall be binding upon the heirs, successors, and assigns of the parties.

I look forward to being of service to you.

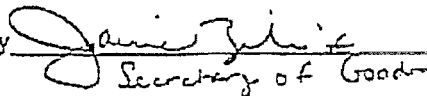
Respectfully submitted,

MJN ENTERPRISES, INC.



By _____
Michael J. Naifeh, MAI, CRE
Certified General
Real Estate Appraiser
State of Arizona
Certificate #30276

CLIENT ACCEPTED & APPROVED:

By  _____
Secretary of Goodman Water Company

Date 6-11-08

MJN/st

Figure 16: Subject Deeds

FIDELITY NATIONAL TITLE



OFFICIAL RECORDS OF
PINAL COUNTY RECORDER
LAURA DEAN-LYTLÉ

When recorded, return to:
Goodman Water Company
Attn: Jackie Zilion, Chief Executive Officer
Sears Financial Corporation
6340 N. Campbell Avenue, Suite 278
Tucson, AZ 85718

DATE/TIME: 05/05/08 1421
FEE: \$16.00
PAGES: 3
FEE NUMBER: 2008-042476

1/2 30029990

SPECIAL WARRANTY DEED

For the consideration of the sum of Ten Dollars (\$10.00) and other valuable consideration, D.R. Horton, Inc., a Delaware corporation ("Grantor"), does hereby grant, sell and convey unto Goodman Water Company, an Arizona corporation, the following described real property located in Pinal County, Arizona:

See Exhibit "A" attached hereto and by this reference made a part hereof (the "Property"),

together with all rights, easements and privileges appurtenant thereto.

SUBJECT TO: All taxes and assessments; patent reservations; easements, rights of way, encumbrances, liens, covenants, conditions, restrictions, obligations, liabilities and other matters that appear of record.

Grantor warrants the title to the Property against all acts of the Grantor and no other, subject only to the matters above set forth.

IN WITNESS WHEREOF, the Grantor has caused these presents to be executed this 18th day of April, 2008.

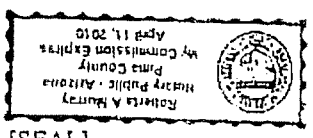
D.R. Horton, Inc. a Delaware corporation

By: *David S. Gendrich*
Name: David S. Gendrich
Title: Division President

STATE OF ARIZONA)
County of PIMA) ss.

On April 18, 2008 before me, Robert A. Murray
personally appeared David S. Greenberg personally known to me (or
proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s)
is/are subscribed to the within instrument and acknowledged to me that he/she/they
executed the same in his/her/their authorized capacity(ies), and that by his/her/their
signature(s) on the instrument the person(s) or the entity upon behalf of which the
person(s) acted, executed the instrument.

Witness my hand and official seal.



Robert A. Murray
Notary Public

[SEAL]

EXHIBIT "A" TO GENERAL WARRANTY DEED

Parcel No. 1:

Tract A, of EAGLE CREST RANCH I, according to the plat record in the office of the
County Recorder of Pinal County, Arizona, recorded in Cabinet D of Maps, Slide 34.

Parcel No. 2:

Tract B, of EAGLE CREST RANCH I, according to the plat record in the office of the
County Recorder of Pinal County, Arizona, recorded in Cabinet D of Maps, Slide 34.

Parcel No. 3:

Tract E, of EAGLE CREST RANCH IV-A, according to the plat of record in the office
of the County Recorder of Pinal County, Arizona, recorded in Cabinet G of Maps, Slide
83.

FIDELITY NATIONAL TITLE



OFFICIAL RECORDS OF
PINAL COUNTY RECORDER
LAURA DEAN-LYTTLE

When recorded, return to:
Goodman Water Company
Attn: Jackie Ziliox, Chief Executive Officer
Sears Financial Corporation
6340 N. Campbell Avenue, Suite 278
Tucson, AZ 85718

DATE/TIME: 05/05/08 1421
FEE: \$16.00
PAGES: 3
FEE NUMBER: 2008-042477

262 30029990

GENERAL WARRANTY DEED

For the consideration of the sum of Ten Dollars (\$10.00) and other valuable consideration, Fidelity National Title Agency, Inc., an Arizona corporation, as Trustee under Trust No. 10,587 ("Grantor"), does hereby grant, sell and convey unto Goodman Water Company, an Arizona public service corporation, the following described real property located in Pinal County, Arizona:

See Exhibit "A" attached hereto and by this reference made a part hereof (the "Property").

together with all rights, easements and privileges appurtenant thereto.

SUBJECT TO: All taxes and assessments; patent reservations; easements, rights of way, encumbrances, liens, covenants, conditions, restrictions, obligations, liabilities and other matters that appear of record.

Grantor warrants the title to the Property against all persons whomsoever subject only to the matters above set forth.

Pursuant to A.R.S. § 33-404, the name and address of the beneficiary of Grantor is:

Goodman Ranch Associates
6340 N. Campbell Avenue
Suite 278
Tucson, AZ

IN WITNESS WHEREOF, the Grantor has caused these presents to be executed
this 27th day of March, 2008.

Fidelity National Title Agency, Inc., an Arizona corporation, as Trustee under Trust No. 10.587

By: FIDELITY NATIONAL TITLE AGENCY, INC.
Name: an Arizona corporation as TRUSTEE Under
Title: TRUST NO. 10.587 and not in its
corporate capacity
By: [Signature]
Its Trust Officer

STATE OF ARIZONA)
) ss.
County of PIMA)

On 3.24.08, before me, LAURA E. MARTINEZ, personally appeared MARTHA L. HILL personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

Witness my hand and official seal.

[Signature]
Notary Public

[SEAL]

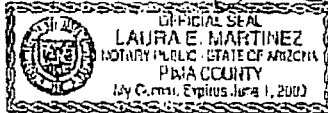


EXHIBIT "A" TO GENERAL WARRANTY DEED

All of that portion of the Southwest Quarter of Section 32, Township 10 South, Range 14 East, Gila and Salt River Base and Meridian, Pinal County, Arizona, being a portion of Eagle Crest Ranch Tracts "A" through "N" and Common Area "A" (Private Streets), a subdivision of Pinal County, Arizona, recorded in Cabinet "C" in Slide 173 on October 25, 2000, more particularly described as follows:

Commencing at the Southeast corner of Tract "D" of said Eagle Crest Ranch Tracts "A" through "N" as it adjoins Tract "E" and Eagle Crest Ranch Boulevard, said point falling on a curve from which the radius bears South 83 degrees 55 minutes 51 seconds West;

Thence Northerly along said curve to the left on the Westerly right-of-way of Eagle Crest Ranch Boulevard, having a radius of 1150.00 feet and a central angle of 03 degrees 36 minutes 30 seconds, an arc distance of 72.42 feet to the POINT OF BEGINNING;

Thence departing said curve, West, on a non-tangent line, a distance of 36.10 feet;

Thence South 45 degrees 00 minutes 00 seconds West, a distance of 92.02 feet;

Thence West, a distance of 46.69 feet;

Thence North 10 degrees 49 minutes 04 seconds West, a distance of 60.09 feet;

Thence South 79 degrees 10 minutes 56 seconds West, a distance of 75.26 feet;

Thence North, a distance of 113.17 feet;

Thence East, a distance of 213.60 feet to a point on the Westerly right-of-way of said Eagle Crest Ranch Boulevard;

Thence South 12 degrees 56 minutes 33 seconds East along said Westerly right-of-way, a distance of 29.49 feet to a point of curvature;

Thence Southerly along said curve to the right, having a radius of 1150.00 feet and a central angle of 03 degrees 15 minutes 55 seconds, an arc distance of 65.54 feet to the POINT OF BEGINNING;



Demographic and Income Profile - Appraisal Version

MJN Enterprises

Eagle Crest
 Eagle Crest Ranch Blvd & N Oracle Rd
 Tucson, AZ 85739

Latitude: 32.511310
 Longitude: -110.925771
 Radius: 3.0 mile

Site Type: Radius

Summary	2000	2008	2013
Population	7,812	12,165	14,342
Households	3,105	4,323	5,414
Families	2,360	4,045	4,841
Average Household Size	2.49	2.28	2.22
Owner Occupied HUs	2,713	4,715	5,543
Renter Occupied HUs	391	515	770
Median Age	46.2	55.5	55.0

Trends: 2008-2013 Annual Rate	Area	State	National
Population	3.24%	3.27%	1.22%
Households	3.75%	3.25%	1.26%
Families	3.68%	3.03%	1.05%
Owner HHs	3.65%	3.1%	1.07%
Median Household Income	2.53%	3.74%	3.18%

Households by Income	2000		2008		2013	
	Number	Percent	Number	Percent	Number	Percent
< \$15,000	377	9.0%	370	5.1%	352	3.0%
\$15,000 - \$24,999	453	15.7%	425	6.0%	311	4.0%
\$25,000 - \$34,999	328	12.3%	507	9.5%	550	9.2%
\$35,000 - \$49,999	669	21.7%	714	13.4%	677	10.6%
\$50,000 - \$74,999	518	20.1%	1,359	25.5%	1,323	25.5%
\$75,000 - \$99,999	250	9.4%	655	12.0%	653	10.7%
\$100,000 - \$149,999	340	7.8%	758	14.8%	1,264	20.0%
\$150,000 - \$199,999	59	1.0%	377	5.2%	411	6.4%
\$200,000+	62	2.0%	311	5.5%	571	9.0%
Median Household Income	\$43,069		\$62,712		\$71,073	
Average Household Income	\$55,566		\$94,604		\$105,131	
Per Capita Income	\$22,245		\$37,768		\$47,605	

Population by Age	2000		2008		2013	
	Number	Percent	Number	Percent	Number	Percent
0 - 4	360	4.6%	474	3.9%	564	3.9%
5 - 9	424	5.4%	471	3.9%	558	3.9%
10 - 14	501	6.4%	500	4.1%	601	4.2%
15 - 19	519	6.8%	539	4.4%	607	4.2%
20 - 24	322	4.1%	470	3.9%	496	3.5%
25 - 34	651	8.3%	1,030	8.5%	1,253	9.7%
35 - 44	1,305	12.0%	1,040	8.5%	1,321	9.8%
45 - 64	1,030	13.2%	1,458	12.0%	1,662	11.6%
65 - 74	1,214	15.5%	1,892	15.6%	2,267	16.0%
75 - 84	1,132	14.5%	2,493	20.5%	2,600	18.2%
85+	551	7.1%	1,480	12.0%	1,800	13.3%
	104	1.3%	331	2.7%	556	3.9%

Data Note: income is expressed in current dollars

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI forecasts for 2008 and 2013

MTLUS Retail History

District 4: Oro Valley - Catalina	4/05	2/06	4/06	2/07	4/07
Street-side Commercial Establishments					
Total	87	94	91	98	98
Vacant	7	4	4	5	5
Square Footage					
Total	208,738	224,203	222,623	239,108	239,108
Vacant	11,668	6,636	4,696	7,903	6,544
Vacancy Rate	5.59%	2.96%	2.11%	3.31%	2.74%
Change in Supply	0	15,465	(1,580)	16,485	0
Absorption	2,665	20,497	360	13,278	1,359
Shopping Center Centers					
Total	6	7	7	8	9
Establishments					
Total	109	121	120	131	141
Vacant	7	10	5	12	19
Square Footage					
Total	515,305	592,260	592,260	646,173	685,732
Vacant	10,359	16,610	5,882	72,990	38,977
Vacancy Rate	2.01%	2.80%	0.99%	11.30%	5.68%
Change in Supply	5,700	76,955	0	53,913	39,559
Absorption	651	70,704	10,728	(13,195)	73,572
Retail Permits					
Buildings	2	6	3	7	11
Square Feet	20,419	76,122	14,478	97,421	407,857

MTLUS Retail History

Total Tucson Area	4/05	2/06	4/06	2/07	4/07
Street-side Commercial Establishments					
Total	5,305	5,305	5,304	5,319	5,338
Vacant	559	538	549	503	544
Square Footage					
Total	17,661,651	17,741,523	17,815,227	17,879,412	17,938,157
Vacant	1,442,570	1,438,701	1,433,834	1,357,473	1,504,553
Vacancy Rate	8.17%	8.11%	8.05%	7.59%	8.39%
Change in Supply Absorption					
Change in Supply	304,882	79,872	73,704	64,185	58,745
Absorption	450,297	83,741	78,571	140,546	(88,335)
Shopping Center Centers					
Centers	204	207	209	212	216
Establishments					
Total	4,260	4,350	4,371	4,424	4,471
Vacant	559	583	546	543	575
Square Footage					
Total	23,917,318	24,502,706	24,793,627	25,169,352	25,356,439
Vacant	1,964,048	2,225,519	1,969,590	1,987,547	1,942,919
Vacancy Rate	8.21%	9.08%	7.94%	7.90%	7.66%
Change in Supply Absorption					
Change in Supply	441,195	585,388	290,921	375,725	187,087
Absorption	552,684	323,917	546,850	357,768	231,715
Retail Permits					
Buildings	40	47	44	48	46
Square Feet	493,876+	799,389+	338,526+	601,611+	765,466+

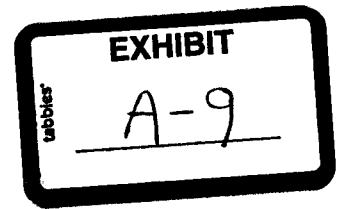
MTLUS Single Family Detached History

4: Oro Valley - Catalina	1/06	2/06	3/06	4/06	1/07	2/07	3/07	4/07
Inventory	18,715	19,013	19,013	19,344	19,343	19,628	19,628	19,925
Absorption of New Inventory		298		331		285		298
Building Permits	170	155	423	132	115	153	125	89

MTLUS Single Family Detached History

Total Tucson Area	1/06	2/06	3/06	4/06	1/07	2/07	3/07	4/07
Inventory	230,907	234,932	234,912	239,462	239,437	243,723	243,710	246,877
Absorption of New Inventory		4,043		4,567		4,309		3,182
Building Permits	2,542	2,638	1,602	1,049	1,245	1,703	1,199	699

Exhibit A-9



May 2, 2011

**Rebuttal Testimony
John Ferenchak, III**

**July 26-28, 2011 ACC Hearing
Goodman Water Company
Docket No. W-02500A-10-0382**

1 LAWRENCE V. ROBERTSON, JR.
2 Attorney At Law
3 P.O. Box 1448
4 Tubac, Arizona 85646
5 (520) 398-0411
6 Attorney for Applicant

7
8 **BEFORE THE ARIZONA CORPORATION COMMISSION**

9 IN THE MATTER OF THE APPLICATION
10 OF GOODMAN WATER COMPANY, AN
11 ARIZONA CORPORATION, FOR (i) A
12 DETERMINATION OF THE FAIR VALUE
13 OF ITS UTILITY PLANT AND PROPERTY
14 AND (ii) AN INCREASE IN ITS WATER
15 RATES AND CHARGES FOR UTILITY
16 SERVICE BASED THEREON.

DOCKET NO. W-02500A-10-0382

17 **REBUTTAL TESTIMONY OF**

18 **JOHN FERENCHAK, III**

19 **ON BEHALF OF GOODMAN WATER COMPANY**

20 **May 2, 2011**

1 **Q.1 Please state your name and business affiliation.**

2 A.1 My name is John Ferenchak, III. I am a partner in the Real Estate Appraising and
3 Consulting firm of Burdick & Ferenchak, Inc. The firm has offices in Tucson, Arizona.
4

5 **Q.2 Does Appendix "A" to this prepared Rebuttal Testimony set forth a summary
6 of your educational background and professional experience?**

7 A.2 Yes, it does. It also includes a copy of my current certification as a Certified
8 General Real Estate Appraiser from the State of Arizona Board of Appraisal.
9

10 **Q.3 What specifically does such certification mean; and, what is required in order
11 for someone to obtain such a certification?**

12 A.3 As a Certified General Real Estate Appraiser within the state of Arizona, I am
13 licensed to appraise any property type (residential or commercial) in this state. I
14 was certified and licensed in 1991 after completing experience credits, and testing.
15

16 **Q.4 You have been retained by Goodman Water Company ("Company") in
17 connection with its currently pending rate case, is that correct?**

18 A.4 Yes.
19

20 **Q.5 What is your understanding as to why the Company retained you to prepare
21 an appraisal in connection with its currently pending rate case?**

22 A.5 By way of background, it is my understanding that the Company originally
23 retained Mr. Michael J. Naifeh to prepare an appraisal of the market value of four
24 (4) parcels of land acquired by the Company in 2008 on which certain of the
25 Company's water utility system facilities are located. The year 2008 was selected
26 by the Company since that was the year in which it actually acquired title to the

1 four (4) parcels in question. Mr. Naifeh's 2008 Appraisal was thereafter used by
2 the Company in connection with the preparation of its rate increase request which
3 is the subject of this proceeding.

4 It is further my understanding that at least one (1) of the other parties in this
5 case has taken the position that the four (4) parcels of real estate in question should
6 be appraised as to their market value for the year in which each such parcel was
7 "devoted to public service" in connection with the Company's water utility
8 operations. Accordingly, and with the intent of removing that issue from this case,
9 the Company decided to retain a separate real estate appraiser to appraise the land
10 values for the aforesaid parcels using the years in which each was "devoted to
11 public service."

12 In that regard, only one (1) of the parcels in question was devoted to public
13 service during calendar year 2008. More specifically, Water Plant No. 1 was
14 devoted to public service on May 1, 2002. Water Plant No. 2 was devoted to
15 public service on August 1, 2005. Water Plant No. 3 was devoted to public service
16 on January 1, 2008. Water Plant No. 4 was devoted to public service on October 1,
17 2004. Accordingly, those were the years I used in my appraisal for purposes of
18 determining the market values of the parcels in question at those points in time.

19
20 **Q.6 Please summarize the appraisal methodology you determined to use in**
21 **connection with the preparation of your appraisal; and, in so doing, please**
22 **explain why you deemed that particular methodology to be appropriate for**
23 **purposes of your assignment.**

24 **A.6** Due to the nature of the subject property, being considered as vacant land parcels,
25 the Sales Comparison Approach was considered the most appropriate method for
26 estimating the value of the each parcel. The use of comparable sales is the

1 application of the principle of substitution, which affirms that the value of the
2 subject tends to be set by the cost of acquisition of an equally desirable property,
3 assuming no costly delays are encountered in making the substitution. The most
4 persuasive indications of a reasonable market value for the subject sites are the
5 sales prices of similar properties that have been recently sold. No prudent
6 purchaser pays more than an amount necessary to get ownership; he, economically,
7 will pay no more for one property than the cost of acquisition of similar property
8 with similar utility and desirability.

9
10 Q.7 Is a copy of your completed appraisal attached to your prepared Rebuttal
11 Testimony as Appendix "B"?

12 A.7 Yes.

13
14 **Q.8 Please describe the type of data you used in connection with preparation of**
15 **your appraisal and arriving at your opinion as to the market value for each of**
16 **the four (4) parcels in question; and, in that regard, also describe the sources**
17 **from which and means by which such data was obtained.**

18 A.8 A search was conducted for sales of vacant land parcels for comparison to the
19 subject parcels, resulting in an opinion of value by the Sales Comparison Approach
20 for each parcel. Data sources included but were not limited to CoStar Data, Tucson
21 Multiple Listing Service (MLS), and the Pima and Pinal County Assessors Offices.

22
23 **Q.9 Did you at any time either prior to or during the course of preparation of your**
24 **appraisal have occasion to discuss Mr. Naifeh's 2008 Appraisal with him?**

25 A.9 No.

26

1 **Q.10 Did you at any time either prior to or during the course of preparation of your**
2 **appraisal have occasion to review Mr. Naifeh's 2008 Appraisal?**

3 A.10 No.
4

5 **Q.11 Why did you neither confer with Mr. Naifeh nor review his 2008 Appraisal?**

6 A.11 Because I believed it was both important and appropriate that my appraisal activity
7 and the formulation of my opinion remain completely independent of any appraisal
8 work he may have done or evaluation opinions he may have expressed.
9

10 **Q.12 What were the market value conclusions you reached with regard to Parcel**
11 **Nos. 1 through 4?**

12 A.12 My opinion as to the market value of the parcel on which Water Plant No. 1 is
13 located is \$140,000. My market value opinion as to the land on which Water Plant
14 No. 2 is located is \$65,000. My market value opinion as to the land on which
15 Water Plant No. 3 is located is \$165,000. My market value opinion as to the land
16 on which Water Plant No. 4 is located is \$85,000. The aggregate value of these
17 four (4) parcels is \$455,000, based upon the respective year in which each was
18 devoted to public service.
19

20 **Q.13 Commission Staff witness Gary T. McMurry in his March 21, 2011 prepared**
21 **Direct Testimony expressed the opinion that the Commission should use the**
22 **Pinal County Assessor's 2009 "market value" data for the four (4) parcels in**
23 **question for purposes of ratemaking recognition in this case, inasmuch as Mr.**
24 **McMurry did not have access to actual market value information for the years**
25 **in which the parcels in question were "devoted to public service." Do you**
26 **believe that the appraisal that you have prepared provides that information as**

1 to market value for the parcels in question during the years in question which
2 was not available to Mr. McMurry?

3 A.13 Yes, I do. In fact, my appraisal is intended by the Company to provide that
4 information to the Commission in connection with the decision it will be reaching
5 on the Company's rate increase request.

6
7 Q.14 The Company will also be filing prepared Rebuttal Testimony by Mr. Naifeh
8 with regard to his 2008 Appraisal and criticisms of the same that were
9 expressed by Mr. McMurry in his March 21, 2011 prepared Direct Testimony.
10 In his prepared Rebuttal Testimony, Mr. Naifeh discusses the reasons why he
11 believes the use of Pinal County Assessor's data to assess the market value of
12 the four (4) parcels of real estate in question would be inappropriate for
13 purposes of this proceeding. In his prepared Direct Testimony, Mr. McMurry
14 had recommended use of the Pinal County Assessor's "market value" data.
15 Do you agree with Mr. Naifeh that the use of Pinal County Assessor's data for
16 the purpose of establishing "market value" in this proceeding would be
17 inappropriate?

18 A.14 Yes, I do.

19
20 Q.15 Please explain why you believe the use of such data for such purpose would be
21 inappropriate.

22 A.15 The Assessor's office estimates a Full Cash Value for each parcel utilizing a mass
23 appraisal model, and not through the use of direct comparable sales. I do not
24 consider this Full Cash Value to be a market value opinion.

25

26

1 Q.16 Does this conclude your Rebuttal Testimony?

2 A.16 Yes, it does.

3

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

**JOHN FERENCHAK, III
REBUTTAL TESTIMONY**

May 2, 2011

APPENDIX A

QUALIFICATIONS OF JOHN FERENCHAK III

PROFESSIONAL MEMBERSHIPS

State of Arizona Certified General Real Estate Appraiser #30344 (August, 2012, since August, 1991)

PROFESSIONAL EXPERIENCE

June, 1995 - Present

Burdick & Ferenchak, Inc. - Real Estate Appraising and Consulting, as Partner

June, 1987 - June, 1995

The Pagel Company, Real Estate Appraisers and Consultants, as an Associate Appraiser

EDUCATION:

Bachelor of Arts Degree in Management
University of Phoenix

March, 1993

APPRAISAL COURSEWORK SUCCESSFULLY COMPLETED

Real Estate Appraisal Principles: 1A-1, 1B-1

Fall, 1987

Capitalization Theory and Techniques, Part A

Spring, 1988

Capitalization Theory and Techniques, Part B

Spring, 1990

Case Studies in Real Estate Valuation

Summer, 1991

Report Writing and Valuation Analysis

Spring, 1992

Standards of Professional Practice (USPAP - Update)

Spring, 2010

PARTIAL LIST OF SEMINARS ATTENDED

- ▶ Fair Lending and Appraisers October, 1993
- ▶ NAFTA Seminar April, 1994
- ▶ Subdivision Analysis Seminar March, 1996
- ▶ Loss Prevention Program October, 1997
- ▶ New Industrial Valuation Seminar May, 1998
- ▶ How Stigmas Affect Property July, 2000
- ▶ Fair Housing in Property Management July, 2000
- ▶ Residential Lot Valuation Issues May, 2002
- ▶ Pricing Small Apartments July, 2002
- ▶ Appraisal Consulting October, 2003
- ▶ Building Operation Costs May, 2004
- ▶ Re-Appraising, Re-Addressing, Re-Assigning April, 2005
- ▶ Water in Arizona: Laws, Agencies & Issues July, 2006
- ▶ Condominiums, Co-Ops, and PUDs October, 2006
- ▶ Legal Aspects of Foreclosures February, 2007
- ▶ Practical Issues in Fair Housing May, 2008
- ▶ Supervising Appraisers June, 2008
- ▶ Disclosure July, 2008
- ▶ Business Practice and Ethics January, 2010

PROFESSIONAL AFFILIATIONS

Associate member of the Appraisal Institute

SCOPE OF APPRAISAL ACTIVITY

Appraisal/consulting assignments have included a wide variety of residential and commercial appraisals, subdivision analysis, market trend studies, and land appraisals.

STATE OF ARIZONA
BOARD OF APPRAISAL

BE IT KNOWN THAT

JOHN A. FERENCHAK

HAS MET ALL THE REQUIREMENTS AS A

Certified General Real Estate Appraiser

In accordance with Arizona Revised Statutes and on authority of the Board of Appraisal, State of Arizona.

This certificate shall remain evidence thereof unless or until the same is suspended, revoked or expires in accordance with the provisions of law.

CERTIFICATE NUMBER

30344

EXPIRATION DATE

August 31, 2012



In witness whereof the Arizona Board of Appraisal caused to be signed by the Chair of the Board and the Executive Director


Chair, Board of Appraisal 6/19/2010
Date


Executive Director of the Board of Appraisal 6/19/2010
Date

SHALL REMAIN PROPERTY OF ARIZONA BOARD OF APPRAISAL

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

**JOHN FERENCHAK, III
REBUTTAL TESTIMONY**

May 2, 2011

APPENDIX B

SUMMARY APPRAISAL REPORT
OF
FOUR WATER PLANT LAND PARCELS

LOCATED
WITHIN THE MASTER PLANNED COMMUNITY
OF EAGLE CREST RANCH

APPRAISED AS OF
VARIOUS RETROSPECTIVE DATES

PREPARED FOR
GOODMAN WATER COMPANY
MR. JAMES SHINER
6840 NORTH CAMPBELL AVENUE
SUITE 278
TUCSON, ARIZONA 85718

BY
BURDICK & FERENCHAK
P.O. BOX 19169
TUCSON, ARIZONA 85731



BURDICK & FERENCHAK
REAL ESTATE APPRAISING AND CONSULTING

JOHN BURDICK, MAI
JOHN FERENCHAK

P.O. BOX 19169
TUCSON, ARIZONA 85731
(520) 885-7797
(520) 885-4402
FAX (520) 885-4110
FAX (520) 885-1935

April 29, 2011

Goodman Water Company
Mr. James Shiner
6840 North Campbell Avenue
Tucson, Arizona 85718

Re: Four Water Plant Land Parcels;
Located within the master planned community of Eagle Crest Ranch,
Saddlebrooke, Pinal County, Arizona 85739
Burdick & Ferenchak File No. BF-1997

Dear Mr. Shiner:

In accordance with your request, I have prepared an appraisal of the above-referenced subject property in a summary report format. The subject consists of four water plant sites located within the master planned community of Eagle Crest Ranch. This appraisal report contains an opinion of retrospective market value, "as if vacant", for each of the four water plant sites as of the date each water plant was put into service. (Water Plant #1 – May 1, 2002; Water Plant #2 – August 1, 2005; Water Plant #3 – January 1, 2008; and Water Plant #4 – October 1, 2004). The ownership and legal description of this property are set forth in the following report.

The purpose of this appraisal is to provide a retrospective opinion of the market value of the fee simple fee estate for the above-referenced subject parcels. Market value, as used herein, is defined as "the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus". Further comment on market value is made in the following report.

By reason of a thorough analysis of the neighborhood environment, physical, social, political and economic factors affecting the value of the subject, including a personal inspection of the subject property, and by the analysis highlighted in this report, my opinions of market value for the four subject parcels as of the date each water plant was put into service are:

**EAGLE CREST RANCH WATER PLANT SITES
"AS IF VACANT"**

WATER PLANT/ TAX ID	SITE SIZE	RETROSPECTIVE DATE OF VALUE	MARKET VALUE OPINION
Water Plant #1 (Ptn of 305-31-013W)	31,363 sf	May 1, 2002	\$140,000
Water Plant #2 (305-31-013Q)	10,890 sf	August 1, 2005	\$65,000
Water Plant #3 (305-93-6040)	27,443 sf	January 1, 2008	\$165,000
Water Plant #4 (305-93-219B)	16,988 sf	October 1, 2004	\$85,000

A typical marketing/exposure period for properties similar to the subject of 12 months was concluded as reasonable.

The reader should note that the "As If Vacant" opinion of market value for the subject water plant sites stated in this report is based upon a **HYPOTHETICAL CONDITION** which assumes the parcels do not have any improvements upon them. It is noted that at the time of inspection (April 12, 2011), each water plant site had water facility improvements completed and in use

This is a Summary Appraisal Report which is intended to comply with the reporting requirements set forth under Standard Rule 2-2(b) of the Uniform Standards of Professional Appraisal Practice for a Summary Appraisal Report. As such, it might not include full discussions of the data, reasoning, and analyses that were used in the appraisal process to develop the appraiser's opinion of value. Supporting documentation concerning the data, reasoning, and analyses is retained in the appraiser's file. The information contained in this report is specific to the needs of the client and for the intended use stated in this report. The appraisers are not responsible for unauthorized use of this report.

Within the constraints of adequate available data, the full appraisal report intends to conform to the appraisal standards required by Title XI of FIRREA (Federal Financial Institutions Reform, Recovery and Enforcement Act of 1989), the OCC (Office of the Comptroller of the Currency) and the Uniform Standards of Professional Appraisal Practice (USPAP).

No potential environmental hazards which might affect the use and value of the subject property were noted upon inspection, however these appraisers lack the experience to investigate hazardous materials and we recommend that a complete Environmental Survey be performed on the subject property to confirm the presence or absence of any environmental hazards. As a

result, the value opinions contained in this appraisal report DO NOT consider any loss in value due to any potentially hazardous environmental substances which may or may not be present on or near the subject property.

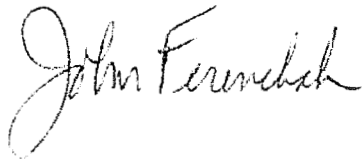
Unless otherwise stated in this report, the existence of hazardous substances, including without limitation asbestos, polychlorinated biphenyls, petroleum leakage, or agricultural chemicals, which may or may not be present on the property, or other environmental conditions, were not called to the attention of nor did the appraiser become aware of such during the appraiser's inspection. The appraiser has no knowledge of the existence of such materials on or in the property unless otherwise stated. The appraiser, however, is not qualified to test such substances or conditions. If the presence of such substances, such as asbestos, urea formaldehyde foam insulation, or other hazardous substances or environmental conditions, may affect the value of the property, the value estimated is predicated on the assumption that there is no such proximity thereto that it would cause a loss in value. No responsibility is assumed for any such conditions, nor for any expertise or engineering knowledge required to discover them.

No engineering or soils report was available, and therefore no information was provided with respect to the utility or constructability of the existing improvements, or any unusual soil or drainage conditions which are not readily apparent. This appraisal assumes no soils challenge's associated with the subject property.

Please refer to the Limiting Conditions and Assumptions included in the Addendum section which accompany this summary appraisal report.

The authentic copies of this report are signed in blue, without which they are unauthorized and may have been altered.

Sincerely,

A handwritten signature in blue ink that reads "John Ferenchak". The signature is written in a cursive, flowing style.

John Ferenchak
State of Arizona Certified General
Real Estate Appraiser #30344

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ADDENDUM:

Subject Photographs/Maps	
Comparable Sale Photographs/Maps	
Copy of the CI-1 and CR-3 Zoning Ordinances	
Limiting Conditions and Assumptions	
Qualifications of the Appraiser	

SUMMARY OF IMPORTANT FACTS AND CONCLUSIONS

REPORT NUMBER: Burdick & Ferenchak File No. BF-1997

APPRAISAL PREPARED FOR: Goodman Water Company
Mr. James Shiner

EFFECTIVE DATE OF VALUATION: This appraisal report contains an opinion of retrospective market value, "as if vacant", for each of the four water plant sites as of the date each water plant was put into service. (Water Plant #1 – May 1, 2002; Water Plant #2 – August 1, 2005; Water Plant #3 – January 1, 2008; and Water Plant #4 – October 1, 2004).

DATE OF INSPECTION: April 12, 2011

DATE OF REPORT: April 29, 2011

TYPE OF REPORT: Summary Appraisal Report

PROPERTY RIGHTS APPRAISED: Fee Simple

PROPERTY IDENTIFICATION: The subject consists of four water plant sites located within the master planned community of Eagle Crest Ranch.

LOCATION: The Eagle Crest Ranch community is found within Pinal County, just north of the Pima County line. This community is located on the east side of Oracle Road, north of Edwin Road.

SITE SIZE: Water Plant #1 – 31,363 sq.ft.
Water Plant #2 – 10,890 sq.ft.
Water Plant #3 – 27,443 sq.ft.
Water Plant #4 – 16,988 sq.ft.

ZONING: CI-1; CR-3 (Pinal County)

TAX PARCEL NUMBERS: Water Plant #1 – Ptn of 305-31-013W
Water Plant #2 – 305-31-013Q
Water Plant #3 – 305-93-6040
Water Plant #4 – 305-93-219B

SPECIAL POINTS REGARDING THE APPRAISAL:

Within the constraints of adequate available data, this appraisal report intends to conform to the appraisal standards required by Title XI of FIRREA (Federal Financial Institutions Reform, Recovery and Enforcement Act of 1989), the OCC (Office of the Comptroller of the Currency) and the Uniform Standards of Professional Appraisal Practice (USPAP).

FINANCING ASSUMPTIONS:

The value opinion is based upon financing assumptions of all cash, or equivalent. Financing equivalent to all cash is considered to be typical new conventional financing which would result in all cash being paid to the seller.

RECONCILED CONCLUSIONS OF VALUE:

EAGLE CREST RANCH WATER PLANT SITES "AS IF VACANT"			
WATER PLANT/ TAX ID	SITE SIZE	RETROSPECTIVE DATE OF VALUE	MARKET VALUE OPINION
Water Plant #1 (Ptn of 305-31-013W)	31,363 sf	May 1, 2002	\$140,000
Water Plant #2 (305-31-013Q)	10,890 sf	August 1, 2005	\$65,000
Water Plant #3 (305-93-6040)	27,443 sf	January 1, 2008	\$165,000
Water Plant #4 (305-93-219B)	16,988 sf	October 1, 2004	\$85,000

A typical marketing/exposure period for properties similar to the subject of 12 months was concluded as reasonable.

The reader should note that the "As If Vacant" opinion of market value for the subject water plant sites stated in this report is based upon a **HYPOTHETICAL CONDITION** which assumes the parcels do not have any improvements upon them. It is noted that at the time of inspection (April 12, 2011), each water plant site had water facility improvements completed and in use

SUMMARY REPORT

Definition of Assignment:

In accordance with your request, we have prepared an appraisal of the subject property in a summary report format. The subject consists of four water plant sites located within the master planned community of Eagle Crest Ranch. Within the constraints of adequate available data, the full appraisal report intends to conform to the appraisal standards required by Title XI of FIRREA (Federal Financial Institutions Reform, Recovery and Enforcement Act of 1989), the OCC (Office of the Comptroller of the Currency) and the Uniform Standards of Professional Appraisal Practice (USPAP).

A Summary Appraisal Report is defined as:

A written report prepared under Standards Rule 2-2(b) or 8-2(b). (USPAP, 2010-2011 edition)

Purpose of the Report:

The purpose of this assignment is to provide opinions of retrospective market value, "as if vacant", for each of the four water plant sites as of the date each water plant was put into service. (Water Plant #1 – May 1, 2002; Water Plant #2 – August 1, 2005; Water Plant #3 – January 1, 2008; and Water Plant #4 – October 1, 2004).

Intended Use of the Appraisal:

The intended use of this appraisal is to provide a basis for land valuations of the four water plant sites for my client, Goodman Water Company. The information contained in this report is specific to the needs of the client and for the intended use stated in this report. This appraiser is not responsible for unauthorized use of this report.

Intended Users of the Appraisal:

This report is intended for use only by my client, Goodman Water Company. Use of this report by others is not intended by the appraisers.

Date of Valuation/Report:

The date of inspection was April 12, 2011. The effective date of value for the four subject parcels is Water Plant #1 – May 1, 2002; Water Plant #2 – August 1, 2005; Water Plant #3 – January 1, 2008; and Water Plant #4 – October 1, 2004. The date of the appraisal report is April 29, 2011.

Interest to be Appraised:

The interest to be appraised is that interest arising from fee simple ownership, which includes the various rights which actually consider the present worth of future benefits resulting from the ownership of the subject property. Fee simple estate is defined in *The Thirteenth Edition of The Appraisal of Real Estate* as the "absolute ownership unencumbered by any other interest or estate, subject only to limitations imposed by the governmental powers of taxation, eminent domain, police power and escheat".

Scope of the Report:

In preparing this appraisal, the appraiser:

- ① Inspected and photographed each water plant site;
- ② Gathered and analyzed information regarding general market conditions in the Eagle Crest Ranch area and subject neighborhood impacting properties similar to the subject;
- ③ Gathered comparable sale data of vacant sites similar to the subject parcels to arrive at a retrospective value opinion for the each water plant site, "as if vacant".

This Summary Appraisal Report is a brief recapitulation of the appraiser's data, analyses, and conclusions.

Assumptions and Limiting Conditions:

- 1) This is a Summary Appraisal Report which is intended to comply with the reporting requirements set forth under Standard Rule 2-2(b) of the Uniform Standards of Professional Appraisal Practice for a Summary Appraisal Report. As such, it might not include full discussions of the data, reasoning, and analyses that were used in the appraisal process to develop the appraiser's opinion of value. Supporting documentation concerning the data, reasoning, and analyses is retained in the appraiser's file. The information contained in this report is specific to the needs of the client and for the intended use stated in this report. The appraisers are not responsible for unauthorized use of this report.
- 2) The reader should note that the "As If Vacant" opinion of market value for the subject water plant sites stated in this report is based upon a **HYPOTHETICAL CONDITION** which assumes the parcels do not have any improvements upon them. It is noted that at the time of inspection (April 12, 2011), each water plant site had water facility improvements completed and in use.
- 3) Within the constraints of adequate available data, the full appraisal report intends to conform to the appraisal standards required by Title XI of FIRREA (Federal Financial Institutions Reform, Recovery and Enforcement Act of 1989), the OCC (Office of the Comptroller of the Currency) and the Uniform Standards of Professional Appraisal Practice (USPAP).
- 4) No potential environmental hazards which might affect the use and value of the subject property were noted upon inspection, however these appraisers lack the experience to investigate hazardous materials and we recommend that a complete Environmental Survey be performed on the subject property to confirm the presence or absence of any environmental hazards. As a result, the value opinions contained in this appraisal report **DO NOT** consider any loss in value due to any potentially hazardous environmental substances which may or may not be present on or near the subject property.

- 5) Unless otherwise stated in this report, the existence of hazardous substances, including without limitation asbestos, polychlorinated biphenyls, petroleum leakage, or agricultural chemicals, which may or may not be present on the property, or other environmental conditions, were not called to the attention of nor did the appraiser become aware of such during the appraiser's inspection. The appraiser has no knowledge of the existence of such materials on or in the property unless otherwise stated. The appraiser, however, is not qualified to test such substances or conditions. If the presence of such substances, such as asbestos, urea formaldehyde foam insulation, or other hazardous substances or environmental conditions, may affect the value of the property, the value estimated is predicated on the assumption that there is no such proximity thereto that it would cause a loss in value. No responsibility is assumed for any such conditions, nor for any expertise or engineering knowledge required to discover them.
- 6) No engineering or soils report was available, and therefore no information was provided with respect to the utility or constructability of the existing improvements, or any unusual soil or drainage conditions which are not readily apparent. This appraisal assumes no soils challenge's associated with the subject property.
- 7) Please refer to the Limiting Conditions and Assumptions included in the Addendum section which accompany this summary appraisal report.

Definition of Market Value:

The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- a. buyer and seller are typically motivated;
- b. both parties are well informed or well advised, and each acting in what they consider their own best interest;
- c. a reasonable time is allowed for exposure in the open market;
- d. payment is made in terms of cash in U.S. dollars or in terms of financial agreements comparable thereto; and
- e. the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

(SOURCE: *Office of the Comptroller of the Currency under 12 CFR, Part 34, Subpart C-Appraisals, 34.42 Definitions [f] and FDIC under 12 CFR, Part 323, Subpart 323.2 Definitions [f].*)

The value opinion is based upon financing assumptions of all cash, or equivalent. Financing equivalent to all cash is considered to be typical new conventional financing which would result in all cash being paid to the seller.

Property Identification:

The subject consists of four water plant sites located within the master planned community of Eagle Crest Ranch. The Eagle Crest Ranch community is found within Pinal County, just north of the Pima County line. This community is located on the east side of Oracle Road, north of Edwin Road.

Water Plant #1 is found on the west side of Eagle Crest Ranch Boulevard, south of Eagle Ranch Road, with a physical address of 39544 South Eagle Crest Ranch Boulevard. This parcel is further identified as a portion of Pinal County Tax ID Number 305-31-013W. According to information provided by the client, the legal description for this parcel is as follows:

All of that portion of the Southwest Quarter of Section 32, Township 10 South, Range 14 East, Gila and Salt River Base and Meridian, Pinal County, Arizona, being a portion of Eagle Crest Ranch Tracts "A" through "N" and Common Area "A" (Private Streets), a subdivision of Pinal County, Arizona, recorded in Cabinet "C" in Slide 173 on October 25, 2000, more particularly described as follows:

Commencing at the Southeast corner of Tract "D" of said Eagle Crest Ranch Tracts "A" through "N" as it adjoins Tract "E" and Eagle Crest Ranch Boulevard, said point falling on a curve from which the radius bears South 83 degrees 55 minutes 51 seconds West;

Thence Northerly along said curve to the left on the Westerly right-of-way of Eagle Crest Ranch Boulevard, having a radius of 1150.00 feet and a central angle of 03 degrees 36 minutes 30 seconds, an arc distance of 72.42 feet to the POINT OF BEGINNING;

Thence departing said curve, West, on a non-tangent line, a distance of 36.10 feet;

Thence South 45 degrees 00 minutes 00 seconds West, a distance of 92.02 feet;

Thence West, a distance of 46.69 feet;

Thence North 10 degrees 49 minutes 04 seconds West, a distance of 60.09 feet;

Thence South 79 degrees 10 minutes 56 seconds West, a distance of 75.26 feet;

Thence North, a distance of 113.17 feet;

Thence East, a distance of 213.60 feet to a point on the Westerly right-of-way of said Eagle Crest Ranch Boulevard;

Thence South 12 degrees 56 minutes 33 seconds East along said Westerly right-of-way, a distance of 29.49 feet to a point of curvature;

Thence Southerly along said curve to the right, having a radius of 1150.00 feet and a central angle of 03 degrees 15 minutes 55 seconds, an arc distance of 65.54 feet to the POINT OF BEGINNING;

Water Plant #2 is found on the west side of Eagle Crest Ranch Boulevard, north of Eagle Heights Drive, with a physical address of 39930 South Eagle Crest Ranch Boulevard. This parcel is further identified under Pinal County Tax ID Number 305-31-013Q. According to public records, this parcel is found in the northwest portion of Tract "F" of Eagle Crest Ranch.

Water Plant #3 is found on the northeast corner of Eagle Ridge Drive and Eagle Mountain Drive, with a physical address of 61025 East Eagle Mountain Drive. This parcel is further identified under Pinal County Tax ID Number 305-93-6040. According to public records, this parcel is identified as Tract E, Eagle Crest Ranch IV-A.

Water Plant #4 is found on the west side of Mountain Shadow Drive, north of Eagle Heights Drive, with a physical address of 39904 South Mountain Shadow Drive. This parcel is further identified under Pinal County Tax ID Number 305-93-219B. According to public records, this parcel is identified as Tract B, Eagle Crest Ranch I.

Property History/Ownership:

The purpose of this assignment is to provide opinions of retrospective market value, "as if vacant", for each of the four water plant sites as of the date each water plant was put into service. (Water Plant #1 – May 1, 2002; Water Plant #2 – August 1, 2005; Water Plant #3 – January 1, 2008; and Water Plant #4 – October 1, 2004).

According to public records, the water plant sites are owned by the Goodman Water Company. No prior sales were found within the past three years and the sites are not currently listed for sale.

Summary of Tucson Regional Data:

Tucson has been one of the fastest growing cities of its size in the United States since 1970, both through the attraction of new industry and a growing retirement segment of the population. All signs point to Tucson continuing as an important trade center to serve not only Southern Arizona, but the entire southwestern United States. Tucson's major "selling points" include its sunbelt location and climate, good transportation systems and educational institutions such as the University of Arizona. In addition, Tucson offers a relatively young, well-educated labor force which helps to attract new business. The climate and amenities available in the region will also continue to attract a retirement population, as well as encourage growth in the tourism industry.

The long-term outlook for the metropolitan area is one of continued growth. Most economic indicators demonstrate that the local economy has historically been led by steady population growth, relatively low unemployment and moderate inflation levels. Bright spots in the local economic picture include tourism, and the continued desirability of the region to "winter visitors" and retirees. The local housing market was particularly active from 2002 through 2005 in terms of units sold and increasing home values, fueled largely by low interest rates. Growth in the population base has also encouraged new commercial development in many locations.

However, the housing frenzy began to cool in 2006, and this trend has continued to the present. This is similar to the trend being experienced on a regional and national level as well. While the long-term outlook is for continued growth of the Tucson metro area, growth in the short term is being adversely affected by the downturn in the housing market and corresponding impacts on

the local economy. Therefore, the rate of growth for Tucson over the next several years may be well below that of recent years.

According to the most recent local population statistics available (July, 2009), the City of Tucson has an estimated population of about 543,566 within the city limits. This can be compared to the larger Pima County population of 1,018,012 as of July, 2009. Published reports indicate that Pima County reached 1,000,000 people in late 2006. About 98 percent of the population in the county is found within the Tucson metropolitan area. One of the most significant aspects of the Tucson area population has been its growth. The population growth rate in Pima County over the past 15-20 years has fallen in the range of 1.4-3.5 percent, with an average near 2.5 percent per year. It is noted that population growth from 1980 to 2000 of 2.4 percent represented a significant decline from the average growth rate during the preceding ten years of 4.2 percent per year. The average growth in population between 1990 and 2000 was approximately 19,400 persons per year.

However, the growth in population for Pima County has declined significantly in 2008 and 2009 according to published statistics. Population growth was only 3,989 during the most recent 12-month period of 2008-2009. This can be compared with growth of 10,788 during 2007-2008, 22,125 during 2006-2007, 25,310 during 2005-2006, 21,898 during 2004-2005, 22,952 during 2003-2004, and 20,160 during 2002-2003. This data suggests local population growth has been adversely impacted by local and national economic conditions. A long-term growth rate near 2.5+- percent per year or about 25,000 people per year is indicated by historical population trends. However, short-term projections may be more modest due to the current downturn in the housing market and the related impact on the local economy.

The labor market in Pima County has grown significantly during the past three decades. The total civilian labor force increased from 225,500 in 1980 to 489,200 in 2009, representing an average annual increase of 2.8 percent. Total employment has increased at a similar pace, with unemployment remaining relatively low in until very recently. Personal income levels have also realized substantial gains since 1970.

However, a noteworthy trend has been a gradual increase in unemployment over the past 24-36 months. This trend can be linked originally to declines in the housing market and construction, as well as related industries. However, the impact of the housing downturn on the general economy is now more widespread and is affecting other sectors of employment such as financial services, retail sales, etc. In addition, general economic conditions deteriorated locally and nationally during 2008 and 2009. For example, unemployment in Pima County was 4.1 percent in 2007 and the country formally entered into a recession in late 2007. Unemployment has gradually increased throughout 2008 and 2009, both nationally and locally. Nationally, the U.S. economy lost 524,000 jobs in December of 2008 and 2.6 million for all of 2008. The national unemployment figures released recently indicate that unemployment reached 9.5 percent as of June 2009, and then continued to increase to 10.2 percent as of October, 2009, then declined slightly to 10.0 percent in November and December, 2009 and is currently at 8.8 percent (March 2011). For all of Arizona, unemployment was reported at 9.6 percent as of the most recent February 2011 statistics, which is a decrease from the 10.0 percent in July and an increase from the 8.9 percent reported in November of 2009. Again, the long-term outlook with respect to increases in the Tucson employment base is considered average to good, but the short-term outlook still has the potential for unemployment rates to fluctuate as they stabilize.

The housing market in Tucson experienced a downturn during the late 1980's and early 1990's. However, since 1990 the new housing market in Tucson gradually improved and reached a peak in 2005. In particular, 2003, 2004 and 2005 represented three successive peak years in terms of new home sales. According to *Bright Future Business Consultants (The Orange Reports)*, 54,844 new housing units were sold in the greater Tucson area between 1999 and 2007, resulting in an average of 6,856 per year. After 6,197 new home sales were reported in 2000, sales subsided somewhat in 2001 and 2002. Sales in 2003 rebounded with a 12 percent increase over 2002, or 6,549 units. Sales in 2004 continued to increase when compared to 2003, finishing with 7,438 units or a 14 percent increase over 2003. Sales continued strong in 2005 with 8,623 units sold, representing an increase near 16 percent from 2004. The dramatic improvement in new housing sales was driven by various factors, though principally a strong local economy, population growth and low interest rates for new home buyers. There was also greater participation in the market on the part of investors.

An adjustment in the local housing market began in 2006, which coincided with regional and national trends. The 8,149 units sold in 2006 was a slight decline from 2005, although the decline took place primarily in the second half of 2006. A decline in units sold continued into 2007, with 6,185 sales reported for 2007 or a 24.1 percent decline. In 2008, only 3,339 new homes sold and closed, representing a 54 percent decline from 2007 and indicating a continued decline in new home sales. This downward trend continued in 2009, with only 2,249 new homes sold. As of the most recent data available (December, 2010) there were 1,778 units sold, which continues the slide for new home sales.

The *Bright Future Business Consultants* also reported that there were 987 resale home closings for the Tucson Area as of June 2010 and this included 272 foreclosures. This compares to 1,304 resale closings in May of 2010, of which 385 were foreclosures. In addition, according to a RealtyTrac U.S. Foreclosure Year End Market Report 2010, Arizona's new foreclosure activity numbers were 13,651 units in December of 2010. RealtyTrac also reported that there were 1,162 foreclosures in Pima County as of December 2010 with one in every 262. A California group called ForeclosureRadar.com is also tracking Arizona's housing market. According to its data, foreclosure filings in Tucson fell 43 percent in March 2011 from February's level. ForeclosureRadar filings include both notice-of-trustee sales and trustee sales. However, during the January-November 2010 period, Arizona recorded a total of 65,911 foreclosures, representing a 12 percent surge when compared with the whole 2009. According to housing industry analysts, 2011 will be much the same for the region, with foreclosures in the state expected to hit record levels. Analysts stated that the unemployment rate of Arizona is part of the reason for the bleak 2011 forecast.

According to the monthly statistics produced by the Tucson Association of Realtors and the MLS, as of April 2011 the active inventory was reported as 8,036, a 19 percent increase from March 2010. There were 1,170 closing in March 2011, a 3 percent above March 2010. Months of inventory was 6.9 up from 6.0 in March 2010. Median price of sold homes was \$125,000 for the month of March 2011, down 21 percent from March 2010. Also having had an impact on the local housing market have been the financial difficulties experienced in the home mortgage business, and the failures of several national home mortgage companies such as AHM Mortgage and First Magnus. In the short-term, this situation has limited financing alternatives for some potential buyers, further impacting sale levels for both existing and new homes.

Nevertheless, the housing market in Tucson will continue to be driven by a combination of population growth, employment growth and relatively low interest rates. Continued demand for new housing will be tied to the overall performance of the Tucson economy and population growth, and may be tempered in the short-term by recent developments in the housing market. However, a moderate rate of future growth in the Tucson area is still anticipated over the long-term.

NEW HOUSING SALES (ACTIVE NEW HOME PROJECTS)		
YEAR	TOTAL SALES	% INCREASE
1995	3,210	-16%
1996	3,962	23%
1997	4,777	21%
1998	5,517	16%
1999	6,192	12%
2000	6,197	1%
2001	5,857	-6%
2002	5,846	<1%
2003	6,549	12%
2004	7,438	14%
2005	8,623	16%
2006	8,149	-5.5%
2007	6,185	-24.1%
2008	3,339	-46%
2009	2,249	-33%
2010	1,778	-21%

The commercial sub-markets within the local real estate market suffered after the downturn during the late 1980's and early 1990's, although subsequently recovered and the general trend was one of improvement from the mid-1990's until recently. New construction of various types of commercial real estate has taken place across the Tucson metro area in recent years. Much of the new development which has taken place has been driven by user demand and pre-leased space, with speculative construction more limited. New retail and office inventory has been developed primarily around the periphery of Tucson, following the residential growth which has taken place in these areas. Re-development of existing older properties has also taken place in more central locations. The industrial sub-market has performed reasonably well in recent years, with much of the existing inventory found on the south side of Tucson due to the proximity of Tucson International Airport, or near the interstate highway system (I-10/I-19) which traverses the metro area. Growth in the multi-family sub-market has been hindered in recent years first as a result of financing alternatives available to new and existing home buyers and then following unemployment figures as renters were forced to moved back home.

The following table summarizes average vacancy levels for various types of income-producing properties (leasable inventory) in the Tucson area.

VACANCY RATES FOR COMMERCIAL MARKET SEGMENTS (GREATER TUCSON)			
	RETAIL	OFFICE	INDUSTRIAL
AGGREGATE VACANCY RATE\ EFFECTIVE DATE	8.9% 1 st Quarter, 2011	12.4% 1 st Quarter, 2011	12.4% 1 st Quarter, 2011
AGGREGATE VACANCY RATE\ EFFECTIVE DATE	8.6% 4 th Quarter, 2010	10.6% 4 th Quarter, 2010	12.2% 4 th Quarter, 2010
AGGREGATE VACANCY RATE\ EFFECTIVE DATE	8.4% 3 rd Quarter, 2010	12.4% 3 rd Quarter, 2010	10.9% 3 rd Quarter, 2010
AGGREGATE VACANCY RATE\ EFFECTIVE DATE	8.8% 2 nd Quarter, 2010	12.0% 2 nd Quarter, 2010	11.2% 2 nd Quarter, 2010
AGGREGATE VACANCY RATE\ EFFECTIVE DATE	8.5% 1 st Quarter, 2010	12.1% 1 st Quarter, 2010	11.4% 1 st Quarter, 2010

Source: CoStar Group//Excludes Owner-Occupied Inventory

The preceding factors suggest a moderate level of growth in the Tucson population and overall economy should continue over the long-term, and this should have a positive impact upon general property values including properties similar to the subject. However, the short-term outlook for properties such as the subject is more guarded due to the recent downturn in the housing market and economy as a whole.

Neighborhood Data:

The Eagle Crest Ranch community is located north of Tucson, on the periphery of the Tucson metropolitan area about one mile north of the Pinal/Pima County boundary. This location is found near the southern perimeter of Pinal County, with the Tucson metropolitan area in Pima County to the south being the nearest major city. Due to the sparse population in the surrounding area within Pinal County, this community relies primarily upon support services in Pima County and the Tucson metropolitan area to the south. The boundaries of the subject neighborhood are roughly considered to be Coronado National Forest to the east, Tangerine Road to the south, and the Tucson Mountains and Sandario Road alignment serve as a rough boundary on the west. The northern boundary of the neighborhood is less definite due to the great amount of open range, although extends into Pinal County. These boundaries delineate an expansive area which is predominantly a combination of existing residential uses and vacant land. Tucson continues to grow in a north/northwesterly direction, led by a number of master planned communities. Commercial-oriented uses are slowly developing in the neighborhood, primarily along the major traffic routes, in response to population increases. Substantial quantities of vacant land still remain throughout the subject neighborhood, particularly in the northern portion, with existing improvements found mostly in the southern portion and spreading to the north.

The northwest side of Tucson has grown dramatically since the 1970's, due in large part to the availability of land for development. Growth of the city is somewhat restricted in other directions. For example, to the north/northeast of Tucson are the Santa Catalina Mountains, to the west are the Tucson Mountains, and to the south is Davis-Monthan Air Force Base and Tucson International Airport. These have served as barriers to residential growth to a certain

extent. As a result, residential growth has historically been led by the northwest and east/southeast sides of Tucson and these continue to be growth areas in the region. The larger Tucson area experienced unprecedented residential growth in recent years between the late 1990's through 2005. This growth resulted from a robust economy, positive job growth and low interest rates which have favored buying versus renting. The level of growth, coupled with other factors such as increasing land prices and environmental constraints, drove developers/builders to the periphery of Tucson in search of land available for development and more affordable land prices. The most active areas were the southeast, south, southwest and northwest of the metro area. Development was also driven to neighboring counties which have historically been more rural in nature such as Cochise County to the east, Santa Cruz County to the south and Pinal County to the north.

The two primary routes into Pinal County from Pima County are Interstate 10 and State Highway 77, which is also known as Oracle Road. State Highway 77 travels through Oracle Junction in a north/northeasterly direction, and is the route to other towns such as Oracle, Mammoth, Winkleman and Globe. Oracle Road connects the midtown and downtown areas of the city with northwest Tucson. There is a good balance of land uses on Oracle Road, which is predominantly commercial in nature. Land uses include office, retail, restaurant, resorts/hotels with multi-family, with single family residences further north of Magee Road. Commercial development continues to grow north to provide support services to the expanding residential base.

Notable developments further south along Oracle Road in Pima County include the Hilton El Conquistador Resort, Oro Valley Country Club, Foothills Business Park and the Honeywell manufacturing facility. Several major points of new commercial development include neighborhood shopping centers located on Oracle Road at the intersections of Golder Ranch Road and near First Avenue. The Rancho Vistoso master planned community, which is located along Oracle Road near Tangerine Road, has a neighborhood center anchored by a Safeway grocery store and a Walgreen's drug store, with an older center located at Oracle and Rancho Vistoso Boulevard. A new neighborhood center is located at Oracle and Golder Ranch Road, anchored by a Basha's grocery store. In addition, a new neighborhood shopping center known as Steam Pump Ranch is currently under development further south. The most recent addition to the commercial base of the neighborhood is a new power center at the southwest corner of Oracle Road and Tangerine Road, known as Oro Valley Marketplace. This center will eventually consist of about 869,000 square feet of commercial space when completed on a 120-acre site. Major tenants now include Wal-Mart, Petco, Best Buy and Linens N' Things, along with a variety of smaller retail tenants, restaurants and offices. Also, a number of smaller commercial enterprises can be found along Oracle Road in the un-incorporated community of Catalina, which is near the Pima County/Pinal County line. Properties along Oracle Road account for a large portion of the developed commercial sites in the subject neighborhood, although a number of vacant sites with potential commercial use can still be found along this route. In general, commercial and industrial improvements in both the neighborhood and greater Tucson have grown gradually with the population base.

Among the major employers on the northwest side of Tucson, the Hilton Tucson El Conquistador Resort was built in the early 1980's and is located on the east side of Oracle Road, about four miles north of Ina Road. The hotel contains 428 rooms, including 180 casitas, and features 18 tennis courts, four indoor racquetball courts, and a nine-hole golf course. Other amenities include pool and spa facilities, riding stables and a health club. This resort draws a variety of conventioners and vacationers. In 1989, the 36-hole Canada Hills Golf Course and

Country Club, located farther to the west, was purchased by Sheraton. Now known as the El Conquistador Country Club, this facility provides an additional amenity for the Hilton (former Sheraton) resort. The Hilton Tucson El Conquistador currently employs approximately 675 people according to the personnel department.

Another resort located in the subject neighborhood which attracts visitors is the Tucson National Resort and Spa. The Tucson National Golf Club was recognized as one of the more affluent settings in Tucson for many years, and the golf course served as the site for the annual Tucson Open PGA golf tournament for over fifteen years. Several years ago, Tucson National was transformed from a private club to a resort with 167 rooms available. Amenities include 27 holes of championship golf, a European class health spa, swimming pool/Jacuzzi and six lighted tennis courts. Finally, development of a Ritz-Carlton destination resort in the Dove Mountain master planned community was completed in late 2009.

Also, the Honeywell (formerly Allied Signal Corporation and Garrett AiResearch) manufacturing facility is located on the east side of Oracle Road, to the north of the Sheraton El Conquistador. The facility contains approximately 355,000 square feet and was originally opened in January of 1987. Original plans detailed an 84 acre industrial campus that would eventually include over 1,000,000 square feet of improvements. Employment began at approximately 2,000 and was originally expected to reach 4,000. However, Honeywell, which merged with Allied-Signal in 1999, employs only about 800 people currently at this facility.

Other major employers in the northwest Tucson area include Phelps Dodge Mining Company which employs 4,900 people, and the Northwest Health System which employs 1,808 people.

According to The Costar Group, North/Oro Valley accounts for about 4.8 percent of the completed leasable retail space in the greater Tucson area, with an aggregate vacancy of 13.8 percent compared to the city average of 8.9 percent (1st quarter, 2011). For office inventory, the subject area accounts for about 1.9 percent of the Tucson inventory with a vacancy of 34.2 percent compared with 12.4 percent for greater Tucson. Industrial leasable inventory in the surrounding area of the subject is limited mainly to pockets near Oracle Road, and represents mainly light industrial or tech-park space. Other industrial developments are found to the south and west of the subject neighborhood, primarily along the I-10 corridor.

Until recently, the subject neighborhood has experienced unprecedented population growth. According to Pima County statistics, the population in northwest Tucson had growth at a rate of 4.5 percent per year between the years of 1980 and 1987. While growth in the neighborhood has since slowed to more modest levels, it is still expected to lead all others in future metropolitan population growth. The demographics near Eagle Crest Ranch are reflected in census data (2000) available by zip code. The subject property falls within zip code 85739, and this zip code had a reported population of 12,088 persons in 2000, with an average household size of 2.31 persons. An average median household income of \$47,001 and a median owner-occupied home value of \$166,200 were also reported. Although Eagle Crest Ranch is considered to be within the Tucson metro area, it is located in the southern portion of Pinal County. According to the U.S. Census Bureau, the population of Pinal County for 2006 was approximately 271,059 which is a 51% increase from 2000. The median household income in 2004 for Pinal County was \$40,255.

Residential growth in the subject neighborhood has been influenced by the number of master planned communities located in or near the neighborhood. Existing projects in northwest Tucson include Canada Hills, Copper Creek, North Ranch, La Reserve, Continental Ranch, Gladden Farms, Dove Mountain, Rancho Vistoso, Eagle Crest Ranch, SaddleBrooke Ranch and SaddleBrooke. The largest master planned project in the area is Rancho Vistoso, and is located toward the southern perimeter of the neighborhood. Rancho Vistoso is a master-planned community that contains approximately 8,000 acres. Canada Hills, Copper Creek, North Ranch, La Reserve and Continental Ranch are older projects which have been sold out for some time. Rancho Vistoso and SaddleBrooke are largely built out, though with some inventory still available. Further west, Dove Mountain and particularly Gladden Farms have significant inventory still available. A variety of national and local production builders operate throughout the neighborhood, with custom home projects also found throughout. Please refer to the subsequent Market Overview section of this report for a more complete discussion of the housing market in Tucson and the neighborhood.

As previously discussed, the larger Tucson area experienced unprecedented residential growth in recent years between the late 1990's through 2005. This growth resulted from a robust economy, positive job growth and low interest rates which have favored buying versus renting. The level of growth, coupled with other factors such as increasing land prices and environmental constraints, drove developers/builders to the periphery of Tucson in search of land available for development and more affordable land prices. The most active areas were the southeast, south, southwest and northwest of the metro area. Development was also driven to neighboring counties which have historically been more rural in nature such as Cochise County to the east, Santa Cruz County to the south and Pinal County to the north. Looking specifically at the subject area, a number of future developments are planned in Southern Pinal County. According to MTLUS information, future projects in the general vicinity of Eagle Crest Ranch include SaddleBrooke Ranch, Falcon Valley Ranch, Coronado Highlands, Cielo, Biosphere, San Manuel Project and Willow Springs. These projects could potentially add nearly 50,000 lots in southeastern Pinal County in the coming years and demonstrate the anticipated demand for new housing in the area.

Four separate governmental entities have jurisdiction in the subject neighborhood. There are two incorporated communities that influence the subject neighborhood. The first is the Town of Oro Valley, which has expanded its boundaries to the north to include the Rancho Vistoso development. The second is the Town of Marana, which has also adopted a pro-growth stance and has annexed western and central portions of the neighborhood. Most portions of the subject neighborhood that are not under the jurisdiction of the previously mentioned entities fall under the jurisdiction of Pima County. The subject property is located just north of the Pima/Pinal County line, falling under the jurisdiction of Pinal County.

For many years the subject neighborhood relied primarily on the greater metropolitan area for medical needs, with the only hospital in the area being Northwest Hospital near La Cholla Boulevard and Orange Grove Road. However, Northwest Hospital has more recently opened a new 4-story, 257,000 square foot, 96-bed hospital in Rancho Vistoso which has improved medical support services for the northern portion of the neighborhood, including residents of Eagle Crest Ranch.

Recreational facilities in the neighborhood include a number of golf courses. These are specifically located in SaddleBrooke, plus three courses in Rancho Vistoso, the Oro Valley Country Club, the Hilton El Conquistador Hotel and Resort, the El Conquistador Country Club and the Tucson National Golf and Country Club. There is also a public course, located at Arthur Pack Park. The Catalina State Park is a recreational facility which contains approximately 8,600 acres, located south of the subject along the east side of Oracle Road. Catalina State Park provides visitors numerous trails for hiking and several areas for picnics and camping. Additionally the park has designated open areas that are intended for the preservation of area wildlife.

The neighborhood is served primarily by three separate school districts. They include the Marana School District Number 6, the Amphitheater School District Number 10 and the Flowing Wells School District Number 8. Places of worship for most denominations can also be found throughout the subject neighborhood for the religious needs of the area residents.

Overall, the subject neighborhood continues to become more established due to steady population growth. In fact, northwest Tucson continues to be one of the fastest growing portions of the metropolitan area. The combination of available land suitable for development, coupled with an expanding economic base, has had a positive influence on future growth trends in the neighborhood. This growth is now extending into Pinal County with a number of master planned communities on the drawing board. The housing market in Tucson and northwest Tucson improved dramatically since the early 1990's, and was particularly strong between 2000 and 2005. This resulted from a combination of factors such as low interest rates, employment and population growth.

Unfortunately, the neighborhood has been adversely impacted by the recent downturn in the housing market, similar to the Tucson area as a whole, and this will adversely affect growth trends in the neighborhood in the short-term. The housing market is currently experiencing a correction and is adversely impacting the subject property in the short-term. However, when taking a long-term view the outlook is better. Steady residential growth in northwest Tucson is anticipated over the long term, which in turn will motivate commercial development in the form of support services. As the population base increases, commercial development providing support services to area residents is following and shopping alternatives are becoming more convenient. In terms of retirement housing, the subject neighborhood should continue to remain desirable for retirement buyers for a number of years to come. The location of the Eagle Crest Ranch community on the northwest periphery of Tucson is a desirable characteristic impacting absorption and overall performance.

Site Data:

Location

The subject consists of four water plant sites located within the master planned community of Eagle Crest Ranch. The Eagle Crest Ranch community is found within Pinal County, just north of the Pima County line. This community is located on the east side of Oracle Road, north of Edwin Road.

Water Plant #1 is found on the west side of Eagle Crest Ranch Boulevard, south of Eagle Ranch Road, with a physical address of 39544 South Eagle Crest Ranch Boulevard. **Water Plant #2** is found on the west side of Eagle Crest Ranch Boulevard, north of Eagle Heights Drive, with a physical address of 39930 South Eagle Crest Ranch Boulevard. **Water Plant #3** is found on the northeast corner of Eagle Ridge Drive and Eagle Mountain Drive, with a physical address of 61025 East Eagle Mountain Drive. **Water Plant #4** is found on the west side of Mountain Shadow Drive, north of Eagle Heights Drive, with a physical address of 39904 South Mountain Shadow Drive.

Site Shape/Size

The subject water plant sites are irregular in shape although the shapes are not considered adverse for their current use. Per public records, the size of each parcel are as follows:

Water Plant #1 – 31,363 sq.ft.

Water Plant #2 – 10,890 sq.ft.

Water Plant #3 – 27,443 sq.ft.

Water Plant #4 – 16,988 sq.ft.

**Access
and Visibility**

All four of the subject parcels are accessed via interior feeder streets found within the Eagle Crest Ranch subdivision. Visibility is considered adequate for these interior parcels which are not high profile locations. All of the streets within the project are two lane, asphalt paved roadways, with curbs and sidewalks noted.

**Topography
and Drainage**

Each of the subject parcels are mostly level, however have different elevations from street grade. No significant drainage or soil conditions were apparent by visual observation which would prevent the highest and best use of the sites, although no soil study or engineering report were available to confirm this observation. No engineering or soils report was available, and therefore no information was provided with respect to the utility or constructability of the existing improvements, or any unusual soil or drainage conditions which are not readily apparent. This appraisal assumes no significant soils challenge's associated with the subject parcels. An examination of the FEMA Flood Insurance Rate Map shows that the subject is located within "Zone X", which is not a special flood hazard area as designated by FEMA Map Number 04021C2475E dated December 4, 2007.

Assessments	There are no assessments due against the subject site per confirmation with the Pinal County.
Easements and Encroachments	No encroachments were noted. The site is subject to various easements which are related primarily to access, utilities, drainage, etc., and which are typical of similar properties and are not considered adverse.
Surrounding Uses	Water Plant sites 1 and 2 are surrounded on two sides by vacant land zoned for commercial uses and two side by residential uses. Water Plant sites 3 and 4 are primarily surrounded by residential uses.
Environmental Concerns	<p>No potential environmental hazards which might affect the use and value of the subject property were noted upon inspection, however these appraisers lack the experience to investigate hazardous materials and we recommend that a complete Environmental Survey be performed on the subject property to confirm the presence or absence of any environmental hazards. As a result, the value opinions contained in this appraisal report <u>DO NOT</u> consider any loss in value due to any potentially hazardous environmental substances which may or may not be present on or near the subject property.</p> <p>Unless otherwise stated in this report, the existence of hazardous substances, including without limitation asbestos, polychlorinated biphenyls, petroleum leakage, or agricultural chemicals, which may or may not be present on the property, or other environmental conditions, were not called to the attention of nor did the appraiser become aware of such during the appraiser's inspection. The appraiser has no knowledge of the existence of such materials on or in the property unless otherwise stated. The appraiser, however, is not qualified to test such substances or conditions. If the presence of such substances, such as asbestos, urea formaldehyde foam insulation, or other hazardous substances or environmental conditions, may affect the value of the property, the value estimated is predicated on the assumption that there is no such proximity thereto that it would cause a loss in value. No responsibility is assumed for any such conditions, nor for any expertise or engineering knowledge required to discover them.</p>
Utilities	All typical utilities are available and in place to each of the subject water plant sites.

Tax Data

The subject parcels are identified under the following tax parcel numbers:

Water Plant #1 – Ptn of 305-31-013W

Water Plant #2 – 305-31-013Q

Water Plant #3 – 305-93-6040

Water Plant #4 – 305-93-219B

Water Plant #1 is a portion of a larger 9.32 acre site that has a current full cash value of \$223,680, and 2010 real estate taxes of \$2,960.18. No delinquent taxes were reported.

Water Plant #2 has a current full cash value of \$46,874, and 2010 real estate taxes of \$1,021.24. No delinquent taxes were reported.

Water Plant #3 has a current full cash value of \$500, and 2010 real estate taxes of \$6.94. No delinquent taxes were reported.

Water Plant #4 has a current full cash value of \$28,000, and 2010 real estate taxes of \$411.22. No delinquent taxes were reported.

Zoning

Water Plants 1 and 2 are found under the CI-1 (Light Industry and Warehouse Zone) and Water Plants 3 and 4 are found under the CR-3 (Single Family Residence Zone), per the Pinal County zoning ordinances.

The CI-1 zone allows for industrial and manufacturing uses, along with all business uses allowed under the CB-1 and CB-2 zones. Residential uses are also allowed. There is no minimum lot area, although a maximum building height of 35 feet is noted, along with a minimum front yard of 15 feet and a minimum rear yard of 10 feet.

The CR-3 zone is a residential zone with a minimum lot area of 7,000 square feet, a minimum lot width of 60 feet, minimum front yard of 20 feet, minimum rear yard of 25 feet, minimum side yards of eight feet each, and a maximum building height of 30 feet.

Summary

In conclusion, the physical characteristics of each of the subject parcels are considered relatively conducive to most types of development. The parcels are generally level and do not display any visible signs of adverse drainage conditions. The degree of access afforded the subject parcels is considered adequate and the sites benefit from the visibility afforded these locations, however, none of the streets are considered a major traffic routes in the neighborhood. All typical municipal services and utilities are available. The existing improvements to each parcel appear to be consistent with the physical and legal constraints of the sites, and the parcels should continue to serve well as the location of these improvements within the foreseeable future.

Highest and Best Use:

As Though Vacant The analysis of the highest and best use of a site, as though vacant, assumes that the parcel in question is either vacant or can be made vacant by demolishing any improvements. By applying this assumption, the uses that create value in the marketplace can be identified. Once the highest and best use of the site, as though vacant, is identified, an estimate of site value can be concluded.

The subject consists of four water plant sites located within the master planned community of Eagle Crest Ranch. Water Plants 1 and 2 are found under the CI-1 (Light Industry and Warehouse Zone) and Water Plants 3 and 4 are found under the CR-3 (Single Family Residence Zone), per the Pinal County zoning ordinances. The degree of access afforded the subject parcels is considered adequate and the sites benefit from the visibility afforded these locations, however, none of the streets are considered a major traffic routes in the neighborhood. All typical municipal services and utilities are available.

Legally permissible uses under the CI-1 zoning classification allow a range of commercial oriented businesses, and well as some residential uses. The CR-3 zoning is primarily a residential zone. Both of these zonings will allow a water plant use. The physically possible uses are mainly limited by the physical sizes of the parcels, although the sites could accommodate a wide variety of uses. Therefore, the legally permissible and physically possible uses of the site are wide ranging and would include a combination of residential or commercial business uses. However, current market conditions do not clearly demonstrate that construction of any particular type of commercial improvements would be financially feasible at the present time. Therefore, the maximally productive use, and the highest and best use, of the CI-1 water plant sites "as though vacant", is considered to be either an investment use with the potential for a variety of future uses or any use that would conform to the CI-1 zoning, be physically possible, and be proven to be financially feasible and maximally productive in the current market. The CR-3 zoned water plant sites are limited to a residential uses, although the size of these two sites are larger than a typical lot would be at 7,000 square feet.

As water plant sites are allowed under both the CI-1 and CR-3 zonings within the Eagle Crest Ranch project, these uses are allowable and considered to be the current Highest and Best Use of each parcel.

The Appraisal Process:

The determination of a market value opinion for real property is an orderly process by which: (1) the problem is defined; (2) the work necessary to solve the problem planned; and (3) the data involved is acquired, classified, analyzed and interpreted into an opinion of value. Inherent in this process is a consideration of the four major forces in our economy which affect value: environmental, social, economic and governmental forces. Such consideration facilitates the determination of the highest and best use of the subject property, the basis upon which the value is opinion is determined.

Three approaches are typically considered, each of which derives information from the market in one form or another. These include the Cost Approach, the Sales Comparison Approach, and the Income Capitalization Approach. Each approach is not necessarily equally as important in every appraisal.

Due to the nature of the subject property, being considered as vacant land parcels, only the Sales Comparison Approach was considered appropriate for estimating the value of the each parcel. The Cost Approach and Income Capitalization Approach were not applicable and not utilized.

A search was conducted for sales of vacant land parcels for comparison to the subject parcels, resulting in an opinion of value by the Sales Comparison Approach. The use of comparable sales is the application of the principle of substitution, which affirms that the value of the subject tends to be set by the cost of acquisition of an equally desirable property, assuming no costly delays are encountered in making the substitution. The most persuasive indications of a reasonable market value for the subject site are the sales prices of similar properties that have been recently sold. No prudent purchaser pays more than an amount necessary to get ownership; he, economically, will pay no more for one property than the cost of acquisition of similar property with similar utility and desirability.

A search of the public records was conducted, and interviews with real estate agents and brokers were made by these appraisers. Because no two properties are ever exactly the same, adjustments are made and considered to reflect the differences between the comparable properties and the subject site, as currently vacant. Adjustments are considered for such factors as relative size, location, date of sale, terms and conditions of sale, environmental appeal, potential use and productivity, service available, topography and other factors which would affect market value. These adjustments to comparable sale prices are explained in the Land Value Analysis.

The valuation process for each water plant site begins on the following page with a summary of the comparable land sale data.

COMPARABLE LAND SALE TABULATION WATER PLANT #1 (DATE OF SERVICE - MAY 1, 2002)						
SALE	SALE DATE	LOCATION (TAX ID NUMBER)	SALE PRICE	PARCEL SIZE (SQ.FT.)	SALE PRICE PER SQ.FT.	ZONING
1	6/02	East side of Oracle Road, north of Pinal Street (222-16-111A)	\$268,000	48,000	\$5.58	CB-1
2	10/01	East side of Oracle Road, north of Pinal Street (222-16-1070)	\$58,000	16,000	\$3.63	TR
3	10/00	East side of Oracle Road, north of Pinal Street (222-16-1060)	\$65,000	16,000	\$4.06	TR
4	6/00	West side of Oracle Road, north of Mainsail Boulevard (222-12-0660)	\$47,500	10,260	\$4.63	CB-2
SUBJECT		Water Plant #1 (Ptn of 305-31-013W); West side of Eagle Crest Ranch Boulevard, south of Eagle Ranch Road		31,363		CI-1

Note: All sale price data presented in this table is based upon the cash equivalent sale prices of the respective transactions

Land Valuation Analysis and Conclusion:

Water Plant #1 is found on the west side of Eagle Crest Ranch Boulevard, south of Eagle Ranch Road, with a physical address of 39544 South Eagle Crest Ranch Boulevard. This site is irregular in shape, contains 31,363 square feet, and is zoned CI-1 by Pinal County. The purpose of this assignment is to provide an opinion of retrospective market value, "as if vacant", for the water plant sites as of the date each water plant was put into service. For Water Plant #1, the date of service was May 1, 2002.

Market conditions do not clearly demonstrate that construction of any particular type of commercial improvements would be financially feasible at the time of service. The highest and best use of this water plant site "as though vacant", is considered to be either an investment use with the potential for a variety of future uses. As water plant sites are allowed under CI-1 zoning within the Eagle Crest Ranch project, this use is considered to be the Highest and Best Use of the parcel.

A search for comparable land sales was conducted and a limited supply of comparable data was found for the date of value of May 1, 2002. Four sales were selected which were considered the best available comparisons to the subject. I have selected the best combination land sales in comparison to the subject based upon the highest and best use of the parcels. Each sale has undergone a cash equivalency analysis designed to identify comparable sales which sold under atypical financing terms, and then adjusted if necessary to reflect cash terms or equivalent. In addition, other adjustments are made to the sales resulting from differences between the subject and the comparable such as size, topography, location or utility. The primary unit of comparison used in this analysis is sales price per square foot, since this unit is typically utilized by buyers and sellers in the market for properties similar to the subject. **Individual plat maps and photographs for each comparable sale can be found in the Addendum of this report.** Here follows the analysis of the comparable sales.

Adjustments:

Due to differences between the subject property and the comparable sales, adjustments were made to the comparable sales in an attempt to reflect those differences in the ultimate price that was paid. Typically, the adjustments to each sale are considered in the following sequence:

- 1) property rights conveyed
- 2) financing terms
- 3) conditions of sale
- 4) market conditions (time)
- 5) location and physical characteristics

An attempt was made to extract market-derived adjustments from the comparable sale data through the use of paired sale analysis, as explained in the following discussion. However, due to the limited amount of sale data with respect to vacant parcels similar to the subject, it was necessary to consider more general market information which has been discussed elsewhere in this report, as well as our general knowledge of local market conditions affecting properties similar to the subject based upon discussions with agents/brokers and other market participants. As a result, the adjustments made reflect a certain amount of appraiser judgment, and might vary from appraiser to appraiser. The following table summarizes our analysis of the comparable sale data.

LAND SALE ADJUSTMENT GRID		SALE 1	SALE 2	SALE 3	SALE 4
SUBJECT PROPERTY: Water Plant #1					
PARCEL DATA	SUBJECT	6/02	10/01	10/00	6/00
DATE OF SALE		48,000 sq.ft.	16,000 sq.ft.	16,000 sq.ft.	10,260 sq.ft.
PARCEL SIZE	31,363 sq.ft.	CB-1	TR	TR	CB-2
ZONING	CI-1	\$5.58	\$3.63	\$4.06	\$4.63
CONTRACT SALE PRICE/SQ.FT.					
ELEMENTS OF COMPARISON		Fee Simple	Fee Simple	Fee Simple	Fee Simple
PROPERTY RIGHTS CONVEYED		0.0%	0.0%	0.0%	0.0%
ADJUSTED CONTRACT SALE PRICE/SQ.FT.		\$5.58	\$3.63	\$4.06	\$4.63
FINANCING		Cash Equiv.	Cash Equiv.	Cash Equiv.	Cash Equiv.
CASH EQUIVALENT SALE PRICE/SQ.FT.		0.0%	0.0%	0.0%	0.0%
CONDITIONS OF SALE		\$5.58	\$3.63	\$4.06	\$4.63
ADJUSTED CASH EQUIVALENT SALE PRICE/SQ.FT.		0.0%	0.0%	0.0%	0.0%
DATE OF SALE		\$5.58	\$4.17	\$4.67	\$5.32
ADJUSTED CASH EQUIVALENT SALE PRICE/SQ.FT.		-5.0%	-5.0%	-5.0%	-5.0%
LOCATIONAL CHARACTERISTICS		5.0%	-5.0%	-5.0%	-5.0%
PARCEL SIZE		0.0%	0.0%	0.0%	0.0%
PHYSICAL CHARACTERISTICS		0.0%	0.0%	0.0%	0.0%
PROXIMITY TO UTILITIES		0.0%	0.0%	0.0%	0.0%
ZONING/HIGHEST & BEST USE		-5.0%	-5.0%	-5.0%	-5.0%
INDICATED SALE PRICE/SQ.FT.		\$5.30	\$3.54	\$3.97	\$4.52

Summary – Water Plant #1:

The four comparable sales ranged in value from \$4.06 to \$5.58 per square foot on a cash equivalent basis. After adjustments to the comparable sales, a range of value for Water Plant #1 is suggested from \$3.54 to \$5.30 per square foot. It is my opinion that a value within this range, above \$4.00, below \$5.00, and near \$4.50 per square foot is reasonable. Then, multiplying \$4.50 times the 31,363 square feet found within Water Plant #1, results in a value opinion of \$141,134, rounded to \$140,000.

Therefore, my final opinion of retrospective market value “as if vacant” for the Water Plant #1 site is concluded to be \$140,000, or near \$4.50 per square foot, as of May 1, 2002.

COMPARABLE LAND SALE TABULATION						
WATER PLANT #2 (DATE OF SERVICE - AUGUST 1, 2005)						
SALE	SALE DATE	LOCATION (TAX ID NUMBER)	SALE PRICE	PARCEL SIZE (SQ.FT.)	SALE PRICE PER SQ.FT.	ZONING
1	7/05	Northeast corner of Oracle Road and Pinal Street (222-11-0470)	\$310,000	37,897	\$8.18	CB-2
2	4/05	West side of Oracle Road, north of Pinal Street (222-11-017B)	\$260,000	51,129	\$5.09	GR-1
3	12/04	East side of Oracle Road, north of Pinal Street (222-16-1060)	\$92,500	16,000	\$5.78	TR
4	10/04	East side of Oracle Road, north of Pinal Street (222-16-1120)	\$92,500	16,667	\$5.10	TR
5	6/04	West side of Oracle Road, north of Mainsail Boulevard (222-12-0660)	\$50,000	10,260	\$4.87	CB-2
SUBJECT		Water Plant #2 (305-31-013Q) West side of Eagle Crest Ranch Boulevard, north of Eagle Heights Drive		10,890		CI-1

Note: All sale price data presented in this table is based upon the cash equivalent sale prices of the respective transactions

Land Valuation Analysis and Conclusion:

Water Plant #2 is found on the west side of Eagle Crest Ranch Boulevard, north of Eagle Heights Drive, with a physical address of 39930 South Eagle Crest Ranch Boulevard. This site is irregular in shape, contains 10,890 square feet, and is zoned CI-1 by Pinal County. The purpose of this assignment is to provide an opinion of retrospective market value, "as if vacant", for the water plant sites as of the date each water plant was put into service. For Water Plant #2, the date of service was August 1, 2005.

Market conditions do not clearly demonstrate that construction of any particular type of commercial improvements would be financially feasible at the time of service. The highest and best use of this water plant site "as though vacant", is considered to be either an investment use with the potential for a variety of future uses. As water plant sites are allowed under CI-1 zoning within the Eagle Crest Ranch project, this use is considered to be the Highest and Best Use of the parcel.

A search for comparable land sales was conducted and a limited supply of comparable data was found for the date of value of August 1, 2005. Five sales were selected which were considered the best available comparisons to the subject. I have selected the best combination land sales in comparison to the subject based upon the highest and best use of the parcels. Each sale has undergone a cash equivalency analysis designed to identify comparable sales which sold under atypical financing terms, and then adjusted if necessary to reflect cash terms or equivalent. In addition, other adjustments are made to the sales resulting from differences between the subject and the comparable such as size, topography, location or utility. The primary unit of comparison used in this analysis is sales price per square foot, since this unit is typically utilized by buyers and sellers in the market for properties similar to the subject. **Individual plat maps and photographs for each comparable sale can be found in the Addendum of this report.** Here follows the analysis of the comparable sales.

Adjustments:

Due to differences between the subject property and the comparable sales, adjustments were made to the comparable sales in an attempt to reflect those differences in the ultimate price that was paid. Typically, the adjustments to each sale are considered in the following sequence:

- 1) property rights conveyed
- 2) financing terms
- 3) conditions of sale
- 4) market conditions (time)
- 5) location and physical characteristics

An attempt was made to extract market-derived adjustments from the comparable sale data through the use of paired sale analysis, as explained in the following discussion. However, due to the limited amount of sale data with respect to vacant parcels similar to the subject, it was necessary to consider more general market information which has been discussed elsewhere in this report, as well as our general knowledge of local market conditions affecting properties similar to the subject based upon discussions with agents/brokers and other market participants. As a result, the adjustments made reflect a certain amount of appraiser judgment, and might vary from appraiser to appraiser. The following table summarizes our analysis of the comparable sale data.

LAND SALE ADJUSTMENT GRID		SALE 1	SALE 2	SALE 3	SALE 4	SALE 5
SUBJECT PROPERTY: Water Plant #2						
PARCEL DATA	SUBJECT					
DATE OF SALE		7/05	4/05	12/04	10/04	6/04
PARCEL SIZE	10,890 sq.ft.	37,897 sq.ft.	51,129 sq.ft.	16,000 sq.ft.	16,667 sq.ft.	10,260 sq.ft.
ZONING	CI-1	CB-2	GR-1	TR	TR	CB-2
CONTRACT SALE PRICE/SQ.FT.		\$8.18	\$5.09	\$5.78	\$5.10	\$4.87
ELEMENTS OF COMPARISON						
PROPERTY RIGHTS CONVEYED	Fee Simple	Fee Simple	Fee Simple	Fee Simple	Fee Simple	Fee Simple
		0.0%	0.0%	0.0%	0.0%	0.0%
ADJUSTED CONTRACT SALE PRICE/SQ.FT.		\$8.18	\$5.09	\$5.78	\$5.10	\$4.87
FINANCING	Cash or Equiv.	0.0%	0.0%	0.0%	0.0%	0.0%
CASH EQUIVALENT SALE PRICE/SQ.FT.		\$8.18	\$5.09	\$5.78	\$5.10	\$4.87
CONDITIONS OF SALE		0.0%	0.0%	0.0%	0.0%	0.0%
ADJUSTED CASH EQUIVALENT SALE PRICE/SQ.FT.		\$8.18	\$5.09	\$5.78	\$5.10	\$4.87
DATE OF SALE		0.0%	0.0%	5.0%	10.0%	10.0%
ADJUSTED CASH EQUIVALENT SALE PRICE/SQ.FT.		\$8.18	\$5.09	\$6.07	\$5.61	\$5.36
LOCATIONAL CHARACTERISTICS		-15.0%	-5.0%	-5.0%	-5.0%	-5.0%
PARCEL SIZE		10.0%	10.0%	5.0%	5.0%	0.0%
PHYSICAL CHARACTERISTICS		0.0%	0.0%	0.0%	0.0%	0.0%
PROXIMITY TO UTILITIES		0.0%	0.0%	0.0%	0.0%	0.0%
ZONING/HIGHEST & BEST USE		-15.0%	10.0%	-5.0%	-5.0%	-5.0%
INDICATED SALE PRICE/SQ.FT.		\$6.54	\$5.85	\$5.77	\$5.33	\$4.82

Summary – Water Plant #2:

The five comparable sales ranged in value from \$4.87 to \$8.18 per square foot on a cash equivalent basis. After adjustments to the comparable sales, a range of value for Water Plant #2 is suggested from \$4.82 to \$6.54 per square foot. It is my opinion that a value within this range, above \$5.00, below \$6.50, and near \$5.75 per square foot is reasonable. Then, multiplying \$5.75 times the 10,890 square feet found within Water Plant #2, results in a value opinion of \$62,618, rounded to \$65,000.

Therefore, my final opinion of retrospective market value “as if vacant” for the Water Plant #2 site is concluded to be \$65,000, or near \$5.75 per square foot, as of August 1, 2005.

COMPARABLE LAND SALE TABULATION						
WATER PLANT #3 (DATE OF SERVICE - JANUARY 1, 2008)						
SALE	SALE DATE	LOCATION (TAX ID NUMBER)	SALE PRICE	PARCEL SIZE (SQ.FT.)	SALE PRICE PER SQ.FT.	ZONING
1	11/07	East side of Avenida Del Canada, north of Mainsail Boulevard (222-19-0100)	\$60,000	12,000	\$5.00	GR-1
2	8/07	West side of Bowman Road, south of Golder Ranch Road (222-42-001J)	\$157,000	43,568	\$3.60	GR-1
3	12/06	South side of Graham Street, east of Oracle Road (222-19-0260)	\$50,000	12,000	\$4.17	GR-1
4	4/06	West side of Oracle Road, north of Pinal Street (222-11-017A)	\$330,000	52,912	\$6.24	GR-1
5	2/06	Northeast corner of Oracle Road and Hawser Street (222-22-0080)	\$350,000	54,886	\$6.83	TR
SUBJECT		Water Plant #3 (305-93-6040); Northeast corner of Eagle Ridge Drive and Eagle Mountain Drive		27,443		CR-3

Note: All sale price data presented in this table is based upon the cash equivalent sale prices of the respective transactions

Land Valuation Analysis and Conclusion:

Water Plant #3 is found on the northeast corner of Eagle Ridge Drive and Eagle Mountain Drive, with a physical address of 61025 East Eagle Mountain Drive. This site is irregular in shape, contains 27,443 square feet, and is zoned CR-3 by Pinal County. The purpose of this assignment is to provide an opinion of retrospective market value, "as if vacant", for the water plant sites as of the date each water plant was put into service. For Water Plant #3, the date of service was January 1, 2008.

The highest and best use of this water plant site "as though vacant", is considered to be either an investment use with the potential for a variety of future residential uses. As water plant sites are allowed under CR-3 zoning within the Eagle Crest Ranch project, this use is considered to be the Highest and Best Use of the parcel.

A search for comparable land sales was conducted and a limited supply of comparable data was found for the date of value of January 1, 2008. Five sales were selected which were considered the best available comparisons to the subject. I have selected the best combination land sales in comparison to the subject based upon the highest and best use of the parcels. Each sale has undergone a cash equivalency analysis designed to identify comparable sales which sold under atypical financing terms, and then adjusted if necessary to reflect cash terms or equivalent. In addition, other adjustments are made to the sales resulting from differences between the subject and the comparable such as size, topography, location or utility. The primary unit of comparison used in this analysis is sales price per square foot, since this unit is typically utilized by buyers and sellers in the market for properties similar to the subject. **Individual plat maps and photographs for each comparable sale can be found in the Addendum of this report.** Here follows the analysis of the comparable sales.

Adjustments:

Due to differences between the subject property and the comparable sales, adjustments were made to the comparable sales in an attempt to reflect those differences in the ultimate price that was paid. Typically, the adjustments to each sale are considered in the following sequence:

- 1) property rights conveyed
- 2) financing terms
- 3) conditions of sale
- 4) market conditions (time)
- 5) location and physical characteristics

An attempt was made to extract market-derived adjustments from the comparable sale data through the use of paired sale analysis, as explained in the following discussion. However, due to the limited amount of sale data with respect to vacant parcels similar to the subject, it was necessary to consider more general market information which has been discussed elsewhere in this report, as well as our general knowledge of local market conditions affecting properties similar to the subject based upon discussions with agents/brokers and other market participants. As a result, the adjustments made reflect a certain amount of appraiser judgment, and might vary from appraiser to appraiser. The following table summarizes our analysis of the comparable sale data.

LAND SALE ADJUSTMENT GRID		SALE 1	SALE 2	SALE 3	SALE 4	SALE 5
SUBJECT PROPERTY: Water Plat #3						
PARCEL DATA	SUBJECT	11/07	8/07	12/06	4/06	2/06
DATE OF SALE		12,000 sq.ft.	43,568 sq.ft.	12,000 sq.ft.	52,912 sq.ft.	54,886 sq.ft.
PARCEL SIZE	27,443 sq.ft.	GR-1	GR-1	GR-1	GR-1	TR
ZONING	CR-3	\$5.00	\$3.60	\$4.17	\$6.24	\$6.38
CONTRACT SALE PRICE/SQ.FT.						
ELEMENTS OF COMPARISON						
PROPERTY RIGHTS CONVEYED	Fee Simple	Fee Simple	Fee Simple	Fee Simple	Fee Simple	Fee Simple
		0.0%	0.0%	0.0%	0.0%	0.0%
ADJUSTED CONTRACT SALE PRICE/SQ.FT.		\$5.00	\$3.60	\$4.17	\$6.24	\$6.38
FINANCING	Cash or Equiv.	0.0%	0.0%	0.0%	0.0%	0.0%
CASH EQUIVALENT SALE PRICE/SQ.FT.		\$5.00	\$3.60	\$4.17	\$6.24	\$6.38
CONDITIONS OF SALE		0.0%	0.0%	0.0%	0.0%	0.0%
ADJUSTED CASH EQUIVALENT SALE PRICE/SQ.FT.		\$5.00	\$3.60	\$4.17	\$6.24	\$6.38
DATE OF SALE		0.0%	5.0%	10.0%	10.0%	10.0%
ADJUSTED CASH EQUIVALENT SALE PRICE/SQ.FT.		\$5.00	\$3.78	\$4.59	\$6.86	\$7.02
LOCATIONAL CHARACTERISTICS		5.0%	5.0%	5.0%	-10.0%	-10.0%
PARCEL SIZE		-5.0%	5.0%	-5.0%	5.0%	5.0%
PHYSICAL CHARACTERISTICS		0.0%	0.0%	0.0%	0.0%	0.0%
PROXIMITY TO UTILITIES		0.0%	0.0%	0.0%	0.0%	0.0%
ZONING/HIGHEST & BEST USE		10.0%	10.0%	10.0%	0.0%	-5.0%
INDICATED SALE PRICE/SQ.FT.		\$5.50	\$4.54	\$5.05	\$6.52	\$6.32

Summary – Water Plant #3:

The five comparable sales ranged in value from \$3.60 to \$6.83 per square foot on a cash equivalent basis. After adjustments to the comparable sales, a range of value for Water Plant #3 is suggested from \$4.54 to \$6.52 per square foot. It is my opinion that a value within this range, above \$5.00, below \$6.50, and near \$6.00 per square foot is reasonable. Then, multiplying \$6.00 times the 27,443 square feet found within Water Plant #3, results in a value opinion of \$164,658, rounded to \$165,000.

Therefore, my final opinion of retrospective market value “as if vacant” for the Water Plant #3 site is concluded to be \$165,000, or near \$6.00 per square foot, as of January 1, 2008.

COMPARABLE LAND SALE TABULATION						
WATER PLANT #4 (DATE OF SERVICE - OCTOBER 1, 2004)						
SALE	SALE DATE	LOCATION (TAX ID NUMBER)	SALE PRICE	PARCEL SIZE (SQ.FT.)	SALE PRICE PER SQ.FT.	ZONING
1	12/04	East side of Oracle Road, north of Pinal Street (222-16-1060)	\$92,500	16,000	\$5.78	TR
2	10/04	East side of Oracle Road, north of Pinal Street (222-16-1120)	\$85,000	16,667	\$5.10	TR
3	7/04	West side of Oracle Road, north of Pinal Street (222-11-017B)	\$225,000	51,129	\$4.40	GR-1
4	6/04	West side of Oracle Road, north of Mainsail Boulevard (222-12-0660)	\$50,000	10,260	\$4.87	CB-2
5	3/04	West side of Oracle Road, south of Mainsail Boulevard (222-21-042A)	\$153,762	25,825	\$5.95	CB-2
6	9/03	West side of Oracle Road, north of Pinal Street (222-11-018B)	\$220,000	48,352	\$4.55	CB-2
SUBJECT		Water Plant #4 (305-93-219B) West side of Mountain Shadow Drive, north of Eagle Heights Drive		16,988		CR-3

Note: All sale price data presented in this table is based upon the cash equivalent sale prices of the respective transactions

Land Valuation Analysis and Conclusion:

Water Plant #4 is found on the west side of Mountain Shadow Drive, north of Eagle Heights Drive, with a physical address of 39904 South Mountain Shadow Drive. This site is irregular in shape, contains 16,988 square feet, and is zoned CR-3 by Pinal County. The purpose of this assignment is to provide an opinion of retrospective market value, "as if vacant", for the water plant sites as of the date each water plant was put into service. For Water Plant #4, the date of service was October 1, 2004.

The highest and best use of this water plant site "as though vacant", is considered to be either an investment use with the potential for a variety of future residential uses. As water plant sites are allowed under CR-3 zoning within the Eagle Crest Ranch project, this use is considered to be the Highest and Best Use of the parcel.

A search for comparable land sales was conducted and a limited supply of comparable data was found for the date of value of October 1, 2004. Six sales were selected which were considered the best available comparisons to the subject. I have selected the best combination land sales in comparison to the subject based upon the highest and best use of the parcels. Each sale has undergone a cash equivalency analysis designed to identify comparable sales which sold under atypical financing terms, and then adjusted if necessary to reflect cash terms or equivalent. In addition, other adjustments are made to the sales resulting from differences between the subject and the comparable such as size, topography, location or utility. The primary unit of comparison used in this analysis is sales price per square foot, since this unit is typically utilized by buyers and sellers in the market for properties similar to the subject. **Individual plat maps and photographs for each comparable sale can be found in the Addendum of this report.** Here follows the analysis of the comparable sales.

Adjustments:

Due to differences between the subject property and the comparable sales, adjustments were made to the comparable sales in an attempt to reflect those differences in the ultimate price that was paid. Typically, the adjustments to each sale are considered in the following sequence:

- 1) property rights conveyed
- 2) financing terms
- 3) conditions of sale
- 4) market conditions (time)
- 5) location and physical characteristics

An attempt was made to extract market-derived adjustments from the comparable sale data through the use of paired sale analysis, as explained in the following discussion. However, due to the limited amount of sale data with respect to vacant parcels similar to the subject, it was necessary to consider more general market information which has been discussed elsewhere in this report, as well as our general knowledge of local market conditions affecting properties similar to the subject based upon discussions with agents/brokers and other market participants. As a result, the adjustments made reflect a certain amount of appraiser judgment, and might vary from appraiser to appraiser. The following table summarizes our analysis of the comparable sale data.

LAND SALE ADJUSTMENT GRID						
SUBJECT PROPERTY:						
Water Plant #4						
PARCEL DATA	SUBJECT	SALE 1	SALE 2	SALE 3	SALE 4	SALE 5
DATE OF SALE		12/04	10/04	7/04	6/04	3/04
PARCEL SIZE	16,988 sq.ft.	16,000 sq.ft.	16,667 sq.ft.	51,129 sq.ft.	10,260 sq.ft.	25,825 sq.ft.
ZONING	CR-3	TR	TR	GR-1	CB-2	CB-2
CONTRACT SALE PRICE/SQ.FT.		\$5.78	\$5.10	\$4.40	\$4.87	\$5.95
ELEMENTS OF COMPARISON						
PROPERTY RIGHTS CONVEYED	Fee Simple	Fee Simple	Fee Simple	Fee Simple	Fee Simple	Fee Simple
		0.0%	0.0%	0.0%	0.0%	0.0%
ADJUSTED CONTRACT SALE PRICE/SQ.FT.		\$5.78	\$5.10	\$4.40	\$4.87	\$5.95
FINANCING	Cash or Equiv.	0.0%	0.0%	0.0%	0.0%	0.0%
CASH EQUIVALENT SALE PRICE/SQ.FT.		\$5.78	\$5.10	\$4.40	\$4.87	\$5.95
CONDITIONS OF SALE		0.0%	0.0%	0.0%	0.0%	0.0%
ADJUSTED CASH EQUIVALENT SALE PRICE/SQ.FT.		\$5.78	\$5.10	\$4.40	\$4.87	\$5.95
DATE OF SALE		0.0%	0.0%	5.0%	5.0%	10.0%
ADJUSTED CASH EQUIVALENT SALE PRICE/SQ.FT.		\$5.78	\$5.10	\$4.62	\$5.11	\$6.25
LOCATIONAL CHARACTERISTICS		-5.0%	-5.0%	-5.0%	-5.0%	-10.0%
PARCEL SIZE		0.0%	0.0%	10.0%	-5.0%	5.0%
PHYSICAL CHARACTERISTICS		0.0%	0.0%	0.0%	0.0%	0.0%
PROXIMITY TO UTILITIES		0.0%	0.0%	0.0%	0.0%	0.0%
ZONING/HIGHEST & BEST USE		-5.0%	-5.0%	10.0%	-5.0%	-5.0%
INDICATED SALE PRICE/SQ.FT.		\$5.20	\$4.59	\$5.31	\$4.34	\$5.63
						\$5.01

Summary – Water Plant #4:

The six comparable sales ranged in value from \$4.40 to \$5.95 per square foot on a cash equivalent basis. After adjustments to the comparable sales, a range of value for Water Plant #4 is suggested from \$4.34 to \$5.63 per square foot. It is my opinion that a value within this range, above \$4.50, below \$5.50, and near \$5.00 per square foot is reasonable. Then, multiplying \$5.00 times the 16,988 square feet found within Water Plant #4, results in a value opinion of \$84,940, rounded to \$85,000.

Therefore, my final opinion of retrospective market value “as if vacant” for the Water Plant #4 site is concluded to be \$85,000, or near \$5.00 per square foot, as of October 1, 2004.

Estimated Exposure/Marketing Time:

A reasonable marketing period is intended to represent the period of time it might take to sell the subject parcels at market value in the period immediately following the retrospective dates of the appraisal. Marketing time differs from exposure time, which is always presumed to precede the effective date of the appraisal. In an effort to estimate a reasonable marketing period for the subject property, the following factors were considered: exposure times for comparable sale properties, interviews with market participants and anticipated changes in market conditions.

The comparable sales summarized in this report which were actively marketed had market times that ranged mostly under 12 months. Interviews with local brokers and market participants and general market conditions for this type of property suggest the any of the subject parcels could be sold within a 12-month period at a reasonable listing price.

The preceding data with respect to exposure times, opinions of market participants and general market conditions suggest that an exposure time of 12 months should be adequate for the subject parcels, “as if vacant”. Consequently, I believe that an estimated marketing time for the subject sites of one year is reasonable given the data available and a reasonable asking price.

Certification of Value:

I do hereby certify that to the best of my knowledge and belief...

The statements of fact contained in this report are true and correct.

The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, unbiased professional analyses, opinions, and conclusions.

I have no present or prospective interest in the property that is the subject of this report, and no personal interest with respect to the parties involved.

I have no bias with respect to the property that is the subject of this report, or to the parties involved with this assignment.

My engagement in this assignment was not contingent upon developing or reporting predetermined results.

My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.

My analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Code of Professional Ethics and the Standards of Professional Appraisal Practice of the Appraisal Institute, as well as the Uniform Standards of Professional Appraisal Practice.

John Ferenchak have made a personal inspection of the property that is the subject of this report, and has the knowledge and experience necessary to complete the assignment competently.

No one has provided significant real property appraisal assistance to the person signing this certification.

The appraisal assignment, my value conclusions, as well as other opinions expressed herein, are not based upon a requested minimum valuation, a specific valuation, or the approval of a loan.

The use of this report is subject to the requirements of the Appraisal Institute relating to review by a duly authorized representative.

I assume no responsibility for matters legal, structural, mechanical, architectural or engineering.

Any opinions of value presented in this report, unless otherwise stated, are formulated under the assumption that hazardous materials or conditions do not adversely affect the subject property. I do not assume any responsibility for any loss in value that is the result of such materials or conditions since we do not possess the expertise for their discovery.

My opinion of value for the subject property as of April 11, 2011 under financing and assumptions described in this report is:

EAGLE CREST RANCH WATER PLANT SITES "AS IF VACANT"			
WATER PLANT/ TAX ID	SITE SIZE	RETROSPECTIVE DATE OF VALUE	MARKET VALUE OPINION
Water Plant #1 (Ptn of 305-31-013W)	31,363 sf	May 1, 2002	\$140,000
Water Plant #2 (305-31-013Q)	10,890 sf	August 1, 2005	\$65,000
Water Plant #3 (305-93-6040)	27,443 sf	January 1, 2008	\$165,000
Water Plant #4 (305-93-219B)	16,988 sf	October 1, 2004	\$85,000

A typical marketing/exposure period for properties similar to the subject of 12 months was concluded as reasonable.

The reader should note that the "As If Vacant" opinion of market value for the subject water plant sites stated in this report is based upon a **HYPOTHETICAL CONDITION** which assumes the parcels do not have any improvements upon them. It is noted that at the time of inspection (April 12, 2011), each water plant site had water facility improvements completed and in use

This is a Summary Appraisal Report which is intended to comply with the reporting requirements set forth under Standard Rule 2-2(b) of the Uniform Standards of Professional Appraisal Practice for a Summary Appraisal Report. As such, it might not include full discussions of the data, reasoning, and analyses that were used in the appraisal process to develop the appraiser's opinion of value. Supporting documentation concerning the data, reasoning, and analyses is retained in the appraiser's file. The information contained in this report is specific to the needs of the client and for the intended use stated in this report. The appraisers are not responsible for unauthorized use of this report.

Within the constraints of adequate available data, the full appraisal report intends to conform to the appraisal standards required by Title XI of FIRREA (Federal Financial Institutions Reform, Recovery and Enforcement Act of 1989), the OCC (Office of the Comptroller of the Currency) and the Uniform Standards of Professional Appraisal Practice (USPAP).

No potential environmental hazards which might affect the use and value of the subject property were noted upon inspection, however these appraisers lack the experience to investigate hazardous materials and we recommend that a complete Environmental Survey be performed on the subject property to confirm the presence or absence of any environmental hazards. As a result, the value opinions contained in this appraisal report **DO NOT** consider any loss in value due to any potentially hazardous environmental substances which may or may not be present on or near the subject property.

Unless otherwise stated in this report, the existence of hazardous substances, including without limitation asbestos, polychlorinated biphenyls, petroleum leakage, or agricultural chemicals, which may or may not be present on the property, or other environmental conditions, were not called to the attention of nor did the appraiser become aware of such during the appraiser's inspection. The appraiser has no knowledge of the existence of such materials on or in the property unless otherwise stated. The appraiser, however, is not qualified to test such substances or conditions. If the presence of such substances, such as asbestos, urea formaldehyde foam insulation, or other hazardous substances or environmental conditions, may affect the value of the property, the value estimated is predicated on the assumption that there is no such proximity thereto that it would cause a loss in value. No responsibility is assumed for any such conditions, nor for any expertise or engineering knowledge required to discover them.

No engineering or soils report was available, and therefore no information was provided with respect to the utility or constructability of the existing improvements, or any unusual soil or drainage conditions which are not readily apparent. This appraisal assumes no soils challenge's associated with the subject property.

Please refer to the Limiting Conditions and Assumptions included in the Addendum section which accompany this summary appraisal report.

The authentic copies of this report are signed in blue, without which they are unauthorized and may have been altered.

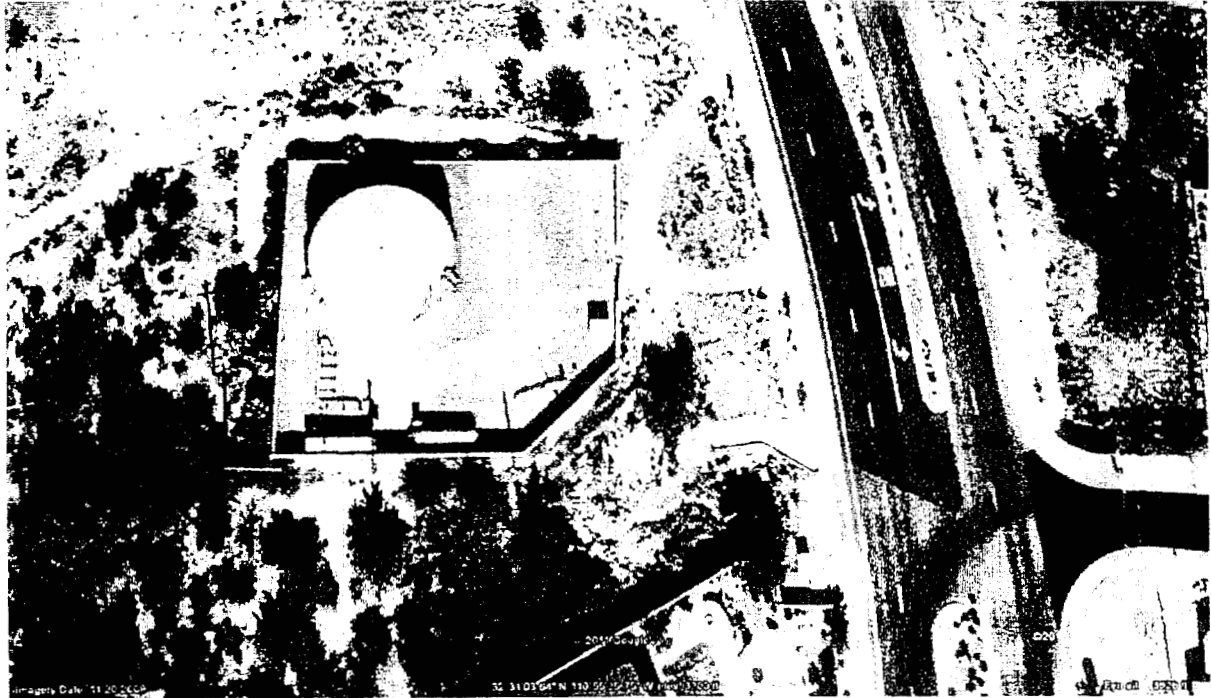
This Certification is signed and dated on April 29, 2011. The authentic copies of this report are signed in blue, without which they are unauthorized and may have been altered.

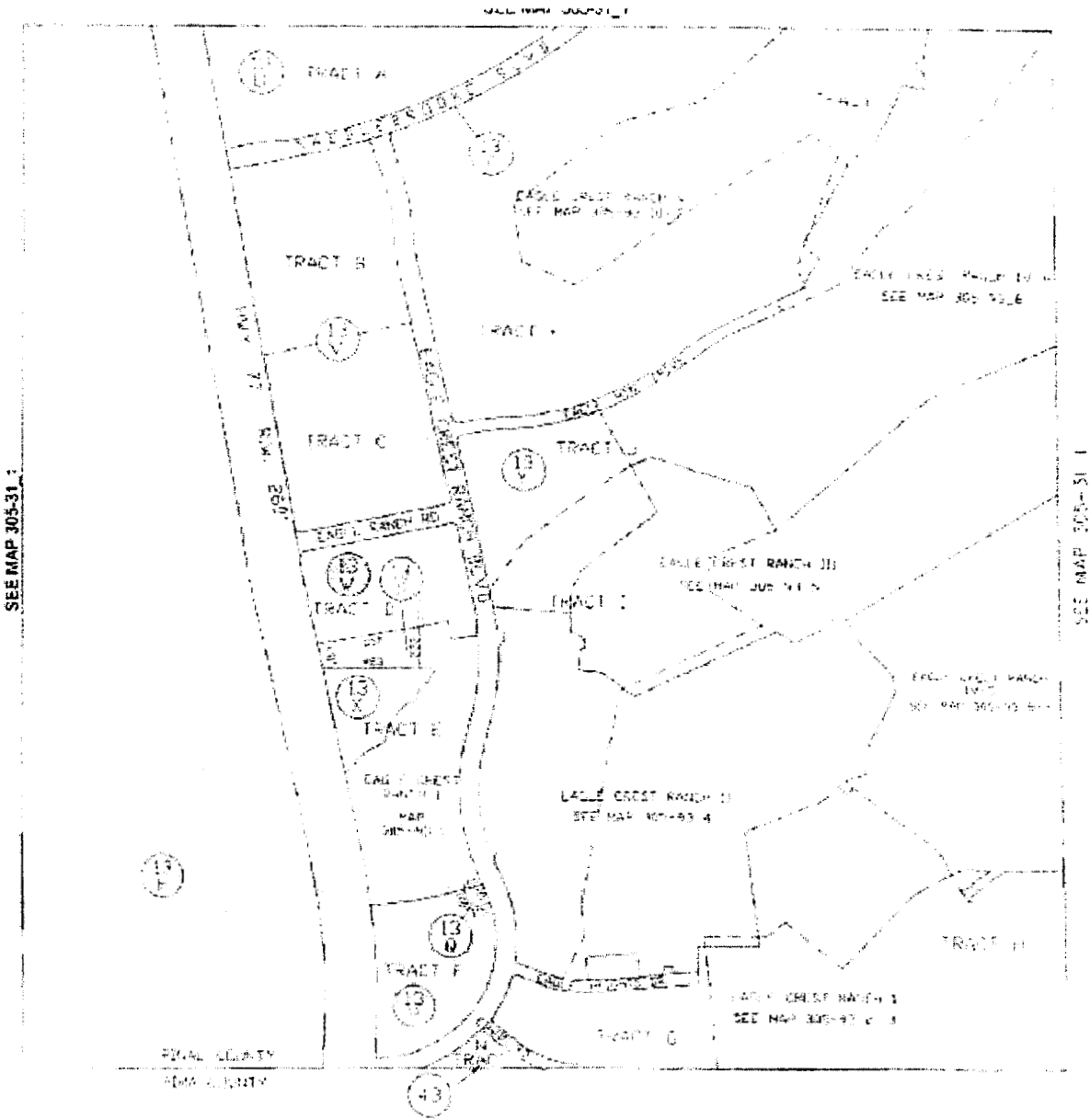
Sincerely,

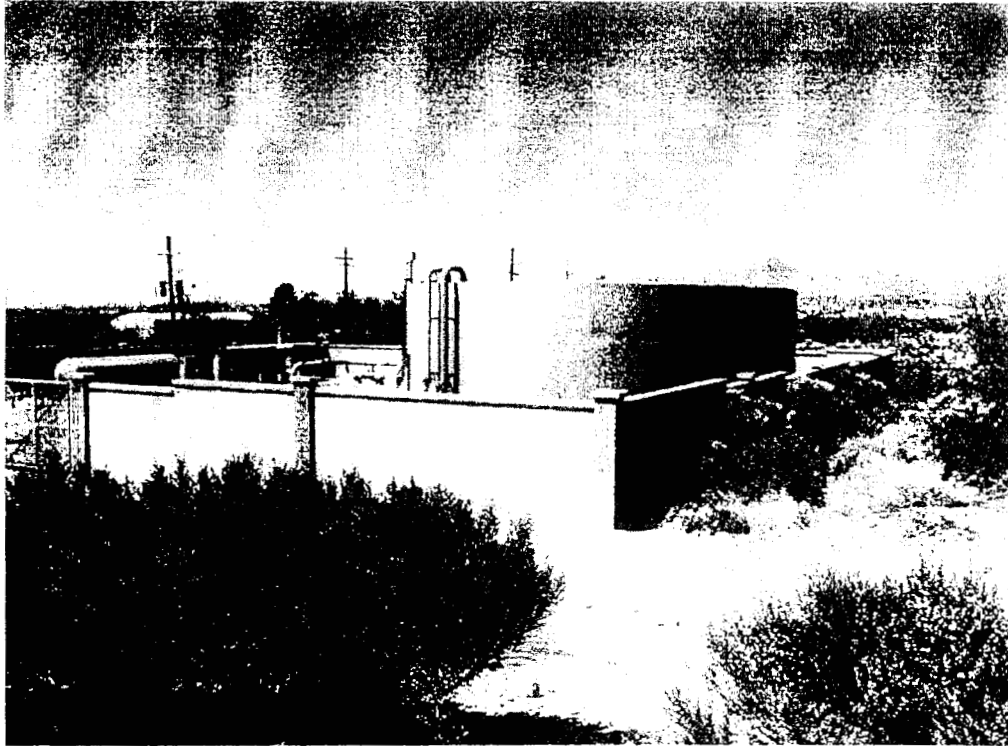


John Ferenchak
State of Arizona Certified General
Real Estate Appraiser #30344

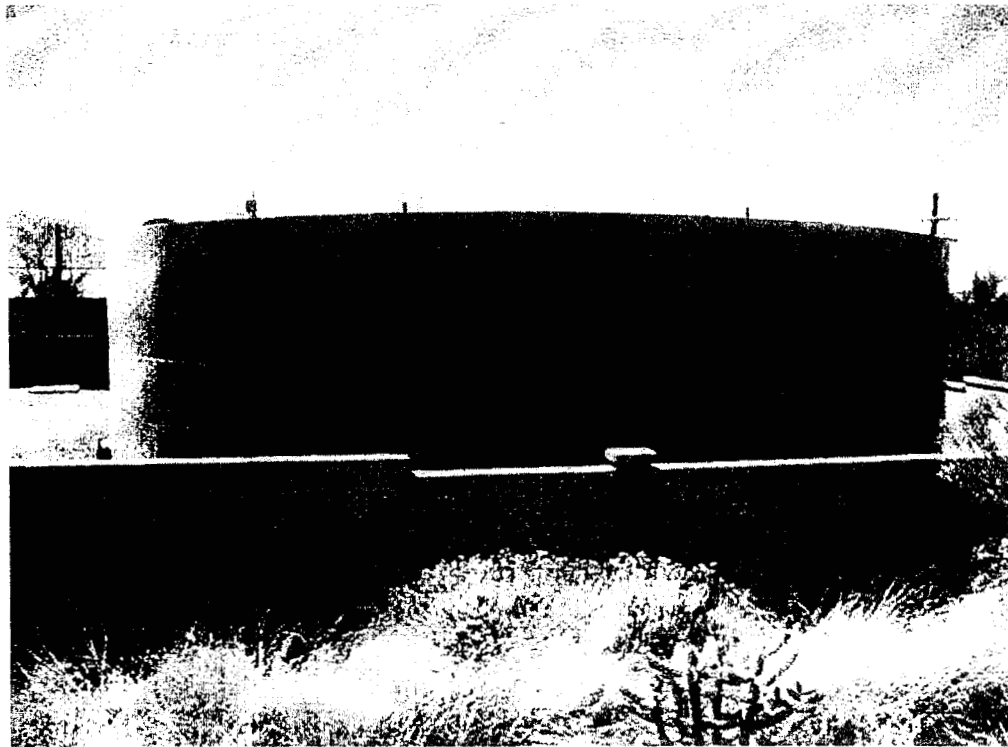
SUBJECT PROPERTY PHOTOGRAPHS – WATER PLANT #1







NORTHEAST ELEVATION



WEST ELEVATION



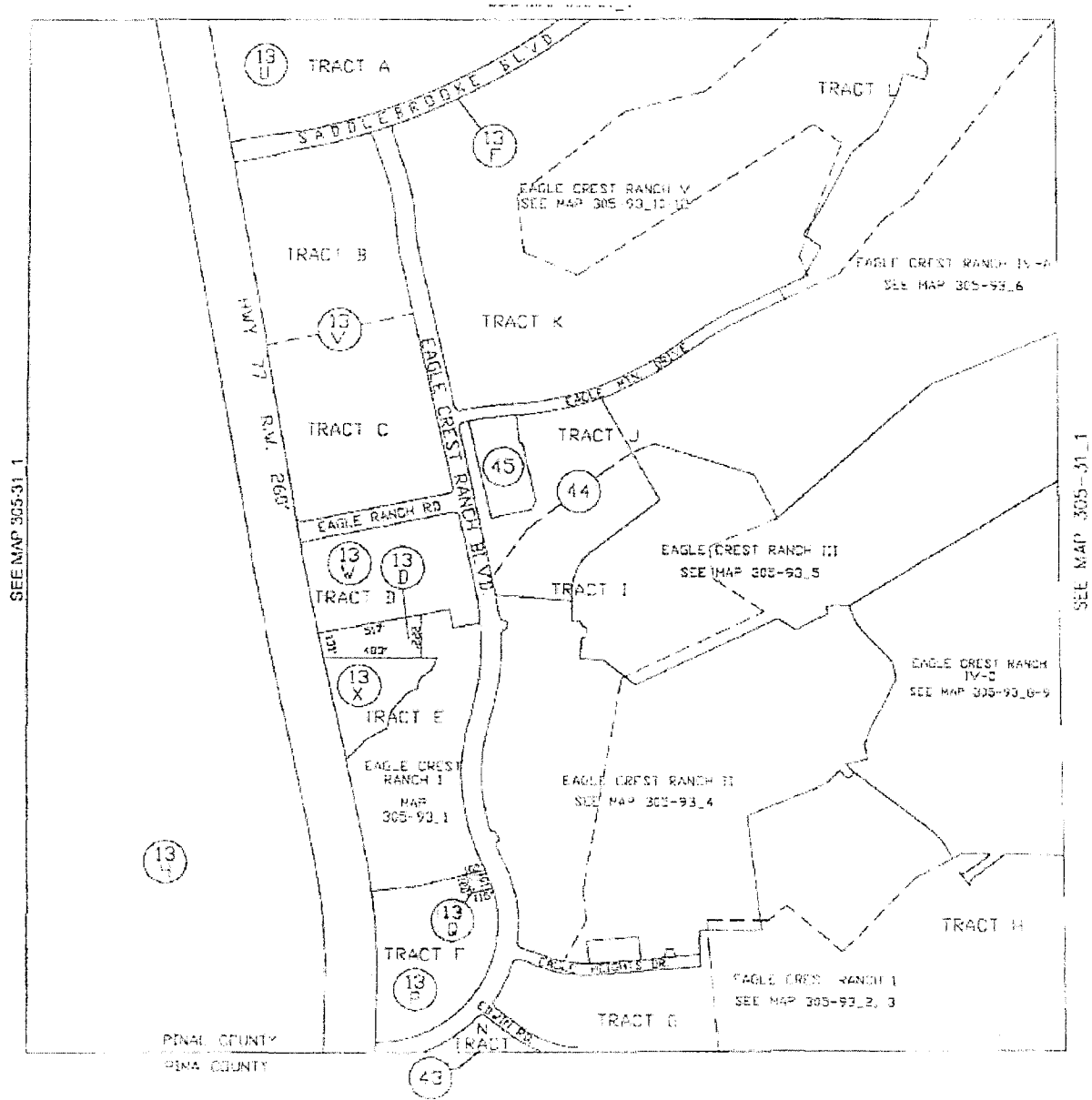
EAGLE CREST RANCH BOULEVARD TO THE NORTH



EAGLE CREST RANCH BOULEVARD TO THE SOUTH

SUBJECT PROPERTY PHOTOGRAPHS/MAPS - WATER PLANT #2





SEE MAP 305-31_1

SEE MAP 305-91_1



SOUTHEAST ELEVATION



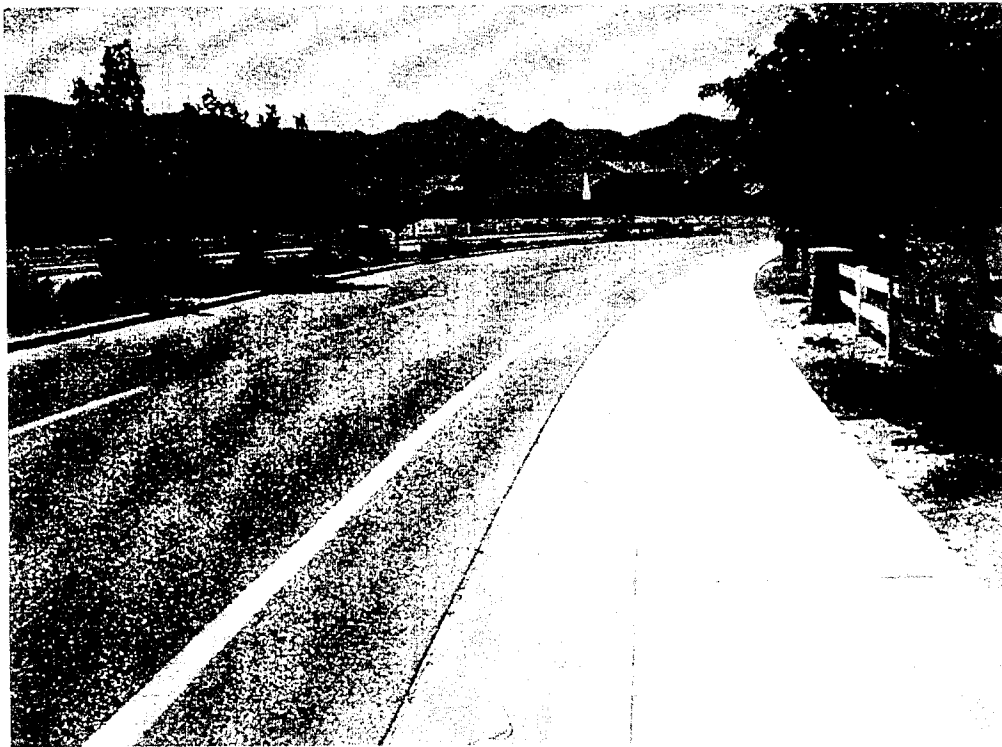
SOUTHWEST ELEVATION



INTERIOR VIEW



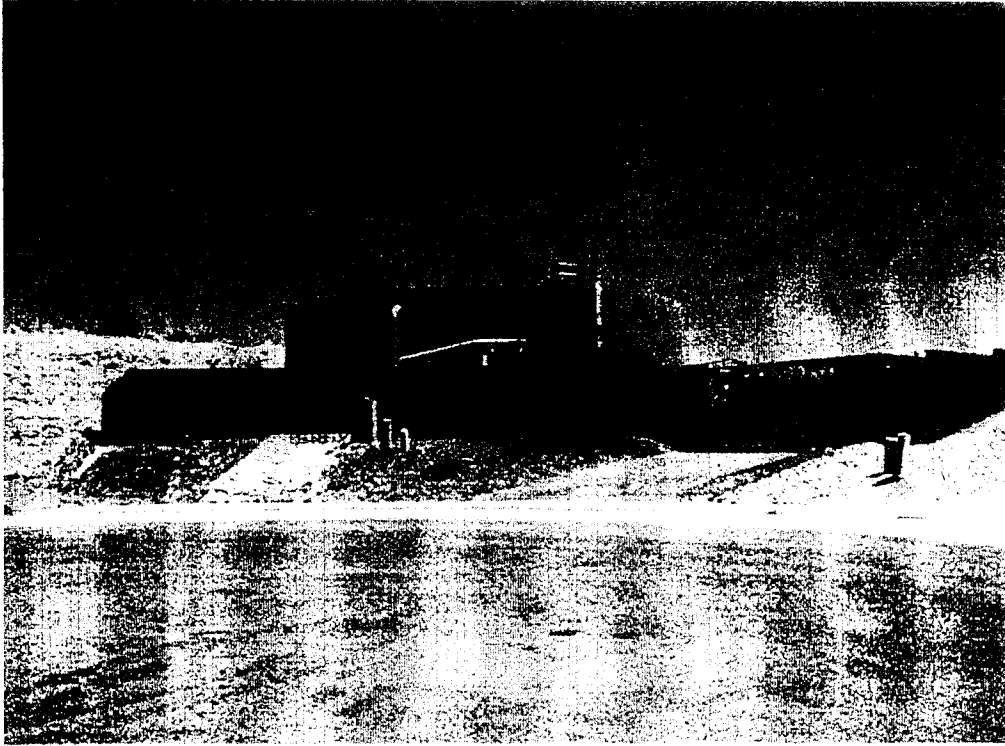
EAGLE CREST RANCH BOULEVARD TO THE NORTH



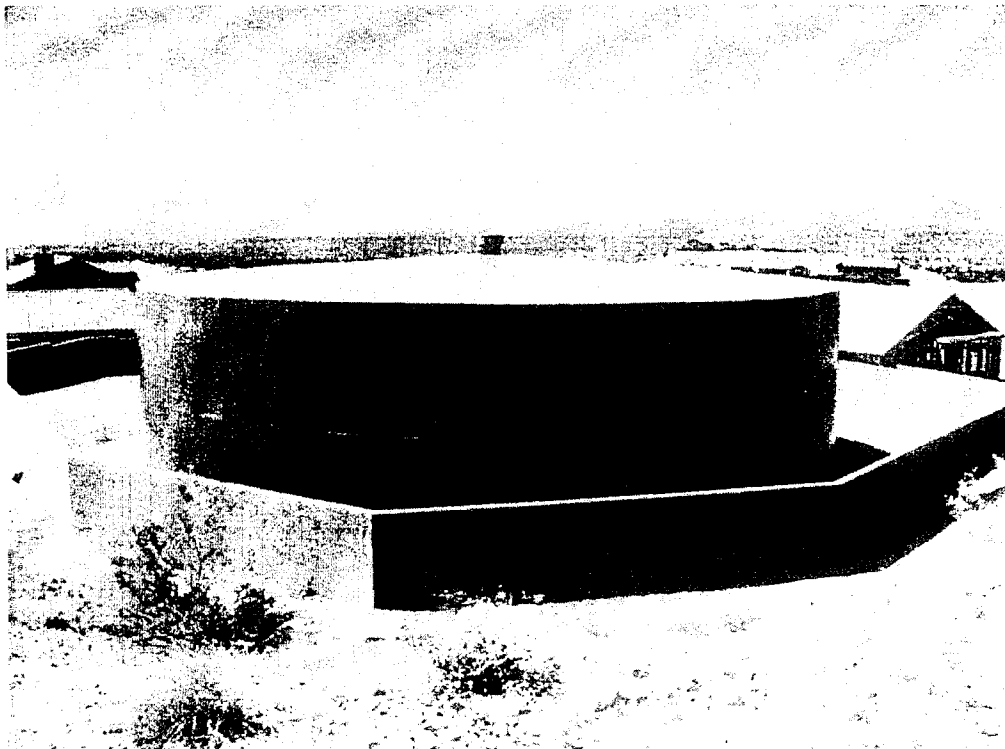
EAGLE CREST RANCH BOULEVARD TO THE SOUTH

SUBJECT PROPERTY PHOTOGRAPHS - WATER PLANT #3

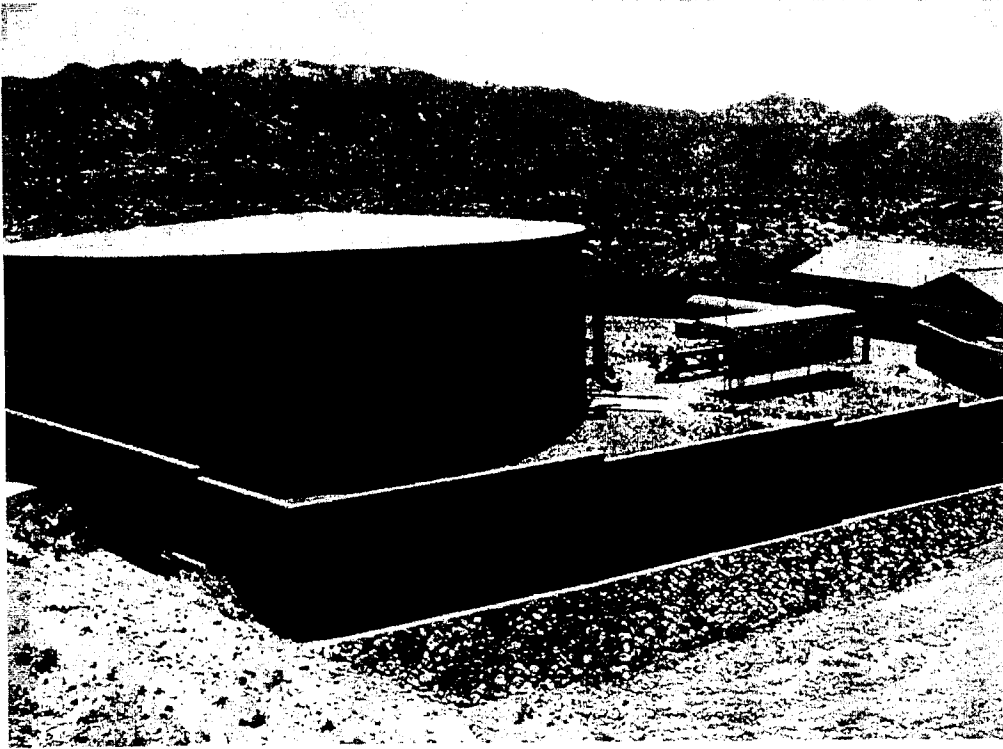




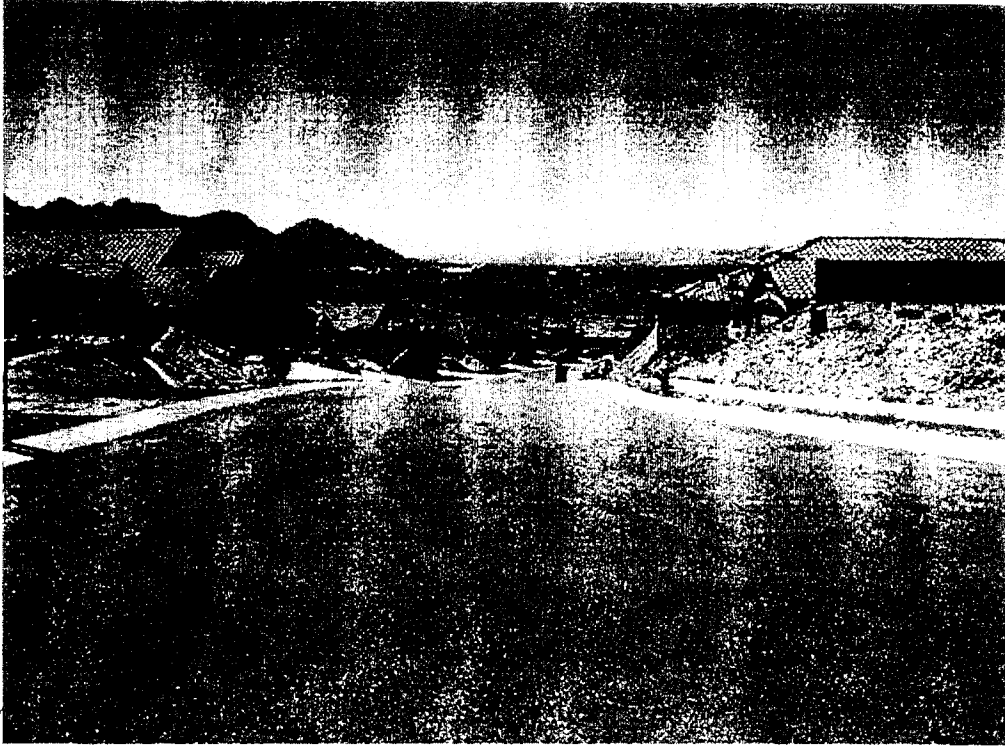
SOUTHWEST ELEVATION



NORTHEAST ELEVATION



NORTHWEST ELEVATION



EAGLE MOUNTAIN DRIVE TO THE SOUTH



EAGLE RIDGE DRIVE TO THE WEST

SUBJECT PROPERTY PHOTOGRAPHS – WATER PLANT #4

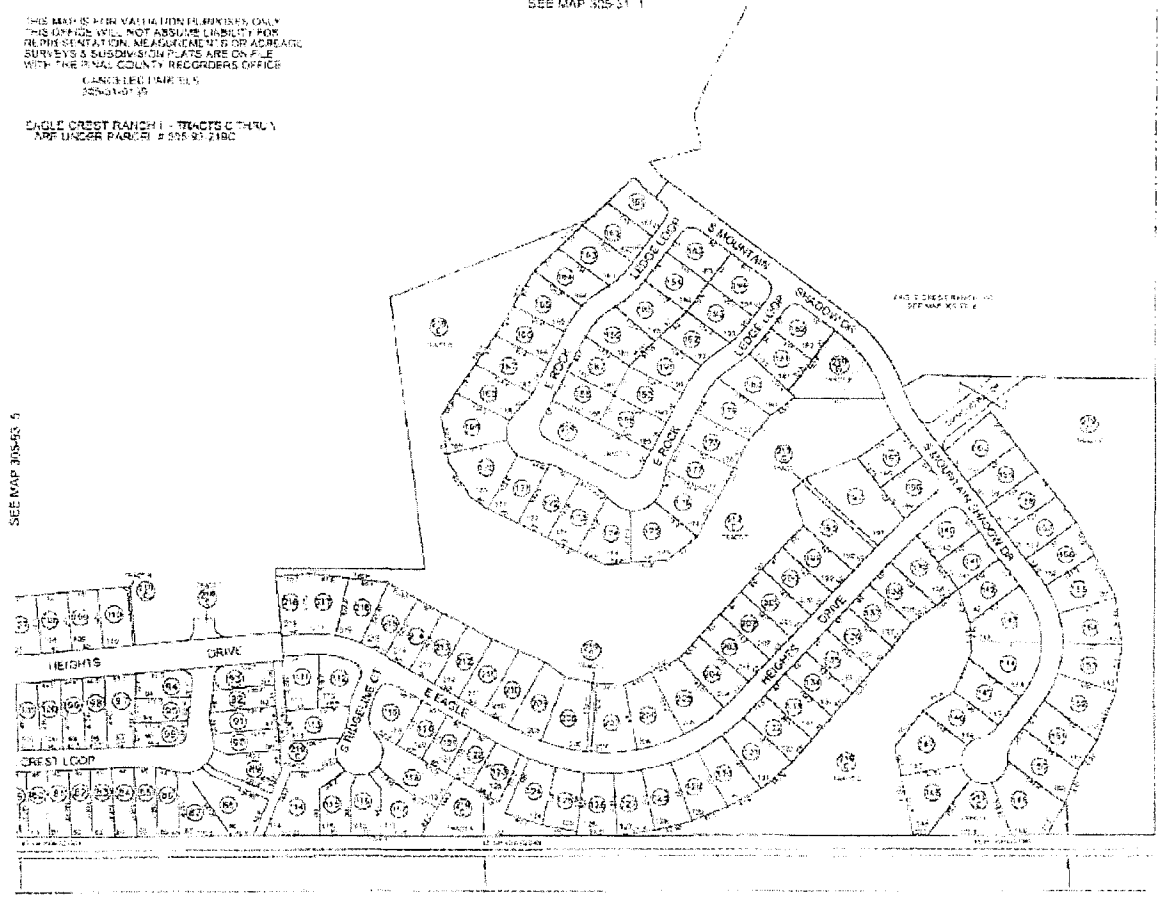


SEC. 32 TN.10S RG.14E

SEE MAP 305-51 1

THIS MAP IS FOR INFORMATION PURPOSES ONLY
THIS OFFICE WILL NOT ASSUME LIABILITY FOR
REPRESENTATION, MEASUREMENTS OR ABSTRACT
SURVEYS & SUBDIVISION PLATS ARE ON FILE
WITH THE PINAL COUNTY RECORDERS OFFICE
CLASSIFIED MAP 115
2020-01-05

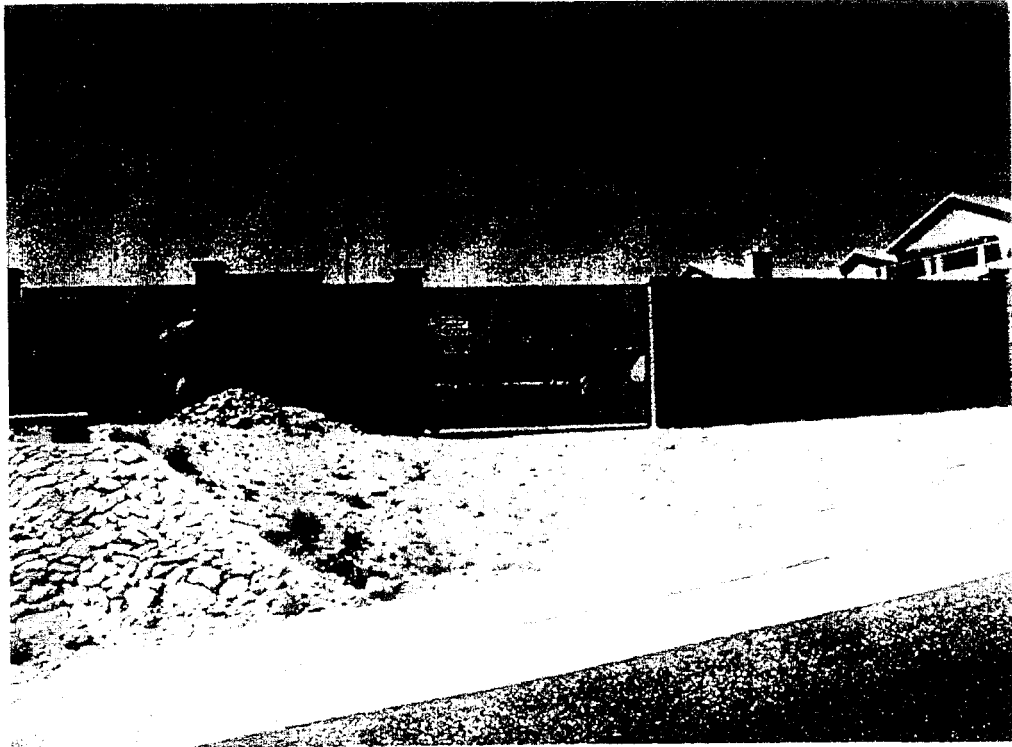
EAGLE CREST RANCH I - TRACTS C THRU J
APR UNDER PARCEL # 305-91-219C



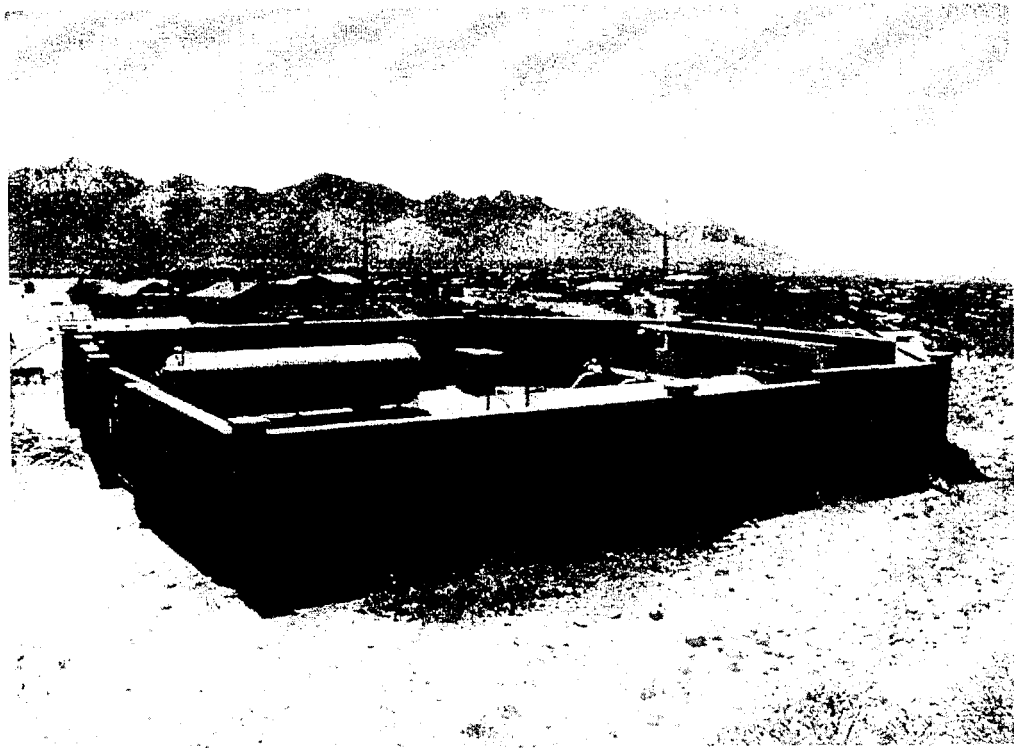
SEE MAP 305-50 5

SEE MAP 305-51 1

SEE MAP 305-49 6



WEST ELEVATION



NORTHWEST ELEVATION

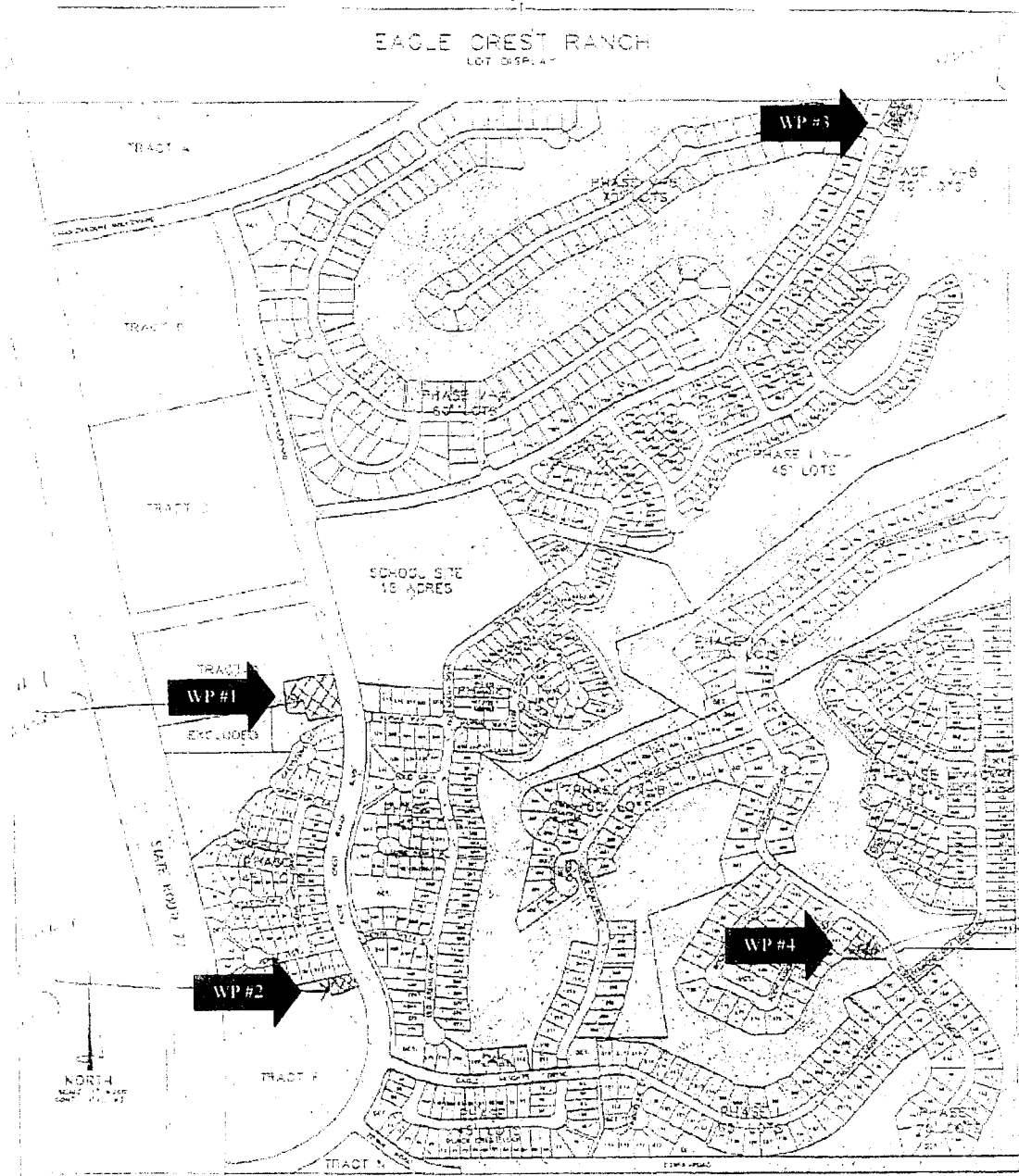


MOUNTAIN SHADOW DRIVE TO THE SOUTH



MOUNTAIN SHADOW DRIVE TO THE NORTH

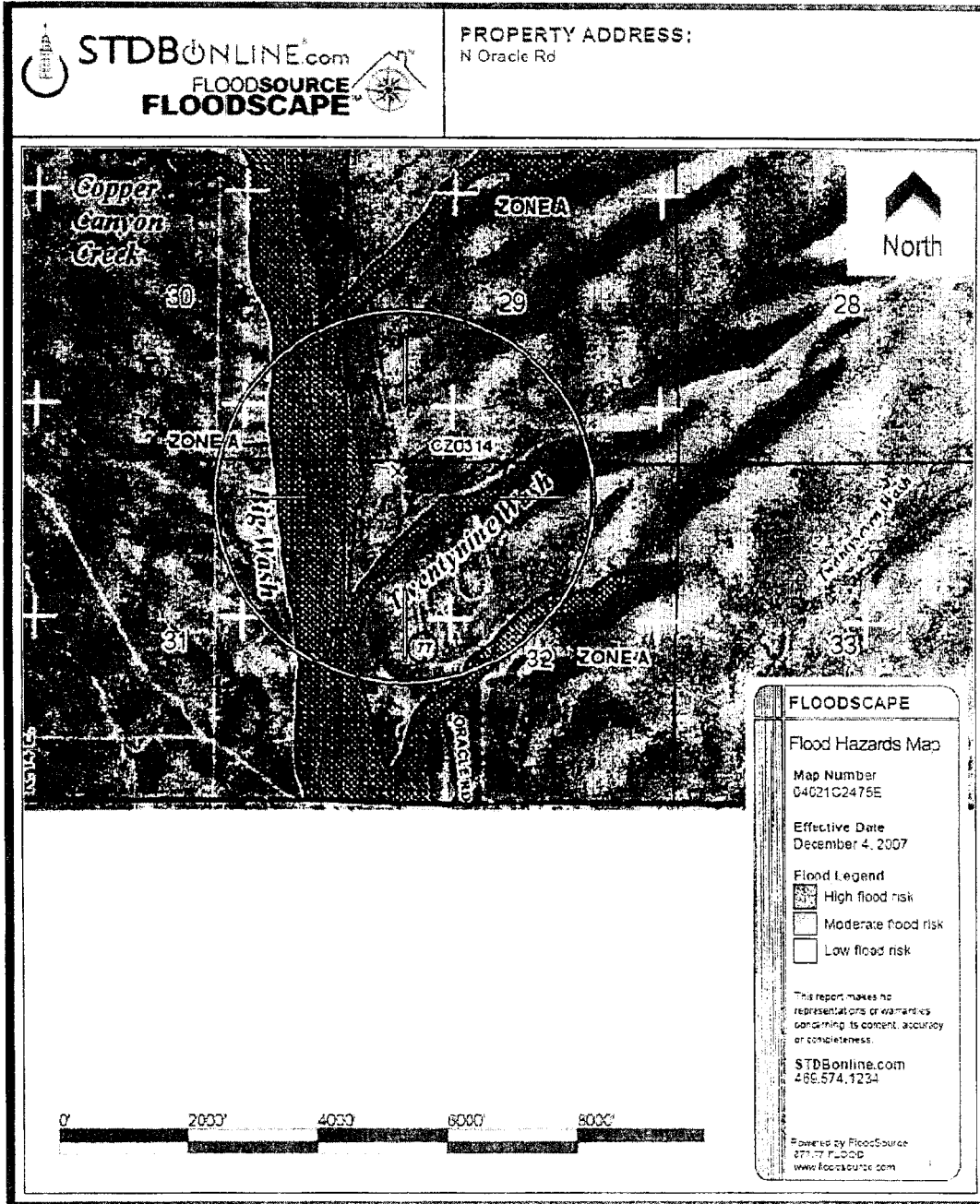
SITE PLAN



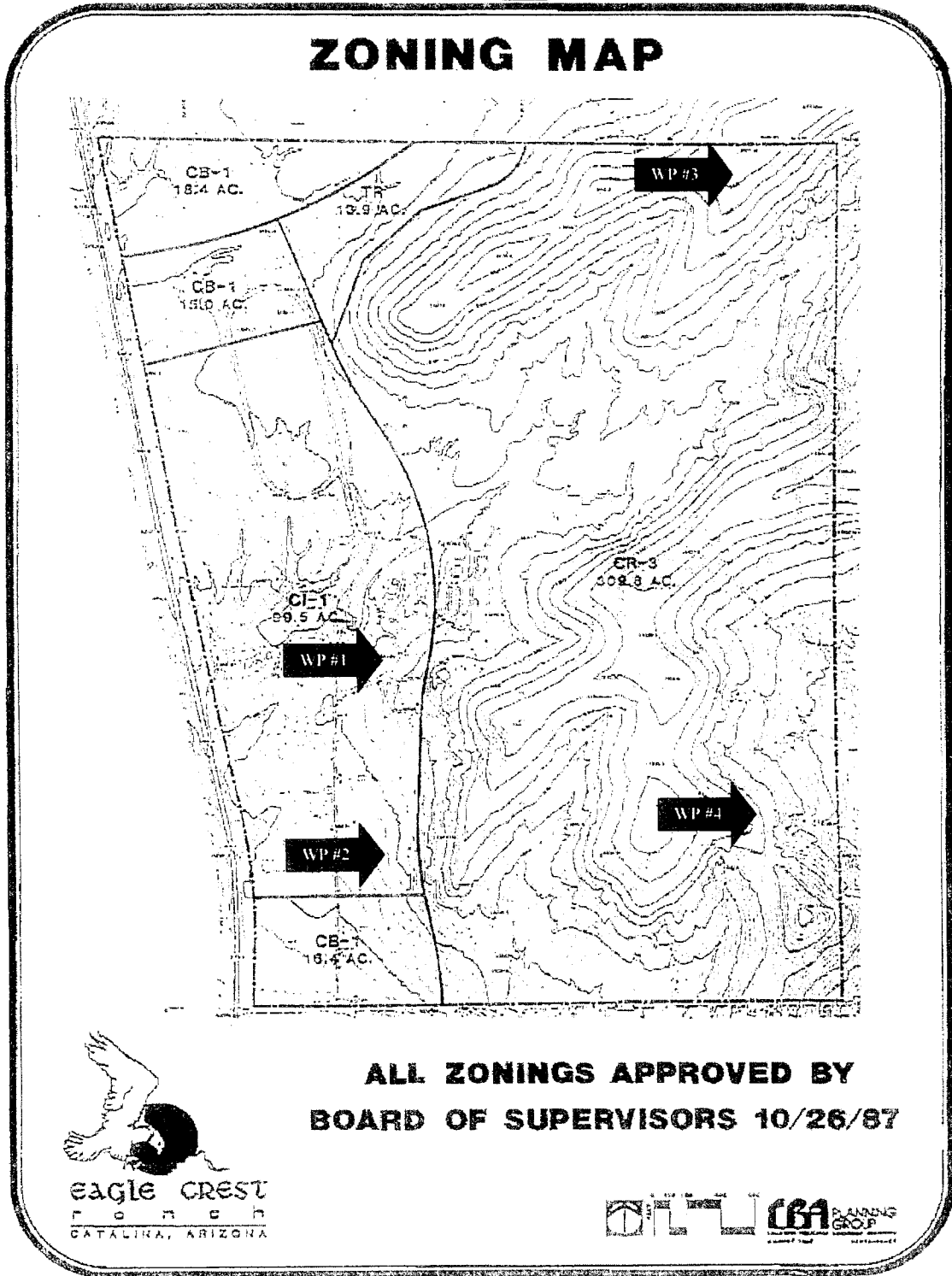
LOT SUBDIVISION	AC	sq	sq	TOTAL
PHASE I	204	25	27	516
PHASE I - A	61	-	-	-
PHASE I - B	-	24	25	123
PHASE I - C	52	-	-	100
PHASE I - D	-	-	42	-
PHASE I - E	113	-	-	-
PHASE I - F	-	-	27	241
PHASE I - G	101	-	-	-
PHASE I - H	-	130	-	-
PHASE I - I	-	-	50	240
PHASE I - J	47	-	-	-

EAGLE CREST RANCH
LOT DISPLAY
CPW ENGINEERING, LLC
ENGINEERING SURVEYING PLANNING

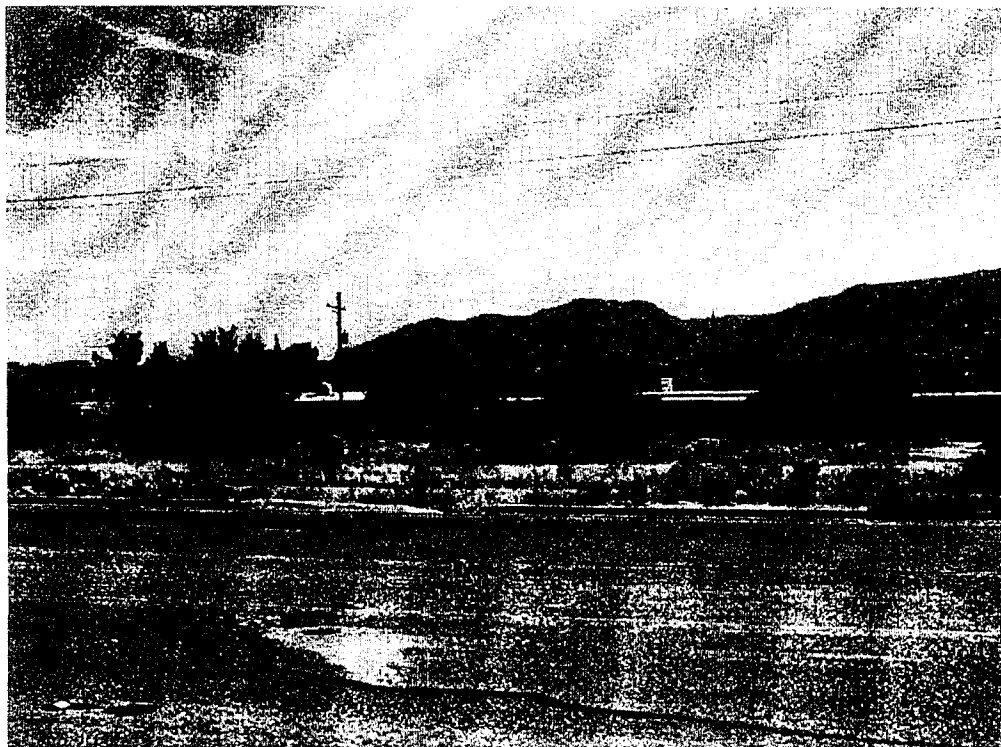
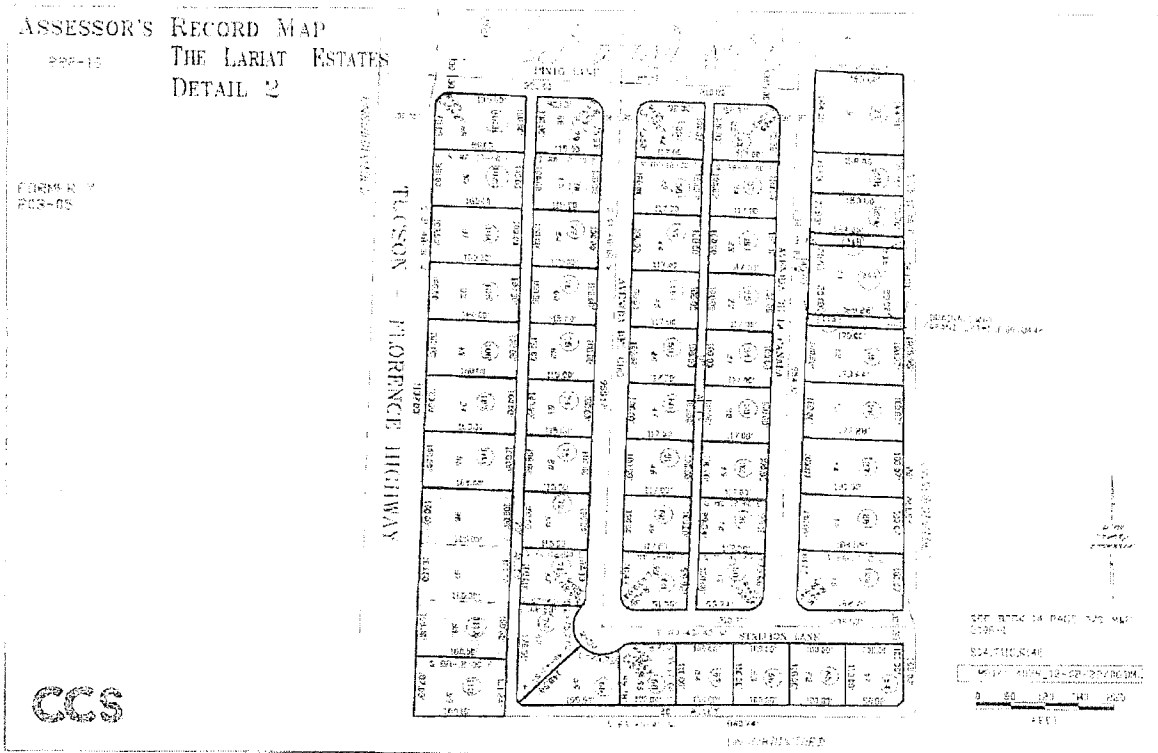
FLOOD MAP



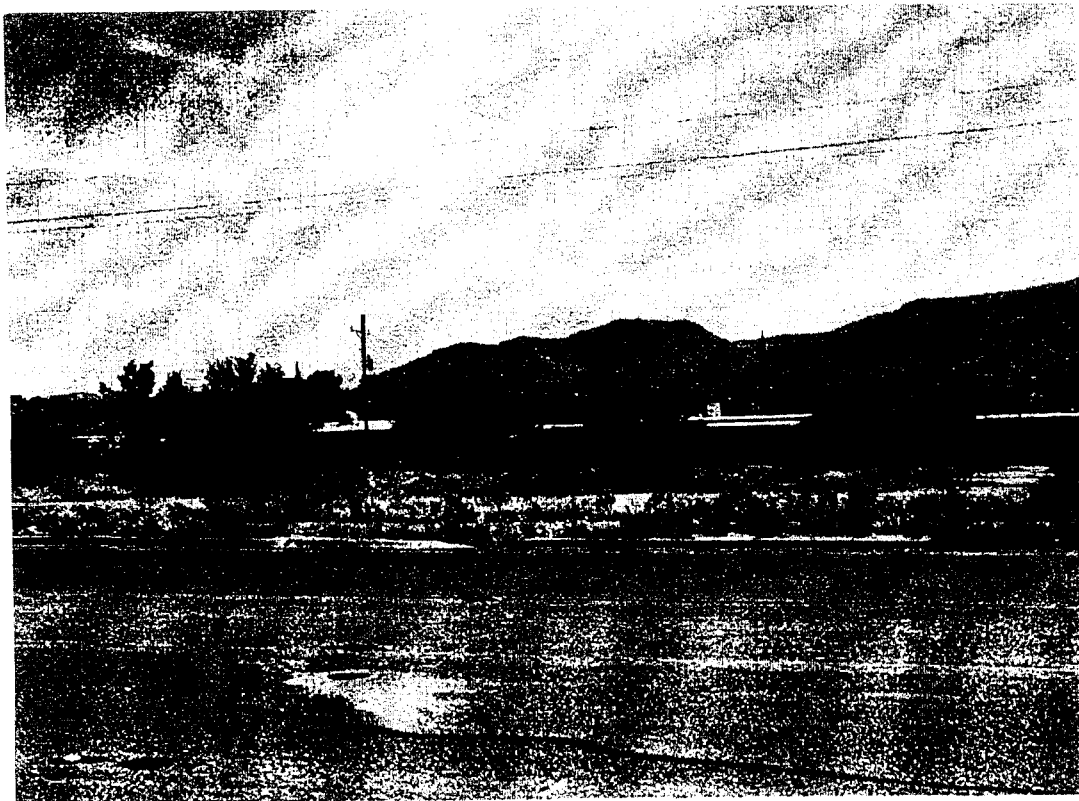
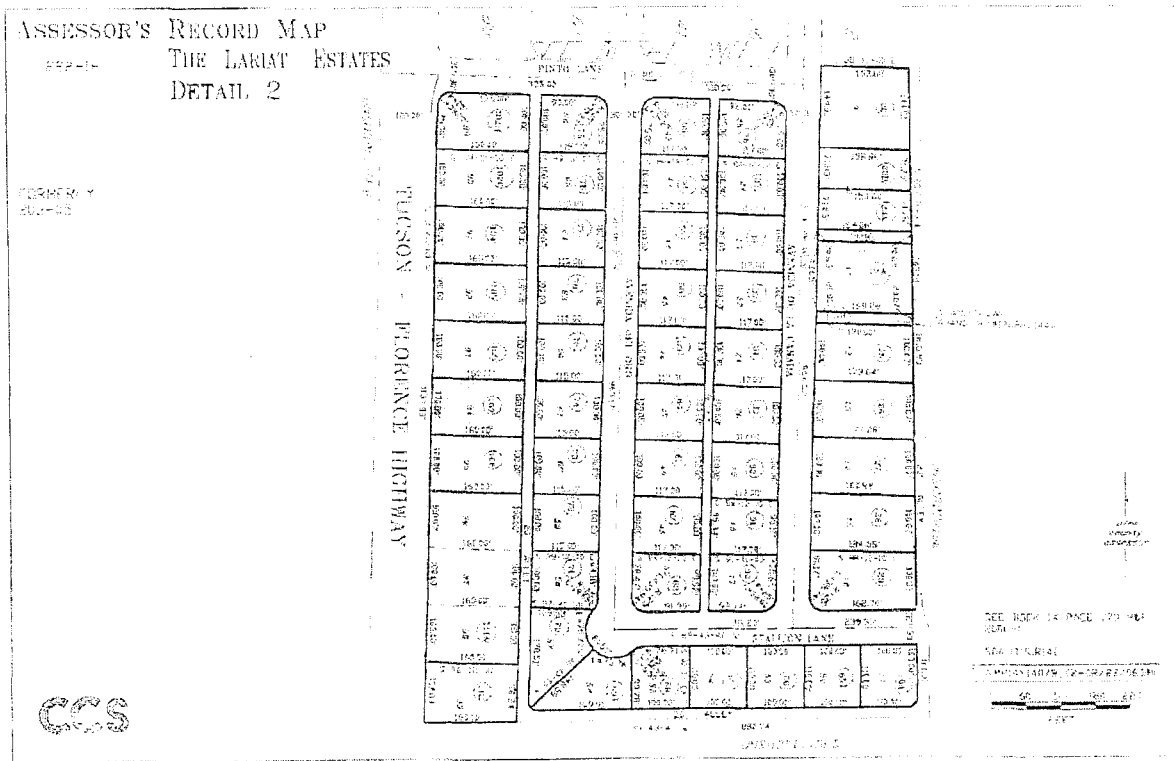
ZONING MAP



COMPARABLE SALE MAPS/PHOTOGRAPHS - WATER PLANT #1

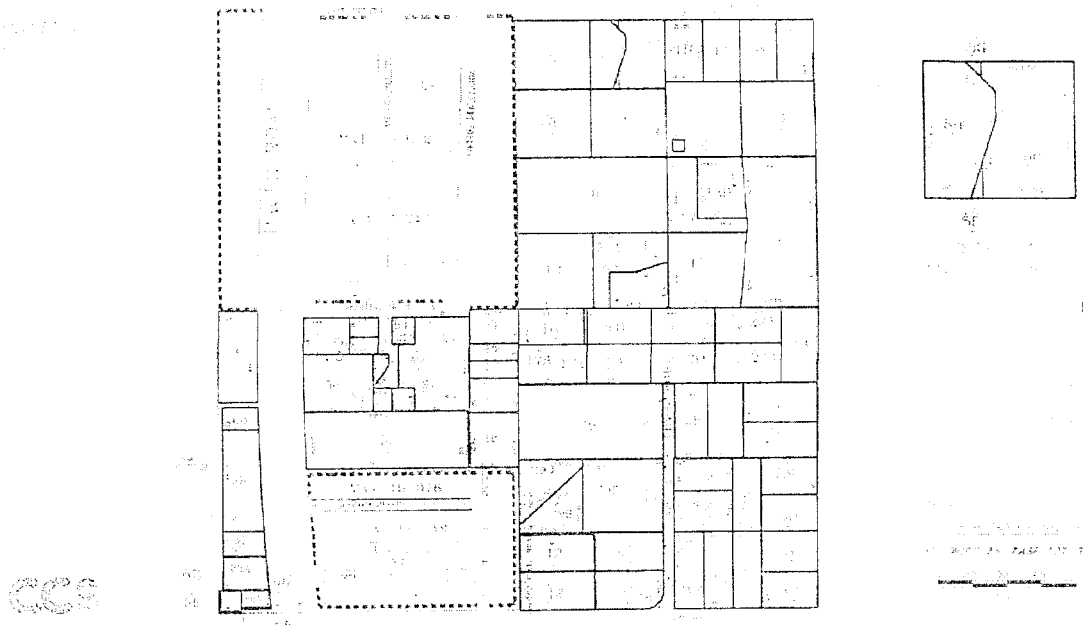


COMPARABLE SALE ONE



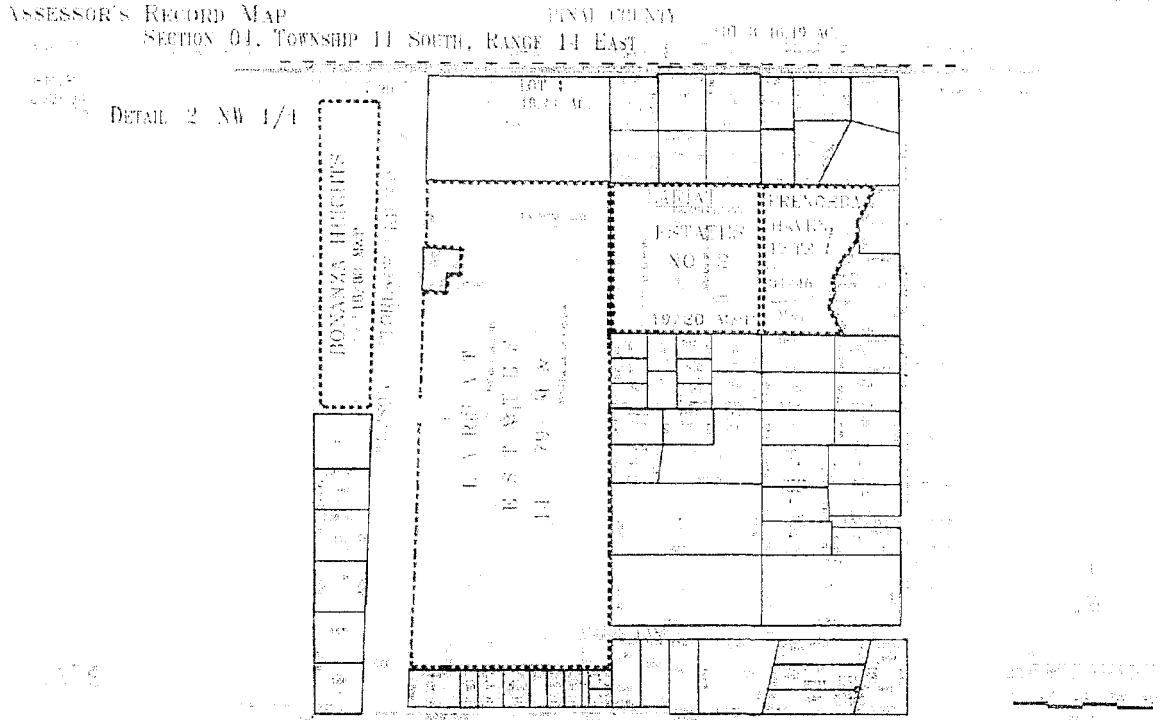
COMPARABLE SALE TWO

ASSESSOR'S RECORD MAP
SECTION 01, TOWNSHIP 11 SOUTH, RANGE 14 EAST
DETAIL 3 SW 1/4

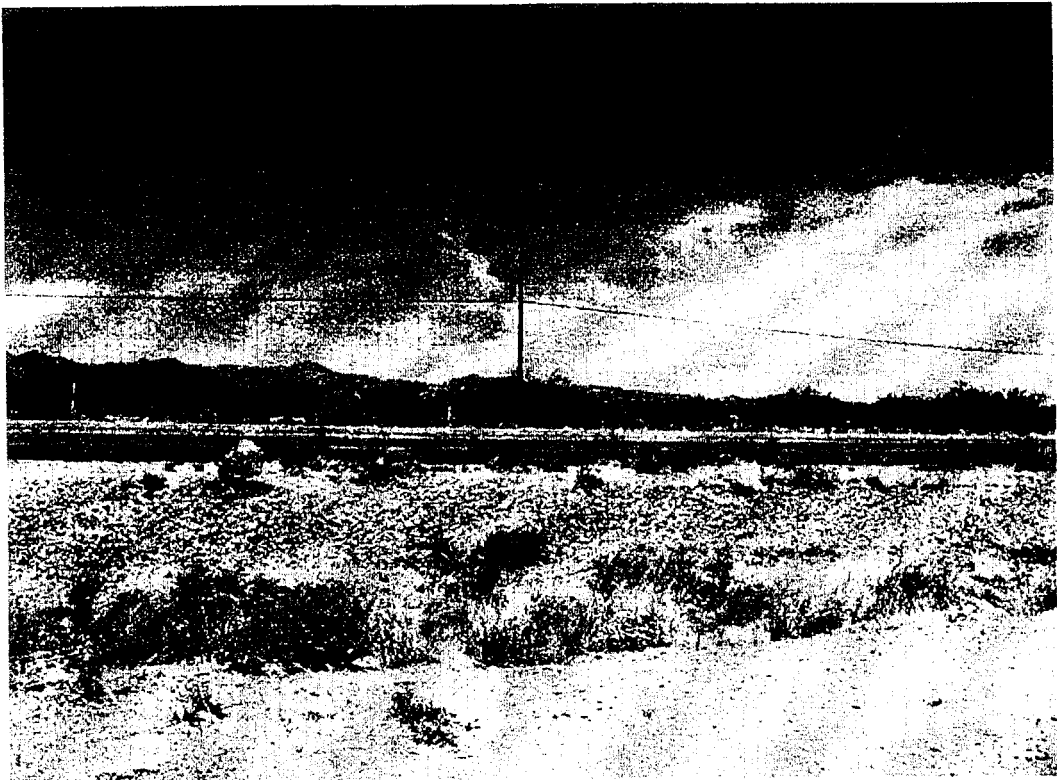
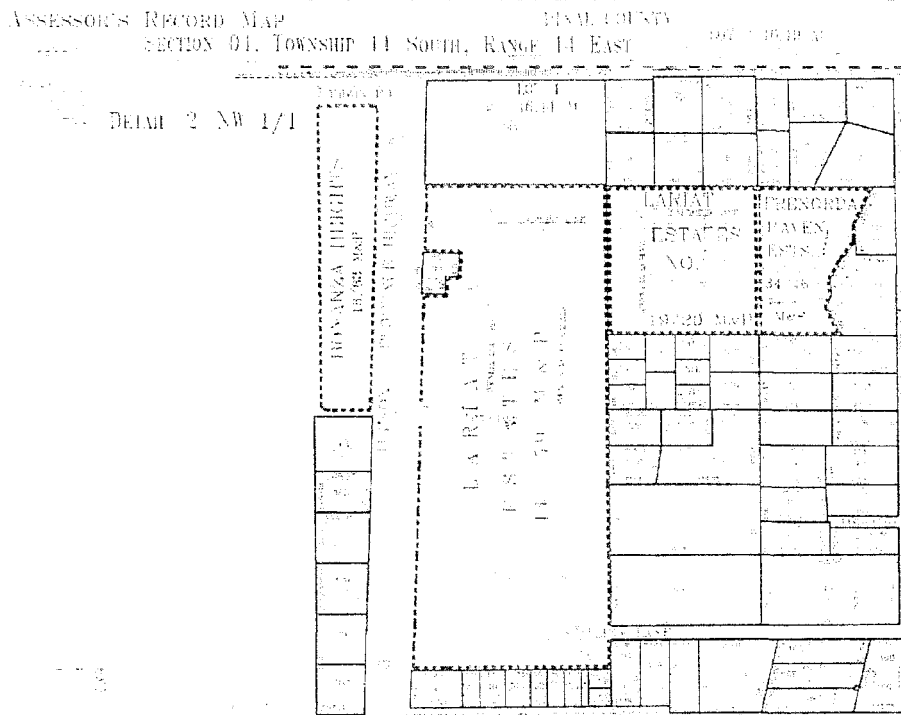


COMPARABLE SALE FOUR

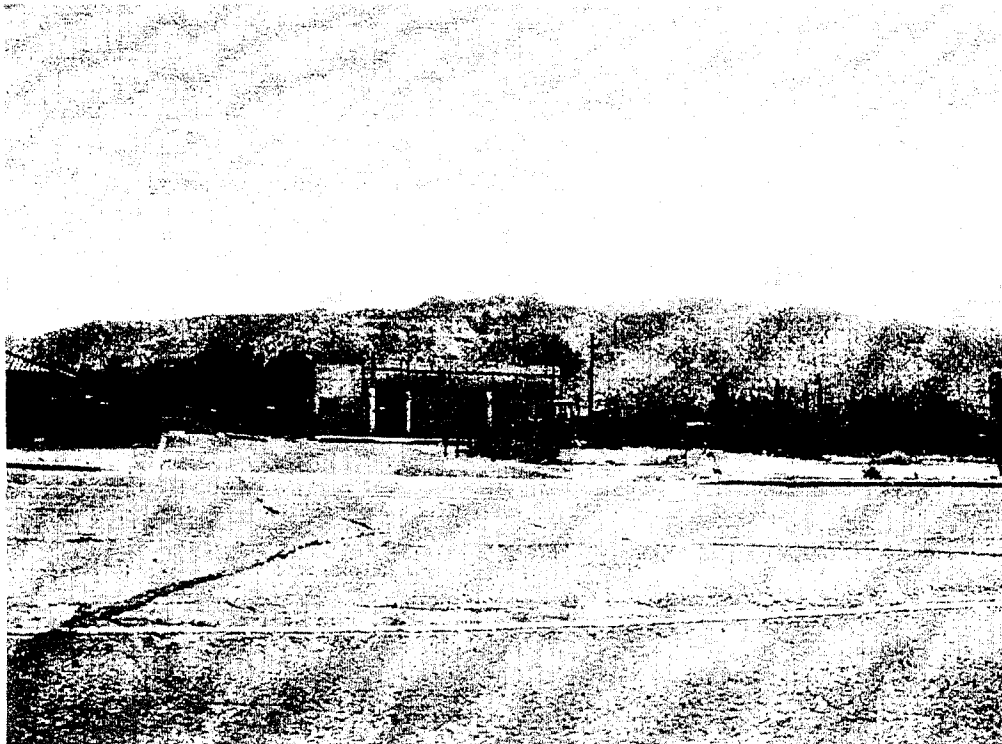
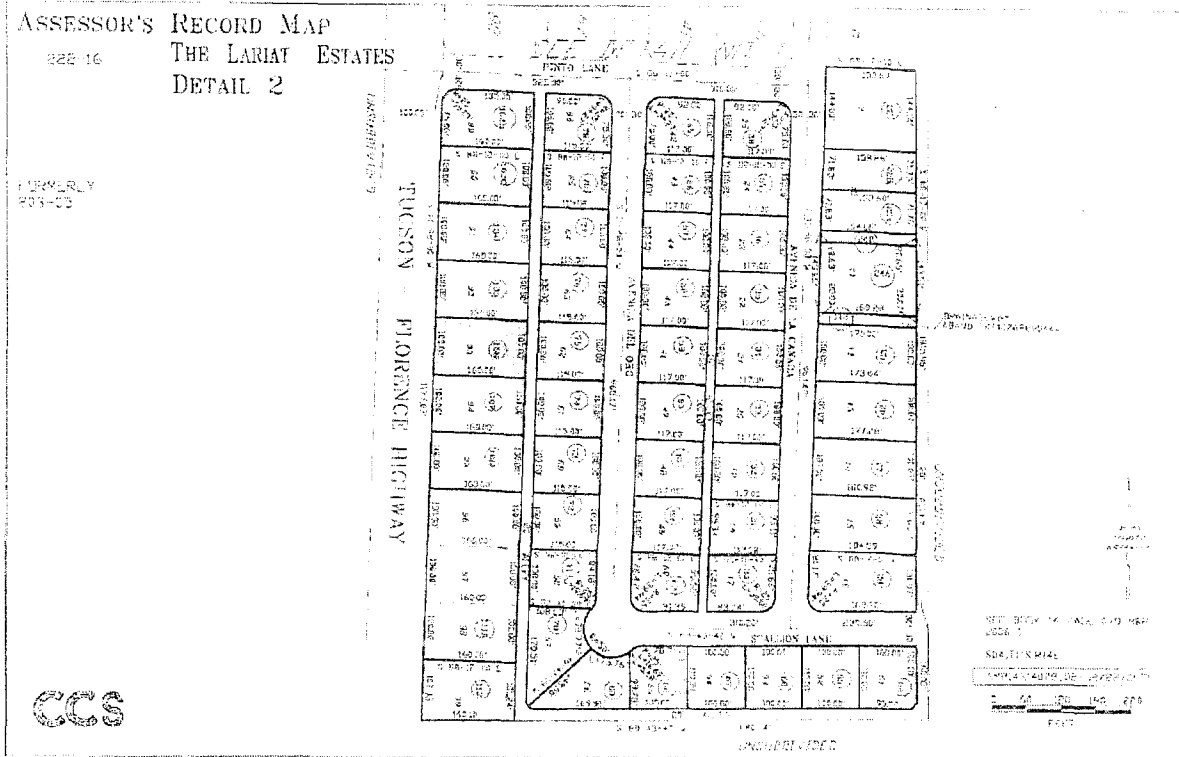
COMPARABLE SALE MAPS/PHOTOGRAPHS - WATER PLANT #2



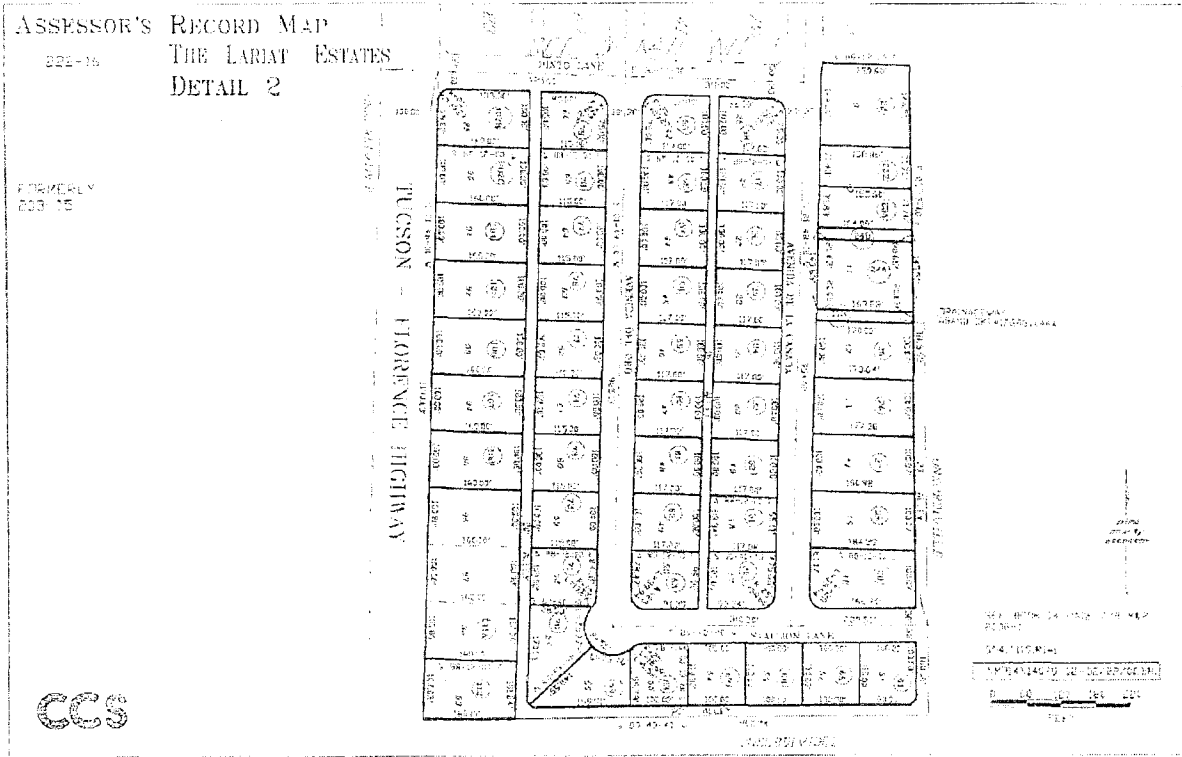
COMPARABLE SALE ONE



COMPARABLE SALE TWO

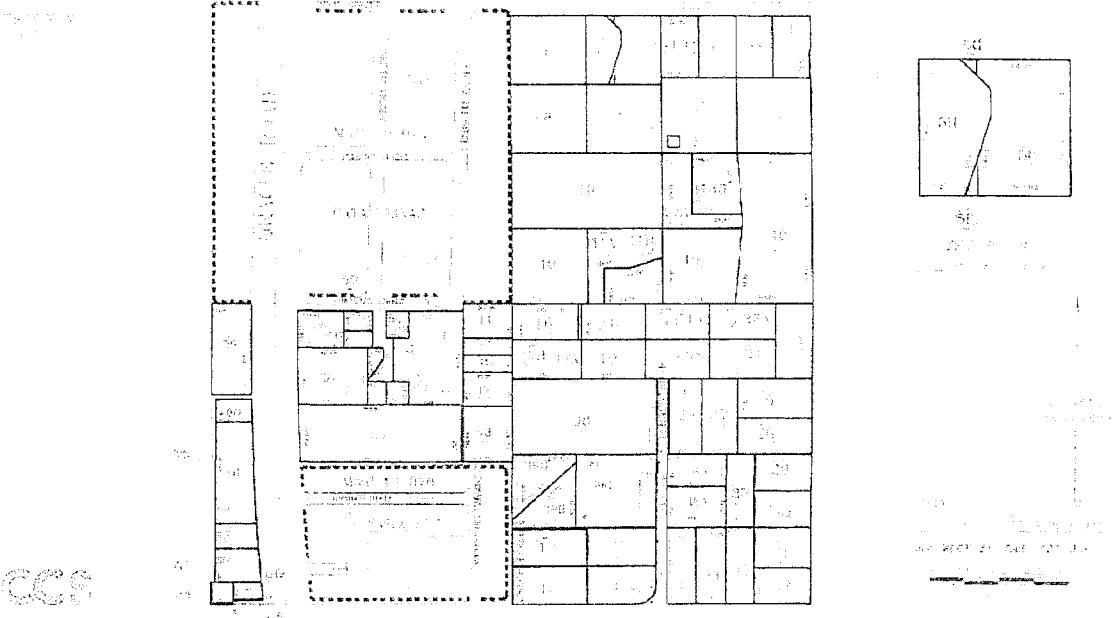


COMPARABLE SALE THREE



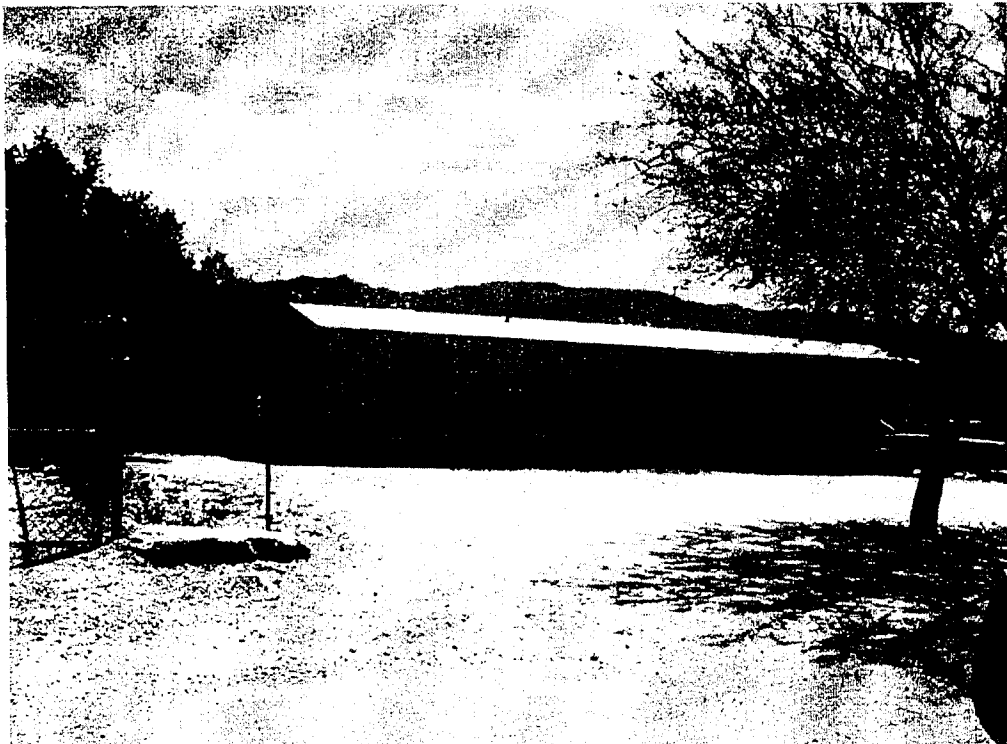
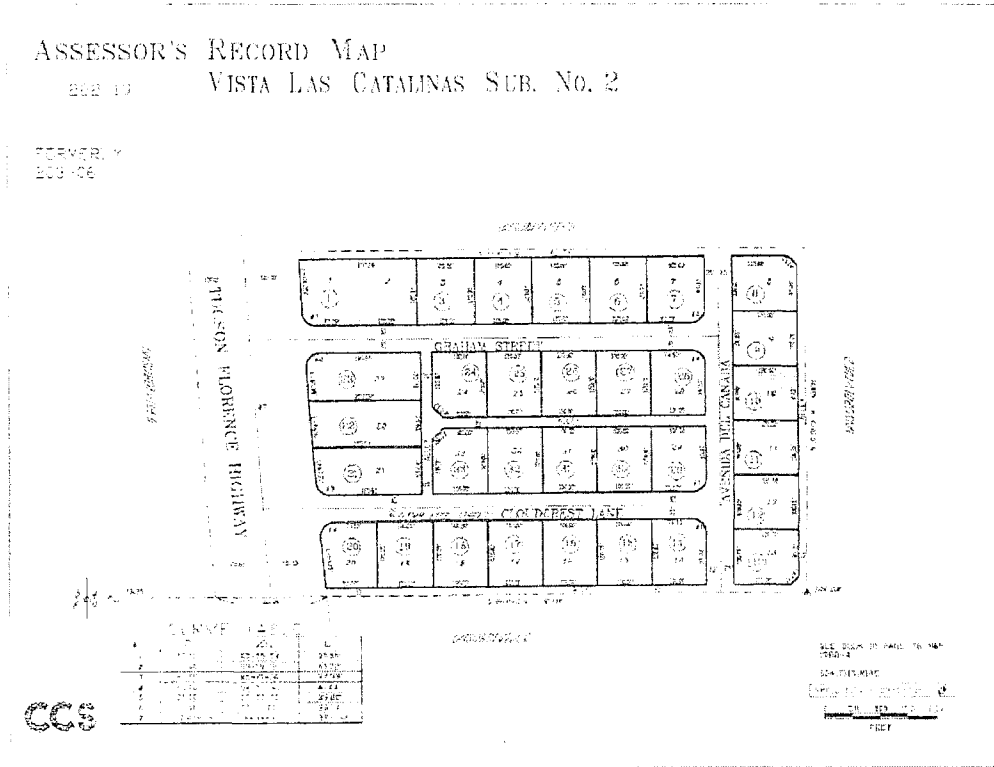
COMPARABLE SALE FOUR

ASSESSOR'S RECORD MAP
SECTION 01, TOWNSHIP 11 SOUTH, RANGE 14 EAST
DETAIL 3 SW 1/4



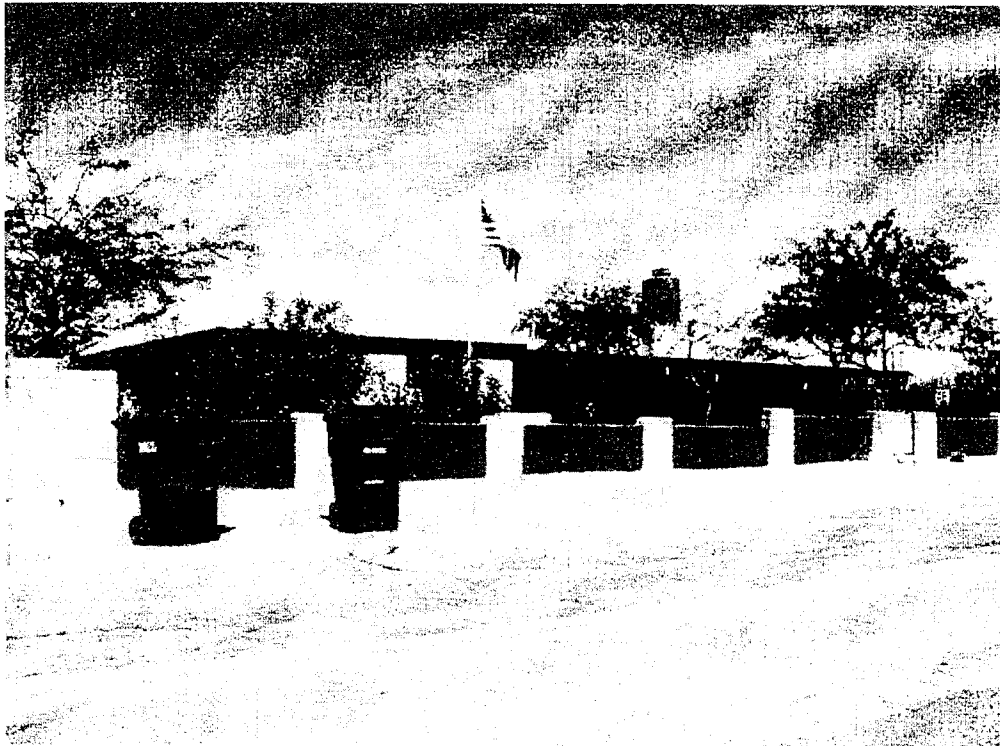
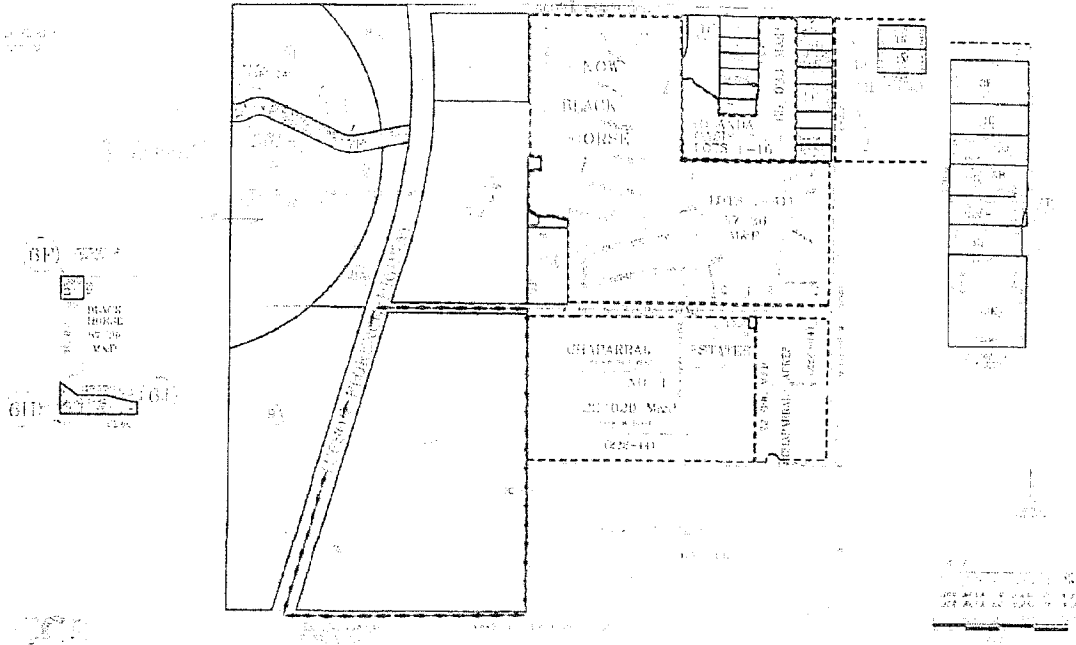
COMPARABLE SALE FIVE

COMPARABLE SALE MAPS/PHOTOGRAPHS - WATER PLANT #3

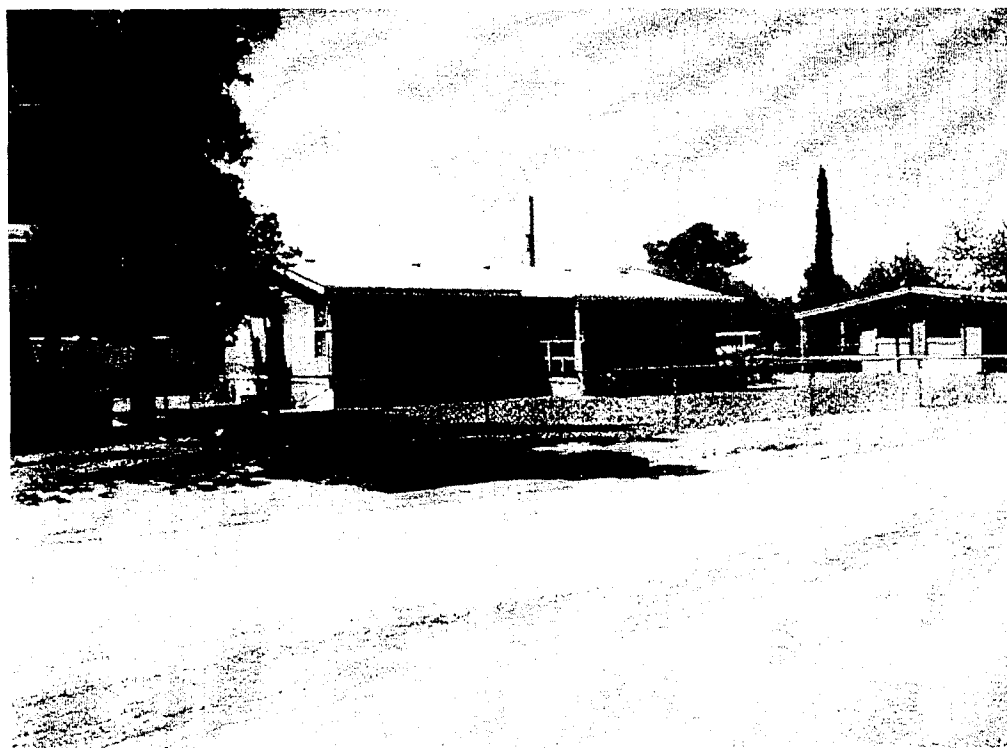
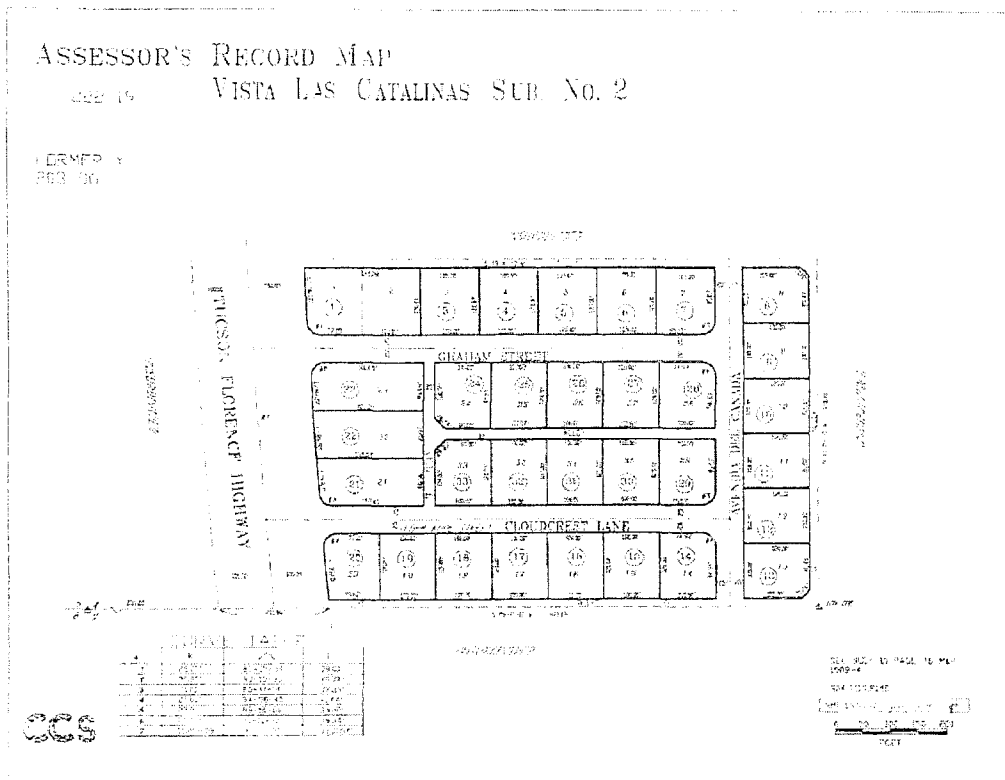


COMPARABLE SALE ONE

ASSESSOR'S RECORD MAP
SECTION 18, TOWNSHIP 11 SOUTH, RANGE 11 EAST



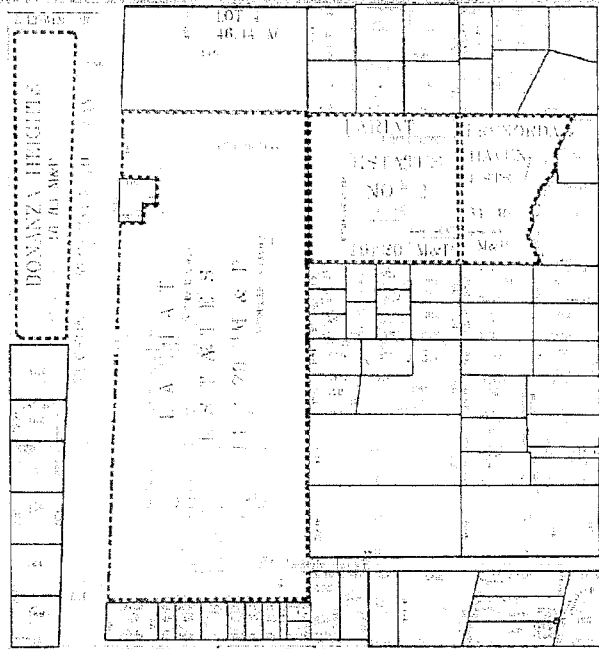
COMPARABLE SALE TWO



COMPARABLE SALE THREE

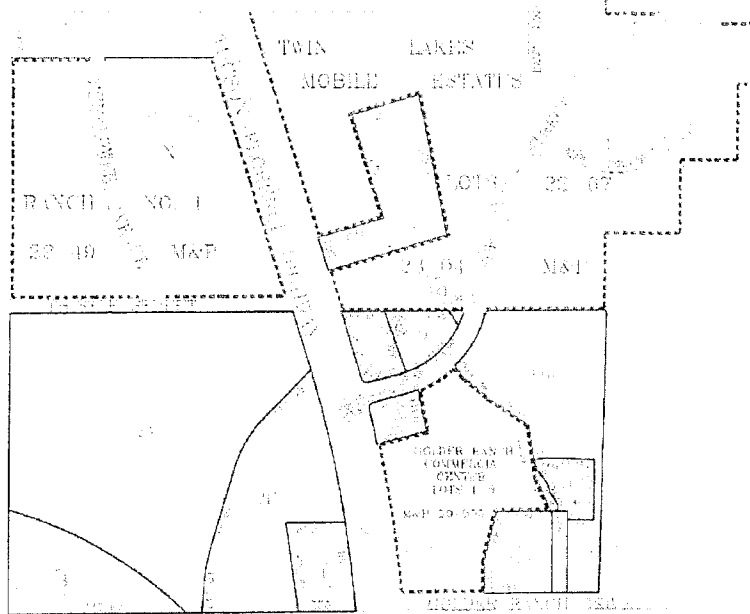
ASSESSOR'S RECORD MAP
SECTION 04, TOWNSHIP 11 SOUTH, RANGE 11 EAST

DETAIL 2 NW 1/4



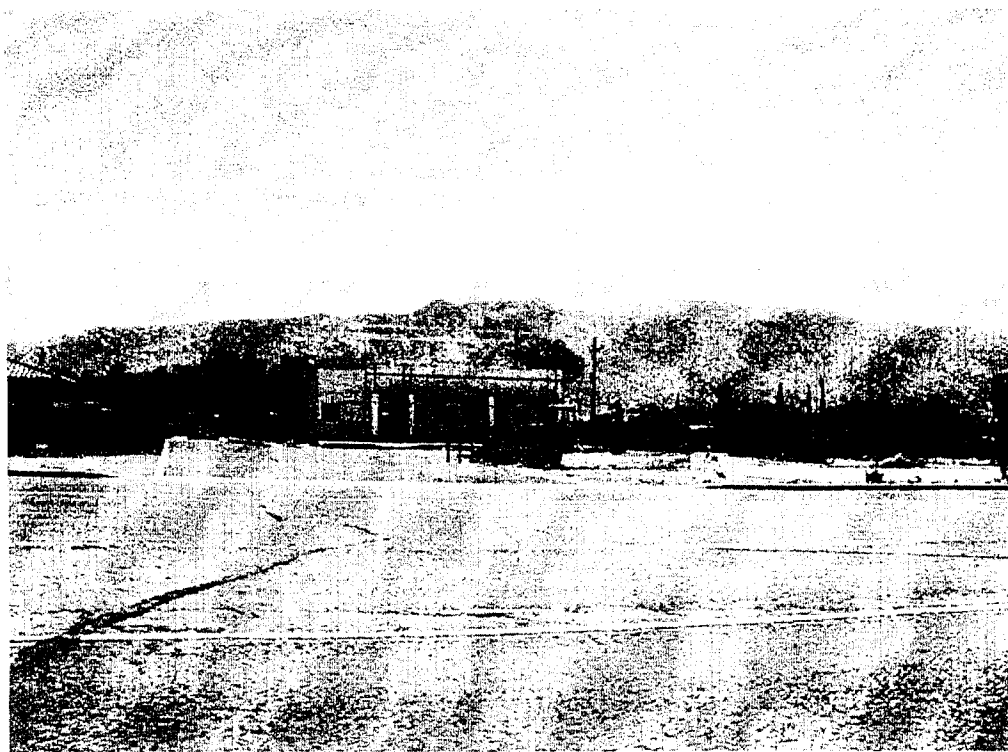
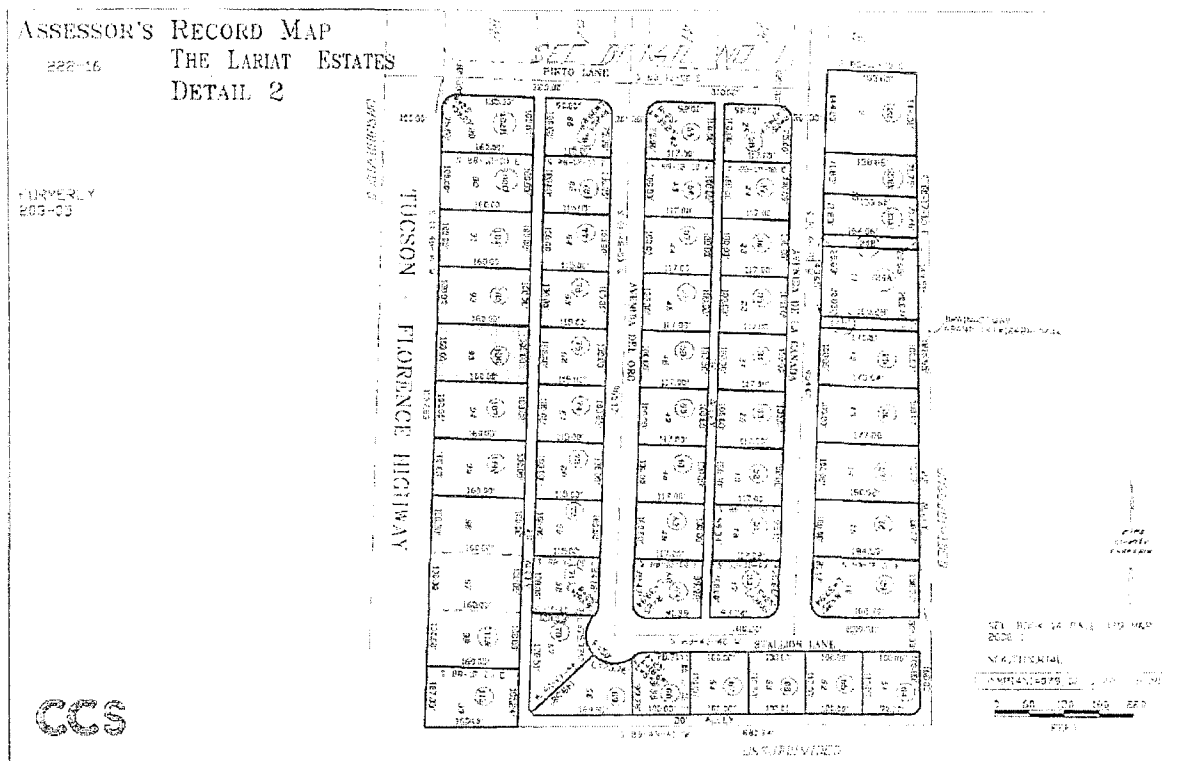
COMPARABLE SALE FOUR

ASSESSOR'S RECORD MAP
SECTION 09, TOWNSHIP 11 SOUTH, RANGE 14 EAST
DETAIL 3 SW 1/4

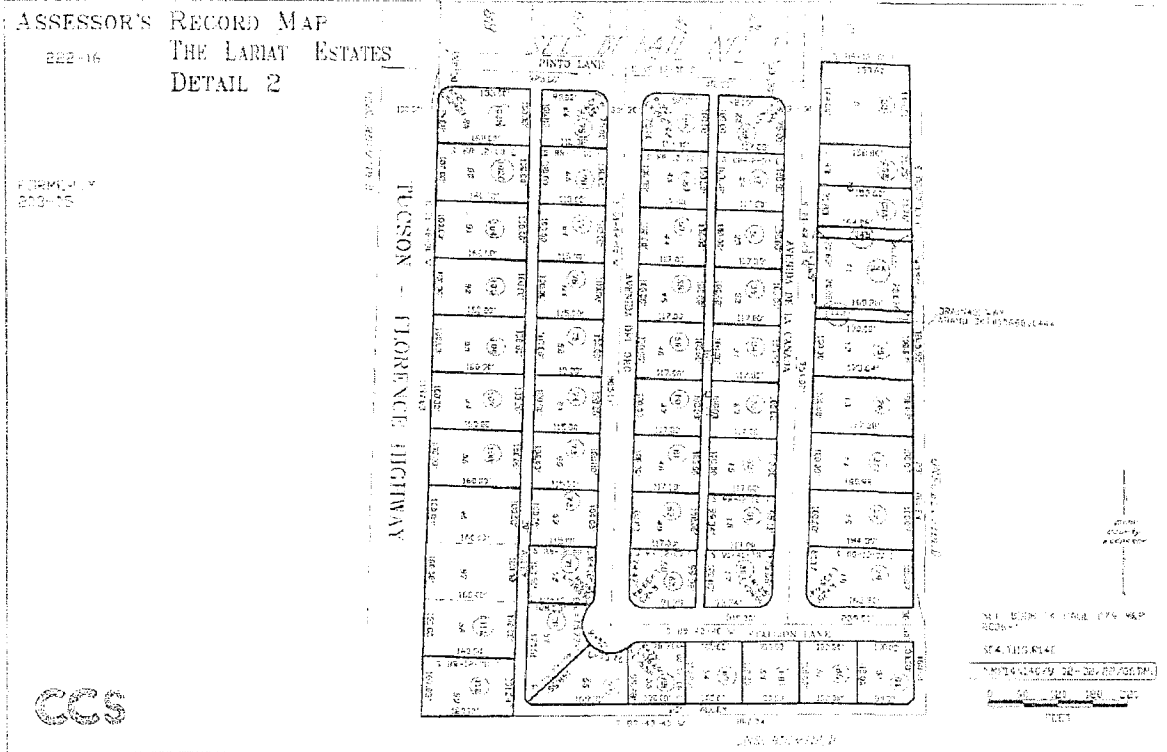


COMPARABLE SALE FIVE

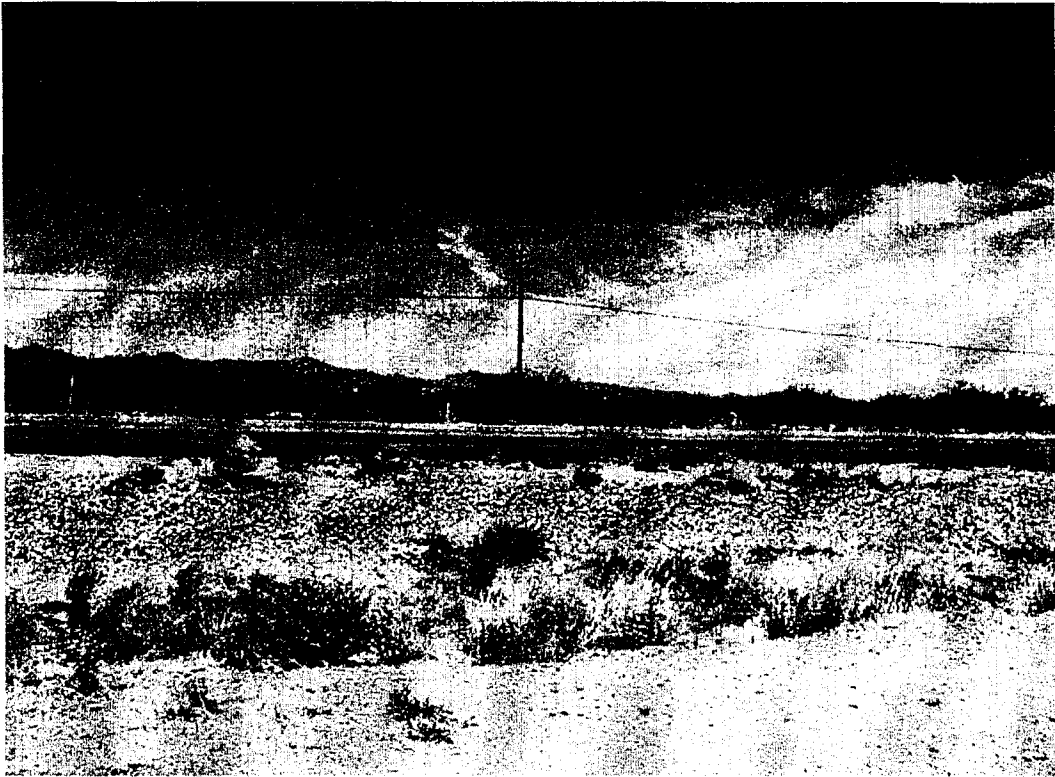
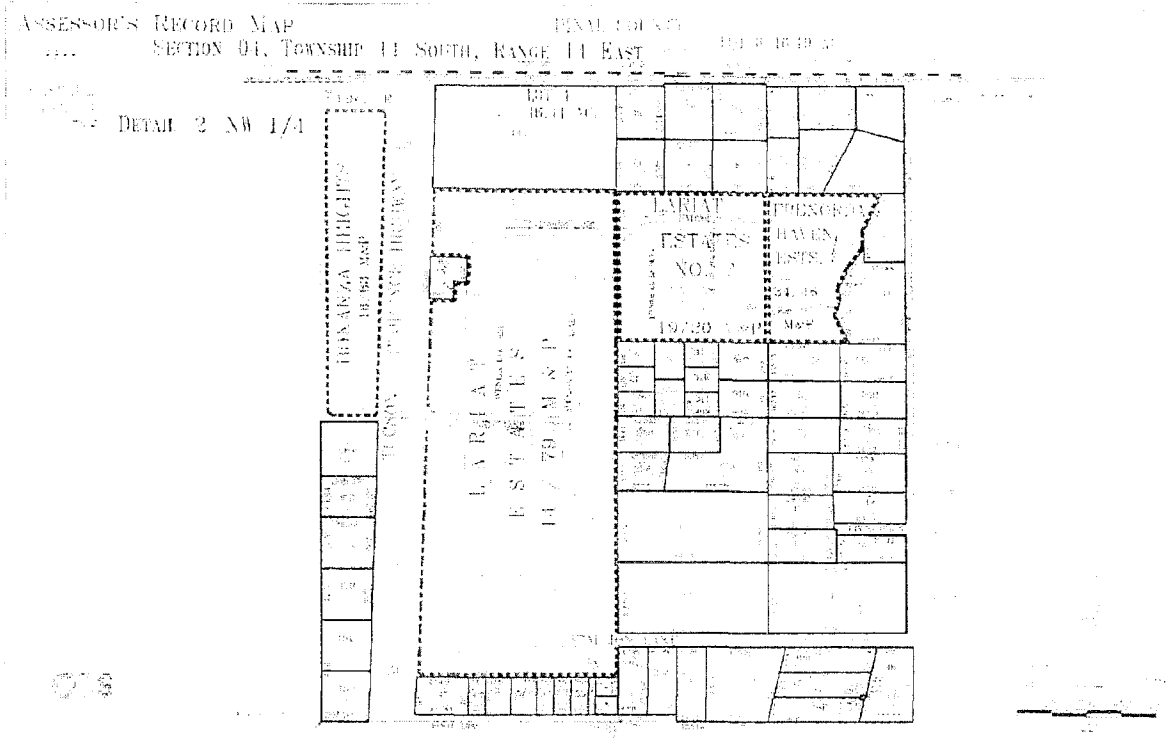
COMPARABLE SALE MAPS/PHOTOGRAPHS - WATER PLANT #4



COMPARABLE SALE ONE

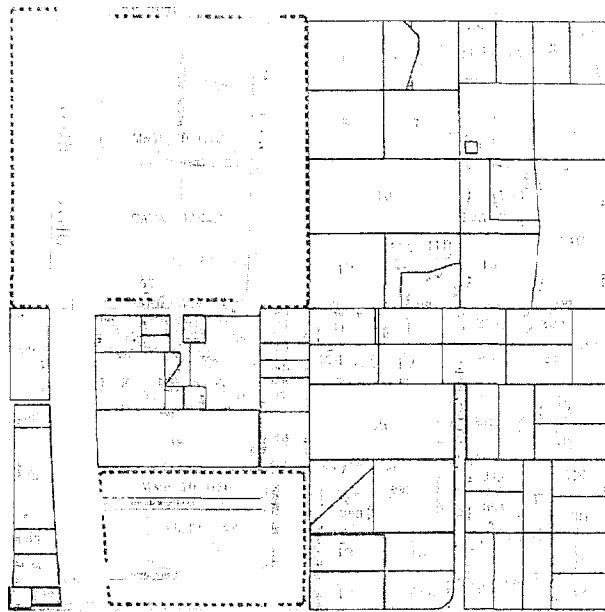


COMPARABLE SALE TWO



COMPARABLE SALE THREE

ASSESSOR'S RECORD MAP
SECTION 04, TOWNSHIP 11 NORTH, RANGE 14 EAST
DETAIL 3 SW 1/4



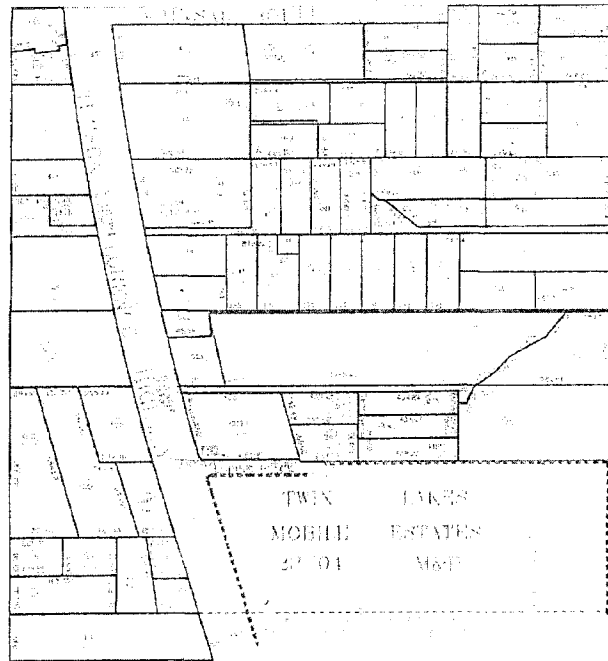
COMPARABLE SALE FOUR

ASSESSOR'S RECORD MAP

SECTION 09, TOWNSHIP 11 SOUTH, RANGE 11 EAST

DETAIL 2

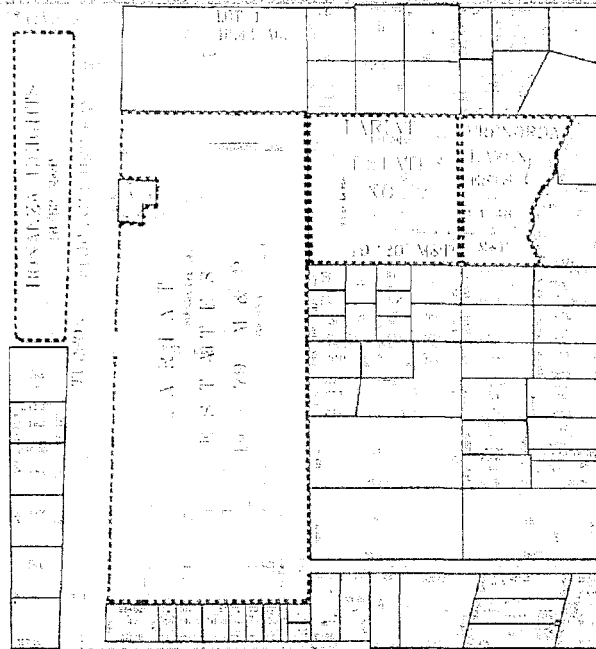
NW 1/4



COMPARABLE SALE FIVE

ASSESSOR'S RECORD MAP
SECTION 04, TOWNSHIP 11 SOUTH, RANGE 14 EAST

DETAIL 2 NW 1/4



COMPARABLE SALE SIX

Chapter 2.70
CR-3 SINGLE RESIDENCE ZONE

Sections:

- 2.70.010 Uses permitted.
- 2.70.020 Site development standards.
- 2.70.030 Detached accessory buildings.

2.70.010 Uses permitted.

- A. One-family dwelling, conventional construction.
- B. Public park, public or parochial school.
- C. Church, provided the minimum off-street parking requirements, as set forth in PCDSC 2.140.020(E), are met.
- D. A travel trailer or recreational vehicle (RV) for not more than 90 days during construction of a residence on the same premises, which period may be extended for an additional period of 90 days upon application to the zoning inspector.
- E. Horticulture, flower and vegetable gardening, nursery or greenhouse used only for propagation and culture and not for retail sales.
- F. Home occupation.
- G. Accessory building or use. [Ord. 61862 § 1101].

2.70.020 Site development standards.

- A. Building height: maximum height of any structure shall be 30 feet.
- B. Minimum lot area: 7,000 square feet.
- C. Minimum lot width: 60 feet.
- D. Minimum area per dwelling unit: 7,000 square feet.
- E. Minimum front yard: 20 feet.
- F. Minimum side yards: eight feet each.
- G. Minimum rear yard: 25 feet to the rear lot line.
- H. Minimum distance between main buildings: 16 feet, except as required in PCDSC 2.150.140 for a rear dwelling.
- I. Buildable area: not to exceed 40 percent of the lot, including all structures, except swimming pools. [Ord. 61862 §§ 1102 – 1110].

2.70.030 Detached accessory buildings.

- A. Permitted coverage: one-third of the total area of the rear and side yards.

- B. Maximum height: 20 feet.
- C. Minimum distance to main building: seven feet.
- D. Minimum distance to front lot line: 60 feet.
- E. Minimum distance to side and rear lot lines: four feet.
- F. Accessory buildings shall be detached from the main building except that they may be attached by means of an unenclosed structure that has only one wall not over six feet high which shall be placed on only one side of the structure. [Ord. 61862 § 1111].

This page of the Pinal County Development Services Code is current through Ordinance 022311-PZ-C-008-10, passed February 23, 2011.

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County Telephone: (800) 208-6897
Code Publishing Company
(<http://www.codepublishing.com/>)

Chapter 2.105
CI-1 LIGHT INDUSTRY AND WAREHOUSE ZONE

Sections:

- 2.105.010 Uses permitted.
- 2.105.020 Site development standards.
- 2.105.030 Industrial buffer required.
- 2.105.040 Detached accessory buildings.

2.105.010 Uses permitted.

A. Any use permitted in PCDSC 2.90.010(B) (CB-1 local business zone) and in PCDSC 2.95.010(B) and (C) (CB-2 general business zone).

B. One-family dwelling unit, conventional construction, or manufactured home or mobile home as watchman or caretaker's quarters in conjunction with an established, permitted use.

C. Any of the following if conducted wholly within a completely enclosed building:

1. Manufacture, compounding, processing, packaging or treatment of: bakery goods, candy, cosmetics, dairy products, drugs and pharmaceutical products, soap (cold process only), and food products, except fish or meat products, sauerkraut, vinegar, yeast, and the rendering or refining of fats and oils.
2. Manufacture, compounding, assembling or treatment of articles or merchandise from the following previously prepared materials: bone, broom corn, cellophane, canvas, cloth, cork, feathers, felt, fiber, fur, glass, hair or bristles, horn, leather, paper, plastics or plastic products, precious or semi-precious metals or stones, shell textiles, tobacco, wax (paraffin, tallow, etc.), wood (excluding sawmill or planing mill), yarns, paint (not employing a boiling process).
3. Manufacture of: glass, pottery or other similar ceramic products (using only previously prepared sand or pulverized clay and kilns fired only by electricity or gas), musical instruments, toys, novelties, rubber or metal stamps.
4. Manufacture and maintenance of: electric and neon signs, billboards, commercial advertising structures and displays, light sheet metal products, including heating or cooling and ventilating ducts and equipment, comices, eaves and the like.
5. Automobile or trailer assembling, painting, upholstering, rebuilding, reconditioning, sale of used parts, truck repair or overhauling, tire rebuilding or recapping, battery manufacture and the like.
6. Blacksmith and welding shop or machine shop (excluding punch presses over 20 tons rated capacity, and drop hammer), foundry casting, electroplating and electro-winding *lightweight nonferrous metals not causing noxious fumes or odors.*

7. Laundry, cleaning or dyeing works, carpet and rug cleaning.
 8. Distribution plant, ice and cold storage plant, beverage bottling plant.
 9. Wholesale business, storage building or warehouse.
 10. Assembly of electrical appliances: radios and phonographs, including the manufacture of small parts only, such as coils, condensers, transformers, crystal holders and the like.
 11. Laboratory: experimental, photo or motion picture film or testing.
 12. Veterinary or cat or dog hospital or kennels.
 13. Poultry or rabbit killing incidental to a retail business on the same premises.
- D. Any of the following if conducted wholly within a completely enclosed building or within an area enclosed on all sides with a solid wall, compact evergreen hedge or uniformly painted board fence, not less than six feet in height.
1. Building material sales yard, contractor's equipment sales yard (only) or rental of equipment commonly used by contractors.
 2. Retail lumber yard, including only incidental mill work, feed yard.
 3. Draying, freighting or truck yard or terminal.
 4. Motion picture studio.
 5. Automobile or automotive body and fender shop.
 6. Public utility service yard.
- E. Accessory building or use when located on the same building site.
- F. Airport, airstrip or landing field, subject to the conditions set forth in PCDSC 2.20.010(J).
- G. 1. Gasoline or flammables bulk station, provided said products, gasoline, or petroleum shall not be stored in tanks of more than 10,000 gallons capacity each, located not less than 25 feet from building or lot line and no closer than 100 feet to a residential zone.
2. Liquefied petroleum gases (LPG) bulk station shall be designed, constructed and maintained in compliance with provisions of National Fire Protection Association NFPA Standards No. 58. [Ord. 61862 § 1701].

2.105.020 Site development standards.

- A. Building height: maximum height of any structure shall be 35 feet.
- B. Minimum lot area: none.

- C. Minimum lot width: none.
- D. Minimum lot area per dwelling unit: none.
- E. Minimum front yard: 15 feet, except as provided in PCDSC 2.105.030.
- F. Minimum side yards: none, except as provided in PCDSC 2.105.030.
- G. Minimum rear yard: 10 feet, except as provided in PCDSC 2.105.030. [Ord. 61862 §§ 1702 – 1708].

2.105.030 Industrial buffer required.

Where industry adjoins, faces or confronts residential property or a major or secondary thoroughfare, such industrial use shall provide a yard of not less than 10 percent of the lot depth or width on the side or sides abutting, facing or confronting said uses, but such yard need not exceed 50 feet unless a greater depth or width is required by the general setback provisions of this title, or general or special setback provisions of any existing setback ordinance. Such yard shall be improved with one or more of the following:

- A. Landscaping.
- B. Parking lot, wherein a minimum width of 10 feet along the lot line(s) closest to the residential property or major or secondary thoroughfare, shall be landscaped; and a decorative screening device of opaque fencing, walls, landscaped earth berms or any combination thereof, shall be installed between the landscaped area and the parking lot, to a minimum height of three feet.
- C. Recreational space for employees, wherein a minimum width of 10 feet along the lot line(s) closest to the residential property or major or secondary thoroughfare, shall be landscaped. [Ord. 61862 § 1709].

2.105.040 Detached accessory buildings.

- A. Permitted coverage: 40 percent of the required rear yard and any additional space within the buildable area.
- B. Maximum building height: 20 feet within the required rear yard; 35 feet within the buildable area.
- C. Minimum distance to main building: seven feet.
- D. Minimum distance to front lot line: 15 feet, except as provided in PCDSC 2.105.030.
- E. Minimum distance to side lot lines: none, except as provided in PCDSC 2.105.030.
- F. Minimum distance to rear lot line: four feet, except as provided in PCDSC 2.105.030. [Ord. 61862 § 1710].

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LIMITING CONDITIONS AND ASSUMPTIONS

1. **LIMIT OF LIABILITY:**

The liability of Burdick & Ferenchak, Inc., and its employees and independent contractors, is limited to the client who ordered the appraisal assignment. There is no accountability, obligation, or liability to any third party.

This is a Summary Appraisal Report which is intended to comply with the reporting requirements set forth under Standard Rule 2-2(b) of the Uniform Standards of Professional Appraisal Practice for a Summary Appraisal Report. As such, it might not include full discussions of the data, reasoning, and analyses that were used in the appraisal process to develop the appraiser's opinion of value. Supporting documentation concerning the data, reasoning, and analyses is retained in the appraiser's file. The information contained in this report is specific to the needs of the client and for the intended use stated in this report. The appraisers are not responsible for unauthorized use of this report.

2. **COPIES, PUBLICATION, DISTRIBUTION, USE OF REPORT:**

Possession of this report or any copy thereof does not carry with it the right of publication, nor may it be used for other than its intended use; the physical report(s) remain the property of the appraiser for the use of the client, the fee being for the analytical services only. The report may not be used for any purpose by any person or corporation other than the client or the party to whom it is addressed or copied without the written consent of an officer of the appraisal firm, and then only in its entirety.

Neither all nor any part of the contents of this report shall be conveyed to the public through advertising, public relations efforts, news, sales, prospectus, brochure, or other media, without the written consent and approval of John Burdick, MAI, or John Ferenchak, nor may any reference be made in such a public communication to the Appraisal Institute or the SRA or MAI designations.

Appraisal reports prepared by Burdick & Ferenchak, Inc. are intended for mortgage loan purposes and for estimation of fair market values, and are not permitted to be used for real estate syndication purposes. Acceptance and use of value estimates and appraisal reports prepared by Burdick & Ferenchak, Inc. constitutes acceptance of the preceding statement.

3. **CONFIDENTIALITY:**

The appraiser may not divulge the material (evaluation) contents of the report, analytical findings or conclusions, or give a copy of the report to anyone other than the client or his designee as specified in writing except as may be required by the Appraisal Institute as they may request in confidence for ethics enforcement, or by a court of law or body with the power of subpoena.

This appraisal is to be used only in its entirety and no part is to be used without the whole report. All conclusions and opinions concerning the analysis as set forth in the report were prepared by the Appraiser(s) whose signature(s) appears on the appraisal report, unless indicated as "Review Appraiser".

No change of any item in the report shall be made by anyone other than the Appraiser and/or officer of the firm. The Appraiser and firm shall have no responsibility if any such unauthorized change is made.

Possession of the appraisal report or a copy thereof does not carry with it the right of publication. The appraisal report is a privileged communication between the appraiser(s) and client, and may not be used for any other purpose without the written permission from the appraiser(s).

4. **TRADE SECRET:**

This appraisal was obtained from Burdick & Ferenchak, Inc., or related companies and/or its individuals or related independent contractors, and consists of "trade secrets and commercial or financial information" which is privileged and confidential and exempted from disclosure under 5 U.S.C. 552 (b) (4). Notify the appraiser(s) signing the report of any request to reproduce this appraisal in whole or part.

5. **INFORMATION USED:**

No responsibility is assumed for accuracy of information furnished by or from others, the client, his designee, or public records. We are not liable for such information or the work of possible subcontractors. The comparable data relied upon in this report has been confirmed with one or more parties familiar with the transaction or from affidavit; all are considered appropriate for inclusion to the best of our factual judgment and knowledge.

6. **TESTIMONY, CONSULTATION, COMPLETION OF CONTRACT FOR APPRAISAL SERVICES:**

The contract for appraisal, consultation or analytical service, are fulfilled and the total fee payable upon completion of the report. The appraiser(s) or those assisting in preparation of the report will not be asked or required to give testimony in court or hearing because of having made the appraisal, in full or in part, nor engage in post appraisal consultation with client or third parties except under separate and special arrangement and at additional fee.

7. **EXHIBITS:**

The sketches and maps in this report are included to assist the reader in visualizing the property and are not necessarily to scale. Various photos, if any, are included for the same purpose and are not intended to represent the property in other than actual status, as of the date of the photos. Site plans are not surveys unless shown from separate surveyor.

8. **LEGAL, ENGINEERING, FINANCIAL, STRUCTURAL, HAZARDOUS MATERIAL, OR MECHANICAL NATURE HIDDEN COMPONENTS, SOIL:**

No responsibility is assumed for matters legal in character or nature, nor matters of survey, nor of any architectural, structural, mechanical, or engineering nature. No opinion is rendered as to the title, which is presumed to be good and merchantable. The property is appraised as if free and clear, unless otherwise stated in particular parts of the report.

The legal description is assumed to be correct as used in this report as furnished by the client, his designee, or as derived by the appraiser.

The appraiser has inspected as far as possible, by observation, the land and the improvements thereon; however it was not possible to personally observe conditions beneath the soil or hidden structural, or other components. We have not critically inspected mechanical components within the improvements and no representations are made herein as to these matters unless specifically stated and considered in the report. The value estimate assumes that there are no such conditions that would cause a loss of value. The land or the soil of the area being appraised appears firm, however subsidence in the area is unknown. The appraiser(s) do not warrant against this condition or occurrence or problems arising from soil conditions.

The appraisal is based on there being no hidden, unapparent, or apparent conditions of the property site, subsoil, or structures which would render it more or less valuable. No responsibility is assumed for any such conditions or for any expertise or engineering to discover them.

All mechanical components are assumed to be in operable condition and status, standard for properties of the subject type. The condition of the heating, cooling, ventilating, electrical and plumbing equipment is considered to be commensurate with the condition of the balance of the improvements unless otherwise stated. No judgment is made as to adequacy of insulation, type of insulation, or energy efficiency of the improvements or equipment.

Unless otherwise stated in this report, the existence of hazardous material, which may or may not be present on the property, was not observed by the appraiser. The appraiser has no knowledge of the existence of such materials on or in the property. The appraiser, however, is not qualified to detect such substances. The presence of substances such as asbestos, urea-formaldehyde foam insulation, or other potentially hazardous materials may affect the value of the property. The value estimate is predicated on the assumption that there is no such material on or in the property that would cause a loss in value. No responsibility is assumed for any such conditions, or for any expertise or engineering knowledge required to discover them. The client is urged to retain an expert in this field, if desired.

9. **LEGALITY OF USE:**

The appraisal is based on the premise that, there is full compliance with all applicable federal, state and local environmental regulations and laws unless otherwise stated in the report; further that all applicable zoning, building and use regulations and restrictions of all types have been compiled with unless otherwise stated in the report; further, it is assumed that all required licenses, consents, permits, or other legislative or administrative authority, local, state, federal and/or private entity or organization have been or can be obtained or renewed for any use considered in the value estimate.

10. **COMPONENT VALUES:**

The distribution of the total valuation of this report between land and improvements applies only under the existing program of utilization. The separate valuations for land and building must not be used in conjunction with any other appraisal and are invalid if so used.

11. **AUXILIARY AND RELATED STUDIES:**

No environmental or impact study, special market study or analysis, highest and best use analysis or feasibility study has been requested or made unless otherwise specified in an agreement for services or in the report. The appraiser reserves the unlimited right to alter, amend, revise or rescind any of the statements, findings, opinions, values, estimates, or conclusions upon any subsequent such study or analysis or previous study or analysis subsequently becoming known to him.

12. **DOLLAR VALUE, PURCHASING POWER:**

The market value estimated, and the costs used, are as of the date of the estimate of value. All dollar amounts are based on the purchasing power and price of the dollar as of the date of the value estimate.

13. **INCLUSIONS:**

Furnishings and equipment, or business operations, except as specifically indicated and typically considered as a part of real estate, have been disregarded with only the real estate being considered in the value estimate, unless otherwise stated.

14. **PROPOSED IMPROVEMENTS, CONDITIONED VALUE:**

Proposed improvements, if any, on or off-site, as well as any repairs required, are considered for purposes of this appraisal, to be completed in good and workmanlike manner according to information submitted and/or considered by the appraiser. In cases of proposed construction, the appraisal is subject to change upon inspection of the property after construction is completed. This estimate of market value is as of the date shown, as proposed, as if completed and operating at levels shown and projected.

15. **VALUE CHANGE, DYNAMIC MARKET, INFLUENCES:**

The estimated market value is subject to change with market changes over time; value is highly related to exposure, time, promotional effort, terms, motivation, and conditions surrounding the offering. The value estimate considers the productivity and relative attractiveness of the property physically and economically in the marketplace. The "Estimate of Market Value" in the appraisal report is not based in whole or in part upon the race, color, or national origin of the present owners, or occupants of the properties in the vicinity of the property appraised.

In cases of appraisals involving the capitalization of income benefits, the estimate of market value is a reflection of such benefits and the appraiser's interpretation of income and yields and other factors derived from general and specific market information. Such estimates are as of the date of the estimate of value; they are thus subject to change as the market is naturally dynamic.

16. **MANAGEMENT OF THE PROPERTY:**

It is assumed that the property which is the subject of this report will be under prudent and competent ownership and management; neither inefficient nor super-efficient.

17. **CONTINUING EDUCATION CURRENT:**

As of the date of this report, John Burdick has completed the requirements of the continuing education program of the Appraisal Institute.

18. **FEES:**

The fee for this appraisal or study is for the service rendered and not only for the time spent on the physical report.

19. **AUTHENTIC COPIES:**

The authentic copies of this report are signed in blue ink. Any copy that does not have the above is unauthorized and may have been altered.

20. **INSULATION:**

Unless otherwise stated in this report, the appraiser(s) signing this report have no knowledge concerning the presence or absence of ureaformaldehyde foam insulation in existing improvements; if such insulation is present the value of the property may be adversely affected and re-appraisal, at additional cost, may be necessary to estimate the effects of such insulation.

21. **NOTE:**

ACCEPTANCE OF, AND/OR USE OF, THIS APPRAISAL REPORT CONSTITUTES ACCEPTANCE OF THE ABOVE CONDITIONS.

22.

AMERICANS WITH DISABILITIES ACT OF 1990:

The ADA became effective on January 26, 1992. We have not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the ADA. It is possible that a compliance survey of the property, together with a detailed analysis of the requirements of the ADA, could reveal that the property is not in compliance with one or more of the requirements of the Act. If so, this fact could have a negative effect on the value of the property. Since we have no direct evidence relating to this issue, we did not consider noncompliance with the requirements of ADA in estimating the value of the property.

QUALIFICATIONS OF JOHN FERENCHAK III

PROFESSIONAL MEMBERSHIPS

State of Arizona Certified General Real Estate Appraiser #30344 (August, 2012, since August, 1991)

PROFESSIONAL EXPERIENCE

June, 1995 - Present

Burdick & Ferenchak, Inc. - Real Estate Appraising and Consulting, as Partner

June, 1987 - June, 1995

The Pagel Company, Real Estate Appraisers and Consultants, as an Associate Appraiser

EDUCATION:

Bachelor of Arts Degree in Management
University of Phoenix

March, 1993

APPRAISAL COURSEWORK SUCCESSFULLY COMPLETED

Real Estate Appraisal Principles: 1A-1, 1B-1
Capitalization Theory and Techniques, Part A
Capitalization Theory and Techniques, Part B
Case Studies in Real Estate Valuation
Report Writing and Valuation Analysis
Standards of Professional Practice (USPAP - Update)

Fall, 1987
Spring, 1988
Spring, 1990
Summer, 1991
Spring, 1992
Spring, 2010

PARTIAL LIST OF SEMINARS ATTENDED

▶ Fair Lending and Appraisers	October, 1993
▶ NAFTA Seminar	April, 1994
▶ Subdivision Analysis Seminar	March, 1996
▶ Loss Prevention Program	October, 1997
▶ New Industrial Valuation Seminar	May, 1998
▶ How Stigmas Affect Property	July, 2000
▶ Fair Housing in Property Management	July, 2000
▶ Residential Lot Valuation Issues	May, 2002
▶ Pricing Small Apartments	July, 2002
▶ Appraisal Consulting	October, 2003
▶ Building Operation Costs	May, 2004
▶ Re-Appraising, Re-Addressing, Re-Assigning	April, 2005
▶ Water in Arizona: Laws, Agencies & Issues	July, 2006
▶ Condominiums, Co-Ops, and PUDs	October, 2006
▶ Legal Aspects of Foreclosures	February, 2007
▶ Practical Issues in Fair Housing	May, 2008
▶ Supervising Appraisers	June, 2008
▶ Disclosure	July, 2008
▶ Business Practice and Ethics	January, 2010

PROFESSIONAL AFFILIATIONS

Associate member of the Appraisal Institute

SCOPE OF APPRAISAL ACTIVITY

Appraisal/consulting assignments have included a wide variety of residential and commercial appraisals, subdivision analysis, market trend studies, and land appraisals.

STATE OF ARIZONA
BOARD OF APPRAISAL

BE IT KNOWN THAT

JOHN A. FERENCHAK

HAS MET ALL THE REQUIREMENTS AS A

Certified General Real Estate Appraiser

In accordance with Arizona Revised Statutes and on authority of the Board of Appraisal, State of Arizona.

This certificate shall remain evidence thereof unless or until the same is suspended, revoked or expires in accordance with the provisions of law.

CERTIFICATE NUMBER

30344


EXPIRATION DATE

August 31, 2012



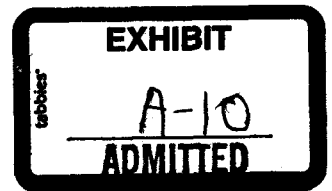
In witness whereof the Arizona Board of Appraisal caused to be signed by the Chair of the Board and the Executive Director


Chair, Board of Appraisal 8/19/2010
Date


Executive Director of the Board of Appraisal 8/19/2010
Date

SHALL REMAIN PROPERTY OF ARIZONA BOARD OF APPRAISAL

Exhibit A-10



July 12, 2011
Rejoinder Testimony
James A. Shiner

July 26-28, 2011 ACC Hearing
Goodman Water Company
Docket No. W-02500A-10-0382

1 LAWRENCE V. ROBERTSON, JR.
Attorney At Law
2 P.O. Box 1448
3 Tubac, Arizona 85646
4 (520) 398-0411
Attorney for Applicant

5
6 **BEFORE THE ARIZONA CORPORATION COMMISSION**

7
8 IN THE MATTER OF THE APPLICATION
9 OF GOODMAN WATER COMPANY, AN
10 ARIZONA CORPORATION, FOR (i) A
11 DETERMINATION OF THE FAIR VALUE
12 OF ITS UTILITY PLANT AND PROPERTY
13 AND (ii) AN INCREASE IN ITS WATER
14 RATES AND CHARGES FOR UTILITY
15 SERVICE BASED THEREON.

DOCKET NO. W-02500A-10-0382

16
17 **REJOINDER TESTIMONY OF**

18 **JAMES A. SHINER**

19
20 **ON BEHALF OF GOODMAN WATER COMPANY**

21
22
23 **July 12, 2011**
24
25
26

1 **Q.1 Please state your name for the record.**
 2 A.1 My name is James A. Shiner.
 3
 4 **Q.2 Have you previously filed testimony regarding this docket?**
 5 A.2 Yes. I filed rebuttal testimony in this docket on May 2, 2011.
 6
 7 **Q.3 What was the purpose of your rebuttal testimony?**
 8 A.3 I am Goodman Water Company's ("GWC" or "Company") policy witness. I provided
 9 certain background information as to the development history of the Eagle Crest Ranch
 10 Subdivision ("Eagle Crest"), and the construction of the Company's water utility system.
 11 In addition I addressed certain issues raised by Commission Staff, RUCO and the
 12 Individual Intervenors.
 13
 14 **Q.4 What is the purpose of your rejoinder testimony?**
 15 A.4 I will address certain issues raised by Staff and Intervenors in their Surrebuttal
 16 Testimonies associated with the development of Eagle Crest, including the parties roles
 17 and the analysis conducted, the upgrade of Water Plant No. 4 and the responsible party,
 18 the Tucson housing market in 2006, rate case expense, why GWC did not seek a WIFA
 19 loan, and GWC's land bookings and evaluation.
 20
 21 **Q.5 Have you reviewed the June 13, 2011 prepared Surrebuttal Testimony of Intervenor**
 22 **Lawrence Wawrzyniak at page 2 lines 18 -26 and page 3 lines 12-19, in which Mr.**
 23 **Wawrzyniak questions the role of EC Development and DR Horton in the**
 24 **development of Eagle Crest. Can you clarify each entities role?**
 25 A.5 Yes. All master planning of Eagle Crest, including the Area Plan, Block Plat and Zoning
 26 were done by Goodman Ranch Associations ("GRA") and/or EC Development ("EC").

1 All contacts, including negotiations with the Oracle School District relative to the
2 proposed School Site were handled by EC Development. Throughout GRA/EC remained
3 the master developer of Eagle Crest. For the convenience of the Administrative Law
4 Judge as well as the other parties to this proceeding, the Company, at the hearing, will be
5 providing Google Earth video presentations as well as on-site photographs taken by
6 representatives of WestLand Resources to provide an orientation and overview of Eagle
7 Crest as a whole, as well as to show the location of various water plant facilities within the
8 boundaries of the subdivision.

9 Eagle Crest was planned to include both residential and commercial development.
10 With regard to the residential portion of Eagle Crest, while slight variations occurred from
11 phase-to-phase for various business reasons, the process began with either a purchase
12 contract or the exercise of an option by the homebuilder. Regardless of whose name was
13 on the plat, both the landowners' representative and DR Horton reviewed the plat, met
14 with the planners and shaped the final plat. The same was true of the water plans;
15 however, GWC had final approval. With regard to construction, the budgets were
16 reviewed by GRA/EC and DR Horton and approved by both. Back office functions, such
17 as bookkeeping were handled by DR Horton. DR Horton was the construction
18 coordinator for Phase I. Starting with Phase II, an independent construction coordinator,
19 Terramar Properties was utilized for the remaining phases. Terramar reported to both EC
20 and DR Horton. It was Terramar who had decision-making authority over the
21 construction. Issues would be referred to the management of EC and the Division
22 President of DR Horton. There was an expedited dispute resolution process in the
23 agreements between the parties if agreement could not be reached. As questions arose,
24 such as the upgrade of Plant No. 4, these questions were resolved without a formal
25 process. Budgets were continuously reviewed as construction progressed by all parties
26 and adjustments and revisions were made as needed and only with agreement of EC and

1 DR Horton. The reconciliations were done with the parties and included Terramar. Both
2 overruns and under budget savings were shared by the parties.

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Q.6 In addition, at page 3, line 20- page 4, line 32, Mr. Wawrzyniak questions EC Development role in the development of Water Plant No. 4. Please explain why Water Plant No. 4 was upgraded and who paid the cost for such upgrades?

A.6 Water Plant No. 4 was upgraded at the request of DR Horton. It was and remains my understanding that DR Horton's motivation for the upgrade was to avoid the need to put fire sprinklers in homes serviced by Plant No. 4. DR Horton was solely responsible for paying the cost of the upgrades.

Q.7 Does either GWC or DR Horton have records to indicate that DR Horton did in fact pay for the upgrades?

A.7 DR Horton contracted directly for the upgrade and would have the contract(s) and cancelled checks associated with that work. This was done without involving EC. GWC's only involvement was in allowing the upgrade of Plant No. 4 at DR Horton's cost. DR Horton's records are not available to GWC or EC. For the upgrade to have been included in GWC's approved plant the ACC would have to have received invoices for the improvement. GWC submitted none. GWC has no invoice for the upgrade and no cancelled check. This is consistent with the EC/DR Horton budgets which show no actual cost assigned for the upgrade.

I spoke a few days ago with Bill Reynolds, the land development manager of DR Horton (as did Mr. Wawrzyniak, according to Mr. Reynolds) who told me he remembers the issue with the upgrade. He remembers the dispute was taken to the Division President of DR Horton who authorized DR Horton to accept the full cost of the upgrade.

1 Q.8 Have you reviewed the June 13, 2011 prepared Surrebuttal Testimony of Intervenor
2 James Schoemperlen at page 6 lines 76 -91, in which Mr. Schoemperlen asserts that
3 GWC did not do any analysis related to the additions to GWC equipment and
4 infrastructure? Is he accurate?

5 A.8 No. GWC's plant additions and expansion plan was based upon (i) a Water System
6 Master Plan prepared by WestLand Resources, and (ii) ongoing analysis as growth was
7 occurring. Although GWC did not undertake a formal financial analysis, GWC did
8 conduct an ongoing analysis based upon growth and made plant additions in accordance
9 with the Water System Master Plan and WestLand Resources' recommendations.

10 Moreover, Mr. Sears and I keep close contact with the local market. In addition to
11 trade meetings, publications, industry meetings and forecasts, we meet with homebuilders,
12 brokers of developable parcels and contractors who build subdivisions. All of the
13 information was taken into consideration prior to construction. We worked with the
14 engineers at WestLand Resources to build the most cost efficient plant possible. As set
15 forth in the Rejoinder Testimony of GWC engineering witness Mark Taylor of WestLand
16 Resources, if GWC were to undertake construction as proposed by the methodology
17 suggested by RUCO and the Intervenor, the costs would be so high that the concerns
18 expressed today would pale in comparison to those generated by the cost to construct
19 piecemeal water infrastructure. Not only will the plant costs increase dramatically,
20 operation and maintenance costs would also significantly increase. When considering
21 these long-term implications, no rational builder or regulator would approve such
22 methodology.

23
24 Q.9 On page 7, line 113- page 8, line 134, Mr. Schoemperlen in his Surrebuttal
25 Testimony asserts that it was apparent in 2006 that the housing bubble had burst.
26 Do you agree?

1 A.9 No. If Mr. Schoemperlen means the era of rapidly increasing home sales and prices was
2 ending, I agree. But it was not apparent to the President of the United States, his
3 economic advisors or the Chairman of the Federal Reserve that the housing market had
4 collapsed. On a somewhat lesser note, it was not apparent to Mr. Sears either, who has
5 received training as an economist.

6 More pertinent, locally the Tucson Metropolitan housing market remained
7 vigorous, recording its second best year ever with over 8,000 new homes sold. (See
8 **Spreadsheet attached as Appendix A**). The first year a "bust" is reflected in the Tucson
9 Metro new housing data is year-end 2008, when it dropped from 6,186 to 3, 339. That
10 information did not become available until AFTER Plant No. 3 was completed in 2007.
11 Sales of more than 5,000 newly constructed homes were considered a good market.
12 Moreover, the decision to build Phase IV was made before the year-end data for 2005 was
13 available.

14
15 **Q.10 Both RUCO and Mr. Schoemperlen question the Company's request for additional**
16 **rate case expense in this case as arbitrary and unsupported. Could you please**
17 **substantiate the actual rate case expense that has been incurred by the Company to**
18 **date and explain why it is much higher than the initial request?**

19 A.10 When we initially estimated rate case expense at \$80,000, GWC's only point of reference
20 was our last rate case in 2007, in which the ACC approved \$100,000. During that case,
21 RUCO was not a party. GWC underestimated the cost associated with prosecuting a case
22 that includes multiple parties and raises additional issues not raised in the previous case.
23 GWC is certainly not suggesting that these parties should not have intervened, or such
24 issues be raised; only that GWC drastically underestimated the cost associated with such
25 intervention.

26 When I compare my involvement to the last rate case, I am spending significantly

1 more time on this case based upon the complexity of the issues. In addition, because I am
2 so intimately involved in this rate case, I cannot and do not question the legitimacy of the
3 time expended by our staff and outside consultants and professionals. The Company has
4 been required to respond to multiple sets of discovery from multiple parties as well as
5 having to retain an additional appraisal witness to address the land value issue. In some
6 instances, data requests have requested information not readily available or compiled by
7 the Company and required development or creation (such as the cost basis of the land).
8 Our consultants have counseled that the best approach is to provide as complete an answer
9 as possible. I check the billings and have no reason to believe that the time spent was
10 unnecessary. Attached as **Appendix B** is a breakdown of rate case expense to date.

11 The relationships with most of the professionals involved in this case (Mike
12 McNulty, Ron Kozoman, Tom Bourassa & Mark Taylor) have been very long term,
13 trusted relationships. While this is the first occasion GWC has worked with Larry
14 Robertson, Mr. Robertson has been known to me for over 30 years and his reputation is
15 sterling. With a proceeding this vigorous, the costs should be no surprise, least of all to
16 RUCO and the Intervenors, who probably have worked very hard on their positions as
17 well.

18
19 **Q.11 Has the Company taken any steps to try to control rate case expense?**

20 **A.11** Yes. On more than one occasion I have advised our consultants of my concerns with
21 regard to escalating costs and the proportionality of these costs to the size of the rate
22 request and the size of the Company. I have requested that they be very careful with the
23 time they bill to the Company, while they do the job correctly. Each has made that
24 commitment and informed me that there has been time that could have been legitimately
25 billed, but was not. The actual costs are now just under \$160,000 and climbing. (See
26 **Appendix B**). In addition, both Mr. Sears and I have spent a significant amount of our

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time assisting in this case without receiving additional compensation.

Q.12 Can you please address the assertion in this case that GWC's existing system facilities could serve 1,800 customer connections?

A.12 It is my understanding that this assertion appeared in a 2010 ACC Staff Memorandum authored by ACC Director Steve Olea to support an ACC recommendation that GWC's 2007 request for a hook-up fee be denied. As Mr. Taylor has testified in his Rebuttal Testimony on pages 16-19 (Question No. 22), GWC's existing system facilities is designed to serve approximately 1,332 units.

Q.13 Parties have raised an issue regarding GWC's failure to seek a WIFA loan to fund plant expansion. Can you expand on the Company's previous testimony as to why GWC did not utilize WIFA for financing plant expansion?

A.13 No. Obtaining a WIFA loan was simply not a cost effective solution. The associated costs with acquiring the loan, the continuing reporting requirements and the requirement that all of the assets of the Company collateralize the loan make it a clearly undesirable alternative. I mention the collateralization issue because should the Company need to borrow again, its ability would be impaired due to the prior collateralization by WIFA.

Q.14 Have you reviewed the June 13, 2011 prepared Surrebuttal Testimony of Staff witness Marlin Scott Jr., at page 9, lines 2-9, in which he proposes that GWC file as a compliance matter, five (5) proposed ADWR Best Management Practices ("BMP's") for approval by the ACC. Is this acceptable to GWC?

A.14 Yes it is.

1 Q.15 At page 6, lines 7-14 of the Surrebuttal Testimony of Mr. Scott, Staff accepts the
2 Company's position that the 190,000 gallon "upsizing" of the Water Plant No. 3
3 storage tank at a cost of \$72,350 is not part of the rate case. Is he correct?

4 A.15 Yes he is.

5
6 Q.16 Have you reviewed the June 13, 2011 prepared Surrebuttal Testimony of Staff
7 witness Gordon L. Fox, at page 16, lines 1-14 in which he is skeptical that the
8 Company's failure to book the land parcel acquisitions for Water Plant Nos. 1-4
9 until 2008 was inadvertent? Please explain how those parcels were inadvertently
10 overlooked.

11 A.16 The failure to book the land parcels was an oversight. GWC made a mistake and we
12 overlooked the land values. However, it was a mistake that did not negatively affect the
13 rate-payers. In fact, had each site been timely transferred and booked, it could have been
14 included in the rate base earlier. Thus, to the extent they were not included earlier, the
15 rate-payers have benefitted. I apologize for the error.

16
17 Q.17 At page 17, line 9- page 18, line 7, of his Surrebuttal Testimony, Mr. Fox states that
18 the Company has failed to meet its burden of proof for the valuation of its claimed
19 land parcels because the Company failed to provide information on E.C.
20 Developments book values for the four (4) parcels in question. Has the Company
21 provided this information?

22 A.17 Yes. On June 23, 2011 the Company served its Supplemental Response to Intervenors
23 Fifth Set of Data Requests providing the book values for the four (4) parcels as follows:
24 Plant No. 1- \$83,629.78; Plant No. 2- \$58,076.24; Plant No. 3-\$66,54.63; and Plant No. 4-
25 \$24,499.66, for a total of \$232,746.30.

In calculating the book value of the parcels, the Company took into account all

1 costs that were incurred in order to make the land suitable for use by the Company in
2 connection with its water utility operations. In that regard, since the parcels upon which
3 the facilities comprising Water Plant Nos. 1-4 are located were never valued as separate
4 parcels prior to their legal conveyance to the Company, any attempt to assign a "book
5 value" to them must be derived by using a combination of (i) the gross acquisition cost of
6 the total acreage acquired for the Phase(s) of Eagle Crest within which a given Water
7 Plant parcel is located, and (ii) the total land development or land improvement cost
8 associated with the phase in question. I have attached a spreadsheet as **Appendix C**
9 setting forth the Company's calculations. The book value determinations are set forth in
10 the column entitled "Improved or Developed Book Value.

11 It remains the Company's position that land values for the four (4) parcels in
12 question that should be used in this case are those determined in the appraisal prepared by
13 Company witness John Ferenczak, which was filed as part of the Company's Rebuttal
14 Testimony and reflected in the last column on **Appendix C**.

15
16 **Q.18** At page 19, line 19- page 20, line 7, of his Surrebuttal Testimony, Mr. Fox states that
17 the Company is not requesting ratemaking recognition of \$72,350 of storage
18 reservoir at Water Plant No. 3 which represents 190,000 gallons of capacity not
19 currently needed. Is he correct?

20 A.18 Yes he is.

21
22 **Q.19** At page 34, lines 1-7; and page 37, line 23-page 38, line 4, of his Surrebuttal
23 Testimony, Mr. Fox is recommending that the Company implement written policies
24 to guide affiliated transactions and the hiring of outside consultants. Does the
25 Company agree to abide by these recommendations?

26 A.19 Yes we do.

1 Q.20 At page 25, line 19-page 26, line 20, of his Surrebuttal Testimony, Mr. Fox indicates
2 that Staff supports the Company's request for additional rate case expense and
3 agrees that \$40,000 per year is reasonable given RUCO's intervention, major
4 differences between the parties unlikely to be resolved by the time of the hearing,
5 and expense incurred to date. Do you have any additional comment?

6 A.20 Yes. I want to express GWC's appreciation for Staff's recognition that GWC has incurred
7 an unexpectedly large amount of rate case expense, with more to be incurred before a final
8 decision is reached in this matter. As I have testified above, the Company has taken great
9 effort in trying to limit rate case expense to date and will continue to stay diligent. That
10 being said, the unanticipated expense associated with prosecuting this rate case has
11 reached such a magnitude as to stress GWC's financial condition and conceivably could
12 jeopardize its ability to provide ongoing adequate and reliable service to its customers if
13 substantial rate relief is not forthcoming in the near future.

14
15 Q.21 Does this conclude your Rejoinder Testimony in this case?

16 A.21 Yes, it does.
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**Goodman Water Company
Docket No. W-02500A-10-0382**

JAMES A. SHINER

REJOINDER TESTIMONY

July 12, 2011

APPENDIX A

SELECTED DATA ON THE TUCSON HOUSING MARKET FOR YEARS
2002 - 2010
ANNUAL HOME SALES FOR THE FOLLOWING AREAS

YEARS	TUCSON METRO AREA	EAGLE CREST
2002	5846	9
2003	6549	81
2004	7438	136
2005	8823	166
2006	8149	47
2007	6186	72
2008	3339	48
2009	2245	36
2010	1778	37

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

JAMES A. SHINER

REJOINDER TESTIMONY

July 12, 2011

APPENDIX B

GOODMAN WATER COMPANY
2010 RATE CASE COSTS

	BOURASSA	ROBERTSON	NATHANSON	SMYTH	WESTLAND	TOTAL
ESTIMATE						\$80,000.00
INVOICE DATE						
6/30/2010				\$1,575.00		
7/15/2010	\$500.00	\$200.29				
7/31/2010				\$1,350.00		
8/6/2010	\$3,910.00					
8/15/2010		\$253.24				
8/31/2010				\$15.00		
9/15/2010		\$990.00				
9/30/2010				\$630.00		
10/1/2010	\$6,252.50					
10/15/2010		\$2,865.37				
10/31/2010			\$3,353.10			
10/31/2010				\$885.00		
11/10/2010	\$3,490.00					
11/15/2010		\$4,676.65				
11/22/2010					\$3,901.50	
11/30/2010			\$937.50			
11/30/2010				\$120.00		
12/14/2010					\$1,655.50	
12/15/2010		\$1,612.50				
12/31/2010				\$1,460.00		
1/17/2011				\$917.76		
1/14/2011	\$3,490.00					
1/15/2011		\$1,082.72				
1/18/2011					\$3,715.00	
2/14/2011	\$2,915.00					
2/15/2011		\$4,171.82				
2/17/2011					\$2,507.50	
2/17/2011			\$156.25			
2/28/2011				\$255.00		
3/15/2011		\$7,691.39				
3/16/2011					\$3,685.48	
3/31/2011				\$780.00		
4/9/2011	\$12,677.50					
4/16/2011		\$20,603.43				
4/20/2011					\$4,830.59	
4/30/2011				\$120.00		
5/15/2011		\$10,548.30				
5/19/2011	\$18,285.62					
5/23/2011					\$8,520.72	
5/31/2011			\$906.25			
6/15/2011		\$7,324.12				
TOTALS TO DATE	\$51,520.62	\$61,919.83	\$5,353.10	\$8,107.76	\$28,816.29	\$155,717.60

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

JAMES A. SHINER

REJOINDER TESTIMONY

July 12, 2011

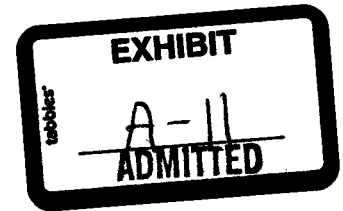
APPENDIX C

Exhibit A-11

July 12, 2011

Rejoinder Testimony

Mark Taylor



**July 26-28, 2011 ACC Hearing
Goodman Water Company
Docket No. W-02500A-10-0382**

1 LAWRENCE V. ROBERTSON, JR.
Attorney At Law
2 P.O. Box 1448
Tubac, Arizona 85646
3 (520) 398-0411
4 Attorney for Applicant

5
6 **BEFORE THE ARIZONA CORPORATION COMMISSION**

7
8 IN THE MATTER OF THE APPLICATION
9 OF GOODMAN WATER COMPANY, AN
ARIZONA CORPORATION, FOR (i) A
10 DETERMINATION OF THE FAIR VALUE
OF ITS UTILITY PLANT AND PROPERTY
11 AND (ii) AN INCREASE IN ITS WATER
RATES AND CHARGES FOR UTILITY
12 SERVICE BASED THEREON.

DOCKET NO. W-02500A-10-0382

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17 **REJOINDER TESTIMONY OF**

18 **MARK F. TAYLOR**

19
20 **ON BEHALF OF GOODMAN WATER COMPANY**

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23 **July 12, 2011**
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1 **Q.1 Please state your name for the record.**

2 A.1 My name is Mark F. Taylor.

3

4 **Q.2 Have you previously filed testimony regarding this docket?**

5 A.2 Yes. I filed Rebuttal Testimony in this docket on May 2, 2011.

6

7 **Q.3 What was the purpose of your Rebuttal Testimony?**

8 A.3 In response to certain parties assertions that the Company has water utility plant capacity
9 which is "excess," or "not used and useful," and thus should not be recognized for
10 ratemaking purposes, I described the circumstances and criteria which influenced the
11 design and sizing of the Company's water system, as set forth in the March 15, 2001
12 Master Water Plan prepared by WestLand Resources.¹ I also explained why water plant
13 additions were undertaken at various points in time over the years, in connection with
14 implementation of the Master Water Plan.

15

16 **Q.4 What is the purpose of your Rejoinder Testimony?**

17 A.4 My Rejoinder Testimony will address that portion of RUCO's surrebuttal testimony
18 pertaining to its excess capacity adjustment and proposed concept of reserve margin for
19 planning purposes. In addition, my rejoinder will address the cost impacts of constructing
20 water plants based on RUCO's concept of an annual 10% reserve margin for planning
21 purposes. In the process, I also address certain plant-related recommendations of Staff
22 witnesses Marlin Scott, Jr. and Gordon Fox.

23

24 **Q.5 Do you have any adjustments that you would like to make to your Rebuttal**

25

¹ A copy of the March 15, 2001 water master plan was attached to my Rebuttal Testimony as Appendix "A."

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Testimony filed on May 2, 2011?

A.5 Yes, it is related to my analysis of Mr. Scott's "Excess Storage Capacity" argument at page 5 of Exhibit MJS of his Direct Testimony. Specifically, on page 18 of my Rebuttal Testimony (A.22) I calculated the conversion of commercial acres to EDU's using an assumption of 83 commercial acres. The March 15, 2001 Water Master Plan had assumed there would be 83 commercial acres in the subdivision, including 12 acres for the Oracle School District ("District") facility. In 2005, the District decided not to construct the school at this location and released the site for alternate use by the Developer. As a result, the Developer changed the land use of these 12 acres to a combination of (i) approximately 2.6 acres of park and recreation area, and (ii) additional residential lots. In turn, this reduced the commercial acres in the subdivision to approximately 73.6 acres, rather than the 83 originally assumed. I became aware of this circumstance after the filing of my Rebuttal Testimony.

Q.6 Please describe the adjustments you would like to make to your calculation of commercial EDU's resulting from the change in commercial acreage from 83 to 73.6.

A.6 At page 18, line 9, I would like to change "83 commercial acres" to "73.6 commercial acres." On line 11, I would like to change "1,374 EDU's" to "1,327 EDU's." Finally on lines 11-12, I would like to modify my last sentence from "This means that existing usable storage capacity is less than what buildout capacity should be by 42 EDU's" to "This means that existing usable storage capacity is only 5 EDU's (0.5%) more than actual planned EDU's for the Eagle Crest community."

1 **Q.7 Does this modification change your conclusion as to whether you agree with Mr.**
2 **Scott's calculations and conclusion that the 530,000 gallon storage reservoir at Water**
3 **Plant No. 3 contains the "excess" capacity he has calculated?**

4 **A.7 No it does not. This modification is insignificant to my analysis.**

5
6 **Q.8 Have you reviewed the June 13, 2011 prepared Surrebuttal Testimony of RUCO**
7 **witness Timothy J. Coley, at page 11 line 19 - page 12 line 16, in which Mr. Coley**
8 **appears to be dismissing both the Company and Staff's "engineering analysis" in**
9 **determining excess capacity because the Staff analysis looks at a planning horizon**
10 **which included estimates for customer growth over a projected five year period; and**
11 **if so, do you agree with any of Mr. Coley's assertions?**

12 **A.8 Yes, I have reviewed this information and I do not agree with his assertions. As I set forth**
13 **in my Rebuttal Testimony, if "backbone" infrastructure like wells and storage reservoirs**
14 **were to be designed and added on the basis of the annual 10% "reserve margin" criterion**
15 **advocated by RUCO, it would be virtually impossible to achieve economies of scale. (See**
16 **Rebuttal Testimony of Mark Taylor, pages 20-22). Rather, if the Company were to follow**
17 **RUCO's approach, plant construction costs would have been significantly higher.**

18
19 **Q.9 Do you believe a projected five year planning horizon is appropriate for planning**
20 **purposes when constructing plant?**

21 **A.9 Yes. In fact, the appropriateness of using a five year planning horizon was confirmed by**
22 **Staff's engineering witness Marlin Scott, Jr., who has testified:**

23
24 **Staff defines excess capacity to mean constructed plant facilities that**
25 **exceed the system requirements within a reasonable planning period. Staff**
typically uses peak demand factors as the requirement and 5 years as a
reasonable planning period. Any operating plant facility needed beyond

1 the 5-year planning period may be considered excess capacity.”² The 5-
2 year growth projection enables utilities to provide new service connections
3 for a reasonable period.³

3 **Q.10 Have you prepared an example to support your opinion that by following RUCO’s**
4 **approach, the Company’s plant costs would have been significantly higher?**

5 A.10 Yes. Attached as Appendix A are two schematic drawings depicting two scenarios
6 analyzing the construction of the Water Plant No. 3 costs. As noted, Water Plant No. 3
7 includes one 600,000-gallon storage tank, a 1,200 gallon per minute (gpm) booster station,
8 a hydrotank, electrical and controls and other ancillary facilities. The first drawing is
9 based on the actual construction cost of the single tank, as completed in one phase, at a
10 cost of \$923,956. This cost includes storage tank costs, structure and improvements,
11 electric pumping equipment costs and does not include soft costs for engineering,
12 permitting and construction inspection. A copy of the Plant and Equipment Account Cost
13 Allocation spreadsheet related to Water Plant 3 Construction is presented in Appendix B.
14 With reference to the second drawing, if the Company were to adopt RUCO’s
15 methodology of a 12 month planning horizon and a 10% annual reserve margin, in order
16 to obtain the storage capacity needed by year 2012-2013, the Company would have had to
17 construct three separate 200,000-gallon storage tanks. The conceptual sizing of these
18 tanks was determined to be that which was necessary in order to provide sufficient storage
19 capacity over a 12-month planning horizon and a 10% annual reserve margin. The result
20 was three 200,000 gallon storage tanks constructed every 2-3 years over a 6-8 year time
21 frame. In addition, to accommodate the placement of the three tanks, the Company would
22 have had to purchase an adjacent 0.32 acre lot (Lot No. 605) at a cost of \$ 33,800 (based
23 on “developed acre” costs of \$105,620.05 per acre). A pictorial presentation of the actual
24

25 ² See Surrebuttal Testimony of Marlin Scott, Jr. Docket No. W-02500A-10-0382, page 4, lines
26 15-19.

³ Id. at page 5, lines 1-2.

1 site profile with one storage and a conceptual site profile with three storage tanks is also
2 included in Appendix A. Finally, O&M costs for the three tanks would be significantly
3 higher, and it would require additional and substantial monitoring to ensure proper water
4 quality in multiple tanks. In total, the cost associated with obtaining 600,000-gallons of
5 additional storage under RUCO's planning methodology would be \$1,434,450, as
6 opposed to \$923,956, or an increase of \$510,494.

7 I suspect if the Company had proceeded in the fashion recommended by RUCO,
8 and then sought to recover costs associated with these three storage tanks, more than one
9 party to this proceeding would be arguing that such piecemeal construction, conducted
10 within the five year planning horizon that Staff recognizes as reasonable, was not prudent
11 and that such costs should be denied.

12
13 **Q.11 According to Mr. Coley, RUCO has now modified its excess capacity calculation.**
14 **Have you reviewed the modified calculation?**

15 A.11 Yes I have.

16
17 **Q.12 Do you agree with RUCO's revised methodology?**

18 A.12 No. Although RUCO's revised methodology excludes the water infrastructure constructed
19 prior to 2005 (the test year of GWC's previous rate case), it applies after-the-fact
20 perspectives and considers growth rate data which was not available to the Company at
21 the time water system planning was done and plant construction decisions were made in
22 2005-06. In my opinion, this is simply "Monday morning quarterbacking" by RUCO, and
23 is not reasonable or appropriate. Also, as previously discussed in this testimony, if the
24 Company were to construct water plant and water lines based on a 12 month planning
25 horizon and 10% annual reserve margin (RUCO's advocated approach), the Company's
26 customers would have ended up paying almost 50% more than what the actual costs are.

1 Such "piece meal" construction approach for a small water company like GWC will result
2 in higher construction costs, and eventually a higher financial burden on the customers.
3 Based on the information available and growth pattern observed at the time of water
4 system planning in 2005-06, I believe that the Company made a prudent decision to
5 construct the water infrastructure that was projected to be needed at that time. This was
6 also discussed in detail in my Rebuttal Testimony on pages 16-20 (Questions 22 through
7 24).

8
9 **Q.13 Have you also analyzed the cost associated with constructing the transmission and**
10 **distribution mains at issue in this case using RUCO's recommended planning**
11 **methodology?**

12 A.13 Yes. We developed conceptual cost estimate examples for a phased construction
13 approach as advocated by RUCO. For example, if GWC, or any other water utility for
14 that matter, were to construct a 4,000 feet water line in four phases of 1,000 feet each, the
15 cost of construction would escalate by nearly 50%. The cost of constructing 4,000 feet
16 water line in a single phase before any roads, paving, curb and gutter are constructed is
17 approximately \$208,000. However, the cost of construction of the same 4,000 feet water
18 line built in four phases of 1,000 each over a period of time (with associated "cutting" and
19 repaving) is estimated to be \$307,000, which is 48% higher than the single phase
20 construction approach adopted by GWC. These conceptual cost estimates are set forth in
21 Appendix C.

22 GWC believes that this information demonstrates the prudence of its system
23 planning approach and it also refutes the suggestion of Staff witnesses Marlin Scott, Jr.
24 and Gordon Fox that \$128,600 in transmission and distribution mains should not be
25 recognized for ratemaking purposes. In that regard, it is further my understanding that it
26 is the Company's legal position that plant which was in fact prudently constructed is to be

1 deemed "used and useful" for ratemaking purposes.

2

3 **Q.14 Please address the assertion in this case that GWC's existing system facilities could**
4 **serve 1,800 customer connections.**

5 A.14 It is my understanding that this assertion appeared in a 2010 ACC Staff Memorandum
6 authored by Utilities Division Director Steve Olea to support a Staff recommendation that
7 GWC's 2007 request for a hook-up fee be denied. As I described in detail in my Rebuttal
8 Testimony, page 16-19 (Question 22), GWC's existing system facilities are designed to
9 serve approximately 1,332 units. It is unclear how Mr. Olea arrived at the 1,800 number;
10 and, thus, I am not in a position at this time to be more specific in my criticism. But, in
11 my opinion, his assertion is without a basis in fact.

12

13 **Q.15 Have you reviewed Exhibit MSJ-1 attached to Mr. Scott's surrebuttal testimony?**

14 A.15 Yes I have.

15

16 **Q.16 Do you agree with Mr. Scott's conclusion that Water Plant No. 3's storage tank**
17 **capacity of 410,000 gallons is not excess capacity and therefore is used and useful?**

18 A.16 Yes.

19

20 **Q.17 Does this conclude your Rejoinder Testimony in this case?**

21

22 A.17 Yes, it does.

23

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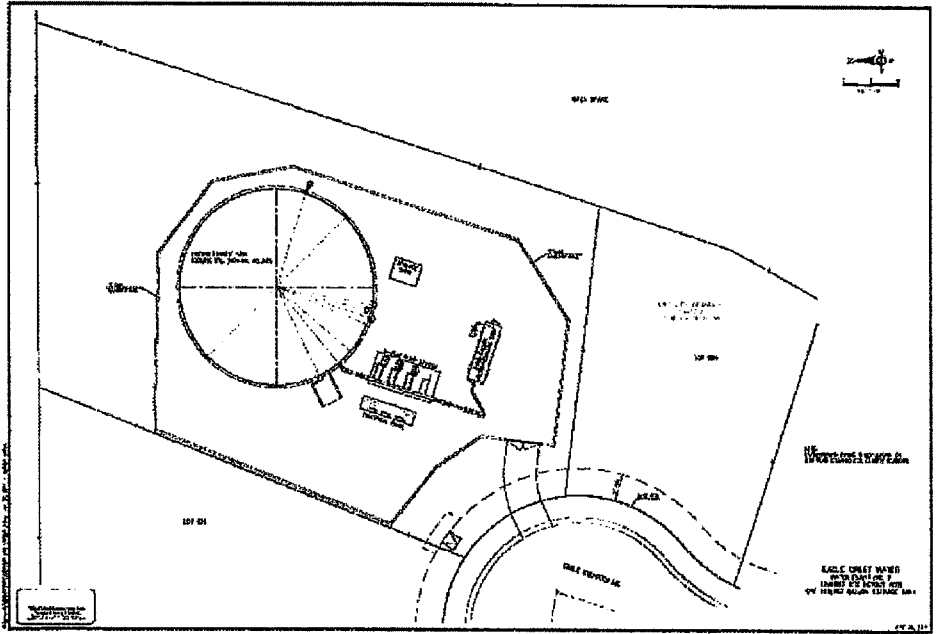
**Goodman Water Company
Docket No. W-02500A-10-0382**

**MARK F. TAYLOR
REJOINDER TESTIMONY**

July 12, 2011

APPENDIX A

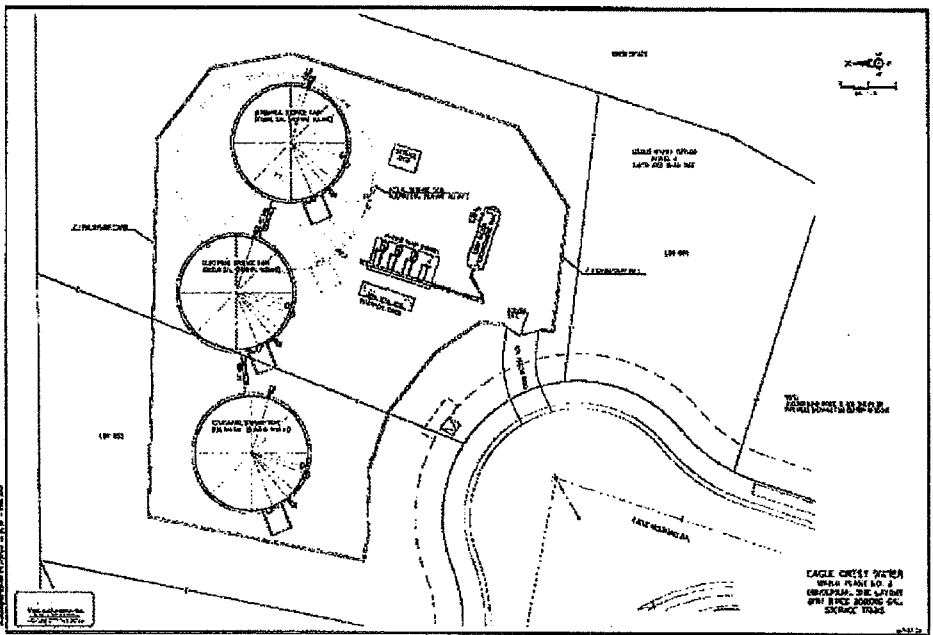
Existing one 600,000-gallon (nominal volume) Storage Tank



- Key Points:**
- 1) Only requires single lot
 - 2) Easy to operate and maintain
 - 3) All construction activities completed in one phase

Actual Construction Costs: \$923,956

Conceptual three 200,000-gallon (nominal volume) Gallon Storage Tanks



- Key Points:**
- 1) Would require purchase of adjacent Lot No. 605, therefore increasing costs
 - 2) Difficult to operate and maintain therefore increases O&M costs
 - 3) Phased construction which results in higher construction costs
 - 4) Need additional monitoring and enhanced operation to maintain acceptable water quality in the storage tanks.

Estimated Conceptual Construction Costs: \$1,434,500

Actual Water Plant # 3 Costs of Construction

No.	Cost Item	Actual Costs for 600,000 gallon (nominal) tank
1	Site Work	\$ 94,325.00
2	5000 gallon hydro tank	\$ 30,000.00
3	Air Compressor	\$ 7,500.00
4	Site Piping, fittings and valves	\$ 60,950.00
5	New 1,200 gpm booster station incl. valves, flow meter	\$ 101,000.00
6	New Electrical Equipment and Controls	\$ 138,000.00
7	7' Masonry Block Wall	\$ 81,000.00
8	Storage Shed	\$ 4,000.00
9	Rip rap in groud per plans	\$ 58,500.00
10	24' Access Gate	\$ 7,500.00
11	Access Road	\$ 5,800.00
12	Construction Water	\$ 2,500.00
13	340,000 (usable) storage tank	\$ 285,500.00
14	Taxes (est. 4.3% of subtotal from actual invoice)	\$ 35,051.07
15	Subtotal W/P#3 Costs	\$ 851,606.07
16	Upsize Storage tank to 590,000 gallons (usable)	\$ 72,350.00
17	Total Actual W/P#3 Hard Costs	\$ 923,956

SUMMARY

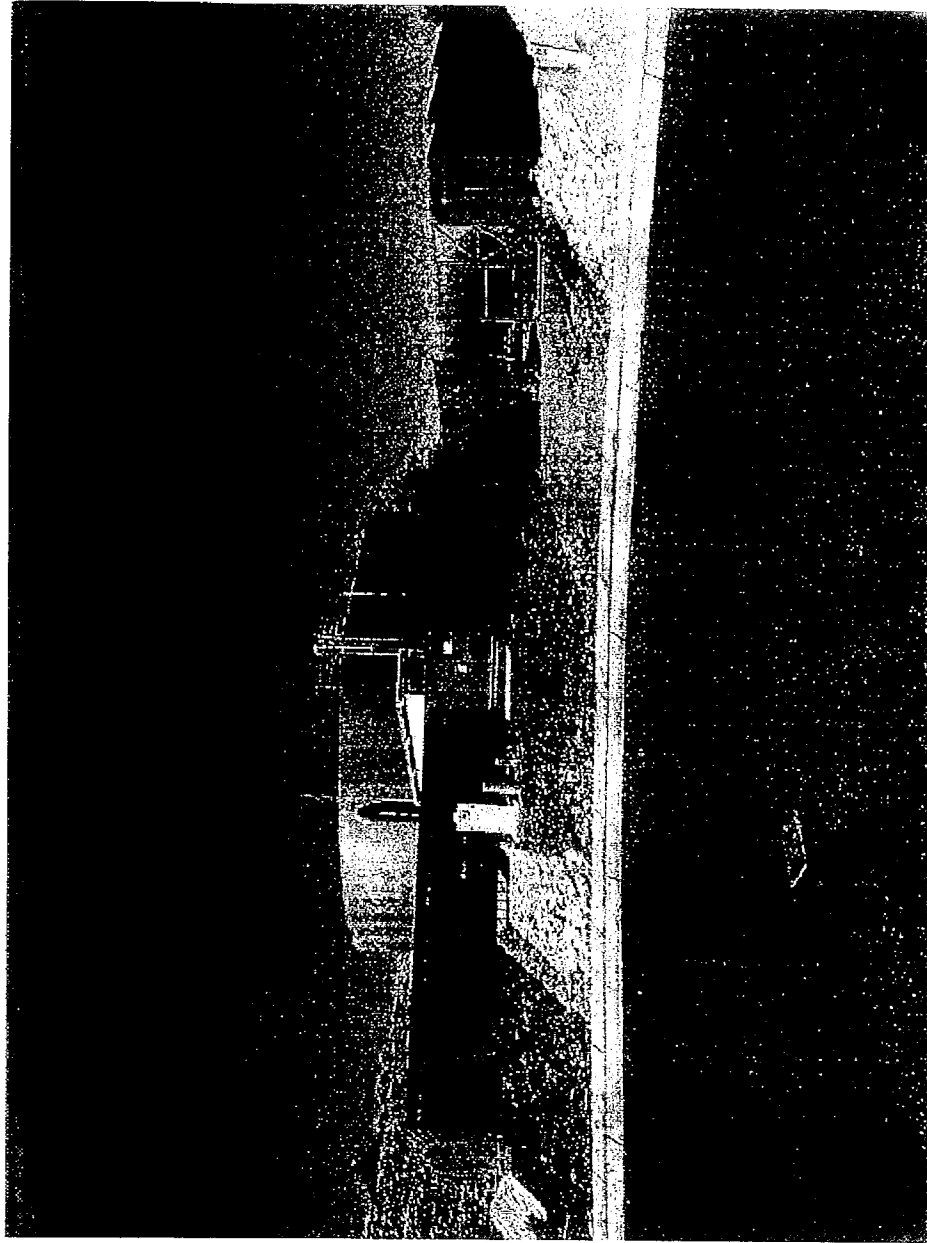
Total Actual W/P#3 Hard Costs	\$ 923,956
Total Conceptual Phased Construction Costs	\$ 1,434,463
Dollar Amount Difference	\$ 510,507
Percent Difference	55%

Assumptions:

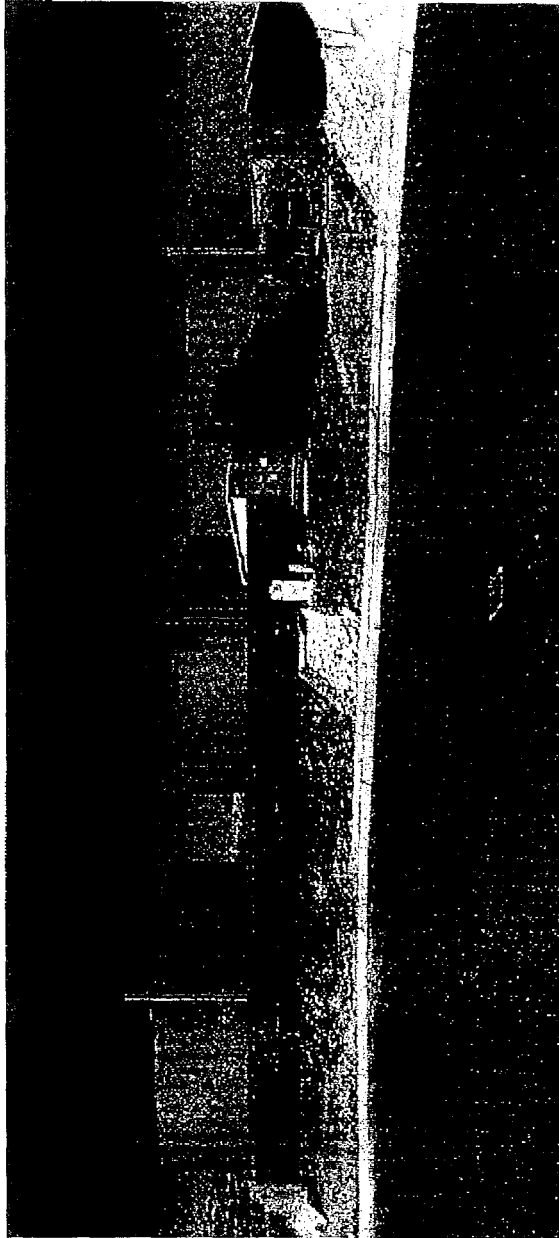
1. Original 600,000 gallon storage tank costs used to develop this conceptual estimate
2. Storage tank costs estimate based on 5% cost increase from previous phase
3. All pumping and electrical constructed for build out as part of Phase 1, Construction
5. Actual Construction Costs obtained from Synch Steel Construction Invoice Dated 01/26/08 for W/P# 3
6. Does not include existing Water Plant 3 land costs
7. Does not include Actual Soft Costs and Conceptual Phase 1 Soft Cost as they would approximately balance each other

Conceptual Water Plant # 3 Costs of Phased Construction

No.	Cost Item	Phase 1 (200,000 nominal gallon tank)	Phase 2 (200,000 nominal gallon tank)	Phase 3 (200,000 nominal gallon tank)
1	Site Work	\$ 51,760	\$ 10,000	\$ 10,000
2	5000 gallon hydro tank	\$ 30,000	\$ -	\$ -
3	Air Compressor	\$ 7,500	\$ -	\$ -
4	Site Piping, fittings and valves	\$ 60,950	\$ 10,000	\$ 10,000
5	New 1,200 gpm booster station incl. valves, flow meter	\$ 101,000	\$ -	\$ -
6	New Electrical Equipment and Controls	\$ 138,000	\$ 8,000	\$ 8,000
7	7' Masonry Block Wall	\$ 102,325	\$ -	\$ -
8	Storage Shed	\$ 4,000	\$ -	\$ -
9	Rip rap in groud per plans	\$ 88,214	\$ -	\$ -
10	Two 14' Access Gate	\$ 15,000	\$ -	\$ -
11	Access Road	\$ 5,800	\$ -	\$ -
12	Construction Water	\$ 3,770	\$ 1,500	\$ 1,500
13	200,000 (nominal) storage tank	\$ 186,000	\$ 196,000	\$ 205,000
14	Estimated Taxes	\$ 34,156	\$ 9,697	\$ 10,127
15	Additional Engineering, permitting and const. mgmt	\$ -	\$ 32,928	\$ 34,388
16	Mobilization/DEMobilization Costs	\$ 33,798	\$ 11,760	\$ 12,281
17	Additional Cost of Lot 605	\$ -	\$ -	\$ -
17	Total Actual W/P#3 Hard Costs	\$ 862,283	\$ 279,884	\$ 792,296



Actual Site Picture



Conceptual Picture with Three
200,000 gallon storage tanks

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

MARK F. TAYLOR

REJOINDER TESTIMONY

July 12, 2011

APPENDIX B

GOODMAN WATER COMPANY
 PHASE IV
 COSTS ALLOCATION

PLANT & EQUIPMENT ACCOUNT ALLOCATION

	ACTUAL	SALES TAX	TOTAL	TRANSMISSION & DISTRIBUTION						
				PLANS	SERVICES	HYDRAULS	STRUCTURES & RESERVOIRS & PUMPS	IMPROVEMENTS STORAGE TANKS	ELECTRIC EQUIPMENT	OTHER PLANT & MISC EQUIPMENT
BORDERLAND - WATER - PHASE 4A										
12" CL 200 C-900 WATERMAIN	255,680.50	10,977.27	266,657.77	256,857.77						
8" CL 200 C-900 WATERMAIN	151,536.00	6,500.89	158,036.89	158,036.89						
8" CL 200 C-900 WATERMAIN	4,384.80	188.11	4,572.91	4,572.91						
12" VALVE	13,485.00	577.22	14,062.22	14,032.22						
8" VALVE	15,465.00	684.31	16,149.31	16,149.31						
8" VALVE	7,200.00	308.88	7,508.88	7,508.88						
2" DRAIN VALVE ASSEMBLY	8,040.00	344.92	8,384.92	8,384.92						
FIRE HYDRANT	21,728.00	932.00	22,660.00	22,657.00						
1" SINGLE SERVICE	27,170.00	1,165.59	28,335.59	28,335.59						
3/4" SINGLE SERVICE	10,620.00	455.80	11,075.80	11,075.60						
1" DOUBLE SERVICE	38,160.00	1,637.08	39,797.08	39,797.06						
CONNECT TO EXISTING	4,020.00	172.45	4,192.45	4,192.45						
TOTAL - WATER PHASE 4A	557,676.30	23,924.31	581,600.61	581,600.61						
BORDERLAND - WATER - PHASE 4C										
12" CL 200 C-900 WATERMAIN	30,478.50	1,307.52	31,786.02	31,786.02						
8" CL 200 C-900 WATERMAIN	56,525.00	2,442.08	58,967.08	58,967.08						
8" CL 200 C-900 WATERMAIN	32,780.00	1,405.40	34,185.40	34,185.40						
12" VALVE	1,540.00	65.07	1,605.07	1,605.07						
8" VALVE	3,320.00	142.43	3,462.43	3,462.43						
8" VALVE	4,305.00	184.68	4,489.68	4,489.68						
2" DRAIN VALVE ASSEMBLY	3,350.00	143.72	3,493.72	3,493.72						
FIRE HYDRANT	9,875.00	423.64	10,298.64	10,298.64						
2" IRRIGATION SERVICE	1,525.00	65.42	1,590.42	1,590.42						
3/4" SINGLE SERVICE	9,150.00	392.54	9,542.54	9,542.54						
1" DOUBLE SERVICE	33,970.00	1,457.31	35,427.31	35,427.31						
CONNECT TO EXISTING	2,010.00	86.23	2,096.23	2,096.23						
TOTAL - WATER PHASE 4C	189,208.50	8,117.04	197,325.54	197,325.54						
BORDERLAND - CHANGE ORDERS										
#9	5,770.00	247.54	6,017.54	6,017.54						
#10	50,024.55	2,148.05	52,172.60	52,172.60						
TOTAL - CHANGE ORDERS	55,794.55	2,395.60	58,190.15	58,190.15						
TOTAL - BORDERLAND COSTS										
	802,679.35	34,454.95	837,134.30	837,134.30	(0.01)	653,218.73	136,682.47	41,194.55	6,017.54	-
SMYTHE STEEL										
SITE WORK	34,325.00	1,472.54	35,797.54	35,797.54						
5,000 GALLON HYDRO-PNEUMATIC TANK	30,080.00	1,267.00	31,347.00	31,287.00						
AIR COMPRESSOR	7,500.00	321.75	7,821.75	7,821.75						
SITE PIPING	60,350.00	2,614.76	62,964.76	63,564.76						
1,200 GPM BOOSTER STATION	101,000.00	4,332.90	105,332.90	105,332.90						
ELECTRICAL EQUIPMENT	138,000.00	5,920.20	143,920.20	143,920.20						
MASONRY WALLS	81,000.00	3,474.90	84,474.90	84,474.90						
STORAGE SHED	4,800.00	171.60	4,971.60	4,971.60						
ROCK RIP-RAP	58,500.00	2,509.65	61,009.65	61,009.65						
14" GATE	7,500.00	321.75	7,821.75	7,821.75						
12" ACCESS ROAD	5,800.00	248.82	6,048.82	6,048.82						
CONSTRUCTION WATER	2,500.00	107.25	2,607.25	2,607.25						
340,000 RESERVOIR	285,900.00	12,247.95	298,147.95	297,747.95						

GOODMAN WATER COMPANY
 PHASE IV
 COSTS ALLOCATION

TOTAL SMTHE STEEL

ACTUAL 818,573.00 SALES TAX 35,031.07 TOTAL 853,604.07

EAGLE CREST WEST, LLC
 UPSIZE RESERVOIR

69,373.86 2,976.14 72,350.00

TOTAL HARD COSTS

1,688,628.21 72,442.18 1,761,070.36

SOFT COSTS

WESTLAND INVOICES

WATER SYSTEM SUPPORT

INV 292202071 226.75
 INV 292202072 263.70

WATER PLAN REVIEW

INV 292210012 908.40
 INV 292210013 445.75
 INV 292210014 553.50
 INV 292210015 234.50
 INV 292210016 94.75
 INV 292210017 152.50
 INV 292210018 107.75
 INV 292210019 202.50
 INV 292212012 82.00
 INV 292212012 72.75
 INV 292219001 3,420.00
 INV 292219002 190.00
 INV 292219003 190.00

ON-SITE WATER INSPECTION SERVICES

INV 292220001 8,250.00
 INV 292220002 4,812.50
 INV 292220003 687.50
 INV 29221001 1,112.50
 INV 29221002 2,225.00
 INV 29221003 2,225.00
 INV 29221004 1,112.50
 INV 29221005 1,112.50
 INV 29221006 2,225.00
 INV 29221007 2,225.00
 INV 29221008 2,225.00
 INV 29221009 3,337.50
 INV 29221010 8,590.00

TOTAL WESTLAND

47,436.85

PLANT & EQUIPMENT ACCOUNT ALLOCATION

TRANSMISSION & DISTRIBUTION LINES SERVICES HYDRANTS STRUCTURES & IMPROVEMENTS STORAGE TANKS RESERVOIRS & EQUIPMENT ELECTRIC PUMPING EQUIPMENT OTHER PLANT & LASC EQUIPMENT

163,526.72 438,826.25 249,253.10

553,219.73 136,682.47 41,194.55 163,526.72 517,193.79 249,253.10

OPW ENGINEERING INVOICES
 OFFSITE DESIGN

INV 11579 400.00
 INV 11681 500.00
 INV 11787 1,300.00
 INV 11862 909.00
 INV 12203 400.00
 INV 12301 500.00

GOODMAN WATER COMPANY
PHASE IV
COSTS ALLOCATION

ACTUAL SALES TAX TOTAL

INV 12808		350.00
INV 12841		750.00
STAKING		
INV 13029	500.00	
INV 13124	2,800.00	
INV 13144	900.00	
INV 13209	5,200.00	
INV 13326	800.00	
INV 13601	157.50	
INV 13687	405.00	
INV 13726	787.50	
INV 13796	105.00	
PHASE 4 DESIGN		
INV 11478	750.37	
INV 11578	600.00	
INV 11682	950.73	
INV 11786	3,067.73	
INV 11861	1,241.49	
INV 11924	221.59	
INV 12042	39.14	
INV 12111	59.54	
INV 12201	447.34	
INV 12271	5,911.59	
INV 12300	282.32	
INV 12361	592.90	
INV 12456	3,258.76	
INV 12538	752.07	
INV 12600	1,382.92	
INV 12712	789.80	
INV 12828	515.68	
INV 12902	432.78	
INV 12928	291.06	
INV 12967	39.11	
INV 13967	189.64	

TOTAL OPW ENGINEERING

38,498.58
\$ 85,933.41

TOTAL SOFT COSTS

COST ALLOCATION SUMMARY

HARD COSTS	\$ 1,761,070.36	TOTAL
HARD COSTS %	100%	
% SHARE OF SOFT COST	\$ 85,933.41	
TOTAL COST ALLOCATION	\$ 1,847,003.77	

PLANT & EQUIPMENT ACCOUNT ALLOCATION

TRANSMISSION & DISTRIBUTION LINES	SERVICES	HYDRAULICS	STRUCTURES & RESERVOIRS & IMPROVEMENTS STORAGE TANKS	ELECTRIC PUMPING EQUIPMENT	OTHER PLANT & MISC EQUIPMENT
\$ 651,219.73	\$ 136,582.47	\$ 41,194.55	\$ 163,526.72	\$ 517,193.79	\$ 249,253.10
37.09%	7.76%	2.34%	9.28%	29.37%	14.15%
\$ 31,874.59	\$ 8,699.57	\$ 2,010.13	\$ 7,979.47	\$ 25,237.05	\$ 12,162.59
1.73%	0.47%	0.11%	0.43%	1.36%	0.66%
\$ 885,094.32	\$ 143,352.04	\$ 43,204.68	\$ 171,506.19	\$ 542,430.84	\$ 261,415.69
48.0%	7.8%	2.3%	9.3%	29.5%	14.6%

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

MARK F. TAYLOR

REJOINDER TESTIMONY

July 12, 2011

APPENDIX C

Actual 4,000 LF of Water Line vs. 1,000 LF of phased construction four phase

Phase	Item	Unit Price	Qty.	Amt.	Comment
Phase 1 - 4,000 feet of waterline	12" Waterline	\$ 52.10	4,000	\$ 208,400	From Borderland estimate

Total Actual Construction Costs

\$ 208,400

Conceptual Costs of 4,000 LF of Waterline Constructed Over Four Phases

Phase	Item	Unit Price	Qty.	Phase 1 Costs
Phase 1 - 1,000 feet of waterline	12" Waterline	\$ 52.10	1,000	\$ 52,100

Phase	Item	Unit Price	Qty.	Phase 2 Costs	Phase 3 Costs	Phase 4 Costs
Phases 2, 3 and 4 - 1,000 feet of waterline each	12" waterline	\$ 52.10	1,000	\$ 52,100	\$ 52,100	\$ 52,100
	Subgrade Preparation	\$ 1.25	333	\$ 417	\$ 417	\$ 417
	10" ABC	\$ 13.20	333	\$ 4,400	\$ 4,400	\$ 4,400
	4" AC	\$ 18.95	333	\$ 6,317	\$ 6,317	\$ 6,317
	Traffic Control	\$ 3,000	1 LS	\$ 3,000	\$ 3,000	\$ 3,000
	Contractor Mob/demob	\$ 3,000	1 LS	\$ 3,000	\$ 3,000	\$ 3,000
	Engineering, Permitting and Construction Admin	\$ 16,000	1 LS	\$ 16,000	\$ 16,000	\$ 16,000
Total for Each Phase				\$ 85,233	\$ 85,233	\$ 85,233
Total Conceptual Four-Phase Construction Costs				\$ 307,800		

SUMMARY

Total Actual 4,000 ft Waterline Costs	\$ 208,400
Total Conceptual 4,000 ft Waterline Costs	\$ 307,800
Dollar Amount Difference	\$ 99,400
Percent Difference	48%

Assumptions:

1. Original Borderland Invoice costs used to develop this conceptual estimate
2. Phase 1 construction prior to any street construction
3. Does not include Actual Soft Costs and Phase 1 Soft Cost