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BEFORE THE ARIZONA CORPORATION C

COMMISSIONERS

GARY PIERCE, Chairman
BOB STUMP
SANDRA D. KENNEDY
PAUL NEWMAN
BRENDA BURNS

Arizona Corporation Commission

DOCKETED

MAR 21 2011

DOCKETED BY

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

DOCKET NO. W-02500A-10-0382

STAFF'S NOTICE OF FILING
DIRECT TESTIMONY

The Utilities Division ("Staff") of the Arizona Corporation Commission hereby submits the Direct Testimony of Staff witnesses Marlin Scott, Jr., Juan C. Manrique and Gary T. McMurry in the above-referenced matter.

RESPECTFULLY SUBMITTED this 21st day of March, 2011.

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Original and thirteen (13) copies of the foregoing were filed this 21st day of March, 2011 with:

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BEFORE THE ARIZONA CORPORATION COMMISSION

GARY PIERCE
Chairman

BOB STUMP
Commissioner

SANDRA D. KENNEDY
Commissioner

PAUL NEWMAN
Commissioner

BRENDA BURNS
Commissioner

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SERVICE BASED THEREON.)
_____)

DOCKET NO. W-02500A-10-0382

DIRECT

TESTIMONY

OF

MARLIN SCOTT, JR.

UTILITIES ENGINEER

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

MARCH 21, 2011

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Engineering Report for Goodman Water Company	MSJ
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1 **INTRODUCTION**

2 **Q. Please state your name, place of employment and job title.**

3 A. My name is Marlin Scott, Jr. My place of employment is the Arizona Corporation
4 Commission ("Commission"), Utilities Division, 1200 West Washington Street, Phoenix,
5 Arizona 85007. My job title is Utilities Engineer.

6
7 **Q. How long have you been employed by the Commission?**

8 A. I have been employed by the Commission since November 1987.

9
10 **Q. Please list your duties and responsibilities.**

11 A. As a Utilities Engineer, specializing in water and wastewater engineering, my
12 responsibilities include: the inspection, investigation, and evaluation of water and
13 wastewater systems; preparing reconstruction cost new and/or original cost studies,
14 reviewing cost of service studies and preparing investigative reports; providing technical
15 recommendations and suggesting corrective action for water and wastewater systems; and
16 providing written and oral testimony on rate applications and other cases before the
17 Commission.

18
19 **Q. How many cases have you analyzed for the Utilities Division?**

20 A. I have analyzed approximately 555 cases covering various responsibilities for the Utilities
21 Division.

22
23 **Q. Have you previously testified before this Commission?**

24 A. Yes, I have testified in 83 proceedings before this Commission.

1 **Q. What is your educational background?**

2 A. I graduated from Northern Arizona University in 1984 with a Bachelor of Science degree
3 in Civil Engineering Technology.
4

5 **Q. Briefly describe your pertinent work experience.**

6 A. Prior to my employment with the Commission, I was Assistant Engineer for the City of
7 Winslow, Arizona, for about two years. Prior to that, I was a Civil Engineering
8 Technician with the U.S. Public Health Service in Winslow for approximately six years.
9

10 **Q. Please state your professional membership, registrations, and licenses.**

11 A. I am a member of the National Association of Regulatory Utility Commissioners
12 (“NARUC”) Staff Subcommittee on Water.
13

14 **PURPOSE OF TESTIMONY**

15 **Q. What was your assignment in this proceeding?**

16 A. My assignment was to provide Staff’s engineering evaluation for Goodman Water
17 Company (“Company”) in this rate proceeding.
18

19 **Q. What is the purpose of your testimony in this proceeding?**

20 A. To present the findings of Staff’s engineering evaluation of the operation of the Company.
21 The findings are contained in the Engineering Report that I have prepared for this
22 proceeding and is included as Exhibit MSJ attached to this Direct Testimony.

1 **ENGINEERING REPORT**

2 **Q. Would you briefly describe what was involved in preparing your Engineering Report**
3 **for this rate proceeding?**

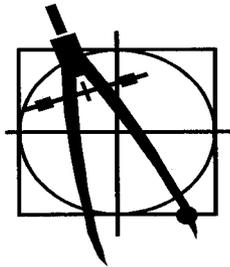
4 A. After reviewing the application for the Company, I physically inspected the water system
5 to evaluate its operation and to determine if any plant items were not used and useful. I
6 obtained information from the Company regarding plant facilities, water testing expense,
7 and I analyzed that information. Based on all the above, I prepared the attached
8 Engineering Report.

9
10 **Q. Do you provide a summary of the water company operation contained in your**
11 **Engineering Report?**

12 A. Yes, the summary containing Staff's engineering conclusions and recommendations are
13 located at the beginning of my Exhibit MSJ.

14
15 **Q. Does this conclude your Direct Testimony?**

16 A. Yes, it does.



**Engineering Report
For
Goodman Water Company
Docket No. W-02500A-10-0382 (Rates)**

March 18, 2011

SUMMARY

CONCLUSIONS

- A. Goodman Water Company ("Company") had a water loss of 9.5% during the test year 2009 which is within the acceptable limit of 10% recommended by Staff.
- B. According to an Arizona Department of Environmental Quality ("ADEQ") Compliance Status Report, dated June 30, 2010, ADEQ has determined that the Company's system, Public Water System No. 11-130, is currently delivering water that meets water quality standards required by 40 CFR 141/Arizona Administrative Code, Title 18, Chapter 4.
- C. The Company is located in the Arizona Department of Water Resources' ("ADWR") Tucson Active Management Area and ADWR has reported that the Company is in compliance with ADWR's requirements governing water providers and/or community water systems.
- D. According to the Utilities Division Compliance database, the Company has delinquent Arizona Corporation Commission compliance items. However, the Company has filed a Motion to Withdraw its Application related to this delinquent case.
- E. The Company has an approved curtailment tariff with an effective date of February 18, 2003.
- F. The Company has an approved backflow prevention tariff with an effective date of February 18, 2003.

RECOMMENDATIONS

- 1. Staff recommends the removal of half of the 530,000 gallon storage tank at a cost of \$185,049 from the plant-in-service because this amount of the storage tank is excess capacity.
- 2. Staff recommends the removal of certain identified water mains at a total cost of \$105,564 from the plant-in-service because these water mains are not used and useful.

EXHIBIT MSJ

3. Staff recommends an average annual water testing expense of \$2,783 be adopted for this proceeding.
4. Staff recommends that the Company continue to use the depreciation rates by individual National Association of Regulatory Utility Commissioners category as presented in Table I-1.
5. Staff recommends the acceptance of the Company's proposed service line and meter installation charges as presented in Table J-1.

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A. INTRODUCTION

On September 17, 2010, Goodman Water Company (“Company”) filed a rate application. This Engineering Report constitutes Staff’s engineering evaluation relative to the Company’s rate application.

The Company serves a community located approximately two miles south of Oracle Junction and approximately 22 miles north of downtown Tucson. Figure A-1 shows the location of the Company within Pinal County and Figure A-2 shows the approximate 1.3 square-miles of certificated area.

B. DESCRIPTION OF WATER SYSTEM

The water system was field inspected on December 16, 2010, by Marlin Scott, Jr., Staff Utilities Engineer, in the accompaniment of Bridget Humphrey, Staff Attorney; and Mark Taylor, Lisa Sullivan, Lex Sears, and Jim Shiner, representing the Company.

The operation of the water system consisted of two wells, two storage tanks, three booster systems and a distribution system serving 621 customers at the end of test year ending December 2009. A system schematic is shown in Figure B-1 with detailed plant facility descriptions as follows:

Table 1. Well Data

Well Data	Well #1	Well #2
ADWR ID No.	55-610541	55-595228
Casing Size	12-inch	16-inch
Casing Depth	700 feet	618 feet
Year Drilled	1982	2004
Pump	75-Hp Vertical Turbine	100-Hp Vertical Turbine
Flow Rate	500 GPM	800 GPM
Meter Size	8-inch	8-inch
Treatment	Tablet Chlorination	Liquid Chlorination
Press Tank (surge)	5,000 gallon	5,000 gallon

Table 2. Storage Tanks

Capacity (Gallons)	Quantity (Each)	Location	Year Constructed
400,000	1	Well Site #1	2001
530,000	1	Booster Site #3	2008

Table 3. Booster Systems

Location	Plant Facilities	Storage Tanks (From Table 2)
Well Site #1	20, 40, 50 and 75-Hp booster pumps, 5,000 gal. pressure tank (surge), with 10-inch meter.	400,000 gal. storage tank
Booster Site #4	5, 10, 15 and 40-Hp booster pumps, two 5,000 gal. pressure tanks (surge), with 8-inch meter.	
Booster Site #3	7-1/2, 15 and 30-Hp booster pumps, 5,000 gal. pressure tank (surge), with 6-inch meter.	530,000 gal. storage tank

Table 4. Water Mains

Diameter	Material	Length
3-inch	PVC	950 ft.
6-inch	PVC	4,012 ft.
8-inch	PVC	19,108 ft.
12-inch	PVC	17,627 ft.
12-inch	DIP	208 ft.
	Total:	41,905 ft.

Table 5. Customer Meters

Size	Quantity
5/8 x 3/4-inch	543
3/4-inch	92
1- inch	6
1-1/2-inch	1
2-inch	5
3-inch	1
Total:	648

Table 6. Fire Hydrants

Size	Quantity
Standard	67

Table 7. Structures & Treatment Equipment

Structures & Treatment Equipment
Well #1: Tablet chlorination unit and 150 feet by 150 feet block wall fencing.
Well #2: Liquid chlorination unit and 100 feet by 100 feet block wall fencing.
Booster Site #4: 75 feet by 100 feet block wall fencing.
Booster Site #3: 100 feet by 160 feet block wall fencing & 12 feet by 15 feet storage building.
Telemetry (SCADA) system and security/motion detectors at all sites.

C. WATER USE

Water Sold

Based on the information provided by the Company, water use for the year 2009 is presented in Figure C-1. Customer consumption experienced a high monthly average water use of 230 gallons per day (“GPD”) per connection in October and a low monthly average water use of 130 GPD per connection in December for an average annual use of 196 GPD per connection.

Non-Account Water

Non-account water should be 10% or less. For the 2009 test year, the Company reported 48,663,000 gallons pumped and 44,043,000 gallons sold, resulting in a water loss of 9.5%. Although this 9.5% is within the acceptable limits, Staff noticed that the December 2009 data showed more gallons sold than gallons pumped.

As a follow-up to the 2009 test year water data, Staff requested the Company provide data for the 2010 months from January to November to further evaluate the water loss. Based on this 2010 data, the Company reported 46,339,000 gallons pumped and 42,517,000 gallons sold, resulting in a water loss of 8.3 percent. In summary, the 9.5 percent and 8.3 percent are within the acceptable limits.

System Analysis

Using the Company's 2009 test year data, the Company reported its highest peak use month as October with 4,350,000 gallons sold to 610 customers. Based on this data, Staff estimates the average daily demand to be 230 GPD per connection for evaluating storage capacity sufficiency. For well capacity evaluation, Staff used 0.20 GPM per connection ($=230 \times 1.25 \text{ factor} / 1440$) for the peak day demand. Using these factors, Staff determined that:

1. The well capacity totaling 1,300 GPM ($=\text{Well \#1 at } 500 + \text{Well \#2 at } 800$) could adequately serve approximately 6,500 connections ($=1,300 / 0.20$). The total well capacity is not excessive because one well is a back-up to the other in case one well is placed out of service. In addition, the total well capacity supplements the fire flow requirement.
2. The storage capacity totaling 930,000 gallons ($=400,000 + 530,000$), minus the fire flow requirement (2,000 GPM at 2 hours = 240,000 GPD), could adequately serve up to approximately 3,000 connections ($((=930,000 - 240,000) / 230)$).
3. Looking forward, Figure D-1 shows a growth projection to approximately 875 total connections by December 2014.

Based on this analysis, the test year well capacity of 1,300 GPM is adequate. However, the storage capacity of 9,300,000 gallons has excess storage capacity for the test year customer base and even for customer growth within a 5-year period.

D. GROWTH

Figure D-1 depicts the customer growth using linear regression analysis. The number of service connections was obtained from annual reports submitted to the Commission. During the test year 2009, the Company had 621 customers and it is projected that the Company could have approximately 875 customers within a 5-year period ending December 2014.

E. PLANT-IN-SERVICE ADJUSTMENTS

Excess Storage Tank Capacity

As shown above in the System Analysis section, the total storage tank capacity of 930,000 gallons has excess capacity. To further evaluate how much of the storage tank capacity is excessive, Staff considered the following:

1. Within a 5-year period, Staff estimated the required storage capacity to be 441,250 GPD. This amount is calculated by the fire flow requirement (240,000 GPD) plus the demand in five years at 201,250 GPD (= 230 GPD/connection x 875 connections), totaling to 441,250 GPD.
2. The entire 400,000 gallon storage tank is needed because both wells pump into this tank and this tank serves as the chlorination contact time chamber. In addition, this tank serves as the main storage for fire flow protection for the majority of the water system.
3. Staff estimated the 5-year projected storage capacity at 441,250 GPD which is more than the 400,000 gallon storage tank by 41,250 gallons.
4. To determine how much of the 530,000 gallon storage tank is needed, Staff considered the fire flow of 180,000 gallons (=1,500 GPM at 2 hours) for the K-Zone customers plus the 41,250 gallons, totaling to 221,250 gallons.
5. 221,250 gallons is 42% of the 530,000 gallon tank, which Staff rounded to 50%. Staff considers half of the 530,000 gallons is needed at this time. Therefore, the cost of the 530,000 gallon storage tank at \$370,098 is reduced by half, being \$185,049.

In summary, Staff considers half of the 530,000 gallon storage tank to be excess capacity and recommends disallowance of half the tank (265,000 gallons) at a cost of \$185,049 for this rate proceeding.

Plant Not Used and Useful

Staff noted during its field inspection there were certain portions of the water system that had plant facilities constructed, but no homes or water services. Through the Company data responses regarding these certain areas, Staff obtained:

- A. Water system as-built maps.
- B. Cost of water mains facilities for;
 1. Water Plant Site #1 to Proposed Well Site #3;
 - a. 974 feet of 12-inch transmission main with appurtenances from Water Plant Site #1 to Eagle Mountain Drive at \$50,586. Since Well #3 is not

yet constructed, Staff considered this transmission main not used and useful because it is not in service.

- b. 524 feet of 12-inch transmission main with appurtenances from Eagle Mountain Drive to Proposed Well Site #3. The cost at \$28,470 has not yet been recorded to the plant-in-service.
 - c. 1,571 feet of 12-inch transmission main with appurtenances from Eagle Mountain Drive to Saddlebrooke Boulevard. The cost at \$94,197 has not yet been recorded to the plant-in-service.
2. Edwin Road to end of line (southwest corner);
 - a. The Company provided a cost of \$29,966 for 679 feet of 12-inch main with appurtenances. After Staff's review, Staff considered 369 feet of this main to be used and useful because it provided fire flow protection service. For the remaining portion of the main, Staff considered this 310 foot section not used and useful because it did not provide service to the proposed commercial lots. Therefore, Staff adjusted the \$29,966 amount to reduce to \$14,600 for 310 feet of 12-inch main with appurtenances.
3. Phase 5 – Main on Running Roses Lane;
 - a. The Company provided a total cost of \$88,803 for 1,650 feet of 8-inch main with appurtenances (divided in two sections; 886 feet at \$48,425 and 764 feet at \$40,378). After Staff's review, Staff considered the 886 foot section to be used and useful because it looped the system for this area and the 764 foot section not used and useful because it did not serve any customers. Therefore, Staff reduced the amount to \$40,378 for the 764 foot section of the 8-inch main with appurtenances for this area.

As a result of the review and evaluation of the above data, a summary of the plant facilities that are considered excess capacity and/or not used and useful are as follows:

Table E-1. Plant-in-Service Adjustments

Acct. No.	Plant Facilities	Year Installed	Original Cost
330	Distribution Reservoirs 530,000 gallon storage tank (half is 265,000 gallons) (Remove half of tank and cost, $\$370,098 / 2 = \$185,049$)	2008	\$185,049
331	Transmission & Distribution Mains 1. From Water Plant #1 to Proposed Well Site #3: a. 12-inch main w/ appurtenances at 974 feet. b. 12-inch main w/ appurtenances at 524 feet. (\$28,470 not yet recorded) c. 12-inch main w/ appurtenances at 1,571 feet. (\$94,197 not yet recorded) 2. From Edwin Road to end of line (southwest corner): 12-inch main w/ appurtenances at 310 feet. 3. Phase 5 - Main on Running Roses Lane: 8-inch main w/ appurtenances at 764 feet	2008	\$50,586
		2002	\$14,600
		2008	\$40,378
		Total:	\$290,613

[Note: On March 17, 2011, Staff received a response to its Tenth Set of Data Requests. Any further plant-in-service adjustment and recommendation related to this data request will be provided in Staff's surrebuttal testimony.]

Staff recommends the removal of above identified plant facilities totaling to \$290,613, from the plant-in-service because these plant items have excess capacity and/or are not used and useful in this rate proceeding.

F. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ("ADEQ") COMPLIANCE

Compliance

In an ADEQ compliance status report, dated June 30, 2010, ADEQ reported that the Company's system, PWS #11-130, has no major deficiencies and is currently delivering water that meets water quality standards required by 40 CFR 141/Arizona Administrative Code, Title 18, Chapter 4.

Water Testing Expense

The Company is subject to mandatory participation in the Monitoring Assistance Program ("MAP"). The Company reported its water testing expense at \$1,215 during the test year. Staff has reviewed this expense and has recalculated the annual testing expense by including the omitted MAP invoice and normalizing the monitoring samples and costs as shown in Table F-1 below:

Table F-1. Water Testing Expense

Monitoring	Cost per test	No. of test	Annual Cost
Total coliform – 2 samples per month	\$20	24	\$480
MAP – IOCs, Radiochemical, Nitrate, Nitrite, Asbestos, SOCs, & VOCs	MAP	MAP	\$1,938
Lead & Copper – 10 samples per 3 years	\$33	10	\$110
D/DBP – TTHM - annually	\$100	1	\$100
-- HAA5 - annually	\$155	1	\$155
Total			\$2,783

Note: ADEQ's MAP invoice for the 2011 Calendar Year was \$1,938.49.

Staff recommends an annual water testing expense of \$2,783 be used for the purpose of this application.

G. ARIZONA DEPARTMENT OF WATER RESOURCES ("ADWR") COMPLIANCE

The Company is located in the ADWR's Tucson Active Management Area. According to ADWR's Water Provider Compliance Status Report dated December 7, 2010, this Company is in compliance with ADWR's requirements governing water providers and/or community water systems.

H. ACC COMPLIANCE

According to the Utilities Division Compliance Section, the Company has delinquent ACC compliance issues related to a CC&N extension case (05-0643) and its Decision No. 68444. However, due to the downturn in the economy, the developer cannot provide the required Main Extension Agreement and Certificate of Assured Water Supply to the Company. As a result, the Company has filed a Motion to Withdraw its Application for its CC&N extension case. This withdrawal request is awaiting Commission consideration.

I. DEPRECIATION RATES

In the prior rate case, the Company was authorized to use Staff's typical and customary depreciation rates. These depreciation rates are presented in Table I-1 and it is recommended that the Company continue to use these depreciation rates by individual National Association of Regulatory Utility Commissioners category.

J. SERVICE LINE AND METER INSTALLATION CHARGES

The Company has requested changes in its service line and meter installation charges. These charges are refundable advances and the Company's requested charges are within Staff's customary range of charges. Since the Company may at times install meters on existing service lines, it would be appropriate for some customers to only be charged for the meter installation. Therefore, Staff recommends approval of the Company's charges as shown in Table J-1, with separate installation charges for the service line and meter.

K. CURTAILMENT PLAN TARIFF

The Company has an approved curtailment tariff that became effective on February 18, 2003.

L. BACKFLOW PREVENTION TARIFF

The Company has an approved backflow prevention tariff that became effective on February 18, 2003.

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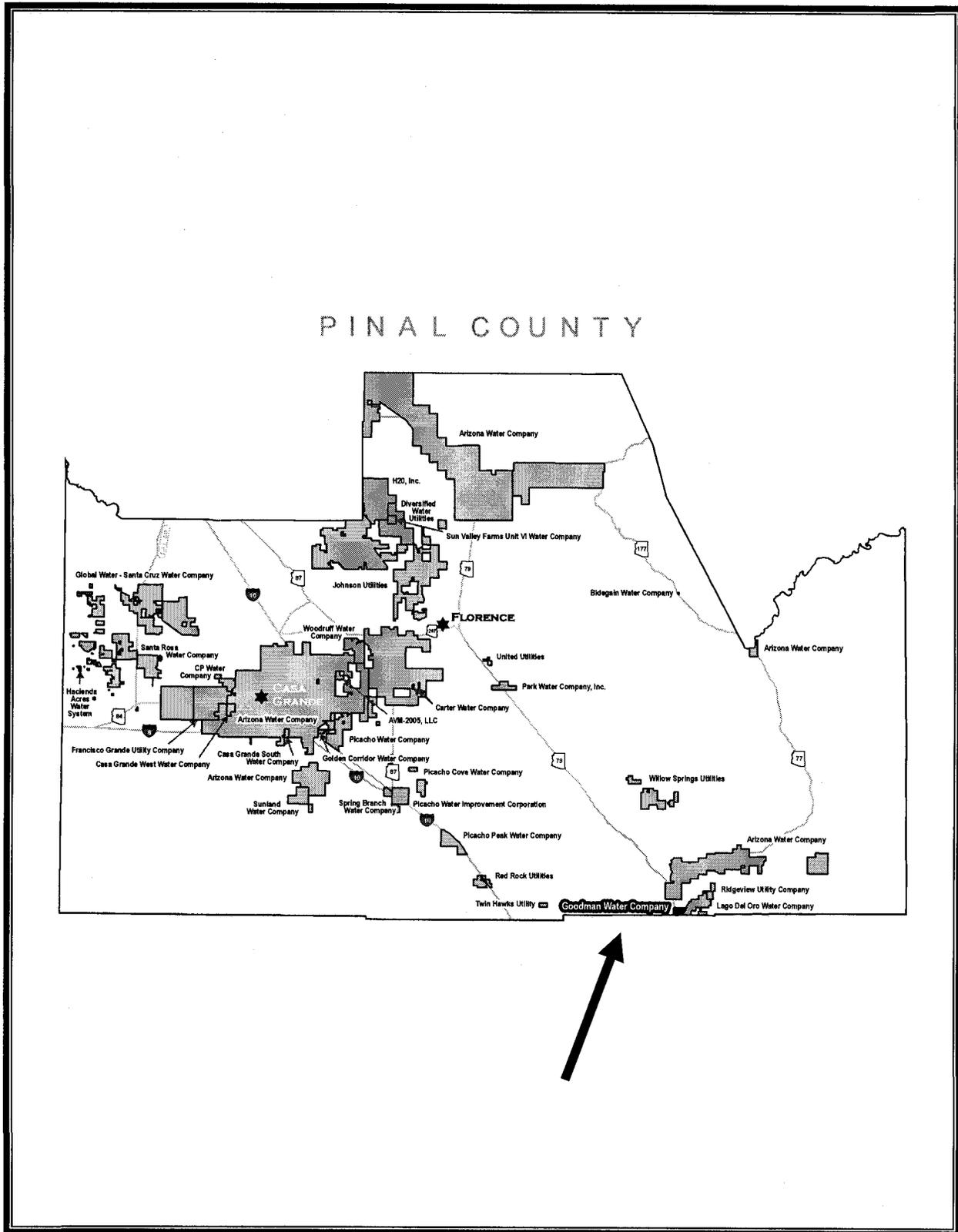


Figure A-1. Pinal County Map

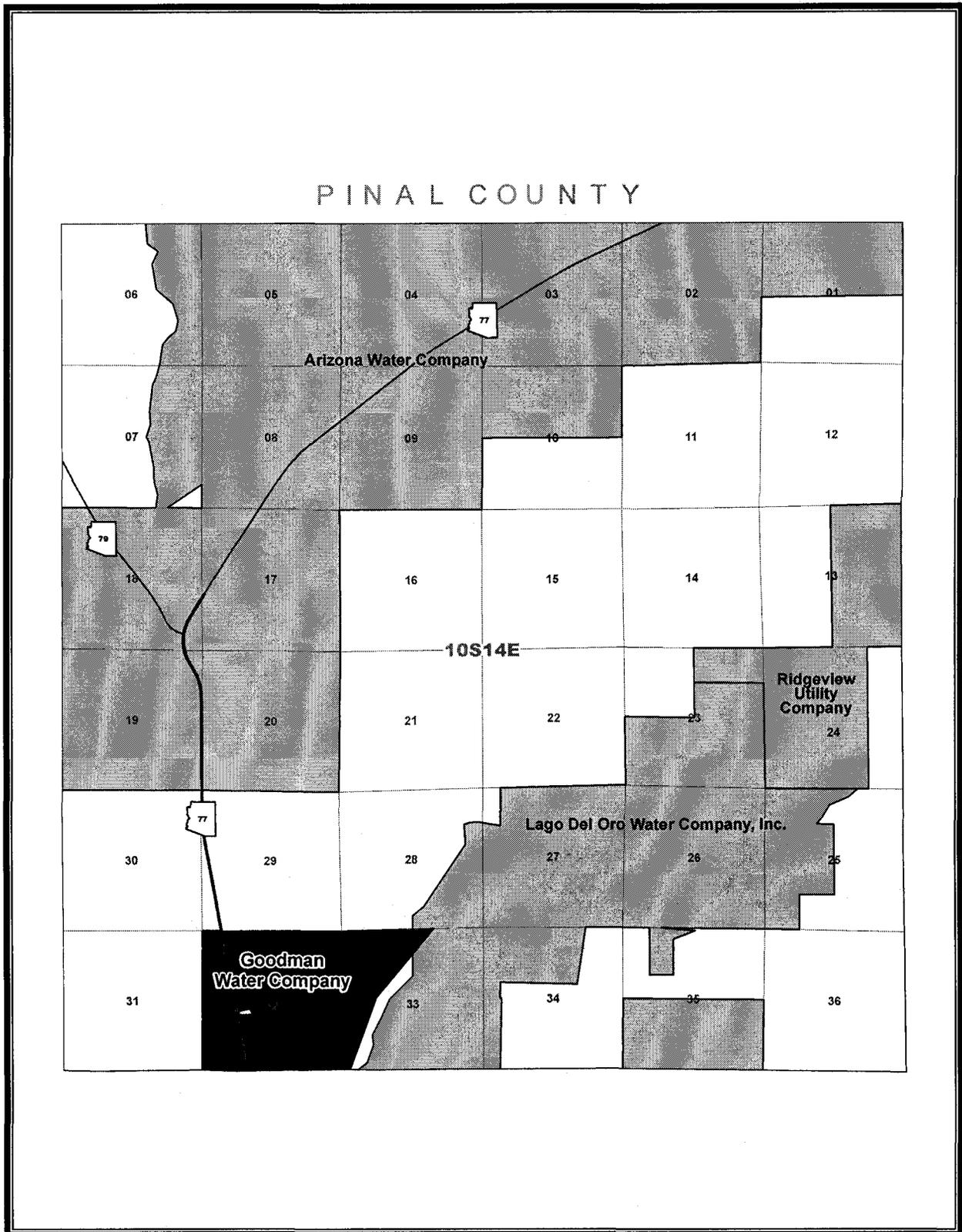


Figure A-2. Certificated Area

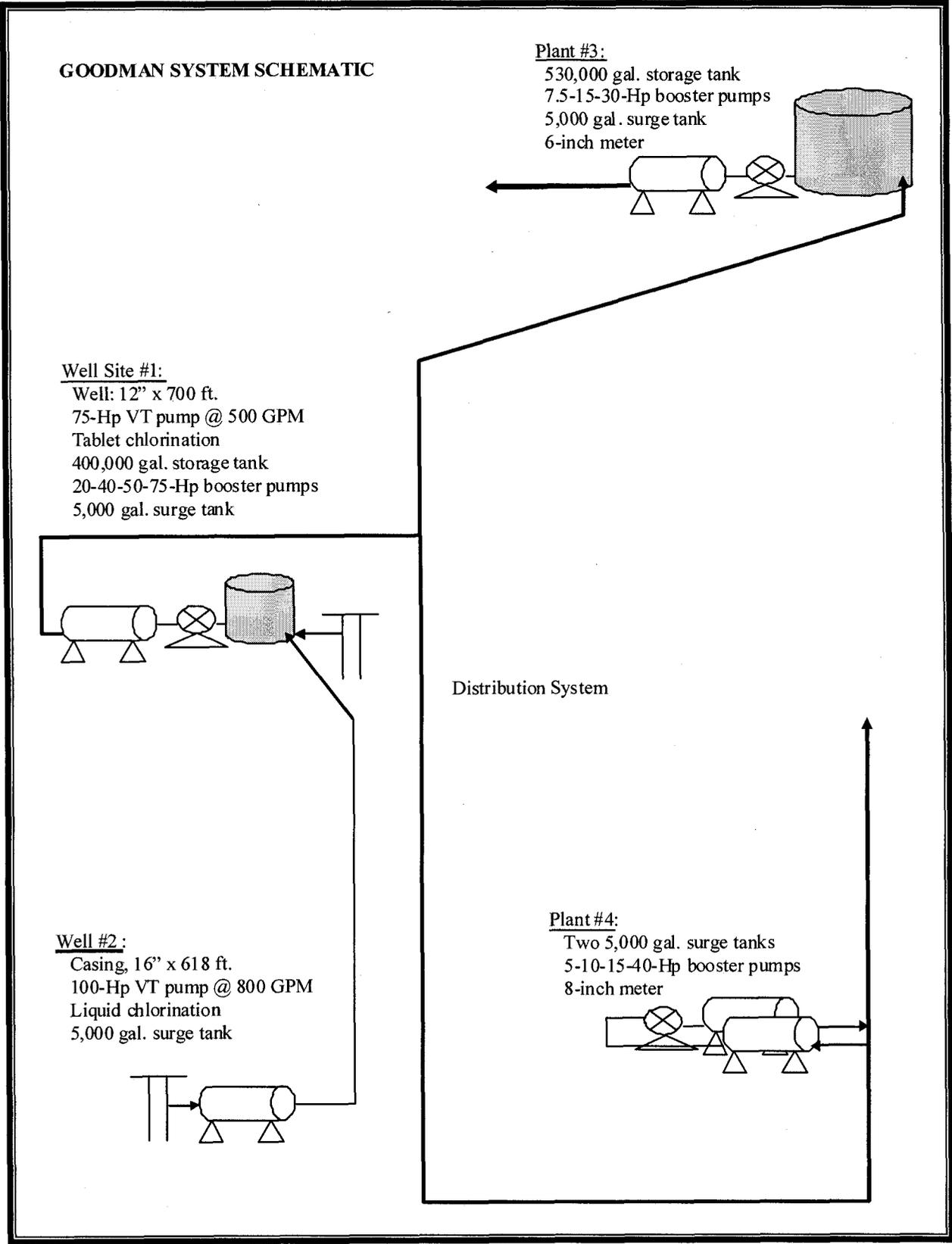


Figure B-1. System Schematic

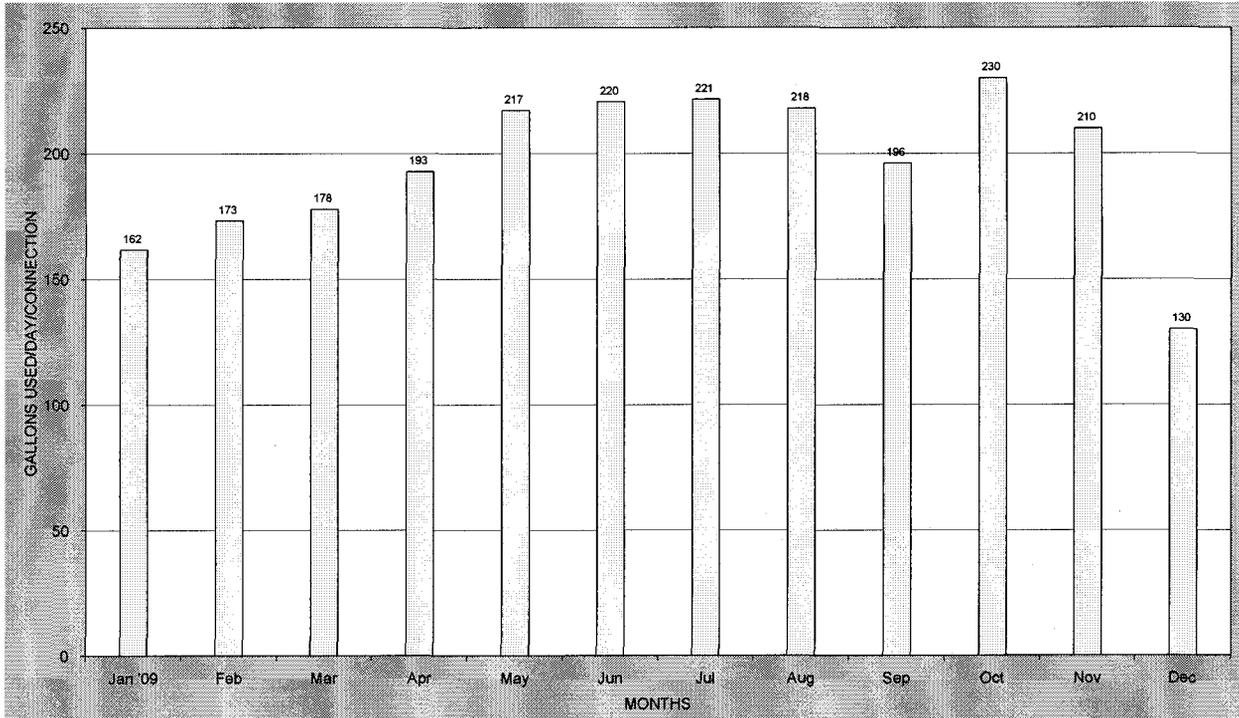


Figure C-1. Water Use

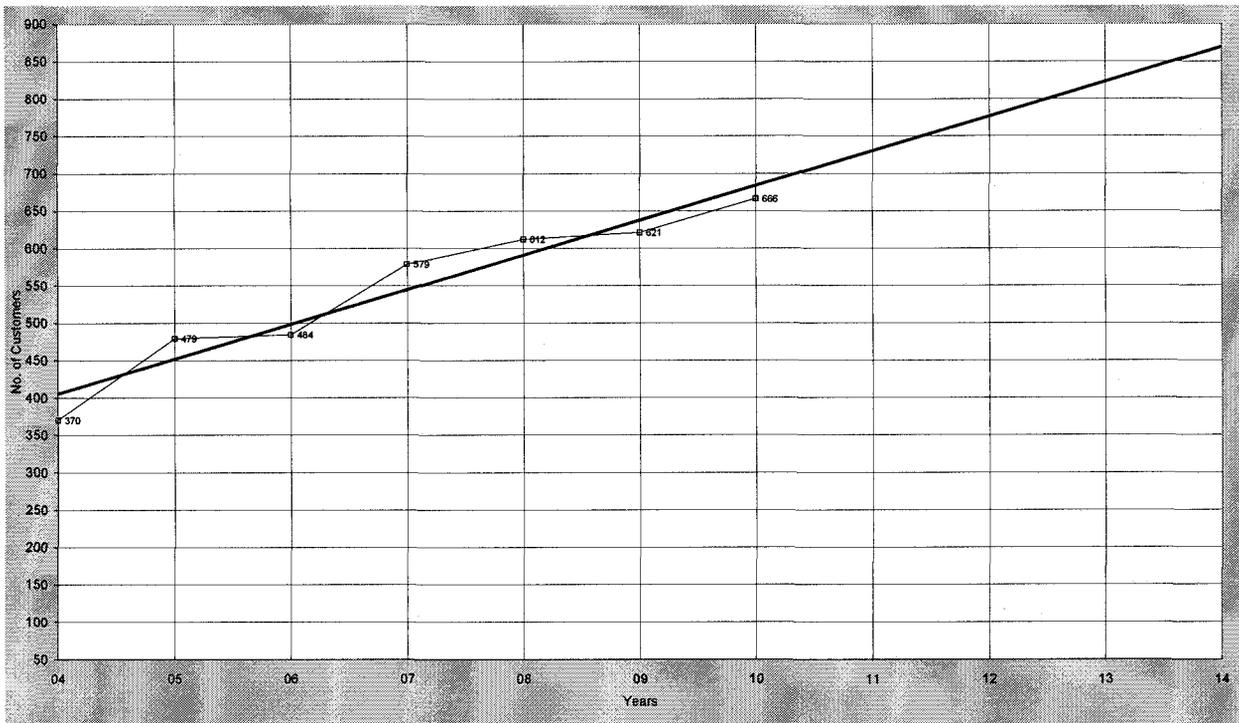


Figure D-1. Growth

Table I-1. Depreciation Rates

NARUC Acct. No.	Depreciable Plant	Average Service Life (Years)	Annual Accrual Rate (%)
304	Structures & Improvements	30	3.33
305	Collecting & Impounding Reservoirs	40	2.50
306	Lake, River, Canal Intakes	40	2.50
307	Wells & Springs	30	3.33
308	Infiltration Galleries	15	6.67
309	Raw Water Supply Mains	50	2.00
310	Power Generation Equipment	20	5.00
311	Pumping Equipment	8	12.5
320	Water Treatment Equipment		
320.1	Water Treatment Equipment	30	3.33
320.2	Solution Chemical Feeders	5	20.0
330	Distribution Reservoirs & Standpipes		
330.1	Storage Tanks	45	2.22
330.2	Pressure Tanks	20	5.00
331	Transmission & Distribution Mains	50	2.00
333	Services	30	3.33
334	Meters	12	8.33
335	Hydrants	50	2.00
336	Backflow Prevention Devices	15	6.67
339	Other Plant & Misc Equipment	15	6.67
340	Office Furniture & Equipment	15	6.67
340.1	Computers & Software	5	20.00
341	Transportation Equipment	5	20.00
342	Stores Equipment	25	4.00
343	Tools, Shop & Garage Equipment	20	5.00
344	Laboratory Equipment	10	10.00
345	Power Operated Equipment	20	5.00
346	Communication Equipment	10	10.00
347	Miscellaneous Equipment	10	10.00
348	Other Tangible Plant	10	10.00

Table J-1. Service Line and Meter Installation Charges

Meter Size	Current Total Charges	Proposed Service Line Charges	Proposed Meter Charges	Proposed Total Charges
5/8 x 3/4"	\$225	\$385	\$135	\$520
3/4"	\$270	\$415	\$205	\$620
1"	\$300	\$465	\$265	\$730
1-1/2"	\$425	\$520	\$475	\$995
2" Turbine	\$550	\$800	\$995	\$1,795
2" Compound	NT	\$800	\$1,840	\$2,640
3" Turbine	\$750	\$1,015	\$1,620	\$2,635
3" Compound	NT	\$1,135	\$2,495	\$3,630
4" Turbine	\$1,375	\$1,430	\$2,570	\$4,000
4" Compound	NT	\$1,610	\$3,545	\$5,155
6" Turbine	\$2,800	\$2,150	\$4,925	\$7,075
6" Compound	\$NT	\$2,270	\$6,820	\$9,090

BEFORE THE ARIZONA CORPORATION COMMISSION

GARY PIERCE

Chairman

BOB STUMP

Commissioner

SANDRA D. KENNEDY

Commissioner

PAUL NEWMAN

Commissioner

BRENDA BURNS

Commissioner

IN THE MATTER OF THE APPLICATION OF)
GOODMAN WATER COMPANY, AN)
ARIZONA CORPORATION, FOR (i) A)
DETERMINATION OF THE FAIR VALUE)
OF ITS UTILITY PLANT AND PROPERTY)
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DOCKET NO. W-02500A-10-0382

DIRECT

TESTIMONY

OF

JUAN C. MANRIQUE

PUBLIC UTILITIES ANALYST I

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

MARCH 21, 2011

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**EXECUTIVE SUMMARY
GOODMAN WATER COMPANY
DOCKET NO. W-02500A-10-0382**

The direct testimony of Staff witness Juan C. Manrique addresses the following issues:

Capital Structure – Staff recommends that the Commission adopt a capital structure for Goodman Water Company (“Applicant”) for this proceeding consisting of 18.6 percent debt and 81.4 percent equity which is the Applicant’s actual capital structure.

Cost of Equity – Staff recommends that the Commission adopt a 9.1 percent return on equity (“ROE”) for the Applicant. Staff’s estimated ROE for the Applicant is based on cost of equity estimates for the sample companies ranging from 9.0 percent for the discounted cash flow method (“DCF”) to 9.1 percent for the capital asset pricing model (“CAPM”).

Cost of Debt – Staff recommends that the Commission adopt an 8.5 percent cost of debt.

Overall Rate of Return – Staff recommends that the Commission adopt a 9.0 percent overall rate of return (“ROR”).

Mr. Bourassa’s Testimony – The Commission should reject the Applicant-proposed 11.0 percent ROE for the following reasons:

Mr. Bourassa’s DCF estimates rely heavily on analysts’ forecasts and provide little weight to historical dividend per share growth rates. Also, Mr. Bourassa’s CAPM estimates rely solely on future estimates of a risk-free rate which unnecessarily biases his estimates upward.

1 **I. INTRODUCTION**

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

3 A. My name is Juan C. Manrique. I am a Public Utilities Analyst employed by the Arizona
4 Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff").
5 My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

6
7 **Q. Briefly describe your responsibilities as a Public Utilities Analyst.**

8 A. In my position as a Public Utilities Analyst, I perform studies to estimate the cost of
9 capital component in rate filings to determine the overall revenue requirement and analyze
10 requests for financing authorizations.

11
12 **Q. Please describe your educational background and professional experience.**

13 A. I graduated from Arizona State University and received a Bachelor of Science degree in
14 Finance. My course of studies included courses in corporate and international finance,
15 investments, accounting, statistics, and economics. I began employment as a Staff Public
16 Utilities Analyst in October 2008. My professional experience includes two years as a
17 Loan Officer with a homebuilder and as an Associate for an Investor Relations firm.

18
19 **Q. What is the scope of your testimony in this case?**

20 A. My testimony provides Staff's recommended capital structure, cost of debt, return on
21 equity ("ROE") and overall rate of return ("ROR") for establishing the revenue
22 requirements for Goodman Water Company's ("GWC" or "Applicant") pending rate
23 application.

1 **Q. Please provide a brief description of GWC.**

2 A. GWC is a for-profit Arizona corporation that is engaged in the business of providing
3 public water (approximately 620 customers) utility service in a portion of Tucson within
4 Pinal County, Arizona.

5
6 **Summary of Testimony and Recommendations**

7 **Q. Briefly summarize how Staff's cost of capital testimony is organized.**

8 A. Staff's cost of capital testimony is presented in eleven sections. Section I is this
9 introduction. Section II discusses the concept of weighted average cost of capital
10 ("WACC"). Section III presents the concept of capital structure and presents Staff's
11 recommended capital structure for GWC in this proceeding. Section IV discusses the
12 concepts of ROE and risk. Section V presents the methods employed by Staff to estimate
13 GWC's ROE. Section VI presents the findings of Staff's ROE analysis. Section VII
14 presents Staff's final cost of equity estimates for GWC. Section VIII presents Staff's Cost
15 of Debt recommendation. Section IX presents Staff's ROR recommendation. Section X
16 presents Staff's comments on the direct testimony of the Applicant's witness, Mr. Thomas
17 J. Bourassa. Finally, section XI presents the conclusions.

18
19 **Q. Have you prepared any exhibits to accompany your testimony?**

20 A. Yes. I prepared nine schedules (JCM-1 to JCM-9) that support Staff's cost of capital
21 analysis.

22
23 **Q. What is Staff's recommended rate of return for GWC?**

24 A. Staff recommends a 9.0 percent overall ROR, as shown in Schedule JCM-1. Staff's ROR
25 recommendation is based on cost of equity estimates for GWC that range from 9.0 percent

1 using the discounted cash flow method ("DCF") to 9.1 percent using the capital asset
2 pricing model ("CAPM") and a cost of debt of 8.5 percent.

3
4 **GWC's Proposed Overall Rate of Return**

5 **Q. Briefly summarize GWC's proposed capital structure, cost of debt, return on equity**
6 **and overall rate of return for this proceeding.**

7 A. Table 1 summarizes the Applicant's proposed capital structure, cost of debt, return on
8 equity and overall rate of return in this proceeding:

9
10 **Table 1**

	Weight	Cost	Weighted Cost
Long-term Debt	18.3%	8.5%	1.6%
Common Equity	81.7%	11.0%	<u>9.0%</u>
Cost of Capital/ROR			10.5%

11
12 GWC is proposing an overall rate of return of 10.5 percent.

13
14 **II. THE WEIGHTED AVERAGE COST OF CAPITAL**

15 **Q. Briefly explain the cost of capital concept.**

16 A. The cost of capital is the opportunity cost of choosing one investment over others with
17 equivalent risk. In other words, the cost of capital is the return that stakeholders expect
18 for investing their financial resources in a determined business venture over another
19 business venture.

20
21 **Q. What is the overall cost of capital?**

22 A. The cost of capital to a company issuing a variety of securities (i.e., stock and
23 indebtedness) is an average of the cost rates on all issued securities adjusted to reflect the

1 relative amounts for each security in the company's entire capital structure. Thus, the
2 overall cost of capital is the weighted average cost of capital ("WACC").
3

4 **Q. How is the WACC calculated?**

5 A. The WACC is calculated by adding the weighted expected returns of a firm's securities.
6 The WACC formula is:

7 Equation 1.

8
9
$$\text{WACC} = \sum_{i=1}^n W_i * r_i$$

10

11 In this equation, W_i is the weight given to the i^{th} security (the proportion of the i^{th} security
12 relative to the portfolio) and r_i is the expected return on the i^{th} security.
13

14 **Q. Can you provide an example demonstrating application of Equation 1?**

15 A. Yes. For this example, assume that an entity has a capital structure composed of 60
16 percent debt and 40 percent equity. Also, assume that the embedded cost of debt is 6.0
17 percent and the expected return on equity, i.e. the cost of equity, is 10.5 percent.
18 Calculation of the WACC is as follows:

19
$$\text{WACC} = (60\% * 6.0\%) + (40\% * 10.5\%)$$

20
$$\text{WACC} = 3.60\% + 4.20\%$$

21
$$\text{WACC} = 7.80\%$$

22

23 The weighted average cost of capital in this example is 7.80 percent. The entity in this
24 example would need to earn an overall rate of return of 7.80 percent to cover its cost of
25 capital.

1 **III. CAPITAL STRUCTURE**

2 **Background**

3 **Q. Please explain the capital structure concept.**

4 A. The capital structure of a firm is the relative proportions of each type of security--short-
5 term debt, long-term debt (including capital leases), preferred stock and common stock--
6 that are used to finance the firm's assets.

7
8 **Q. How is the capital structure expressed?**

9 A. The capital structure of a company is expressed as the percentage of each component of
10 the capital structure (capital leases, short-term debt, long-term debt, preferred stock and
11 common stock) relative to the entire capital structure.

12
13 As an example, the capital structure for an entity that is financed by \$20,000 of capital
14 leases, \$85,000 of long-term debt, \$15,000 of preferred stock and \$80,000 of common
15 stock is shown in Table 2.

16
17 **Table 2**

Component			%
Capital Leases	\$20,000	(\$20,000/\$200,000)	10.0%
Long-Term Debt	\$85,000	(\$85,000/\$200,000)	42.5%
Preferred Stock	\$15,000	(\$15,000/\$200,000)	7.5%
Common Stock	\$80,000	(\$80,000/\$200,000)	40.0%
Total	\$200,000		100%

1 The capital structure in this example is composed of 0.0 percent short-term debt, 10.0
2 percent capital leases, 42.5 percent long-term debt, 7.5 percent preferred stock and 40.0
3 percent common stock.

4
5 **GWC's Capital Structure**

6 **Q. What capital structure does GWC propose?**

7 A. The Applicant proposes a capital structure composed of 18.3 percent debt and 81.7 percent
8 common equity.

9
10 **Q. How does GWC's proposed capital structure compare to capital structures of the**
11 **publicly-traded water utilities?**

12 A. GWC's updated capital structure is composed of 18.3 percent debt and 81.7 percent
13 equity. Schedule JCM-4 shows the capital structures of six publicly-traded water
14 companies ("sample water companies") as of September 2010. The average capital
15 structure for the sample water utilities is comprised of approximately 52.6 percent debt
16 and 47.4 percent equity.

17
18 **Staff's Capital Structure**

19 **Q. What is Staff's recommended capital structure for GWC?**

20 A. Staff recommends using the Applicant's current capital structure which is composed of
21 18.6 percent debt and 81.4 percent equity.

22
23 **Q. Why does Staff's capital structure differ from the Applicant's proposed capital**
24 **structure?**

25 A. Staff used the most updated capital structure, as of December 31, 2010, provided by the
26 Applicant in response to Staff Data Request 5.1, rather than the end of the test year.

1 **IV. RETURN ON EQUITY**

2 **Background**

3 **Q. Please define the term “cost of equity capital.”**

4 A. The cost of equity is the rate of return that investors expect to earn on their investment in a
5 business entity given its risk. In other words, the cost of equity to the entity is the
6 investors’ expected rate of return on other investments of similar risk. As investors have a
7 wide selection of stocks to choose from, they will choose stocks with similar risks but
8 higher returns. Therefore, the market determines the entity’s cost of equity.

9
10 **Q. Is there a correlation between interest rates and the cost of equity?**

11 A. Yes. The cost of equity tends to move in the same direction as interest rates. This
12 relationship is part of the CAPM formula. The CAPM is a market-based model employed
13 by Staff for estimating the cost of equity. The CAPM is further discussed in Section V of
14 this testimony.

15
16 **Q. What has been the general trend of interest rates in recent years?**

17 A. A chronological chart of interest rates is a good tool to show interest rate history and
18 identify trends. Chart 1 graphs intermediate U.S. treasury rates from January 2001 to
19 January 2011.

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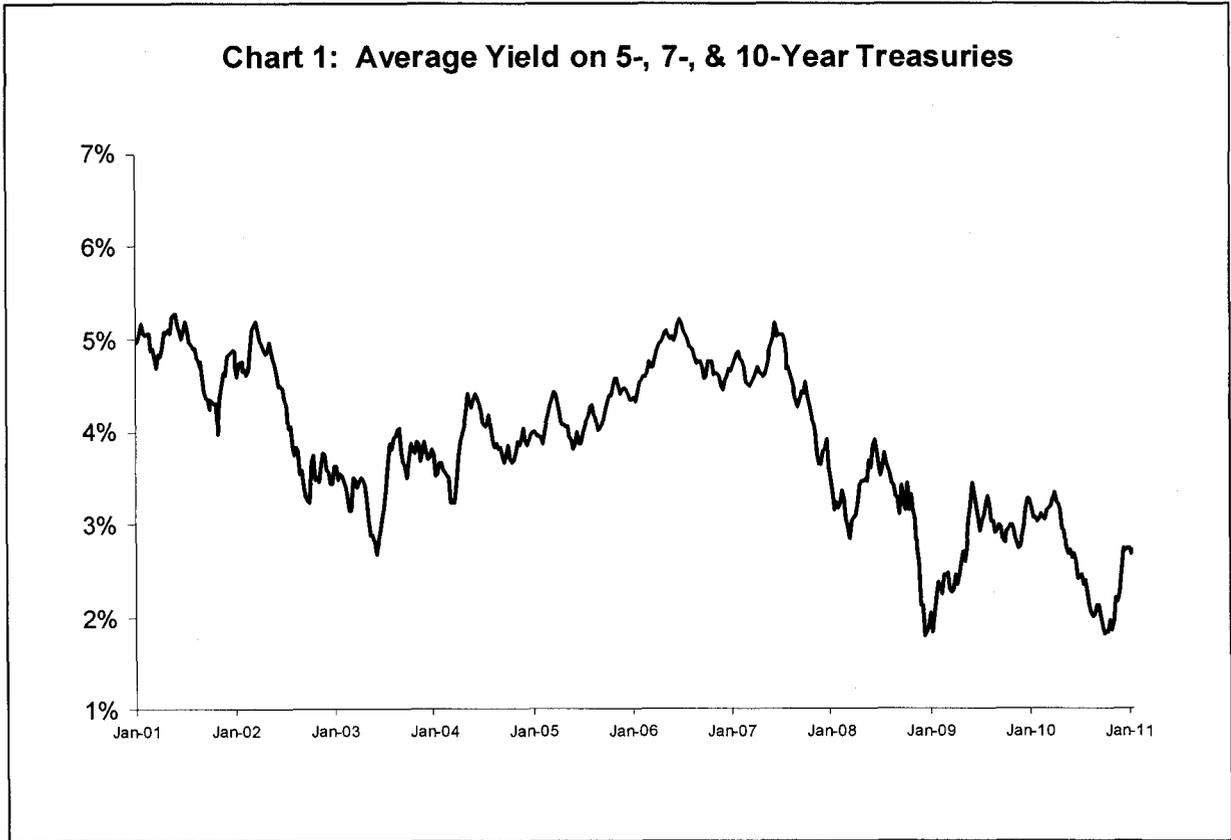
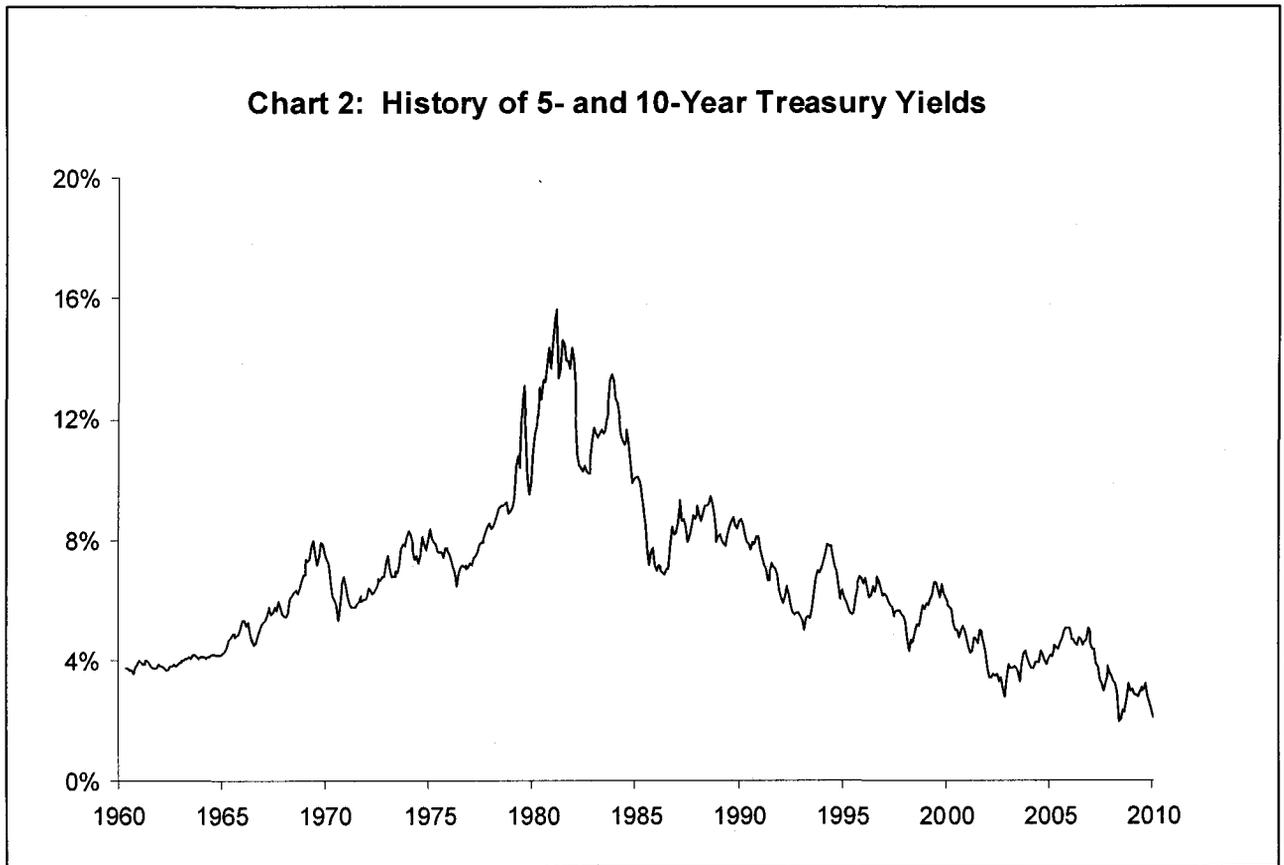


Chart 1 shows that intermediate interest rates trended downward from 2000 to mid-2003, then turned slightly upward until mid-2007 and have trended downward since with dips in early-2009 and again in early-2010.

Q. What has been the general trend in interest rates longer term?

A. U.S. Treasury rates from 1959 to present are shown in Chart 2. The chart shows that interest rates trended upward through the mid-1980s and have trended downward over the last 25 years.

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Source: Federal Reserve

Q. Do these trends suggest anything in terms of cost of equity?

A. Yes. As previously discussed, interest rates and cost of equity tend to move in the same direction. The implication is that the cost of equity has declined in the past 25 years.

Q. Do actual returns represent the cost of equity?

A. No. The cost of equity represents investors' *expected* returns and not realized returns.

1 **Q. Is there any information available that leads to an understanding of the relationship**
2 **between the equity returns required for a regulated water utility and those required**
3 **in the market as a whole?**

4 A. Yes. A comparison of betas, a component of the CAPM discussed in Section V, for the
5 water utility industry and the market provide insight into this relationship. The average
6 beta (0.77)¹ for a water utility is lower than the theoretical average beta for all stocks (1.0).
7 According to the CAPM formula, the cost of equity capital moves in the same direction as
8 beta. Since the beta for the water utility industry is lower than the beta for the market, the
9 implication is that the required return on equity for a regulated water utility is below the
10 average required return on the market.

11

12 **Risk**

13 **Q. Please define risk in relation to cost of capital.**

14 A. Risk, as it relates to an investment, is the variability or uncertainty of the returns on a
15 particular security. Investors are risk averse and require a greater potential return to invest
16 in relatively greater risk opportunities, i.e., investors require compensation for taking
17 on additional risk. Risk is generally separated into two components. Those components
18 are market risk (systematic risk) and non-market risk (diversifiable risk or firm-specific
19 risk).

20

21 **Q. What is market risk?**

22 A. Market risk or systematic risk is the risk of an investment that cannot be reduced through
23 diversification. Market risk stems from factors that affect all securities such as recessions,
24 war, inflation and high interest rates. Since these factors affect the entire market they
25 cannot be eliminated through diversification. Market risk does not impact each security to

¹ See Schedule JCM-7

1 the same degree. The degree to which any security's returns is affected by the market can
2 be measured using Beta. Beta reflects the business risk and the financial risk of a security.

3

4 **Q. Please define business risk.**

5 A. Business risk is the fluctuation of earnings inherent in a firm's operations and environment
6 such as competition and adverse economic conditions that may impair its ability to
7 provide returns on investment. Companies in the same or similar line of business tend to
8 experience the same fluctuations in business cycles.

9

10 **Q. Please define financial risk.**

11 A. Financial risk is the fluctuation of earnings inherent in using debt financing by a firm that
12 may impair its ability to provide adequate return. The more a company uses debt
13 financing, the more the company becomes exposed to financial risk.

14

15 **Q. Do business risk and financial risk affect the cost of equity?**

16 A. Yes.

17

18 **Q. Is a firm subject to any other risk?**

19 A. Yes. Firms are also subject to unsystematic or firm-specific risk. Examples of
20 unsystematic risk include losses caused by labor problems, nationalization of assets, loss
21 of a big client or weather conditions. Investors can eliminate firm-specific risk by holding
22 a diverse portfolio; thus, it is not of concern to diversified investors.

1 **Q. How does GWC's financial risk compare to the sample water companies' financial**
2 **risk from the perspective of an investor?**

3 A. From an investor's perspective GWC's capital structure is less risky than the sample water
4 companies. Schedule JCM-4 shows the capital structures of the six publicly-traded water
5 companies ("sample water companies") as of September 2010, as well as GWC's actual
6 capital structure. As of September 2010, the sample water utilities were capitalized with
7 approximately 52.6 percent debt and 47.4 percent equity, while GWC's actual capital
8 structure consists of approximately 18.6 percent debt and 81.4 percent equity. Thus,
9 GWC's shareholders bear less financial risk than the shareholders of the sample
10 companies.

11
12 **Q. Is firm-specific risk measured by beta?**

13 A. No. Firm-specific risk is not measured by beta.

14
15 **Q. Is the cost of equity affected by firm-specific risk?**

16 A. No. Since firm-specific risk can be eliminated through diversification, it does not affect
17 the cost of equity.

18
19 **Q. Can investors expect additional returns for firm-specific risk?**

20 A. No. Investors who hold diversified portfolios can eliminate firm-specific risk and,
21 consequently, do not require any additional return. Since investors who choose to be less
22 than fully-diversified must compete in the market with fully-diversified investors, the
23 former cannot expect to be compensated for unique risk.

24

1 **V. ESTIMATING THE COST OF EQUITY**

2 **Introduction**

3 **Q. Did Staff directly estimate the cost of equity for GWC?**

4 A. No. Since GWC is not a publicly-traded company, Staff is unable to directly estimate the
5 Applicant's cost of equity due to the unavailability of financial information. Instead, Staff
6 uses an average of a representative sample group to reduce the sample error resulting from
7 random fluctuations in the market at the time the information is gathered.

8
9 **Q. What companies did Staff select as proxies or comparables for GWC?**

10 A. Staff's sample consists of the following six publicly-traded water utilities: American
11 States Water, California Water, Aqua America, Connecticut Water Services, Middlesex
12 Water and SJW Corp. Staff chose these companies because they are publicly-traded and
13 receive the majority of their earnings from regulated operations.

14
15 **Q. What models did Staff implement to estimate GWC's cost of equity?**

16 A. Staff used two market-based models to estimate the cost of equity for GWC: the DCF and
17 the CAPM.

18
19 **Q. Please explain why Staff chose the DCF and CAPM models.**

20 A. Staff chose to use the DCF and CAPM models because they are widely-recognized
21 market-based models and have been used extensively to estimate the cost of equity. An
22 explanation of the DCF and CAPM models follows.

1 **Discounted Cash Flow Model Analysis**

2 **Q. Please provide a brief summary of the theory upon which the DCF method of**
3 **estimating the cost of equity is based.**

4 A. The DCF method of stock valuation is based on the theory that the value of an investment
5 is equal to the sum of the future cash flows generated from the aforementioned investment
6 discounted to the present time. This method uses expected dividends, market price and
7 dividend growth rate to calculate the cost of capital. Professor Myron Gordon pioneered
8 the DCF method in the 1960s. The DCF method has become widely used to estimate the
9 cost of equity for public utilities due to its theoretical merit and its simplicity. Staff used
10 the financial information for the relevant six sample companies in the DCF model and
11 averaged the results to determine an estimated cost of equity for the sample companies.

12
13 **Q. Does Staff use more than one version of the DCF Model?**

14 A. Yes. Staff uses two versions of the DCF model: the constant-growth DCF Model and the
15 multi-stage or non-constant growth DCF. The constant-growth DCF Model assumes that
16 an entity's dividends will grow indefinitely at the same rate. The multi-stage growth DCF
17 model assumes the dividend growth rate will change at some point in the future.

1 *The Constant-Growth DCF*

2 **Q. What is the mathematical formula used in Staff's constant-growth DCF analysis?**

3 A. The constant-growth DCF formula used in Staff's analysis is:

Equation 2 :

$$K = \frac{D_1}{P_0} + g$$

where : K = the cost of equity
 D_1 = the expected annual dividend
 P_0 = the current stock price
 g = the expected infinite annual growth rate of dividends

4 Equation 2 assumes that the entity has a constant earnings retention rate and that its
5 earnings are expected to grow at a constant rate. According to Equation 2, a stock with a
6 current market price of \$10 per share, an expected annual dividend of \$0.45 per share and
7 an expected dividend growth rate of 3.0 percent per year has a cost of equity to the entity
8 of 7.5 percent reflected by the sum of the dividend yield ($\$0.45 / \$10 = 4.5$ percent) and the
9 3.0 percent annual dividend growth rate.

10
11 **Q. How did Staff calculate the dividend yield component (D_1/P_0) of the constant-growth**
12 **DCF formula?**

13 A. Staff calculated the yield component of the DCF formula by dividing the expected annual
14 dividend² (D_1) by the spot stock price (P_0) after the close of the market January 19, 2011,
15 as reported by the website *MSN Money*.

² Value Line Summary & Index. 1-28-11

1 **Q. Why did Staff use the January 19, 2011, spot price rather than a historical average**
2 **stock price to calculate the dividend yield component of the DCF formula?**

3 A. Current, rather than historic, market stock price is used in order to be consistent with
4 finance theory, i.e., the efficient market hypothesis. The efficient market hypothesis
5 asserts that the current stock price reflects all available information on a stock including
6 investors' expectations of future returns. Use of a historical average of stock prices
7 illogically discounts the most recent information in favor of less recent information. The
8 latter is stale and is representative of underlying conditions that may have changed.

9
10 **Q. How did Staff estimate the dividend growth (g) component of the constant-growth**
11 **DCF model represented by Equation 2?**

12 A. The dividend growth component used by Staff is determined by the average of six
13 different estimation methods, as shown in Schedule JCM-8. Staff calculated historical and
14 projected growth estimates on dividend-per-share ("DPS"),³ earnings-per-share ("EPS")⁴
15 and sustainable growth bases.

16
17 **Q. Why did Staff examine EPS growth to estimate the dividend growth component of**
18 **the constant-growth DCF model?**

19 A. Historic and projected EPS growth are used because dividends are related to earnings.
20 Dividend distributions may exceed earnings in the short run but cannot continue
21 indefinitely. In the long term, dividend distributions are dependent on earnings.

³ Derived from information provided by *Value Line*

⁴ Derived from information provided by *Value Line*

1 **Q. How did Staff estimate historical DPS growth?**

2 A. Staff estimated historical DPS growth by calculating the average rate of growth in DPS of
3 the sample water companies from 2000 to 2010. The results of that calculation are shown
4 in Schedule JCM-5. Staff calculated an average historical DPS growth rate of 3.1 percent
5 for the sample water utilities for the aforementioned period.

6
7 **Q. How did Staff estimate the projected DPS growth?**

8 A. Staff calculated an average of the projected DPS growth rates for the sample water utilities
9 from *Value Line*. The average projected DPS growth rate is 3.1 percent, as shown in
10 Schedule JCM-5.

11
12 **Q. How did Staff calculate the historical EPS growth rate?**

13 A. Staff estimated historical EPS growth by calculating the average rate of growth in EPS of
14 the sample water companies from 2000 to 2010. Staff calculated an average historical
15 EPS growth rate of 4.6 percent for the sample water utilities for the aforementioned
16 period, as shown in Schedule JCM-5.

17
18 **Q. How did Staff estimate the projected EPS growth?**

19 A. Staff calculated an average of the projected EPS growth rates for the sample water utilities
20 from *Value Line*. The average projected EPS growth rate is 4.9 percent, as shown in
21 Schedule JCM-5.

22

1 **Q. How does Staff calculate its historical and projected sustainable growth rates?**

2 A. Historical and projected sustainable growth rates are calculated by adding their respective
3 retention growth rate terms (br) to their respective stock financing growth rate terms (vs)
4 as shown in Schedule JCM-6.

5
6 **Q. What is retention growth?**

7 A. Retention growth is the growth in dividends due to the retention of earnings. The
8 retention growth concept is based on the theory that dividend growth cannot be achieved
9 unless the company retains and reinvests some of its earnings. The retention growth is
10 used in Staff's calculation of sustainable growth shown in Schedule JCM-6.

11
12 **Q. What is the formula for the retention growth rate?**

13 A. The retention growth rate is the product of the retention ratio and the book/accounting
14 return on equity. The retention growth rate formula is:

15 Equation 3 :

$$\text{Retention Growth Rate} = br$$

where : b = the retention ratio (1 – dividend payout ratio)

r = the accounting/book return on common equity

16
17 **Q. How did Staff calculate the average historical retention growth rate (br) for the**
18 **sample water utilities?**

19 A. Staff calculated the historical retention rates by averaging the retention rates for the
20 sample water companies from 2001 to 2010. The historical average retention (br) growth
21 for the sample water utilities is 2.9 percent, as shown in Schedule JCM-6.

1 **Q. How did Staff determine projected retention growth rate (br) for the sample water**
2 **utilities?**

3 A. Staff used the retention growth projections for the sample water utilities for the period
4 2013 to 2015 from *Value Line*. The projected average retention growth rate for the sample
5 water utilities is 5.6 percent, as shown in Schedule JCM-6.

6
7 **Q. When can retention growth provide a reasonable estimate of future dividend**
8 **growth?**

9 A. The retention growth rate is a reasonable estimate of future dividend growth when the
10 retention ratio is reasonably constant and the entity's market price to book value ("market-
11 to-book ratio") is expected to be 1.0. The average retention ratio has been reasonably
12 constant in recent years. However, the market-to-book ratio for the sample water utilities
13 is 2.0, notably higher than 1.0, as shown in Schedule JCM-7.

14
15 **Q. Is there any financial implication of a market-to-book ratio greater than 1.0?**

16 A. Yes. A market-to-book ratio greater than 1.0 implies that investors expect an entity to
17 earn an accounting/book return on its equity that exceeds its cost of equity. The
18 relationship between required returns and expected cash flows is readily observed in the
19 fixed securities market. For example, assume an entity contemplating issuance of bonds
20 with a face value of \$10 million at either 6 percent or 8 percent, and thus, paying annual
21 interest of \$600,000 or \$800,000, respectively. Regardless of investors' required return on
22 similar bonds, investors will be willing to pay more for the bonds if issued at 8 percent
23 than if the bonds are issued at 6 percent. For example, if the current interest rate required
24 by investors is 6 percent, then they would bid \$10 million for the 6 percent bonds and
25 more than \$10 million for the 8 percent bonds. Similarly, if equity investors require a 9
26 percent return and expect an entity to earn accounting/book returns of 13 percent, the

1 market will bid up the price of the entity's stock to provide the required return of 9
2 percent.

3
4 **Q. How has Staff generally recognized a market-to-book ratio exceeding 1.0 in its cost of
5 equity analyses in recent years?**

6 A. Staff has assumed that investors expect the market-to-book ratio to remain greater than
7 1.0. Given that assumption, Staff has added a stock financing growth rate (vs) term to the
8 retention ratio (br) term to calculate its historical and projected sustainable growth rates.

9
10 **Q. Do the historical and projected sustainable growth rates Staff uses to develop its
11 DCF cost of equity in this case continue to include a stock financing growth rate
12 term?**

13 A. Yes.

14
15 **Q. What is stock financing growth?**

16 A. Stock financing growth is the growth in an entity's dividends due to the sale of stock by
17 that entity. Stock financing growth is a concept derived by Myron Gordon and discussed
18 in his book *The Cost of Capital to a Public Utility*.⁵ Stock financing growth is the product
19 of the fraction of the funds raised from the sale of stock that accrues to existing
20 shareholders (v) and the fraction resulting from dividing the funds raised from the sale of
21 stock by the existing common equity (s).

⁵ Gordon, Myron J. *The Cost of Capital to a Public Utility*. MSU Public Utilities Studies, Michigan, 1974. pp 31-35.

1 **Q. What is the mathematical formula for the stock financing growth rate?**

2 A. The mathematical formula for stock financing growth is:

Equation 4:

$$\text{Stock Financing Growth} = vs$$

where: v = Fraction of the funds raised from the sale of stock that accrues
to existing shareholders

s = Funds raised from the sale of stock as a fraction of the existing
common equity

3

4 **Q. How is the variable v presented above calculated?**

5 A. Variable v is calculated as follows:

Equation 5:

$$v = 1 - \left(\frac{\text{book value}}{\text{market value}} \right)$$

6

7 For example, assume that a share of stock has a \$30 book value and is selling for \$45.

8 Then, to find the value of v , the formula is applied:

$$v = 1 - \left(\frac{30}{45} \right)$$

9

In this example, v is equal to 0.33.

10

11 **Q. How is the variable s presented above calculated?**

12 A. Variable s is calculated as follows:

13

Equation 6:

14

$$s = \frac{\text{Funds raised from the issuance of stock}}{\text{Total existing common equity before the issuance}}$$

15

1 For example, assume that an entity has \$150 in existing equity, and it sells \$30 of stock.

2 Then, to find the value of s , the formula is applied:

$$s = \left(\frac{30}{150} \right)$$

3 In this example, s is equal to 20.0 percent.

4
5 **Q. What is the vs term when the market-to-book ratio is equal to 1.0?**

6 A. A market-to-book ratio equal to 1.0 reflects that investors expect an entity to earn a
7 book/accounting return on their equity investment equal to the cost of equity. When the
8 market-to-book ratio is equal to 1.0, none of the funds raised from the sale of stock by the
9 entity accrues to the benefit of existing shareholders, i.e., the term v is equal to zero (0.0).
10 Consequently, the vs term is also equal to zero (0.0). When stock financing growth is
11 zero, dividend growth depends solely on the br term.

12
13 **Q. What is the effect of the vs term when the market-to-book ratio is greater than 1.0?**

14 A. A market-to-book ratio greater than 1.0 reflects that investors expect an entity to earn a
15 book/accounting return on their equity investment greater than the cost of equity.
16 Equation 5 shows that when the market-to-book ratio is greater than 1.0 the v term is also
17 greater than zero. The excess by which new shares are issued and sold over book value
18 per share of outstanding stock is a contribution that accrues to existing stockholders in the
19 form of a higher book value. The resulting higher book value leads to higher expected
20 earnings and dividends. Continued growth from the vs term is dependent upon the
21 continued issuance and sale of additional shares at a price that exceeds book value per
22 share.

1 **Q. What *vs* estimate did Staff calculate from its analysis of the sample water utilities?**

2 A. Staff estimated an average stock financing growth of 2.4 percent for the sample water
3 utilities, as shown in Schedule JCM-6.

4
5 **Q. What would occur if an entity had a market-to-book ratio greater than 1.0 as a result
6 of investors expecting earnings to exceed the cost of equity capital and the entity
7 subsequently experienced newly-authorized rates equal to its cost of equity capital?**

8 A. Market pressure on the entity's stock price to reflect the change in future expected cash
9 flows would cause the market-to-book ratio to move toward 1.0.

10
11 **Q. Is inclusion of the *vs* term necessary if the average market-to-book ratio of the
12 sample water utilities falls to 1.0 due to authorized ROEs equaling the cost of equity?**

13 A. No. As discussed above, when the market-to-book ratio is equal to 1.0, none of the funds
14 raised from the sale of stock by the entity accrues to the benefit of existing shareholders
15 because the *v* term equals to zero, and consequently, the *vs* term also equals zero. When
16 the market-to-book ratio equals 1.0, dividend growth depends solely on the *br* term.
17 Staff's inclusion of the *vs* term assumes that the market-to-book ratio continues to exceed
18 1.0 and that the water utilities will continue to issue and sell stock at prices above book
19 value with the effect of benefitting existing shareholders.

20
21 **Q. What are Staff's historical and projected sustainable growth rates?**

22 A. Staff's estimated historical sustainable growth rate is 5.4 percent based on an analysis of
23 earnings retention for the sample water companies. Staff's projected sustainable growth
24 rate is 9.1 percent based on retention growth projected by *Value Line*. Schedule JCM-6
25 presents Staff's estimates of the sustainable growth rate.

1 **Q. What is Staff's expected infinite annual growth rate in dividends?**

2 A. Staff's expected infinite annual growth rate in dividends is 5.0 percent which is the
3 average of historical and projected DPS, EPS, and sustainable growth estimates. Staff's
4 calculation of the expected infinite annual growth rate in dividends is shown in Schedule
5 JCM-8.

6
7 **Q. What is Staff's constant-growth DCF estimate for the sample utilities?**

8 A. Staff's constant-growth DCF estimate is 8.3 percent, as shown in Schedule JCM-3.

9
10 *The Multi-Stage DCF*

11 **Q. Why did Staff implement the multi-stage DCF model to estimate GWC's cost of**
12 **equity?**

13 A. Staff generally uses the multi-stage DCF model to consider the assumption that dividends
14 may not grow at a constant rate. The multi-stage DCF uses two stages of growth. The
15 first stage is four years followed by the second constant growth stage.

1 **Q. What is the mathematical formula for the multi-stage DCF?**

2 A. The multi-stage DCF formula is shown in the following equation:

Equation 7 :

$$P_0 = \sum_{t=1}^n \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n} \left[\frac{1}{(1+K)} \right]^n$$

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

3

4 **Q. What steps did Staff take to implement its multi-stage DCF cost of equity model?**

5 A. First, Staff projected future dividends for each of the sample water utilities using near-
6 term and long-term growth rates. Second, Staff calculated the rate (cost of equity) which
7 equates the present value of the forecasted dividends to the current stock price for each of
8 the sample water utilities. Lastly, Staff calculated an average of the individual sample
9 company cost of equity estimates.

10

11 **Q. How did Staff calculate near-term (stage-1) growth?**

12 A. The stage-1 growth rate is based on *Value Lines*'s projected dividends for the next twelve
13 months, when available, and on the average dividend growth rate (5.0 percent) calculated
14 in Staff's constant DCF analysis for the remainder of the stage.

1 **Q. How did Staff estimate long-term (stage-2) growth?**

2 A. Staff calculated the stage-2 growth rate using the arithmetic mean rate of growth in GDP
3 from 1929 to 2009.⁶ Using the GDP growth rate assumes that the water utility industry is
4 expected to grow at the same rate as the overall economy.

5
6 **Q. What is the historical GDP growth rate that Staff used to estimate stage-2 growth?**

7 A. Staff used 6.6 percent to estimate the stage-2 growth rate.

8
9 **Q. What is Staff's multi-stage DCF estimate for the sample utilities?**

10 A. Staff's multi-stage DCF estimate is 9.7 percent, as shown in Schedule JCM-3.

11
12 **Q. What is Staff's overall DCF estimate for the sample utilities?**

13 A. Staff's overall DCF estimate is 9.0 percent. Staff calculated the overall DCF estimate by
14 averaging the constant growth DCF (8.3 percent) and multi-stage DCF (9.7 percent)
15 estimates, as shown in Schedule JCM-3.

16
17 **Capital Asset Pricing Model**

18 **Q. Please describe the CAPM.**

19 A. The CAPM is used to determine the prices of securities in a competitive market. The
20 CAPM model describes the relationship between a security's investment risk and its
21 market rate of return. Under the CAPM an investor requires the expected return of a
22 security to equal the rate on a risk-free security plus a risk premium. If the investor's
23 expected return does not meet or beat the required return, the investment is not
24 economically justified. The model also assumes that investors will sufficiently diversify

⁶ www.bea.doc.gov

1 their investments to eliminate any non-systematic or unique risk.⁷ In 1990, Professors
2 Harry Markowitz, William Sharpe, and Merton Miller earned the Nobel Prize in
3 Economic Sciences for their contribution to the development of the CAPM.

4
5 **Q. Did Staff use the same sample water utilities in its CAPM and DCF cost of equity**
6 **estimation analyses?**

7 A. Yes. Staff's CAPM cost of equity estimation analysis uses the same sample water
8 companies as its DCF cost of equity estimation analysis.

9
10 **Q. What is the mathematical formula for the CAPM?**

11 A. The mathematical formula for the CAPM is:

12
Equation 8 :

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

where: R_f = risk free rate
 R_m = return on market
 β = beta
 $R_m - R_f$ = market risk premium
 K = expected return

13
14 The equation shows that the expected return (K) on a risky asset is equal to the risk-free
15 interest rate (R_f) plus the product of the market risk premium ("Rp") ($R_m - R_f$) multiplied
16 by beta (β) where beta represents the riskiness of the investment relative to the market.

⁷ The CAPM makes the following assumptions: 1) single holding period; 2) perfect and competitive securities market; 3) no transaction costs; 4) no restrictions on short selling or borrowing; 5) the existence of a risk-free rate; and 6) homogeneous expectations.

1 **Q. What is the risk free rate?**

2 A. The risk free rate is the rate of return of an investment with zero risk.

3

4 **Q. What does Staff use as surrogates to represent estimations of the risk-free rates of**
5 **interest in its historical and current market risk premium CAPM methods?**

6 A. Staff uses separate parameters as surrogates for the estimations of the risk-free rates of
7 interest for the historical market risk premium CAPM cost of equity estimation and the
8 current market risk premium CAPM cost of equity estimation. Staff uses the average of
9 three (five-, seven-, and ten-year) intermediate-term U.S. Treasury securities' spot rates in
10 its historical market risk premium CAPM cost of equity estimation, and the 30-year U.S.
11 Treasury bond spot rate in its current market risk premium CAPM cost of equity
12 estimation. U.S. Treasuries are largely verifiable and readily available.

13

14 **Q. What does beta measure?**

15 A. Beta measures the volatility, or systematic risk, of a security relative to the market. Since
16 systematic risk cannot be diversified away, it is the only risk that is relevant when
17 estimating a security's required return. Using a baseline market beta of 1.0, a security
18 with a beta less than 1.0 will be less volatile than the market. A security with a beta
19 greater than 1.0 will be more volatile than the market.

20

21 **Q. How did Staff estimate GWC's beta?**

22 A. Staff used the average of the *Value Line* betas for the sample water utilities as a proxy for
23 GWC's beta. Schedule JCM-7 shows the *Value Line* betas for each of the sample water
24 utilities. The 0.77 average beta for the sample water utilities is Staff's estimated beta for
25 GWC. A security with a 0.77 beta has less volatility than the market.

1 **Q. Please describe expected market risk premium ($R_m - R_f$)?**

2 A. The expected market risk premium is the expected return on the market above the risk free
3 rate. Simplified, it is the return an investor expects as compensation for market risk.

4
5 **Q. What did Staff use for the market risk premium?**

6 A. Staff uses separate calculations for the market risk premium in its historical and current
7 market risk premium CAPM methods.

8
9 **Q. How did Staff calculate an estimate for the market risk premium in its historical
10 market risk premium CAPM method?**

11 A. Staff uses the intermediate-term government bond income returns published in the
12 Ibbotson Associates' *Stocks, Bonds, Bills, and Inflation 2009 Yearbook* to calculate the
13 historical market risk premium. Ibbotson Associates calculates the historical risk
14 premium by averaging the historical arithmetic differences between the S&P 500 and the
15 intermediate-term government bond income returns for the period 1926-2009. Staff's
16 historical market risk premium estimate is 7.2 percent, as shown in Schedule JCM-3.

17
18 **Q. How did Staff calculate an estimate for the market risk premium in its current
19 market risk premium CAPM method?**

20 A. Staff solves equation 8 above to arrive at a market risk premium using a DCF derived
21 expected return (K) of 11.53 ($1.8 + 9.73^8$) percent using the expected dividend yield (1.8
22 percent over the next twelve months) and the annual per share growth rate (9.73 percent)
23 that *Value Line* projects for all dividend-paying stocks under its review⁹ along with the
24 current long-term risk-free rate (30-year Treasury note at 4.53 percent) and the market's

⁸ The three to five year price appreciation is 45%. $1.45^{0.25} - 1 = 9.73\%$

⁹ January 28, 2011 issue date.

1 average beta of 1.0. Staff calculated the current market risk premium as 7.00¹⁰ as shown
2 in Schedule JCM-3.

3
4 **Q. What is the result of Staff's historical market risk premium CAPM and current
5 market risk premium CAPM cost of equity estimations for the sample utilities?**

6 A. Staff's cost of equity estimates are 8.2 percent using the historical market risk premium
7 CAPM and 9.9 using the current market risk premium CAPM.

8
9 **Q. What is Staff's overall CAPM estimate for the sample utilities?**

10 A. Staff's overall CAPM cost of equity estimate is 9.1 percent which is the average of the
11 historical market risk premium CAPM (8.2 percent) and the current market risk premium
12 CAPM (9.9 percent) estimates, as shown in Schedule JCM-3.

13
14 **VI. SUMMARY OF STAFF'S COST OF EQUITY ANALYSIS**

15 **Q. What is the result of Staff's constant-growth DCF analysis to estimate of the cost of
16 equity to the sample water utilities?**

17 A. Schedule JCM-3 shows the result of Staff's constant-growth DCF analysis. The result of
18 Staff's constant-growth DCF analysis is as follows:

19
20
$$k = 3.3\% + 5.0\%$$

21
22
$$k = 8.3\%$$

23 Staff's constant-growth DCF estimate of the cost of equity to the sample water utilities is
24 8.3 percent.

¹⁰ 11.53% = 4.53% + (1) (7.00%)

1 **Q. What is the result of Staff's multi-stage DCF analysis to estimate of the cost of equity**
2 **for the sample utilities?**

3 A. Schedule JCM-9 shows the result of Staff's multi-stage DCF analysis. The result of
4 Staff's multi-stage DCF analysis is:

5

6 Applicant	7 Equity Cost 8 Estimate (k)
9 American States Water	9.6%
10 California Water	9.6%
11 Aqua America	9.3%
12 Connecticut Water	10.1%
13 Middlesex Water	10.5%
14 SJW Corp	<u>9.2%</u>
15 Average	9.7%

16

17 Staff's multi-stage DCF estimate of the cost of equity for the sample water utilities is 9.7
18 percent.

19

20 **Q. What is Staff's overall DCF estimate of the cost of equity for the sample utilities?**

21 A. Staff's overall DCF estimate of the cost of equity for the sample utilities is 9.0 percent.
22 Staff calculated an overall DCF cost of equity estimate by averaging Staff's constant
23 growth DCF (8.3 percent) and Staff's multi-stage DCF (9.7 percent) estimates, as shown
24 in Schedule JCM-3.

25

26 **Q. What is the result of Staff's historical market risk premium CAPM analysis to**
27 **estimate of the cost of equity for the sample utilities?**

28 A. Schedule JCM-3 shows the result of Staff's CAPM analysis using the historical risk
29 premium estimate. The result is as follows:

30

$$k = 2.7\% + 0.77 * 7.2\%$$
$$k = 8.2\%$$

1 Staff's CAPM estimate (using the historical market risk premium) of the cost of equity to
2 the sample water utilities is 8.2 percent.

3
4 **Q. What is the result of Staff's current market risk premium CAPM analysis to**
5 **estimate the cost of equity for the sample utilities?**

6 A. Schedule JCM-3 shows the result of Staff's CAPM analysis using the current market risk
7 premium estimate. The result is:

8
$$k = 4.5\% + 0.77 * 7.0\%$$

9
10
$$k = 9.9\%$$

11 Staff's CAPM estimate (using the current market risk premium) of the cost of equity to the
12 sample water utilities is 9.9 percent.

13
14 **Q. What is Staff's overall CAPM estimate of the cost of equity for the sample utilities?**

15 A. Staff's overall CAPM estimate for the sample utilities is 9.1 percent. Staff's overall
16 CAPM estimate is the average of the historical market risk premium CAPM (8.2 percent)
17 and the current market risk premium CAPM (9.9 percent) estimates, as shown in Schedule
18 JCM-3.

1 **Q. Please summarize the results of Staff's cost of equity analysis for the sample utilities.**

2 A. The following table shows the results of Staff's cost of equity analysis:

3

4

Table 2

Method	Estimate
Average DCF Estimate	9.0%
Average CAPM Estimate	9.1%
Overall Average	9.1%

5

6 Staff's average estimate of the cost of equity to the sample water utilities is 9.1 percent.

7

8 **VII. FINAL COST OF EQUITY ESTIMATES FOR GWC**

9 **Q. Please compare GWC's capital structure to that of the six sample water companies.**

10 A. The average capital structure for the sample water utilities is composed of 47.4 percent
11 equity and 52.6 percent debt, as shown in Schedule JCM-4. GWC's capital structure is
12 composed of 81.4 percent equity and 18.6 percent debt. In this case, since GWC's capital
13 structure is less leveraged than that of the average sample water utilities' capital structure,
14 its stockholders bear less financial risk than the sample water utilities. Accordingly,
15 GWC's cost of equity is lower than that of the sample water utilities.

16

17 **Q. What is Staff's ROE estimate for GWC?**

18 A. Staff determined an ROE estimate of 9.1 percent for the Applicant based on cost of equity
19 estimates for the sample companies ranging from 9.0 percent for the DCF to 9.1 percent
20 for the CAPM.

1 **Q. Why does Staff not use a financial risk adjustment to calculate the effect on the cost**
2 **of equity capital of the different financial risks posed by GWC versus the sample**
3 **companies?**

4 A. In this case, Staff does not use a financial risk adjustment because GWC is not a publicly-
5 traded company, and thus, it does not have access to the capital markets.

6
7 **VIII. COST OF DEBT**

8 **Q. What is Staff's Cost of Debt recommendation?**

9 A. The Applicant is proposing an 8.5 percent cost of debt representing the interest rate on its
10 loan with its affiliate EC Development. Staff agrees with this cost of debt and
11 recommends that it be adopted.

12
13 **IX. RATE OF RETURN RECOMMENDATION**

14 **Q. What overall rate of return did Staff determine for GWC?**

15 A. Staff determined a 9.0 percent ROR for the Applicant, as shown in Schedule JCM-1 and in
16 the following table:

17
18 **Table 3**

19

	Weight	Cost	Weighted Cost
Long-term Debt	18.6%	8.5%	1.6%
Common Equity	81.4%	9.1%	<u>7.4%</u>
Overall ROR			<u>9.0%</u>

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

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

4 A. Mr. Bourassa recommends a 11.0 percent ROE based on analyses for two constant growth
5 DCF models (Past and Future Growth and Future Only Growth), as well as historical and
6 current market risk premium CAPM for the same sample of water companies selected by
7 Staff. Mr. Bourassa also asserts that GWC faces additional risks not captured by the
8 market models, such as regulatory and financial risk, and he concludes that an 11.0
9 percent ROE presents a reasonable balance resulting from his analyses. Mr. Bourassa
10 proposes 10.54 percent for the overall ROR with a capital structure consisting of 18.32
11 percent equity and 81.68 percent debt.

12
13 **Constant-Growth DCF**

14 **Q. Does Mr. Bourassa give equal weight to historical data and analysts' projections to**
15 **estimate the growth component of his DCF cost of equity estimate?**

16 A. No. Mr. Bourassa's DCF cost of equity estimate is based on the midpoint of his (1) Past
17 and Future Growth estimate and (2) Future Growth estimate. Half of the Past and Future
18 Growth estimate relies on analysts' projections of earnings growth and the entire Future
19 Growth estimate relies on analysts' projections of earnings growth. Thus, choosing the
20 midpoint of the two methods provides analysts' projections with 75 percent of the weight
21 compared to 25 percent for historical data. In addition, Mr. Bourassa's Past and Future
22 Growth estimate provides equal weight to stock price, book value per share, earnings per
23 share and dividends per share. Thus, only one-eighth (12.5 percent) of his method of
24 estimating the dividend growth relies on the growth in dividends per share.

1 **Q. Does Staff have any comments on Mr. Bourassa's heavy reliance on analysts'**
2 **forecasts to estimate DPS growth in his constant growth DCF estimates?**

3 A. Yes. Generally, analysts' forecasts are known to be overly optimistic. Heavy use of
4 analysts' forecasts to calculate the growth in dividends (g), will cause inflated growth, and
5 consequently, inflated cost of equity estimates unless investors give the same strong
6 weight to analysts' forecasts. Also, heavy reliance on analysts' forecasts of earnings
7 growth to forecast DPS is inappropriate because it assumes that investors discount other
8 relevant information such as past dividend and earnings growth.

9
10 **Q. Does Staff have any evidence to support its assertion that heavy reliance on analysts'**
11 **forecasts of earnings growth in the DCF model would result in inflated cost of equity**
12 **estimates?**

13 A. Yes. Experts in the financial community have commented on the optimism in analysts'
14 forecasts of future earnings.¹¹ A study cited by David Dreman in his book *Contrarian*
15 *Investment Strategies: The Next Generation* found that *Value Line* analysts were
16 optimistic in their forecasts by 9 percent annually, on average for the 1987 – 1989 period.
17 Another study conducted by David Dreman found that between 1982 and 1997, analysts
18 overestimated the growth of earnings of companies in the S&P 500 by 188 percent.

19 Also, Burton Malkiel of Princeton University studied the one-year and five-year earnings
20 forecasts made by some of the most respected names in the investment business. His
21 results showed that the five-year estimates of professional analysts, when compared with
22 actual earnings growth rates, were much worse than the predictions from several naïve
23 forecasting models, such as the long-run rate of growth of national income. In the

¹¹ See Seigel, Jeremy J. *Stocks for the Long Run*. 2002. McGraw-Hill. New York. p. 100. Dreman, David. *Contrarian Investment Strategies: The Next Generation*. 1998. Simon & Schuster. New York. pp. 97-98. Malkiel, Burton G. *A Random Walk Down Wall Street*. 2003. W.W. Norton & Co. New York. p. 175. Testimony of Professors Myron J. Gordon and Lawrence I. Gould, consultant to the Trial Staff (Common Carrier Bureau), FCC Docket 79-63, p. 95.

1 following excerpt from Professor Malkiel's book *A Random Walk Down Wall Street*, he
2 discusses the results of his study:

3 When confronted with the poor record of their five-year growth
4 estimates, *the security analysts honestly, if sheepishly, admitted*
5 *that five years ahead is really too far in advance to make reliable*
6 *projections.* They protested that although long-term projections
7 are admittedly important, they really ought to be judged on their
8 ability to project earnings changes one year ahead. Believe it or
9 not, it turned out that their one-year forecasts were even worse than
10 their five-year projections.

11 The analysts fought back gamely. They complained that it was
12 unfair to judge their performance on a wide cross section of
13 industries, because earnings for high-tech firms and various
14 "cyclical" companies are notoriously hard to forecast. *"Try us on*
15 *utilities," one analyst confidently asserted. At the time they were*
16 *considered among the most stable group of companies because of*
17 *government regulation. So we tried it and they didn't like it. Even*
18 *the forecasts for the stable utilities were far off the mark.*¹²
19 (Emphasis added)

20
21 **Q. Are investors aware of the problems related to analysts' forecasts?**

22 A. Yes. In addition to books, there are numerous published articles appearing in *The Wall*
23 *Street Journal* and other financial publications that cast doubt as to how accurate research
24 analysts are in their forecasts.¹³ Investors, being keenly aware of these inherent biases in
25 forecasts, will use other methods to assess future growth.
26

¹² Malkiel, Burton G. *A Random Walk Down Wall Street*. 2003. W.W. Norton & Co. New York. p. 175

¹³ See Smith, Randall & Craig, Suzanne. "Big Firms Had Research Ploy: Quiet Payments Among Rivals." *The Wall Street Journal*. April 30, 2003. Brown, Ken. "Analysts: Still Coming Up Rosy." *The Wall Street Journal*. January 27, 2003. p. C1. Karmin, Craig. "Profit Forecasts Become Anybody's Guess." *The Wall Street Journal*. January 21, 2003. p. C1. Gasparino, Charles. "Merrill Lynch Investigation Widens." *The Wall Street Journal*. April 11, 2002. p. C4. Elstein, Aaron. "Earnings Estimates Are All Over the Map." *The Wall Street Journal*. August 2, 2001. p. C1. Dreman, David. "Don't Count on those Earnings Forecasts." *Forbes*. January 26, 1998. p. 110.

1 **Q. Does Staff have any comments on the study cited by Mr. Bourassa, conducted by**
2 **David A. Gordon, Myron J. Gordon and Lawrence I. Gould¹⁴ that he asserts**
3 **supports heavy use of analysts' forecasts in the DCF model?**

4 A. Yes. The article cited by Mr. Bourassa does not conclude that investors ignore or heavily
5 discount past growth when pricing stocks. Instead, the article describes more generally
6 that methods exclusively using analysts' forecasts are "popular or attractive models", but
7 the article does not support the conclusion that these forecasts should be used alone or as
8 the primary estimates.

9
10 **Q. Does Professor Gordon recommend relying exclusively on analysts' forecasts as the**
11 **measure of growth in the DCF model?**

12 A. No. Subsequent to the study cited by Mr. Bourassa,¹⁵ Professor Gordon provided the
13 keynote address at the 30th Financial Forum of the Society of Utility and Regulatory
14 Financial Analysts, in which he stated:

15 I understand that companies coming before regulatory agencies
16 liked and advocated the high growth rates in security analyst
17 forecasts for arriving at their cost of equity capital. Instead of
18 rejecting these forecasts, I understand that FERC and other
19 regulatory agencies have decided to compromise with them. In
20 particular, in arriving at the cost of equity for company X, the
21 FERC has decided to arrive at the growth rate in my dividend
22 growth model by using an average of two growth rates. One is
23 security analysts forecast of the short-term growth rate in earnings
24 provided by IBES or Value Line and the other a more long run and
25 typically lower figure such as the past growth in GNP.

26 Such an average can be questioned on various grounds. However,
27 my judgment is that between the short-term forecast alone and its

¹⁴ Gordon, David A., Myron J. Gordon, Lawrence I. Gould. "Choice Among Methods of Estimating Share Yield." *The Journal of Portfolio Management*. Spring 1989. pp. 50-55. (Bourassa's direct testimony, page 28, footnote.)

¹⁵ Ibid.

1 average with the past growth rate in GNP, *the latter may be a more*
2 *reasonable figure.*¹⁶ (Emphasis added)

3
4 Simply stated, Professor Gordon would temper the typically higher analysts' forecasts
5 with the typically lower GNP growth rate by averaging the two.

6
7 **Q. How does Staff respond to Mr. Bourassa's statement, "Logically, in estimating future**
8 **growth, financial institutions and analysts have taken into account all relevant**
9 **historical information on a company as well as other more recent information. To**
10 **the extent that past results provide useful indications of future growth prospects,**
11 **analysts' forecasts would already incorporate that information"?** (Bourassa's Direct
12 **Testimony, Page 28, line 1-4)**

13 A. The appropriate growth rate to use in the DCF formula is the dividend growth rate
14 expected by *investors*, not analysts. Therefore, while analysts may have considered
15 historical measures of growth, it is reasonable to assume that investors rely to some extent
16 on past growth as well. This calls for consideration of both analysts' forecasts as well as
17 past growth.

18
19 **Q. Does Staff have any comments on Mr. Bourassa's slight reliance on historical DPS**
20 **growth to estimate DPS growth constant growth DCF estimates?**

21 A. Yes. As previously stated on section V of this testimony, the current market price of a
22 stock is equal to the present value of all expected future dividends, not future earnings.
23 Professor Jeremy Siegel from the Wharton School of Finance stated:

¹⁶ Gordon, M. J. Keynote Address at the 30th Financial Forum of the Society of Utility and Regulatory Financial Analysts. May 8, 1998. Transparency 3.

1 Note that the price of the stock is always equal to the present value
2 of all future *dividends* and not the present value of future earnings.
3 Earnings not paid to investors can have value only if they are paid
4 as dividends or other cash disbursements at a later date. Valuing
5 stock as the present discounted value of future earnings is
6 manifestly wrong and greatly overstates the value of the firm.¹⁷
7

8 In other words, investors pay attention to earnings as long as they are paid as dividends.
9 Earnings can easily be overstated. If investors do not receive dividends or other cash
10 disbursement at a later date, then such earnings are meaningless. Accordingly, historical
11 DPS growth should receive appropriate consideration in the estimation of DPS growth
12 component of the DCF cost of equity estimation model.
13

14 **Q. Does Staff have any comment on data in Mr. Bourassa Schedule D-4.4 which he uses**
15 **to calculate a DCF dividend growth rate in his Past and Future DCF method?**

16 A. Yes. Schedule D-4.4 presents calculations based on five years of historical data. Using
17 only five years of data could result in significant variances in the outcomes due to a single
18 high or low data point. A larger number of data points, i.e., use of more years, is usually
19 preferable. Also, five years may be too limited to capture a full business cycle, resulting
20 in unnecessary skewing of the outcomes.

¹⁷ Seigel, Jeremy J. Stocks for the Long Run. 2002. McGraw-Hill. New York. P. 93.

1 **Firm-Specific Risk**

2 **Q. Does Staff have any comment on Mr. Bourassa's statement that "Arizona water (and**
3 **wastewater) utilities face legal constraints that limit their ability to obtain rate relief**
4 **outside of a general rate case in which the 'fair value' of the utility's property is**
5 **determined and used to set rates"?**¹⁸

6 A. Yes. The unique regulatory environments of the sample companies and GWC are firm-
7 specific risks for which investors cannot expect compensation. None of Mr. Bourassa's
8 comments demonstrate that Arizona is a less favorable regulatory environment from those
9 of the sample companies. Every regulatory jurisdiction has its own framework with its
10 own specific identifiable advantages and disadvantages; however, it is the overall effect
11 that is relevant. Nothing in Mr. Bourassa's testimony provides this overall perspective.
12 The fact that investors continue to acquire Arizona utilities and invest capital in Arizona
13 utilities debunks the notion that the regulatory environment in Arizona places utilities at
14 some disadvantage. The regulatory framework in Arizona has many attractive attributes
15 including: use of fair value rate base, ability to seek accounting orders, recognition of
16 known and measurable changes, wide use of hook-up fees and regulatory responsiveness
17 to utility industry concerns (e.g., arsenic cost recovery mechanisms and arsenic remedial
18 surcharge mechanisms).

19

¹⁸ Direct Testimony of Thomas J. Bourassa, Goodman Water Company, Docket No. W-02500A-10-0382, page 19 lines 5-8

- 1 **Q. What is Staff's response to Mr. Bourassa's contention that the market data provided**
2 **by the sample water utilities does not capture all of the market risk associated with**
3 **GWC due to Arizona regulatory requirements' use of historical test years and**
4 **limited out of period adjustment recognition?**¹⁹
- 5 A. The examples cited by Mr. Bourassa are examples of firm-specific or unique risks.
6 Existence of firm-specific risk does not necessarily indicate that a company has more total
7 risk than others, as all companies have firm-specific risks. Moreover, as previously
8 discussed, the market does not compensate investors for firm-specific risk because it can
9 be eliminated through diversification.
- 10
- 11 **Q. Does Staff have a response to Mr. Bourassa's citation that "[i]n Chapter 7 of**
12 **Morningstar's Ibbotson SBBI 2009 Valuation Yearbook, for example, Ibbotson**
13 **reports that when betas (a measure of market risk) are properly estimated, betas are**
14 **larger for smaller companies than for larger companies"**²⁰?
- 15 A. Yes. It is generally understood that smaller companies tend to have higher betas than
16 larger companies due to larger variations in earnings thus making the smaller companies
17 more risky.

¹⁹ Direct Testimony of Thomas J. Bourassa, Goodman Water Company, Docket No. W-02500A-10-0382, page 19 lines 12-13

²⁰ Direct Testimony of Thomas J. Bourassa, Goodman Water Company, Docket No. W-02500A-10-0382, page 31 lines 23-24 and page 32 line 1

1 **Q. What is Staff's response to Mr. Bourassa's contention that GWC should receive a**
2 **higher cost of equity estimate because of its smaller size through a "company specific**
3 **risk premium"²¹ and to his assertion that GWC is not comparable to the six publicly-**
4 **traded water utilities in the sample group due to a difference in size?²²**

5 A. Staff does not agree that GWC should be allowed a small firm risk premium. No
6 generally-accepted analysis demonstrates that utilities are subject to the same size-
7 dependent betas as the general market. The Commission has previously ruled that firm
8 size does not warrant recognition of a risk premium. In Decision No. 64282, dated
9 December 28, 2001, for Arizona Water, the Commission stated, "We do not agree with the
10 Company's proposal to assign a risk premium to Arizona Water based on its size relative
11 to other publicly traded water utilities...." In Decision No. 64727, dated April 17, 2002,
12 for Black Mountain Gas, the Commission agreed with Staff that "the 'firm size
13 phenomenon' does not exist for regulated utilities, and that therefore there is no need to
14 adjust for risk for small firm size in utility rate regulation."
15

16 **XI. CONCLUSION**

17 **Q. Please summarize Staff's recommendations.**

18 A. Staff recommends that the Commission adopt a capital structure for GWC in this
19 proceeding composed of 18.6 percent debt and 81.4 percent equity.
20

21 Staff also recommends that the Commission adopt a 9.0 percent ROR for the Applicant,
22 based on Staff's cost of equity estimates that range from 9.0 percent to 9.1 percent for the
23 sample companies and a 8.5 percent cost of debt.

²¹ Direct Testimony of Thomas J. Bourassa, Goodman Water Company, Docket No. W-02500A-10-0382, page 38 lines beginning line 19

²² Direct Testimony of Thomas J. Bourassa, Goodman Water Company, Docket No. W-02500A-10-0382, page 38 lines 20-21

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

2 A. Yes, it does.

3

Goodman Water Company Cost of Capital Calculation
 Capital Structure
 And Weighted Average Cost of Capital
 Staff Recommended and Company Proposed

[A] <u>Description</u>	[B] <u>Weight (%)</u>	[C] <u>Cost</u>	[D] <u>Weighted Cost</u>
Staff Recommended Structure	18.6%	8.5%	1.6%
Debt	81.4%	9.1%	<u>7.4%</u>
Common Equity			9.0%
Weighted Average Cost of Capital			
Company Proposed Structure	18.3%	8.5%	1.6%
Debt	81.7%	11.0%	<u>9.0%</u>
Common Equity			10.5%
Weighted Average Cost of Capital			

[D] : [B] x [C]
 Supporting Schedules: JCM-3 and JCM-4.

Intentionally left blank

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		D_1/P_0^1	+	g^2
Multi-Stage DCF Estimate		3.3%	+	5.0%
Average of DCF Estimates				k
				8.3%
				9.7%
				9.0%
CAPM Method				
Historical Market Risk Premium ³	Rf	β^5	x	(Rp)
Current Market Risk Premium ⁴	2.7%	0.77	x	7.2% ⁶
Average of CAPM Estimates	4.5%	0.77	x	7.0% ⁷
				k
				8.2%
				9.9%
				9.1%
			Average	9.1%
			Financial risk adjustment	
			Total	9.1%

1 MSN Money and Value Line

2 Schedule JCM-5

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 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>	Common <u>Equity</u>	<u>Total</u>
American States Water	49.7%	50.3%	100.0%
California Water	49.8%	50.2%	100.0%
Aqua America	56.0%	44.0%	100.0%
Connecticut Water	57.0%	43.0%	100.0%
Middlesex Water	49.7%	50.3%	100.0%
SJW Corp	<u>53.6%</u>	<u>46.4%</u>	<u>100.0%</u>
Average Sample Water Utilities	52.6%	47.4%	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%	3.6%	6.2%	3.0%
California Water	0.8%	0.7%	4.0%	6.5%
Aqua America	7.7%	4.9%	6.7%	5.0%
Connecticut Water	1.3%	No Projection	1.5%	No Projection
Middlesex Water	1.7%	No Projection	2.1%	No Projection
SJW Corp	<u>5.1%</u>	<u>No Projection</u>	<u>1.2%</u>	<u>No Projection</u>
Average Sample Water Utilities	3.1%	3.1%	4.6%	4.9%

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]
<u>Company</u>	Retention Growth 2001 to 2010 <u>br</u>	Retention Growth Projected <u>br</u>	Stock Financing Growth <u>vs</u>	Sustainable Growth 2001 to 2010 <u>br + vs</u>	Sustainable Growth Projected <u>br + vs</u>
American States Water	2.9%	5.8%	1.8%	4.8%	7.6%
California Water	2.2%	6.1%	3.9%	6.1%	10.0%
Aqua America	4.5%	5.0%	4.5%	9.1%	9.5%
Connecticut Water	2.5%	No Projection	0.9%	3.4%	No Projection
Middlesex Water	1.4%	No Projection	3.3%	4.7%	No Projection
SJW Corp	<u>4.1%</u>	<u>No Projection</u>	<u>0.1%</u>	<u>4.2%</u>	<u>No Projection</u>
Average Sample Water Utilities	2.9%	5.6%	2.4%	5.4%	9.1%

[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 1/19/2011	Book Value	Mkt To Book	Value Line Beta β	Raw Beta β_{raw}
American States Water	AWR	<u>34.53</u>	20.35	1.7	0.80	0.67
California Water	CWT	37.63	21.13	1.8	0.70	0.52
Aqua America	WTR	23.18	8.46	2.7	0.65	0.45
Connecticut Water	CTWS	25.95	12.67	2.0	0.80	0.67
Middlesex Water	MSEX	18.45	10.76	1.7	0.75	0.60
SJW Corp	SJW	25.19	14.42	<u>1.7</u>	<u>0.90</u>	<u>0.82</u>
Average				2.0	0.77	0.62

[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>	<u>g</u>
DPS Growth - Historical ¹	3.1%
DPS Growth - Projected ¹	3.1%
EPS Growth - Historical ¹	4.6%
EPS Growth - Projected ¹	4.9%
Sustainable Growth - Historical ²	5.4%
<u>Sustainable Growth - Projected²</u>	<u>9.1%</u>
Average	5.0%

¹ Schedule JCM-5
² Schedule JCM-6

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

[A] Company	[B] Current Mkt. Price (P_0) ¹ 1/19/2011	[C] d_1	[D] d_2	[E] d_3	[F] d_4	[H] Stage 2 growth ³ (g_n)	[I] Equity Cost Estimate (K) ⁴
American States Water	34.5	1.08	1.13	1.19	1.25	6.6%	9.6%
California Water	37.6	1.19	1.25	1.31	1.38	6.6%	9.6%
Aqua America	23.2	0.64	0.68	0.71	0.75	6.6%	9.3%
Connecticut Water	26.0	0.96	1.00	1.05	1.11	6.6%	10.1%
Middlesex Water	18.5	0.76	0.80	0.84	0.88	6.6%	10.5%
SJW Corp	25.2	0.68	0.71	0.75	0.79	6.6%	9.2%

Average 9.7%

$$P_0 = \sum_{t=1}^n \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n} \left[\frac{1}{(1+K)} \right]^n$$

- 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

BEFORE THE ARIZONA CORPORATION COMMISSION

GARY PIERCE
Chairman
BOB STUMP
Commissioner
SANDRA D. KENNEDY
Commissioner
PAUL NEWMAN
Commissioner
BRENDA BURNS
Commissioner

IN THE MATTER OF THE APPLICATION OF)
GOODMAN WATER COMPANY FOR AN)
INCREASE IN ITS WATER RATES)
FOR CUSTOMERS WITHIN PINAL)
COUNTY, ARIZONA)
_____)

DOCKET NO. W-02500A-10-0382

DIRECT
TESTIMONY
OF
GARY T. MCMURRY
PUBLIC UTILITIES ANALYST IV
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

MARCH 21, 2011

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**EXECUTIVE SUMMARY
GOODMAN WATER COMPANY
DOCKET NO. W-02500A-10-0382**

Goodman Water Company ("Goodman" or "Company") is an Arizona for-profit, Class C public service corporation providing water service to approximately 600 customers in the vicinity of Oracle in Pinal County, Arizona. On September 17, 2010, Goodman filed a general rate application. The application shows that Goodman posted a \$73,882 adjusted operating income for the test year that ended December 31, 2009. Goodman requests a \$291,454 (50.9 percent) revenue increase to provide a \$253,194 operating income for a 10.54 percent rate of return on a \$2,402,222 fair value rate base.

The testimony of Mr. Gary T. McMurry presents Staff's recommendation in the areas of rate base, operating income, revenue requirement and rate design. Staff recommends a \$120,829 (20.83 percent) revenue increase to provide a \$156,574 operating income for a 9.0 percent rate of return on a \$1,739,712 fair value rate base. Staff's recommendation reflects six rate base adjustments for a \$662,510 reduction and five operating income adjustments for a \$13,175 increase in adjusted test year operating income.

The present rate structure for the residential, commercial, and construction customer classes consists of an inverted three-tier commodity rate for 5/8 x 3/4-inch and 3/4-inch meters. An inverted two-tier commodity rate structure applies to larger meters. A minimum monthly fixed charge that increases by meter size is also applicable to residential and commercial customers.

The Company proposes a rate structure similar to the present rate structure that collects a greater proportion of the revenue from the commodity rates and spreads the rates between the tiers by a greater ratio by increasing the ratio between the first and second tiers for 5/8 x 3/4-inch and 3/4-inch meters. On average, the Company's proposed rates increase by 50.24 percent to achieve its proposed revenue requirement.

Staff also recommends continuation of the fundamental existing rate structure. However, Staff recommends spreading the rates between the tiers by an even greater ratio than proposed by the Company and generating an even greater percentage of the revenue from the commodity rates. Staff's recommended rate design would generate Staff's recommended water revenue requirement of \$700,939 composed of \$687,201 from water services and \$13,738 from other revenues. The typical residential water bill would increase by \$13.55, or 22.2 percent, from \$60.96 to \$74.50.

Staff observed that the Company has engaged in significant transactions with affiliated parties. Staff recommends that Goodman develop policies applicable to transactions with affiliated parties. In addition, due to the fact that Goodman has only one employee, the Company relies heavily on outside contractors. Staff recommends that Goodman develop written policies regarding the hiring and supervision of outside contractors.

1 **I. INTRODUCTION**

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

3 A. My name is Gary McMurry. I am a Public Utilities Analyst employed by the Arizona
4 Corporation Commission (“ACC” or “Commission”) in the Utilities Division (“Staff”).
5 My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

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

8 A. I received a Bachelor of Science degree in Business Administration with a major in
9 Accounting from the University of Arizona. I have since been awarded two professional
10 designations, as a Certified Fraud Examiner and as a Certified Internal Auditor; after
11 successfully meeting the prescribed requirements established by each of the sponsoring
12 professional organizations.

13
14 My prior work experience includes approximately 20 years of auditing (both internal and
15 external), five additional years as a bank examiner, and two years of Investigations work.
16 Prior to joining the Commission, I was employed by the Office of Audit and Analysis for
17 the Department of Transportation primarily as a construction auditor.

18
19 In 2007, I began employment at the Commission as a Public Utilities Analyst IV in the
20 Finance and Regulatory Analysis Section. Since coming to the Commission, I have
21 participated in a number of rate cases and other regulatory proceedings involving water
22 and gas utilities. I have also attended various seminars and classes on general regulatory
23 and business issues, including the National Association of Regulatory Utility
24 Commissioners (“NARUC”) Utility Rate School and the Institute of Public Utilities
25 Annual Regulatory Studies Program (“Camp NARUC”).

1 **Q. Briefly describe your responsibilities as a Public Utilities Analyst.**

2 A. I am responsible for the examination and verification of financial and statistical
3 information included in assigned utility rate applications and other financial regulatory
4 matters. I develop revenue requirements, design rates, and prepare written reports,
5 testimony and schedules to present Staff's recommendations to the Commission.

6
7 **Q. What is the purpose of your testimony in this case?**

8 A. The purpose of my testimony is to present Staff's analysis and recommendations
9 regarding the Goodman Water Company's ("Goodman" or "Company") application for a
10 permanent rate increase. I am presenting recommendations in the areas of rate base,
11 operating income, revenue requirement and rate design. Staff witness Marlin Scott is
12 presenting the engineering analysis and recommendations. Staff witness Juan Manrique is
13 presenting the cost of capital analysis and recommendations.

14
15 **Q. What is the basis of Staff's recommendations?**

16 A. I have performed a regulatory audit of the Company's records to determine whether
17 sufficient, relevant and reliable evidence exists to support the proposals in Goodman's rate
18 application. My regulatory audit consisted of the following: (1) examining and testing
19 Goodman's accounting ledgers, reports and supporting documents; (2) checking the
20 accumulation of amounts in the records; (3) tracing recorded amounts to source
21 documents; and (4) verifying that the Company-applied accounting principles were in
22 accordance with the National Association of Regulatory Utility Commissioners
23 ("NARUC") Uniform System of Accounts ("USOA").

1 **Q. How is your testimony organized?**

2 A. My testimony is presented in nine sections. Section I is this introduction. Section II
3 provides a background of the Company. Section III is a summary of consumer service
4 issues. Section IV is a summary of proposed revenues. Section V is a summary of Staff's
5 rate base and operating income adjustments. Section VI presents Staff's rate base
6 recommendations. Section VII presents Staff's operating income recommendations.
7 Section VIII discusses the Company's current treatment of affiliated party transactions.
8 Section IX discusses rate design.

9
10 **Q. Have you prepared any schedules to accompany your testimony?**

11 A. Yes. I prepared schedules GTM-1 to GTM-20.
12

13 **II. BACKGROUND**

14 **Q. Would you please review the pertinent background information associated with the**
15 **Company's application for a permanent rate increase?**

16 A. Goodman is a class C public service corporation that provides water service to
17 approximately 600 customers in the vicinity of the town of Oracle in Pinal County,
18 Arizona. On September 17, 2010, Goodman filed an application for approval of
19 permanent rates and charges for water service, and on November 5, 2010, Staff filed a
20 letter declaring the application sufficient. Goodman's application asserts that an increase
21 in revenues is required to recover operating expenses and to provide debt service coverage
22 and a 10.54 percent return on fair value rate base ("FVRB").
23

24 **Q. What test year did Goodman use in its filing?**

25 A. Goodman's rate filing is based on the twelve-month period that ended December 31, 2009.

1 **Q. When were Goodman's present rates established?**

2 A. The Commission Decision No. 69404, dated April 16, 2007, granted the Company its
3 present permanent rates.

4
5 **Q. Does Goodman have any other cases currently pending before the Commission?**

6 A. No.

7
8 **III. CONSUMER SERVICE**

9 **Q. Please provide a brief summary of customer complaints received by the Commission**
10 **regarding Goodman Utilities.**

11 A. Staff reviewed the Commission's records for the period January 1, 2008, through March 7,
12 2011, and found 3 complaints and 287 opinions opposed to the rate increase. The
13 Company is in good standing with Corporations Division. The Company is current on all
14 property and sales taxes.

15
16 **IV. SUMMARY OF PROPOSED REVENUES**

17 **Q. What revenue requirement is Goodman proposing?**

18 A. The Company's application proposes total operating revenue of \$864,205, an increase of
19 \$291,454, or 50.89 percent, over its test year revenue of \$572,751. The Company's
20 proposed revenue, as filed, would provide an operating income of \$253,194 for a 10.54
21 percent rate of return on the proposed \$2,402,221 fair value rate base which is the same as
22 the proposed original cost rate base ("OCRB").

1 **Q. What is Staff's revenue requirement recommendation?**

2 A. Staff recommends revenues of \$700,939, a \$120,829 (20.83 percent) increase over test
3 year revenues of \$580,110, to provide an operating income of \$156,574 for a 9.00 percent
4 rate of return on \$1,739,712 FVRB.

5
6 **V. SUMMARY OF STAFF'S RATE BASE AND OPERATING INCOME**
7 **ADJUSTMENTS**

8 **Q. Please summarize Staff's rate base and operating income adjustments.**

9 A. Rate Base:

10 Land Purchase – This adjustment decreases the cost basis of the Company's 2008 land
11 purchase by \$369,500 because this non-arm's-length transaction was based on a flawed
12 appraisal and other factors.

13
14 Reclassify Water Treatment Plant – This adjustment reclassifies \$15,947 in funds from
15 G/L account 320 "Water Treatment Plant" to G/L account 320.2 "Chemical Solution
16 Feeders."

17
18 Reclassify Distribution Reservoirs
19 This adjustment reclassifies \$836,890 from G/L account 330 "Distribution Reservoirs"
20 between two G/L accounts; 330.1 "Storage Tanks" and 330.2 "Pressure Tanks."

21
22 Eliminate the unused and not useful storage tank
23 This adjustment eliminates \$185,049 or approximately one-half of the cost of a 530,000-
24 gallon water storage tank which Staff has deemed to be excess capacity.

1 Eliminate Transmission Mains

2 This adjustment eliminates \$105,564 from transmission mains to reflect lines that Staff
3 has deemed to be not used or useful.

4
5 Adjust accumulated depreciation

6 This adjustment increases the accumulated depreciation balance by \$2,397 to correct for
7 an error in the Company's recorded amount.

8

9 B. Operating Income:

10 Revenue Annualization – This adjustment reverses the Company's \$7,359 negative
11 proforma adjustment because it is not known and measurable, and it is inconsistent with
12 other revenue trends.

13

14 Water Testing Expense – This adjustment increases water testing expense by \$1,568 to
15 reflect Staff's recommended water testing expense.

16

17 Depreciation Expense – This adjustment increases depreciation expense by \$998 to reflect
18 application of Staff's recommended depreciation rates to Staff-recommended plant
19 amounts.

20

21 Property Taxes – This adjustment decreases test year property taxes by \$3,998 to reflect
22 application of the modified version of the Arizona Department of Revenue's property tax
23 methodology which the Commission has consistently adopted.

24

1 Test Year Income Taxes – This adjustment decreases test year income tax expense by
2 \$4,384 to reflect application of statutory state and federal income tax rates to Staff-
3 adjusted taxable income.

4
5 **VI. RATE BASE**

6 **Fair Value Rate Base**

7 **Q. Does Goodman’s application include schedules with elements of a Reconstruction**
8 **Cost New Rate Base?**

9 A. No. The Company’s application does not request recognition of a Reconstruction Cost
10 New Rate Base. Accordingly, Staff has treated the Company’s OCRB as its FVRB.

11
12 **Rate Base Summary**

13 **Q. Please summarize Staff’s rate base recommendation.**

14 A. Staff recommends a \$1,739,712 FVRB, a \$662,510 reduction from the Company’s
15 proposed \$2,402,222 rate base. Staff’s recommendation results from the rate base
16 adjustments described below.

17
18 **Rate Base Adjustment No. 1 – Reduce Cost Basis for Land Purchase**

19 **Q. What did the Company propose with respect to land in the test year?**

20 A. Schedule B-2, page 3, line 7, of the Company’s application shows that the Company
21 recorded a balance in the land and land rights account of \$494,159. The entire balance
22 was due to the 2008 purchase of four parcels of land from an affiliated party, EC
23 Development, Inc.

1 **Q. Is there any reason to question the value the Company used to record the land?**

2 A. Yes. Staff has identified multiple reasons to question the recorded value of the land.
3 First, the transaction was not recorded at cost at the time the land was placed in service.
4 Second, the transaction was not at arm's length, and the Company has not shown that the
5 transaction was recorded in accordance with NARUC audit guidelines for affiliate
6 transactions. Third, the land appraisal used to value the transaction was conducted by an
7 appraiser that was not independent from the Company. Fourth, the appraisal was flawed.

8
9 **Q. Did the Company record the land in its records on the date that the land was devoted**
10 **to public service?**

11 A. No. The Company recorded the acquisition of four land parcels in its general ledger on
12 October 31, 2008. The Company placed parcels one and four into service in June 2003,
13 parcel two in 2004 and parcel three in 2007. Thus, each of the four parcels was placed
14 into service between one and five years prior to the recorded in-service date. Plant should
15 be recorded at cost at the time it is devoted to public service.

16
17 **Q. What caused the Company to delay recording the land until long after it was placed**
18 **into service?**

19 A. In response to Staff data request GTM-7.9, the Company stated that it was an inadvertent
20 oversight by the Company at that point of time.

21
22 **Q. What is the relationship between the Company and the land seller?**

23 A. Goodman purchased the four parcels of real estate from EC Development for \$490,000.
24 EC Development is owned by Alex Sears and James Shiner. In response to Staff data
25 request GTM-1.11, the Company identified Mr. Sears and Mr. Shiner, among others, as
26 affiliates of the Company. My Sears and Mr. Shiner are both owners of Goodman as well.

1 **Q. What is the concern regarding non-arm's length transactions?**

2 A. Non-arm's length transactions are suspect of self-dealing and may not be conducted at
3 market price. The purchaser of the land, in this case, is related to the seller of the land. In
4 such cases, it is not clear whether the price paid for the real estate was truly market value.

5
6 **Q. According to NARUC audit guidelines, what is an appropriate basis for recording
7 the transfer of a capital asset from an affiliate to a utility?**

8 A. Generally, the transfer of assets from an affiliate to the utility should be at the lower of
9 prevailing market price or net book value, and an appraisal should be used to determine
10 the market price.

11
12 **Q. Has the Company shown that the transaction for the land was recorded in
13 accordance with NARUC audit guidelines for affiliate transactions?**

14 A. No. The Company has not provided the book value of the land carried by the seller.

15
16 **Q. What did the Company use to determine the basis for the amount to record the land?**

17 A. The Company recorded the land's acquisition price based on a Summary Appraisal Report
18 performed by Michael Naifeh, MAI, CRE, dated June 26, 2008.

19
20 **Q. Is the appraiser independent of the parties to the transaction?**

21 A. No. The appraiser properly discloses in his appraisal that he has a financial interest
22 related indirectly to the transaction.

23
24 **Q. What is the appraiser's relation to the transaction?**

25 A. In response to GTM-7.7, the appraiser has an investment in a company which has an
26 investment in another company owned by one of Goodman's principals.

1 **Q. What is the appraiser's financial interest in the transaction?**

2 A. In response to GTM-7.8, the Company stated that the appraiser has an approximate two
3 percent interest in D&D Investments West which is owned by Alexander Sears.
4

5 **Q. Is the appraiser's financial interest in the transaction relevant?**

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

14 **Q. How does Staff recommend that the land be valued?**

15 A. Since the seller's book value of the property is unknown and Company's appraised value
16 is suspect, Staff recommends using the 2009 Pinal County Assessor's Full Cash Value
17 ("FCV") for the four parcels.
18

19 **Q. Why is Staff using the Pinal County Assessor's 2009 FCV?**

20 A. Because, unfortunately, it is the best information available. Staff would prefer to use data
21 from 2003 or 2004, when the majority of the parcels were placed into service; however,
22 those numbers are not available. Accordingly, Staff used the earliest date for which FCV
23 is available for all four parcels. Had Staff used the assessor's current year (2011) FCV,
24 the value of the four parcels would have fallen to \$66,500.
25

1 **Q. What is Staff recommending?**

2 A. Staff recommends a \$369,500 reduction in the land's basis to \$124,659, as shown in
3 GTM-5.

4

5 **Rate Base Adjustment No. 2 – Reclassify Water Treatment Plant**

6 **Q. What did the Company propose with respect to water treatment equipment?**

7 A. Goodman proposed a balance of \$15,947 in account number 320, Water Treatment Plant.

8

9 **Q. Is general account number 320 normally divided into subaccounts?**

10 A. Yes. Normally, account number 320 is divided into subaccounts. Since there is a
11 significant difference in the expected lives of various water treatment equipment, it is
12 appropriate to establish subaccounts, each with its own depreciation rate.

13

14 **Q. What does Staff recommend with respect to the Water Treatment Equipment?**

15 A. Based on the Company's response to GTM-1.5, Staff recommends reclassifying \$15,947
16 to G/L account 320.2, Chemical Solution Feeders, as shown in Schedule GTM-6.

17

18 **Rate Base Adjustment No. 3 – Reclassify Distribution Reservoirs**

19 **Q. What did the Company propose with respect to distribution reservoirs?**

20 A. Goodman's application proposes \$836,890 in G/L account number 330, Distribution
21 Reservoirs and Standpipe.

22

23 **Q. Is general account number 330 normally divided into subaccounts?**

24 A. Yes. Similar to the discussion above regarding Water Treatment Equipment, normally,
25 account number 330, Distribution Reservoirs, is divided into subaccounts to recognize the
26 various types of equipment and their respective lives, each with its own depreciation rate.

1 **Q. What is Staff recommending?**

2 A. Staff recommends reclassifying the \$836,890 from G/L account number 330, Distribution
3 Reservoirs and Standpipe, to two accounts, \$384,827 going to account 330.1, Storage
4 Tanks, and \$452,063 going to account 330.2, Pressure Tanks, as shown in Schedule GTM-
5 7.

6

7 **Rate Base Adjustment No. 4 – Reduce Storage Tanks**

8 **Q. Did Staff conclude that all of the Company's water storage capacity is necessary for**
9 **the provision of service?**

10 A. No. Staff witness Marlin Scott, Jr. concluded that approximately, one-half of the 530,000
11 gallon storage tank capacity represents excess capacity and recommends a proportional
12 one-half, or \$185,049, disallowance related to the tank cost. Since the excess capacity is
13 not used and useful, it should be removed from rate base. Staff made the \$185,049
14 deduction from the \$384,827 reclassified to account number 330.1, Storage Tanks, as
15 discussed in Staff Rate Base Adjustment No. 3.

16

17 **Q. What is Staff recommending?**

18 A. Staff recommends an \$185,049 negative adjustment to the storage tanks balance, as shown
19 in Schedule GTM-8.

20

21 **Rate Base Adjustment No. 5 – Reduce Transmission and Distribution Mains**

22 **Q. What did the Company propose with respect to transmission and distribution**
23 **mains?**

24 A. In the Company's application, it recorded \$1,611,320 in G/L account 331, Transmission
25 and Distribution Mains.

26

1 **Q. Does Staff have any concerns with the Company's account balance for Transmission**
2 **and Distribution Mains?**

3 A. Yes. Staff witness Marlin Scott, Jr. concluded that a portion of the transmission mains are
4 not used and useful to the Company's ratepayers. A complete discussion of this
5 adjustment may be found in Mr. Scott's direct testimony.

6
7 **Q. What is Staff recommending?**

8 A. Staff recommends a decrease of \$105,564, as shown in Schedule GTM-9, to reflect the
9 portion of plant determined to be not used or useful to the production of water service by
10 the Company.

11

12 **Rate Base Adjustment No. 6 – Reduce Accumulated Depreciation**

13 **Q. What did the Company propose with respect to accumulated depreciation?**

14 A. The Company's application proposed \$731,205 in accumulated depreciation reflecting a
15 \$67,829 pro forma decrease from the end of test year recorded amount of \$799,034.

16

17 **Q. Does Staff concur with the Company's proposal?**

18 A. No. In response to RUCO data request 2.12, the Company acknowledged that it
19 miscalculated the date for implementing newly-authorized depreciation rates resulting
20 from Decision No. 69404. Since that Decision became effective May 1, 2007, the
21 depreciation for 2007 should reflect four months at the previous rates and eight months at
22 the revised rates. Staff recalculated accumulated depreciation for the intervening years to
23 calculate a \$733,602 balance.

24

1 **Q. What is Staff recommending?**

2 A. Staff recommends an increase of \$2,397 to the accumulated depreciation account balance,
3 as shown in Schedule GTM-10.

4
5 **VII. OPERATING INCOME**

6 **REVENUES**

7 **Q. Please summarize the results of Staff's examination of test year operating income.**

8 A. Staff determined a test year operating income of \$87,057, \$13,175 higher than the
9 Company's adjusted test year operating income of \$73,882. Staff's recommendation
10 results from the operating income adjustments described below.

11
12 **Operating Income Adjustment No. 1 – Eliminate Proforma Adjustment for Negative**
13 **Revenue Annualization**

14 **Q. What does the Company propose for operating revenues?**

15 A. The Company has proposed the recorded test year revenues of \$580,110 less a \$7,359 pro
16 forma revenue annualization adjustment for adjusted test year revenues of \$572,751.

17
18 **Q. Is the Company's downward pro forma revenue annualization adjustment consistent**
19 **with other information regarding revenues?**

20 A. No. The Company's revenue annualization adjustment adjusts the billing data for each
21 month of the test year to reflect the end of test year customer count. While this is one of
22 the possible and commonly-used revenue annualization methods, it is not an appropriate
23 method if customer growth is not reasonably linear throughout the year, e.g., when there is
24 seasonal change in customers. The Company's metered water sales increased \$18,356, or
25 3.3 percent, in 2009 over 2008, and metered revenue has continued to increase through
26 2010. This customer growth information indicates that the revenue annualization method

1 proposed by the Company misrepresents the correct revenue trend. Accordingly, the
2 Company's pro forma revenue annualization adjustment should be rejected.

3

4 **Q. What is Staff recommending?**

5 A. Staff recommends the reversal of the Company's proposed \$7,359 negative annualization
6 to test year revenue, as shown in Schedule GTM-13.

7

8 **Operating Income Adjustment No. 2 – Not Used**

9

10 **Operating Income Adjustment No. 3 – Water Testing Expense**

11 **Q. What is the Company proposing for Water Testing Expense?**

12 A. Goodman proposes its actual recorded test year amount of \$1,215 for water testing.

13

14 **Q. Is the Company's actual test year water testing expense representative of its average
15 on-going expense?**

16 A. No. Water testing expense varies from one year to the next based on the schedule
17 intervals for the various tests. Accordingly, water testing expense should be normalized.
18 Staff has determined that the on-going average water testing expense should be \$2,783.

19

20 **Q. What is Staff recommending?**

21 A. Staff recommends Water Testing expense of \$2,783, a \$1,568 increase from the
22 Company's reclassified amount as shown in Schedule GTM-15.

23

1 **Operating Income Adjustment No. 4 – Depreciation Expense**

2 **Q. What is the Company proposing for Depreciation expense?**

3 A. The Company proposes its recorded test year depreciation expense of \$228,578 less a
4 \$723 pro forma adjustment for \$227,855.

5
6 **Q. Did Staff recalculate depreciation expense?**

7 A. Yes. As shown in Schedule GTM-16, Staff recalculated depreciation expense by applying
8 Staff's recommended depreciation rates to Staff's recommended plant by account. Staff
9 calculated depreciation expense of \$228,853, an increase of \$998 from the \$228,853
10 proposed by the Company.

11
12 **Q. What is Staff recommending?**

13 A. Staff recommends \$228,853 for Depreciation expense, a \$998 increase from the
14 Company's proposed amount, as shown in Schedule GTM-16.

15
16 **Operating Income Adjustment No. 5 – Property Tax Expense**

17 **Q. What is the Company proposing for test year property tax expense?**

18 A. Goodman proposes \$21,299 for test year property taxes. The proposed amount is \$12,722
19 greater than the \$8,576 recorded in the test year. The Company calculated its proposed
20 amount using a modified version of the Arizona Department of Revenue's ("ADOR")
21 property tax method.

22
23 **Q. What method has the Commission typically adopted to determine property tax
24 expense for ratemaking purposes of Class B water utilities?**

25 A. The Commission's practice in recent years has been to use a modified ADOR
26 methodology for water and wastewater utilities.

1 **Q. Using the modified ADOR property tax method, what is the primary factor for**
2 **determining the amount of property tax calculated?**

3 A. The results from the modified ADOR methodology are primarily dependent upon revenue
4 inputs for three years. In the same manner as each operating income has a specific income
5 tax expense, there is a specific property tax expense for each three-year set of revenue
6 inputs. Therefore, the property tax expense calculated for the test year is different than the
7 property tax calculated for the authorized revenue. Only when the revenue inputs for all
8 three years is equal to the test year revenue will the resulting calculation reflect property
9 tax expense that correlates with the test year revenue. Since under the modified ADOR
10 method property tax expense is revenue-dependent in the same manner as is income tax
11 expense, property tax expense must be recalculated to reflect the authorized revenue.
12 Using inputs of one year of authorized revenue and two years of test year revenue in the
13 modified ADOR method provides the average expected property tax over a subsequent
14 three-year period. Use of one year of authorized revenue and two years of test year
15 revenue is consistent with the tax assessment lags used by ADOR.

16
17 **Q. What revenues did the Company use to calculate test year property tax expense?**

18 A. Schedule C-2, page 3, of the Company's application shows that it used one year of
19 proposed revenue and two years of test year revenues to calculate test year property tax
20 expense.

21
22 **Q. Does the Company's property tax calculations reflect an appropriate amount for test**
23 **year property tax expense?**

24 A. No. As discussed above, only when the revenue input for all three years is equal to the
25 test year revenue will the resulting calculation using the modified ADOR method reflect
26 property taxes that correlate with test year revenue. Since the Company included one year

1 of proposed revenue in its calculation, its proposed test year property tax expense reflects
2 the on-going property tax expense, as opposed to test year expense, and will only reflect
3 the on-going expense if the Company's proposed revenue is adopted.
4

5 **Q. Has Staff developed a solution to address the dependent relationship between**
6 **Property Tax expense and revenues?**

7 A. Yes. Staff has included a factor for property taxes in the gross revenue conversion factor
8 ("GRCF") (see Schedule GTM-2) that automatically adjusts the revenue requirement for
9 changes in revenue in the same way that income taxes are adjusted for changes in
10 operating income. This flexible method will accurately reflect property tax expense at any
11 authorized revenue level. This refinement allows for accurate calculation of property tax
12 expense at the test year revenue level, and for recovery of any additional property tax
13 expense incurred due to any increase in authorized revenue. It also removes any necessity
14 to present on-going property tax expense as test year property tax expense. In using the
15 GRCF to calculate the correct revenue requirement, the test year operating income must
16 be determined with property tax expense derived from the modified ADOR method using
17 test year revenue as the input for all three years.
18

19 **Q. What is Staff recommending for test year property tax expense?**

20 A. Staff recommends \$17,301 for test year property tax expense, a \$3,998 reduction from the
21 Company's proposed amount, as shown in Schedule GTM-17.¹ Staff further recommends
22 adoption of its GRCF that includes a factor for property tax expense, as shown in
23 Schedule GTM-2.
24

¹ Schedule GTM-11 also shows calculations for Property Tax Expense for Staff's recommended revenue.

1 **Operating Income Adjustment No. 6 – Income Tax Expense**

2 **Q. What is the Company proposing for test year income tax expense?**

3 A. Goodman is proposing \$22,873 for test year income tax expense. The Company's test
4 year income tax expense reflects application of the statutory State and Federal income tax
5 rates to its adjusted test year income.

6
7 **Q. How did Staff calculate Test Year Income Tax Expense?**

8 A. Staff calculated test year income tax expense of \$18,489 by applying the statutory State
9 and Federal income tax rates to Staff's adjusted test year taxable income, as shown in
10 Schedule GTM-2.

11
12 **Q. Since Staff and the Company used the same tax rates and methods to calculate test**
13 **year income tax expense, what accounts for the difference between the Staff and the**
14 **Company test year income tax expenses?**

15 A. Staff and the Company used different test year operating expenses and synchronized
16 interest to calculate taxable income.

17
18 **Q. What is Staff recommending?**

19 A. Staff recommends test year income tax expense of \$18,489, as shown in Schedule GTM-2
20 and GTM-18.

21
22 **Q. Does Staff have any additional comments regarding income taxes?**

23 A. Yes. On Schedule C-3, the Company shows its calculation of a 1.6254 gross revenue
24 conversion factor. Schedule GTM-2 shows the calculation of Staff's 1.7381 GRCF. This
25 difference in GRCF is due to the Company's use of a lower average Federal tax rate (31.5

1 percent) than Staff (37.5 percent) and to a lesser extent Staff's inclusion of a factor for
2 property tax expense.

3
4 Staff Schedule GTM-2 provides a reconciliation of Staff's test year and recommended
5 revenues. The reconciliation shows the incremental operating income, property tax
6 expense and income tax expense components of Staff recommended increase in revenue.
7 The reconciliation verifies that Staff's 1.7381 GRCF results in the recommended
8 operating income.

9
10 **VIII. AFFILIATED TRANSACTIONS**

11 **Q. Are there any affiliated parties involved in this rate case?**

12 A. Yes. In response to GTM-1.11 the Company identified Alexander Sears, Jim Shiner, EC
13 Development, and Goodman Ranch Associates as related parties.

14
15 **Q. Does Goodman have any written affiliated transaction policies?**

16 A. No. In response to Staff data request GTM-1.12, the Company stated that it had no
17 affiliated transaction policies.

18
19 **Q. Why is Staff concerned with affiliated transactions?**

20 A. When related parties choose to enter into a business (non-arm's length) transaction, there
21 is usually reason to question whether a true market price for the good or service
22 exchanged was obtained.

23

1 **Q. Did Staff find any instances of non-arm's length transactions?**

2 A. Yes. As discussed above regarding rate base adjustment no. 1, Goodman's purchase of
3 four land parcels from EC Development, which is owned by Mr. Sears and Mr. Shiner, is
4 a non-arm's length transaction.

5
6 **Q. Are there other examples of affiliated transactions?**

7 A. Yes. During the test year Goodman employed Jim Shiner to provide management
8 services.

9
10 **Q. Does Mr. Shiner have a written employment agreement with the Company?**

11 A. According to the Company's response to Staff data request GTM-4.8, no such agreement
12 exists.

13
14 **Q. Why is the Company's selection Mr. Shiner as an outside contractor a concern?**

15 A. As noted above, Mr. Shiner is an affiliated party. Part of his job responsibilities,
16 according to the Company's response to Staff data request GTM-1.6, is to hire contractors
17 and supervise service contractors, of which he is one.

18
19 **Q. Does the Company have written policies regarding the hiring of outside contractors?**

20 A. No. According to the Company's response to Staff data request GTM-7.11, the Company
21 has not formulated policies in this area due to its small size.

22
23 **Q. Does the Company utilize a formal competitive bidding process with respect to the
24 hiring of outside contractors?**

25 A. No. According to the Company's response to Staff data request GTM-7.13, the Company
26 does not use a formal competitive bidding process in the selection of outside contractors.

1 **Q. Has Staff identified another example of affiliated transactions?**

2 A. Yes. In February 2008, the Company borrowed \$527,400 from its affiliated parent (EC
3 Development).

4
5 **Q. Was this financing authorized?**

6 A. Yes. The authority to incur debt was authorized by ACC Decision No. 56118, dated
7 September 15, 1988.

8
9 **Q. Why was there a twenty-year delay between the financing authorization and its
10 execution?**

11 A. According to the Company's response to Staff data request GTM-4.12, the Company 1)
12 did not have the need for debt-funded growth and 2) did not have sufficient financial
13 capacity to support long term debt until the new rates went into effect in May 2007
14 (Commission Decision No. 69404).

15
16 **Q. Does the twenty-year delay concern Staff?**

17 A. Yes. Financial conditions of an organization can change drastically over a twenty year
18 period. In recent years, the Commission has typically established expiration dates on
19 finance authorizations to mitigate the concern regarding changing financial conditions of
20 utilities.

21
22 **Q. What does Staff recommend?**

23 A. Staff recommends that the Company develop and implement written policies pertaining to
24 affiliated transactions and hiring of outside consultants.

25

1 **IX. RATE DESIGN**

2 **Present Rate Design**

3 **Q. Please provide an overview of the Company's present rates.**

4 A. The following is a general description of the present rate structure. Details of the rate
5 designs are presented in Schedule GTM-19. The present rate structure includes
6 residential, commercial, and construction customer classes. The present rate structure for
7 the residential, commercial, and construction customer classes consists of an inverted
8 three-tier commodity rate for 5/8 x 3/4-inch and 3/4-inch meters. An inverted two-tier
9 commodity rate structure applies to larger meters. A minimum monthly fixed charge that
10 increases by meter size is also applicable to residential and commercial customers.

11
12 **Company's Proposed Water Rate Design**

13 **Q. Please provide an overview of the Company's proposed rate structure.**

14 A. The Company proposes a rate structure similar to the present rate structure that collects a
15 greater proportion of the revenue from the commodity rates and spreads the rates between
16 the tiers by a greater ratio by increasing the ratio between the first and second tiers for 5/8
17 x 3/4-inch and 3/4-inch meters. On average, the Company's proposed rates increase by
18 50.24 percent to achieve its proposed revenue requirement.

19
20 **Q. Did the Company propose to change the amount for any of its existing water system
21 service charges?**

22 A. No. The Company proposes to maintain the currently-authorized amounts for existing
23 service charges; however, it is proposing two new types of service charges. The
24 Company's proposed service charges are shown in the Company's Schedule H-3 and Staff
25 Schedule GTM-19.

1 **Q. Has the Company submitted proposed tariff language specifying the terms and**
2 **conditions as well as its rates and charges?**

3 A. No. The Company's application proposes only rates and charges. No specific tariff
4 language is proposed.

5
6 **Q. What are the two new service charge tariffs the Company proposes?**

7 A. The Company proposes a turn-on/off charge and a moving service meter charge.

8
9 **Q. How does the Company propose to apply the \$75.00 turn on/off tariff?**

10 A. In response to GTM-8.1, the Company stated that this tariff would apply when a customer
11 originates a request to turn on/off water services in the non-establishment or non-
12 reconnection of water service situations.

13
14 **Staff's Recommended Water Rate Design**

15 **Q. Please provide a description of Staff's recommended rate structure for the water**
16 **system.**

17 A. Staff also recommends continuation of the fundamental existing rate structure. However,
18 Staff recommends spreading the rates between the tiers by an even greater ratio than
19 proposed by the Company and generating an even greater percentage of the revenue from
20 the commodity rates. Staff recommends the following monthly fixed charges by customer
21 class: 5/8 x 3/4-inch meter, \$47.50; 3/4-inch meter, \$71.30; 1-inch meter, \$119.00; 1.5-
22 inch meter, \$238.00; 2-inch meter, \$380.00; 3-inch meter, \$760.00; 4-inch meter,
23 \$1,188.00; and 6-inch meter, \$2,375.00. Staff recommends the following commodity
24 rates per 1,000 gallons of water use by the 5/8 x 3/4-inch residential class, 1 to 3,000
25 gallons, \$4.50 per 1,000 gallons; 3,001 to 9,000 gallons, \$9.00 per 1,000 gallons; and over
26 9,000 gallons, \$11.00 per 1,000 gallons.

1 **Q. Did Staff prepare schedules showing the present, Company proposed, and Staff**
2 **recommended monthly minimums and commodity rates for each rate class?**

3 A. Yes. Staff's Direct Testimony Schedule GTM-19 shows the present monthly fixed
4 charges and commodity rates, the Company's proposed monthly fixed charges and
5 commodity rates and Staff's recommended monthly fixed charges and commodity rates.

6
7 **Q. Did Staff prepare a schedule showing the average and median monthly bill under**
8 **present rates, the Company's proposed rates, and Staff's recommended rates?**

9 A. Yes. Staff's Direct Testimony Schedule GTM-20 presents the typical bill analysis for a
10 residential water customer using present rates, the Company's proposed rates and Staff's
11 recommended rates.

12
13 **Q. What is the impact to the median customer bill with Staff's rate design?**

14 A. The typical bill for a residential customer would increase by \$13.55, or 22.22 percent,
15 from \$60.96 to \$74.50.

16
17 **Q. Does Staff have any comment pertaining to the Company's proposal to initiate a**
18 **\$75.00 turn on/off tariff?**

19 A. Yes. Staff does not see the necessity of a separate charge addressing specifically the need
20 for turning on/off water at the customer's request. For the most part, customers already
21 have the ability to shut off their own water. In fact, Arizona Administrative Code R14-2-
22 405(B)(3) requires that for new service the customer will provide and maintain a private
23 cutoff valve within 18 inches of the meter on the customer's side of the meter. Staff
24 concludes that enforcement of the existing rule is a better solution than creating a new
25 tariff. Staff further notes that such a tariff is not common among other water utilities,

1 which typically provide water cutoff during normal working hours as a courtesy service,
2 without an additional charge.
3

4 **Q. What does Staff recommend?**

5 A. Staff recommends denial of the turn on/off charge.
6

7 **Q. Does Staff have any comment pertaining to the Company's proposal to initiate a**
8 **moving service meter tariff?**

9 A. Staff agrees with the Company's proposal to charge the customer at cost to move the
10 meter at the customer's request. Such charges were anticipated and are permissible in
11 accordance with Arizona Administrative Code R14-2-405(B)(5).
12

13 **Q. What is Staff's position on after-hours service charges?**

14 A. Staff agrees with the Company that an after-hour service charge is appropriate when it is
15 at the customer's request/convenience. Such a tariff compensates the utility for additional
16 expenses incurred from providing after-hours service. Staff notes, however, that, in
17 addition to its \$10.00 after-hours service charge, the Company has a separate tariff for
18 establishment after-hours that *includes* a \$25 premium over the charge for establishment
19 during regular hours. Further, the Company has a separate tariff for reconnection after-
20 hours that provides for a \$50 premium *in addition to* the reconnection charge during
21 regular hours. Although the Company intent is not to apply more than one after-hours
22 charge, such inconsistent tariffs are not only confusing, but create the potential for
23 duplication of charges for the same service.
24

25 **Q. What does Staff recommend?**

26 A. Staff recommends the elimination of both the \$75 establishment (after hours) tariff and the
27 \$50.00 reconnection (after-hours) tariff. Staff further recommends that the after-hours

1 service charge be increased to \$50 and that this fee be in addition to the charge for any
2 utility service provided after hours at the customer's request or for the customer's
3 convenience. For example, under Staff's proposal, a customer would be subject to a \$50
4 establishment fee if it is done during normal business hours, but would pay an additional
5 \$50 after-hours fee if the customer requested that the establishment be done after normal
6 working hours.
7

8 **Q. Does Staff have any other tariff recommendations?**

9 A. Staff recommends that the Company be required to produce written language in each tariff
10 explaining the terms and conditions for each of the rates and charges.
11

12 **Q. What water system service charges does Staff recommend?**

13 A. Staff's recommendations for service charges are shown in Schedule GTM-19. These
14 service charges will generate \$13,738 based on the Company's estimates for the various
15 services provided in the test year as previously discussed.
16

17 **Q. Will Staff's recommended rate design generate Staff's recommended revenue
18 requirement?**

19 A. Staff's recommended rate design would generate Staff's recommended water revenue
20 requirement of \$700,939, composed of \$687,201 from water sales and \$13,738 from other
21 revenues.
22

23 **Q. Does this conclude your Direct Testimony?**

24 A. Yes, it does.

GOODMAN WATER COMPANY
Docket No. W-02500A-10-0382
Test Year ended December 31, 2009

DIRECT TESTIMONY - GARY T. McMURRY

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GTM-7	ORIGINAL COST RATE BASE ADJUSTMENT # 3 - RECLASSIFY DISTRIBUTION RESERVOIRS
GTM-8	ORIGINAL COST RATE BASE ADJUSTMENT # 4 - ELIMINATE EXCESS CAPACITY - STORAGE TANK
GTM-9	ORIGINAL COST RATE BASE ADJUSTMENT # 5 - ELIMINATE EXCESS CAPACITY - DISTRIBUTION MAINS
GTM-10	ORIGINAL COST RATE BASE ADJUSTMENT # 6 - ADJUST ACCUMULATED DEPRECIATION
GTM-11	OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED
GTM-12	SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR
GTM-13	OPERATING INCOME ADJUSTMENT # 1 - ELIMINATE REVENUE ANNUALIZATION
GTM-14	OPERATING INCOME ADJUSTMENT # 2 - NOT USED
GTM-15	OPERATING INCOME ADJUSTMENT # 3 - WATER TESTING EXPENSE
GTM-16	OPERATING INCOME ADJUSTMENT # 4 - DEPRECIATION EXPENSE
GTM-17	OPERATING INCOME ADJUSTMENT # 5 - PROPERTY TAXES
GTM-18	OPERATING INCOME ADJUSTMENT # 6 - INCOME TAXES
GTM-19	RATE DESIGN
GTM-20	TYPICAL BILL ANALYSIS

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COMPANY ORIGINAL COST	(B) COMPANY FAIR VALUE	(C) STAFF ORIGINAL COST	(D) STAFF FAIR VALUE
1	Adjusted Rate Base	\$ 2,402,222	\$ 2,402,222	\$ 1,739,712	\$ 1,739,712
2	Adjusted Operating Income (Loss)	\$ 73,882	\$ 73,882	\$ 87,057	\$ 87,057
3	Current Rate of Return (L2 / L1)	3.08%	3.08%	5.00%	5.00%
4	Required Rate of Return	10.54%	10.54%	9.00%	9.00%
5	Required Operating Income (L4 * L1)	\$ 253,194	\$ 253,194	\$ 156,574	\$ 156,574
6	Operating Income Deficiency (L5 - L2)	\$ 179,312	\$ 179,312	\$ 69,517	\$ 69,517
7	Gross Revenue Conversion Factor	1.6254	1.6254	1.7381	1.7381
8	Required Revenue Increase (L7 * L6)	\$ 291,454	\$ 291,454	\$ 120,829	\$ 120,829
9	Adjusted Test Year Revenue	\$ 572,751	\$ 572,751	\$ 580,110	\$ 580,110
10	Proposed Annual Revenue (L8 + L9)	\$ 864,205	\$ 864,205	\$ 700,939	\$ 700,939
11	Required Increase in Revenue (%)	50.89%	50.89%	20.83%	20.83%
12	Rate of Return on Common Equity (%)	11.00%	11.00%	9.10%	9.10%

References:

Column (A): Company Schedule B-1
Column (B): Company Schedule B-1
Column (C): Company Schedules A-1, A-2, & D-1
Column (D): Staff Schedule GTM-2 , GTM-3 & GTM-11
Column (E): Staff Schedule GTM-2 , GTM-3 & GTM-11
Column (F): Staff Schedule GTM-2 , GTM-3 & GTM-11

GROSS REVENUE CONVERSION FACTOR

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<u>Calculation of Gross Revenue Conversion Factor:</u>					
1	Revenue	100.0000%			
2	Uncollectible Factor (Line 11)	0.0000%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Tax Rate (Line 17) + Property Tax Factor (Line 23)	42.4668%			
5	Subtotal (L3 - L4)	57.5332%			
6	Revenue Conversion Factor (L1 / L5)	1.7381			
<u>Calculation of Uncollectible Factor:</u>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 17)	41.8891%			
9	One Minus Combined Income Tax Rate (L7 - L8)	58.1109%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 * L10)	0			
<u>Calculation of Effective Tax Rate:</u>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.9680%			
14	Federal Taxable Income (L12 - L13)	93.0320%			
15	Applicable Federal Income Tax Rate (Line 53)	37.5367%			
16	Effective Federal Income Tax Rate (L14 x L15)	0.349211069			
17	Combined Federal and State Income Tax Rate (L13 +L16)	41.8891%			
<u>Calculation of Effective Property Tax Factor</u>					
18	Unity	100.0000%			
19	Combined Federal and State Tax Rate (Line 17)	41.8891%			
20	One Minus Combined Income Tax Rate (L18 - L19)	58.1109%			
21	Property Tax Factor (GTM-18, L24)	0.9941%			
22	Effective Property Tax Factor (L 21 * L 22)	0.5777%			
23	Combined Federal and State Tax and Property Tax Rate (L17+L22)		42.4668%		
24	Required Operating Income (Schedule GTM-1, Line 5)	\$ 156,574			
25	Adjusted Test Year Operating Income (Loss) (Schedule GTM-10, Line 40)	\$ 87,057			
26	Required Increase in Operating Income (L24 - L25)		\$ 69,517		
27	Income Taxes on Recommended Revenue (Col. (D), L52)	\$ 68,600			
28	Income Taxes on Test Year Revenue (Col. (B), L52)	\$ 18,489			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		\$ 50,111		
30	Recommended Revenue Requirement (Schedule GTM-1, Line 10)	\$ 700,939			
31	Uncollectible Rate (Line 10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L24 * L25)	\$ -			
33	Adjusted Test Year Uncollectible Expense	\$ -			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32 - L33)		\$ -		
35	Property Tax with Recommended Revenue (GTM-18, L19)	\$ 18,502			
36	Property Tax on Test Year Revenue (GTM-17, L 16)	\$ 17,301			
37	Increase in Property Tax Due to Increase in Revenue (GTM-17, L22)		\$ 1,201		
38	Total Required Increase in Revenue (L26 + L30 + L34+L37)		\$ 120,829		
<u>Calculation of Income Tax:</u>					
		Test Year		STAFF Recommended	
39	Revenue (Schedule GTM-10, Col.[C], Line 5 & Sch. GTM-1, Col. [B], Line 10)	\$ 580,110		\$ 700,939	
40	Operating Expenses Excluding Income Taxes	\$ 474,564		\$ 475,765	
41	Synchronized Interest (L56)	\$ 27,835		\$ 27,835	
42	Arizona Taxable Income (L39 - L40- L41)	\$ 77,711		\$ 197,339	
43	Arizona State Income Tax Rate	6.9680%		6.9680%	
44	Arizona Income Tax (L42 x L43)		\$ 5,415		\$ 13,751
45	Federal Taxable Income (L42 - L44)	\$ 72,296		\$ 183,588	
46	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ 7,500		\$ 7,500	
47	Federal Tax on Second Income Bracket (\$50,001 - \$75,000) @ 25%	\$ 5,574		\$ 6,250	
48	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ -		\$ 8,500	
49	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ -		\$ 32,599	
50	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ -		\$ -	
51	Total Federal Income Tax		\$ 13,074		\$ 54,849
52	Combined Federal and State Income Tax (L35 + L42)		\$ 18,489		\$ 68,600
53	Applicable Federal Income Tax Rate [Col. (D), L42 - Col. (B), L42] / [Col. (C), L36 - Col. (A), L36]				37.54%
<u>Calculation of Interest Synchronization:</u>					
54	Rate Base (Schedule GTM-3, Col. [C], Line (17))	\$ 1,739,712			
55	Weighted Average Cost of Debt (Schedule GTM-1)	1.60%			
56	Synchronized Interest (L45 X L46)	\$ 27,835			

RATE BASE - ORIGINAL COST

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	REF	(C) STAFF AS ADJUSTED
1	Plant in Service	\$ 5,453,761	\$ (660,113)	\$ 4,793,648
2	Less: Accumulated Depreciation	731,205	2,397	733,602
3	Net Plant in Service	<u>\$ 4,722,556</u>	<u>\$ (662,510)</u>	<u>\$ 4,060,046</u>
<u>LESS:</u>				
4	Contributions in Aid of Construction (CIAC)	\$ -	\$ -	\$ -
5	Less: Accumulated Amortization	-	-	-
6	Net CIAC	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
7	Advances in Aid of Construction (AIAC)	2,101,905	-	2,101,905
8	Service Line & Meter Installation Charges	83,087	-	83,087
9	Deferred Income Tax Credits	135,342	-	135,342
<u>ADD:</u>				
10	Unamortized Finance Charges	-	-	-
11	Deferred Tax Assets	-	-	-
12	Working Capital	-	-	-
13	Intentionally Left Blank	-	-	-
14	Original Cost Rate Base	<u>\$ 2,402,222</u>	<u>\$ (662,510)</u>	<u>\$ 1,739,712</u>

References:

Column (A), Company Schedule B-1
Column [B]: Column [C] - Column [A]
Column [C], GTM-4

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	ACCT. NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) LAND ADJ #1	(C) WATER TREATMENT ADJ #2	(D) DISTRIBUTION RESERVOIR ADJ #3	(E) DISTRIBUTION RESERVOIR ADJ #4	(F) TRANSMISSION MAINS ADJ #5	(G) ACCUMULATED DEPRECIATION ADJ #6	(H) STAFF ADJUSTED
PLANT IN SERVICE:										
1	301	Organization Cost	\$ 127,103	-	-	-	-	-	-	\$ 127,103
2	302	Franchise Cost	-	-	-	-	-	-	-	-
3	303	Land and Land Rights	-	(369,500)	-	-	-	-	-	-
4	304	Structures and Improvements	494,159	-	-	-	-	-	-	124,659
5	305	Collecting and Impounding Res.	182,570	-	-	-	-	-	-	182,570
6	306	Lake River and other Intakes	-	-	-	-	-	-	-	-
7	307	Wells and Springs	-	-	-	-	-	-	-	-
8	308	Infiltration Galleries and Tunnels	386,591	-	-	-	-	-	-	386,591
9	309	Supply Mains	-	-	-	-	-	-	-	-
10	310	Power Generation Equipment	-	-	-	-	-	-	-	-
11	311	Electrical Pumping Equipment	968,652	-	-	-	-	-	-	968,652
12	320	Water Treatment Equipment	15,947	-	(15,947)	-	-	-	-	-
13	320.1	Water Treatment Plant	-	-	15,947	-	-	-	-	-
14	320.2	Chemical Solution Feeders	-	-	-	-	-	-	-	-
15	330	Distribution Reservoirs & Standpipe	-	-	-	-	-	-	-	-
16	330.1	Storage Tanks	836,890	-	-	(836,890)	-	-	-	15,947
17	330.2	Pressure Tanks	-	-	-	452,063	-	-	-	-
18	331	Transmission and Distribution Mains	1,611,320	-	-	-	-	(105,564)	-	199,778
19	333	Services	386,947	-	-	-	-	-	-	452,063
20	334	Meters	94,263	-	-	-	-	-	-	1,505,756
21	335	Hydrants	161,737	-	-	-	-	-	-	386,947
22	336	Backflow Prevention Devices	-	-	-	-	-	-	-	94,263
23	339	Other Plant & Miscellaneous Equipment	-	-	-	-	-	-	-	161,737
24	340	Office Furniture & Fixtures	187,582	-	-	-	-	-	-	-
25	340.1	Computers & Software	-	-	-	-	-	-	-	-
26	341	Transportation Equipment	-	-	-	-	-	-	-	-
27	342	Stores Equipment	-	-	-	-	-	-	-	-
28	343	Tools and Work Equipment	-	-	-	-	-	-	-	-
29	344	Laboratory Equipment	-	-	-	-	-	-	-	-
30	345	Power Operated Equipment	-	-	-	-	-	-	-	-
31	346	Communications Equipment	-	-	-	-	-	-	-	-
32	347	Miscellaneous Equipment	-	-	-	-	-	-	-	-
33	348	Other Tangible Plant	-	-	-	-	-	-	-	-
34		Rounding Amount	-	-	-	-	-	-	-	-
35		Subtotal Plant in Service	\$ 5,453,761	\$ (369,500)	\$ -	\$ -	\$ (185,049)	\$ (105,564)	\$ -	\$ 4,793,648
36		Add:								
37	Other 1	Intentionally Left Blank	-	-	-	-	-	-	-	-
38	Other 2	Intentionally Left Blank	-	-	-	-	-	-	-	-
39	Less:									
40	Other 3	Intentionally Left Blank	-	-	-	-	-	-	-	-
41	Other 4	Intentionally Left Blank	-	-	-	-	-	-	-	-
42										
43		Total Plant in Service:	\$ 5,453,761	\$ (369,500)	\$ -	\$ -	\$ (185,049)	\$ (105,564)	\$ -	\$ 4,793,648
44		Less: Accumulated Depreciation	731,205	-	-	-	-	-	2,397	733,602
45		Intentionally Left Blank	-	-	-	-	-	-	-	-
46		Net Plant in Service (L59 - L 60)	\$ 4,722,556	\$ (369,500)	\$ -	\$ -	\$ (185,049)	\$ (105,564)	\$ (2,397)	\$ 4,060,046
47										
48		LESS:								
49		Contributions in Aid of Construction (CIAC)	-	-	-	-	-	-	-	-
50		Less: Accumulated Amortization	-	-	-	-	-	-	-	-
51		Net CIAC (L49 - L50)	-	-	-	-	-	-	-	-
52		Advances in Aid of Construction (AIAC)	2,101,905	-	-	-	-	-	-	2,101,905
53		Service Line & Meter Installation Charges	83,087	-	-	-	-	-	-	83,087
54		Deferred Income Taxes	135,342	-	-	-	-	-	-	135,342
55										
56		ADD:								
57		Unamortized Finance Charges	-	-	-	-	-	-	-	-
58		Deferred Tax Assets	-	-	-	-	-	-	-	-
59		Working Capital	-	-	-	-	-	-	-	-
60		Regulatory Asset (Liability)	-	-	-	-	-	-	-	-
61		Original Cost Rate Base	\$ 2,402,222	\$ (369,500)	\$ -	\$ -	\$ (185,049)	\$ (105,564)	\$ (2,397)	\$ 1,739,712

References:
 Column [A] Schedule B-2, E-1

ORIGINAL COST RATE BASE ADJUSTMENT # 1 - REDUCE COST BASIS FOR LAND PURCHASE

Line No.	Account Number	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	303	Land and Land Rights	\$ 494,159	\$ (369,500)	\$ 124,659

2	Accessor's Parcel No.	Acres	Full Cash Value 2009 ¹	Market Value Opinion ²
3	1 305-93-219 A	0.09	\$ 40,000	\$ 180,000 ³
5	2 305-31-013 Q	0.25	40,000	60,000
6	3 305-93-219 B	0.39	40,000	100,000
7	4 305-93-604 O	0.63	500	150,000
8				
9		1.3564	\$ 120,500	\$ 490,000

- (1) - This is the full cash value (FCV) for 2009 as obtained from the Pinal County Assessor's website.
- (2) - The Company provided a six page "A Summary Appraisal Report developing market value opinions of the underlying land (a fractional interest appraisal)" by M. Naifeh, MAI, CRE.
- (3) - Parcel "one" is comprised of two real estate parcels.

Staff's basis for Land

Assesor's FCV	\$ 120,500
Closing Costs	2,159
Appraisal Fee	2,000
	<u>\$ 124,659</u>

References:

- Col [A]: Company Schedule B-1
- Col [B]: GTM Testimony
- Col [C]: Col. [A] + Col. [B]
- Col [C]: Col. [A] + Col. [B]

GOODMAN WATER COMPANY
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 Test Year ended December 31, 2009

Schedule GTM-6

ORIGINAL COST RATE BASE ADJUSTMENT # 2 - RECLASSIFY WATER TREATMENT EQUIPMENT

<u>LINE NO.</u>	<u>Account Number</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY PROPOSED</u>	<u>[B] STAFF ADJUSTMENTS</u>	<u>[C] STAFF RECOMMENDED</u>
1	320	Water Treatment Equipment	\$ 15,947	\$ (15,947)	\$ -
2	320.1	Water Treatment Plant		-	-
3	320.2	Chemical Solution Feeders		\$ 15,947	\$ 15,947
4		Total	<u>\$ 15,947</u>	<u>\$ -</u>	<u>\$ 15,947</u>

References:

Col [A]: Company Schedule B-1
 Col [B]: GTM Testimony , SDR GTM-1.5
 Col [C]: Col. [A] + Col. [B]

ORIGINAL COST RATE BASE ADJUSTMENT # 3 - RECLASSIFY DISTRIBUTION RESERVOIRS

LINE NO.	Account Number	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	330	Distribution Reservoirs & Standpipe	\$ 836,890	\$ (836,890)	\$ -
2	330.1	Storage Tanks		\$ 384,827	\$ 384,827
3	330.2	Pressure Tanks		\$ 452,063	\$ 452,063
4		Total	<u>\$ 836,890</u>	<u>\$ -</u>	<u>\$ 836,890</u>

References:

- Col [A]: Company Schedule B-1
- Col [B]: GTM Testimony, SDR GTM-1.4
- Col [C]: Col. [A] + Col. [B]

ORIGINAL COST RATE BASE ADJUSTMENT # 4 - ELIMINATE EXCESS CAPACITY - STORAGE TANK

<u>LINE NO.</u>	<u>Account Number</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY PROPOSED</u>	<u>[B] STAFF ADJUSTMENTS</u>	<u>[C] STAFF RECOMMENDED</u>
1	331	Storage Tanks ¹	<u>\$ 384,827</u>	<u>\$ (185,049)</u>	<u>\$ 199,778</u>

¹ The Company proposed amount is the portion claimed by the Company and reclassified by Staff to Acct. 330.1 as shown in GTM-7.

References:

- Col [A]: Company Schedule B-1
- Col [B]: GTM and MSJ Testimony
- Col [C]: Col. [A] + Col. [B]

GOODMAN WATER COMPANY
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 Test Year ended December 31, 2009

Schedule GTM-9

ORIGINAL COST RATE BASE ADJUSTMENT # 5 - ELIMINATE EXCESS CAPACITY - DISTRIBUTION MAINS

<u>LINE NO.</u>	<u>Account Number</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY PROPOSED</u>	<u>[B] STAFF ADJUSTMENTS</u>	<u>[C] STAFF RECOMMENDED</u>
1	333	Transmission and Distribution Mains	<u>1,611,320</u>	<u>\$ (105,564)</u>	<u>\$ 1,505,756</u>

References:

Col [A]: Company Schedule B-1
 Col [B]: GTM and MSJ Testimony
 Col [C]: Col. [A] + Col. [B]

ORIGINAL COST RATE BASE ADJUSTMENT # 6 - ADJUST ACCUMULATED DEPRECIATION

LINE NO.	Account Number	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1		Accumulated Depreciation	<u>\$ 731,205</u>	<u>\$ 2,397</u>	<u>\$ 733,602</u>
			Accumulated Depreciation per application	Accumulated Depreciation per Staff	Difference
2		Structures and Improvements	\$ 10,285	\$ 10,289	\$ 4
3		Collecting and Impounding Res.	-	-	-
4		Lake River and other Intakes	-	-	-
5		Wells and Springs	67,423	67,557	134
6		Infiltration Galleries and Tunnels	-	-	-
7		Supply Mains	-	-	-
8		Power Generation Equipment	-	-	-
9		Electrical Pumping Equipment	341,101	343,970	2,869
10		Water Treatment Equipment	2,167	2,172	5
11		Water Treatment Plant	-	-	-
12		Chemical Solution Feeders	-	-	-
13		Distribution Reservoirs & Standpipe	64,318	-	(64,318)
14		Storage Tanks	-	51,229	51,229
15		Pressure Tanks	-	15,136	15,136
16		Transmission and Distribution Mains	139,059	135,664	(3,395)
17		Services	40,947	41,022	75
18		Meters	17,066	17,456	390
19		Hydrants	12,984	12,962	(22)
20		Backflow Prevention Devices	-	-	-
21		Other Plant & Miscellaneous Equipment	35,847	36,136	289
22		Office Furniture & Fixtures	-	-	-
23		Computers & Software	-	-	-
24		Transportation Equipment	-	-	-
25		Stores Equipment	-	-	-
26		Tools and Work Equipment	-	-	-
27		Laboratory Equipment	-	-	-
28		Power Operated Equipment	-	-	-
29		Communications Equipment	-	-	-
30		Miscellaneous Equipment	-	-	-
31		Other Tangible Plant	-	-	-
			<u>\$ 731,197</u>	<u>\$ 733,594</u>	<u>\$ 2,397</u>

References:

Col [A]: Company Schedule B-1
Col [B]: GTM Testimony, RUCO DR 2.12
Col [C]: Col. [A] + Col. [B]

GOODMAN WATER COMPANY
 Docket No. W-02500A-10-0382
 Test Year ended December 31, 2009

OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] COMPANY ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
1	OPERATING REVENUES:					
2	Metered Water Revenues	\$ 559,013	\$ 7,359	\$ 566,372	\$ 120,829	\$ 687,201
3	Unmetered Water Revenues	-	-	-	-	-
4	Other Water Revenues	13,738	-	13,738	-	13,738
5	Total Operating Revenues	\$ 572,751	\$ 7,359	\$ 580,110	\$ 120,829	\$ 700,939
6						
7	OPERATING EXPENSES:					
8	Salaries and Wages	\$ 40,000	\$ -	\$ 40,000	\$ -	\$ 40,000
9	Employee Pensions & Benefits	-	-	-	-	-
10	Purchased Water	-	-	-	-	-
11	Purchased Power	27,066	-	27,066	-	27,066
12	Chemicals	-	-	-	-	-
13	Repairs and Maintenance	7,746	-	7,746	-	7,746
14	Office Supplies and Expense	14,855	-	14,855	-	14,855
15	Outside Services	102,925	-	102,925	-	102,925
16	Water Testing	1,215	1,568	2,783	-	2,783
17	Rents	-	-	-	-	-
18	Transportation Expenses	-	-	-	-	-
19	Insurance - General Liability	9,669	-	9,669	-	9,669
20	Insurance - Health and Life	-	-	-	-	-
21	Advertising	-	-	-	-	-
22	Regulatory Comm Expense - Rate Case	20,000	-	20,000	-	20,000
23	Regulatory Comm Expense - Other	378	-	378	-	378
24	Bad Debt Expense	-	-	-	-	-
25	Miscellaneous Expense	-	-	-	-	-
26	Depreciation and Amortization	227,855	998	228,853	-	228,853
27	Interest on Security Deposits	-	-	-	-	-
28	Taxes other than Income	2,988	-	2,988	-	2,988
29	Property Taxes	21,299	(3,998)	17,301	1,201	18,502
30	Income Tax	22,873	(4,384)	18,489	50,111	68,600
31	Total Operating Expenses	\$ 498,869	\$ (5,816)	\$ 493,053	\$ 51,312	\$ 544,365
32						
33	Operating Income	\$ 73,882	\$ 13,175	\$ 87,057	\$ 69,517	\$ 156,574

References:
 Column [A]: Company Schedule C-1
 Column [B]: Schedule GTM-11
 Column [C]: Column [A] + Column [B]
 Column [D]: Schedules GTM-1 and GTM-2
 Column [E]: Column [C] + Column [D]

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) GTM-13 Revenue Annualization ADJ #1	(C) GTM-14 Not Used ADJ #2	(D) GTM-15 Water Testing ADJ #3	(E) GTM-16 Depreciation Exp ADJ #4	(F) GTM-17 Property Taxes ADJ #5	(G) GTM-18 Income Taxes ADJ #6	(H) STAFF ADJUSTED
1	Operating Revenues:								
2	Metered Water Revenues	\$ 559,013	\$ 7,359						\$ 566,372
3	Unmetered Water Revenues	13,738	-						13,738
4	Other Water Revenues	-	-						-
5	Total Operating Revenues	\$ 572,751	\$ 7,359						\$ 580,110
6	Operating Expenses:								
7	Salaries and Wages	\$ 40,000							\$ 40,000
8	Employee Pensions & Benefits	-							-
9	Purchased Water	-							-
10	Purchased Power	27,066							27,066
11	Chemicals	-							-
12	Repairs and Maintenance	7,746							7,746
13	Office Supplies and Expense	14,855							14,855
14	Outside Services	102,925							102,925
15	Water Testing	1,215			1,568				2,783
16	Rents	-							-
17	Transportation Expenses	-							-
18	Insurance - General Liability	9,669							9,669
19	Insurance - Health and Life	-							-
20	Advertising	-							-
21	Regulatory Comm Expense - Rate Case	20,000							20,000
22	Regulatory Comm Expense - Other	378							378
23	Bad Debt Expense	-							-
24	Miscellaneous Expense	-							-
25	Depreciation and Amortization	227,855				998			228,853
26	Interest on Security Deposits	2,988							2,988
27	Taxes other than Income	21,299							17,301
28	Property Taxes	22,873					(3,998)		18,489
29	Income Tax	-						(4,384)	-
30	Total Operating Expenses	\$ 498,869			\$ 1,568	\$ 998	\$ (3,998)	\$ (4,384)	\$ 493,053
31	Operating Income	\$ 73,882	\$ 7,359		\$ (1,568)	\$ (998)	\$ 3,998	\$ 4,384	\$ 87,057

References:
Column [A]: Company Schedule C-1
Column [B] - [G]: Schedule GTM-13 through GTM-17
Column [H]: Add Column [A] - Column [F]

GOODMAN WATER COMPANY
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Schedule GTM-13

OPERATING INCOME ADJUSTMENT # 1 - ELIMINATE REVENUE ANNUALIZATION

<u>LINE NO.</u>	<u>Account Number</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY PROPOSED</u>	<u>[B] STAFF ADJUSTMENTS</u>	<u>[C] STAFF RECOMMENDED</u>
1		Metered Water Revenues	<u>\$ 559,013</u>	<u>\$ 7,359</u>	<u>\$ 566,372</u>

References:

Col [A]: Company Schedule B-1

Col [B]: GTM Testimony

Col [C]: Col. [A] + Col. [B]

GOODMAN WATER COMPANY
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Schedule GTM-14

OPERATING INCOME ADJUSTMENT # 2 - NOT USED

<u>LINE</u> <u>NO.</u>	<u>DESCRIPTION</u>	<u>[A]</u> <u>COMPANY</u> <u>PROPOSED</u>	<u>[B]</u> <u>STAFF</u> <u>ADJUSTMENTS</u>	<u>[C]</u> <u>STAFF</u> <u>RECOMMENDED</u>
1		\$ -	\$ -	\$ -

References:

GOODMAN WATER COMPANY
Docket No. W-02500A-10-0382
Test Year ended December 31, 2009

Schedule GTM-15

OPERATING INCOME ADJUSTMENT # 3 - WATER TESTING EXPENSE

<u>LINE NO.</u>	<u>Account Number</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY PROPOSED</u>	<u>[B] STAFF ADJUSTMENTS</u>	<u>[C] STAFF RECOMMENDED</u>
1		Water Testing	<u>\$ 1,215</u>	<u>\$ 1,568</u>	<u>\$ 2,783</u>

References:

Col [A]: Company Schedule B-1

Col [B]: GTM Testimony

Col [C]: Col. [A] + Col. [B]

OPERATING INCOME ADJUSTMENT # 4 - DEPRECIATION EXPENSE

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENTS	[C] STAFF RECOMMENDED
1	Depreciation and Amortization	\$ 227,855	\$ 998	\$ 228,853

Line No.	ACCT NO.	DESCRIPTION	[A] Company Proposed PLANT IN SERVICE BALANCE	[B] STAFF DEPR. PLANT BALANCE	[C] STAFF RECOMMENDED RATE	[D] STAFF RECOMMENDED EXPENSE
Plant In Service						
2	301	Organization Cost	\$ 127,103	127,103	0.00%	\$ -
3	302	Franchise Cost	-	-	0.00%	-
4	303	Land and Land Rights	494,159	124,659	0.00%	-
5	304	Structures and Improvements	182,570	182,570	3.33%	6,080
6	305	Collecting and Impounding Res.	-	-	2.50%	-
7	306	Lake River and other Intakes	-	-	2.50%	-
8	307	Wells and Springs	386,591	386,591	3.33%	12,873
9	308	Infiltration Galleries and Tunnels	-	-	6.67%	-
10	309	Supply Mains	-	-	2.00%	-
11	310	Power Generation Equipment	-	-	5.00%	-
12	311	Electrical Pumping Equipment	968,652	968,652	12.50%	121,082
13	320.0	Water Treatment Equipment	15,947	-	-	-
14	320.1	Water Treatment Plant	-	-	3.33%	-
15	320.2	Chemical Solution Feeders	-	15,947	20.00%	3,189
16	330	Distribution Reservoirs & Standpipe	836,890	-	-	-
17	330	Storage Tanks	-	199,778	2.22%	9,989
18	330	Pressure Tanks	-	452,063	5.00%	9,041
19	331	Transmission and Distribution Mains	1,611,320	1,505,756	2.00%	30,115
20	333	Services	386,947	386,947	3.33%	12,885
21	334	Meters	94,263	94,263	8.33%	7,852
22	335	Hydrants	161,737	161,737	2.00%	3,235
23	336	Backflow Prevention Devices	-	-	6.67%	-
24	339	Other Plant & Miscellaneous Equipment	187,582	187,582	6.67%	12,512
25	340	Office Furniture & Fixtures	-	-	6.67%	-
26	340	Computers & Software	-	-	20.00%	-
27	341	Transportation Equipment	-	-	20.00%	-
28	342	Stores Equipment	-	-	4.00%	-
29	343	Tools and Work Equipment	-	-	5.00%	-
30	344	Laboratory Equipment	-	-	10.00%	-
31	345	Power Operated Equipment	-	-	5.00%	-
32	346	Communications Equipment	-	-	10.00%	-
33	347	Miscellaneous Equipment	-	-	10.00%	-
34	348	Other Tangible Plant	-	-	3.33%	-
35	-	Rounding Amount	-	-	67.00%	-
36		Subtotal General	\$ 5,453,761	\$ 4,793,648		\$ 228,853
37		Less: Non-depreciable Account(s)	621,262	251,762		
38		Depreciable Plant (L29-L30)	\$ 4,832,499	\$ 4,541,886		
39		Contributions-in-Aid-of-Construction (CIAC)			\$ -	
40		Weighted Average Depreciation/Amortization Rate			5.0387%	
41		Less: Amortization of CIAC (L32 x L33)			\$ -	
42		Depreciation Expense - STAFF [Col. (C), L36 - L41]			\$ 228,853	

OPERATING INCOME ADJUSTMENT # 5 - PROPERTY TAXES

LINE NO.	Property Tax Calculation	[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues - 2009	\$ 580,110	\$ 580,110
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	\$ 1,160,220	\$ 1,160,220
4a	Staff Adjusted Test Year Revenues - 2006	580,110	
4b	Staff Recommended Revenue, Per Schedule GTM-1		700,939
5	Subtotal (Line 4 + Line 5)	\$ 1,740,330	\$ 1,861,159
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	\$ 580,110	\$ 620,386
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	\$ 1,160,220	\$ 1,240,773
10	Plus: 10% of CWIP -		-
11	Less: Net Book Value of Licensed Vehicles		-
12	Full Cash Value (Line 9 + Line 10 - Line 11)	\$ 1,160,220	\$ 1,240,773
13	Assessment Ratio	20.0%	20.0%
14	Assessment Value (Line 12 * Line 13)	232,044	\$ 248,155
15	Composite Property Tax Rate (Per Company Schedule C-2, Page 3, Line 16)	7.4558%	7.4558%
16	Staff Proposed Property Tax Expense (Line 14 * Line 15)	\$ 17,301	
17	Company Proposed Property Tax	21,299	
18	Staff Test Year Adjustment (Line 16-Line 17)	\$ (3,998)	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 18,502
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		\$ 17,301
21	Increase/(Decrease) to Property Tax Expense		\$ 1,201
22	Decrease to Property Tax Expense		\$ 1,201
23	Increase in Revenue Requirement		120,829
24	Decrease to Property Tax per Dollar Increase in Revenue (Line19/Line 20)		0.994107%

References:

Col [A]: Company Schedule C-1 Page 3

Col [B]: GTM Testimony

GOODMAN WATER COMPANY
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Schedule GTM-18

OPERATING INCOME ADJUSTMENT # 6 - INCOME TAXES

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY PROPOSED</u>	<u>[B] STAFF ADJUSTMENTS</u>	<u>[C] STAFF RECOMMENDED</u>
1	Income Tax	<u>\$ 22,873</u>	<u>\$ (4,384)</u>	<u>\$ 18,489</u>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11	<u>References:</u>			
12	Col [A]: Company Schedule C-1 Page 3			
13	Col [B]: Column [C] - Column [A]			
14	Col [C]: Schedule GTM-2			

RATE DESIGN

Monthly Usage Charge (all classes)	Present Rates	Company Proposed Rates	Staff Recommended Rates
5/8" Meter - All Classes	\$ 42.20	\$ 56.97	\$ 47.50
3/4" Meter - All Classes	\$ 63.30	\$ 85.46	\$ 71.30
1" Meter - All Classes	\$ 105.50	\$ 142.43	\$ 119.00
1½" Meter - All Classes	\$ 211.50	\$ 284.85	\$ 238.00
2" Meter - All Classes	\$ 339.68	\$ 455.76	\$ 380.00
3" Meter - All Classes	\$ 675.20	\$ 911.52	\$ 760.00
4" Meter - All Classes	\$ 1,055.00	\$ 1,424.25	\$ 1,188.00
6" Meter - All Classes	\$ 2,110.00	\$ 2,848.50	\$ 2,375.00
Construction/Stand pipe	N/A	N/A	N/A
Commodity Rates (all classes)			
5/8" Meter			
From 1 to 3,000 Gallons	\$ 3.95	\$ 6.80	\$ 4.50
From 3,001 to 9,000 Gallons	\$ 5.91	\$ 10.92	\$ 9.00
Over 9,000 Gallons	\$ 7.11	\$ 13.13	\$ 11.00
3/4" Meter			
From 1 to 3,000 Gallons	\$ 3.95	\$ 6.80	\$ 4.50
From 3,001 to 9,000 Gallons	\$ 5.91	\$ 10.92	\$ 9.00
Over 10,000 Gallons	\$ 7.11	\$ 13.13	\$ 11.00
1" Meter			
From 1 to 22,500 Gallons	\$ 5.91	\$ 10.92	\$ 9.00
Over 22,500 Gallons	\$ 7.11	\$ 13.13	\$ 11.00
1½" Meter			
From 1 to 34,000 Gallons	\$ 5.91	\$ 10.92	\$ 9.00
Over 34,000 Gallons	\$ 7.11	\$ 13.13	\$ 11.00
2" Meter			
From 1 to 45,000 Gallons	\$ 5.91	\$ 10.92	\$ 9.00
Over 45,000 Gallons	\$ 7.11	\$ 13.13	\$ 11.00
3" Meter			
From 1 to 68,000 Gallons	\$ 5.91	\$ 10.92	\$ 9.00
Over 68,000 Gallons	\$ 7.11	\$ 13.13	\$ 11.00
4" Meter			
From 1 to 90,000 Gallons	\$ 5.91	\$ 10.92	\$ 9.00
Over 90,000 Gallons	\$ 7.11	\$ 13.13	\$ 11.00
6" Meter (Res., Comm.)			
From 1 to 135,000 Gallons	\$ 5.91	\$ 10.92	\$ 9.00
Over 135,000 Gallons	\$ 7.11	\$ 13.13	\$ 11.00
Construction/Stand pipe (Res., Comm.) All Gallons	\$ 7.11	\$ 13.13	\$ 11.00

Service Line and Meter Installation Charges	Present	Co. Proposed			Staff Recommended		
	Total	Line	Meter	Total	Line	Meter	Total
5/8" Meter	\$ 225	\$ 385	\$ 135	\$ 520	\$ 385	\$ 135	\$ 520
3/4" Meter	270	415	205	620	415	205	620
1" Meter	300	465	265	730	465	265	730
1½" Meter	425	520	475	995	520	475	995
2" Turbine Meter	550	800	995	1,795	800	995	1,795
2" Compound Meter	550	800	1,840	2,640	800	1,840	2,640
3" Turbine Meter	750	1,015	1,620	2,635	1,015	1,620	2,635
3" Compound Meter	750	1,135	2,495	3,630	1,135	2,495	3,630
4" Turbine Meter	1,375	1,430	2,570	4,000	1,430	2,570	4,000
4" Compound Meter	1,375	1,610	3,545	5,155	1,610	3,545	5,155
6" Turbine Meter	2,800	2,150	4,925	7,075	2,150	4,925	7,075
6" Compound Meter	2,800	2,270	6,820	9,090	2,270	6,820	9,090
8"	Cost	Cost	Cost	Cost	Cost	Cost	Cost
10"	Cost	Cost	Cost	Cost	Cost	Cost	Cost
12"	Cost	Cost	Cost	Cost	Cost	Cost	Cost
Service Charges							
Establishment	\$ 50.00	\$ 50.00			\$ 50.00		
Establishment (After Hours)	75.00	75.00			NT		
Reconnection (Delinquent)	75.00	75.00			75.00		
Reconnection (After Hours)	50.00	50.00			NT		
Meter Test	20.00	20.00			20.00		
Deposit Requirement (Residential)	(a)	(a)			(a)		
Deposit Requirement (None Residential Meter)	(a)	(a)			(a)		
Deposit Interest	6.00%	6.00%			6.00%		
Re-Establishment (With-in 12 Months)	(b)	(b)			(b)		
NSF Check	15.00	15.00			15.00		
Deferred Payment, Per Month	1.5%	1.50%			1.50%		
Meter Re-Read	20.00	20.00			20.00		
Late Charge per month	1.5%	1.5%			1.5%		
Customer Requested Meter Test	20.00	20.00			20.00		
After Hours Service Charge	10.00	10.00			50.00		
Turn-on/off (at customer request)	NT	75.00			NT		
Moving Customer Meter (at customer request)	NT	cost			cost		
NT = No Tariff							
Monthly Service Charge for Fire Sprinkler							
All Meter Sizes				Greater of \$10 or 2 percent of the general service rate for a similar size meter.			

Per Commission Rules (R14-2-403.B)

- (a) Residential - two times the average bill. Non-residential - two and one-half times the average bill.
- (b) Minimum charge times number of months disconnected.

In addition to the collection of regular rates, the utility will collect from its customers a proportionate share of any privilege, sales, use, and franchise tax. Per Commission Rule (14-2-409.D.5).

All advances and/or contributions are to include labor, materials, overheads and all applicable taxes, Cost to include labor, materials and parts, overheads and all applicable taxes.

Typical Bill Analysis
Residential 5/8 Inch Meter

Company Proposed	Gallons	Present Rates	Proposed Rates	Dollar Increase	Percent Increase
Average Usage	5,477	\$ 66.73	\$ 100.30	\$ 33.57	50.31%
Median Usage	4,500	60.96	89.63	\$ 28.68	47.04%
Staff Recommended					
Average Usage	5,477	\$ 66.73	\$ 83.29	\$ 16.56	24.82%
Median Usage	4,500	60.96	74.50	\$ 13.55	22.22%

Present & Proposed Rates (Without Taxes)
Residential 5/8 Inch Meter

Consumption	Rates	Rates	Increase	Rates	Increase
-	\$ 42.20	\$ 56.97	35.00%	\$ 47.50	12.56%
1,000	46.15	63.77	38.18%	52.00	12.68%
2,000	50.10	70.57	40.86%	56.50	12.77%
3,000	54.05	77.37	43.15%	61.00	12.86%
4,000	58.00	84.17	45.12%	70.00	20.69%
4,500	60.96	89.63	47.04%	74.50	22.22%
5,000	63.91	95.09	48.79%	79.00	23.61%
5,477	66.73	100.30	50.31%	83.29	24.82%
6,000	69.82	106.01	51.83%	88.00	26.04%
7,000	75.73	116.93	54.40%	97.00	28.09%
8,000	81.64	127.85	56.60%	106.00	29.84%
9,000	87.55	138.77	58.50%	115.00	31.35%
10,000	94.66	151.90	60.47%	126.00	33.11%
11,000	101.77	165.03	62.16%	137.00	34.62%
12,000	108.88	178.16	63.63%	148.00	35.93%
13,000	115.99	191.29	64.92%	159.00	37.08%
14,000	123.10	204.42	66.06%	170.00	38.10%
15,000	130.21	217.55	67.08%	181.00	39.01%
16,000	137.32	230.68	67.99%	192.00	39.82%
17,000	144.43	243.81	68.81%	203.00	40.55%
18,000	151.54	256.94	69.55%	214.00	41.22%
19,000	158.65	270.07	70.23%	225.00	41.82%
20,000	165.76	283.20	70.85%	236.00	42.37%
25,000	201.31	348.85	73.29%	291.00	44.55%
30,000	236.86	414.50	75.00%	346.00	46.08%
35,000	272.41	480.15	76.26%	401.00	47.20%
40,000	307.96	545.80	77.23%	456.00	48.07%
45,000	343.51	611.45	78.00%	511.00	48.76%
50,000	379.06	677.10	78.63%	566.00	49.32%
75,000	556.81	1,005.35	80.56%	841.00	51.04%
100,000	734.56	1,333.60	81.55%	1,116.00	51.93%