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Docket #(s): W-02304A-15-0263

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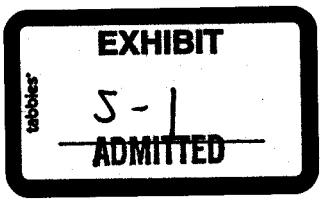
Exhibit #: S1-S8; A1-A13



BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Interim Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner

IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR RATE INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON	DOCKET NO. W-02304A-15-0263

DIRECT

TESTIMONY

OF

JIAN W. LIU

UTILITIES ENGINEER

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

FEBRUARY 2, 2016

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EXECUTIVE SUMMARY
COMMUNITY WATER COMPANY OF GREEN VALLEY
DOCKET NO. W-02304A-15-0263

CONCLUSIONS

1. The Arizona Department of Environmental Quality ("ADEQ") reported that the Community Water Company of Green Valley ("Community Water" or "Company") Public Water System ("PWS") No. 10-004, is currently delivering water that meets water quality standards required by 40 C.F.R. 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4. (ADEQ compliance status report dated July 16, 2015).

2. The Company is located in the Tucson Active Management Area ("AMA") and is subject to Arizona Department of Water Resources ("ADWR") AMA reporting and conservation requirements. ADWR reported that Community Water is currently in compliance with departmental requirements governing water providers and/or community water systems. (ADWR email dated November 2, 2015).

3. A check with the Arizona Corporation Commission ("ACC" or "Commission") Utilities Division Compliance Section showed no delinquent compliance items for the Company. (ACC Compliance Section Email dated October 28, 2015).

4. Community Water will have little or no growth in the future since there are only approximately 500 lots available within its Certificate of Convenience and Necessity ("CC&N") area based on information provided by the Company.

5. Community Water reported 771,424,000 gallons pumped and 730,051,000 gallons sold, resulting in a water loss of approximately 5.36 percent in 2014.

6. Community Water has approved Curtailment Plan and Backflow Prevention Tariffs on file with the Commission.

7. The Company has approved BMP tariffs on file with the Commission.

8. Community Water's existing water system (as of December 2014) can adequately support approximately 44,000 additional connections based on storage capacity and can adequately support approximately 28,000 additional connections based on well production.

RECOMMENDATIONS

1. Staff recommends its average annual cost of $15,124 be adopted for the water testing expense in this proceeding.

2. In the prior rate case, the Company adopted Staff's typical and customary water depreciation rates. These 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.

3. The Company did not propose any changes to its service line and meter installation charges. Therefore, Staff recommends that the current authorized rates for a meter and service line continue to apply. These charges are listed in Table M-1.

4. Staff finds the Reservoir No. 5 with 2,000,000 gallons of storage capacity as excess capacity.

INTRODUCTION

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

A. My name is Jian W. Liu. My place of employment is the Arizona Corporation Commission ("ACC" or "Commission"), Utilities Division, 1200 West Washington Street, Phoenix, Arizona 85007. My job title is Water/Wastewater Engineer.

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

A. I have been employed by the Commission since October 2005.

Q. Please list your duties and responsibilities.

A. My main responsibilities are to inspect, investigate and evaluate water and wastewater systems. This includes obtaining data, preparing reconstruction cost new and/or original cost studies, investigative reports, interpreting rules and regulations, and to suggest corrective action and provide technical recommendations on water and wastewater system deficiencies. I also provide written and oral testimony in rate cases and other cases before the Commission.

Q. How many companies have you analyzed for the Utilities Division?

A. I have analyzed approximately 50 companies covering various responsibilities for the Utilities Division.

Q. Have you previously testified before this Commission?

A. Yes, I have testified before this Commission.

Q. What is your educational background?

A. I am a Ph.D. Candidate in Geotechnical Engineering from Arizona State University ("ASU"). I have a Master of Science Degree in Natural Science from ASU and a Master of Science Degree in Civil Engineering from Institute of Rock & Soil Mechanics ("IRSM"), Academy of Sciences, China.

Q. Briefly describe your pertinent work experience.

A. From 1982 to 2000, I was employed by IRSM, SCS Engineers, and URS Corporation as a Civil and Environmental Engineer. In 2000, I joined the Arizona Department of Environmental Quality ("ADEQ"). My responsibilities with ADEQ included review and approval of water distribution systems, sewer distribution systems, and on-site wastewater treatment facilities. I remained with ADEQ until transferring to the Commission in October 2005.

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

A. I am a licensed professional civil engineer in the State of Arizona.

PURPOSE OF TESTIMONY

Q. What was your assignment in this rate proceeding?

A. My assignment was to provide Staff's engineering evaluation of the subject rate proceeding. I reviewed the Company's application and responses to data requests, and I inspected the water system. This testimony and its attachments present Staff's engineering evaluation. The findings of my engineering evaluation are contained in the Engineering Report that I have prepared for this proceeding. The report is included as Exhibit JWL in this pre-filed testimony.

ENGINEERING REPORT

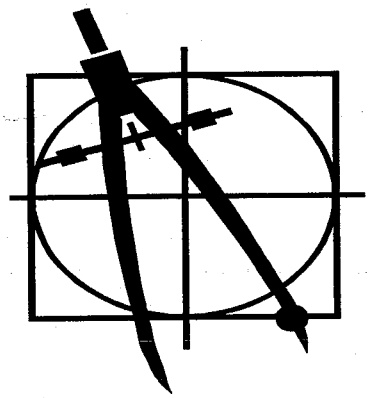
Q. Please describe the attached Engineering Report, Exhibit JWL.

A. Exhibit JWL presents the details and analyses of Staff's findings, and is attached to this direct testimony. Exhibit JWL contains the following major topics: A) Location of Company; B) Description of the Water System; C) ADEQ Compliance; D) ACC Compliance; E) Arizona Department Of Water Resources ("ADWR") compliance; F) Water Testing Expenses, G) Water Usage, H) Growth; I) Depreciation Rates; J) Other Issues.

Staff's conclusions and recommendations from the engineering report are contained in the "Executive Summary", above.

Q. Does this conclude your direct testimony?

A. Yes, it does.



Engineering Report for:
Community Water of Green Valley
Docket No. W-02304A-15-0263
(Rates)

By: Jian W Liu
Utilities Engineer

December 9, 2015

EXECUTIVE SUMMARY

CONCLUSIONS:

CONCLUSIONS

1. The Arizona Department of Environmental Quality ("ADEQ") reported that the Community Water Company of Green Valley ("Community Water" or "Company") Public Water System ("PWS") No. 10-004, is currently delivering water that meets water quality standards required by 40 C.F.R. 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4. (ADEQ compliance status report dated July 16, 2015).

2. The Company is located in the Tucson Active Management Area ("AMA") and is subject to Arizona Department of Water Resources ("ADWR") AMA reporting and conservation requirements. ADWR reported that Community Water is currently in compliance with departmental requirements governing water providers and/or community water systems. (ADWR email dated November 2, 2015).

3. A check with the Arizona Corporation Commission ("ACC" or "Commission") Utilities Division Compliance Section showed no delinquent compliance items for the Company. (ACC Compliance Section Email dated October 28, 2015).

4. Community Water will have little or no growth in the future since there are only approximately 500 lots available within its Certificate of Convenience and Necessity ("CC&N") area based on information provided by the Company.

5. Community Water reported 771,424,000 gallons pumped and 730,051,000 gallons sold, resulting in a water loss of approximately 5.36 percent in 2014.

6. Community Water has approved Curtailment Plan and Backflow Prevention Tariffs on file with the Commission.

7. The Company has approved BMP tariffs on file with the Commission.

8. Community Water's existing water system (as of December 2014) can adequately support approximately 44,000 additional connections based on storage capacity and can adequately support approximately 28,000 additional connections based on well production.

RECOMMENDATIONS

1. Staff recommends its average annual cost of $15,124 be adopted for the water testing expense in this proceeding.

2. In the prior rate case, the Company adopted Staff's typical and customary water depreciation rates. These 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.

3. The Company did not propose any changes to its service line and meter installation charges. Therefore, Staff recommends that the current authorized rates for a meter and service line continue to apply. These charges are listed in Table M-1.

4. Staff considered the Reservoir No. 5 with 2,000,000 gallons of storage capacity as excess capacity.

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A. INTRODUCTION AND LOCATION OF COMPANY

On July 15, 2015 Community Water Company of Green Valley ("Community Water" or "Company") filed an application with the Arizona Corporation Commission ("ACC" or "Commission") for approval of a rate increase in Docket No. W-02304A-15-0263. Community Water is located approximately 25 miles south of Tucson on Interstate Highway 19 and serves portions of Pima County. The Company's existing Certificate of Convenience and Necessity includes an area totaling approximately 6,000 acres or 9.4 square miles. Figure A-1 shows the location of Community Water within Pima County and Figure A-2 shows the certificated area. The Commission Utilities Division Staff ("Staff") engineering review and analysis of the pending application are presented in this report.

B. B. DESCRIPTION OF WATER SYSTEM

The water system was field inspected on November 4, 2015, by Jian W Liu, Staff Utilities Engineer, and Phan Tsan, Public Utilities Analyst in the accompaniment of John Meyer and Pierre Han hart, representing Community Water.

The operation of the water system consists of four wells, six storage tanks, three booster stations and a distribution system, serving approximately 12,939 connections as of December 2014. Wells 6 and 9 are located in the middle part of the service area, and wells 10 and 11 are located in the southern and northern part of the service area. Freeport MacMoRan (formerly Phelps Dodge) has paid for all of the capital costs associated with constructing of wells 10 and 11. The detailed plant facility descriptions are as follows:

Table 1. Arsenic Treatment Plant

Name or Description	Plant Items	Location
1200 GPM Arsenic Treatment Plant	Settling Tank, Sludge Container, 550 gallon Sodium Hypochlorite tank, Static Mixer, 550 gallon Ferric Chloride tank, Media Trap/Strainer, sludge drying bed, 8 Arsenic filter tanks	Well #9 1526 N La Canoa Dr
1000 GPM Arsenic Treatment Plant	Settling Tank, Sludge Container, 550 gallon Sodium Hypochlorite tank, Static Mixer, 550 gallon Ferric Chloride tank, 8 Arsenic filter tanks	Well #6 304 S Abrego Drive
2500 GPM Arsenic Treatment Plant	Settling Tank, Sludge Container, 6-Arsenic filter tanks, 1,100 gallon double-walled chlorine tank, Static Mixer, 550 gallon double-walled Ferric Chloride tank, and dewatering pump/control panel, sludge drying bed	Well #10 1667 S Abrego Drive
2500 GPM Arsenic Treatment Plant	Settling Tank, Sludge Container, 6-Arsenic filter tanks, 1,100 gallon double-walled chlorine tank, Static Mixer, 550 gallon double-walled Ferric Chloride tank, and dewatering pump/control panel, sludge drying bed	Well #11 18460 S. Calle Valle Verde

Table 2. Well Data

Well Name Or #	ADWR ID No.	Pump HP	Pump GPM	Casing Size & Depth	Meter Size
#6	55-627485	250	650	16" and 837'	1-6"&1-10"
#9	55-588121	250	1,000	20" and 1000'	1-3"&1-12"
#10	55-207982	400	2,100	20" and 1140'	1-12"
#11	55-608518	350	2,400	24" and 2786'	1-12"
Totals:			6,150		

Note: GPM = gallons per minute.

Table 3. Storage Tanks

Capacity Million Gallons (MG)	Quantity (Each)	Location
2.0 (Reservoir #5)	1	2051 W Continental Road
1.0 (Reservoir #3)	1	1901 W. Duval Road
2.0 (Reservoir #4)	1	1901 W. Duval Road
1.0 (Reservoir #1)	1	640 W Bondadosa
0.30 (Well #10 Forebay)	1	Well #10
0.30 (Well #11 Forebay)	1	Well #11
Totals: 6.6 MG	6	

Table 4. Booster Systems

Location	Plant Facilities
640 W Bondadosa (Reservoir No. 1)	40 Hp booster pump
Well #10	Five 100Hp
Well #11	Five 125Hp

Table 5. Water Mains

Diameter	Material	Length
2-inch	Copper & PVC	7,050 ft
3-inch	AC & PVC	8,167 ft
4-inch	AC & DI	53152 ft.
6-inch	AC & DI	314312 ft.
8-inch	AC & DI	241677 ft.
10-inch	AC & DI	6,799 ft.
12-inch	AC & DI	111119 ft.
16-inch	AC & DI	45,450 ft.

Table 6. Customer Meters

Size	Quantity
5/8 x 3/4-inch	10110
3/4-inch	96
1- inch	512
1-1/2-inch	78
2-inch	163
Turbo 3	15
Turbo 4	1
Turbo 6	

Table 7. Fire Hydrants

Size	Quantity
Standard	1013

C. WATER USE

Water Sold

Based on the information provided by Community Water, water use for the year 2014 is presented in Figure C-1. Customer consumption experienced a high monthly average water use of 176 gallons per day ("GPD") per connection and a low monthly average water use of 137 GPD per connection for an average annual use of 155 GPD per connection.

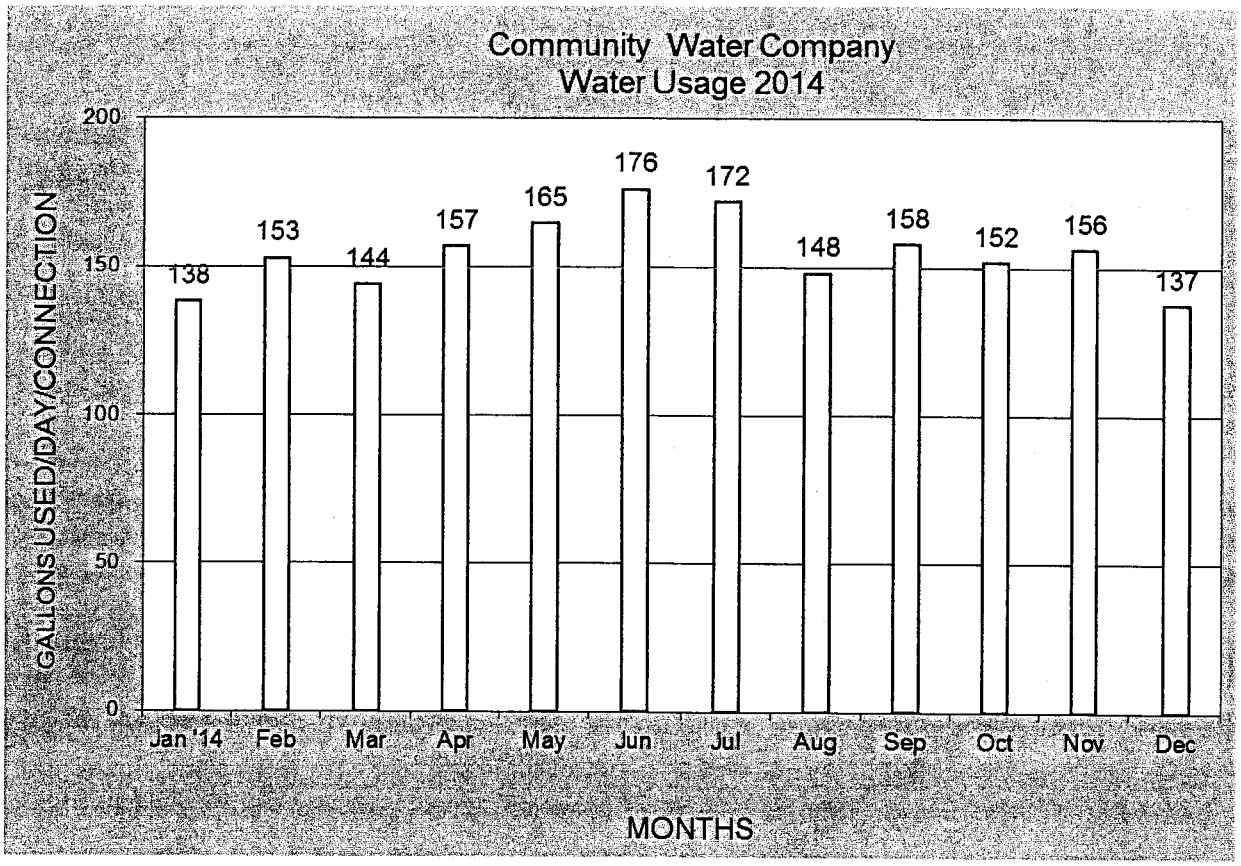

Figure C-1. Water Use

Non-Account Water

Non-account water should be 10 percent or less. Community Water reported 771,424,000 gallons pumped and 730,051,000 gallons sold, resulting in a water loss of approximately 5.36 percent in 2014.

D. GROWTH

Community Water had 12,676 customers in 2009. In test year 2014, Community Water had 12,939 customers. The Company added 263 connections during the 5 year period (from 2009 to 2014). Community Water will have little or no growth in the future since there is only approximately 500 lots available within its Certificate of Convenience and Necessity ("CC&N") area based on information provided by the Company.

E. WATER SYSTEM ANALYSIS

The existing water system consists of four wells capable of producing approximately 6,150 gallons per minute ("GPM") of total capacity, and a total storage tank capacity of 4,600,000 gallons in December 2014. Based on 2014 water use data, Community Water's existing water system (as of December 2014) can adequately support approximately 44,000 additional connections based on storage capacity, and can adequately support approximately 28,000 additional connections based on well production.

Figure E-1 depicts the Customer Consumption Projection using linear regression analysis. Community Water's customers used 20.1 percent less water in 2014 compared with their water Consumption in 2007.

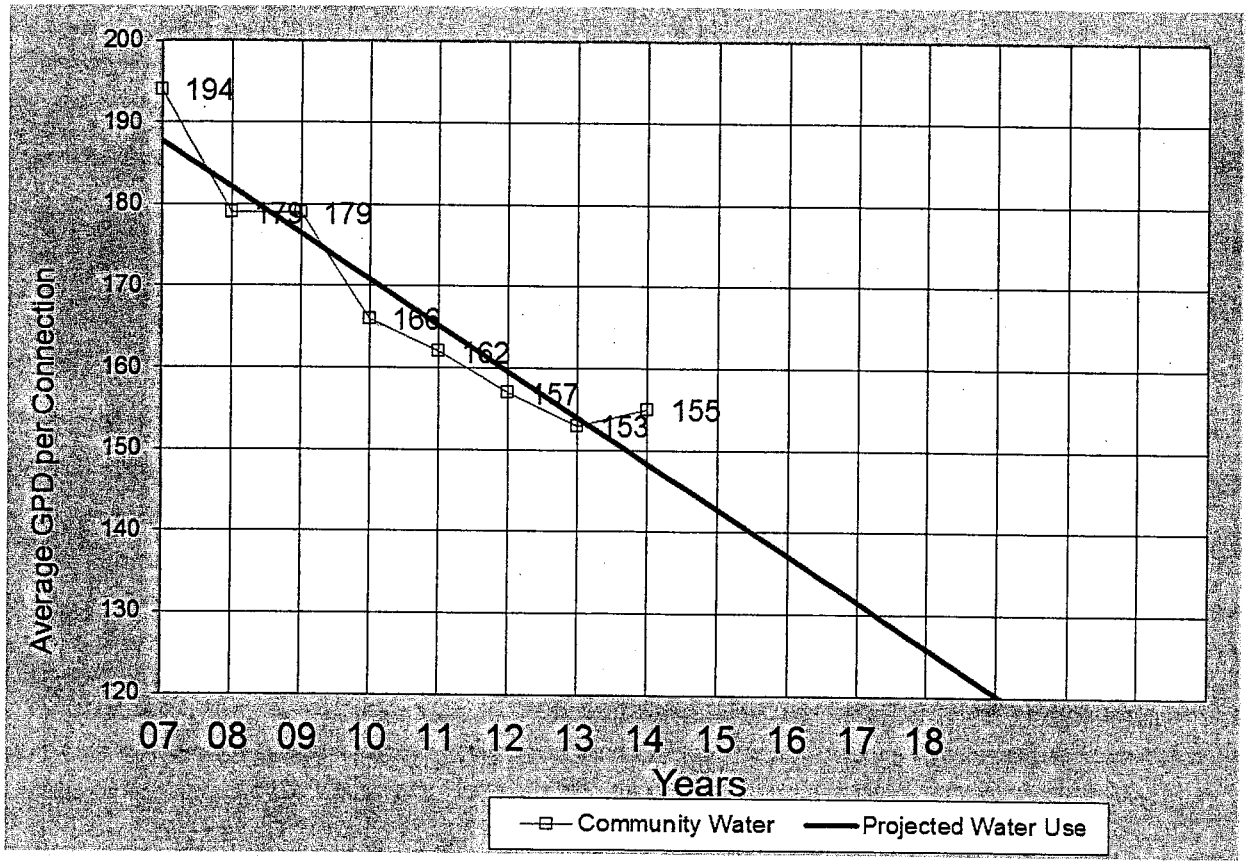

Figure E-1. Customer Consumption Projection

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

Compliance

ADEQ reported that the Community Water's drinking water system, Public Water System ("PWS") No. 10-004, is currently delivering water that meets water quality standards required by 40 C.F.R. 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code ("A.A.C."), Title 18, Chapter (ADEQ compliance status report dated July 16, 2015).

Water Testing Expense

Since Community Water serves more than 10,000 customers, the Company does not participate in the Monitoring Assistance Program. The Company reported its total water testing expense was $15,124 during the test year 2014. Staff has reviewed this reported amount, invoices and all supporting documents. Staff recommends an average annual cost of $15,124 be adopted for this proceeding.

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

Community Water's service area is located in the ADWR Tucson Active Management Area ("AMA") and is subject to ADWR AMA reporting and conservation requirements. ADWR reported that Company is currently in compliance with departmental requirements governing water providers and/or community water systems. (ADWR email dated November 2, 2015).

H. ACC COMPLIANCE

A check with the ACC Utilities Division Compliance Section showed no delinquent compliance items for the Company. (Compliance Section email dated October 28, 2015).

I. DEPRECIATION RATES

In the prior rate case, the Company adopted Staff's typical and customary water depreciation rates. These 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 ("NARUC") category.

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 Plants	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

J. CURTAILMENT PLAN TARIFF

The Company has an approved curtailment tariff on file with the Commission.

K. BACKFLOW PREVENTION TARIFF

The Company has an approved backflow prevention tariff on file with the Commission.

L. BEST MANAGEMENT PRACTICES

The Company has approved BMP tariffs on file with the Commission.

M. SERVICE LINE AND METER INSTALLATION CHARGES

The Company did not propose any changes to its service line and meter installation charges. Therefore, Staff recommends that the current authorized rates for a meter and service line continue to apply, these charges are listed below in Table M-1.

Table M-1. Service Line and Meter Installation Charges

Meter Size	Current & Proposed Service Line Charges	Current & Proposed *Meter Charges	**Total Current & Proposed Charges**
5/8 x3/4-inch	$445	$155	$600
3/4-inch	$445	$255	$700
1-inch	$495	$315	$810
1-1/2-inch	$550	$525	$1075
2-inch Turbine	$830	$1045	$1,875
2-inch Compound	$830	$1,890	$2,720
3-inch Turbine	$1045	$1,670	$2,715
3-inch Compound	$1165	$2,545	$3,710
4-inch Turbine	$1,490	$1737	$3,227
4-inch Compound	$1,670	$3,645	$5,315
6-inch Turbine	$2,210	$3,766	$5,976
6-inch Compound	$2,330	$6,920	$9,250
8-inch & Larger	At Cost	At Cost	At Cost

*Note: Meter charge includes meter box or vault.

N. POST-TEST YEAR PLANT ADDITION

Community Water removed Reservoir No. 2 (1,000,000 gallons) from service on December 8, 2014. The Company constructed Reservoir No. 5 (2,000,000 gallons) in 2015 to replace Reservoir No. 2.

Staff has inspected and verified the completion and in-service status of the post-test year plant addition - Reservoir No. 5. The Company told Staff that Reservoir No. 5 has been in-service since September 18, 2015.

The Company water system had adequate storage capacity without Reservoir No. 5 during the peak month of 2015. In fact, Community Water used only 75 percent of its storage capacity, without Reservoir No. 5, during the summer of 2015 according to information provided by the Company.

As explained in the Water System Analysis Section above, Community Water's water system can adequately support approximately 44,000 additional connections based on storage capacity without Reservoir No. 5. "The Company's service area is near full capacity, and the Company has estimated that growth is limited to less than 500 customers[1]". Furthermore, the Company states that "the total water consumption has decreased" and "The downward trends in per-household demand are expected to continue through 2020 and into the next decade.[2]"

Arizona Department of Environmental Quality ("ADEQ") storage requirements, pursuant to Arizona Administrative Code ("A.A.C.") R18-5-503, are as follows:

A. The minimum storage capacity for CWS[3] or a non-community water system that serves a residential population or a school shall be equal to the average daily demand during the peak month of the year. Storage capacity may be based on existing consumption and phased as the water system expands.

B. The minimum storage capacity for a multiple-well system for a CWS or a non-community water system that serves a residential population or a school may be reduced by the amount of the total daily production capacity minus the production from the largest producing well.

Based on Community Water 2014 Water use data, the Company's existing water system consists of four wells capable of producing approximately 8,856,000 gallons per day. The largest producing well can produce 3,456,000 gallons per day. The amount of the total daily production capacity (8,856,000 gallons) minus the production from the largest producing well (3,456,000 gallons) equals 5,400,000 gallons. This 5,400,000 gallons can be used as storage capacity per ADEQ.

Therefore, Community Water had a total storage than capacity of 4,600,000 gallons in December 2014, plus daily production capacity of 5,400,000 gallons can be used as storage capacity.

---

[1] Page 2 of the Direct Testimony of Arturo Gabaldon
[2] Page 11 of the Direct Testimony of Arturo Gabaldon
[3] Community Water System

That is a total storage capacity of 10,000,000 gallons available for the Company (not including Reservoir No. 5 (2,000,000 gallons)).

Furthermore, The Company's target of 48 hours of average day demand being available in storage to meet emergency requirements is not reasonable because "The Company has never has a customer without access to water for more than 12 hours[4]." If Community Water's statement is true, that is no customer without access to water for more than 12 hours during the last 40 years.

In determining excess capacity[5], Staff uses the data from the peak month of the year as the requirement and 5 years as a reasonable planning period. Since Reservoir No. 5 with 2,000,000 gallons of storage capacity is not needed now and not needed in the foreseeable future.

Staff finds the Reservoir No. 5 with 2,000,000 gallons of storage capacity as excess capacity.

[4] Page 3 of the Direct Testimony of Arturo Gabaldon

[5] Excess Capacity means constructed plant facilities that exceed the system requirements within a reasonable planning period.

PIMA COUNTY

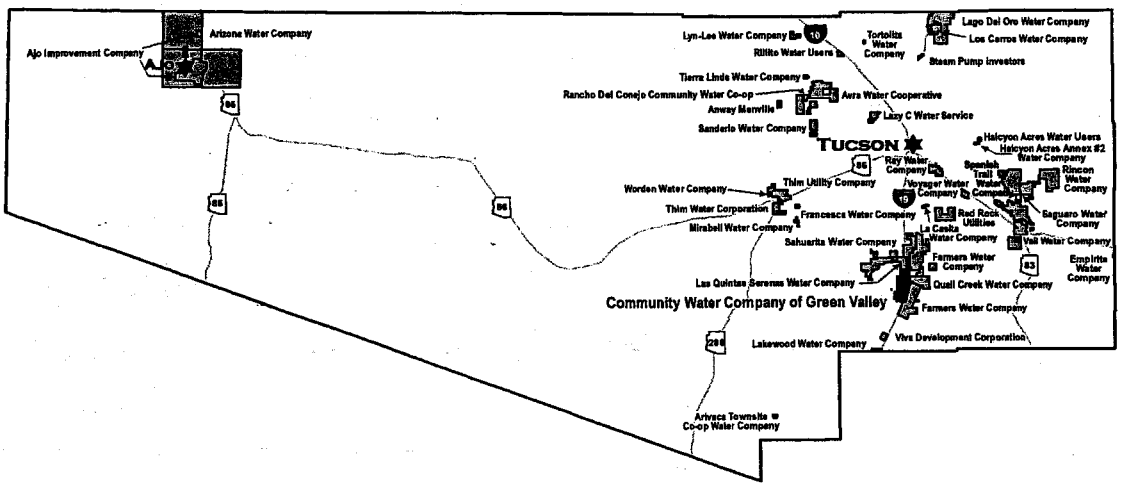

Figure A-1. Pima County Map

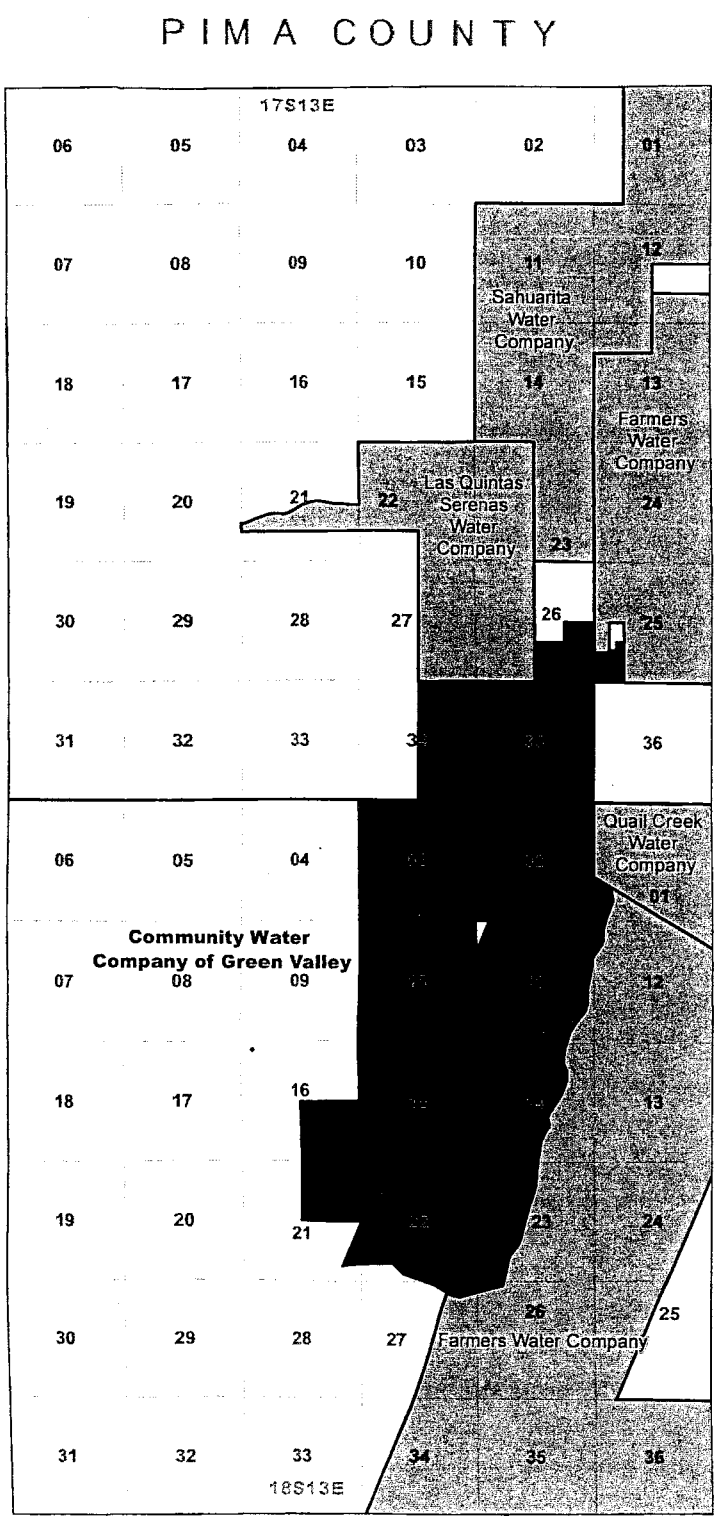

Figure A-2. Certificated Area

EXHIBIT
S-2
ADMITTED

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR RATE INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON	DOCKET NO. W-02304A-15-0263

SURREBUTTAL

TESTIMONY

OF

JIAN W. LIU

UTILITIES ENGINEER

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

APRIL 12, 2016

EXECUTIVE SUMMARY
COMMUNITY WATER COMPANY OF GREEN VALLEY
DOCKET NO. W-02304A-15-0263

Engineering Staff's recommendations have not changed based on the Rebuttal Testimony filed by the Company on March 15, 2016.

INTRODUCTION

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

A. My name is Jian W. Liu. My job title is Water/Wastewater Engineer. My place of employment is the ACC, Utilities Division ("Staff"), 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Are you the same Jian W. Liu who filed Direct Testimony on February 2, 2016 in this case?

A. Yes, I am.

Q. What is the purpose of your Surrebuttal Testimony?

A. My Surrebuttal Testimony is in response to Company's witness Raul F.G. Piña regarding his design storage calculation in the Rebuttal Testimony filed on March 15, 2016.

Q. What is the classification of CWC water system?

A. CWC operates four domestic water wells, based on that CWC water system is classified as a multiple-well community water system pursuant to Arizona Department of Environmental Quality ("ADEQ").

Q. What assumptions did CWC utilize when designing its storage capacity?

A. In designing its storage capacity, CWC utilizes the assumption that it has a single well water system.

Q. Does Staff agree with that assumption?

A. No.

Q. What was the Companies rational for utilizing such assumptions?

A. The Company claims that they adopted the assumption for planning purposes, in case there is a major outage in its service territory and no production would be possible.

Q. Does Staff believe a major outage is possible as stated by the Company?

A. Staff believes anything is possible, however, based on historical data and information obtained from Tucson Electric Power Company ("TEP") it is highly improbable.

Q. Why should CWC's design storage capacity be calculated by using CWC as a multiple-well water system?

A. The analysis using CWC as a single well community water system may excludes 5,400,000 gallons of storage capacity from production wells. In Staff's view, using CWC as a multiple-well water system is a more realistic representation of how the system has functioned and should continue to function.

Q. Are there generators at the Company's well sites?

A. Yes. There is a 250 kilowatt ("kW") generator at Well 10 site, and 350 kW generator at Well 11 site.

Q. Can any of the existing generators be used in an emergency to run the well pumps?

A. No. CWC indicates the generators were installed as emergency backup power to allow the Company access to the water in the forebay holding tanks. The problem is, without water pumped from the wells, the forebay holding tanks store very little water. Per CWC[1], the Average Operating Storage is 265,625 gallons[2] for the forebay holding tanks. However, the

[1] Community Water Company of Green Valley's responses to Staff's Sixth Set of Data Requests received on March 28, 2016

[2] Average Operating Storage is 143,750 gallons for Well 10 Forebay Tank and 121,875 gallons for Well 11 Forebay Tank.

demand is 3,200,504 gallons (133,354 gallons per hour) for the Peak day of the peak month (based on CWC production).

Q. Did CWC's Engineer recommend CWC provide a standby generator for one of the production wells?

A. Yes. Mr. Pina states[3] "Therefore, we recommended in our Engineer's Reservoir Selection Report to replace Reservoir No. 2 or provide a standby generator for one of the production wells, so that the Company could at all times meet the minimum required storage requirement."

Q. Has Staff been consistent in its recommendation regarding Staff's Water System Analysis?

A. Yes. I have performed Water System Analysis for more than 100 water systems in Arizona by using the same Water System Analysis Method. In my experience and in comparison to the many other water systems I have evaluated on behalf of Staff, it is my view that the CWC water system probably has the best storage and production capacity in Arizona even without Reservoir No. 5.

Q. Did you attempt to address every issue the Company raised in its Rebuttal Testimony?

A. No. Staff limited its discussion to the specific issues as outlined above. Staff's lack of response to any issue in this proceeding should not be construed as agreement with the Company's position in its Direct Testimony; rather where there is no response, Staff relies on its original Direct Testimony.

[3] Rebuttal Testimony of Mr. Pina at page 7

Q. Does this conclude your Surrebuttal Testimony?

A. Yes, it does.

EXHIBIT
S-3
ADMITTED

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Interim Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner

IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE	DOCKET NO. W-02304A-15-0263

DIRECT TESTIMONY OF PHAN TSAN

PUBLIC UTILITIES ANALYST

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

FEBRUARY 2, 2016

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EXECUTIVE SUMMARY
COMMUNITY WATER COMPANY OF GREEN VALLEY
DOCKET NO. W-02304A-15-0263

Community Water Company of Green Valley ("Community Water" or "Cooperative") is a member-owned, non-profit water utility located in Southern Arizona, in unincorporated Pima County and the Town of Sahuarita. Community Water provided water service to approximately 12,939 customers during the test year ended December 31, 2014. The current rates for Community Water were approved in Decision No. 71478, dated February 3, 2010.

Community Water proposed increasing operating revenues by $708,244 to produce operating revenues of $4,231,930 resulting in operating income of $698,269, or a 20.10 percent increase over test year revenues of $3,523,686. The Cooperative proposes a 16.5 percent operating margin, which corresponds to a 9.09 percent rate of return. The Company also proposes a Fair Value Rate Base ("FVRB") of $7,678,586 which does not differ from its Original Cost Rate Base.

Staff recommends increasing operating revenues by $257,877 to produce operating revenues of $3,899,354, resulting in operating income of $643,289, or a 7.08 percent increase over adjusted test year revenues of $3,641,478. Staff recommends a 16.50 percent operating margin which corresponds to a 9.80 percent rate of return. Staff recommends a FVRB of $6,563,586.

INTRODUCTION

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

A. My name is Phan Tsan. I am a Public Utilities Analyst employed by the Arizona Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

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

A. I am responsible for the examination and verification of financial and statistical information included in utility rate applications. In addition, I prepare written reports, testimonies, and schedules that include Staff recommendations to the Commission. I am also responsible for testifying at formal hearings on these matters.

Q. Please describe your educational background and professional experience.

A. I received a Bachelor of Science Degree in Finance and Economics and a Master of Science Degree in Accounting from Grand Canyon University. Since joining the Commission, I have participated in numerous rate cases and other regulatory proceedings. I have testified on matters involving regulatory accounting and auditing. Additionally, I have attended the rate school sponsored by the National Association of Regulatory Utility Commissioners ("NARUC") on ratemaking.

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

A. I am representing Staff's analysis and recommendations in the areas of rate base, operating revenues and expense, and revenue requirement regarding Community Water's application for a permanent rate increase.

Q. Who else is providing Staff testimony and what issues will they address?

A. Staff witness Jian Liu is presenting Staff's engineering analysis and recommendations.

Q. What is the basis of your recommendations?

A. I performed a regulatory audit of the Cooperative's application to determine whether sufficient, relevant, and reliable evidence exists to support the Cooperative's requested rate increase. The regulatory audit consisted of examining and testing the financial information, accounting records, and other supporting documentation and verifying that the accounting principles applied were in accordance with the Commission-adopted NARUC Uniform System of Accounts.

BACKGROUND

Q. Please provide a brief description of Community Water and the service it provides.

A. Community Water is a member-owned, non-profit water utility located in Southern Arizona, in unincorporated Pima County, and the Town of Sahuarita. Community Water provided water service to approximately 12,939 customers during the test year ended December 31, 2014. The current rates for Community Water were approved in Decision No. 71478, dated February 3, 2010.

On July 15, 2015, Community Water filed an application requesting a permanent rate increase. On August 14, 2015, Staff filed a sufficiency letter informing the Cooperative that the application met the sufficiency requirements as outlined in the Arizona Administrative Code R-14-2-103. The Cooperative is classified as a Class B utility.

Q. What are the primary reasons for Community Water's requested permanent rate increase?

A. According to the Cooperative, since its most recent rate increase was approved on February 3, 2010, the Cooperative has made significant investments in plant, and various expenses have increased. Consequently, rate increases are necessary to ensure that the Cooperative has the ability to cover its operating expenses, service debt, fund expected capital requirements, and partially fund cash reserves for major maintenance items and plant replacements.

CONSUMER SERVICE

Q. Please provide a brief history of customer complaints received by the Commission regarding Community Water.

A. Staff reviewed the Commission's records and found two complaints during the past three years. Both complaints were related to billing issues. Both complaints have been resolved and closed. There were also two opinions filed in 2015 opposing the currently proposed rate increase. The Cooperative is in good standing with the Corporations Division of the Commission. The Cooperative mailed a Customer Notice to its customers during the billing cycles in September and October, 2015 as an insert with their monthly bills. An affidavit of publication and mailing was docketed on October 20, 2015.

COMPLIANCE

Q. Please provide a summary of the compliance status of Community Water.

A. A check of the Compliance Database indicates that there are currently no delinquencies for Community Water at this time. Therefore, the Cooperative is currently in compliance with the Compliance Database.

SUMMARY OF PROPOSED AND RECOMMENDED REVENUES

Q. Please summarize Community Water's filing.

A. The Cooperative proposed increasing total annual operating revenue to $4,231,930, which is a $708,244, or a 20.10 percent increase over test year revenue of $3,523,686. This will produce operating income of $698,269, or a 16.5 percent operating margin and a 9.09 percent rate of return.

Q. Please summarize Staff's recommended revenue.

A. Staff recommends increasing total annual operating revenue to $3,899,354 which is a $257,877, or a 7.08 percent, increase over adjusted test year revenue of $3,641,478. This will produce operating income of $643,289, or a 16.50 percent operating margin and a 9.80 percent rate of return, as shown on Schedule PNT-1.

SUMMARY OF THE RATE BASE AND OPERATING INCOME

Q. Please summarize the rate base adjustments addressed in your testimony.

A. My testimony addresses the following issues:

Plant not used and useful – This adjustment decreases rate base by $1,115,000.

Q. Please summarize the operating revenue and expense adjustments addressed in your testimony.

A. My testimony addresses the following issues:

Water usage normalization – This adjustment increases Metered Water Revenue by $94,433, Purchased Power Expense by $13,599 and Chemicals Expense by $2,079.

Other Operating Revenues – This adjustment increases Other Operating Revenue by $23,358.

Salaries and Wages – This adjustment decreases expenses by $72,685.

Employee Pensions and Benefits – This adjustment increases expenses by $160,577.

Repairs and Maintenance – This adjustment decreases expenses by $29,146.

Outside Service – This adjustment decreases expenses by $17,961.

Miscellaneous Expense – This adjustment decrease expenses by $130,121.

Depreciation Expense – This adjustment decreases expenses by $202,499.

Property Tax Expense – This adjustment increases expenses by $5,239 to reflect Staff's recalculation of property tax expense, based on Staff's recommended revenue requirement.

RATE BASE

Fair Value Rate Base

Q. Did the Cooperative prepare schedules showing the elements of Reconstruction Cost New Rate Base?

A. No, the Cooperative did not. The Cooperative's filing treats the Original Cost Rate Base ("OCRB") the same as the Fair Value Rate Base ("FVRB"); and Staff supports using the Cooperative's OCRB as FVRB.

Rate Base Summary

Q. Please summarize the Company's proposed rate base.

A. The Cooperative is proposing a FVRB of $7,678,586 as shown on Schedules PNT-1 and PNT-2.

Q. Does Staff recommend any changes to the Cooperative's proposed rate base?

A. Yes. Staff recommends a FVRB of $6,563,586, a reduction of $1,115,000, as shown on Schedules PNT-2 and PNT-3.

Adjustment No.1- Plant not used and useful

Q. Did Staff identify any plant that was not used and useful?

A. Yes. Staff Engineer Jian Liu inspected the entire system and identified $1,115,000 in Post-test-year Plant Addition-Distribution Reservoirs & Standpipes that were not used and useful. Details are discussed in his testimony and report.

Q. What adjustment did Staff make?

A. Staff removed $1,115,000 from Plant-in-service, as shown on Schedule PNT-3.

Q. What is Staff's recommendation?

A. Staff recommends decreasing rate base by $1,115,000, from $7,678,586 to $6,563,586 as shown on Schedules PNT-2 and PNT-3.

OPERATING INCOME

Operating Income Summary

Q. What are the results of Staff's analysis of test year revenues, expenses, and operating income?

A. Staff's analysis resulted in adjusted test year operating revenues of $3,641,478, operating expenses of $3,252,242 and an operating income of $389,235, as shown on Schedules PNT-5 and PNT-6.

Operating Revenue Adjustment No.1 – Water Usage Normalization

Q. What did the Cooperative propose for Water Usage Normalization?

A. The Cooperative proposed a water usage normalization adjustment which would reduce Metered Water Revenue by $94,433, Purchased Power Expense by $13,599 and Chemicals Expense by $2,079 based on a simple linear regression analysis.

Q. **What is Staff's recommendation?**

A. Staff believes that water usage by residential customers can be seasonal and can also be impacted by factors such as rainfall variances experienced from year to year. The Cooperative's customer usage linear regression analysis did not give consideration to any of these other factors that can and do impact customer water usage from year to year.

Therefore, Staff recommends reversing the usage adjustments recommended by the Cooperative which will increase metered water usage revenue back to the actual test year level and also increase purchased power expense and chemical expense back to the levels recorded during the test year as shown on Schedule PNT-7.

Operating Revenue Adjustment No. 2 – Other Operating Revenues

Q. What did the Cooperative propose for Other Operating Revenues?

A. The Cooperative proposed Other Operating Revenues of $72,833.

Q. During the course of the audit, did Staff identify revenue that the Cooperative had incorrectly classified as non-utility revenue?

A. Yes.

Q. What was the source of the revenue?

A. Pima County Waste Water Management pays Community Water for providing customer water usage information.

Q. What is Staff's recommendation?

A. Staff recommends increasing other revenue by $23,358, from $72,833 to $96,191 as shown on Schedules PNT-5, PNT-6 and PNT-8.

Operating Income Adjustment No. 3 – Salaries and Wages

Q. What is the Cooperative proposing for salaries and wages expense?

A. The Cooperative is proposing salaries and wages expense of $999,690. This amount composed of $842,176 actual test year salaries and wages and a $157,514 adjustment.

Q. What adjustment did Staff make to salaries and wages expense?

A. Starting with $1,087,895 total compensation, Staff removed salaries and wages that were capitalized and/or charged to non-utility expenses. Staff also removed the cost of using an outside accountant which was included in Outside Service expense as shown on Schedule PNT-9.

Q. What is Staff's recommendation?

A. Staff recommends decreasing salaries and wages expense by $72,685, from $999,690 to $927,005 as shown on Schedules PNT-5 and PNT- 6.

Operating Income Adjustment No. 4 – Employee Pensions and Benefits

Q. What did the Cooperative propose for Employee Pensions and Benefits?

A. The Cooperative has no account 602-Employee Pension and Benefits in its books. Total $124,576 Profit sharing and 401(K) Matching were classified as Miscellaneous expense.

Q. What adjustment did Staff make?

A. Staff reclassified $124,576 Profit sharing and 401(K) Matching from account 675-Miscellaneous Expense to account 604-Employee Pensions and Benefits. Staff also increased this account by $36,001 to match contributions or additional retirement expense related to pay increases as shown on schedule PNT-10.

Q. What is Staff's recommendation?

A. Staff recommends the Cooperative adopt account 604- Employee Pensions and Benefits, as guided in the Commission-adopted NARUC USOA for Class B Water Utilities. Staff also recommends increasing this account by $160,577, from $0 to $160,577, as shown on schedules PNT-5 and PNT-6.

Operating Income Adjustment No. 5 – Repair and Maintenance Expense

Q. What did the Cooperative propose for Repair and Maintenance Expense?

A. The Cooperative proposed $65,908 for Repair and Maintenance Expense.

Q. What adjustment did Staff make?

A. Staff recalculated the annual reserve accrual for reservoir maintenance.

Q. What did the Cooperative propose for the annual reserve accrual for reservoir maintenance?

A. The Cooperative proposed $55,886 for the annual reserve accrual for reservoir maintenance.

Q. What does Staff recommend for the annual reserve accrual for reservoir maintenance?

A. Staff recommends $26,740 for the annual reserve accrual for reservoir maintenance.

Q. How is Staff's calculation different than the Cooperative's?

A. The Cooperative factored compounded an annual inflation rate of 3.00 percent in the calculation of annual reserve. The Cooperative also included the cost of annual reserve for PTY plant-Reservoir No. 5. Staff's calculation does not factor an inflation rate, as shown on Schedule PNT-11, because the inflation rate is unknown, an annual reserve can always be adjusted when the Cooperative comes in for a rate case. Staff does not include annual reserve for Reservoir No. 5 since that plant is not used and useful.

Q. What is Staff's recommendation for Repair and Maintenance?

A. Staff recommends decreasing this account by $29,146, from $65,908 to $36,762 as shown on schedule PNT-5 and PNT-6.

Operating Income Adjustment No. 6 – Outside Service

Q. What did the Cooperative propose for Outside Service?

A. The Cooperative proposed $295,318 for this expense.

Q. What adjustment did Staff make?

A. Staff removed $10,911 in legal fees and the cost of a settlement agreement associated with an issue with one of its employees since it is considered extraordinary or a non-recurring event. Staff also removed the cost of hiring an outside Assistant to the President since the Cooperative is hiring for this position as a part time position and the expense was included in Salaries and Wages expense, as shown on Schedule PNT-12.

Q. What is Staff's recommendation?

A. Staff recommends decreasing the expense by $17,961, from $295,318 to $277,357, as shown on Schedule PNT-5 and PNT-6.

Operating Income Adjustment No. 7 – Miscellaneous Expense

Q. What did the Cooperative propose for Miscellaneous Expense?

B. The Cooperative proposed $236,192 for this expense.

Q. What adjustment did Staff make?

A. Staff removed $5,545 cost of food and entertainment. Staff also reclassified $124,576 Profit Sharing and 401(K) Matching from this account to Account 604, Employee Pensions and Benefits, as shown on schedule PNT-13.

Q. What is Staff's recommendation?

A. Staff recommends decreasing the expense by $130,121, from $236,192 to 106,071, as shown on schedules PNT-5 and PNT-6.

Operating Expense Adjustment No. 8 – Depreciation Expense

Q. What is the Cooperative proposing for depreciation expense?

A. The Cooperative is proposing $1,026,384 for depreciation expense.

Q. What adjustment did Staff make to depreciation expense?

A. Staff decreased depreciation expense by $202,499, as reflected on Schedule PNT-14. This adjustment reflects Staff's recommended depreciation rates on a going-forward basis, applied to Staff adjusted depreciable plant. The Cooperative uses the Broad Group Method of depreciation. Under this method, plant is not considered fully depreciated until it is retired. Consequently, the Cooperative continues to depreciate plant that is fully depreciated which causes over depreciation of plant.

Q. Which plant accounts did Staff find were over-depreciated?

A. Staff found that Account 311- Electric Pumping Equipment, Account 340.01-Computer and Software, Account 341-Transportation, Account 345.01-Power Operated Equipment-Backhoe and Account 346-Communication Equipment are over-depreciated.

Electric Pumping Equipment

Q. What estimated service life did the Cooperative use to depreciate Electric Pumping Equipment additions?

A. The Cooperative used a 12.50 percent depreciation rate which assumes an estimated service life of 8 years (i.e., 1 ÷ 8 years = 12.50%).

Q. Did Staff identify any Electric Pumping Equipment that was fully depreciated at the end of the test year or that would be fully depreciated within six months after the test year?

A. Staff identified a total $1,163,886 plant balance less retirements that was fully depreciated, inclusive of 2004 plant balance of $381,324 (Decision 69205) and $1,045,685 plant additions placed in service in 2006.

Computer and Software

Q. **What estimated service life did the Cooperative use to depreciate Computer and Software additions?**

A. The Cooperative used a 20.00 percent depreciation rate which assumes an estimated service life of 5 years (i.e., 1 ÷ 5 years = 20%).

Q. Did Staff identify any Computer and Software that were fully depreciated at the end of the test year or that would be fully depreciated within six months after the test year?

A. Staff identified a total $105,743 plant balance less retirements that was fully depreciated, inclusive of a 2007 plant balance of $265,818 with an accumulated depreciation balance of $237,831(Decision No.71478), $48,325 plant additions placed in service in 2009 and $16,450 plant additions placed in service in 2010.

Transportation and Equipment

Q. **What estimated service life did the Cooperative use to depreciate Transportation and Equipment additions?**

A. The Cooperative used a 20.00 percent depreciation rate which assumes an estimated service life of 5 years (i.e., 1 ÷ 5 years = 20%).

Q. Did Staff identify any Transportation and Equipment that were fully depreciated at the end of the test year or that would be fully depreciated within six months after the test year?

A. Staff identified a total $300,372 plant balance less retirements that was fully depreciated, inclusive of a 2007 plant balance of $464,094 with accumulated depreciation balance of $398,371(Decision No.71478) and $183,156 plant additions placed in service from 2008 to 2010.

Power Operated Equipment-Backhoe

Q. **What estimated service life did the Cooperative use to depreciate Power Operated Equipment-Backhoe additions?**

A. The Cooperative used a 5 percent depreciation rate which assumes an estimated service life of 20 years (i.e., 1 ÷ 20 years = 5%).

Q. Did Staff identify any Power Operated Equipment-Backhoe that was fully depreciated at the end of the test year or that would be fully depreciated within six months after the test year?

A. Yes. Staff identified $107,179 end of 2007 balance (Decision No. 71478) that was fully depreciated.

Communication Equipment

Q. What estimated service life did the Cooperative use to depreciate Communication Equipment additions?

A. The Cooperative used a 10.00 percent depreciation rate which assumes an estimated service life of 10 years (i.e., 1 ÷ 10 years = 10%).

Q. Did Staff identify any Communication Equipment that was fully depreciated at the end of the test year or that would be fully depreciated within six months after the test year?

A. Yes. Staff identified a total $50,298 plant balance less retirements that was fully depreciated, inclusive of a $69,340 end of 2007 balance with an accumulated depreciation balance of 32,224 (Decision No.71478).

Q. Is the Broad Group Depreciation Method utilized by the Cooperative generally accepted accounting?

A. Yes. However, while Staff recognized that the Broad Group Method is a generally accepted approach to recording depreciation expense for groups of homogeneous assets that could become administratively burdensome to depreciate as individual property units, it should not be used by entities that do not conduct periodic reviews of depreciation rates as required by the NARUC USoA. Accounting Instruction No. 27 (c) of the NARUC USoA for Class B Utilities states:

> When the straight-line method is used, the rates **shall be reviewed periodically and adjusted as required,** so that the depreciation accrual **will bear a reasonable relationship to the service life,** the estimated net salvage, and the cost of the plant in service.

Q. Did the Cooperative perform a depreciation study?

A. No, the Cooperative did not perform a depreciation study.

Q. What problems can occur when entities do not periodically review and obtain Commission authorization to update depreciation rates when necessary?

A. Excess depreciation expense can continue to be calculated on the fully depreciated plant. In this instance, Community Water's ratepayers are being asked to reimburse the Cooperative for MORE THAN the original investments made in those assets. This is inconsistent with the intent of the NARUC and the Arizona Administrative Code's purpose of allowed recovery of depreciation which is to recover plant investments in a systematic and rational manner that results in plant becoming fully depreciated at approximately the same time that the underlying asset ceases being economically useful in providing service.

Q. Do these plant items remain in service?

A. Yes. Therefore, under the Group Method of depreciation these plant items would continue to be depreciated until they are retired even though ratepayers have already paid or reimbursed through depreciation the full original cost of the underlying assets. Staff also notes that observations of over-depreciated plant also suggest that the depreciation rates that have been used were too high since the actual economic life of the assets ends up being longer than the life assumed when depreciation rates were set. Undertaking periodic depreciation studies would help alleviate such over-depreciation risks.

Q. **Is Staff's depreciation expense adjustment prospective in nature and known and measurable?**

A. Yes.

Q. What is Staff's recommendation?

A. Staff recommends decreasing depreciation expense by $202,499 from $1,026,384 to $823,885, as shown on Schedule PNT-5 and PNT-6.

Operating Expense Adjustment No. 9– Property Tax Expense

Q. What did the Cooperative propose for Property Tax Expense?

A. The Cooperative proposed Property Tax Expense of $156,279.

Q. What is Staff's recommendation?

A. Staff recommends increasing property taxes by $5,239, from $156,279 to $161,518. Staff's calculation is based upon Staff's adjusted test year and recommended revenues, as shown on Schedule PNT-15.

REVENUE REQUIREMENT

Q. What does the Cooperative propose for an increase in operating revenue?

A. The Cooperative proposes increasing operating revenues by $708,244, from $3,523,687, to $4,231,930, as reflected on Schedule PNT-1.

Q. What does Staff recommend for an increase in operating revenues?

A. Staff recommends a $257,877 increase in operating revenues, from $3,641,478, to $3,899,354, as reflected on Schedule PNT-1.

Q. How does the above revenue requirement translate to the bottom line, or available operating income, for the Cooperative?

A. The Cooperative's requested revenue requirement of $4,231,930 results in an operating income level of $698,269 which is also a 16.5 percent operating margin. Staff's recommended revenue requirement of $3,899,354 results in an operating income level of $643,289 which is also a 16.5 percent operating margin.

Q. **Were the Cooperative's current rates developed using a 16.5 percent operating margin?**

A. No. The Cooperative's current rates were developed using a 15.0 percent operating margin, and Staff is accepting the Cooperative's proposed movement to a 16.5 percent operating margin only for this docket and only because the resulting change on revenue requirement is small. However, Staff wants to place the Cooperative on notice that further efforts to base rates on an even higher operating margin will be very carefully evaluated and possibly challenged. Certainly there is reason to believe that utilizing operating margins above 16.5 percent for Community Water could result in rates that are not fair and reasonable.

Q. Why does Staff believe that utilization of an operating margin above 16.5 percent for Community Water could result in rates that might not be fair and reasonable for this Cooperative's customers?

A. While Staff will certainly give consideration to all arguments raised by the Cooperative in further rate case filings before reaching such a specific conclusion, staff notes that the Cooperative has suggested that it might move to even a higher operating margin level as a part of future rate case filings as a means of positioning the Cooperative to be able to fund all, or substantially all on-going capital expenditures with the funds provided by current ratepayers. Stated another way, Community Water wants its on-going, annually generated revenues, to be set high enough to position the Cooperative to be able to "pay cash" for its annual capital expenditures. Staff believes the Company's request is inconsistent with matching principle because it would require current customers to fully pay for long-term investments that will benefit and provide service to many generations of customers. Also Staff believes that specifically building funding for capital projects into rates and then also requirement ratepayers to pay a second time for these investments through depreciation expense recoveries could constitute double recoveries from customers. Staff believes it is better to assure that there is a proper matching of infrastructure cost funding with those who actually utilize such assets over the economic life of those assets.

Again, Staff raises this concern at the present time to not to suggest that it has pre-judged any specific future request that may be presented by the Community Water, but Staff wants the Cooperative to understand these concerns.

Q. Is it unusual for the Commission to approve rates for a cooperative using operating margins rather than using a rate of return on rate base approach?

A. No, it is not. Because cooperatives are member owned, the more traditional rate of return/return on equity approach to setting rates is not utilized.

Q. Did Staff review the cash flow produced by its recommended revenue requirement?

A. Yes, Staff did review the cash flow. The attached Schedule PNT-16 indicates that Staff's recommended revenue requirement produces an after debt service cash flow of $1,194,418.

Q. Does this conclude your direct testimony?

A. Yes, it does.

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	[A] COOPERATIVE ORIGINAL COST	[B] STAFF ORIGINAL COST
1	Adjusted Rate Base	$ 7,678,586	$ 6,563,586
2	Adjusted Operating Income (Loss)	$ 526	$ 389,235
3	Current Rate of Return (L2 / L1)	0.01%	5.93%
4	Required Rate of Return	9.09%	9.80%
5	Required Operating Income (L4 * L1)	$ 698,269	$ 643,289
6	Operating Income Deficiency (L5 - L2)	$ 697,743	$ 254,054
7	Gross Revenue Conversion Factor	1.0150	1.0150
8	Required Revenue Increase (L7 * L6)	$ 708,244	$ 257,877
9	Adjusted Test Year Revenue	$ 3,523,687	$ 3,641,478
10	Proposed Annual Revenue (L8 + L9)	$ 4,231,930	$ 3,899,354
11	Required Increase in Revenue (%)	20.10%	7.08%
12	Current Operating Margin	0.01%	10.69%
13	Operating Margin (L5/L10)	16.50%	16.50%

References:
Column (A): Cooperative Schedule A-1
Column (B): Staff Schedules PNT-2 and PNT-4

GROSS REVENUE CONVERSION FACTOR

Line No.	Description	
1	Combined Federal An State Effective Income Tax Rate	0.0000%
2	Effective Property Tax Factor (Schedule PNT-14, L24)	1.4825%
3	Total Tax Percentage (L1+L2)	1.4825%
4	Operating income percentage (1-L2)	98.5175%
5	Gross Revenue Conversion Factor (1:L4)	1.015048

Community Water Company of Green Valley
Docket No. W-02304A-15-0263
Test Year ended December 31, 2014

Schedule PNT-2

RATE BASE - ORIGINAL COST/FAIR VALUE

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF AS ADJUSTED
1	Plant in Service	$ 42,452,128	$ (1,115,000)	$ 41,337,128
2	Less: Accumulated Depreciation	16,014,775	-	16,014,775
3	Net Plant in Service	$ 26,437,353	$ (1,115,000)	$ 25,322,353
	LESS:			
4	Net Contribution in Aid-of Construction (CIAC)	$ 11,375,198	$ -	$ 11,375,198
5	Advances in Aid of Construction (AIAC)	7,383,569	-	7,383,569
6	Customer Deposits	-	-	-
7	Deferred Income Tax Credits	-	-	-
8	Total Deductions	$ 18,758,767	$ -	$ 18,758,767
	ADD:			
9	Unamortized Finance Charges	$ -	$ -	$ -
10	Deferred Tax Assets	-	-	-
11	Allowance for Working Capital	-	-	-
12	Intentional Left Blank	-	-	-
13	Total Additions	$ -	$ -	$ -
14	**Original Cost Rate Base**	**$ 7,678,586**	**$ (1,115,000)**	**$ 6,563,586**

References:
Column (A), Cooperative Schedule B-1
Column (B): Schedule PNT-3
Column (C): Column (A) + Column (B)

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Schedule PNT-3

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT		[C] STAFF ADJUSTED
		PLANT IN SERVICE:				
1	301	Organization Costs	$ 47,863	$ -		$ 47,863
2	302	Franchise Costs	244	-		244
3	303	Land & Land Rights	170,589	-		170,589
4	304	Structures & Improvements-Pumping	30,695	-		30,695
5	304.1	Structures & Improvements-Water Treatment	141,261	-		141,261
6	307	Wells & Springs	2,013,049	-		2,013,049
7	311	Electric Pumping Equipment	3,289,327	-		3,289,327
8	311.1	Pumping Equipment-Gas	118,494	-		118,494
9	320	Water Treatment Equipment	4,440,527	-		4,440,527
10	320.1	Water Treatment Plants	-	-		-
11	320.2	Solutions & Feeders	-	-		-
12	320.3	Arsenic Remediation Plant	-	-		-
13	330	Distribution Reservoirs & Standpipes	2,061,545	(1,115,000)	1	946,545
14	330.1	Storage Tank	-	-		-
15	330.2	Pressure Tanks	-	-		-
16	331	Transmission & Distribution Mains	19,123,697	-		19,123,697
17	333	Services	4,696,522	-		4,696,522
18	333	Fire Taps	332,174	-		332,174
19	334	Meters & Meter Installations	1,600,133	-		1,600,133
20	335	Hydrants	2,031,665	-		2,031,665
21	336	Backflow Prevention Devices	-	-		-
22	339	Other Plant & Misc. Equip.	583,181	-		583,181
23	340	Office Furniture & Fixtures	151,618	-		151,618
24	340.1	Computer & Software	608,761	-		608,761
25	341	Transportation Equipment	469,777	-		469,777
26	342	Store Equipment	2,441	-		2,441
27	343	Tools & Work Equipment	103,018	-		103,018
28	344	Laboratory Equipment	12,000	-		12,000
29	345	Power Operated Equipment	136,512	-		136,512
30	345.1	Power Operated Equipment-Backhoe	149,439	-		149,439
31	346	Communications Equipment	124,656	-		124,656
32	347	Miscellaneous Equipment	-	-		-
33	348	Other Tangible Plant	12,938	-		12,938
		Rounding	2			2
34		Gross Utility Plant in Service	$ 42,452,128	$ (1,115,000)		$ 41,337,128
35		Less: Accumulated Depreciation	16,014,775			16,014,775
36		Net Utility Plant in Service	$ 26,437,353	$ (1,115,000)		$ 25,322,353
		DEDUCTIONS				
37		Contributions in Aid of Construction (CIAC)	$ 16,784,118	$ -		$ 16,784,118
38		Less: Accumulated Amortization	5,408,920	-		5,408,920
39		Net CIAC	$ 11,375,198	$ -		$ 11,375,198
40		Advances in Aid of Construction (AIAC)	7,383,569	-		7,383,569
41		Customer Meter Deposits	-	-		-
42		Deferred Income Tax Credits	-	-		-
43		Total Deductions	$ 18,758,767	$ -		$ 18,758,767
		ADDITIONS:				
44		Unamortized Finance Charges	$ -	$ -		$ -
45		Deferred Tax Assets	-	-		-
46		Allowance for Working Capital	-	-		-
47		Intentional Left Blank	-	-		-
48		Total Additions	$ -	$ -		$ -
49		**ORIGINAL COST RATE BASE**	$ 7,678,586	$ (1,115,000)		$ 6,563,586

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Schedule PNT-4

RATE BASE ADJUSTMENT NO. 1 - PLANT NOT USED AND USEFUL

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1	Distribution Reservoirs & Standpipes	$ 2,061,545	$ (1,115,000)	$ 946,545

REFERENCES:
Column [A]: Cooperative Schedule B-2
Column [B]: Staff Testimony
Column [C]: Column [A] + Column [B]

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Schedule PNT-5

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 RECOMMENDED CHANGES	[E] STAFF RECOMMENDED
1	*REVENUES:*					
2	Metered Water Sales	$ 3,450,854	$ 94,433	$ 3,545,287	$ 257,877	$ 3,803,164
3	Water Sales - Unmetered	-	-	-		-
4	Other Operating Revenue	72,833	23,358	96,191	-	96,191
5	**Total Operating Revenues**	$ 3,523,687	$ 117,791	$ 3,641,478	$ 257,877	3,899,354
6	*OPERATING EXPENSES:*					
7	Salaries & Wages	$ 999,690	$ (72,685)	$ 927,005	$ -	$ 927,005
8	Employee Pensions and Benefits	-	160,577	160,577	-	160,577
9	Purchased Water	-	-	-	-	-
10	Purchased Power	220,756	13,599	234,355	-	234,355
11	Chemicals	33,730	2,079	35,809	-	35,809
12	Repairs & Maintenance	65,908	(29,146)	36,762	-	36,762
13	Office Supplies & Expense	16,621	-	16,621	-	16,621
14	Outside services	295,318	(17,961)	277,357	-	277,357
15	Water Testing	15,124	-	15,124	-	15,124
16	Rents	-	-	-	-	-
17	Transportation Expense	54,195	-	54,195	-	54,195
18	Insurance - General Liability	54,967	-	54,967	-	54,967
19	Insurance - Health & Life	212,765		212,765	-	212,765
20	Regulatory Commission Expense	30,000	-	30,000	-	30,000
21	Miscellaneous Expense	236,192	(130,121)	106,071	-	106,071
22	Depreciation Expense	1,026,384	(202,499)	823,885	-	823,885
23	Taxes Other than Income	105,232	-	105,232	-	105,232
24	Property Taxes	156,279	5,239	161,518	3,823	165,340
25	Income Tax	-	-	-	-	-
26	**Total Operating Expenses**	$ 3,523,161	$ (270,919)	$ 3,252,242	$ 3,823	$ 3,256,065
27	**Operating Income (Loss)**	$ 526	$ 388,709	$ 389,235	$ 254,054	$ 643,289

References:
Column (A): Cooperative Schedule C-1
Column (B): Schedule PNT-6
Column (C): Column (A) + Column (B)
Column (E): Column (C) + Column (D)

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SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] Usage Normalization ADJ #1	[C] Other Revenue ADJ #2	[D] Sal. & Wages ADJ #3	[E] Em. Pen. & Ben. ADJ #4	[F] Re. & Main. ADJ #5	[G] Outside Service ADJ #6
1	*REVENUES:*							
2	461 Metered Water Sales	$ 3,450,854	$ 94,433	$ -	$ -	$ -	$ -	$ -
3	460 Water Sales - Unmetered	-	-	-	-	-	-	-
4	474 Other Operating Revenue	72,833	-	23,358	-	-	-	-
5	**Total Operating Revenues**	$ 3,523,687	$ 94,433	$ 23,358	$ -	$ -	$ -	$ -
6	*OPERATING EXPENSES:*							
7	601 Salaries & Wages	$ 999,690	$ -	$ -	$ (72,685)	$ -	$ -	$ -
8	604 Employee Pensions and Benefits	-	-	-	-	160,577	-	-
9	610 Purchased Water	-	-	-	-	-	-	-
10	615 Purchased Power	220,756	13,599	-	-	-	-	-
11	618 Chemicals	33,730	2,079	-	-	-	-	-
12	620 Repairs & Maintenance	65,908	-	-	-	-	(29,146)	-
13	621 Office Supplies & Expense	16,621	-	-	-	-	-	-
14	630 Outside services	295,318	-	-	-	-	-	(17,961)
15	635 Water Testing	15,124	-	-	-	-	-	-
16	641 Rents	-	-	-	-	-	-	-
17	650 Transportation Expense	54,195	-	-	-	-	-	-
18	657 Insurance - General Liability	54,967	-	-	-	-	-	-
19	659 Insurance - Health & Life	212,765	-	-	-	-	-	-
20	666 Regulatory Commission Expense	30,000	-	-	-	-	-	-
21	675 Miscellaneous Expense	236,192	-	-	-	-	-	-
22	403 Depreciation Expense	1,026,384	-	-	-	-	-	-
23	408 Taxes Other than Income	105,232	-	-	-	-	-	-
24	408 Property Taxes	156,279	-	-	-	-	-	-
25	409 Income Tax	-	-	-	-	-	-	-
26	**Total Operating Expenses**	$ 3,523,161	$ 15,678	$ -	$ (72,685)	$ 160,577	$ (29,146)	$ (17,961)
27	**Operating Income (Loss)**	$ 526	$ 78,755	$ 23,358	$ 72,685	$ (160,577)	$ 29,146	$ 17,961

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

LINE NO.		DESCRIPTION	[H] Mis. Expense ADJ #7	[I] Depr. Exp. ADJ #8	[J] Prop. Tax ADJ #9	[K] STAFF ADJUSTED	[L] STAFF RECOMMENDED CHANGES	[M] STAFF RECOMMENDED
1		*REVENUES:*						
2	461	Metered Water Sales	$ -	$ -	$ -	$ 3,545,287	$ 257,877	$ 3,803,164
3	460	Water Sales - Unmetered	-	-	-	-	-	-
4	474	Other Operating Revenue	-	-	-	96,191	-	96,191
5		**Total Operating Revenues**	$ -	$ -	$ -	$ 3,641,478	$ 257,877	$ 3,899,354
6		*OPERATING EXPENSES:*						
7	601	Salaries & Wages	$ -	$ -	$ -	$ 927,005	$ -	$ 927,005
8	604	Employee Pensions and Benefits	-	-	-	160,577	-	160,577
9	610	Purchased Water	-	-	-	-	-	-
10	615	Purchased Power	-	-	-	234,355	-	234,355
11	618	Chemicals	-	-	-	35,809	-	35,809
12	620	Repairs & Maintenance	-	-	-	36,762	-	36,762
13	621	Office Supplies & Expense	-	-	-	16,621	-	16,621
14	630	Outside services	-	-	-	277,357	-	277,357
15	635	Water Testing	-	-	-	15,124	-	15,124
16	641	Rents	-	-	-	-	-	-
17	650	Transportation Expense	-	-	-	54,195	-	54,195
18	657	Insurance - General Liability	-	-	-	54,967	-	54,967
19	659	Insurance - Health & Life	-	-	-	212,765	-	212,765
20	666	Regulatory Commission Expense	-	-	-	30,000	-	30,000
21	675	Miscellaneous Expense	(130,121)	-	-	106,071	-	106,071
22	403	Depreciation Expense	-	(202,499)	-	823,885	-	823,885
23	408	Taxes Other than Income	-	-	-	105,232	-	105,232
24	408.1	Property Taxes	-	-	5,239	161,518	3,823	165,340
25	409	Income Tax	-	-	-	-	-	-
26		**Total Operating Expenses**	$ (130,121)	$ (202,499)	$ 5,239	$ 3,252,242	$ 3,823	$ 3,256,065
27		**Operating Income (Loss)**	$ 130,121	$ 202,499	$ (5,239)	$ 389,235	$ 254,054	$ 643,289

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Schedule PNT-7

OPERATING INCOME ADJUSTMENT NO. 1 - WATER USAGE NORMALIZATION

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Meter Water Revenue	$ 3,450,854	$ 94,433	$ 3,545,287
2	Purchased Power Expense	$ 220,756	$ 13,599	$ 234,355
3	Chemicals	$ 33,730	$ 2,079	$ 35,809

References:
Column (A), Cooperative Schedule C-2
Column (B): Testimony
Column (C): Column (A) + Column (B)

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Schedule PNT-8

OPERATING INCOME ADJUSTMENT NO. 2 - OTHER REVENUES

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Other Water Revenue	72,833	23,358	96,191

References:
Column (A), Cooperative Schedule C-2
Column (B): Testimony
Column (C): Column (A) + Column (B)

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Schedule PNT-9

OPERATING INCOME ADJUSTMENT NO. 3 - SALARIES AND WAGES

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Salaries and Wages	$ 999,690	$ (72,685)	$ 927,005

2	2015 Total Compensation	$ 1,087,895
3	Amounts Capitalized and Charged to other accounts	(148,850)
4	Cost of Accountant included in Outside Service	(12,040)
5	Adjusted salaries and wages charged to O & M	$ 927,005

References:
Column (A), Cooperative Schedule C-2
Column (B): Testimony
Column (C): Column (A) + Column (B)

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Schedule PNT-10

OPERATING INCOME ADJUSTMENT NO. 4 - EMPLOYEE PENSIONS AND BENEFITS

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Reclassification from Miscellaneous Expense	$ -	$ 124,576	$ 124,576
2	Retirement Adjustment		36,001	36,001
			$ 160,577	

References:
Column (A), Cooperative Schedule C-2
Column (B): Testimony
Column (C): Column (A) + Column (B)

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Schedule PNT-11

OPERATING INCOME ADJUSTMENT NO. 5 - REPAIR AND MAINTENANCE EXPENSE

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Reservoir Maintenance Annual Reserve	$ 55,886	$ (29,146)	$ 26,740

Reservoir Maintenance Annual Reserve calculation

	[A]	[B] Estimated Cost	[C] GL Balance	[D] Distribution from Reservoir 2	[E] Total needed [B]-[C]-[D]	[F] Frequency	[G] Annual cost [E]/[F]
2	Reservoir 1	$75,000	$ (62,870)	$34,000	$103,870	10 years	$10,387
3	Reservoir 3	107,600	48,516		59,084	20 years	2,954
4	Reservoir 4	196,350	64,368	31,000	100,982	20 years	5,049
5	Tank 10	67,830	5,685	21,492	40,653	10 years	4,065
6	Tank 11	53,100	10,260		42,840	10 years	4,284
7	Reservoir 2 (removed)		86,492				
8	**Total**			$86,492			**$26,740**

References:
Column (A), Cooperative Schedule C-2
Column (B): Testimony
Column (C): Column (A) + Column (B)

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Schedule PNT-12

OPERATING INCOME ADJUSTMENT NO. 6 - OUTSIDE SERVICE

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Legal Consulting	$ 18,345	$ (10,911)	$ 7,434
2	HR-Assistant to President	7,050.1	(7,050.1)	-
			$ (17,961)	

References:
Column (A), Cooperative Schedule C-2
Column (B): Testimony
Column (C): Column (A) + Column (B)

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Schedule PNT-13

OPERATING INCOME ADJUSTMENT NO. 7- MISCELLANEOUS EXPENSES

LINE NO.	DESCRIPTION	[A] COMPANY PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Food & Entertainment	$ 5,545	$ (5,545)	$ -
2	Profit Sharing	87,871	(87,871)	-
3	401(K) Matching	36,705	(36,705)	-
4	Total		$ (130,121)	

References:
Column (A), Cooperative Schedule C-2
Column (B): Testimony
Column (C): Column (A) + Column (B)

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Schedule PNT-14

OPERATING INCOME ADJUSTMENT No. 8 - DEPRECIATION EXPENSE

Line No.	ACCT NO.	DESCRIPTION	GROSS UTILITY PLANT IN SERVICE	FULLY/NON DEPRECIABLE	DEPRECIABLE PLANT	DEPREC. RATE	EXPENSE
		Plant In Service					
1	301	Organization Costs	$ 47,863	$ 47,863	$ -	0.00%	$ -
2	302	Franchise Costs	244	244	-	0.00%	-
3	303	Land & Land Rights	170,589	170,589	-	0.00%	-
4	304	Structures & Improvements-Pumping	30,695		30,695	3.33%	1,022
5	304.1	Structures & Improvements-Water Treatme	141,261		141,261	3.33%	4,704
6	307	Wells & Springs	2,013,049		2,013,049	3.33%	67,035
7	311	Electric Pumping Equipment	3,289,327	1,163,886	2,125,441	12.50%	265,680
8	311.1	Pumping Equipment-Gas	118,494	118,494	-	12.50%	-
9	320	Water Treatment Equipment	4,440,527		4,440,527	3.33%	147,870
10	320.1	Water Treatment Plants	-		-	3.33%	-
11	320.2	Solutions & Feeders	-		-	20.00%	-
13	330	Distribution Reservoirs & Standpipes	946,545		946,545	2.22%	21,013
14	330.1	Storage Tank	-		-	2.22%	-
15	330.2	Pressure Tanks	-		-	5.00%	-
16	331	Transmission & Distribution Mains	19,123,697		19,123,697	2.00%	382,474
17	333	Services	4,696,522		4,696,522	3.33%	156,394
18	333	Fire Taps	332,174		332,174	3.33%	11,061
19	334	Meters & Meter Installations	1,600,133		1,600,133	8.33%	133,291
20	335	Hydrants	2,031,665		2,031,665	2.00%	40,633
21	336	Backflow Prevention Devices	-		-	6.67%	-
22	339	Other Plant & Misc. Equip.	583,181	-	583,181	6.67%	38,898
23	340	Office Furniture & Fixtures	151,618		151,618	6.67%	10,113
24	340.1	Computer & Software	608,761	105,743	503,018	20.00%	100,604
25	341	Transportation Equipment	469,777	300,372	169,405	20.00%	33,881
26	342	Store Equipment	2,441		2,441	4.00%	98
27	343	Tools & Work Equipment	103,018		103,018	5.00%	5,151
28	344	Laboratory Equipment	12,000		12,000	10.00%	1,200
29	345	Power Operated Equipment	136,512		136,512	5.00%	6,826
30	345.1	Power Operated Equipment-Backhoe	149,439	107,179	42,260	5.00%	2,113
31	346	Communications Equipment	124,656	50,299	74,357	10.00%	7,436
32	347	Miscellaneous Equipment	-		-	10.00%	-
33	348	Other Tangible Plant	12,938		12,938	10.00%	1,294
34		Subtotal General	$ 41,337,126	$ 2,064,669	$ 39,272,457		$ 1,438,790
		Composite rate					3.66%
35		Contributions in Aid of Construction (CIAC)					$ 16,784,118
36		Amortization of Contributions					$ 614,905
37		Staff Recommended Depreciation Expense					$ 823,885
38		Cooperative Proposed Depreciation Expense					1,026,384
39		Increase/(Decrease) to Depreciation Expense					$ (202,499)

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Schedule PNT-15

OPERATING INCOME ADJUSTMENT No. 9- PROPERTY TAXES

LINE NO.	DESCRIPTION	[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	$ 3,641,478	$ 3,641,478
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	$ 7,282,955	$ 7,282,955
4	Staff Recommended Revenue	3,641,478	3,899,354
5	Subtotal (Line 4 + Line 5)	$ 10,924,433	$ 11,182,309
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	$ 3,641,478	$ 3,727,436
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	$ 7,282,955	$ 7,454,873
10	Plus: 10% of CWIP	-	-
11	Less: Net Book Value of Licensed Vehicles	19,442	19,442
12	Full Cash Value (Line 9 + Line 10 - Line 11)	$ 7,263,513	$ 7,435,431
13	Assessment Ratio	18.00%	18.00%
14	Assessment Value (Line 12 * Line 13)	$ 1,307,432	$ 1,338,378
15	Composite Property Tax Rate - Obtained from ADOR	12.35380%	12.35380%
16	Staff Test Year Adjusted Property Tax Expense (Line 14 * Line 15)	$ 161,518	
17	Company Proposed Property Tax	156,279	
18	Staff Test Year Adjustment (Line 16 - Line 17)	$ 5,239	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		$ 165,340
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		161,518
21	Increase in Property Tax Due to Increase in Revenue Requirement		$ 3,823
22	Increase in Property Tax Due to Increase in Revenue Requirement (Line 21)		$ 3,823
23	Increase in Revenue Requirement		$ 257,877
24	Increase in Property Tax Per Dollar Increase in Revenue (Line 22 / Line 23)		**1.482456%**

REFERENCES:
Line 15: Composite Tax Rate obtained from Arizona Department of Revenue
Line 17: Cooperative Schedule C-1 Page 2
Line 21: Line 19 - Line 20
Line 23: Schedule PNT-4

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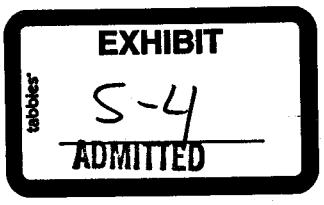
Schedule PNT-16

Cash Flow Analysis

Line No.		[A] *Cooperative Proposed*	[B] *Staff Recommended*
1	Operating Revenue:	$ 4,231,930	$ 3,899,354
2	Operating Expenses:		
3	Operation and Maintenance	2,235,266	2,161,608
4	Depreciation	1,026,384	823,885
5	Property & Other Taxes	272,010	270,572
6	Income Tax	-	-
7	Total Operating Expense	$ 3,533,660	$ 3,256,065
8			
9	Operating Income	$ 698,270	$ 643,289
10			
11	Annual Debt Payment	$ 272,756	$ 272,756
12			
13	Cash Flow : (L9+L4-L11)	$ 1,451,898	$ 1,194,418

References:
Column (A), Cooperative Schedule C-1
Column (B): Schedule PNT-4



BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Interim Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner

IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY FOR DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASE IN ITS RATES AND CHARGES FOR UTILITY SERVICE	DOCKET NO. W-02304A-15-0263

(RATE DESIGN)

DIRECT

TESTIMONY

OF

PHAN N. TSAN

PUBLIC UTILITIES ANALYST

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

FEBRUARY 16, 2016

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EXECUTIVE SUMMARY
COMMUNITY WATER COMPANY OF GREEN VALLEY
DOCKET NO. W-02304A-15-0263

Community Water Company of Green Valley ("Community Water" or "Cooperative") is a member-owned, non-profit water utility located in Southern Arizona, in unincorporated Pima County and the Town of Sahuarita. Community Water provided water service to approximately 12,939 customers during the test year ended December 31, 2014. The current rates for Community Water were approved in Decision No. 71478, dated February 3, 2010.

The Cooperative's proposed rates would increase the typical 5/8-inch meter residential bill with median usage of 3,500 gallons from $18.15 to $22.35 for an increase of $4.20 or 23.14 percent. Staff's recommended rates would increase the typical 5/8-inch meter residential bill with a median usage of 3,500 gallons from $18.15 to $18.93, for an increase of $0.78 or 4.30 percent.

Staff recommends approval of its recommended rates and charges for Community Water as shown on the attached schedules.

INTRODUCTION

Q. Please state your name, title, and business address.

A. My name is Phan Tsan. I am a Public Utilities Analyst employed by the Arizona Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Are you the same Phan Tsan who previously filed testimony pertaining to rate base, operating revenues and expenses on behalf of Staff in this docket for Community Water Company of Green Valley's ("Community Water" or "Cooperative") permanent rate application?

A. Yes.

Q. What is the basis of your testimony?

A. Based on adjustments and revenue requirements recommended by Staff, I am presenting Staff's recommended rate design.

BACKGROUND

Q. Please describe the Cooperative and background of the current rate case.

A. Community Water is a member-owned, non-profit water utility located in Southern Arizona, in unincorporated Pima County and the Town of Sahuarita. Community Water provided water service to approximately 12,939 customers during the test year ended December 31, 2014. The current rates for Community Water were approved in Decision No. 71478, dated February 3, 2010.

RATE DESIGN

Q. Did Staff prepare schedules showing the present, Cooperative-proposed, and Staff-recommended rates and charges?

A. Yes. Staff Schedule PNT-R1 shows the present, the Cooperative's proposed and Staff's recommended monthly minimum charges and commodity rates. The schedule also shows the present, proposed and recommended service charges. Staff Schedule PNT-R2 shows the bill impact on 5/8 inch residential customers.

Q. Please summarize the Cooperative's present rate design.

A. The present monthly minimum charges by meter size are as follows: 5/8 x 3/4-inch, $13.00; 3/4-inch, $13.00; 1-inch, $24.00; 1 1/2-inch, $40.00; 2-inch, $67.00; 3-inch, $105.00; 4-inch, $400.00; 6-inch, $650.00; and 8-inch, $1,000.00. No gallons are included in the monthly minimum charge. The commodity rate for the 5/8 x 3/4-inch and 3/4-inch residential customers is $1.30 per thousand gallons for zero to 3,000 gallons, $2.50 per thousand gallons for 3,001 to 10,000 gallons, and $3.42 per thousand gallons for any consumption over 10,000 gallons. The larger residential and commercial classes' commodity break-over points vary by meter size with a $2.50 per thousand gallons first-tier commodity rate and a $3.42 per thousand gallons commodity rate for any consumption over the first tier. The present commodity rate for construction water is $2.50 per thousand gallons for zero to 1,050,000 gallons and $3.42 per thousand gallons for any consumption over 1,050,000 gallons for all meter sizes.

Q. Please summarize the Cooperative's proposed rate design.

A. The Cooperative's proposed monthly minimum charges by meter size are as follows: Residential 5/8 x 3/4-inch, $16.64; 3/4-inch, $16.64; 1-inch, $30.72; 1 1/2-inch, $51.20; 2-inch, $85.76; 3-inch, $134.40; 4-inch, $512.00; 6-inch, $832.00; and 8-inch, $1,280.00. Zero

gallons are included in the monthly minimum charge. The Cooperative proposes a three-tier inverted-block commodity rate for the 5/8 x 3/4-inch and 3/4-inch residential customers with a $1.44 per thousand gallons first-tier (zero to 3,000 gallons) commodity rate, a $2.78 per thousand gallons second-tier (3,001 to 10,000 gallons) commodity rate and a $3.80 per thousand gallons third-tier commodity rate for any consumption over 10,000 gallons. The larger residential and commercial classes' commodity break-over points vary by meter size with a $2.78 per thousand gallons first-tier commodity rate and a $3.80 per thousand gallons for any consumption over the first tier. The Cooperative's proposed commodity rate for construction water is $2.78 per thousand gallons for zero to ~~$~~1,050,000 gallons and $3.80 per thousand gallons commodity rate for any consumption over ~~$~~1,050,000 gallons for all meter sizes.

Q. Please summarize Staff's recommended rate design.

A. Staff's recommended monthly minimum charges by meter size are as follows: 5/8 x 3/4-inch, $13.78; 3/4-inch, $17.00; 1-inch, $30.72; 1 1/2-inch, 51.20; 2-inch, $85.76; 3-inch, $134.40; 4-inch, $512.00; 6-inch, $832.00; and 8-inch, $1,280.00. Zero gallons are included in the monthly minimum charge. Staff recommends no change to the Cooperative's current commodity rates.

Q. What is the rate impact on a typical 5/8 x 3/4-inch meter residential customer?

A. The Cooperative's proposed rates would increase the typical 5/8-inch meter residential bill with median usage of 3,500 gallons from $18.15 to $22.35 for an increase of $4.20 or 23.14 percent. Staff's recommended rates would increase the typical 5/8-inch meter residential bill with a median usage of 3,500 gallons from $18.15 to $18.93, for an increase of $0.78 or 4.30 percent.

Q. What is the Cooperative's rate structure under present, Cooperative's proposed and Staff's recommended rates?

A. Under present rates, approximately 52.43 percent of revenue is coming from the monthly minimum and 47.57 percent is from the commodity charges. Approximately 57.16 percent revenue is coming from monthly minimum and 42.84 percent is from commodity charges under the Cooperative's proposed rates. Under Staff's recommended rates, approximately 56.01 percent is coming from monthly minimum and 43.99 percent is from commodity charges.

Service Lines and Meter Installation Charges

Q. Did Community Water propose any changes to its water system service charges?

A. No. The Cooperative did not.

Q. What is Staff's recommendation for water system service line and meter installation charges?

A. Staff recommends that the current authorized rates for service line and meter installation continue to apply as shown on Schedule PNT-R1.

Miscellaneous Service Charges

Q. Did Community Water propose any changes to its water system service charges?

A. No. The Cooperative did not.

Q. What is Staff's recommendation?

A. Staff recommends elimination of Establishment (After Hours), Reconnect Delinquent (After Hours), Call Out Charge (After Hours/Saturday), and Call out Charge (Sunday/Holidays);

instead, Staff recommends the creation of a separate $40 After-Hour Service Charge, as shown on Schedule PNT-R1.

Q. Does this conclude your direct testimony?

A. Yes, it does.

RATE DESIGNS

Monthly Usage Charge	Present Rates	Company Proposed Rates	Staff Recommended Rates
Meter Size (All Classes):			
5/8 x 3/4 Inch	$ 13.00	$ 16.64	$ 13.78
3/4 Inch	13.00	16.64	17.00
1 Inch	24.00	30.72	30.72
1 1/2 Inch	40.00	51.20	51.20
2 Inch	67.00	85.76	85.76
3 Inch	105.00	134.40	134.40
4 Inch	400.00	512.00	512.00
6 Inch	650.00	832.00	832.00
8 Inch	1,000.00	1,280.00	1,280.00
Construction Water Meter	According to meter size charges listed above	According to meter size charges listed above	According to meter size charges listed above
Fire Sprinkler			
Less than 6 inch	$ 10.00	$ 10.00	10.00
Less than 8 inch	15.00	15.00	15.00
Less than 10 inch	22.50	22.50	22.50
Less than 12 inch	33.75	33.75	33.75
Commodity Charge - Per 1,000 Gallons			
5/8" x 3/4" Meter (Residential)			
First 3,000 gallons	$ 1.30	$ 1.44	$ 1.30
3,001 to 10,000 gallons	2.50	2.78	2.50
Over 10,000 gallons	3.42	3.80	3.42
3/4" Meter (Residential)			
First 3,000 gallons	$ 1.30	$ 1.44	$ 1.30
3,001 to 10,000 gallons	2.50	2.78	2.50
Over 10,000 gallons	3.42	3.80	3.42
5/8" x 3/4" Meter (Commercial/residential and Commercial)			
First10,000 gallons	$ 2.50	$ 2.78	$ 2.50
Over 10,000 gallons	3.42	3.80	3.42
3/4" Meter (Commercial/residential and Commercial)			
First 10,000 gallons	N/A	$ 2.78	$ 2.50
Over10,000 gallons	N/A	3.80	3.42
1" Meter (All classes, except construction)			
First 21,000 gallons	$ 2.50	$ 2.78	$ 2.50
Over 21,000 gallons	3.42	3.80	3.42
1 1/2" Meter(All classes, except construction)			
First 35,000 gallons	$ 2.50	$ 2.78	$ 2.50
Over 35,000 gallons	3.42	3.80	3.42
2" Meter(All classes, except construction)			
First 63,000 gallons	$ 2.50	$ 2.78	$ 2.50
Over 63,000 gallons	3.42	3.80	3.42
3" Meter (All classes, except construction)			
First 103,000 gallons	$ 2.50	$ 2.78	$ 2.50
Over 103,000 gallons	3.42	3.80	3.42
4" Meter (All classes, except construction)			
First 424,000 gallons	$ 2.50	$ 2.78	$ 2.50
Over 424,000 gallons	3.42	3.80	3.42
6" Meter (All classes, except construction)			
First 680,000 gallons	$ 2.50	$ 2.78	$ 2.50
Over 680,000 gallons	3.42	3.80	3.42

RATE DESIGNS(Cont.)

8" Meter (All classes, except construction)			
First 1,050,000 gallons	$ 2.50	$ 2.78	$ 2.50
Over 1,050,000 gallons	3.42	3.80	3.42
Construction Water (All meter sizes)			
First 1,050,000 gallons	$ 2.50	$ 2.78	$ 2.50
Over 1,050,000 gallons	3.42	3.80	3.42
Other Service Charges			
Establishment	$ 25.00	$ 25.00	$ 25.00
Establishment (After Hours)	35.00	35.00	N/A
Reconnection (Delinquent)	25.00	25.00	25.00
Reconnection (Delinquent) - After Hours	35.00	35.00	N/A
Call out charge (After hours/Saturday)	35.00	35.00	N/A
Call out charge (Sunday/Holiday)	50.00	50.00	N/A
Meter test (If Correct)	20.00	20.00	20.00
Deposit	*	*	*
Hydrant Meter Deposit:**			
5/8 x 3/4 Inch	$ 155.00	$ 155.00	$ 155.00
3/4 Inch	255.00	255.00	255.00
1 Inch	315.00	315.00	315.00
1 1/2 Inch	525.00	525.00	525.00
2 Inch Turbine	1,045.00	1,045.00	1,045.00
2 Inch Compound	1,890.00	1,890.00	1,890.00
3 Inch Turbine	1,670.00	1,670.00	1,670.00
3 Inch Compound	2,545.00	2,545.00	2,545.00
4 Inch Turbine	1,737.00	1,737.00	1,737.00
4 Inch Compound	3,645.00	3,645.00	3,645.00
6 inch Turbine	3,766.00	3,766.00	3,766.00
6 Inch Compound	6,920.00	6,920.00	6,920.00
8 Inch	Cost	Cost	Cost
10 Inch	Cost	Cost	Cost
12 Inch	Cost	Cost	Cost
Deposit Interest	6.00%	6.00%	6.00%
Reestablishment (within 12 months)	***	***	***
Reestablishment (within 12 months after hours)	***	***	***
NSF Check	25.00	25.00	25.00
Meter Reread (if Correct)	10.00	10.00	10.00
Late Payment Penalty	1.5% per month	1.5% per month	1.5% per month
Deferred Payment (R-01-2-409.G)	1.5% per month	1.5% per month	1.5% per month
Moving meter at customer request (R-14-2-405(B))	20.00	20.00	20.00
Meter Tampering Charge	Cost	Cost	Cost
Meter Box - Cut Lock Charge	Cost	Cost	Cost
Payment via Visa Charge Card	Cost****	Cost****	Cost****
After Service Charge	N/A	N/A	40.00

* Per Commission Rule A.A.C. R-14-2-403(B)
Residential - two times the average bill. Non-residential- two and one-half times the average bill
** Shall be refunded entirely upon return of undamaged meter.
*** Per Commission Rule A.A.C. R14-2-403(D) - Months off the system times the monthly minimum.
**** Cost up to 6% service charge on bill paid

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 14-2-409D(5).

Service and Meter Installation Charges

Service Size	Total Present Charge	Proposed Service Line Charge	Proposed Meter Installation Charge	Total Proposed Charge	Recommended Service Line Charge	Recommended Meter Installation Charge	Total Recommended Charge
5/8 x 3/4 Inch	$ 600.00	$ 445.00	$ 155.00	$ 600.00	$ 445.00	$ 155.00	$ 600.00
3/4 Inch	670.00	445.00	225.00	670.00	445.00	225.00	670.00
1 Inch	810.00	495.00	315.00	810.00	495.00	315.00	810.00
1 1/2 Inch	1,075.00	550.00	525.00	1,075.00	550.00	525.00	1,075.00
2 Inch Turbine	1,875.00	830.00	1,045.00	1,875.00	830.00	1,045.00	1,875.00
2 Inch Compound	2,720.00	830.00	1,890.00	2,720.00	830.00	1,890.00	2,720.00
3 Inch Turbine	2,715.00	1,045.00	1,670.00	2,715.00	1,045.00	1,670.00	2,715.00
3 Inch Compound	3,710.00	1,165.00	2,545.00	3,710.00	1,165.00	2,545.00	3,710.00
4 Inch Turbine	3,227.00	1,490.00	1,737.00	3,227.00	1,490.00	1,737.00	3,227.00
4 Inch Compound	5,315.00	1,670.00	3,645.00	5,315.00	1,670.00	3,645.00	5,315.00
6 Inch Turbine	5,976.00	2,210.00	3,766.00	5,976.00	2,210.00	3,766.00	5,976.00
6 Inch Compound	9,250.00	2,330.00	6,920.00	9,250.00	2,330.00	6,920.00	9,250.00
8 Inch	cost	cost	cost	cost	cost	cost	cost
10 Inch	cost	cost	cost	cost	cost	cost	cost
12 Inch	cost	cost	cost	cost	cost	cost	cost

Community Water Company of Green Valley
Docket No. W-02304A-15-0263
Test Year Ended December 31, 2014

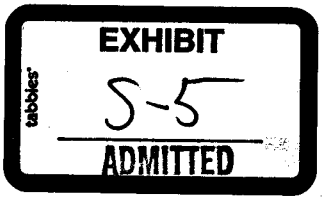
Schedule PNT-R2

Typical Bill Analysis
General Service 5/8 x 3/4-Inch Meter

Company Proposed	Gallons	Present Rates	Proposed Rates	Dollar Increase	Percent Increase
Average Usage	3,897	$ 19.14	$ 23.45	$ 4.31	22.52%
Median Usage	3,500	18.15	22.35	$ 4.20	23.14%
Staff Recommended					
Average Usage	3,897	$ 19.14	$ 19.92	$ 0.78	4.07%
Median Usage	3,500	18.15	18.93	$ 0.78	4.30%

Present & Proposed Rates (Without Taxes)
General Service 5/8 x 3/4-Inch Meter

Gallons Consumption	Present Rates	Company Proposed Rates	% Increase	Staff Recommended Rates	% Increase
-	$ 13.00	$ 16.64	28.00%	$ 13.78	6.00%
1,000	14.30	18.08	26.43%	15.08	5.45%
2,000	15.60	19.52	25.13%	16.38	5.00%
3,000	16.90	20.96	24.02%	17.68	4.62%
4,000	19.40	23.74	22.37%	20.18	4.02%
5,000	21.90	26.52	21.10%	22.68	3.56%
6,000	24.40	29.30	20.08%	25.18	3.20%
7,000	26.90	32.08	19.26%	27.68	2.90%
8,000	29.40	34.86	18.57%	30.18	2.65%
9,000	31.90	37.64	17.99%	32.68	2.45%
10,000	34.40	40.42	17.50%	35.18	2.27%
11,000	37.82	44.22	16.92%	38.60	2.06%
12,000	41.24	48.02	16.44%	42.02	1.89%
13,000	44.66	51.82	16.03%	45.44	1.75%
14,000	48.08	55.62	15.68%	48.86	1.62%
15,000	51.50	59.42	15.38%	52.28	1.51%
16,000	54.92	63.22	15.11%	55.70	1.42%
17,000	58.34	67.02	14.88%	59.12	1.34%
18,000	61.76	70.82	14.67%	62.54	1.26%
19,000	65.18	74.62	14.48%	65.96	1.20%
20,000	68.60	78.42	14.31%	69.38	1.14%
25,000	85.70	97.42	13.68%	86.48	0.91%
30,000	102.80	116.42	13.25%	103.58	0.76%
35,000	119.90	135.42	12.94%	120.68	0.65%
40,000	137.00	154.42	12.72%	137.78	0.57%
45,000	154.10	173.42	12.54%	154.88	0.51%
50,000	171.20	192.42	12.39%	171.98	0.46%
75,000	256.70	287.42	11.97%	257.48	0.30%
100,000	342.20	382.42	11.75%	342.98	0.23%



BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASE IN ITS RATES AND CHARGES FOR UTILITY SERVICE	DOCKET NO. W-02304A-15-0263

SURREBUTTAL

TESTIMONY

OF

PHAN TSAN

PUBLIC UTILITIES ANALYST

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

APRIL 12, 2016

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EXECUTIVE SUMMARY
COMMUNITY WATER COMPANY OF GREEN VALLEY
DOCKET NO. W-02304A-15-0263

Staff's surrebuttal testimony addresses rate base, operating income, revenue requirement and rate design. Staff's recommended Fair Value Rate Base ("FVRB") is the same as the recommendation made in its direct testimony which is $6,563,586. Staff recommends a revenue increase of $478,000 or 13.50 percent increase over test year revenue of $3,541,415. The total annual revenue of $4,019,415 produces an operating income of $663,076 for a 16.50 percent operating margin.

Staff's recommended rates would increase the typical 5/8-inch meter residential bill with a median usage of 3,500 gallons from $18.15 to $20.30, for an increase of $2.15 or 11.82 percent.

Staff's surrebuttal testimony responds to Community Water Company's ("Community Water" or "Cooperative") rebuttal testimony on the following issues:

1. Operating Income
    a. Water usage normalization
    b. Repairs and Maintenance
    c. Depreciation Expense
2. Rate Design

INTRODUCTION

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

A. My name is Phan Tsan. I am a Public Utilities Analyst employed by the Arizona Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Are you the same Phan Tsan who filed direct testimony in this case?

A. Yes.

PURPOSE OF SURREBUTTAL TESTIMONY

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

A. The purpose of my surrebuttal testimony in this proceeding is to respond, on behalf of Staff, to the rebuttal testimony of Mr. Arturo Gabaldon, and Mr. Thomas Bourassa, witnesses for Community Water Company of Green Valley ("Community Water" or "Cooperative").

Q. What issues will you address?

A. I will address the following issues:

1. Operating Income
    a. Water usage normalization
    b. Repairs and Maintenance
    c. Depreciation Expense
2. Rate Design

Q. Does your silence on any particular issue raised in the Cooperative's rebuttal testimony indicate that Staff agrees with the Cooperative's stated rebuttal position?

A. No. Rather, where I do not respond, I rely on my direct testimony.

SUMMARY OF PROPOSED REVENUES

Q. Please summarize Staff's recommended revenue increase.

A. Staff now recommends a revenue increase of $478,000 or a 13.50 percent increase over test year revenue of $3,541,415. The total annual revenue of $4,019,415 produces an operating income of $663,076 for a 16.50 percent operating margin.

Q. How does Staff's recommended revenue compare to the recommended revenue in Staff's direct testimony?

A. Staff's recommended revenue has increased by $120,061, from $3,899,354 in its direct testimony to $4,019,415 in this surrebuttal testimony.

RATE BASE

Q. What is Staff's recommended rate base?

A. Staff's recommended rate base is $6,563,586 as shown on Surrebuttal Schedule PNT-2.

Q. How does Staff's recommended rate base compare to the recommended rate base in Staff's direct testimony?

A. Staff's recommended rate base rate is the same as the recommendation made in its direct testimony.

OPERATING INCOME

Operating Income Adjustment No. 1 – Water Usage Normalization

Q. Has Staff reviewed the Cooperative's rebuttal testimony regarding water usage normalization?

A. Yes. The Cooperative has proposed in its direct testimony to reduce Metered Water Revenue by $95,505 which includes $1,072 revenue annualization and $94,433 usage normalization, from $3,546,359 to $3,450,854. The Cooperative's rebuttal position proposed an additional $64,296 revenue decline over the $94,433 usage normalization adjustment in its direct testimony so the Cooperative now proposes to reduce total Metered Water Revenue by $158,729. The Cooperative also proposed to reduce Purchased Power Expense and Chemicals expense by an addition of $9,091 and $1,390, results in a total reduction of $22,690 and $3,469 respectively.

Q. Does Staff agree with the Cooperative's adjustment?

A. No. While Staff now is recognizing declining usage for residential customers, Staff does not believe the track for commercial usage is predictable. Commercial sales have fluctuated from year to year and has been slowly increasing in recent years. The Cooperative stated that the anticipated reduction in usage from Freeport McMoran Sierrita may have a significant impact on commercial sales; however Staff does not believe the future usage from the mining company is known and measurable.

Q. What is Staff's recommendation?

A. Staff used 2015 updated data (test year ended December 31, 2014) for the residential usage normalization calculation. Details of the calculation are shown on Surrebuttal Schedule PNT-7, page 2 and 3.

Staff recommends a usage normalization adjustment that will reduce metered water revenue by $5,629 from $3,450,854 to $3,445,225, purchase power expense by $2,117 from $220,756 to $218,639, and chemicals expense by $323, from $33,730 to $33,407.

Q. How does Staff's recommendation for water usage normalization compare to the recommendation for water usage normalization in Staff's direct testimony?

A. Staff did not recognize any water usage normalization adjustment in its direct testimony.

Operating Income Adjustment No. 5 – Repair and Maintenance, reservoir maintenance annual reserve.

Q. Has Staff reviewed the Cooperative's rebuttal testimony regarding the reservoir maintenance annual reserve?

A. Yes.

Q. What is the Cooperative's position regarding Repair and Maintenance Expense, reservoir maintenance annual reserve?

A. The Cooperative updated the estimated costs for the reservoir maintenance. The Cooperative is proposing an increase of $11,114 for Repair and Maintenance, reservoir maintenance annual reserve from $55,886 in its direct testimony to $67,000 in its rebuttal testimony.

Q. What is Staff's recommendation?

A. Staff recommends repair and maintenance, reservoir maintenance annual reserve of $44,129 as shown on Surrebuttal Schedule PNT-11, which results in an adjusted repair and maintenance expense of $54,151. Based on the updated information provided by the Cooperative, Staff recalculated annual reserve for the reservoir maintenance. Staff excluded the reserve for Reservoir No. 5 since it is not used and useful. With the exclusion of

Reservoir No. 5, the total estimated cost for all reservoir and tank maintenance is $765,000. However, the Cooperative has already accrued a net reserve of $152,451. Therefore, only $612,549 is needed. See Surrebuttal Schedule PNT-11 for a detailed calculation of annual reserve for the various reservoirs/tanks.

Q. How does Staff's recommendation for repair and maintenance expense, reservoir maintenance annual reserve compare to the recommendation for maintenance expense, reservoir maintenance annual reserve in Staff's direct testimony?

A. Staff's recommendation for maintenance expense, reservoir maintenance annual reserve is increasing from $26,740 in its direct to $44,129 in its surrebuttal; so Staff's recommendation has increased by $17,389.

Operating Income Adjustment No.7 - Depreciation expense

Q. Has Staff reviewed the Cooperative's rebuttal testimony concerning depreciation expense?

A. Yes.

Q. Is Staff still of the opinion that the Cooperative did not implement broad group depreciation method properly which caused over depreciation of plant?

A. Yes.

Q. Is the broad group procedure commonly used and an accepted method in regulatory utility accounting?

A. The broad group method is a generally accepted approach only if the entities conduct periodic reviews of depreciation rates as required by the NARUC Uniform System of

Accounts ("USoA"). Accounting Instruction No. 33 (c) of the NARUC USoA for Class A[1] Utilities states:

> When the straight-line method is used, the rates shall be reviewed ***periodically*** and ***adjusted*** as required, so that the depreciation accrual will bear a reasonable relationship to the service life, the estimated net salvage, and the cost of the plant in service.

Q. What is Staff's response to Mr. Gabaldon's rebuttal testimony, page 2, line 8 to line 12, that the Cooperative's "depreciation method was properly implemented, incorporating depreciation rates Staff recommended and the Commission approved in its last rate case and its prior rate cases" and that to require a depreciation study, as Staff suggests, would be costly to the Cooperative and unprecedented?

A. Staff continues to believe the Cooperative's depreciation methodology was implemented improperly. However, as stated above, NARUC USoA requires entities to conduct periodic reviews of depreciation rates if using Broad Group depreciation methodology, but the Cooperative has failed to do so. Staff is not recommending that the Cooperative perform a "special deprecation study" but believes that it is critically important that periodic deprecation studies be conducted as required by NARUC so that the reasonableness of the depreciation rates being utilized are shown to be fair and appropriate for the remaining economic life of the underlying long-term assets. Staff notes that the Cooperative was aware of this requirement but failed to perform a study and proposed new depreciation rates in conjunction with the processing of this rate case. The Cooperative's response to Staff data request PNT 2.2, stated that:

[1] The Cooperative is classified as Class A Utilities under NARUC USoA.

Until 1994, CWC contracted an engineer to perform regular depreciation analysis every two years. This practice was changed in 1995 when CWC was informed that changes to depreciation rates must be done in the context of a full rate case – consistent with A.A.C. Rl4-2-1 02(CX1).

Q. Mr. Bourassa stated in his rebuttal testimony that Staff is trying to impose the vintage group procedure onto the Broad Group to justify its position that certain plant is fully depreciated. How does Staff respond to this statement?

A. There were instances where the Cooperative did not apply the broad group methodology correctly so Staff chose to employ the vintage group method when determining when significant plant elements were fully depreciated. The problems noted included an instance where the Cooperative placed a cap on certain accumulated depreciation balances that artificially stopped calculating depreciation expense which is a violation of the NARUC depreciation guidelines. For instance, on Schedule B-2, page 3.8, there is no depreciation expense calculated for Account No. 341 – Transportation Equipment for the year 2013 even though the plat is not yet retired.

Q. Why did Staff not make corresponding adjustments to accumulated depreciation?

A. Staff made a pro-forma adjustment to reflect a proper amount of depreciation expense be recovered from customers through rates on a going-forward basis. Therefore, no adjustments to the accumulated depreciation reserve balance was necessary.

Q. Is Staff's adjustment to depreciation expense in its surrebuttal testimony the same as it is in its direct testimony?

A. No. Staff recommends a depreciation expense of $926,682 in this surrebuttal testimony, but recommended $823,885 in its direct testimony; so Staff's rebuttal position represents an increase of $102,797.

Operating Income Adjustment No.9 – Property Tax

Q. Did Staff make any adjustment to the property tax expense?

A. Yes. Staff's adjustment is based upon Staff's adjusted test year and recommended revenues, as shown on Surrebuttal Schedule PNT-15.

Q. What is Staff's recommendation?

A. Staff recommends a property tax expense of $156,460.

REVENUE REQUIREMENT

Q. **Is the Cooperative's proposed revenue requirement in its rebuttal testimony different from the proposed one in its direct testimony?**

A. Yes.

Q. Please summarize Cooperative's proposed and Staff's recommended revenue requirement, revenue increase, and operating margin.

A. The proposed and recommended revenue requirement, revenue increase, and operating margin are as follows:

	Revenue Requirement	Revenue Increase	Operating Margin
Cooperative- Direct	$4,231,930	$708,244	16.5%
Staff – Direct	$3,899,354	$257,877	16.5%
Cooperative-Rebuttal	$4,165,106	$682,357	16.5%
Staff – Surrebuttal	$4,019,415	$478,000	16.5%

Q. In rebuttal testimony, Cooperative witness Mr. Jones (page 9, line 3 through 10) argues that the Commission should effectively increase the 16.5 percent operating margin used for setting the Cooperative's rate to the extent that Staff's recommendations decrease the Cooperative's net income. Will you be responding to this Company proposal?

A. No, Staff witness Mr. Darron Carlson will be responding to this aspect of Mr. Jones's rebuttal testimony.

RATE DESIGN

Q. Does Staff recommend a different rate design than in its direct testimony?

A. Yes. Staff has prepared an altered rate design. Surrebuttal Schedule PNT-17 shows the present, the Cooperative's proposed and Staff's recommended monthly minimum charges and commodity rates.

Q. What is the rate impact on a typical 5/8 x 3/4-inch meter residential customer?

A. Staff's recommended rates would increase the typical 5/8-inch meter residential bill with a median usage of 3,500 gallons from $18.15 to $20.30, for an increase of $2.15 or 11.82 percent.

Q. How is the revenue flow derived under Staff's revised recommended rates?

A. Under Staff's recommended rates, approximately 54.81 percent is coming from monthly minimum and 45.19 percent is from commodity charges.

Q. Does this conclude Staff's surrebuttal testimony?

A. Yes, it does.

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REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	[A] COOPERATIVE ORIGINAL COST	[B] STAFF ORIGINAL COST
1	Adjusted Rate Base	$ 7,678,586	$ 6,563,586
2	Adjusted Operating Income (Loss)	$ 526	$ 192,162
3	Current Rate of Return (L2 / L1)	0.01%	2.93%
4	Required Rate of Return	9.09%	10.10%
5	Required Operating Income (L4 * L1)	$ 698,269	$ 663,076
6	Operating Income Deficiency (L5 - L2)	$ 697,743	$ 470,914
7	Gross Revenue Conversion Factor	1.0150	1.0150
8	Required Revenue Increase (L7 * L6)	$ 708,244	$ 478,000
9	Adjusted Test Year Revenue	$ 3,523,687	$ 3,541,415
10	Proposed Annual Revenue (L8 + L9)	$ 4,231,930	$ 4,019,415
11	Required Increase in Revenue (%)	20.10%	13.50%
12	Current Operating Margin	0.01%	5.43%
13	Operating Margin (L5/L10)	16.50%	16.50%

References:
Column (A): Cooperative Schedule A-1
Column (B): Staff Surrebuttal Schedules PNT-2 and PNT-4

GROSS REVENUE CONVERSION FACTOR

Line No.	Description	
1	Combined Federal and State Effective Income Tax Rate	0.0000%
2	Effective Property Tax Factor (Schedule PNT-14, L24)	1.4825%
3	Total Tax Percentage (L1+L2)	1.4825%
4	Operating income percentage (1-L2)	98.5175%
5	Gross Revenue Conversion Factor (1:L4)	1.015048

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Surrebuttal Schedule PNT-2

RATE BASE - ORIGINAL COST/FAIR VALUE

LINE NO.	DESCRIPTION	[A] COOPERATIVE AS FILED	[B] STAFF ADJUSTMENTS	[C] STAFF AS ADJUSTED
1	Plant in Service	$ 42,452,128	$ (1,115,000)	$ 41,337,128
2	Less: Accumulated Depreciation	16,014,775	-	16,014,775
3	Net Plant in Service	$ 26,437,353	$ (1,115,000)	$ 25,322,353
	LESS:			
4	Net Contribution in Aid-of Construction (CIAC)	$ 11,375,198	$ -	$ 11,375,198
5	Advances in Aid of Construction (AIAC)	7,383,569	-	7,383,569
6	Customer Deposits	-	-	-
7	Deferred Income Tax Credits	-	-	-
8	Total Deductions	$ 18,758,767	$ -	$ 18,758,767
	ADD:			
9	Unamortized Finance Charges	$ -	$ -	$ -
10	Deferred Tax Assets	-	-	-
11	Allowance for Working Capital	-	-	-
12	Intentional Left Blank	-	-	-
13	Total Additions	$ -	$ -	$ -
14	**Original Cost / Fair Value Rate Base**	**$ 7,678,586**	**$ (1,115,000)**	**$ 6,563,586**

References:
Column (A), Cooperative Schedule B-1
Column (B): Surrebuttal Schedule PNT-3
Column (C): Column (A) + Column (B)

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Surrebuttal Schedule PNT-3

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COOPERATIVE AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF ADJUSTED
		PLANT IN SERVICE:			
1	301	Organization Costs	$ 47,863	$ -	$ 47,863
2	302	Franchise Costs	244	-	244
3	303	Land & Land Rights	170,589	-	170,589
4	304	Structures & Improvements-Pumping	30,695	-	30,695
5	304.1	Structures & Improvements-Water Treatment	141,261	-	141,261
6	307	Wells & Springs	2,013,049	-	2,013,049
7	311	Electric Pumping Equipment	3,289,327	-	3,289,327
8	311.1	Pumping Equipment-Gas	118,494	-	118,494
9	320	Water Treatment Equipment	4,440,527	-	4,440,527
10	320.1	Water Treatment Plants	-	-	-
11	320.2	Solutions & Feeders	-	-	-
12	320.3	Arsenic Remediation Plant	-	-	-
13	330	Distribution Reservoirs & Standpipes	2,061,545	(1,115,000) 1	946,545
14	330.1	Storage Tank	-	-	-
15	330.2	Pressure Tanks	-	-	-
16	331	Transmission & Distribution Mains	19,123,697	-	19,123,697
17	333	Services	4,696,522	-	4,696,522
18	333	Fire Taps	332,174	-	332,174
19	334	Meters & Meter Installations	1,600,133	-	1,600,133
20	335	Hydrants	2,031,665	-	2,031,665
21	336	Backflow Prevention Devices	-	-	-
22	339	Other Plant & Misc. Equip.	583,181	-	583,181
23	340	Office Furniture & Fixtures	151,618	-	151,618
24	340.1	Computer & Software	608,761	-	608,761
25	341	Transportation Equipment	469,777	-	469,777
26	342	Store Equipment	2,441	-	2,441
27	343	Tools & Work Equipment	103,018	-	103,018
28	344	Laboratory Equipment	12,000	-	12,000
29	345	Power Operated Equipment	136,512	-	136,512
30	345.1	Power Operated Equipment-Backhoe	149,439	-	149,439
31	346	Communications Equipment	124,656	-	124,656
32	347	Miscellaneous Equipment	-	-	-
33	348	Other Tangible Plant	12,938	-	12,938
		Rounding	2		2
34		Gross Utility Plant in Service	$ 42,452,128	$ (1,115,000)	$ 41,337,128
35		Less: Accumulated Depreciation	16,014,775		16,014,775
36		Net Utility Plant in Service	$ 26,437,353	$ (1,115,000)	$ 25,322,353
		DEDUCTIONS			
37		Contributions in Aid of Construction (CIAC)	$ 16,784,118	$ -	$ 16,784,118
38		Less: Accumulated Amortization	5,408,920	-	5,408,920
39		Net CIAC	$ 11,375,198	$ -	$ 11,375,198
40		Advances in Aid of Construction (AIAC)	7,383,569	-	7,383,569
41		Customer Meter Deposits	-	-	-
42		Deferred Income Tax Credits	-	-	-
43		Total Deductions	$ 18,758,767	$ -	$ 18,758,767
		ADDITIONS:			
44		Unamortized Finance Charges	$ -	$ -	$ -
45		Deferred Tax Assets	-	-	-
46		Allowance for Working Capital	-	-	-
47		Intentional Left Blank	-	-	-
48		Total Additions	$ -	$ -	$ -
49		**ORIGINAL COST RATE BASE**	$ 7,678,586	$ (1,115,000)	$ 6,563,586

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Surrebuttal Schedule PNT-4

RATE BASE ADJUSTMENT NO. 1 - PLANT NOT USED AND USEFUL

LINE NO.	DESCRIPTION	[A] COOPERATIVE AS FILED	[B] ADJUSTMENT	[C] STAFF ADJUSTED
1	Distribution Reservoirs & Standpipes	$ 2,061,545	$ (1,115,000)	$ 946,545

REFERENCES:
Column [A]: Cooperative Schedule B-2
Column [B]: Staff Testimony
Column [C]: Column [A] + Column [B]

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Surrebuttal Schedule PNT-5

OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] COOPERATIVE ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF RECOMMENDED CHANGES	[E] STAFF RECOMMENDED
1	*REVENUES:*					
2	Metered Water Sales	$ 3,450,854	$ (5,629)	$ 3,445,225	$ 478,000	$ 3,923,225
3	Water Sales - Unmetered	-	-	-		-
4	Other Operating Revenue	72,833	23,358	96,191	-	96,191
5	**Total Operating Revenues**	$ 3,523,687	$ 17,728	$ 3,541,415	$ 478,000	4,019,415
6	*OPERATING EXPENSES:*					
7	Salaries & Wages	$ 999,690	$ (72,685)	$ 927,005	$ -	$ 927,005
8	Employee Pensions and Benefits	-	160,577	160,577	-	160,577
9	Purchased Water	-	-	-	-	-
10	Purchased Power	220,756	(2,117)	218,639	-	218,639
11	Chemicals	33,730	(323)	33,407	-	33,407
12	Repairs & Maintenance	65,908	(11,757)	54,151	-	54,151
13	Office Supplies & Expense	16,621	-	16,621	-	16,621
14	Outside services	295,318	(17,961)	277,357	-	277,357
15	Water Testing	15,124	-	15,124	-	15,124
16	Rents	-	-	-	-	-
17	Transportation Expense	54,195	-	54,195	-	54,195
18	Insurance - General Liability	54,967	-	54,967	-	54,967
19	Insurance - Health & Life	212,765		212,765	-	212,765
20	Regulatory Commission Expense	30,000	-	30,000	-	30,000
21	Miscellaneous Expense	236,192	(130,121)	106,071	-	106,071
22	Depreciation Expense	1,026,384	(99,702)	926,682	-	926,682
23	Taxes Other than Income	105,232	-	105,232	-	105,232
24	Property Taxes	156,279	181	156,460	7,086	163,546
25	Income Tax	-	-	-	-	-
26	**Total Operating Expenses**	$ 3,523,161	$ (173,908)	$ 3,349,253	$ 7,086	$ 3,356,339
27	**Operating Income (Loss)**	$ 526	$ 191,636	$ 192,162	$ 470,914	$ 663,076

References:
Column (A): Cooperative Schedule C-1
Column (B): Surrebuttal Schedule PNT-6
Column (C): Column (A) + Column (B)
Column (E): Column (C) + Column (D)

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SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	[A] COOPERATIVE AS FILED	[B] Usage Normalization ADJ #1	[C] Other Revenue ADJ #2	[D] Sal. & Wages ADJ #3	[E] Em. Pen. & Ben. ADJ #4	[F] Re. & Main. ADJ #5	[G] Outside Service ADJ #6
1	*REVENUES:*							
2	461 Metered Water Sales	$ 3,450,854	$ (5,629)	$ -	$ -	$ -	$ -	$ -
3	460 Water Sales - Unmetered	-	-	-	-	-	-	-
4	474 Other Operating Revenue	72,833	-	23,358	-	-	-	-
5	**Total Operating Revenues**	$ 3,523,687	$ (5,629)	$ 23,358	$ -	$ -	$ -	$ -
6	*OPERATING EXPENSES:*							
7	601 Salaries & Wages	$ 999,690	$ -	$ -	$ (72,685)	$ -	$ -	$ -
8	604 Employee Pensions and Benefits	-	-	-	-	160,577	-	-
9	610 Purchased Water	-	-	-	-	-	-	-
10	615 Purchased Power	220,756	(2,117)	-	-	-	-	-
11	618 Chemicals	33,730	(323)	-	-	-	-	-
12	620 Repairs & Maintenance	65,908	-	-	-	-	(11,757)	-
13	621 Office Supplies & Expense	16,621	-	-	-	-	-	-
14	630 Outside services	295,318	-	-	-	-	-	(17,961)
15	635 Water Testing	15,124	-	-	-	-	-	-
16	641 Rents	-	-	-	-	-	-	-
17	650 Transportation Expense	54,195	-	-	-	-	-	-
18	657 Insurance - General Liability	54,967	-	-	-	-	-	-
19	659 Insurance - Health & Life	212,765	-	-	-	-	-	-
20	666 Regulatory Commission Expense	30,000	-	-	-	-	-	-
21	675 Miscellaneous Expense	236,192	-	-	-	-	-	-
22	403 Depreciation Expense	1,026,384	-	-	-	-	-	-
23	408 Taxes Other than Income	105,232	-	-	-	-	-	-
24	408 Property Taxes	156,279	-	-	-	-	-	-
25	409 Income Tax	-	-	-	-	-	-	-
26	**Total Operating Expenses**	$ 3,523,161	$ (2,440)	$ -	$ (72,685)	$ 160,577	$ (11,757)	$ (17,961)
27	**Operating Income (Loss)**	$ 526	$ (3,189)	$ 23,358	$ 72,685	$ (160,577)	$ 11,757	$ 17,961

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

LINE NO.		DESCRIPTION	[H] Mis. Expense ADJ #7	[I] Depr. Exp. ADJ #8	[J] Prop. Tax ADJ #9	[K] STAFF ADJUSTED	[L] STAFF RECOMMENDED CHANGES	[M] STAFF RECOMMENDED
1		*REVENUES:*						
2	461	Metered Water Sales	$ -	$ -	$ -	$ 3,445,225	$ 478,000	$ 3,923,225
3	460	Water Sales - Unmetered	-	-	-	-	-	-
4	474	Other Operating Revenue	-	-	-	96,191	-	96,191
5		**Total Operating Revenues**	$ -	$ -	$ -	$ 3,541,415	$ 478,000	$ 4,019,415
6		*OPERATING EXPENSES:*						
7	601	Salaries & Wages	$ -	$ -	$ -	$ 927,005	$ -	$ 927,005
8	604	Employee Pensions and Benefits	-	-	-	160,577	-	160,577
9	610	Purchased Water	-	-	-	-	-	-
10	615	Purchased Power	-	-	-	218,639	-	218,639
11	618	Chemicals	-	-	-	33,407	-	33,407
12	620	Repairs & Maintenance	-	-	-	54,151	-	54,151
13	621	Office Supplies & Expense	-	-	-	16,621	-	16,621
14	630	Outside services	-	-	-	277,357	-	277,357
15	635	Water Testing	-	-	-	15,124	-	15,124
16	641	Rents	-	-	-	-	-	-
17	650	Transportation Expense	-	-	-	54,195	-	54,195
18	657	Insurance - General Liability	-	-	-	54,967	-	54,967
19	659	Insurance - Health & Life	-	-	-	212,765	-	212,765
20	666	Regulatory Commission Expense	-	-	-	30,000	-	30,000
21	675	Miscellaneous Expense	(130,121)	-	-	106,071	-	106,071
22	403	Depreciation Expense	-	(99,702)	-	926,682	-	926,682
23	408	Taxes Other than Income	-	-	-	105,232	-	105,232
24	408.1	Property Taxes	-	-	181	156,460	7,086	163,546
25	409	Income Tax	-	-	-	-	-	-
26		**Total Operating Expenses**	$ (130,121)	$ (99,702)	$ 181	$ 3,349,253	$ 7,086	$ 3,356,339
27		**Operating Income (Loss)**	$ 130,121	$ 99,702	$ (181)	$ 192,162	$ 470,914	$ 663,076

OPERATING INCOME ADJUSTMENT NO. 1 - WATER USAGE NORMALIZATION

LINE NO.	DESCRIPTION	[A] COOPERATIVE PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Meter Water Revenue	$ 3,450,854	$ (5,629)	$ 3,445,225
2	Purchased Power Expense	$ 220,756	$ (2,117)	$ 218,639
3	Chemicals	$ 33,730	$ (323)	$ 33,407

References:
Column (A), Cooperative Schedule C-2
Column (B): Column (C)-Column (A)
Column (C): Surrebuttal Schedule PNT-7, page 2 and 3.

Line No.	***Declining Usage calculation***	
1	2015 total gallons sold (in 1,000's)-residential	539,786
2	2015 total residential customers	130,271
3	Total gallons sold per customers in 1,000's (Line 1 /line 2)	4.14
4	Test year total residential bills	124,416
5	Adjusted usage (Line 3 X Line 4)	515,525
6	Test year total gallons sold-residential	564,257
7	Decling Usage (Line 5 minus Line 6)	(48,732)
8	Weighted Avg Volume Charge *(3)*	$2.05
9	Decling Usage Revenue Adjustment (Line 7 X Line 8)	($100,062)

(1)	Test year Total Residential Commodity Revenue	$1,158,609
(2)	Test year total residential gallons sold	564,257
(3)	Weighted Average Volume Charge ((1)/(2))	$2.05

Line No.		
1	Usage Normalization Revenue Adjustment	
2		
3	Actual Test Year Metered Water Revenue	$ 3,546,359
4	Revenue Annualization*	(1,072)
5	Declining Usage Adjustment-Staff (L 9, Surrebuttal Schedule PNT-7, page 2)	(100,062)
6	Staff adjusted metered water revenue (L3+L4+L5)	$ 3,445,225
7		
8	Purchased Power Normalization	
9		
10	Test Year Purchased Power Expense	$ 234,393
11	Gallons Sold (in 1,000's)	726,711
12	Cost per 1,0000 gallons (L10/L11)	0.3225
13		
14	Normalized Gallons Reduction (in 1,000's)	(48,732)
15	Purchased Power Normalization (L12 x L14)	(15,716)
16	Purchased Power annualization*	(38)
17	Staff adjusted purchased power expense (L10+L15+L16)	218,639.07
18		
19		
20		
21	Chemicals Expense Normalization	
22		
23	Test Year Chemicals Expense	$ 35,815
24	Gallons Sold (in 1,000's)	726,711
25	Cost per 1,0000 gallons (L23/L24)	0.0493
26		
27	Normalized Gallons Reduction (in 1,000's)	(48,732)
28	Chemicals expense Normalization(L27 X L25)	(2,402)
29	Chemical Expense annualization*	(6)
30	Staff adjusted chemicals expense (L23+L28+L29)	33,407

* Cooperative's direct schedule C-2 Page 5, Staff does not disagree with this adjustment

Community Water Company of Green Valley
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Surrebuttal Schedule PNT-8

OPERATING INCOME ADJUSTMENT NO. 2 - OTHER REVENUES

LINE NO.	DESCRIPTION	[A] COOPERATIVE PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Other Water Revenue	72,833	23,358	96,191

References:
Column (A), Cooperative Schedule C-2
Column (B): Testimony
Column (C): Column (A) + Column (B)

Community Water Company of Green Valley
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Surrebuttal Schedule PNT-9

OPERATING INCOME ADJUSTMENT NO. 3 - SALARIES AND WAGES

LINE NO.	DESCRIPTION	[A] COOPERATIVE PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Salaries and Wages	$ 999,690	$ (72,685)	$ 927,005

2	2015 Total Compensation	$ 1,087,895
3	Amounts Capitalized and Charged to other accounts	(148,850)
4	Cost of Accountant included in Outside Service	(12,040)
5	Adjusted salaries and wages charged to O & M	$ 927,005

References:
Column (A), Cooperative Schedule C-2
Column (B): Testimony
Column (C): Column (A) + Column (B)

Community Water Company of Green Valley
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Surrebuttal Schedule PNT-10

OPERATING INCOME ADJUSTMENT NO. 4 - EMPLOYEE PENSIONS AND BENEFITS

LINE NO.	DESCRIPTION	[A] COOPERATIVE PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Reclassification from Miscellaneous Expense	$ -	$ 124,576	$ 124,576
2	Retirement Adjustment		36,001	36,001
			$ 160,577	

References:
Column (A), Cooperative Schedule C-2
Column (B): Testimony
Column (C): Column (A) + Column (B)

Community Water Company of Green Valley
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Surrebuttal Schedule PNT-11

OPERATING INCOME ADJUSTMENT NO. 5 - REPAIR AND MAINTENANCE EXPENSE

LINE NO.	DESCRIPTION	[A] COOPERATIVE PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Reservoir Maintenance Annual Reserve	$ 55,886	$ (11,757)	$ 44,129

Reservoir Maintenance Annual Reserve calculation

	[A]	[B] Estimated Cost	[C] GL Balance	[D] Distribution from Reservoir 2	[E] Total needed [B]-[C]-[D]	[F] Frequency	[G] Annual cost [E]/[F]
2	Reservoir 1	$75,000	$ (62,870)	$17,298	$120,572	10 years	$12,057
3	Reservoir 3	190,000	48,516	17,298	124,186	20 years	6,209
4	Reservoir 4	300,000	64,368	17,298	218,334	20 years	10,917
5	Tank 10	100,000	5,685	17,298	77,016	10 years	7,702
6	Tank 11	100,000	10,260	17,298	72,442	10 years	7,244
7	Reservoir 2 (removed)		86,492				
8	**Total**	765,000	$ 152,451		$ 612,549		**$44,129**

References:
Column (A), Cooperative Schedule C-2
Column (B): Surrebuttal Testimony
Column (C): Column (A) + Column (B)

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Surrebuttal Schedule PNT-12

OPERATING INCOME ADJUSTMENT NO. 6 - OUTSIDE SERVICE

LINE NO.	DESCRIPTION	[A] COOPERATIVE PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Legal Consulting	$ 18,345	$ (10,911)	$ 7,434
2	HR-Assistant to President	7,050.1	(7,050.1)	-
			$ (17,961)	

References:
Column (A), Cooperative Schedule C-2
Column (B): Testimony
Column (C): Column (A) + Column (B)

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Surrebuttal Schedule PNT-13

OPERATING INCOME ADJUSTMENT NO. 7- MISCELLANEOUS EXPENSES

LINE NO.	DESCRIPTION	[A] COOPERATIVE PROPOSED	[B] STAFF ADJUSTMENT	[C] STAFF RECOMMENDED
1	Food & Entertainment	$ 5,545	$ (5,545)	$ -
2	Profit Sharing	87,871	(87,871)	-
3	401(K) Matching	36,705	(36,705)	-
4	Total		$ (130,121)	

References:
Column (A), Cooperative Schedule C-2
Column (B): Testimony
Column (C): Column (A) + Column (B)

Company of Green Valley
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d December 31, 2014

Surrebuttal Schedule PNT-14

OPERATING INCOME ADJUSTMENT No. 8 - DEPRECIATION EXPENSE

Line No.	ACCT NO.	DESCRIPTION	GROSS UTILITY PLANT IN SERVICE	FULLY/NON DEPRECIABLE	DEPRECIABLE PLANT	DEPREC. RATE	EXPENSE
	Plant In Service						
1	301	Organization Costs	$ 47,863	$ 47,863	$ -	0.00%	$ -
2	302	Franchise Costs	244	244	-	0.00%	-
3	303	Land & Land Rights	170,589	170,589	-	0.00%	-
4	304	Structures & Improvements-Pumping	30,695		30,695	3.33%	1,022
5	304.1	Structures & Improvements-Water Treatme	141,261		141,261	3.33%	4,704
6	307	Wells & Springs	2,013,049		2,013,049	3.33%	67,035
7	311	Electric Pumping Equipment	3,289,327		3,289,327	12.50%	411,166
8	311.1	Pumping Equipment-Gas	118,494	118,494	-	12.50%	-
9	320	Water Treatment Equipment	4,440,527		4,440,527	3.33%	147,870
10	320.1	Water Treatment Plants	-		-	3.33%	-
11	320.2	Solutions & Feeders	-		-	20.00%	-
13	330	Distribution Reservoirs & Standpipes	946,545		946,545	2.22%	21,013
14	330.1	Storage Tank	-		-	2.22%	-
15	330.2	Pressure Tanks	-		-	5.00%	-
16	331	Transmission & Distribution Mains	19,123,697		19,123,697	2.00%	382,474
17	333	Services	4,696,522		4,696,522	3.33%	156,394
18	333	Fire Taps	332,174		332,174	3.33%	11,061
19	334	Meters & Meter Installations	1,600,133		1,600,133	8.33%	133,291
20	335	Hydrants	2,031,665		2,031,665	2.00%	40,633
21	336	Backflow Prevention Devices	-		-	6.67%	-
22	339	Other Plant & Misc. Equip.	583,181	-	583,181	6.67%	38,898
23	340	Office Furniture & Fixtures	151,618		151,618	6.67%	10,113
24	340.1	Computer & Software	608,761	89,293	503,018	20.00%	100,604
25	341	Transportation Equipment	469,777	194,310	169,405	20.00%	33,881
26	342	Store Equipment	2,441		2,441	4.00%	98
27	343	Tools & Work Equipment	103,018		103,018	5.00%	5,151
28	344	Laboratory Equipment	12,000		12,000	10.00%	1,200
29	345	Power Operated Equipment	136,512		136,512	5.00%	6,826
30	345.1	Power Operated Equipment-Backhoe	149,439	107,179	42,260	5.00%	2,113
31	346	Communications Equipment	124,656	50,299	74,357	10.00%	7,436
32	347	Miscellaneous Equipment	-		-	10.00%	-
33	348	Other Tangible Plant	12,938		12,938	10.00%	1,294
34		Subtotal General	$ 41,337,126	$ 778,271	$ 40,436,343		$ 1,584,276
		Composite rate					3.92%
35		Contributions in Aid of Construction (CIAC)					$ 16,784,118
36		Amortization of Contributions					$ 657,593
37		Staff Recommended Depreciation Expense					$ 926,682
38		Cooperative Proposed Depreciation Expense					1,026,384
39		Increase/(Decrease) to Depreciation Expense					$ (99,702)

Community Water Company of Green Valley
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Surrebuttal Schedule PNT-15

OPERATING INCOME ADJUSTMENT No. 9- PROPERTY TAXES

LINE NO.	DESCRIPTION	[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	$ 3,541,415	$ 3,541,415
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	$ 7,082,831	$ 7,082,831
4	Staff Recommended Revenue	3,541,415	4,019,415
5	Subtotal (Line 4 + Line 5)	$ 10,624,246	$ 11,102,246
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	$ 3,541,415	$ 3,700,749
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	$ 7,082,831	$ 7,401,497
10	Plus: 10% of CWIP	-	-
11	Less: Net Book Value of Licensed Vehicles	46,755	46,755
12	Full Cash Value (Line 9 + Line 10 - Line 11)	$ 7,036,076	$ 7,354,742
13	Assessment Ratio	18.00%	18.00%
14	Assessment Value (Line 12 * Line 13)	$ 1,266,494	$ 1,323,854
15	Composite Property Tax Rate - Obtained from ADOR	12.35380%	12.35380%
16	Staff Test Year Adjusted Property Tax Expense (Line 14 * Line 15)	$ 156,460	
17	Cooperative Proposed Property Tax	156,279	
18	Staff Test Year Adjustment (Line 16 - Line 17)	$ 181	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		$ 163,546
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		156,460
21	Increase in Property Tax Due to Increase in Revenue Requirement		$ 7,086
22	Increase in Property Tax Due to Increase in Revenue Requirement (Line 21)		$ 7,086
23	Increase in Revenue Requirement		$ 478,000
24	Increase in Property Tax Per Dollar Increase in Revenue (Line 22 / Line 23)		**1.482456%**

REFERENCES:
Line 15: Composite Tax Rate obtained from Arizona Department of Revenue
Line 17: Cooperative Schedule C-1 Page 2
Line 21: Line 19 - Line 20
Line 23: Surrebuttal Schedule PNT-4

Community Water Company of Green Valley
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Surrebuttal Schedule PNT-16

Cash Flow Analysis

Line No.		[A] *Cooperative Proposed*	[B] *Staff Recommended*
1	Operating Revenue:	$ 4,231,930	$ 4,019,415
2	Operating Expenses:		
3	Operation and Maintenance	2,235,266	2,160,879
4	Depreciation	1,026,384	926,682
5	Property & Other Taxes	272,010	268,778
6	Income Tax	-	-
7	Total Operating Expense	$ 3,533,660	$ 3,356,339
8			
9	Operating Income	$ 698,270	$ 663,076
10			
11	Annual Debt Payment	$ 272,756	$ 272,756
12			
13	Cash Flow : (L9+L4-L11)	$ 1,451,898	$ 1,317,002

References:
Column (A), Cooperative Schedule C-1
Column (B): Surrebuttal Schedule PNT-4

RATE DESIGNS

Monthly Usage Charge	Present Rates	Cooperative Proposed Rates	Staff Recommended Rates
Meter Size (All Classes):			
5/8 x 3/4 Inch	$ 13.00	$ 16.64	$ 14.70
3/4 Inch	13.00	16.64	20.00
1 Inch	24.00	30.72	30.80
1 1/2 Inch	40.00	51.20	51.70
2 Inch	67.00	85.76	85.70
3 Inch	105.00	134.40	135.00
4 Inch	400.00	512.00	512.00
6 Inch	650.00	832.00	832.00
8 Inch	1,000.00	1,280.00	1,280.00
Construction Water Meter	According to meter size charges listed above	According to meter size charges listed above	According to meter size charges listed above
Fire Sprinkler			
Less than 6 inch	$ 10.00	$ 10.00	10.00
Less than 8 inch	15.00	15.00	15.00
Less than 10 inch	22.50	22.50	22.50
Less than 12 inch	33.75	33.75	33.75
Commodity Charge - Per 1,000 Gallons			
5/8" x 3/4" Meter (Residential)			
First 3,000 gallons	$ 1.300	$ 1.440	$ 1.400
3,001 to 10,000 gallons	$ 2.500	$ 2.780	$ 2.790
Over 10,000 gallons	$ 3.420	$ 3.800	$ 3.820
3/4" Meter (Residential)			
First 3,000 gallons	$ 1.300	$ 1.440	$ 1.300
3,001 to 10,000 gallons	$ 2.500	$ 2.780	$ 2.790
Over 10,000 gallons	$ 3.420	$ 3.800	$ 3.820
5/8" x 3/4" Meter (Commercial/residential and Commercial)			
First10,000 gallons	$ 2.500	$ 2.780	$ 2.790
Over 10,000 gallons	$ 3.420	$ 3.800	$ 3.820
3/4" Meter (Commercial/residential and Commercial)			
First 10,000 gallons	N/A	$ 2.780	$ 2.790
Over10,000 gallons	N/A	$ 3.800	$ 3.820
1" Meter (All classes, except construction)			
First 21,000 gallons	$ 2.500	$ 2.780	$ 2.790
Over 21,000 gallons	$ 3.420	$ 3.800	$ 3.820
1 1/2" Meter(All classes, except construction)			
First 35,000 gallons	$ 2.500	$ 2.780	$ 2.790
Over 35,000 gallons	$ 3.420	$ 3.800	$ 3.820
2" Meter(All classes, except construction)			
First 63,000 gallons	$ 2.500	$ 2.780	$ 2.790
Over 63,000 gallons	$ 3.420	$ 3.800	$ 3.820
3" Meter (All classes, except construction)			
First 143,000 gallons	$ 2.500	$ 2.780	$ 2.790
Over 143,000 gallons	$ 3.420	$ 3.800	$ 3.820
4" Meter (All classes, except construction)			
First 424,000 gallons	$ 2.500	$ 2.780	$ 2.790
Over 424,000 gallons	$ 3.420	$ 3.800	$ 3.820
6" Meter (All classes, except construction)			
First 680,000 gallons	$ 2.500	$ 2.780	$ 2.790
Over 680,000 gallons	$ 3.420	$ 3.800	$ 3.820
8" Meter (All classes, except construction)			
First 1,050,000 gallons	$ 2.500	$ 2.780	$ 2.790
Over 1,050,000 gallons	$ 3.420	$ 3.800	$ 3.820
Construction Water (All meter sizes)			
First 1,050,000 gallons	$ 2.500	$ 2.780	$ 2.790
Over 1,050,000 gallons	$ 3.420	$ 3.800	$ 3.820

RATE DESIGNS(Cont.)

Other Service Charges			
Establishment	$ 25.00	$ 25.00	$ 25.00
Establishment (After Hours)	35.00	35.00	N/A
Reconnection (Delinquent)	25.00	25.00	25.00
Reconnection (Delinquent) - After Hours	35.00	35.00	N/A
Call out charge (After hours/Saturday)	35.00	35.00	N/A
Call out charge (Sunday/Holiday)	50.00	50.00	N/A
Meter test (If Correct)	20.00	20.00	20.00
Deposit	*	*	*
Hydrant Meter Deposit**			
5/8 x 3/4 Inch	$ 155.00	$ 155.00	$ 155.00
3/4 Inch	255.00	255.00	255.00
1 Inch	315.00	315.00	315.00
1 1/2 Inch	525.00	525.00	525.00
2 Inch Turbine	1,045.00	1,045.00	1,045.00
2 Inch Compound	1,890.00	1,890.00	1,890.00
3 Inch Turbine	1,670.00	1,670.00	1,670.00
3 Inch Compound	2,545.00	2,545.00	2,545.00
4 Inch Turbine	1,737.00	1,737.00	1,737.00
4 Inch Compound	3,645.00	3,645.00	3,645.00
6 inch Turbine	3,766.00	3,766.00	3,766.00
6 Inch Compound	6,920.00	6,920.00	6,920.00
8 Inch	Cost	Cost	Cost
10 Inch	Cost	Cost	Cost
12 Inch	Cost	Cost	Cost
Deposit Interest	6.00%	6.00%	6.00%
Reestablishment (within 12 months)	***	***	***
Reestablishment (within 12 months after hours)	***	***	***
NSF Check	25.00	25.00	25.00
Meter Reread (if Correct)	10.00	10.00	10.00
Late Payment Penalty	1.5% per month	1.5% per month	1.5% per month
Deferred Payment (R-01-2-409.G)	1.5% per month	1.5% per month	1.5% per month
Moving meter at customer request (R-14-2-405(B))	20.00	20.00	20.00
Meter Tampering Charge	Cost	Cost	Cost
Meter Box - Cut Lock Charge	Cost	Cost	Cost
Payment via Visa Charge Card	Cost****	Cost****	Cost****
After Service Charge	N/A	N/A	40.00

* Per Commission Rule A.A.C. R-14-2-403(B)
Residential - two times the average bill. Non-residential- two and one-half times the average bill
** Shall be refunded entirely upon return of undamaged meter.
*** Per Commission Rule A.A.C. R14-2-403(D) - Months off the system times the monthly minimum.
**** Cost up to 6% service charge on bill paid

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 14-2-409D(5).

Service and Meter Installation Charges

Service Size	Total Present Charge	Proposed Service Line Charge	Proposed Meter Installation Charge	Total Proposed Charge	Recommended Service Line Charge	Recommended Meter Installation Charge	Total Recommended Charge
5/8 x 3/4 Inch	$ 600.00	$ 445.00	$ 155.00	$ 600.00	$ 445.00	$ 155.00	$ 600.00
3/4 Inch	670.00	445.00	225.00	670.00	445.00	225.00	670.00
1 Inch	810.00	495.00	315.00	810.00	495.00	315.00	810.00
1 1/2 Inch	1,075.00	550.00	525.00	1,075.00	550.00	525.00	1,075.00
2 Inch Turbine	1,875.00	830.00	1,045.00	1,875.00	830.00	1,045.00	1,875.00
2 Inch Compound	2,720.00	830.00	1,890.00	2,720.00	830.00	1,890.00	2,720.00
3 Inch Turbine	2,715.00	1,045.00	1,670.00	2,715.00	1,045.00	1,670.00	2,715.00
3 Inch Compound	3,710.00	1,165.00	2,545.00	3,710.00	1,165.00	2,545.00	3,710.00
4 Inch Turbine	3,227.00	1,490.00	1,737.00	3,227.00	1,490.00	1,737.00	3,227.00
4 Inch Compound	5,315.00	1,670.00	3,645.00	5,315.00	1,670.00	3,645.00	5,315.00
6 Inch Turbine	5,976.00	2,210.00	3,766.00	5,976.00	2,210.00	3,766.00	5,976.00
6 Inch Compound	9,250.00	2,330.00	6,920.00	9,250.00	2,330.00	6,920.00	9,250.00
8 Inch	cost	cost	cost	cost	cost	cost	cost
10 Inch	cost	cost	cost	cost	cost	cost	cost
12 Inch	cost	cost	cost	cost	cost	cost	cost

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Surrebuttal Schedule PNT-18

Typical Bill Analysis
General Service 5/8 x 3/4-Inch Meter

Cooperative Proposed	Gallons	Present Rates	Proposed Rates	Dollar Increase	Percent Increase
Average Usage	3,897	$ 19.14	$ 23.45	$ 4.31	22.52%
Median Usage	3,500	18.15	22.35	$ 4.20	23.14%
Staff Recommended					
Average Usage	3,897	$ 19.14	$ 21.40	$ 2.26	11.81%
Median Usage	3,500	18.15	20.30	$ 2.15	11.82%

Present & Proposed Rates (Without Taxes)
General Service 5/8 x 3/4-Inch Meter

Gallons Consumption	Present Rates	Company Proposed Rates	% Increase	Staff Recommended Rates	% Increase
-	$ 13.00	$ 16.64	28.00%	$ 14.70	13.08%
1,000	14.30	18.08	26.43%	16.10	12.59%
2,000	15.60	19.52	25.13%	17.50	12.18%
3,000	16.90	20.96	24.02%	18.90	11.83%
4,000	19.40	23.74	22.37%	21.69	11.80%
5,000	21.90	26.52	21.10%	24.48	11.78%
6,000	24.40	29.30	20.08%	27.27	11.76%
7,000	26.90	32.08	19.26%	30.06	11.75%
8,000	29.40	34.86	18.57%	32.85	11.73%
9,000	31.90	37.64	17.99%	35.64	11.72%
10,000	34.40	40.42	17.50%	38.43	11.72%
11,000	37.82	44.22	16.92%	42.25	11.71%
12,000	41.24	48.02	16.44%	46.07	11.71%
13,000	44.66	51.82	16.03%	49.89	11.71%
14,000	48.08	55.62	15.68%	53.71	11.71%
15,000	51.50	59.42	15.38%	57.53	11.71%
16,000	54.92	63.22	15.11%	61.35	11.71%
17,000	58.34	67.02	14.88%	65.17	11.71%
18,000	61.76	70.82	14.67%	68.99	11.71%
19,000	65.18	74.62	14.48%	72.81	11.71%
20,000	68.60	78.42	14.31%	76.63	11.71%
25,000	85.70	97.42	13.68%	95.73	11.70%
30,000	102.80	116.42	13.25%	114.83	11.70%
35,000	119.90	135.42	12.94%	133.93	11.70%
40,000	137.00	154.42	12.72%	153.03	11.70%
45,000	154.10	173.42	12.54%	172.13	11.70%
50,000	171.20	192.42	12.39%	191.23	11.70%
75,000	256.70	287.42	11.97%	286.73	11.70%
100,000	342.20	382.42	11.75%	382.23	11.70%

BEFORE THE ARIZONA CORPORATION COMMISSION

DOUG LITTLE
Chairman
BOB STUMP
Commissioner
BOB BURNS
Commissioner
TOM FORESE
Commissioner
ANDY TOBIN
Commissioner

IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY FOR DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR AN INCREASE IN ITS RATES AND CHARGES FOR UTILITY SERVICE	DOCKET NO. W-02304A-15-0263

SURREBUTTAL

TESTIMONY

OF

DARRON W. CARLSON

PUBLIC UTILITIES ANALYST MANAGER

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

APRIL 12, 2016

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OPERATING MARGIN / CASH RESERVES	3

INTRODUCTION

Q. Please state your name and business address.

A. My name is Darron Carlson. My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Did you provide any direct testimony on behalf of Staff in this proceeding?

A. No, I did not.

Q. By whom are you employed and in what capacity?

A. I am employed by the Utilities Division ("Staff") of the Arizona Corporation Commission ("ACC" or "Commission") as a Public Utilities Analyst Manager.

Q. How long have you been employed with the Utilities Division?

A. I have been employed with the Utilities Division since September of 1991.

Q. Please describe your educational background and professional experience.

A. I hold a Bachelor of Arts degree in both Accounting and Business Management from Northeastern Illinois University in Chicago, Illinois.

I have participated in quite a number of seminars and workshops related to utility ratemaking, cost of capital, income taxes, and similar issues. These have been sponsored by organizations such as the National Association of Regulatory Utility Commissioners ("NARUC"), Duke University, Florida State University, Michigan State University, New Mexico State University, and various other organizations.

Q. Briefly describe your responsibilities as a Public Utilities Analyst Manager.

A. In my capacity as a Public Utilities Analyst Manager, I supervise analysts who examine, verify, and analyze utilities' statistical, financial, and other information. These analysts write reports and/or testimonies analyzing proposed mergers, acquisitions, asset sales, financings, rate cases, and other matters in which they make recommendations to the Commission. I provide support and guidance along with reviewing and editing the work products. I also perform analysis as needed on special projects. Additionally, I provide expert testimony at formal hearings. Finally, I assist Staff members during formal hearings and supervise responsive testimonies, as needed, during the hearing process.

BACKGROUND

Q. Please describe Community Water of Green Valley ("Community Water" or "Cooperative")

A. Community Water is a member-owned, non-profit water utility located in Southern Arizona, in unincorporated Pima County and the Town of Sahuarita. The Cooperative provided water service to approximately 12, 939 customers during the test year ended December 31, 2014. The current rates for the Cooperative were approved in Decision No. 71478, dated February 3, 2010.

PURPOSE OF TESTIMONY

Q. What is the scope of your surrebuttal testimony in this case?

A. I am presenting Staff's analysis and recommendation in the limited area of operating margin and the Cooperative's associated cash reserves.

Q. Who else is providing Staff testimony and what areas/issues will they address?

A. Staff witness Phan Tsan is presenting Staff's recommendations regarding rate base, operating revenues and expenses, revenue requirement, and rate design. Staff witness Jian Liu is presenting Staff's recommendations regarding the engineering and technical analysis.

OPERATING MARGIN / CASH RESERVES

Q. What did the Cooperative request for an operating margin?

A. The Cooperative requested a 16.50 percent operating margin.

Q. What is Staff's recommendation regarding the operating margin?

A. Staff concurs with the Cooperative and recommends a 16.50 percent operating margin.

Q. If you concur on the level of operating margin, what is the problem?

A. Staff has a number of concerns about details of the Cooperative's intentions going-forward as depicted in its direct and rebuttal testimonies filed in the Cooperative's pending rate case.

Q. Please explain your concerns.

A. In the Cooperative witness Mr. Gabaldon's direct testimony, he lays out a strategy that includes the intention to increase the operating margin percentage in each of the next three rate cases so that the Cooperative will be able to fund all of its future plant replacements and improvements through the cash reserves that will build up through the increasing operating margins. Although Mr. Gabaldon also mentions that the Cooperative believes a long-term debt level of 20 to 35 percent is a good balance, it appears that the Cooperative intends to use little or no long-term debt to fund its future plant needs.

Further, Cooperative witness Mr. Jones argues in his direct testimony, and on pages 9 through 11 of his rebuttal testimony, that it is a necessity that Community Water's customers be expected to fund significant additional cash reserves for the Cooperative. Mr. Jones goes on to request that to the extent the Commission accepts adjustments recommended by Staff that would effectively reduce the Cooperative's ability to build up such cash reserves that the operating margin used to establish rates in this case be increased above 16.50 percent in this case.

Q. Why are these comments and requests on behalf of Community Water concerning to Staff?

A. Staff is concerned that the Cooperative will not seek to maintain a balanced capital structure that would include more long-term debt (40 percent to 60 percent) instead of relying so heavily on equity. Staff believes that cooperatives, like other public service entities, operate best, most economically, and most financially sound by maintaining a balanced capital structure.

Further, and most important, the level of total capital should not be excessive. Or stated another way, the level of total capitalization should be roughly equivalent to the level of rate base required to provide safe and reliable service to ratepayers.

Q. Isn't the fact that Community Water is a member-owned cooperative, with arguably a more limited access to equity infusions and a greater reliance upon the reinvestment of earnings to fund capital expenditures, important factors for the Commission to consider?

A. Yes, those are important considerations but only to a reasonable point. Even the rates charged by a cooperative for its services can pass the point of being reasonable, and the Commission

must give considerations to both the financial health of the Cooperative and the interests of its members.

Staff believes the Commission should be cautious and conservative in assessing Community Water's required operating margin and that is why it believes that going above a 16.50 percent operating margin would not be advisable in the current docket.

Q. Mr. Carlson, what matters of financial relevance exist that support Staff's view?

A. There are several identified factors that are relevant and support Staff's position. Those factors include the following:

- The Cooperative's projected year (12/31/2015) total capital, from Schedule A-3, is almost $13 million which far exceeds the Cooperative's rate base of approximately $7.7 million, shown on Schedule A-1.
- The Cooperative's current cash on hand balance was approximately $2.6 million as seen on Schedule E-1.
- Building even higher current cash reserve balances comes at the expense of higher rates for current customers, and current customers should not be excessively burdened with the responsibility of funding, or pre-funding, capital improvements that will be used to serve future generations of customers. This can happen if unreasonably high operating margins are used in order to achieve the goal of the building-up of cash reserves so that the Cooperative can eventually pay cash for long-term infrastructure additions.

Despite the arguments surrounding the unique financial needs of a cooperative public service corporation, Staff believes that assuring intergenerational fairness to ratepayers should be an ever present goal of this Commission.

Q. Mr. Carlson, is synchronization of the level of capital employed by a regulated utility with the level of rate base of that utility a foundational consideration of setting rates for public service corporations?

A. Yes, absolutely, and the Commission should not be persuaded to ignore this feature of ratemaking fairness in the case of Community Water.

Q. Mr. Carlson, does this conclude your testimony?

A. Yes, it does.

EXHIBIT
S-7
ADMITTED

ROSHKA DEWULF & PATTEN

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May 20, 2014

By email and hand-delivery

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1200 West Washington
Phoenix, Arizona 85007

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Jian Liu
Utilities Division
Arizona Water Company
1200 West Washington
Phoenix, Arizona 85007

Re: Community Water Company of Green Valley's (CWCGV) Responses to Staff's Sixth Set of Data Requests
Docket No. W-02304A-14-0041

Dear Messrs. Hains and Liu:

Enclosed please find Community Water Company of Green Valley's Responses to Staff's Sixth Set of Data Requests dated May 15, 2014.

Sincerely,

Jason D. Gellman

JDG/da
Encl.

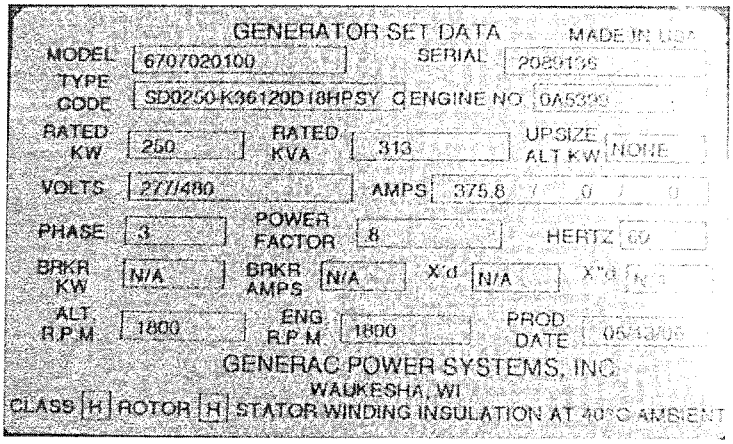
COMMUNITY WATER COMPANY
OF GREEN VALLEY'S
RESPONSES TO STAFF'S SIXTH SET
OF DATA REQUESTS DATED MAY 15, 2014
DOCKET NO. W-02304A-14-0041
Dated May 19, 2014

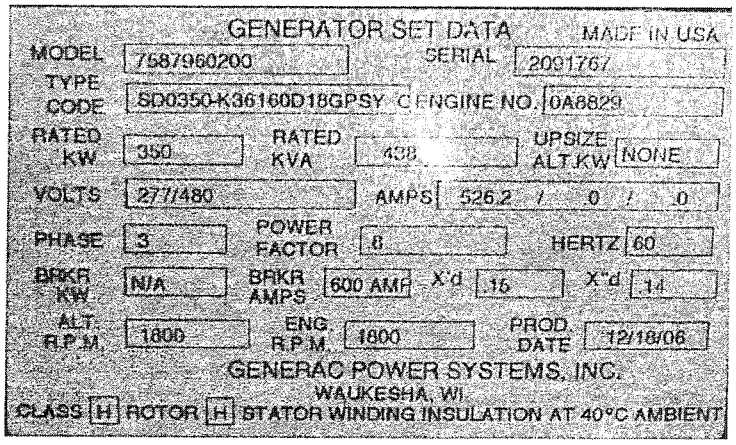
JL 6.1 Please list all generators the Company has, and give detailed specifications for each generator.

Response: **Well 10 generator:** 250 kW (See photo below for specifications).

Well 11 generator: 350 kW (See photo below for specifications).

Respondent: John Meyer





COMMUNITY WATER COMPANY
OF GREEN VALLEY'S
RESPONSES TO STAFF'S SIXTH SET
OF DATA REQUESTS DATED MAY 15, 2014
DOCKET NO. W-02304A-14-0041
Dated May 19, 2014

JL 6.2 Where are the generators located, and when were they installed?

Response: The Well 10 generator was installed in 2006 and is located at 1667 S. Abrego Dr. Green Valley within the well-site boundaries.

The Well 11 generator was installed in 2006 and is located at 18460 S. Calle Valle Verde Green Valley within the well-site boundaries.

Respondent: John Meyer

JL 6.3 Why were these generators installed and what if any were CWC's concerns when the generators were installed? What impact on operating costs has CWC had since the generators were installed?

Response: The generators were installed as emergency backup power to run two of the five boosters at each well site, these boosters allow the Company access to the water in the forebay holding tanks..

CWC's concerns included noise pollution, air pollution, fuel spills at well sites and increases in operating costs (roughly $4,400/year).

Respondent: John Meyer

JL 6.4 Can any of the existing generators be used in an emergency to run the well pumps? If the answer is no, please give detailed reasons why not.

Response: The existing generators are inadequate for the running of the well pumps. The wells require a minimum of a 500 kW generator. The generator at Well 10 is 250 kW and the generator at Well 11 is 350 kW.

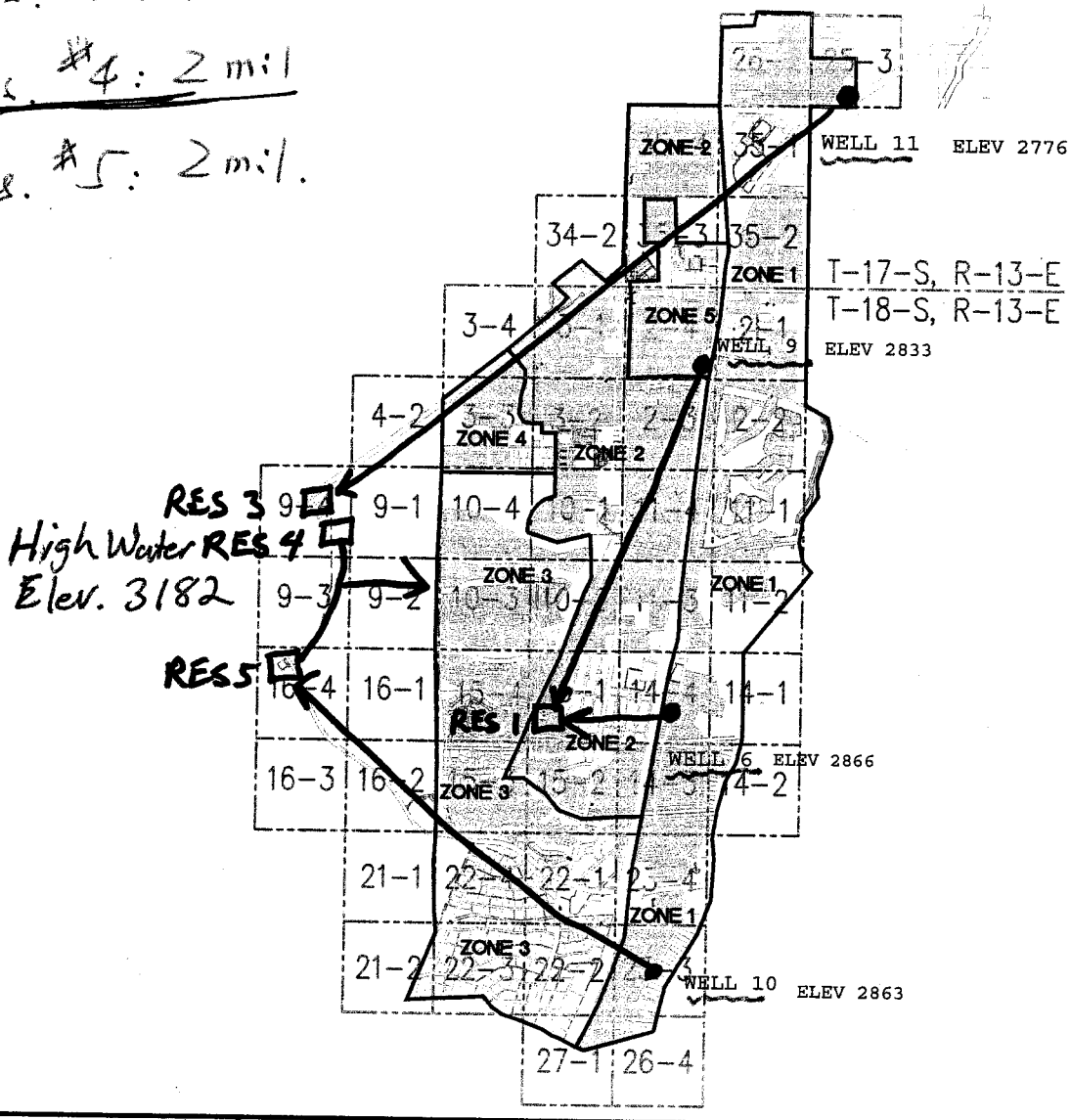
Respondent: John Meyer

Dec 8, 2014 Reservoir #2 Offline
Sept. 18, 2015 " #5 in service.

EXHIBIT
S-8
ADMITTED

COMMUNITY WATER CO. STAGE THREE PRV ADJUSTMENT PROCEDURE

Res. #3: 1 mi
Res. #4: 2 mi
Res. #5: 2 mi.



COMMUNITY WATER CO. OF GREEN VALLEY
PO Box 1078, Green Valley, Arizona 85622-1078
Phone 520-625-8409, FAX 520-625-1951
www.communitywater.com

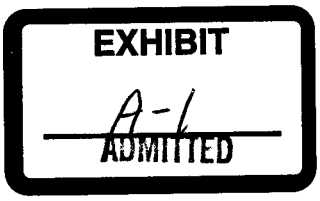
PRESSURE ZONES

WATER DISTRIBUTION

08/2007

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
DOUG LITTLE – CHAIRMAN
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN



IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE.	)	DOCKET NO. W-02304A-15-0263

REBUTTAL TESTIMONY OF

GARY WOODARD

ON BEHALF OF

COMMUNITY WATER COMPANY OF GREEN VALLEY

March 15, 2016

TABLE OF CONTENTS

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II.	Historical SFR Demand Trends for Arizona Municipal Providers	3
III.	Disaggregated Demand Trends for Community Water	3
IV.	Factors of Municipal Water Demand	5
V.	Forecast Demand for Community Water	7
VI.	Impacts of Declining Demand on Revenues and Rates	9
VII.	Conclusions	10

EXHIBITS

GW-1 Resume, Gary C. Woodard

GW-2 Historical Trends in Residential Demand for 10 Municipal Providers in Arizona, 2000-2013

GW-3 Detailed Demand Trends for Community Water, 2000-2015

GW-4 Seasonality of Indoor Demand in Green Valley from Wastewater Influent Records

GW-5 Seasonality of Outdoor Demand in Green Velley from Drought Records

I. INTRODUCTION.

Q. Please state your name and address.

A. My name is Gary Calvin Woodard. My work and mailing address is: Montgomery & Associates, 1550 East Prince Road, Tucson, Arizona 85719

Q. On whose behalf are you testifying in the proceeding?

A. I am testifying on behalf of the Applicant, Community Water Company of Green Valley ("Community Water").

Q. With whom are you employed and in what capacity?

A. I am employed by Montgomery & Associates, a consulting firm that provides hydrologic and water resources services to a wide range of clients, including municipal water providers, mines, cities, utilities, developers, tribes, law firms, and conservation groups. My position is Senior Water Policy and Economics Consultant.

Q. Please describe your professional background.

A. I began working for Montgomery & Associates in August 2012 as a Senior Consultant in the areas of municipal water demand modeling, water conservation, litigation support, rate design, and water policy and planning. My clients have included several municipal water departments, wholesale water providers, private water companies, tribes, regulatory agencies, developers, and conservation groups.

Prior to joining Montgomery and Associates, I was employed by the University of Arizona for over 30 years, beginning in 1982. I founded a policy analysis unit in the Business College; served as Deputy Director and Acting Director of the Water Resources Research Center in the College of Agriculture and Life Sciences; was Associate Director for Information Transfer, Informal Education, and International Activities at the NSF Center for Sustainability of Semi-Arid Hydrology and Riparian Areas, which was housed in the Engineering College; and led Information Transfer and Outreach efforts at the College of Science. Each of these positions was predominantly focused on water resource issues and challenges in Arizona, the Southwest U.S., and semi-arid regions globally.

I also served on the board of the Universities Council on Water Resources and subsequently served as its president; was appointed by Governor Symington to the board of the Santa Cruz Water Authority and served as its founding chairman; and established the Water Conservation Association of Southern Arizona (Water CASA), of which Community Water is a founding member.

While at the University of Arizona, I also engaged in private consulting. I assisted in the establishment of Metro Water and Oro Valley's water utility, and designed and reviewed rates for several water providers. I also modeled water demand for new developments, provided litigation support, and estimated the water needs of commercial enterprises. As part of a small international team, I drafted significant portions of the Kingdom of Saudi Arabia's new National Water Act.

I received a Bachelor of Science degree, majoring in chemistry and minoring in math, from the University of Michigan-Dearborn in 1976. After working for two years as a research chemist at the General Motors Tech Center, I returned to the University of Michigan, where I received both a Juris Doctor in Law and a Masters of Public Policy in 1981. My resume is attached to my Rebuttal Testimony as **Exhibit GW-1**.

Q. Have you previously testified before the Arizona Corporation Commission?

A. No.

Q. What is the purpose of your Rebuttal Testimony?

A. To support Community Water's application for rate adjustments. Specifically, I will testify on: (1) analysis of historical demand trends for single family residential customers for 10 water providers in Pima and Maricopa Counties, including Community Water; (2) updated and detailed analysis of demand trends for Community Water customer classes; (3) the major factors causing declining rates of demand, or usage, at Community Water and other municipal water providers; (4) forecasts of demand for Community Water's residential customers through 2020; and (5) the impacts of declining demand on municipal provider revenues and rates.

II. HISTORICAL SINGLE FAMILY RESIDENTIAL DEMAND TRENDS FOR ARIZONA MUNICIPAL PROVIDERS.

Q. Has your prior work given you any insights into municipal water demand trends for Community Water and other Arizona providers? If so, describe.

A. Yes, I analyzed historic demand patterns for the single family residential (SFR) customer classes of 10 municipal water providers in Pima and Maricopa Counties as part of two parallel studies. The providers analyzed for the time period 2000-2013 were: (1) Community Water, Metro Water, and Tucson Water in Pima County; and (2) municipal water departments for the cities of Chandler, Gilbert, Glendale, Mesa, Peoria, Scottsdale, and Tempe in Maricopa County. Trend analysis based on monthly data for the 14-year period was conducted on total annual demand per SFR household served, as well as on indoor demand, total outdoor demand, and peak outdoor demand. Annual data are shown in **Exhibit GW-2**.

Q. What did the analysis reveal?

A. The analysis showed that demand declined over the period studied for all 10 water providers, and the declines were statistically highly significant for nine of the providers, including Community Water. A "spaghetti plot" of the data in **Exhibit GW-2** shows that the SFR demand rates did not monotonically decline every year, as there were some year-to-year increases. However, there was a strong downward trend for nine of the 10 providers. Average annual rates of decline were calculated for each provider and for both counties. For Maricopa County, the average rate of decline was 2.12% per year; in Pima County, the average rate of decline was 2.29% per year; for Community Water, it was 2.25% per year.

III. DISAGGREGATED DEMAND TREND ANALYSIS FOR COMMUNITY WATER.

Q. Have you performed any additional analysis of Community Water's ratepayer demand for the purposes of this rate case?

A. Yes, the time series analysis performed as part of the previous study of demand trends was updated and broadened for this rate case. The time frame was extended to between 2000 and2015, and data on other ratepayer classes was added, including multi-family residential (MFR) ratepayers, commercial ratepayers, and "other turf". Trends were analyzed for total demand, SFR demand, and residential demand (both SFR and MFR). Assumptions about

household size were revisited, and service area population was estimated for each year. Trends were then analyzed for total per-capita demand and residential per capita demand. These data are shown in **Exhibit GW**, which is attached to my testimony.

Q. What did this more detailed analysis of Community Water demand trends reveal?

A. The analysis revealed that total water deliveries by Community Water tracked closely with population from 2000 until 2006, with both increasing at nearly the same rate. After 2006, population growth leveled off while water demand declined rapidly. Demand peaked in 2006 at 2,745 AF and has declined steadily since, to 2,124 AF in 2015. This is slightly less than total water deliveries in 2000, despite a 30% increase in service area population, from an estimated 19,292 in 2000 to 25,102 in 2015. This is shown in greater detail in **Exhibit GW-3**.

Q. Is this decrease in total water deliveries over the past decade despite continuing population growth unusual?

A. No, it is typical. Tucson Water served the same amount of water in 2015 as it did in 1985, despite a 66% increase in customers. Similar reductions in deliveries despite major increases in customers and service area population have been observed for Metro Water, Phoenix Water, Albuquerque-Bernalillo County Water Utility, Las Vegas Valley Water District, and elsewhere.

Q. What are the trends in per-customer and per-capita demand for Community Water?

A. SFR and MFR customer accounts represent more than 90% of all Community Water accounts, and residential demand is typically 75-80% of total demand. Residential per capita demand rates, measured in gallons per capita per day, or gpcd, have been declining since the early 2000s. The gpcd rates for residential demand have dropped an average of 2.6% per year between 2000 and 2015; they dropped an average of 3.4% between 2006 and 2015. Total per capita demand rates have been declining rapidly from 2006, at an average rate of 3.7% per year (see **Exhibit GW-3**). This accelerating rate of decline has been observed at most municipal water providers in Pima and Maricopa Counties.

IV. FACTORS OF MUNICIPAL WATER DEMAND.

Q. Have you reviewed the Direct Testimony of Commission Staff witness Phan Tsan as it pertains to potential seasonal usage and rain-influenced variances in Community Water's year-to-year water demand (page 7)? If so, can you comment on Staff's conclusion that the decreases in Community Water's demand may be temporary?

A. Yes, I reviewed this testimony. It appears that Staff was considering significant declines in Community Water's demand that occurred over a relatively short period of time. Until recently, many municipal water planners have similarly concluded that declines in demand over a few years could be the result of some combination of climate fluctuations (cool, wet weather suppressing landscape irrigation), economic conditions (recession-caused cutbacks in overall consumption), and other temporary factors. This led to the belief that demand levels might "return to normal". However, the steepness and duration of municipal demand being experienced by providers in Arizona eventually led them to conclude that other factors were at work. This led to the two studies involving Community Water and nine other municipal providers described above.

Q. What is your specific response to the suggestion that, over the time frame for which they had demand data, seasonal fluctuations in resident population and precipitation caused the observed declines in demand?

A. Let me address the issue of seasonal demand first. Municipal providers in Arizona typically see indoor demand peak in the months of December through March due to winter visitors, sometimes referred to as "snow birds". Indoor demand typically is at a low in June and July, when few tourists visit Arizona, schools are not in session, and many residents take vacations or occupy second homes to avoid the summer heat. Community Water has a particularly large transient population, as many retirees who purchase homes there keep their previous homes, located in other states, for a number of years. Thus, Community Water and other retirement-oriented areas see significant seasonality in indoor demand.

Q. What evidence is there for this seasonal indoor demand?

A. The best direct evidence is inflow to Pima County's Green Valley wastewater treatment plant. Monthly data for the period January 2000 through May 2013 and a time series plot are shown in **Exhibit GW-4**. Note that this plant services the entire Green Valley area, not just Community

Water's service area. The month of highest influent is almost always February, followed by March and January. The month of lowest influent is usually June.

Q. Does this seasonality in residents and indoor demand explain, in whole or in part, the observed declines in Community Water's demand?

A. No, it is irrelevant. What is observed, and is causing financial problems for Community Water, are year-over-year declines in demand. The influent graph shows no change in the annual pattern of influent. Because this wastewater plant serves the broader Green Valley area, any longer-term trend would not reflect indoor demand by Community Water ratepayers. Rather, the data show the seasonality of demand in a retirement-dominated community that includes Community Water.

Q. What about the possibility that climate fluctuations, possibly in the form of greater than average precipitation, have temporarily reduced demand by suppressing landscape irrigation?

A. No, that is not possible. Green Valley, along with most of Arizona, has been in a long-term drought. Also, precipitation is not the best indicator of climatic effects on outdoor demand.

Q. What is the preferred weather variable for modeling impacts of climate fluctuation on outdoor demand?

A. A drought index is generally used, because it aggregates recent precipitation, temperature, humidity and other relevant factors and compares them with long-term averages to generate a number that indicates the magnitude and direction of deviation from long-term averages. "Normal" conditions produce an index value of zero, while abnormally dry and drought conditions produce negative values. The preferred index for determining impacts on urban landscapes is the Palmer Z-index, developed to measure the short-term impact of climatic fluctuations on irrigated crops.

Q. What does the Z-index for Green Valley reveal about Community Water's outdoor demand trends?

A. Data and a plot of the Z-index for Green Valley are provided in **Exhibit GW-5**. Because landscape irrigation peaks in the months of May through September, the values shown represent that period for each year. The plot confirms long-term drought conditions for the area, with an average Z-index value of -0.68 over the period 2000-2015. Note that the index is negative for 12 of the 16 years. Simple linear regression shows a modest deepening of the drought over this

period. Therefore, it is not possible that Community Water's outdoor demand has been temporarily suppressed by abnormally wet and cool weather.

Q. Does this mean the drought has had no impact on Community Water's demand?

A. It is impossible to be certain, but the long-term drought is believed to be one factor in an observed trend of landscape conversions, away from turf-centric landscapes and towards more drought-tolerant landscapes, often featuring native plants. These are commonly referred to as xeriscapes.

Q. What is the basis of your conclusion that landscape conversions have reduced outdoor water demand in Community Water's service area?

A. As part of the Pima and Maricopa County water demand projects referred to above, dynamic simulation models were built for Community Water and the other nine municipal providers, in part to provide forecasts of demand for SFR customers out to 2020. One factor considered was landscape conversions, particularly turf removal. Data from remote sensing reveal that turf is being removed from the existing housing stock, and that newer homes were far less likely to have any turf. The trends were particularly pronounced in front yards, but also exist for backyards.

V. FORECAST DEMAND FOR COMMUNITY WATER.

Q. What other factors of demand were included in the SFR demand forecast model developed for Community Water?

A. In addition to turf removal, other factors of outdoor demand included in the forecast model included: frequency and size of backyard swimming pools; use of pool covers; and incidence of evaporative coolers. Indoor factors included the age and type of water-using appliances and fixtures, including: showers and baths; toilets; clothes washers; and dishwasher and kitchen faucet usage. Factors that affect both indoor and outdoor demand include the age, type, and value of residences.

All these factors affect stocks of water-using appliances, fixtures, and landscape features, which in turn determine amount of water per use. In addition, we considered the impact of various socio-demographic factors on frequency and intensity of uses. These factors included persons per household, age cohorts of household members, and seasonal residency.

We also analyzed some triggers of change in households that impact water usage. These included sale of an existing home to a new owner, houses being flipped and converted from owner-occupied to rentals, and appliances, fixtures, and landscape features being replaced as they reach the end of their useful lives.

Q. What does the forecasting model reveal about the causes of changes in demand over time?

A. The modeling efforts revealed that residential indoor demand for existing homes is being driven down by replacement of older water-using appliances and fixtures by new, more water-efficient ones. This is typically triggered either by the device reaching the end of its useful life, or by replacement that occurs during kitchen and bath remodeling. Sales of a home to a new owner frequently triggers remodeling.

Outdoor demand is declining as a result of turf removal, conversions of evaporative coolers to refrigeration cooling, or air conditioning, and the waning popularity of backyard pools. Both indoor and outdoor demand are reduced by addition of new, highly water-efficient residences to the existing housing stock.

For Community Water in particular, demand has been driven down by replacement of older appliances and fixtures, by turf removal, loss of evaporative coolers, and new, highly water-efficient construction.

Q. Based on this modeling effort and the resulting forecasts, what do you believe is the most likely future trend in Community Water's demand?

A. The dynamic simulation model forecasts continued reductions in Community Water's per-household residential demand through 2020, and probably for several years beyond. There are no plausible scenarios that would lead to an abrupt leveling off of demand, let alone any return to previous demand levels. It should be noted that the model considered SFRs only, but the results are generally applicable to MFR indoor demand. Together, these account for 75%-80% of Community Water's total demand.

VI. IMPACTS OF DECLINING DEMAND ON REVENUES AND RATES.

Q. Doesn't reduced demand create several types of benefits for providers, particularly in water-scarce regions?

A. Yes, there are obvious benefits of using less water in a desert environment, and reducing costs for pumping and treating water. But many of the benefits of reduced demand accrue to the utility only if the decreases in demand are anticipated and reflected in long-term plans. Few municipal water providers realized 15 to 20 years ago that the drops in per-capita demand they were experiencing were the start of a long-term trend. Other factors, such as year-to-year weather fluctuations and economic cycles were blamed. Also, regulatory agencies including Arizona Department of Water Resources and Arizona Department of Environmental Quality promulgated reporting rules and service requirements that essentially forced municipal water and wastewater providers to assume constant demand rates for existing customers and total demand increasing with service area population. In other words, demand was presumed to be tightly linked to population. Under these conditions, decreasing demand can have negative consequences.

Q. Have you analyzed these other impacts of declining municipal water demand on utility operations?

A. Yes. Fiscal impacts can include revenues dropping more than expenses, with conservation-oriented rate structures making the problem worse, and budgeting uncertainties. Operational issues include over-sized pipes leading to longer water age, particularly in winter. This can require higher levels of disinfection and potentially higher levels of disinfectant byproducts. Planning challenges include the optimal timing of capital improvements and acquisition of new supplies, as well as the design and evaluation of water conservation programs.

Q. Are these potential impacts of dropping demand occurring for many municipal providers, or are they mostly theoretical in nature?

A. The great majority of municipal providers across Arizona are experiencing at least some of these impacts. Many providers are just coming to grips with the implications of continued declines in total water demand. On the revenue issue, some recently decided to alter their rate structures, reducing the number of tiers in their block rates, reducing the ratio of upper-tier commodity charges to lower-tier charges, and increasing the percent of revenue generated by the fixed fee portion of their rates.

Q. Doesn't decreasing demand reduce utility costs?

A. Yes, costs are reduced, but in almost all cases, utility revenues are reduced even more, resulting in budgetary problems. Water provider expenses are mostly fixed, meaning they do not increase or decrease with short-term changes in demand. Variable costs, which do drop with decreasing demand, are primarily the costs of energy and chemicals. Based on numbers contained in Schedule C-1 prepared by Community Water witness Thomas J. Bourassa and submitted with the Application on July 15, 2015, these costs are only about 15% of total costs. At the margin, they appear to be even less, constituting about 6% of costs. Thus, when Community Water experiences decreasing per-ratepayer demand, revenues drop considerably faster than costs.

Q. How would you characterize Community Water's current rate structure?

A. Community Water's current rate structure has a 3-step increasing block rate, with the commodity charge nearly doubling from $1.30/kgal for the first block to $2.50/kgal for the second block. There is a big step up to the third block price as well, which is $3.42/kgal. Compared with other rate structures in place in southeastern Arizona, I would characterize it as moderately aggressive. I would also characterize the rates proposed by Community Water and counter-proposed by the Commission as moderately aggressive. This type of increasing block rate structure exacerbates the problem of revenue declines, because as ratepayers use less water, they drop into lower-rate tiers.

VII. CONCLUSIONS.

Q. Please summarize your conclusions regarding declining demand and revenue.

A. My conclusions are as follows:

- SFR demand, which is the largest customer class and demand component for most municipal water providers, has been declining across Arizona and the U.S. for nearly two decades.
- The primary causes are: increasingly water-efficient appliances and fixtures; changing tastes and preferences leading to less turf and swimming pools; new homes being far more water-efficient than the existing housing stock; and the cumulative effect of decades of conservation efforts.
- For most local municipal water providers, per-capita demand has been dropping at a faster rate than population has been growing, resulting in less water being served to more customers over time.

- Community Water has experienced such declines, with total water deliveries in 2015 slightly below water deliveries in 2000, despite a 30% increase in service area population.
- These decreases in demand are not due to seasonal population changes or climatic fluctuations or other temporary factors.
- A forecast model for Community Water's SFR ratepayers indicates that the major factors underlying decreases in demand are still in place, and demand will continue to decrease through 2020 and probably well beyond.
- Decreases in per-capita or per-household demand will lead to drops in revenue that greatly exceed drops in operating costs.
- Community Water's current rate structure, with its fairly aggressive increasing block rate structure, is exacerbating this revenue problem.

GW-1. FULL RESUME, GARY C. WOODARD

Gary C. Woodard, J.D., M.P.P.

A member of M&A's Water Policy & Economics group, Gary Woodard has had a long and distinguished career in academia and consulting. At the University of Arizona, he established a new Masters of Engineering program and taught courses on natural resource economics, water resource management, cost-benefit analysis, water demand modeling, and the science of sustainability. His capacity-building work with UNESCO has taken him to arid lands across the Middle East and North Africa.

Woodard has served as president of the National Board of Directors, Universities Council on Water Resources. He was the first chairman and founding board member of the Santa Cruz Valley Water District. In addition, he founded and directed the Water Conservation Alliance of Southern Arizona.

Years of experience: 32
Years with M&A: 3

Key Areas of Expertise

- Municipal water demand modeling / forecasting
- Conservation and demand management evaluation and design
- Water right, storage credit, infrastructure, irrigation system, and water company valuation
- Design of demand-management strategies and municipal water rate structures
- Evaluation of the economic and social impacts of water loss on rural communities
- Evaluation of municipal water quality impacts on end users
- Analysis of water demand / quality needs for high-tech industry
- Time-series and cross-sectional statistical and econometric analysis

Education

- B.S., Chemistry, University of Michigan (1976)
- M.P.P., Public Policy, University of Michigan (1981)
- J.D., Law, University of Michigan (1981)

Awards & Distinctions

- **2005–2008**: Three awards for technical communication, *Southwest Hydrology*
- **2005**: Education & Public Service Award, Universities Council on Water Resources
- **2005**: U.S. Geological Survey's Shoemaker Award for Communications Product Excellence (Web)
- **1996**: Award for Excellence in Public Service, School of Renewable Natural Resources, College of Agriculture, University of Arizona
- **1980–1981**: Ford Foundation Fellow, Public Policy Studies, University of Michigan
- **1979**: Certificate of Merit, Economics of Government Regulation, Michigan Law School

Academic Appointments (University of Arizona)

- **2012–present**: Adjunct Faculty, Department of Hydrology and Water Resources
- **2010–2012**: Associate Director for Knowledge Transfer, College of Science
- **2005–2010**: Associate Director for Knowledge Transfer and International Activities, Sustainability of semi-Arid Hydrology and Riparian Areas (SAHRA)
- **2000–2005**: Assistant Director for Knowledge Transfer, SAHRA
- **1991–2000**: Deputy and Acting Director, Water Resources Research Center
- **1982–1991**: Director, Public Policy Unit, Division of Economic and Business Research

Project Experience – M&A

Water Demand Analysis

Litigation Support • Large-scale, Mixed Development • Coyote Springs Investment
Modeled water demand at build-out; estimated the seasonality of demand and opportunities for effluent reuse; investigated trends in water-efficient fixtures, appliances, and landscapes in new housing; developed a graphical model dashboard to support scenario analysis [SW US]

Water Demand Forecasting • Residential Demand Trends Study • Pima & Maricopa County Providers & Regulators
Examined factors of long-term declines in residential water demand; studied triggers of water-conserving behavior in existing homes; investigated trends in water efficiency in new homes; designed and supervised the construction of a dynamic simulation model [PIMA & MARICOPA COUNTIES, AZ]

Water Demand Forecasting and Evaluation of Conservation Potential • New Commercial Development • Confidential Client
Modeled water demand at build-out; estimated ability to use different water sources to meet seasonal demands; investigated potential to reduce potable demand through use of advanced conservation technologies [NORTHERN AZ]

Water Demand Forecasting • High-tech Industry • Confidential Client
Examined factors of water demand for semiconductor fabrication; identified key trends and technology shifts in the manufacturing process; estimated potential impacts on water demand [AZ]

Water Demand Forecasting • Municipal Demand • Central Arizona Project
Examined the municipal demand component of Central Arizona Project's CAP:SAM supply and demand model; proposed options for enhancing the model's ability to better capture impacts of polices, trends, and customer preferences on residential and non-residential water demand [MARICOPA, PINAL, & PIMA COUNTIES, AZ]

Water Policy & Planning

Water Resource Plan • Grand Canyon West Project • Hualapai Tribe
Evaluated water supply alternatives and demand characteristics for a tourism-based, economic development project; coordinated the design / implementation of a spreadsheet-based model for water supply / reliability and budget planning; designed a graphical dashboard interface for investigating and comparing scenarios [AZ]

Planning Alternatives • Verde River Watershed • The Nature Conservancy
Participated in an assessment of alternatives for protecting Verde River water supplies for humans and the environment; examined water supply and demand characteristics for individual communities; projected impacts of development and passive conservation on future demands; examined water conservation options and their feasibility for specific communities [YAVAPAI COUNTY, AZ]

Project Experience – Other

- Developed long-range **municipal water-demand forecasts** and conducted demand-management analyses for municipal water customers and land owners such as the Phoenix Water and Wastewater Department, San Diego County Water District, Metro Water District, Tucson Water Department, Colorado River Indian Tribes, and various planned communities

- Provided **litigation support** on various cases involving water issues for clients who have included the Federal Bankruptcy Court, Maricopa County Flood Control District, Lincoln Ranch Partners, and several law firms

- Estimated the **value of water rights**, water companies, wastewater companies, and associated infrastructure for clients including the Federal Bankruptcy Court; the Atchison, Topeka & Santa Fe Railway; Metro Water; the Maricopa County Flood Control District; the City of Albuquerque; the Community Water Company of Green Valley; two golf courses; various water rights buyers and sellers; HUB Water; and the City of Nogales

- Designed, evaluated, and modified **water rate structures** to stabilize revenues, encourage water conservation, and meet other needs the Town of

Oro Valley, Community Water Company of Green Valley, Metro Water District, and three private water companies

- Estimated direct, indirect and induced economic **impacts of loss of water** and agricultural business **on rural communities** in La Paz County (Arizona) and Lincoln, Nye, and White Pine Counties (Nevada)
- Organized and taught **short courses for various professional groups** on topics such as water rights valuation, impacts of groundwater management on development, and impacts of drought and climate change
- Evaluated **water conservation measures** and programs; drafted ordinances for the City of Tucson, ADWR, City of Surprise, and Pima County
- Modeled and evaluated **options for water supply firming** for a planned recreational development on tribal land
- Designed survey instruments; supervised data collection via mail, phone, or Internet; and performed statistical analyses on **household-level surveys** of water users to reveal demand patterns and trends for Tucson Water Department, Phoenix Water Department, and Metro Water District
- Developed a new **National Water Act** for the Kingdom of Saudi Arabia; served on international team that reviewed water strategy, analyzed regulatory structures, and interviewed stakeholders; drafted sections on water rights and ownership, water quality protection, water monitoring, climate change impacts, water uses and regulation, and water pricing
- Participated in G-WADI and ICIWaRM, two UNESCO-sponsored water centers that **support capacity-building efforts** in developing arid and semi-arid countries by improving analytical tools

Recent Presentations

Improved estimates of groundwater sustainability through municipal demand modeling?

Woodard, G.C., T. Bayley, M. Zivic, 2015, Biennial Conference, Groundwater Resources Association of California, October 7, Sacramento, CA

Designing effective water rates in an era of declining demand

Woodard, G.C., 2015, Arizona Hydrological Society 2015 Symposium, September 17, Phoenix, AZ

Long-term declines in municipal water demand: Causes and consequences for water providers

Woodard, G.C., 2015, Arizona City/County Managers Association, July 23, Marana, AZ

Causes and consequences of declining municipal demand: An unexpected water resource challenge

Woodard, G.C., 2015, Universities Council on Water Resources, UCOWR / NIWR / CUAHSI 2015 Conference, June 18, Henderson, NV

How low can it go? Patterns and predictions for residential water demand

Woodard, G.C., 2015, Arizona Water Annual Conference, May 8, Glendale, AZ

Causes and Consequences of declining municipal water demand

Woodard, G.C., 2015, National Ground Water Association Brown Bag Webinar, April 30

The surprising slide in domestic demand: Be careful what you wish for

Woodard, G.C., 2015, University of Arizona Water Resources Research Center seminar & webcast, March 11, Tucson, AZ

Dynamic simulation modeling of outdoor demand: Key factors, trends, and triggers

Woodard, G.C., 2015, Arizona State University Urban Water Demand Roundtable, February 19, Tempe, AZ

Debate on water transactions: Should government regulate the sales and exchanges of water or should there be a free market?

Woodard, G.C., 2015, Arizona Water Research Committee workshop, January 14, Tempe, AZ

Changing Preferences, New Development, and Passive Conservation: What's Driving Down Domestic Demand?

Woodard, G.C., 2014, Arizona Water Conservation Professionals Infoshare, December 9, Tucson, AZ

Patterns and trends in single family residential water demand: Impacts of changing tastes, technologies, and demographics

Woodard, G.C., 2014, Arizona Hydrological Society annual symposium, September 16, Prescott, AZ

Recalibrating our planning assumptions: Causes and consequences of declining domestic demand

Woodard, G.C., 2014, Arizona Water Association annual conference, May 8, Glendale, AZ

Prices, programs, preachments, and passive conservation: What's driving down domestic demand?

Woodard, G.C., 2014, New Mexico Water Conservation Association meeting, March 13, Albuquerque, NM

Understanding trends in residential water demand: Tools for improved forecasting and planning

Woodard, G.C., 2013, American Water Resources Association meeting, December 10, Albuquerque, NM

Assumptions, extrapolations, and outliers: Our dysfunctional dialogue over water, environment, and the future

Woodard, G.C., and Gammage, Jr., G., 2013, keynote address for Arizona Hydrological Society annual symposium, September 19, Tucson, AZ

Sustainable groundwater use: Lessons of Omani Aflaj

Woodard, G.C., 2012, What ancient methods of water management can teach about addressing modern water challenges (symposium), April 20, Tucson, AZ

Increasing the value of citizen science data: detecting and correcting QA/QC problems

Woodard, G.C., and Rupprecht, C., 2009, American Geophysical Union annual meeting, December, San Francisco, CA

Supporting domestic well owners through Internet services and shared information

Woodard, G.C., and Artiola, J., 2008, International Conference on Water Scarcity, Global Changes and Groundwater Management Responses, UNESCO conference, December, University of California, Irvine, CA

Water policy challenges and solutions: Some lessons from Arizona

Woodard, G.C., 2008, workshop for the Formulating a Comprehensive Water Act and its Implementing Regulation Project, October 25, Riyadh, Saudi Arabia

ICIWaRM: An international knowledge transfer center for bridging theory and practice

Woodard, G.C., Valdes, J., and Stakhiv, E., 2008, Universities Council on Water Resources annual meeting, July 23, Duke University, Durham, NC

Web services for interagency data access and visualization: Lessons from the Arizona Hydrologic Information System

Woodard, G.C., 2007, keynote address for the annual meeting of the Arizona Geographic Information Council, August 8, Prescott, AZ

Accessing and visualizing well data for improved groundwater management

Woodard, G.C., and Jacobs K., 2007, Western Governors Associations Meeting, Green Valley Ranch, December 7, Henderson, NV

Rainwater harvesting in the American Southwest: Perspectives on tools and technologies for water sustainability

Woodard, G.C., 2006, UNESCO-sponsored workshop on water harvesting, G-WADI program, ICARDA, November 20, Aleppo, Syria

Raising hydrologic literacy: A multi-faceted approach to better-informed water resources policy making

Woodard, G.C., 2006, invited seminar, National Drought Mitigation Center, University of Nebraska, February 22, Lincoln, NE

Selected Publications

Water resources management under drought conditions

Woodard, G.C., Valdes, J.B., Gonzalez, J., and Cañon-Barriga, J., 2006, Management of Natural Resources, Sustainable Development and Ecological Hazards, WIT Press, WIT Transactions on Ecology and the Environment, v.99

Functioning of aging low-consumption toilets in Tucson: A follow-up with rebate program participants

Woodard, G.C., and Henderson, J., 2000, final report to City of Phoenix Water Services Department, Water Conservation Office, and the U.S. Bureau of Reclamation, Phoenix Area Office, October

Water in the Tucson area: A status report

Woodard, G.C., Gelt, J., Henderson, J., Seasholes, K., and Tellman, B., 1999, four-page color supplement, Sunday edition of the *Arizona Daily Star*, July 11

Water in the Tucson area: Seeking sustainability

Woodard, G.C., Gelt, J., Henderson, J., Seasholes, K., and Tellman, B., 1999, issues paper published by the University of Arizona Office of Research

Model outdoor water conservation ordinances for municipal providers

Woodard, G.C., Glennon, R., and Gold, D., 1997, for City of Surprise and Arizona Department of Water Resources, November

The value of water

Woodard, G.C., Brown, F.L., Garcia, C.N., and Shoemaker, J.W., 1996, report to the City of Albuquerque, January 15

Field manual for water quality sampling / Manual de campo para el muestreo de la calidad del agua

Woodard, G.C., 1995, supported by ADEQ and EPA

Impacts of changes in water quality and consumer responses in Tucson, Arizona

Woodard, G.C., Eden, S., and Seasholes, K., 1993, final report of a study commissioned by the *Arizona Daily Star*, September

Socio-economic impacts of water farming on rural areas of origin in Arizona

Woodard, G.C., and Charney, A., 1990, American Journal of Agricultural Economics, December

Water transfers in Arizona

Woodard, G.C., and McCarthy, C., 1990, The Water Transfer Process as a Management Option for Meeting Changing Water Demands (Volume II), USGS final report, April

The legal framework for water transfers in Arizona

Woodard, G.C., and Checchio, E., 1989, Arizona Law Review, 13:4, December

The water transfer process in Arizona: Analysis of impacts and legislative options

Woodard, G.C., and Checchio, E., 1988, April

Impacts on rural communities of purchases of land for transport of water: La Paz County, Arizona

Woodard, G.C., and Garcia, C.N., 1988, report to the Ford Foundation

Effects of weather and climate on municipal water demand in Arizona

Woodard, G.C., and Horn, C., 1988, report to ADWR and Tucson Water

A proposed modification of Opaluch's test of consumer price behavior: Comment

Woodard, G.C., and Charney, A.H., 1984, Land Economics, November

Arizona water issues: Contrasting economic and legal perspectives

Woodard, G.C., and McNulty, M.F., 1984, Arizona Review, Third Quarter

Designing water rate structures to promote conservation

Woodard, G.C., 1984, Hydrology and Water Resources in Arizona and the Southwest, v.14

Models of indoor and outdoor water demand for single-family residences in Tucson, Arizona

Woodard, G.C., and Rasmussen, T., 1983, Hydrology and Water Resources in Arizona and the Southwest, v.13

State commissions for public utility regulation: A review of issues and options for change

Woodard, G.C., 1983, final report to the Government Operations Committee, Arizona Senate

Interviews & Guest Columns

1993–2013: Wrote guest columns and invited op-ed pieces for the *Arizona Daily Star*, *Arizona Republic*, *Tucson Citizen*, *Daily Territorial*, other papers

2009–2003: Quoted on water and air-quality issues in articles in various magazines, including *National Geographic*, Science, *Western Water*, and *New Scientist* (British), and on NPR

May 2008: *Wired* magazine interview, feature story on the water-energy nexus

December 2006: British Broadcast Corporation. Featured in a documentary on climate-change impacts on the Southwest U.S.

March 2006: *New York Times*. Quoted on the front page regarding drought impacts in the Southwest; participated in follow-up interviews with NBC Nightly News, Fox News, several radio stations, the *Christian Science Monitor*, and other print publications.

Media Briefings

2002–2012: Media briefings for science reporters and broadcast meteorologists on research and forecasts on drought, fire, monsoon science, and related topics

May 2004: Media briefing / panel discussion and Q&A for pre-screening of *The Day After Tomorrow* (a climate-change disaster film), attended by reporters and climate-change scientists

Online Media Authored/Produced

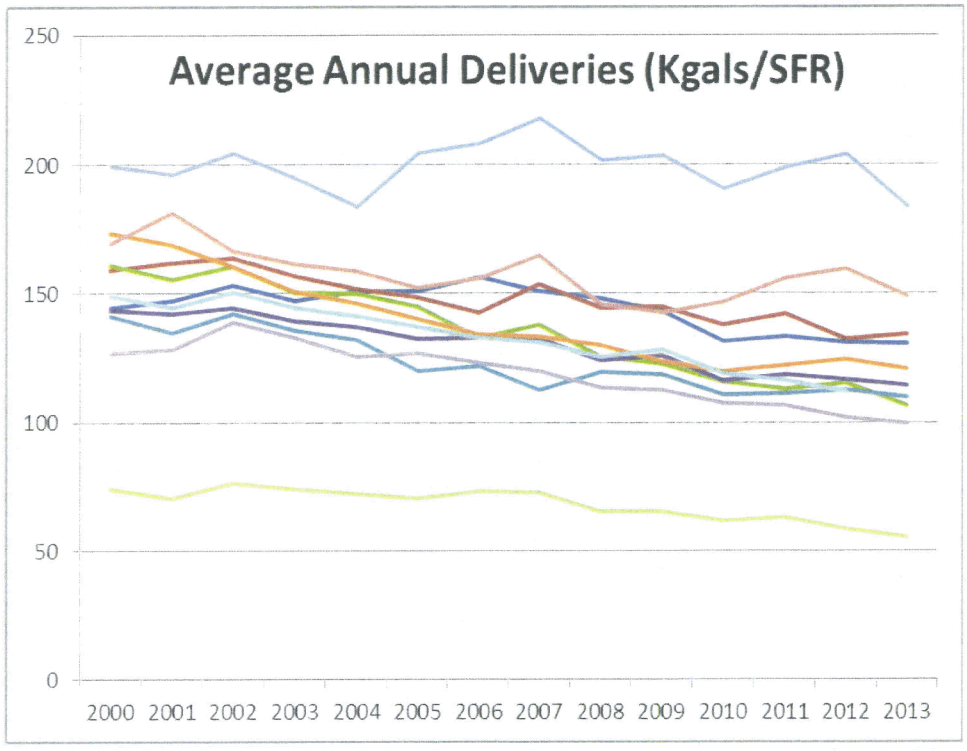
- Desert Landscaping CD-ROM
- Hydrology of Kartchner Caverns DVD
- Arizona Wells web service
- RainLog and RainMapper networks
- HydroArchive site for sharing open-source, hydrology-related software
- RainHarvestHelp.org
- WellOwnerHelp.org
- Global Water News Watch web service
- Water News Tracker subscription service
- RainLog apps for Android and iPhone smart phones

GW-2. HISTORICAL TRENDS IN RESIDENTIAL DEMAND FOR 10 MUNICIPAL PROVIDERS IN ARIZONA, 2000-2013

AVERAGE ANNUAL DELIVERIES (kgals/SFR customer/year)

Year	Chandler	Gilbert	Glendale	Mesa	Peoria	Scottsdale	Tempe	CWGV	Metro	Tucson
2000	144.21	159.30	161.15	143.51	141.01	199.50	169.24	74.10	127.01	148.98
2001	147.35	162.01	155.37	142.23	134.50	196.19	181.35	70.55	128.26	144.55
2002	153.39	163.71	160.32	144.56	142.32	204.51	166.54	76.74	138.95	150.43
2003	147.03	156.82	150.46	139.17	135.50	194.72	161.59	74.09	133.06	144.54
2004	151.05	151.67	150.04	137.18	131.92	183.53	158.51	72.50	125.26	141.02
2005	150.93	148.40	144.99	132.57	119.89	204.52	152.33	70.57	126.97	136.80
2006	156.51	142.66	132.74	133.00	121.65	208.24	156.05	73.33	123.22	133.06
2007	150.68	153.83	137.74	132.30	112.60	217.83	164.64	72.70	119.87	130.98
2008	148.00	144.40	125.45	123.95	119.56	201.69	145.76	65.53	113.54	125.62
2009	142.80	145.05	122.94	125.90	118.44	203.29	142.78	65.42	112.50	128.32
2010	131.38	137.83	115.77	116.43	110.69	190.53	146.92	61.63	107.44	118.87
2011	133.49	141.93	113.09	118.45	111.36	198.93	155.94	63.36	106.73	116.07
2012	130.96	132.23	115.39	116.76	112.36	204.06	159.57	58.46	101.81	112.09
2013	130.62	134.11	106.64	114.48	109.93	183.62	149.20	55.13	99.54	

Average Annual % Changes, SFR Demand	
Chandler	-1.07
CWGV	-2.25
Gilbert	-1.51
Glendale	-3.26
Mesa	-1.92
Metro Water	-2.21
Peoria	-2.10
Scottsdale	-0.11
Tempe	-1.10
Tucson	-2.34
Maricopa Co.	-2.12
Pima Co.	-2.29

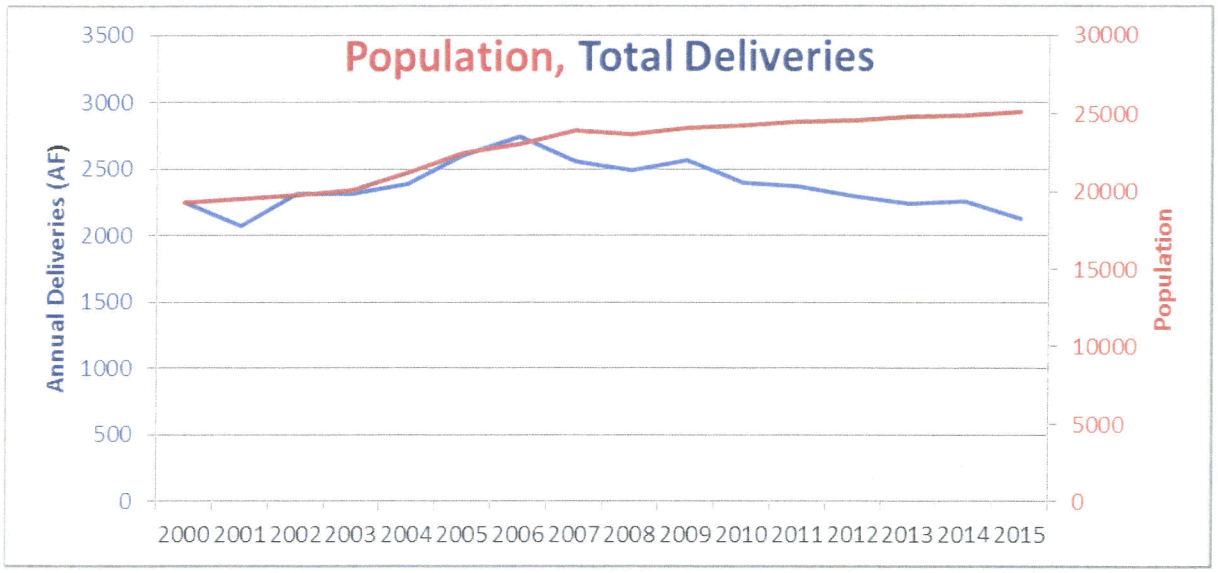


Data for Community Water are plotted on the green line at bottom.

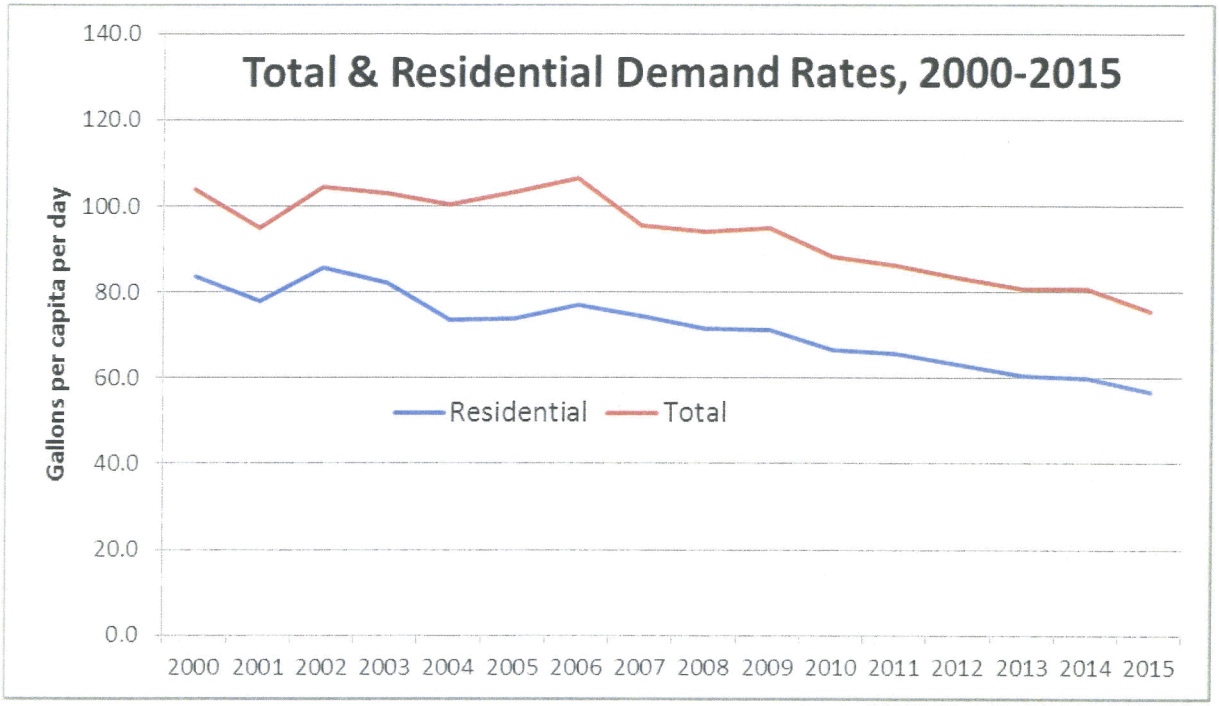
GW-3. DETAILED DEMAND TRENDS FOR COMMUNITY WATER, 2000-2015

	ANNUAL PUMPAGE BY CATEGORY (AF)						Residential	UNITS SERVED AT YEAR-END			Est.	Est. Pop.	RESIDENTIAL DEMAND		TOTAL DEMAND	
Year	SFR	MFR	Commercial	Other Turf	Total	Misc	(SFR+MFR)	Total	Residential	Non-Residential	PPH	(year end)	gals/res/ day	gpcd	gal/res/ day	gpcd
2000	1073.42	736.01	262.02	131.26	2245.55	42.84	1809.43	9868	9646	222	2	19292	163.7	83.5	203.2	103.91343
2001	1041.69	658.28	271.1	72.6	2068.43	24.76	1699.97	9968	9741	227	2	19482	152.3	77.9	185.3	94.783662
2002	1160.3	731.94	309.73	83.02	2310.42	25.43	1892.24	10114	9873	241	2	19746	167.0	85.6	203.9	104.45711
2003	1152.12	694.84	300.65	0	2314.67	167.06	1846.96	10276	10025	251	2	20050	160.5	82.2	201.1	103.06255
2004	1206.2	545.3	308.3	0	2386.3	326.5	1751.5	10884	10615	269	2	21230	143.7	73.5	195.7	100.34627
2005	1317	545	306.3	195.1	2605.1	241.7	1862	11528	11258	270	2	22516	144.2	73.8	201.7	103.29026
2006	1432.9	555.4	339.8	205.9	2744.9	210.9	1988.3	11589	11514	75	2	23028	153.2	77.1	211.4	106.41344
2007	1462	531	340.9	184	2557.8	39.9	1993	12267	11949	318	2	23898	145.0	74.5	186.1	95.550116
2008	1408.9	492.1	333.8	166.1	2494.1	93.2	1901	12395	11837	558	2	23674	136.9	71.5	179.6	94.052082
2009	1414.7	507.4	400.7	175.7	2564.4	65.9	1922.1	12509	12044	465	2	24088	137.2	71.2	183.0	95.041049
2010	1332.9	475.8	370	159	2401.5	63.8	1808.7	12745	12129	616	2	24258	126.7	66.6	168.2	88.379958
2011	1337.3	468.5	349.1	0	2369.6	214.7	1805.8	12770	12259	511	2	24518	126.2	65.8	165.7	86.281203
2012	1290.7	450.8	351.2	0	2292.6	199.9	1741.5	12875	12294	581	2	24588	120.8	63.1	159.0	83.239848
2013	1255.1	425.1	356.3	165.8	2242.2	39.9	1680.2	12958	12394	564	2	24788	115.8	60.5	154.5	80.753072
2014	1249.3	422.2	366.7	186	2256.3	32.1	1671.5	12939	12459	480	2	24918	115.3	59.9	155.7	80.836938
2015	1177.4	415.2	328.3	175.9	2123.5	26.7	1592.6	13024	12551	473	2	25102	109.2	56.6	145.6	75.521418

PPH assumes 80% retirees @ 1.8 & 20% non-retired @ 2.8



Community Water annual deliveries and population estimates, 2000-2015

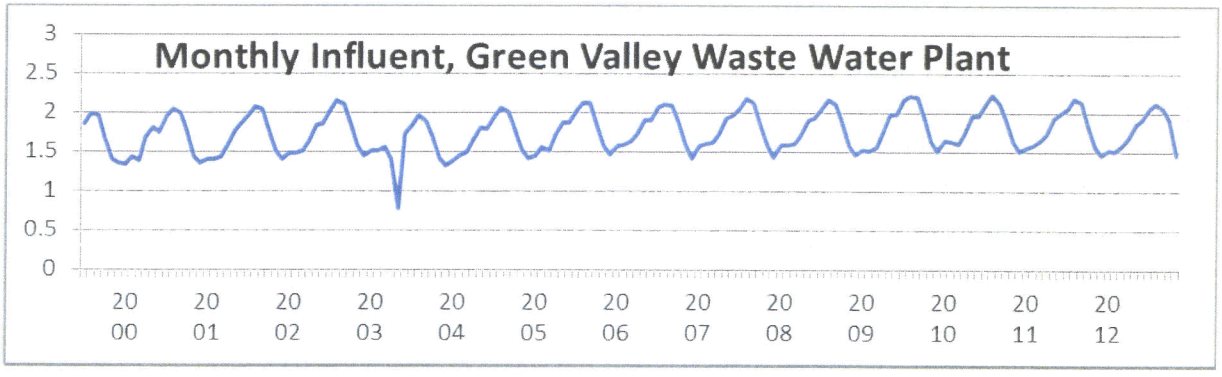


Community Water gpcd rates for total and residential water deliveries, 2000-2015

GW-4. SEASONALITY OF INDOOR DEMAND IN GREEN VALLEY FROM WASTEWATER INFLUENT RECORDS

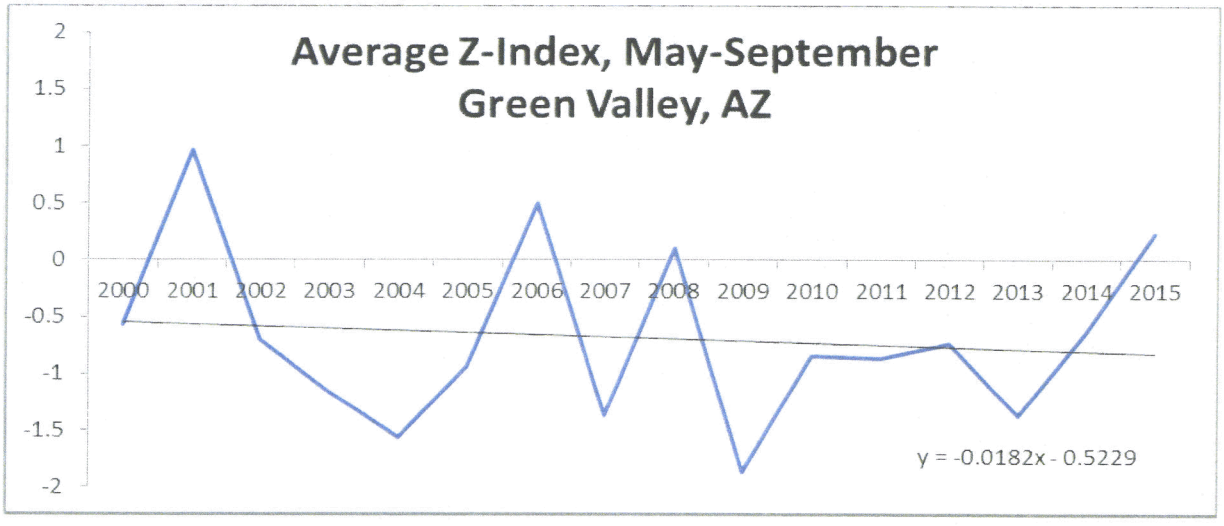
GREEN VALLEY WASTEWATER INFLUENT, JANUARY 2000 - MAY 2013

Date	Influent	Date	Influent	Date	Influent	Date	Influent	Date	Influent
1/31/2000	1.847	1/31/2003	2.02	1/31/2006	2.013	1/31/2009	2.056	1/31/2012	2.054
2/29/2000	1.965	2/28/2003	2.142	2/28/2006	2.104	2/28/2009	2.163	2/29/2012	2.17
3/31/2000	1.962	3/31/2003	2.1	3/31/2006	2.105	3/31/2009	2.09	3/31/2012	2.132
4/30/2000	1.677	4/30/2003	1.856	4/30/2006	1.847	4/30/2009	1.879	4/30/2012	1.842
5/31/2000	1.393	5/31/2003	1.568	5/31/2006	1.559	5/31/2009	1.56	5/31/2012	1.567
6/30/2000	1.352	6/30/2003	1.438	6/30/2006	1.45	6/30/2009	1.449	6/30/2012	1.455
7/31/2000	1.337	7/31/2003	1.5	7/31/2006	1.568	7/31/2009	1.521	7/31/2012	1.522
8/31/2000	1.423	8/31/2003	1.501	8/31/2006	1.574	8/31/2009	1.5	8/31/2012	1.506
9/30/2000	1.382	9/30/2003	1.551	9/30/2006	1.634	9/30/2009	1.542	9/30/2012	1.581
10/31/2000	1.674	10/31/2003	1.395	10/31/2006	1.721	10/31/2009	1.743	10/31/2012	1.672
11/30/2000	1.796	11/30/2003	0.776	11/30/2006	1.89	11/30/2009	1.976	11/30/2012	1.849
12/31/2000	1.742	12/31/2003	1.721	12/31/2006	1.896	12/31/2009	1.966	12/31/2012	1.902
1/31/2001	1.935	1/31/2004	1.829	1/31/2007	2.063	1/31/2010	2.155	1/31/2013	2.052
2/28/2001	2.037	2/29/2004	1.95	2/28/2007	2.102	2/28/2010	2.21	2/28/2013	2.106
3/31/2001	1.982	3/31/2004	1.881	3/31/2007	2.076	3/31/2010	2.188	3/31/2013	2.056
4/30/2001	1.767	4/30/2004	1.696	4/30/2007	1.872	4/30/2010	1.95	4/30/2013	1.904
5/31/2001	1.42	5/31/2004	1.406	5/31/2007	1.581	5/31/2010	1.629	5/31/2013	1.463
6/30/2001	1.344	6/30/2004	1.317	6/30/2007	1.414	6/30/2010	1.499		
7/31/2001	1.387	7/31/2004	1.38	7/31/2007	1.569	7/31/2010	1.647		
8/31/2001	1.4	8/31/2004	1.437	8/31/2007	1.604	8/31/2010	1.621		
9/30/2001	1.418	9/30/2004	1.482	9/30/2007	1.616	9/30/2010	1.601		
10/31/2001	1.566	10/31/2004	1.636	10/31/2007	1.726	10/31/2010	1.743		
11/30/2001	1.752	11/30/2004	1.802	11/30/2007	1.927	11/30/2010	1.952		
12/31/2001	1.85	12/31/2004	1.789	12/31/2007	1.956	12/31/2010	1.955		
1/31/2002	1.962	1/31/2005	1.939	1/31/2008	2.055	1/31/2011	2.118		
2/28/2002	2.062	2/28/2005	2.043	2/29/2008	2.18	2/28/2011	2.216		
3/31/2002	2.038	3/31/2005	2.01	3/31/2008	2.111	3/31/2011	2.118		
4/30/2002	1.786	4/30/2005	1.785	4/30/2008	1.846	4/30/2011	1.914		
5/31/2002	1.504	5/31/2005	1.525	5/31/2008	1.588	5/31/2011	1.634		
6/30/2002	1.392	6/30/2005	1.409	6/30/2008	1.42	6/30/2011	1.495		
7/31/2002	1.464	7/31/2005	1.437	7/31/2008	1.581	7/31/2011	1.552		
8/31/2002	1.47	8/31/2005	1.549	8/31/2008	1.575	8/31/2011	1.586		
9/30/2002	1.507	9/30/2005	1.507	9/30/2008	1.592	9/30/2011	1.637		
10/31/2002	1.628	10/31/2005	1.705	10/31/2008	1.707	10/31/2011	1.72		
11/30/2002	1.827	11/30/2005	1.862	11/30/2008	1.892	11/30/2011	1.928		
12/31/2002	1.852	12/31/2005	1.863	12/31/2008	1.918	12/31/2011	1.992		



GW-5. SEASONALITY OF OUTDOOR DEMAND IN GREEN VALLEY FROM DROUGHT RECORDS

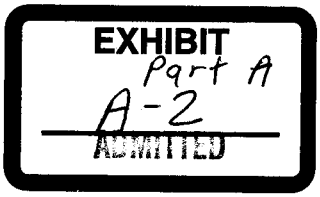
Palmer Z-index Green Valley, AZ May-Sep Averages	
2000	-0.572
2001	0.96
2002	-0.698
2003	-1.174
2004	-1.562
2005	-0.938
2006	0.5
2007	-1.372
2008	0.1
2009	-1.876
2010	-0.844
2011	-0.866
2012	-0.732
2013	-1.37
2014	-0.63
2015	0.228



The index has averaged -0.68 for the period 2000-2015, and is below the long-term average value of 0 for 12 of the 16 irrigation seasons. Drought conditions have gradually intensified, as indicated by the slightly negative slope of the regression line.

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
DOUG LITTLE – CHAIRMAN
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN



IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE.	DOCKET NO. W-02304-15-0263

REBUTTAL TESTIMONY OF

RAUL FRANCISCO G. PINA

ON BEHALF OF

COMMUNITY WATER COMPANY OF GREEN VALLEY

March 15, 2016

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Exhibits:

Exhibit RP-1	Resume of Raul Francisco G. Pina
Exhibit RP-2	CPE Engineer Reservoir Selection Report
Exhibit RP-3	CPE Water Reservoir No. 5 Completion Report
Exhibit RP-4	Operating Storage Capacity
Exhibit RP-5	HDR Engineering Handbook on Public Water Systems, 2nd Edition (March 2001) - Excerpts

I. INTRODUCTION.

Q. Please state your name and address.

A. My name is Raul Francisco G. Piña. My work and mailing address is CPE Consultants, LLC, 3895 N. Business Center Drive, Suite 115, Tucson, AZ 85705.

Q. With whom are you employed and in what capacity?

A. I am the owner of CPE Consultants, LLC.

Q. Please describe your professional background?

A. I have practiced as a professional registrant consultant for over 35 years. I have attached my resume as Exhibit RP-1, which provides a detailed description of my professional background, including my education, training, certifications, experience, and other qualifications.

Q. On whose behalf are you providing Rebuttal Testimony in the proceeding?

A. I am providing testimony on behalf of Community Water Company of Green Valley, to whom I will refer in my Rebuttal Testimony as the "Company".

Q. What is the purpose of your Rebuttal Testimony?

A. My Rebuttal Testimony is simply to present the professional reports I prepared addressing Reservoir No. 5 and discussing the benefits of Reservoir No. 5 to the Company and its customers. The testimony provided in response to the recommendation made in the Direct Testimony of Jian W. Liu that the Company's Reservoir No. 5 be treated as excess capacity.

II. EVALUATION OF RESERVOIR NO. 5.

A. Overview.

Q. Is Reservoir No. 5 currently being used to provide water service to the Company customers in your professional opinion?

A. Yes. I have provided professional services to the Company related to the sizing and construction of Reservoir No. 5, including the preparation of an Engineer's Reservoir Selection Report ("Selection Report", attached as Exhibit RP-2 to my testimony) and the Water Reservoir No. 5 Completion Report ("Completion Report", attached as Exhibit RP-3 to my testimony). Based on my knowledge of the Company's distribution system and the planning and construction for Reservoir No. 5, as documented in these reports, it is my opinion that Reservoir No. 5 is an essential part of the Company's distribution system, that it is being used to provide water service, and that it provides numerous operational benefits to the Company system, the Company and its customers. I do not agree that Reservoir No. 5 is "excess capacity" as suggested from Staff's engineering witness.

Q. Please summarize the Reservoir No. 5 project.

A. The Reservoir No. 5 project is a 2.0-million gallon above ground steel-tank water-storage reservoir. It replaced Reservoir No. 2 that was located at the same location. Reservoir No. 5 was constructed at a higher water-operation elevation-level, matching the Company Reservoirs No. 3 and No. 4. The contract to construct Reservoir No. 5 was awarded to Smyth Industries in December of 2014. Construction of Reservoir No. 5 took place from May through September 2015. On September 18, 2015, the Arizona Department of Environmental Quality issued an Approval of Construction for Reservoir No. 5. Construction was in compliance with regulatory requirements and specifications.

Reservoir No. 5 was placed into service September 18, 2015. The project was completed within the original authorized budget.

Q. What were the circumstances of your being retained to produce the Selection Report?

A. I was retained to supplement and support the Financing Application filed by the Company with the Arizona Corporation Commission ("ACC") in Docket No. W-02304A-14-0041 ("Financing Application").

Q. What was the purpose of the Selection Report (Exhibit RH-2)?

A. I was asked to evaluate the relative need for Water Reservoir No. 2 and the possibility of its replacement with a new reservoir (Reservoir No. 5). The scope included comparing the cost and cost-effectiveness of a new reservoir with the option of acquiring a standby generator for well production.

Q. What options were ultimately evaluated?

A. The Selection Report considered four options:

- Do nothing alternative
- Rehabilitation of Reservoir No. 2
- Construction of new Reservoir No. 5
- Providing standby generator

Q. Please summarize you key findings, conclusions and recommendations presented in the Selection Report.

A. Our task, as presented in the Engineer's Reservoir Selection Report prepared for the Company, was to determine the relative need for Reservoir No. 2 and review replacement alternatives, if a new reservoir was required. The following criteria were used to evaluate the required storage requirements:

1. **Minimum Design**. The minimum storage requirement is identified in ARS paragraph R18-5-503.A, Storage Requirements, and supplemented with Arizona Department of Environmental Quality ("ADEQ") Engineering Bulletin No. 10, Guidelines for the Construction of Water Systems (May 1978). In brief, the available storage should provide for the average daily demand during the peak month of the year, and in addition the fire flow requirement for the community served (Demand in Average Day in Peak Month plus Fire Flow Requirements). In the Company's case, the minimum storage requirement is 3.04 million gallons. A qualifier to this requirement, as stated in ARS paragraph R18-5-503.B, is that the minimum storage allowance may be allowed a reduction equal to the rated production of its largest well, if the provider operates multiple wells in its system.

2. **Additional Design Recommendation**. In addition to the above minimum requirement, we also used the more recent recommendation from HDR Engineering's Handbook of Public Water Systems, 2nd Edition, dated March 2001 (HDR handbook), which is that the available storage also be equal to 48-hours of the provider average daily demand flow. In the Company's case, this is 4.44 million gallons.

B. <u>Key Factors for Consideration.</u>

In determining which standard to use, our reasoning is that the Company should operate a system that meets or exceeds the ADEQ minimum requirement, and should adhere to current recommended standards if they can be met physically and in a financially responsible manner. Accordingly, we considered the following additional items:

1. The Company is a relatively small water system where redundancy is important since, unlike with larger municipal providers, they cannot afford the means to transfer storage from one service area to another.

2. For the most part, the Company's production wells are located adjacent to the Santa Cruz River, so they are subject to emergencies of the type that can easily take wells out of service, as in the case of a flood impacting the well sites or causing power outages. Therefore, the Company's emergency storage needs to be highly reliable, such as with gravity storage, or the storage system needs emergency generators dedicated to it, exclusively.

3. The average age of the population in the Company service area is seventy-two (72) years old, so it is critical for the Company to provide a superior rather than adequate emergency response to its community.

C. <u>Findings.</u>

The available storage indicated in the ACC Utility Engineer's Report is the rated capacity for the reservoir tanks, and does not consider the operational levels in the storage tanks nor dead storage. The operational level determines the actual available storage in each reservoir tank, and is defined as storage between the low water level when the pumps turn on to fill the reservoir, and the high water level when the pumps turn off. Dead storage is the amount of water not realistically available in a reservoir, based on piping configurations, or other factors. The tank rated capacity volume includes all of the above volumes, including dead storage.

Currently, the Company has replaced the 1-million gallon Reservoir No. 2 with a new 2-million gallon Reservoir No. 5. The statement from the ACC Utilities Engineer, that the Company has a storage capacity of 6.6 million gallons is not accurate when you consider operating levels and actual available storage versus dead storage. The existing available storage for the Company is 4.7 million gallons, as shown in Exhibit RP-4.

Last, the ACC Utilities Engineer implies that because it operates multiple wells in its system, the Company can further reduce the required storage volume. The Company's production wells are all located adjacent to the Santa Cruz River and none of the wells are equipped with standby generators. In case of a major emergency, which could be a flood event in the river, the Company could potentially loose its power supply and all of the production wells would be incapacitated. It is for this reason that the required storage capacity is limited to what is available in the water reservoirs.

D. <u>Need for Reservoir No. 2.</u>

Q. Would the Company be in compliance with ADEQ standards if Reservoir No. 2 were simply decommissioned?

A. No. The Company total available storage with Reservoir No. 2 in service was 3.2 million gallons at low level and 3.8 million gallons at operating level. The available storage at low level would have been reduced to 2.6 million gallons and at the operating level to 3.2 million gallons.

Q. Would the Company be in compliance with ADEQ standards if Reservoir No. 2 were not replaced?

A. No. The Company would fall below the minimum requirement of 3.04 million gallons at low-level storage; and at operating level its available storage would have been 3.2 million

gallons, which is near the minimum storage requirement. Therefore, we recommended in our Engineer's Reservoir Selection Report to replace Reservoir No. 2 or provide a standby generator for one of the production wells, so that the Company could at all times meet the minimum required storage requirement.

E. Selection of a New Reservoir No. 5.

Q. Based on your evaluation did you make a recommendation regarding Reservoir No. 5?

A. Yes. The existing Reservoir No. 2 was decommissioned and a new Reservoir No. 5 was recommended. The Engineer's Selection Report evaluated the cost of rehabilitating the existing Reservoir No. 2, the cost of providing standby power if Reservoir No. 2 was decommissioned, and the cost of replacing Reservoir No. 2 with a 1-million gallon reservoir or with a 2-million gallon reservoir.

Q. What were your recommendations?

A. Our report provided the following recommendations:

1. Rehabilitation of Reservoir No. 2 was not practical, since it is an older type reservoir (hypalon tank) that would be more expensive to repair and maintain than building a new reservoir. Also, because of the design of Reservoir No. 2, it was more vulnerable to water quality problems.

2. The cost of providing standby generators at one of the large capacity production wells was more expensive than a new reservoir for replacement of Reservoir No. 2 and required long-term costs for maintenance and replacement.

3. The difference in cost between a 1-million gallon steel reservoir and a 2-million gallon steel reservoir was nominal, adding approximately 20 percent to the base cost. Thus, purchasing a 2-million gallon reservoir would allow the Company to meet the minimum required storage and the more current recommended storage of 48-hours of average daily demand flow, as presented in the HDR handbook.

More specifics details can be found in the Engineer's Reservoir Selection Report, prepared for the Company, by CPE Consultants, LLC., and referenced above. (Exhibit RP-2)

Q. What was the purpose of the Completion Report (Exhibit RP-3)?

A. The report is intended to inform the ACC about the successful completion of the new Reservoir No. 5, replacement of Reservoir No. 2, and of achieving the benefits outlined by the Company in the Financing Application approved by the ACC.

Q. What are the benefits of the new Reservoir No. 5 to the Company and its customers?

A. The benefits of acquiring a new steel tank reservoir to replace the existing Reservoir No. 2, as identified in the Engineer's Reservoir Selection Report, are:

a) full compliance with the more conservative recommended storage capacity, even if any of the other the Company reservoirs are brought off-line for repairs or maintenance;

b) lower maintenance costs and less time of interrupted service for maintenance activities than the other alternatives;

c) lower risk for contingencies and repairs than a generator, since reservoir storage is always at hand and not awaiting activation in case of an emergency;

d) the larger 2-million gallon steel tank reservoir matches the capacity of Reservoir No. 4, which allows for minimal adverse impact to storage, should the latter reservoir be brought off-line for repairs or maintenance;

e) constructing a new reservoir that equalizes its operating level with that of Reservoir No. 3 and Reservoir No. 4 simplifies the interconnectivity of the system and reduces pumping cost for routine filling of reservoirs;

f) having system storage capacity at recommended levels rather than minimum required levels addresses concerns about service to the vulnerable population in the Company service area, since they are mostly retired senior citizens;

g) significantly lower vulnerability to vandalism than the other alternatives.

III. STORAGE STANDARD USED TO EVALUATE RESERVOIR NO. 5.

Q. What is the storage standard utilized in the Selection Report and Completion Report?

A. My reports utilize a 48-hour average demand as the recommended level of storage for the Company system.

Q. What is the source of this recommendation?

A. The main source reference utilized is HDR Engineering's Handbook of Public Water Systems, 2nd Edition, dated March 2001. Document excerpts applicable to the current discussion are attached as Exhibit RP-5.

Q. Why not use the minimum storage capacity as outlined in A.A.C R18-503?

A. As explained in the Completion Report, my professional opinion is that the more conservative 48-hour average demand standard is more appropriate. After consideration of the technical design references noted above and the particular characteristics of the Company's customer profile, noting the fact that the Company served population is almost entirely made up of retired senior citizens that are extremely vulnerable to interruptions or disruption of water service. In my professional opinion, using minimum standards as the

storage standard for the Company would be inappropriate and would leave the water system and the Company's customers with inadequate protection from water service interruption.

IV. SUMMARY OF POSITION.

Q. Please summarize your conclusions regarding the Company's Reservoir No. 5.

A. Reservoir No. 5 was planned and constructed using 48-hour average demand as the recommend level of storage for the Company System. The 48-hour standard is a more conservative approach than using minimum standards contained in the Arizona Administrative Code, but appropriate protection for the Company and its vulnerable population of retired senior citizens. Reservoir No. 5 was placed into service in September of 2015 and is currently used in the provision of service to the Company customers. In addition to enabling the Company to meet its recommended level of storage, Reservoir No. 5 provides numerous operational benefits, including lower operational costs, lower maintenance costs, reduced potential for interruption of service, lower risk, operational flexibility during tank maintenance, and equalized operation levels between reservoirs. Given the benefits to customers and significant operational benefits, it is my professional opinion that Reservoir No. 5 is a valuable and useful asset for the provision of reliable service to the customers of the Company.

Q. Does this conclude your Rebuttal Testimony?

A. Yes

Exhibit RP-1

CONSULTANTS

Raul F. Piña, P.E., R.L.S.
PRINCIPAL

Education

B.S.C.E., 1978, Civil & Sanitary Engineering, The University of Arizona
Continuing Education, 1979, Soil Mechanics & Foundation Analysis
Continuing Education, 1982, Hydraulics, Erosion Control/Highway Drawing

Professional Registration

1983/Civil Engineer/AZ No. 15606
1984/Land Surveyor/AZ No. 16587

Professional Experience

Raul Piña has been a professional Civil Engineer consultant for over 30 years and is the Principal of his own consultant firm. He established his first company in 1984, joined by one partner and two employees. Over the years, this company grew to 125 persons, becoming one of the largest firms in Southern Arizona. Consultant services were provided to municipal and private clients in the areas of land development, planning, engineering, surveying, architecture, landscape architecture and construction oversight. With offices in Tucson, Phoenix, Nogales and Willcox, Arizona, Mr. Piña has serviced communities throughout Southern Arizona. After selling the original professional services firm to an international consultant, Mr. Piña returned his attention to the local market in Tucson and, in 2003, started a new land development and project management consultant firm, CPE Consultants.

From the beginning, Mr. Piña has been involved in the management of multi-discipline projects that have included complex development issues, mixed-use commercial and residential hubs, and the establishment and oversight of municipal engineering departments for several Arizona cities and towns. In particular, Mr. Piña has cultivated a solid knowledge of land development regulations and infrastructure specifications and standards in Pima, Pinal and Santa Cruz Counties, Arizona State agencies, US-Mexico Border Region agencies, the twin cities of Nogales, Arizona, and Nogales, Sonora.

Summary of Project Experience

Recent Project Experience:

Project Name: Water Distribution and Regional Aquifer Recharge Facility in the Town of Sahuarita, Pima County, Arizona (PM, PE, RLS) – Raul Piña is the Project Manager, responsible for directing the multi-discipline consultant team planning, designing and obtaining the permits for construction and operation of a water delivery system capable of recharging 7,000 acre-feet per year of CAP water into the Santa Cruz River Aquifer, in Pima County, Arizona. Project requires the design and construction of a 9.6-mile long, 36" DIP water delivery system and a 30-acre recharge basin facility that will also provide natural habitat for perennial migrating shorebirds; the project also features a bridge crossing and a booster pump station. Once the construction permits are secured, Raul Piña will direct the oversight and management of the construction effort. Permits to be obtained include an Underground Storage Facility (USF) permit from ADWR, construction and grading permits from the Town of Sahuarita, a floodplain use permit that requires concurrence from FEMA, connection permits from CAWCD for CAP water delivery and use, right-of-way permits from ADOT and the Town of Sahuarita, and negotiations with the local electric utility for energy to operate the booster station equipment. Project construction budget is $25M.

Site Acquisition, Rezoning, Design and Construction Administration for Durham Regional Landfill in Pinal County, Arizona (Right Away Disposal) – Raul Piña was the Principal Project Manager, in charge of a multi-discipline team that was conformed to locate and conduct the necessary feasibility studies for a site in a remote location in Pinal County, suitable for development as a landfill. Mr. Piña met and negotiated the various issues important to the Arizona Department of Environmental Quality (ADEQ), representatives from Pinal and Pima Counties, and numerous other agencies and stakeholders within the landfill service area that included Arizona City, Picacho Peak, Oro Valley, Union Pacific Railroad (UPRR), and regulatory agencies such as the Arizona Department of Transportation (ADOT) and the Arizona State Land Department (ASLD). Under Mr. Piña's direction, the consultant team successfully negotiated and obtained a Comprehensive Plan Amendment that was approved by Pinal County in 2008; and Rezoning of the master parcel and grant of its Industrial Use Permit were achieved in 2009. Mr. Piña continued on to manage the landfill design team that prepared construction documents and secured operating permits for the proposed new regional municipal landfill. Mr. Piña worked closely with ADEQ, the Arizona State Land Department (ASLD), and with Pinal County representatives for approval of the project construction documents and negotiation of special land development conditions.; with the Bureau of Land Management (BLM) for the conveyance of mineral rights on site; and with the U.S. Army Corps of Engineers (USACOE) for approval a Sec 404 CWA jurisdictional delineation report. Construction permits for this project were secured from all of the various agencies and jurisdictions in time to begin project construction in July of 2014, at which time Mr. Piña assumed the duties and responsibilities for Construction Administration of the project, with construction completed in March of 2015, when the landfill first opened for service. The Project construction cost was $10M.

Palo Parado Road/Santa Cruz River Bridge Crossing, Santa Cruz County Flood Control District, Rio Rico, Arizona (Santa Cruz County) – As the Prime Consultant Manager, Mr. Piña was responsible for the preparation of construction documents (plans, specifications, and cost estimate; PS&E) for a new two-lane rural roadway 3,700 feet in length, connecting Interstate Highway 19 to Pendleton Drive, including improvements to the existing interchange connection, construction of an 820-foot bridge crossing, and improvements to an existing railroad crossing. As part of this project, a Design Concept Report (DCR) for a connector road from the I-19 Palo Parado Traffic Interchange to Pendleton Road including a bridge across the Santa Cruz River and an at-grade crossing of the Union Pacific Railroad (UPRR). One major challenge in this project was to design an all-weather crossing across the Santa Cruz River with 100 year flows in excess of 47,000 cfs, while minimizing the impact to the pristine and well-established vegetation in an existing native wetlands environment. Services included environmental permitting, hydrology/ hydraulics, structural bridge design, civil and drainage design, landscape architecture, surveying and mapping, right of way, traffic engineering, geotechnical engineering, and public outreach and public meetings. The project was designed to meet Arizona Department of Transportation's Local Government Section Project Manual and Project Development process, in order to meet Federal Aid Standards and funding requirements. Construction of the project was completed in March 2013, and its construction cost was $7 million.

Willow Ridge [illegible] Subdivision and Cortaro Road Widening and Drainage Improvements (Willow Ridge LLC) – Raul Piña was in charge of the multi-discipline consultant team that provided professional planning and engineering services for development of a 103-acre parcel located south of Cortaro Farms Road and east of Interstate Highway 10 (I-10), in the Town of Marana, Arizona. The project consisted of a balanced, mixed-use development with 60 acres of R-6 single-family residential units (6,000 square-foot lots); 34 acres of R-16 single-family residential units (16,000 square-foot lots); and two neighborhood commercial (NC) retail nodes. The site also accommodates approximately 40 acres of open space, which 32,000 square feet dedicated for active recreation and perimeter landscape buffer yards. The project also involved revisiting **PS&E documents** and reports prepared by a different consultant for Pima County for the arterial abutting the proposed subdivision, Cortaro Farms Road, with the purpose of reducing the roadway features for a more cost effective project, such as reducing the number of signalized intersections and lowering the final roadway profile; the project design also incorporated several of the design parameters from Pima County's Environmentally Sensitive Roadway Design

Guidelines. Ultimately, this project upgraded an existing rural road to an urban road, constructing it over existing utilities, matching existing cross drainage patterns and matching existing grades at adjacent businesses and homes, while addressing the increased traffic concerns. Close coordination was maintained all stakeholders including the Town of Marana, ADOT, U.S. Corps of Engineers, Pima County, Union Pacific Railroad, utility companies and local residents and business owners; the end result was a safe and efficient roadway project and an attractive land development project. Project construction cost was $11 million.

Prior Project Experience:

Starr Pass Master Plat and PGA Golf Course, Tucson, Pima County, Arizona (Rawson) – Raul Piña was lead Design Engineer and Project Manager for the planning, rezoning, permitting, platting and infrastructure design for this 1,200-acre master plat that includes 15 residential subdivisions and a PGA professional golf course. Raul Piña was the Principal responsible to the Owner/Developer, Starr Pass Properties, throughout the 18-year platting to construction effort for this residential land development project. The project was completed in 2010, with an infrastructure construction budget is estimated at $50M.

Silverbell Natural Recharge Project (Kai Regional Retention Basin), Pima County Regional Flood Control District and US Army Corps of Engineers, in Pima County, Arizona – Raul Piña was Project Manager for the planning, permitting, and design of this recharge basin renovation project, that involved rehabilitation and planting in a 50-acre barren regional detention basin, to accommodate a 141-acre wetlands and shorebird habitat. The modified detention basis also harvests regional stormwater runoff that is used for irrigation of a 32-acre, professional major league baseball stadium and practice fields, in south central Tucson, Arizona. The project was completed in 2001 and its construction budget was $11M.

Tucson Drainage Area/Arroyo Chico Multi-Use Project (Detention Basin and Baseball Park), Pima County Regional Flood Control District and City of Tucson Floodplain Management Department, in Tucson, Pima County, Arizona – Raul Piña was Project Manager for the planning, permitting, and design of this regional detention basin that provides flood control for the Tucson Downtown District, and also accommodates the Cherry Avenue Baseball/Soccer Field and several shorebird habitat ephemeral ponds in the urban center of the Tucson Metropolitan Area. Two initial project phases were completed in 1996 and 2010 at a cost of $33M; the overall project construction budget was $72M.

City Engineer for City of Nogales, Town of Marana, City of South Tucson and Town of Sahuarita, Arizona. As City Engineer for several cities in Southern Arizona, Raul Piña has worked closely with ADOT and other Arizona agencies, providing the general liaison services that promoted open interaction and the free exchange of information between related public agencies on both sides of the US-México International Border, on issues as varied as transportation needs, road and railroad infrastructure, wastewater and drainage. Typical day-to-day responsibilities included solicitation, negotiation and contracting of engineering consultants, and compliance review of all plans for private commercial development, subdivisions, roadway improvements, and water, sewer, and drainage improvements. Engineering services also included surveying and design of public roadway improvements, construction staking for public improvements, and attendance at public meetings (i.e. Town Council and Planning & Zoning Commission meetings).

Professional Affiliations

President, Minority Professional Consultant Association (MPCASA), 1986
Board Member, Arizona Consulting Engineers Association, 1988-1994
Chairman, City of Tucson Minority & Woman-Owned Business Enterprise Commission, 1989
Treasurer, Hispanic Chamber of Commerce, 1990
Board Member, La Frontera Mental Health Clinic, 1990-1999
President, Arizona Consulting Engineers Association, 1993-1994
National Director, Arizona Consulting Engineers Association, 1994-1997
Board Member, City of Tucson Bond Committee ($260 million Infrastructure Bonds), 1994

Board Member, Pima County Air Quality Review Committee, 1994
Board Member, 4th R Program, Tucson Unified School District, 1994-present
Treasurer, La Frontera Mental Health Clinic, 1996-1997
Board Member, International Committee, American Consulting Engineers Council, 1996-2000
Board Member, Pima County Citizens for a Better Community ($712 million Transportation Bonds), 1997
Chairperson, Pima County Citizens for a Better Community ($712 million Transportation Bonds), 1997
Board Member, St. Augustine High School, 2007
Member, Town of Marana Utility Commission, 2007

Awards

Young Engineer of the Year, Arizona Society of Professional Engineers, 1991
Man of the Year, Tucson Utilities Contractors Association, 1998
Engineer of the Year, Arizona Society of Professional Engineers, Southern Chapter, 1998
Outstanding Engineer of the Year, Arizona Society of Professional Engineers, 1998
American Consulting Engineers Council, National Community Service Award, 1999
LULAC Community Service Award, 2002

Exhibit RP-2

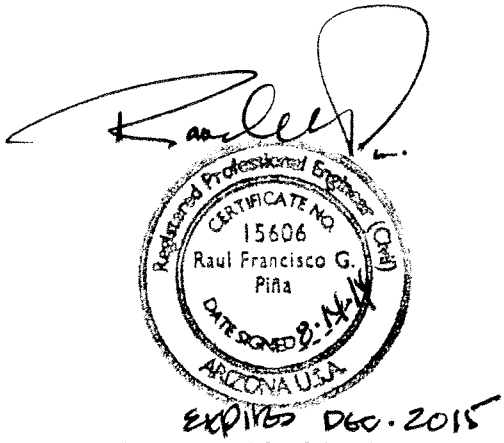
ENGINEER'S RESERVOIR SELECTION REPORT

Prepared for:

Community Water Company of Green Valley
1501 S. La Canada Drive
Green Valley, AZ 85622

Prepared by:

CPE Consultants, LLC



3895 N. Business Center Drive
Suite 115
Tucson, AZ 85705

August 13, 2014

1. INTRODUCTION

Community Water Company of Green Valley (CWC) is a municipal water provider in southern Arizona. It primarily serves the communities of Green Valley and the Town of Sahuarita; both communities are in southeastern Pima County, Arizona (see Figure 1, Location Map). According to official records on file in the Arizona Corporation Commission (ACC), its service area is about 9.44 square miles or 6,000 acres, and it provides water to nearly 13,000 connections/customers (see Figure 2, Service Area Map). The CWC "Annual Water Withdrawal Report" to ADWR informs that a total of 796.0 million gallons (MG) was pumped from its wells in 2013.

CWC is evaluating alternatives for repairs to one of its water reservoirs, water reservoir #2 (WR#2). In its evaluation CWC will consider the cost benefits and long term effects of each alternative. The alternatives considered include: the rehabilitation of existing WR#2, the construction of a new steel tank reservoir to replace WR#2, or the decommission of WR#2 and acquisition and installation of a standby generator to power CWC's largest water production well and booster site.

2. PURPOSE

The purpose of this report is to evaluate the relative need for WR#2 and its replacement with a new reservoir, and to compare the new reservoir cost with that of acquiring a standby generator, and to compare the cost-effectiveness between the two options considered for implementation by CWC.

3. BACKGROUND

WR#2 was originally constructed in 1975. It is a 1MG hypalon bladder tank, placed within a gunite concrete structure excavated into the surrounding high terrain, at the western end of the CWC service area. The hypalon tank was last replaced in 1999. Together with WR#3 and WR#4, WR#2 provides water to the entire CWC service area. One special feature of WR#2 is that its operating level is 20' below that of the other two reservoirs, which has created the need for a special valve arrangement designed to equalize and coordinate water supplied from the three reservoirs.

CWC has expressed concerns over the current condition of WR#2, because it is representative of an older design technology and its hypalon tank has had several tears that have been repaired; it is exposed to the elements; and it is vulnerable to vandalism and at risk for contamination (see Exhibit 1, CWC Responses to ACC Second Set of Data Requests). For these reasons and because the hypalon tank is near its usable lifetime, it will soon need replacement.

CWC wishes to evaluate its reservoir rehabilitation/replacement options, including the use of a steel tank reservoir instead of a new hypalon tank (see Figure 3, Continental Road Reservoir Improvements). Another consideration for construction of a new reservoir is that a new tank can be placed at an operating level similar to the other two in its pressure zone, thus eliminating the need for the special valve arrangement currently in place at WR#2. Further, CWC would prefer to increase the WR#2 capacity to 2MG of water. This will begin to address capacity issues for storage needs within the CWC service area, in accordance with the provisions of its Certificate of Convenience and Necessity (CC&N).

4. EXISTING CONDITIONS

CWC is classified as a multiple-well community water system by the State of Arizona. Its water system is served by four wells, which together are rated as having a water production capacity of 6,250 gallons per minute (GPM), equipped with electric motor driven pumps (see Tables 1 and 2, below).

Operating Capacity		
Well No.	Discharge Pressure (psi)	Discharge Volume (gpm)
6	104	570
9	96	980
10	5	2,250
11	5	2,450
Totals		6,250

Table 1. Well Water Production Capacity
(from CWC records)

Pumping Station Location		Pump Design Data		Pump Operating Parameters		
Location	Type	ID	Design Discharge (gpm)	Pumps in Operation	Operating Head (ft)	Total Discharge at OpHead (gpm)
Reservoir No. 1, Zone 2 Booster Station	Booster	1	700	1	125	700
Reservoir No. 1, Zone 2 Natural Gas Engine Pump	Booster	1	1,500	1	102	1,500
La Cañada Transfer Station	Transfer	1	350	1	240	350
Well #10, Zone 4 Transfer Station (w/Reservoir No. 3 Control)	Transfer	1	625	1	291	700
		2	625	2	306	1,350
		3	625	3	323	1,800
		4	625	4	346	1,900
		5	625	Standby Pump Unit		
Well #11, Zone 4 Transfer Station	Transfer	1	625	1	398	780
		2	625	2	415	1,500
		3	625	3	443	2,100
		4	625	4	476	2,600
		5	625	Standby Pump Unit		

Table 2. Well Pumping Facilities
(from CWC records)

The wells deliver water to four storage reservoirs and two water tanks, with a combined design storage capacity of 5.6MG and an average operating capacity of 3.8MG (see Table 3, below).

Operating Capacity				
Reservoir No.	Facility Storage Type	High Water Level (ft)	Reservoir Design Capacity (gallons)	Average Reservoir Operating Capacity (gallons)
1	Forebay	2,970.0	1,000,000	793,000
2	High Water	3,161.0	1,000,000	659,000
3	High Water	3,181.0	1,000,000	792,000
4	High Water	3,181.0	2,000,000	1,333,000
W#10 Tank	Forebay	2,875.0	300,000	143,750
W#11 Tank	Forebay	2,791.2	300,000	121,875
Totals			5,600,000	3,842,625

Table 3. CWC Water Storage Facilities
(from CWC records)

All of the active wells are equipped with Arsenic treatment plants, which independently treat water extracted from their corresponding well, prior to delivering it to their reservoir or tank (see Table 4, below).

Treatment Facility Location	# of Treatment Vessels	Operating Pressure (psi)	Vessel Treatment Capacity (gpm)	Total Treatment Capacity (gpm)
Well #6	8	92	150	1,200
Well #9	8	114	150	1,200
Well #10	6	5	417	2,500
Well #11	6	5	417	2,500
Total Treatment Capacity (gpm)				7,400

Table 4. Arsenic Treatment Facilities
(from CWC records)

In its Administrative Code, the State of Arizona defines the minimum storage capacity required of a community water system (see Exhibit 2, 18 AAC R18-5-503.Storage Requirements). This is further qualified to include fire flow demand, in AHD Bulletin 10, Design of Water Systems. Pursuant to section R18-5-503, the minimum storage capacity CWC is required to maintain is

$D_{storage}$ = Demand in Average Day of Peak Month + 4-hr Fire Flow (= 2,000 GPM*4 hrs*60 min)

= 2.56 MG + 0.48 MG = 3.04 MG.

CWC elects to abide by the more prudent recommendation from multiple sources such as, AWWA, FEMA, and HDR Engineering's "Handbook of Water Systems", 2nd Edition, which recommend storage of the 48-hour average demand, or

$$D_{storage} = 2 * \text{Average Daily Demand} = 2 * 2.22 \text{ MG} = 4.44 \text{ MG.}$$

CWC has elected to observe this more conservative standard, because its service population is almost entirely retired senior citizens, who are extremely vulnerable to interruptions or disruption of utility service.

The data used for determining average daily demand and average day of peak month demand are based on the latest information on CWC water deliveries to consumers (see Table 5, below, and Exhibit 3, CWC Responses to ACC Fourth Set of Data Requests).

System Requirements Peak month divided by 30 adjusted for peak day				
	Peak Day of Peak Month		Average Day of	Average Day of
Customer Counts	ACC	CWC	**Peak Month**	**Year 2013**
Number of customers at Jan 2013		12,868	12,868	12,868
Number of customers at June 2013	12,902	12,902	12,902	12,902
2013 six month increase		34	34	34
Number of customers at Dec 2013	12,958	12,958	12,958	12,958
Number of customers projected at June 2014		12,992	12,992	12,992
Water Use				
Gallons of water sold June 2013 (ACC basis)	69,556,000			
Gallons of water produced in the year 2013				795,994,000
Gallons of water produced June 2013 (CWC basis)		76,280,000	76,280,000	
Number of customers June 2013	12,902	12,902	12,902	12,902
Average gallons per customer for a month	5,391	5,912	5,912	5,141
Gallons per customer per day (/30)	180	197	197	171
Peak factor (per day x 1.25)	225	246	-	-
Number of customers at Dec 2013	12,958	-	-	-
Number of customers projected to June 2014	-	12,992	12,992	12,992
Avg day of 2013 (based on produced CWC)				**2,226,518**
Avg day of peak month (based on prod CWC)			**2,560,403**	
Peak day of peak month (based on prod CWC)		3,200,504		
Peak day of peak month (based on sold ACC)	2,910,746			
Hourly projected water requirement (gallons)	121,281	133,354	106,683	92,772
48-Hours supply	5,821,492	6,401,009	5,120,807	4,453,037

Table 5. CWC Average and Peak Daily Water Demand
(from CWC records)

Comparing the most recent water demand and available storage figures, it is evident that CWC requires all of the existing storage facilities it operates, in order to comply with current regulations (see Table 6, below). Further, if WR#2 is brought off-line, the remaining available storage capacity

in the system is 3.18MG, which is slightly above the minimum prescribed requirement of 3.04MG, and significantly below the desired recommended storage of 4.4MG. Therefore, CWC should repair or replace WR#2, or it will need to maintain standby power at its largest well, in order to remain in compliance with State requirements, should contingencies arise that cause it to bring any other reservoir off-line (maintenance or similar situation).

Operating Capacity						
Reservoir No.	Reservoir Design Capacity (gallons)	Average Reservoir Operating Capacity (gallons)	Alternative 1 WR#2 Off-Line Capacity (gallons)	Alternative 2 WR#2 Off-Line 1,000 kW Gen Capacity (gallons)	Alternative 3a New WR#2 1MG Capacity (gallons)	Alternative 3b New WR#2 2MG Capacity (gallons)
1	1,000,000	793,000	793,000	793,000	793,000	793,000
2	1,000,000	659,000	0	0	750,000	1,500,000
3	1,000,000	792,000	792,000	792,000	792,000	792,000
4	2,000,000	1,333,000	1,333,000	1,333,000	1,333,000	1,333,000
W#10 Tank	300,000	143,750	143,750	143,750	143,750	143,750
W#11 Tank	300,000	121,875	121,875	121,875	121,875	121,875
W#11 w/1,000 kW Gen				588,000		
Totals	5,600,000	3,842,625	3,183,625	3,771,625	3,933,625	4,683,625

Table 6. Comparison of CWC Storage Scenarios.

5. DEVELOPMENT OF ALTERNATIVES

Four alternatives have been evaluated in this report, as follows:

1. **Do nothing alternative.** Maintain WR#2 as is, and continue operating the special valve arrangement on site. Accomplish the current repairs identified by CWC operators, wait until major repairs are needed at this reservoir and accomplish repairs under near crisis conditions. Additional water demands on the system at a later time will cause additional, unplanned costs. This is the least favorable alternative, because it creates potential disruption of service and distrust about the utility's stability.

2. **Rehabilitation of WR#2.** This option is similar to option one, except that the replacement of the hypalon tank in WR#2 would be formally scheduled, in order to avoid contingency conditions during its replacement. In all other respects the current WR#2 operating status will be maintained.

3. **Construct new reservoir.** This will allow CWC to resolve its water storage issue with minimum disruption to service, and in full control of contingencies. It will provide hydraulic advantages to the system as described in Exhibit 5. Installing a replacement tank that equalizes the operating high water elevation between WR#2 and the other two reservoirs in its pressure zone, realizes pumping cost savings at the Well #10 booster site, because it eliminates

the water transportation friction losses resulting from water pumping through an extra mile of pipeline, from WR#2 to WR#4. This is the most favorable alternative.

4. **Provide a standby generator.** A routinely implemented alternative to avoid the perceived larger costs of reservoir construction, this alternative considers the purchase and installation of a standby generator, for operation under a potential outage. A contingency generator requires sufficient power to operate the well, boosters and the Arsenic treatment plant. Based on a recent energy demand study (see Exhibit 4, Generator Power Requirement), the generator size must be at least 1,000 kW.

   In addition to the acquisition costs, this alternative requires considerable expense to maintain the generators in a standby ready condition. Other significant concerns include the price of fuel and the safety requirements for storing adequate amounts of fuel near a potable water supply, permitting issues, sound and odor, as well as the generator's estimated useful life of 20 years.

6. COSTS

To obtain current cost information for the alternatives evaluated, CWC secured bids from its providers, to address potential costs of the various alternatives considered (see Exhibit 5, Cost Proposals). Comparing the different costs, the initial finding is that repairs to the existing WR#2 will be $500,000. Cost of new steel tank reservoirs are $1.2M for a 2MG reservoir and $1.0M for a 1MG reservoir.

The cost for a new 1,000 kW generator is $598,000 if diesel fueled, or $1.13M if fueled by natural gas. In addition, site improvements will be required, to accommodate the new generator and its base pad (see Figure 4, Modified Well Layout).

Comparison of Costs					
Cost Criteria	**Alternative 2 Repair & Keep WR#2 (Hypalon Tank)**	**Alternative 4a WR#2 Off-Line 1,000 kW Diesel Generator**	**Alternative 4b WR#2 Off-Line 1,000 kW Natural Gas Generator**	**Alternative 3a New WR#2 (1MG Steel) Reservoir**	**Alternative 3b New WR#2 (2MG Steel) Reservoir**
Acquisition and Installation Cost	500,000	467,000	1,135,000	1,000,000	1,200,000
Cost of Additional Improvements	0	50,000	50,000	0	0
Annual Maintenance Cost	12,500	4,400	4,400	800	1,000
Totals (20-yr)	750,000	605,000	1,273,000	1,032,000	1,236,000
Totals (40-yr)	2,000,000	926,500	1,928,500	1,248,000	1,456,000

Notes and Assumptions:

Hypalon Tank Annual Maintenance Cost (250 mhrs, @ $50/hr) =	$ 12,500
Site improvements for new generator (concrete pad, site reconfiguration, permits, etc.) =	$ 50,000
Standby Power Generator Annual Maintenance Cost =	$ 4,400
Steel Tank 10-yr Periodic Minor Interior Coat Maintenance Cost =	$ 8,000
Steel Tank 20-yr Major Interior Maintenance Repairs Cost =	$100,000

Table 7. Comparison of Alternative Costs.

7. SUMMARY AND CONCLUSIONS

A comparison between alternatives reveals that repairing or replacing the hypalon tank in WR#2 is the most expensive alternative, even though it requires the smaller initial investment. This is because maintenance of the hypalon tank requires more active inspection and maintenance than the other options. It is also the most vulnerable to inclement weather and vandalism.

Comparison of the steel tank reservoir and generator alternatives indicates that the cost for a standby generator will approach the cost of a steel tank, which will not require the additional standby ready costs. This is especially true of a natural gas generator. Further, the cost difference between the 1MG and 2MG steel tank is small, when one considers the value of the additional storage capacity obtained for the additional cost.

Finally, the benefits of acquiring a new steel tank reservoir to replace the existing WR#2 are many, among others:

a) full compliance with the more conservative recommended storage capacity, even if any of the other CWC reservoirs are brought off-line for repairs or maintenance;

b) lower maintenance costs and less time of interrupted service for maintenance activities than the other alternatives;

c) lower risk for contingencies and repairs than a generator, since reservoir storage is always at hand and not awaiting activation in case of an emergency;

d) the larger 2MG steel tank reservoir matches the capacity of WR#4, which allows for minimal adverse impact to storage, should the latter reservoir be brought off-line for repairs or maintenance;

e) constructing a new reservoir that equalizes its operating level with that of WR#3 and WR#4 simplifies the interconnectivity of the system and reduces pumping cost for routine filling of reservoirs;

f) having system storage capacity at recommended levels rather than minimum required levels addresses concerns about service to the very vulnerable population in the CWC service area, since they are mostly retired senior citizens;

g) significantly lower vulnerability to vandalism than the other alternatives.

Therefore, our recommendation is the acquisition of a steel tank reservoir. The larger, 2MG reservoir represents greater advantage in terms of storage, when compared to a modest additional cost over the 1MG steel tank reservoir.

8. REFERENCES

1. Arizona Corporation Commission Docket # W-02304A-14-0041, Application for Financing Authorization requested by Community Water Company of Green Valley on February 12, 2014.

2. Arizona Administrative Code Title 18, Section R18-5-503.Storage Requirements.

FIGURES

1. Location Map

2. Service Area Map

3. Continental Road Reservoir Improvements

4. Modified Well Layout - Well No 11 with Standby Generator

EXHIBITS

1. CWC Responses to ACC Second Set of Data Requests dated March 10, 2014.

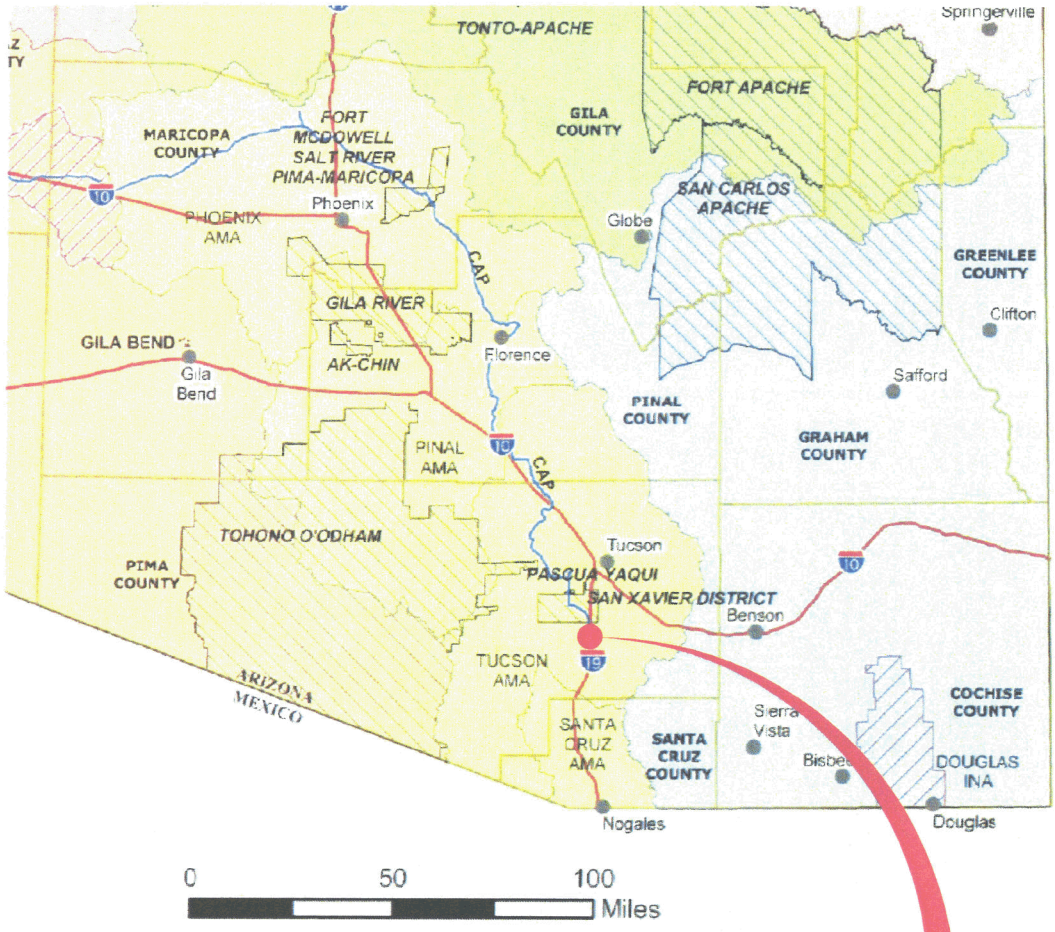
2. 18 AAC, R18-5-503.Storage Requirements.

3. CWC Responses to ACC Fourth Set of Data Requests dated May 2, 2014

4. Generator Power Requirement, August 8, 2014.

5. Cost Proposals

    - CWC Responses to ACC Fifth Set of Data Requests dated May 13, 2014 regarding price difference.
    - CWC Responses to ACC Second Set of Data Requests dated March 10, 2014 regarding cost estimate for new storage tank dated March 17, 2014 and Opinion from Smyth Industries dated July 1, 2014.
    - Smyth Industries Cost Estimate to Raul Piña dated August 8, 2014 for Standby Generator



COMMUNITY WATER COMPANY OF GREEN VALLEY

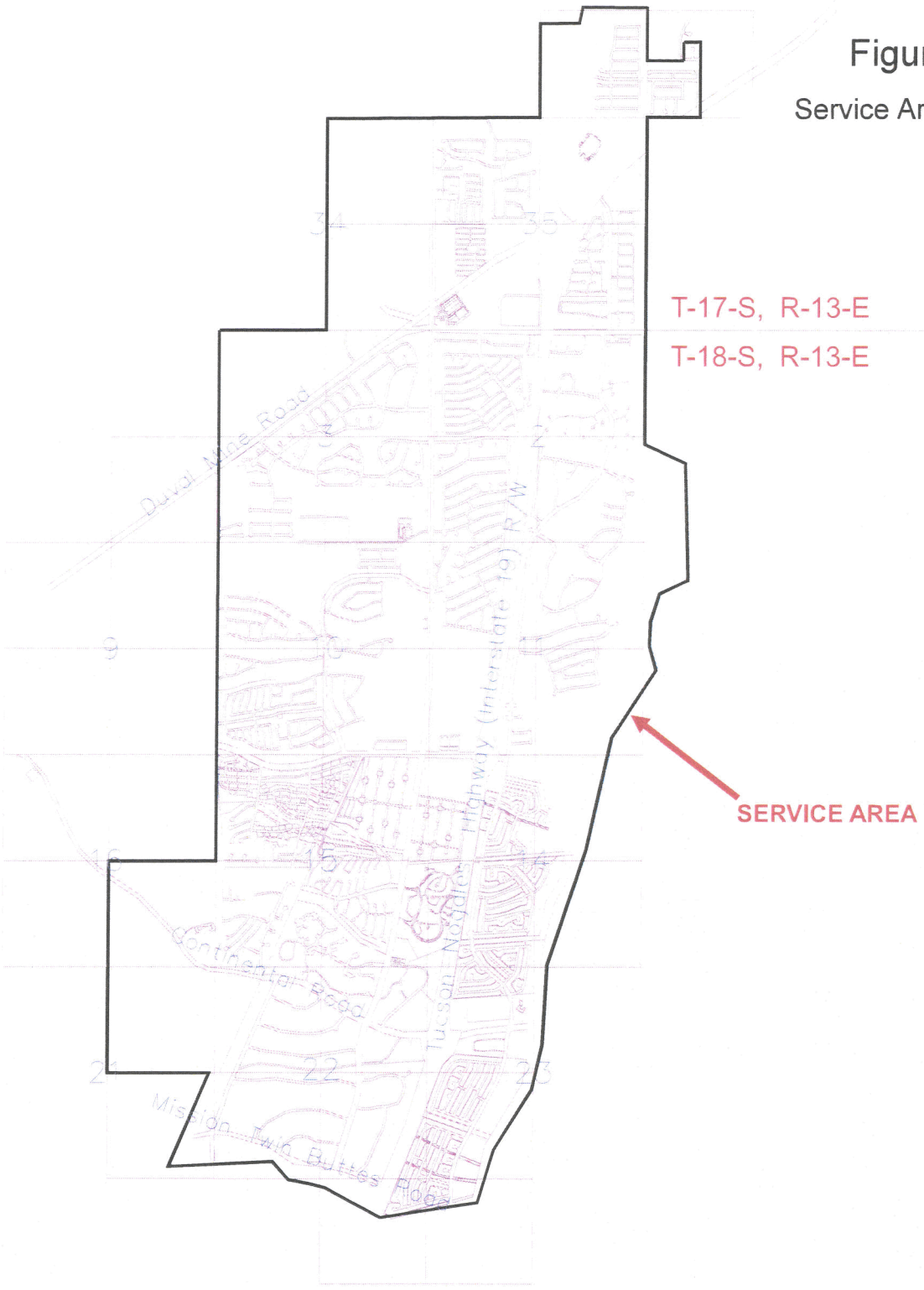
LOCATION MAP

CPE CONSULTANTS
3895 N. Business Center Drive, Suite 115
Tucson, AZ 85705
520•545•7001

FIGURE 1

Figure 2

Service Area Map



Stantec

Legend:

Community Water Company Service Area Boundary

Client / Project

Community Water Company of Green Valley

Water System Improvement Design Plan

Figure No.

1.1

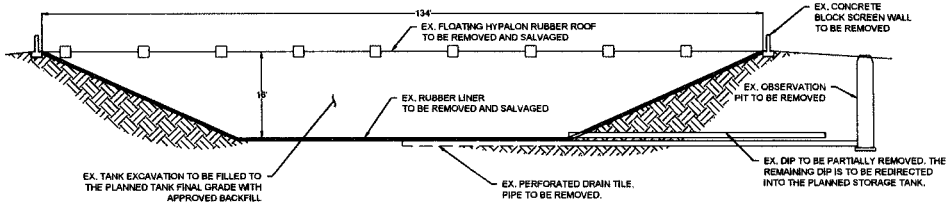
Title

Location Map of Service Area

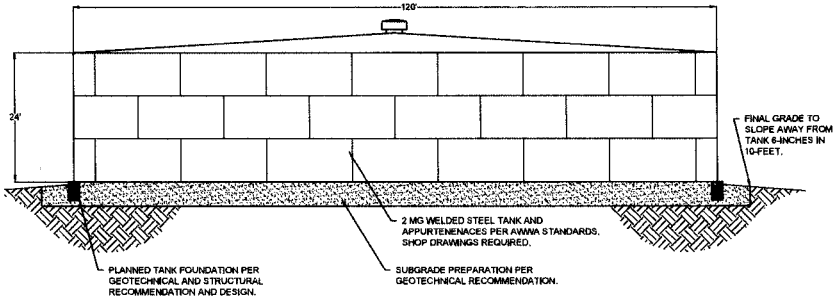
COMMUNITY WATER COMPANY

CONTINENTAL ROAD RESERVOIR IMPROVEMENTS EXHIBIT

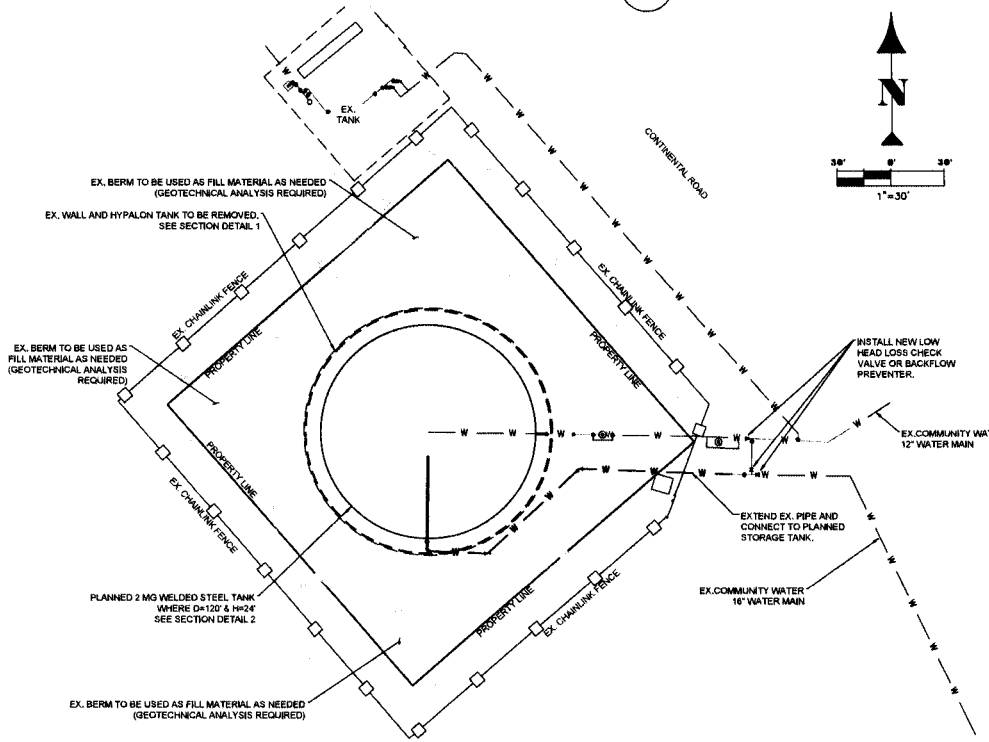
Figure 3



1 EXISTING HYPALON TANK SECTION DETAIL N.T.S.



2 PLANNED 2MG WELDED STEEL TANK SECTION DETAIL N.T.S.



NOTES:
1. THIS PLAN IS CONCEPTUAL ONLY. FINAL TANK DESIGN, PIPE LAYOUT, AND GRADING DESIGN AND RECOMMENDATIONS PER APPROVED PLANS.
2. THE INFORMATION SHOWN ON THIS PLAN IS FOR PLANNING AND SCHEMATIC PURPOSES ONLY.
3. A DETAILED SITE SURVEY WILL BE NECESSARY TO LOCATE AND IDENTIFY ALL PROPERTY LINES, EASEMENTS, AND EXISTING IMPROVEMENTS. THOSE SHOWN HERE-ON ARE SCHEMATIC ONLY.

PRELIMINARY
NOR FOR
CONSTRUCTION

COMMUNITY WATER COMPANY
1501 S. LA CANADA DR
GREEN VELLEY, AZ 85622
PH: 520-625-8409

SMYTH INDUSTRIES

Figure 4

Exhibit 1

COMMUNITY WATER COMPANY OF GREEN VALLEY'S RESPONSES TO STAFF'S SECOND SET OF DATA REQUESTS DOCKET NO. W-02304A-14-0041 Dated March 10, 2014

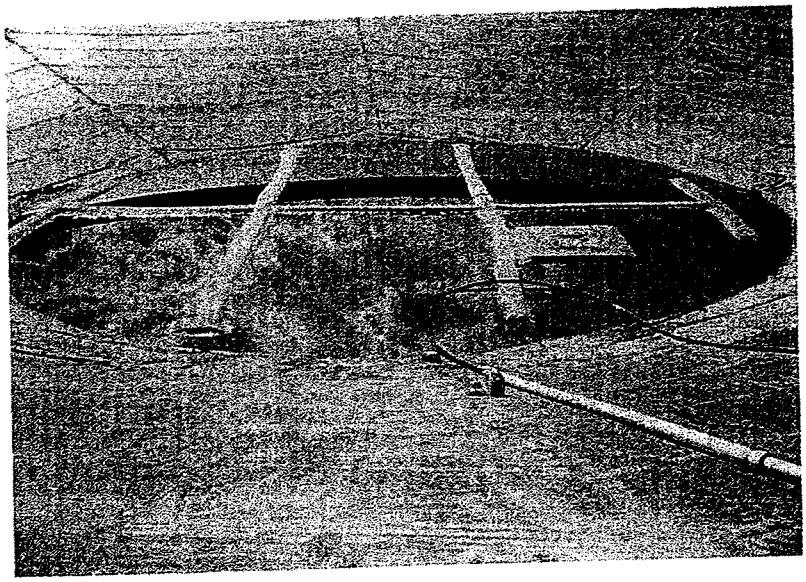
JL 2.2 Risk for Contamination — Please provide all historic information regarding the contamination of the existing Reservoir #2.

RESPONSE: See attached.

Respondent: John Meyer, CWCGV Treatment Supervisor

The following pictures represent some of the sources and causes of contamination at CWC Reservoir #2

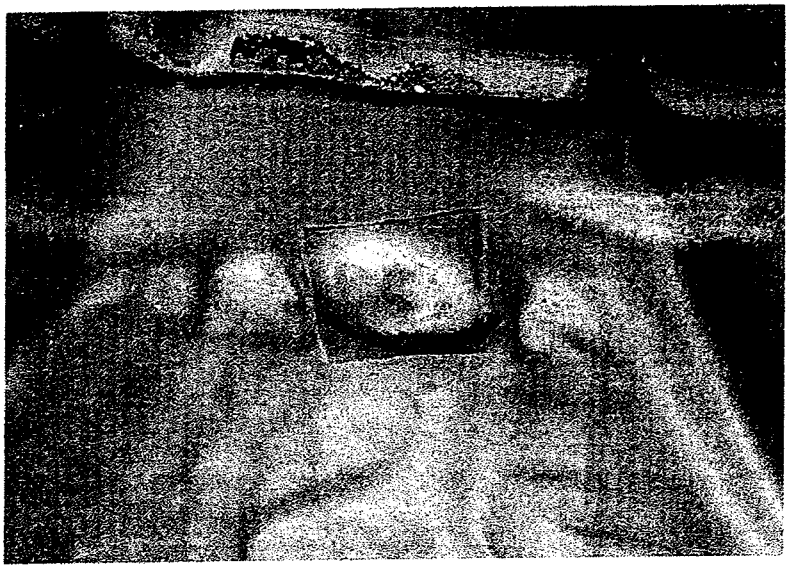
Res. #2: Large patch failure.



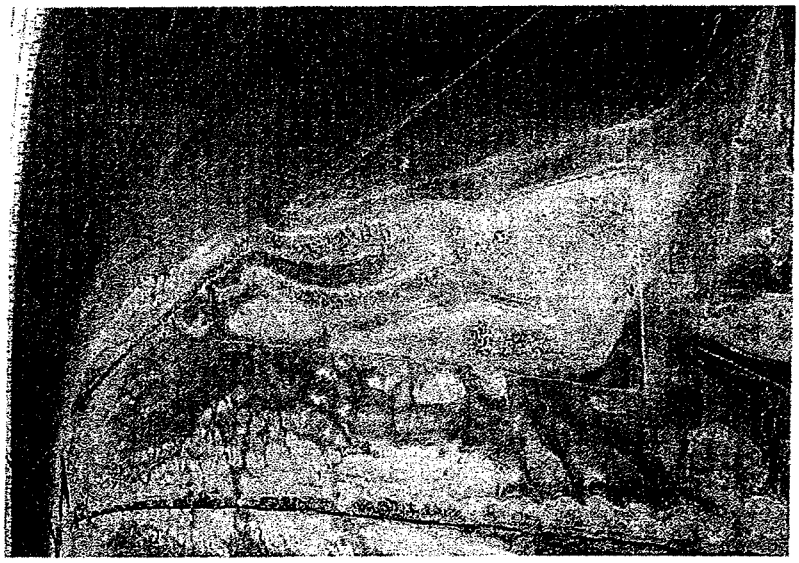
Res. #2: Drained after vandalism.

Res. #2: Small patch failure.

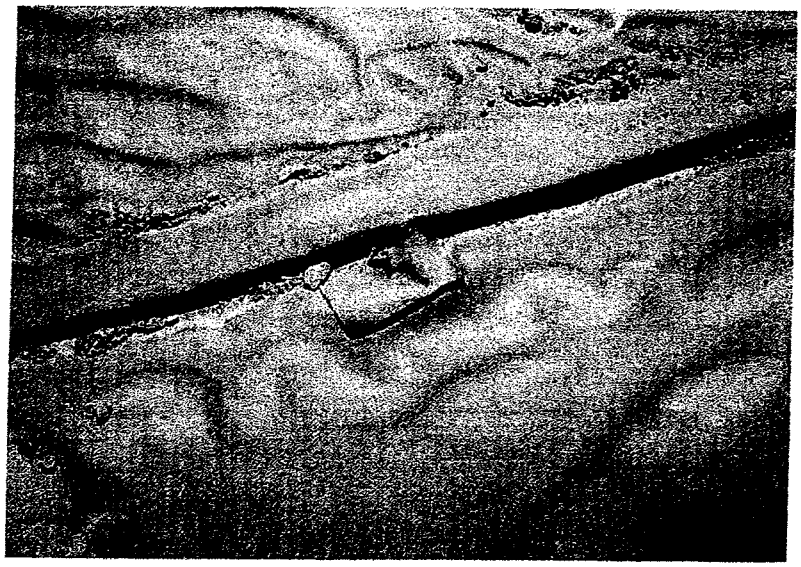
Res. #2: Temporary patch.



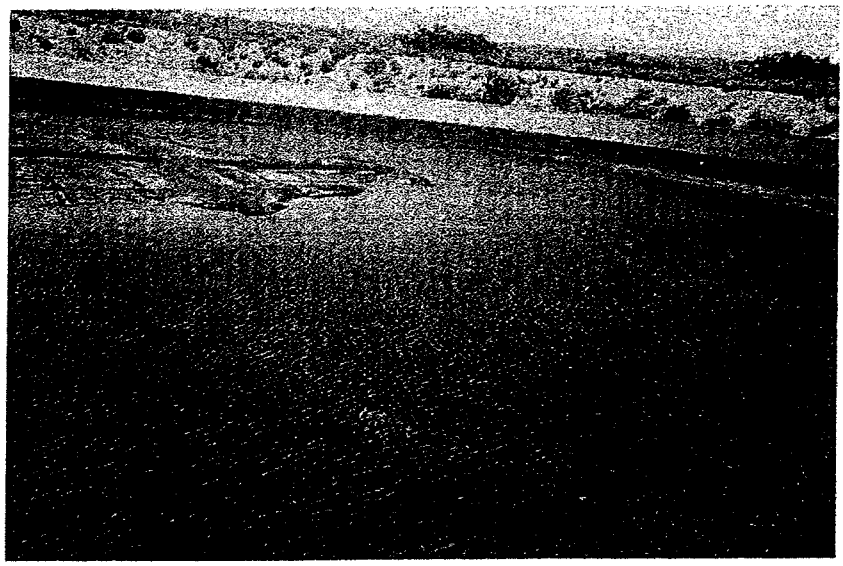
Res. #2: Small patch failure.



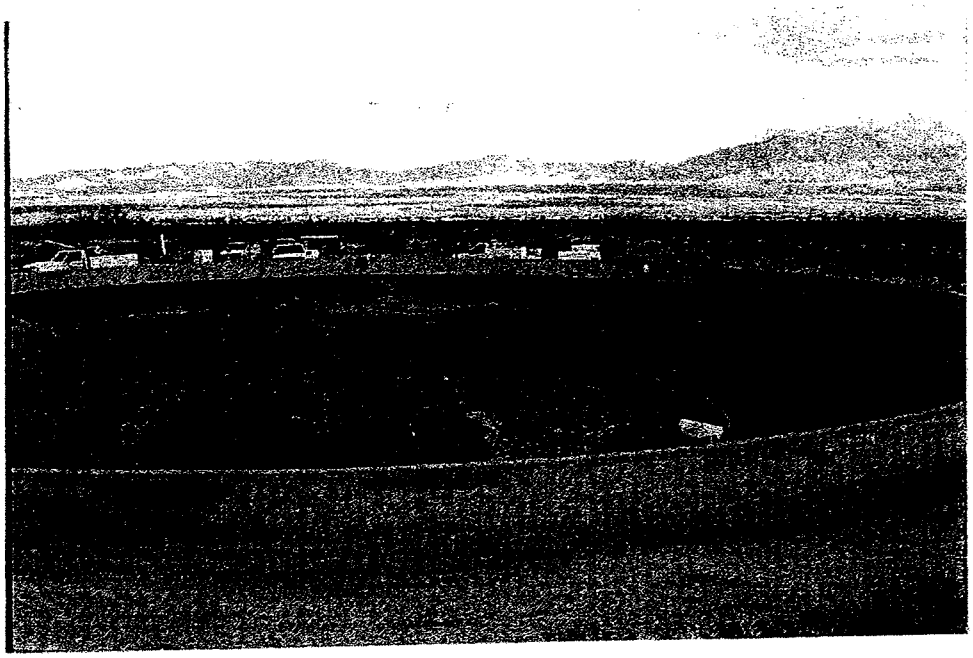
Res. #2: Debris on top of liner.



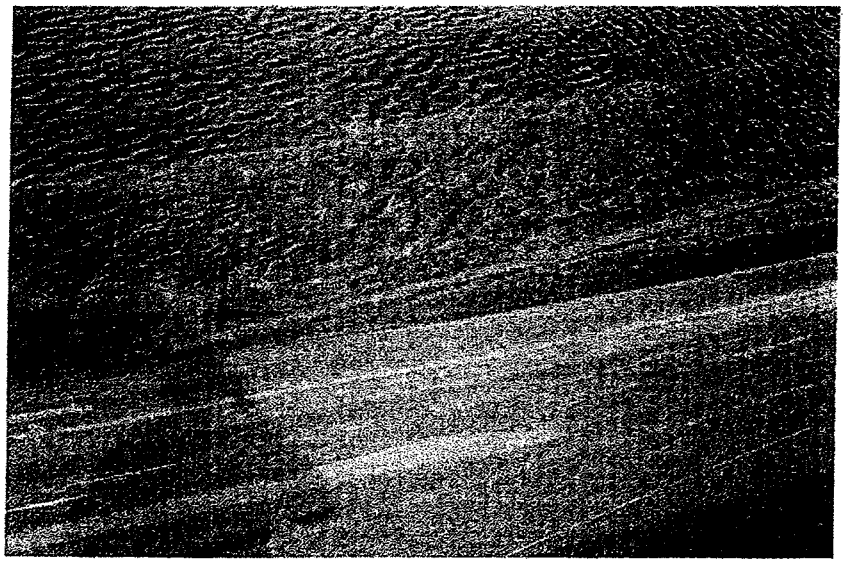
Res. #2: Small patch failure.



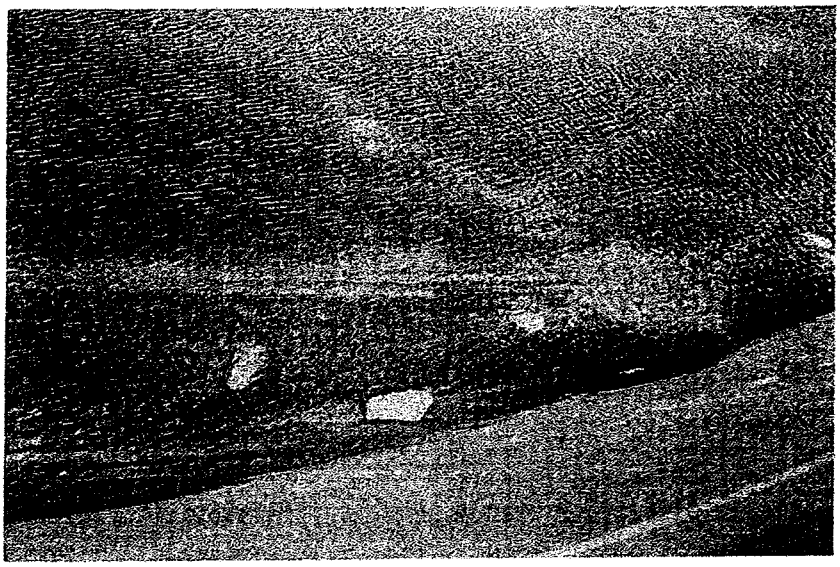
Res. #2: Water on top after vandals sliced liner.



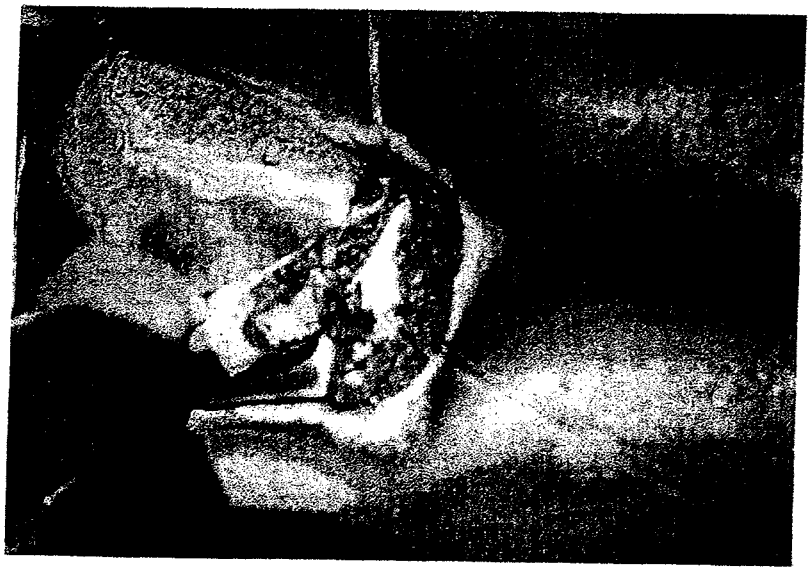
Res. #2: Drained after vandalism.



Res. #2: Aftermath of vandalism.



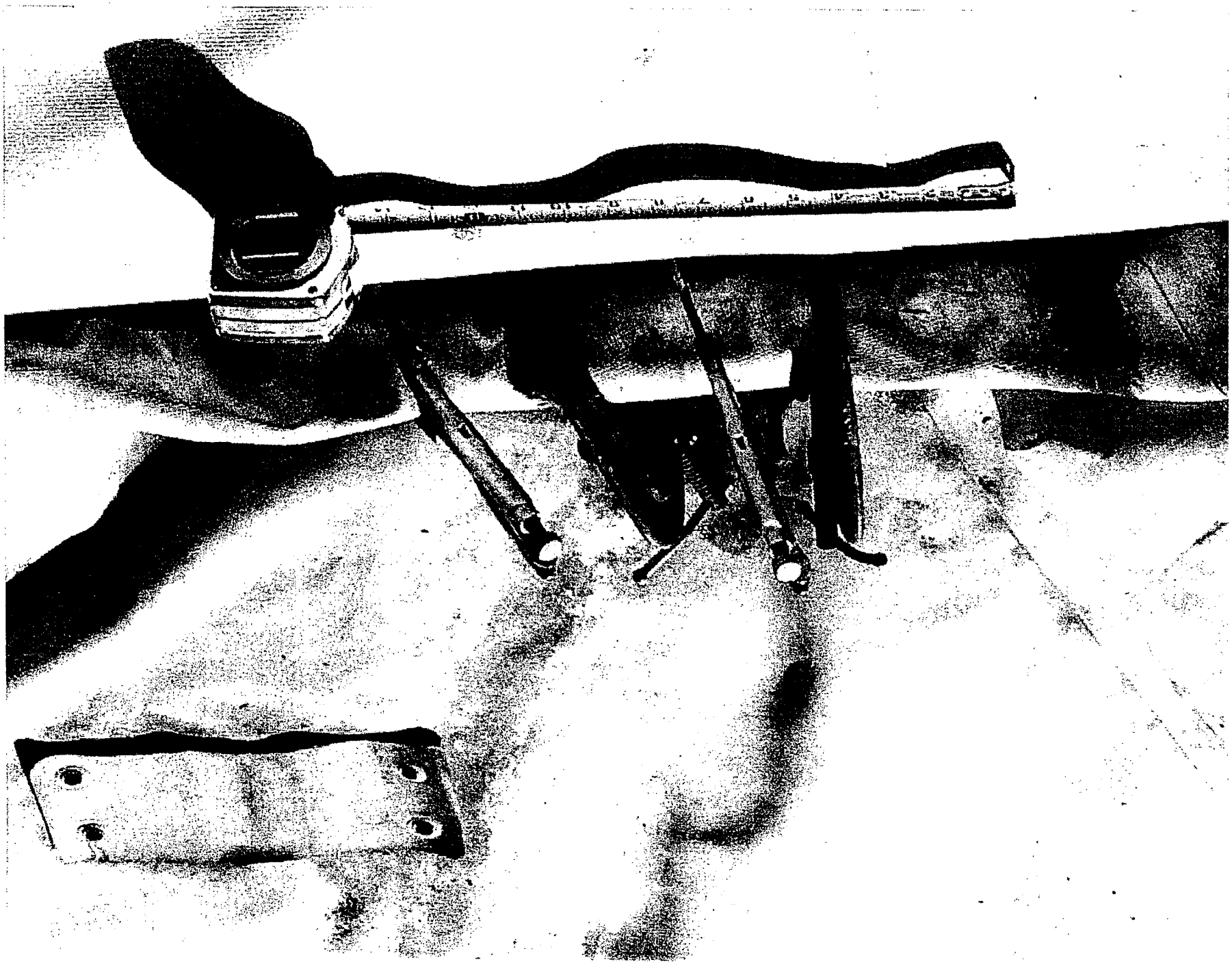
Res. #2: Large rocks and slice in liner by vandals.

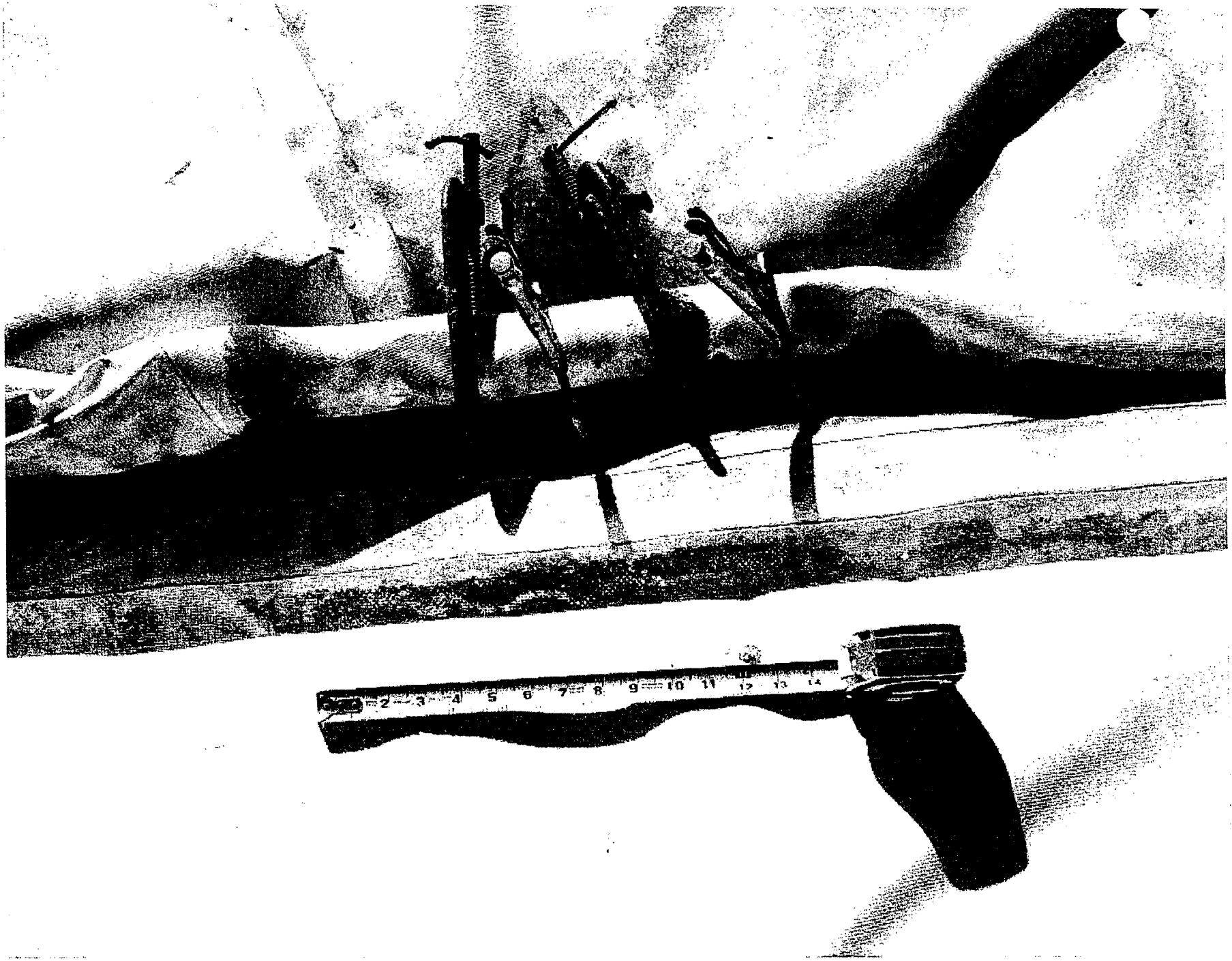


Res. #2: Algae growth under failing patch.

Reservoir #2 safety concerns:

Res. #2: Employee partially submerged on top of liner performing maintenance.





ARTICLE 5. MINIMUM DESIGN CRITERIA

Article 5, consisting of R18-5-501 through R18-5-509, recodified from 18 A.A.C. 4, Article 5 at 10 A.A.R. 585, effective January 30, 2004 (Supp. 04-1).

R18-5-501. Siting Requirements

To the extent practicable, a new public water system or an extension to an existing public water system shall be geographically located to avoid a site which is:

1. Subject to a significant risk from earthquakes, floods, fires, or other disasters which could cause a breakdown of the public water system or portion thereof; or
2. Within the flood plain of a 100-year flood, except for intake structures and properly protected wells.

Historical Note

Section recodified from R18-4-501 at 10 A.A.R. 585, effective January 30, 2004 (Supp. 04-1).

R18-5-502. Minimum Design Criteria

A. A public water system shall be designed using good engineering practices. A public water system which is designed in a manner consistent with the criteria contained in Engineering Bulletin No. 10, "Guidelines for the Construction of Water Systems," issued by the Arizona Department of Health Services, May 1978 (and no future editions), which is incorporated herein by reference and on file with the Office of the Secretary of State, shall be considered to have been designed using good engineering practices. Other system designs shall be approved if the applicant can demonstrate that the system will function properly and may be operated reliably in compliance with this Chapter. Minimum design criteria which are not subject to modification are listed in this Section.

B. A potable water distribution system shall be designed to maintain and shall maintain a pressure of at least 20 pounds per square inch at ground level at all points in the distribution system under all conditions of flow.

C. Water and sewer mains shall be separated in order to protect public water systems from possible contamination. All distances are measured perpendicularly from the outside of the sewer main to the outside of the water main. Separation requirements are as follows:

1. A water main shall not be placed:
   a. Within 6 feet, horizontal distance, and below 2 feet, vertical distance, above the top of a sewer main unless extra protection is provided. Extra protection shall consist of constructing the sewer main with mechanical joint ductile iron pipe or with slip-joint ductile iron pipe if joint restraint is provided. Alternate extra protection shall consist of encasing both the water and sewer mains in at least 6 inches of concrete for at least 10 feet beyond the area covered by this subsection (C)(1)(a).
   b. Within 2 feet horizontally and 2 feet below the sewer main.
2. No water pipe shall pass through or come into contact with any part of a sewer manhole. The minimum horizontal separation between water mains and manholes shall be 6 feet, measured from the center of the manhole.
3. The minimum separation between force mains or pressure sewers and water mains shall be 2 feet vertically and 6 feet horizontally under all conditions. Where a sewer force main crosses above or less than 6 feet below a water line, the sewer main shall be encased in at least 6 inches of concrete or constructed using mechanical joint ductile iron pipe for 10 feet on either side of the water main.
4. The separation requirements do not apply to building, plumbing, or individual house service connections.
5. Sewer mains (gravity, pressure, and force) shall be kept a minimum of 50 feet from wells unless the following conditions are met:

a. Water main pipe, pressure tested in place to 50 psi without excessive leakage, is used for gravity sewers at distances greater than 20 feet from water wells; or
b. Water main pipe, pressure tested in place to 150 psi without excessive leakage, is used for pressure sewers and force mains at distances greater than 20 feet from water wells. "Excessive leakage" means any amount of leakage which is greater than that permitted under the AWWA Standard applicable to the particular pipe material or valve type.

6. Requests for authorization to use alternate construction techniques, materials, and joints shall be reviewed by the Department, and such requests may be approved on a case-by-case basis.

D. A public water system shall not construct or add to its system a well which is located:
1. Within 50 feet from existing sewers unless the sewer main has been constructed in accordance with subsection (C)(5)(a) or (b) of this Section;
2. Within 100 feet of any existing septic tank or subsurface disposal system;
3. Within 100 feet of a discharge or activity which is required to obtain an Individual Aquifer Protection Permit, pursuant to A.R.S. §§ 49-241(A) through 49-251;
4. Within 100 feet of an underground storage tank as defined in A.R.S. § 49-1001; or
5. Within 100 feet of hazardous waste facilities operated by large quantity generators and treatment, storage, and disposal facilities regulated under the Arizona Hazardous Waste Management Act, A.R.S. § 49-921 et seq.

Historical Note

Section recodified from R18-4-502 at 10 A.A.R. 585, effective January 30, 2004 (Supp. 04-1).

R18-5-503. Storage Requirements

A. The minimum storage capacity for a CWS or a noncommunity water system that serves a residential population or a school shall be equal to the average daily demand during the peak month of the year. Storage capacity may be based on existing consumption and phased as the water system expands.

B. The minimum storage capacity for a multiple-well system for a CWS or a noncommunity water system that serves a residential population or a school may be reduced by the amount of the total daily production capacity minus the production from the largest producing well.

Exhibit 3

COMMUNITY WATER COMPANY
OF GREEN VALLEY'S
RESPONSES TO STAFF'S REQUESTS
DATED APRIL 23, 2014
(FOURTH SET OF DATA REQUESTS)
DOCKET NO. W-02304A-14-0041
Dated May 2, 2014

JL 4.1 CWC sold total of 721,654,000 gallons water in 2013 with 12,958 customers, and sold 831,899,400 gallons in 2007 with 11,854 customers. Therefore, CWC's customers used 110,245,400 gallons less water in 2013 with 1,104 more customers. Please explain in details why?

Response:

CWC believes that the decrease in water consumption is the result of many factors including higher water bills and sewer bills that have motivated customers to reduce water consumption, CWC and customer conservation efforts, appliance efficiencies, reduction in pools, and impact of the economic downturn that continues to some degree. CWC is not in a position to determine whether these are permanent or cyclical changes.

Respondent: John Meyer and Arturo Gabaldon

COMMUNITY WATER COMPANY
OF GREEN VALLEY'S
RESPONSES TO STAFF'S REQUESTS
DATED APRIL 23, 2014
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DOCKET NO. W-02304A-14-0041
Dated May 2, 2014

JL 4.2 Please see attached water storage calculations. It shows CWC has adequate production capacity and storage capacity to serve the existing customer base and reasonable growth after Company's existing reservoir #2 is removed without replacement. Please let us know if you agree.

Response:

CWC disagrees that there is adequate storage capacity after removing reservoir #2. Further, CWC does not concur that production capacity should be used as a substitute for water storage. CWC assumes for planning purposes that a major power outage is in effect and no production is possible. CWC wells run on electricity only and wells do not have stand-by power generation capabilities. CWC plans for numerous other contingencies including when the Company takes a well or reservoir out of service to perform routine maintenance for example. Its planning is based on overall reliability of CWC's system that has been in place and evolved over time.

Further, CWC does not agree with some of the figures and assumptions ACC Staff uses to make its calculations. Below are CWC's proposed adjustments to ACC Staff's calculations and assumptions in its question:

1. Production capacity without backup power generating capabilities should not be included when calculating storage capacity, see Arizona Department of Environmental Quality Engineering Bulletin 10, Chapter 6, section D "capacity."
2. CWC target for emergency storage requirement is 48 hours of average day based on standards set forth in the Handbook on Water Systems 2nd Edition HDR Engineering Inc. © 2001 ("Capacity" page 957) "... a minimum emergency storage volume would be enough to supply two days [48-hours] of average demand in the area served by the storage facility."
3. Based on 2013 total water produced a 48-hour average demand in the CWC area is 4,453,037 gallons.
4. CWC believes that using the December 31, 2013 customer count is too low and proposes the following projected June 2014 numbers. CWC is prepared to provide actual numbers when available.
5. Water use should be based on gallons pumped and not gallons sold. It is reasonable to expect that unaccounted for and system use water is an inherent element of water consumption and should be factored into the analysis.
6. Based on ACC formula applying CWC adjustments noted, the peak day of peak month projected use (the day where demand for water from CWC customers is at its highest) can reasonably be estimated to be at least 3,200,504 gallons.

Based on CWC's adjustments, it projects the number of customers to be approximately 12,992 at June 2014, which affects both the average and peak day projected use within the peak month, as shown in Table 1:

Table 1

System Requirements
Peak month divided by 30 adjusted for peak day

		Peak Day of Peak Month		Average Day of Peak Month	Average Day of Year 2013
Customer Counts	Dates	ACC	CWC		
Number of customers at Jan 2013			12,868	12,868	12,868
Number of customers at June 2013		12,902	12,902	12,902	12,902
2013 6 month Increase			34	34	34
Number of customers at Dec 2013		12,958	12,958	12,958	12,958
Number of customers projected to June 2014			12,992	12,992	12,992
Water Use					
Gallons of water sold June 2013 (ACC basis)		69,556,000			
Gallons of water produced in the year 2013					795,994,000
Gallons of water produced June 2013 (CWC basis)			76,280,000	76,280,000	
Number of customers June 2013		12,902	12,902	12,902	12,902
Average gallons per customer for a month		5,391	5,912	5,912	5,141
Gallons per customer per day (/30)		180	197	197	171
Peak factor (per day x 1.25)		225	246	-	-
Number of customers at Dec 2013		12,958	-	-	-
Number of customers projected to June 2014		-	12,992	12,992	12,992
Avg day of 2013 (based on produced CWC)					2,226,518
Avg day of peak month (based on prod CWC)				2,560,403	
Peak day of peak month (based on prod CWC)			3,200,504		
Peak day of peak month (based on sold ACC)		2,910,746			
Hourly projected water requirement (gallons)		121,281	133,354	106,683	92,772
48-Hours supply		5,821,492	6,401,009	5,120,807	4,453,037

Reservoir storage components are described on Table 2; volume is allocated for overflow, operations, equalizing, emergency and dead storage, based on standards set forth in the Handbook on Water Systems ("Capacity" figure 27-1 on page 955).

Table 2

Storage Component Breakdown (Gallons)

Reservoir Number	#1	#2 (Current)	#3	#4	Well 10 Forebay	Well 11 Forebay
Overflow less 1 ft	129,000	207,000	83,000	167,000	37,500	37,500
Normal Operating	156,000	180,000	250,000	500,000	37,500	131,250
Equalizing	222,000	222,000	250,000	500,000	50,000	37,500
Emergency	493,000	347,000	417,000	583,000	75,000	18,750
Dead	-	44,000	0	250,000	100,000	75,000
Total Design in Gallons	1,000,000	1,000,000	1,000,000	2,000,000	300,000	300,000
Average Operating Storage	793,000	659,000	792,000	1,333,000	143,750	121,875
AOS Percent of Design	79%	66%	79%	67%	48%	41%

Storage Component Breakdown (Feet of Water)

Reservoir Number	#1	#2 (Current)	#3	#4	Well 10 Forebay	Well 11 Forebay
Overflow less 1 ft	1.5	2.0	2.0	2.0	1.5	2.0
Normal Operating	2.0	2.0	6.0	6.0	1.5	7.0
Equalizing	3.0	3.0	6.0	6.0	2.0	2.0
Emergency	8.0	7.5	10.0	7.0	3.0	1.0
Dead	0.0	1.5	0.0	3.0	4.0	4.0
Total Design in Feet	14.5	16.0	24.0	24.0	12.0	16.0
Average Operating Storage	12.0	11.5	19.0	16.0	5.8	6.5
AOS Percent of Design	83%	72%	79%	67%	48%	41%

Storage Component Breakdown (Percent)

Reservoir Number	#1	#2 (Current)	#3	#4	Well 10 Forebay	Well 11 Forebay
Overflow less 1 ft	13%	21%	8%	8%	13%	13%
Normal Operating	16%	18%	25%	25%	13%	44%
Equalizing	22%	22%	25%	25%	17%	13%
Emergency	49%	35%	42%	29%	25%	6%
Dead	0%	4%	0%	13%	33%	25%
Total Design	100%	100%	100%	100%	100%	100%

Note - Component breakdown description per Handbook on Water Systems 2nd Edition HDR Engineering Inc. © 2001 ("Capacity" page 955 figure 27-1.)

The lowest operating levels include the equalizing and emergency water storage: this is labelled "Lowest Operating Storage", average operating includes 50% of operating storage. Table 2 also

show storage component breakdown (gallons) for each reservoir and forebay in the CWC system. Forebays were designed to operate as a buffer between the well pumps and the boosters.

Based on the calculations below, the removal of reservoir #2 (Table 3 column A) will bring total available storage at average operating storage levels for emergencies and equalization to 3,183,625 gallons, which is below 4,453,037 gallons, its storage target, and below its 3,200,504 gallon peak day of peak month. Using average operating storage CWC would have 34 hours of storage for average usage, which is below its 48-hour emergency supply target.

CWC believes it is prudent to remove reservoir #2, based on its vulnerability to contamination, safety and security considerations. The reservoir is located in a remote desert area west of the service area. In the mid 1980's the reservoir had been subject of vandalism (knife cut), which could not have happened with a steel tank.

Should reservoir #4 (its largest remaining reservoir) go offline (Table 3 column B), the total available storage at average operating storage levels for emergencies and equalization is 1,850,625 gallons, or 20 hours of storage to meet the average day demands.

Table 3

Existing System Storage and Removal of Reservoir #2

					A	B
Storage Available	Design Capacity	Lowest Operating Storage (LOS)	Average Operating Storage (AOS)	Maximum Operating Storage (MOS)	Reservoir #2 Removed (AOS)	Res. #4 Offline & Reservoir #2 Removed (AOS)
Reservoir #1	1,000,000	715,000	793,000	871,000	793,000	793,000
Reservoir #2	1,000,000	569,000	659,000	749,000	-	-
Reservoir #3	1,000,000	667,000	792,000	917,000	792,000	792,000
Reservoir #4	2,000,000	1,083,000	1,333,000	1,583,000	1,333,000	-
Well 10 Forebay	300,000	125,000	143,750	162,500	143,750	143,750
Well 11 Forebay	300,000	56,250	121,875	187,500	121,875	121,875
Total	5,600,000	3,215,250	3,842,625	4,470,000	3,183,625	1,850,625
Hrs of storage (Avg Day of Peak Mo)		30	36	42	30	17
Hrs of storage (Peak Day of Peak Mo)		24	29	34	24	14
Hrs of storage (Avg Day of Year)		35	41	48	34	20

CWC also considered and rejected replacing reservoir #2 with a 1,000,000 gallon above ground steel tank (Table 4 column C). At average operating storage levels this will bring total available storage for emergencies and equalization to 3,842,625 gallons, which is below 4,453,037 gallons, its storage target. Using average operating storage CWC would have 41 hours of storage for average usage, which is below its 48-hour emergency supply target.

Should reservoir #4 (its largest remaining reservoir) go offline (Table 4 column D), the total available storage using average operating storage levels for emergencies and equalization is 2,509,625 gallons, or 27 hours of storage to meet average day demands. This would leave CWC vulnerable in the case of a prolonged power outage.

Table 4

Replace Reservoir #2 with 1,000,000 Gallon Above Ground Steel Tank

			C			D
Storage Available	Design Capacity	Lowest Operating Storage (LOS)	Average Operating Storage (AOS)	Maximum Operating Storage (MOS)	Reservoir #4 Offline (LOS)	Reservoir #4 Offline (AOS)
Reservoir #1	1,000,000	715,000	793,000	871,000	715,000	793,000
Reservoir #2 @ 1M Steel	1,000,000	569,000	659,000	749,000	569,000	659,000
Reservoir #3	1,000,000	667,000	792,000	917,000	667,000	792,000
Reservoir #4	2,000,000	1,083,000	1,333,000	1,583,000	-	-
Well 10 Forebay	300,000	125,000	143,750	162,500	125,000	143,750
Well 11 Forebay	300,000	56,250	121,875	187,500	56,250	121,875
Total	5,600,000	3,215,250	3,842,625	4,470,000	2,132,250	2,509,625
Hrs of storage (Avg Day of Peak Mo)		30	36	42	20	24
Hrs of storage (Peak Day of Peak Mo)		24	29	34	16	19
Hrs of storage (Avg Day of Year)		35	41	48	23	27

A 2,000,000 gallon above ground steel tank replacement of reservoir #2 (Table 5 column E) at average operating storage levels would bring total available storage for emergencies and equalization to 4,516,625 gallons, which provides significantly more assurance CWC can supply water to its customer base in an emergency situation. Using average operating storage for average day usage CWC would have 49 hours of storage for average usage, which meets its 48-hour emergency supply target.

Should reservoir #4 (its largest remaining reservoir) go offline (Table 5 column F), the total available storage at average operating storage levels for emergencies and equalization is 3,183,625 gallons, or 34 hours of storage to meet average usage demands.

Further, the opportunity to double the capacity of reservoir #2 at this time for an incremental increase in cost will better protect the system from long-term power outages. The average age of CWC's customers (many of whom are retirees) makes them particularly vulnerable to water outages. The benefits to replacing reservoir #2 with a 2,000,000 gallon storage facility (and the long-term security it brings) significantly outweighs the incremental cost of the additional capacity in CWC's view.

Table 5

Replace Reservoir #2 with 2,000,000 Gallon Above Ground Steel Tank

			E			F
Storage Available	Design Capacity	Lowest Operating Storage (LOS)	Average Operating Storage (AOS)	Maximum Operating Storage (MOS)	Reservoir #4 Offline (LOS)	Reservoir #4 Offline (AOS)
Reservoir #1	1,000,000	715,000	793,000	871,000	715,000	793,000
Reservoir #2 @ 2M Steel	2,000,000	1,083,000	1,333,000	1,583,000	1,083,000	1,333,000
Reservoir #3	1,000,000	667,000	792,000	917,000	667,000	792,000
Reservoir #4	2,000,000	1,083,000	1,333,000	1,583,000	-	-
Well 10 Forebay	300,000	125,000	143,750	162,500	125,000	143,750
Well 11 Forebay	300,000	56,250	121,875	187,500	56,250	121,875
Total	6,600,000	3,729,250	4,516,625	5,304,000	2,646,250	3,183,625
Hrs of storage (Avg Day of Peak Mo)		35	42	50	25	30
Hrs of storage (Peak Day of Peak Mo)		28	34	40	20	24
Hrs of storage (Avg Day of Year)		40	49	57	29	34

An example of how additional capacity could assist CWC to resolve service issues occurred on February 3, 2011 at approximately 9 a.m. At that time, CWC experienced a 6" fire sprinkler break, which resulted in the loss of more than 750,000 gallons of water within 6 hours. CWC was alerted by its SCADA system and operators were mobilized to investigate the service area to identify the possible causes of the sudden drain in water supplies. The leak was ultimately reported by a customer. Operators noted how vulnerable the reservoirs were to sudden leaks, and felt fortunate that the break occurred during working hours. Had the incident happened at night or on a weekend, the response time may have been delayed, causing serious damage to the system infrastructure, as well as water shortages in the system.

Put simply, CWC's system has been based on having four wells and four reservoirs (storage facilities) from a systems reliability perspective. This means that the system has been designed based on these components in service. The design has served CWC and its customers well for over 37 years. To simply remove one component significantly changes the system design and puts the system at greater risk of a major event leading to customers not having water more frequently and for a greater period of time. CWC believes this is an unacceptable approach because it does not conform to its best management practices. Further, the above event demonstrates our need to increase water storage facilities. Based on the above CWC believes it is reasonable to replace reservoir #2 with the proposed aboveground storage tank and increase storage capacity.

Thus, CWC has several justifications to replace the existing reservoir #2 with the proposed aboveground storage tank beyond simply looking at production as an alternative to storage.

Reservoir #2 should be replaced with an aboveground 2,000,000 gallon steel tank to eliminate the following deficiencies:

1. Vulnerability to contamination (vandalism, terrorism, over filling)
2. Increasing maintenance cost
3. Operational challenges
4. Water quality challenges
5. Employee safety concerns

The following are excerpts from various water utility emergency preparedness articles and government agencies regarding the importance of having ample storage in a prolonged outage or natural disaster.

1) "Many utilities have taken steps to identify their vulnerability to power loss and have taken preventive action, such as increasing storage capacity and using backup power strategies to ensure continued operations." ('Superstorm Sandy After Action Report'; Water/Wastewater Agency Response Network, © 2013 American Water Works Association at page 3.)

2) "Jackson said the guiding thought behind the recovery is that without a sufficient supply of water and a functioning wastewater system and effective drainage system, there is no city. 'It has practically become a mantra of ours,' Jackson said, cautioning that many others 'don't really get it yet." ("Katrina Stories Highlight New Realities of Disaster Planning"; Water Beat.) © 2006 American Water Works Association at page 22.)

3) "Assess the significance of extended outages - Multi-agency emergency water supply plans should include an assessment as to recovery periods being extended due to critical spare parts not being available for long durations and the time for restoring critical infrastructure to functional condition. Consequently, provision of potable water and other measures will be required for greater durations than those conventionally planned." ("Planning for Emergency Drinking Water Supply"; EPA 600/R-11/054 June 2011 at page 31.)

4) "The recovery period would likely be of a long duration since events that impact drinking water systems also have profound primary impacts on other infrastructure (e.g., power, transportation, communications) and secondary impacts (e.g., disruption to supply chains, mobility difficulties, security concerns, human-resource depletion). ("Planning for Emergency Drinking Water Supply"; EPA 600/R-11/054 June 2011 at page 38.)

5) "Treatment operations resiliency (percent): Percent of minimum daily demand met with the primary production or treatment plant offline for 24, 48, and 72 hours. (Note: "minimum daily demand" is the average daily demand for the lowest production month of the year.) ("A Primer for Water and Wastewater Utilities" American Water Works Association, © 2008, at page 39.) This illustrates the need to consider 48 and 72 hours of emergency storage even under minimum demands and lowest production levels.

Respondents: John Meyer and Arturo Gabaldon

Exhibit 4

SMYTH INDUSTRIES

4010 E. Illinois St.
Tucson, AZ 85714
(520) 750-8719
(520) 750-9544

Load Summary	
Well Pump (400HP)	477
Booster Pump #1 (100HP)	124
Booster Pump #2 (100HP)	124
Booster Pump #3 (100HP)	124
Booster Pump #4 (100HP)	124
Booster Pump #5 (100HP)	124
20/240 Volt XFMR (10KVA)	20.8
Sub Total:	1117.8
25% Largest Motor	119.25
Total:	**1237.05**

Well Pump (350HP)	414
Booster Pump #1 (125HP)	156
Booster Pump #2 (125HP)	156
Booster Pump #3 (125HP)	156
Booster Pump #4 (125HP)	156
Booster Pump #5 (125HP)	156
20/240 Volt XFMR (10KVA)	20.8
Sub Total:	1214.8
25% Largest Motor	103.5
Total:	**1318.3**

License #ROC154663 A-General Engineering
License #ROC171540 L-11 Electrical
ASME Boiler and Pressure Vessel 'U' Certified
The National Board of Boiler and Pressure Vessel Inspectors 'R' Certified
UL 508A Manufacturing #E306021

Exhibit 5

COMMUNITY WATER COMPANY
OF GREEN VALLEY'S
RESPONSES TO STAFF'S VERBAL REQUESTS
DATED MAY 7, 2014
(FIFTH SET OF DATA REQUESTS)
DOCKET NO. W-02304A-14-0041
Dated May 13, 2014

STF 5.1 What is the price difference between a 1 million gallon and a 2 million gallon above ground storage tank, of similar design?

Response:

The price difference is estimated at $197,814, see below:

	2 Million Gallons	1 Million Gallons	Difference	Percent 1MG
Total Tank Bid	875,660	710,000	165,660	23%
Taxes @ 6.1%	53,415	43,310	10,105	23%
Controls Reconfiguration	15,000	15,000	-	0%
Flowmeters	15,500	15,500	-	0%
Fencing	33,434	33,434	-	0%
Atty. Fees	20,000	20,000	-	0%
Overhead (5%)	51,000	42,100	8,900	21%
Contingency	131,491	118,342	13,149	11%
Surveying	4,500	4,500	-	0%
Total	1,200,000	1,002,186	197,814	20%
verage Operating Storage (Gallons)	1,333,000	666,500	666,500	100%
Cost per AOS gallons	0.90	1.50	0.60	40%
Cost per design gallons	0.60	1.00	0.40	40%

Quotes are attached.

Respondent: John Meyer

COMMUNITY WATER COMPANY
OF GREEN VALLEY'S
RESPONSES TO STAFF'S VERBAL REQUESTS
DATED MAY 7, 2014
(FIFTH SET OF DATA REQUESTS)
DOCKET NO. W-02304A-14-0041
Dated May 13, 2014

STF 5.2 What are CWC's concerns regarding emergency generators located at the well-sites?

Response:

Safety Concerns:

CWC has concerns for employee safety. A review of our well sites indicates that the well 11 site may not be large enough to accommodate a sufficiently-sized generator. An inappropriate space for maintenance and inspection would create an unsafe work environment. An above ground storage facility will not require additional land.

Further, CWC well sites are located in residential areas, the use of large quantities of combustible fuels (either natural gas or diesel) in residential area will increase the potential risk to the community. An above ground storage facility provides direct available water supplies and greater security.

Operational Cost/Rate Concerns:

CWC is concerned that there would not be sufficient fuel supplies to meet our emergency needs. Forebays have approximately a 10-hour fuel supply; alternative power supplies for wells would have a similar limitation. CWC has no stand by fuel supplies in a major power outage. An above ground storage facility will rely on being filled when electricity is available.

CWC has concerns about natural gas supplies. Availability of natural gas in the area of the wells is unknown. Gas utility may require larger delivery lines. An above ground storage facility will not rely on alternative fuel sources.

CWC has concerns about the impact on operations. In the late 1970's and early 1980's Community Water Company stored gasoline at its warehouse facility for use by its service vehicles. The operating costs required from the regulations outweighed the savings from purchasing fuel in bulk. Further, regulatory and permitting requirements may be implicated, which adds to operational costs. An above ground storage facility will not rely on alternative fuels.

CWC is concerned about increasing the complexity of operating the system, which would increase employee training and wage costs. This would affect rate payers.

CWC has concerns about the impact on operating costs. Storage requirements of diesel fuel to retain its usefulness are unknown. Unused fuel may have to be dumped or used, resulting in

higher operating costs on water on rate payers. An above ground storage facility will not increase operating costs.

Respondents: John Meyer and Arturo Gabaldón

COMMUNITY WATER COMPANY
OF GREEN VALLEY'S
RESPONSES TO STAFF'S VERBAL REQUESTS
DATED MAY 7, 2014
(FIFTH SET OF DATA REQUESTS)
DOCKET NO. W-02304A-14-0041
Dated May 13, 2014

STF 5.3 Please provide any records regarding past power failures to CWC.

Response:

CWC does not have records of power failures in its possession. Management has attempted to inquire with TEP but has not yet received a response.

Respondent: John Meyer and Arturo Gabaldón

COMMUNITY WATER COMPANY
OF GREEN VALLEY'S
RESPONSES TO STAFF'S VERBAL REQUESTS
DATED MAY 7, 2014
(FIFTH SET OF DATA REQUESTS)
DOCKET NO. W-02304A-14-0041
Dated May 13, 2014

STF 5.4 Please explain the need for the new storage facility based on CWC's planning. What are CWC's overall concerns?

Response:

CWC is planning for a major event (such as a power failure) that would adversely impact its entire system, and its ability to provide safe and reliable service to its customers. CWC management and staff are responsible for the delivery of suitable water to a population of over 22,000 persons (almost 13,000 customers) many of whom are retirees 75 years old or older. This population is especially vulnerable, which is the basis for a 48-hour supply of water based on average use, before curtailment measures would have to be put into effect. CWC continues to work with local emergency management organizations to develop plans in case of such an event, in addition to ensuring a reliable water supply in accordance with its best practices.

Respondent: John Meyer and Arturo Gabaldón

COMMUNITY WATER COMPANY
OF GREEN VALLEY'S
RESPONSES TO STAFF'S VERBAL REQUESTS
DATED MAY 7, 2014
(FIFTH SET OF DATA REQUESTS)
DOCKET NO. W-02304A-14-0041
Dated May 13, 2014

STF 5.4 What does a backup generator cost?

Response:

Per quote from Barney Foster at Simonsen, Generator Service, Inc. (520-889-9581) the cost of a 500 KW Natural Gas Unit with ATS is $210,000.

Respondent: John Meyer

COMMUNITY WATER COMPANY OF GREEN VALLEY'S RESPONSES TO STAFF'S SECOND SET OF DATA REQUESTS DOCKET NO. W-02304A-14-0041 Dated March 10, 2014

JL 2.1 New Storage Tank — Please provide a copy of engineering report regarding the need for the new storage tank. This report should be signed by a licensed professional engineer in the State of Arizona, and include following:

a. Submit a cost estimate with sufficient detail to the proposed new aboveground storage tank;

b. Provide professional engineering opinion regarding the existing Reservoir 42, and compare the costs and benefits to repair the existing Reservoir #2 vs. replace it.

RESPONSE: See attached.

Respondent: John Meyer, CWCGV Treatment Supervisor

SMYTH STEEL MANUFACTURING, INC.
4010 E. Illinois St.
Tucson, AZ 85714
(520) 750-8719
(520) 750-9544

March 17, 2014

To: John Meyer
Re: 2.0MG Reservoir

We are pleased to offer the following proposal to fabricate and install a new 2.0MG water storage tank and associated piping per AWWA D100-96. Said tank will be 120'Ø x 24' tall.

<u>One 2.0 MG steel water storage tank, 120' diameter x 24' height</u>

Includes:

- One roof vent and roof access hatch
- Shell man-ways
- One overflow, inlet and outlet piping
- Gauge board
- Interior and exterior ladder
- NSF approved interior and exterior coatings
- Installation of concrete tank base
- Installation of gravel
- Shop drawings

Excludes: Valves, flow meters, site piping, etc.
Taxes, Bonds and Permits

Price - $742,900

<u>Add Alternate:</u>

- Fabricate and install 60 LF of 16" carbon steel mixing pipe with 4 pipe stands and painted.

Price - $5,960

<u>Site Work</u>

Includes:

- Remove and haul off existing block wall
- Remove existing Hypalon tank liner
- Backfill existing reservoir (pricing assumes adequate material available on site to complete pad, no import material)
- Compaction testing of backfill by geotechnical consultant
- Install 16" piping inlets/outlets to the new tank and connect to existing system

SMYTH STEEL MANUFACTURING, INC.
4010 E. Illinois St.
Tucson, AZ 85714
(520) 750-8719
(520) 750-9544

Excludes:

- Taxes, bonds and permits
- Backflow preventer(s)
- Flow meter(s)

Price - $126,800

Due to the volatility of the steel and fuel markets, this quote is valid for 30 days from the above date. We will need to order and bill for material upon receipt of a purchase order.

If you have any questions please do not hesitate to contact our office.

Respectfully submitted,

Accepted

By:_____
Gary Smyth
President
Date:_____

Preliminary Schedule Of Values

Project: Continental Road Reservoir Improvements - 2 MG Storage Tank

Prepared For: Community Water

Prepared By: Smyth Industries, INC.

REVISED: March 17, 2014

Item No.	Description	Amount	Units	Total
1	Survey	1	EA	$2,000
2	Geotechnical Site Evaluation & Materials Testing	1	EA	$12,000
3	Structural Design	1	EA	$5,000
4	Demo, Grading & Backfill	1	EA	$69,600
5	Underground Piping	1	EA	$38,200
6	Tank Mixing Pipe	1	EA	$5,960
7	2 MG Welded Steel Tank per AWWA Standards	1	EA	$742,900

Notes:

1) Due to the volatilty of the steel and fuel markets, this proposal is valid for 30 days from the date listed above.

2) This proposal addresses the increased costs of tank coatings and the underground piping installation having no backflow prevention devices.

SMYTH INDUSTRIES INC.
4010 E. Illinois St.
Tucson, AZ 85714
(520) 750-8719 Phone | (520) 750-9544 Fax

July 1, 2014

Community Water Company of Green Valley
1501 S. La Canada Dr.
Green Valley, AZ 85622

Dear Community Water,

This letter is in response to your request for Smyth Industries to evaluate the two options being considered to replace the existing hypalon tank at the Reservoir #2 site on Continental Road. The two options being considered are:

1. Install a new above-ground welded steel potable water storage tank.
2. Replace the existing below-ground hypalon tank.

We conclude that there are many advantages gained with the construction of a welded steel tank, including health and safety, cost, security, and maintenance while there are only minimal benefits gained with the installation of a new hypalon tank. The pros and cons are described in greater detail below.

Cost

The approximate cost to replace the Reservoir #2 hypalon tank is $500,000 and the estimated service life of that tank is 12-13 years. The cost of the new welded steel tank is about $1,000,000 with an estimated service life of 30 years. The cost per year of the hypalon tank is about $38,000-42,000 while the cost per year of the welded steel tank is about $33,000-34,000. Additionally the hypalon tank would require about 250 man hours of maintenance annually for the following actions:

- Dewatering the hypalon cover after rainfall
- Cleaning the hypalon cover
- Maintaining the motor operated valve
- Maintaining the pressure pump
- Maintaining the control system

The maintenance required for steel tanks is usually repair of the interior coatings. Typically these repairs are under warranty for the first 2 years of service. After warranty, about every 8-10 years coating maintenance is required at a cost of about $5,000-$10,000, and a full recoating of the tank interior may be needed after 15-20 years at a rough cost of about $100,000.

Health and Safety

During site visits we observed and noticed the existing hypalon tank cover (which is at ground level and exposed to the elements) has been repaired, likely due to splitting or vandalism. These penetrations of the hypalon cover allow for contaminants to enter the tank prior to their repair.

SMYTH INDUSTRIES INC.
4010 E. Illinois St.
Tucson, AZ 85714
(520) 750-8719 Phone | (520) 750-9544 Fax

Additionally the connection of the hypalon tank cover to the concrete ring at the edge of the tank is made via plates and bolts. Said connection is not likely watertight which may permit contaminants to enter the tank via rainwater runoff. This is of concern when considering the proximity to the existing mine and desert animal fecal material. Another safety concern is that there is no way to inspect the inside of the hypalon tank, and Community Water has been unable to contract a certified diver to inspect the inside of the tank to date.

A welded steel tank would eliminate all of the health and safety concerns described above.

Hydraulic Advantages

As mentioned prior, the existing hypalon tank is a below-ground storage vessel. Per plan documents provided by Community Water the bottom of the existing tank is 16-feet below ground surface. This requires that the inlet/outlet is at that level as well which reduces the amount of available head pressure within the system. Also the shared inlet/outlet in the existing system results in poor water exchange or circulation within the tank leading to stagnation and less desirable water quality.

An above-ground welded steel tank would increase the amount of head pressure available within the system and based on the information provided by Community Water it would reduce pumping costs at well #10. It would also allow for the elimination of the pressure pump at this site and create a redundant source of water pressure within the distribution system. Additionally the welded steel tank design would include an inlet and outlet with at least 90-degrees of separation between which would increase circulation in the tank, thereby increasing water quality. Another benefit resulting from the above ground steel tank is that the Reservoir #2 site would then be under positive pressure which is generally more secure against contamination.

If you have any questions, comments, or concerns regarding the opinions and recommendations described herein please contact Smyth Industries.

Sincerely,

Jesse Schultz, PE
Project Manager

SMYTH INDUSTRIES

4010 E. Illinois St.
Tucson, AZ 85714
(520) 750-8719
(520) 750-9544

Raul Pina CPE Consultants
Re: Community Water Generator Quotes
Date: August 8, 2014

Natural Gas Generator: $1,135,318.00 (per site)

- Furnish and install (1) new 1000kW Natural Gas Generator.
  - Automatic Transfer Switch.
  - Natural Gas Engine (exceeds 48hr runtime requirement).
  - Sound Attenuated Enclosure.
  - Wire from the SES to the Transfer Switch and continued to the power distribution blocks in the wireway to feed the pump panels.
  - Conduit and necessary appurtenances.

Diesel Generator: $466,568.00 (per site)

- Furnish and install (1) new 1000kW Diesel Generator.
  - Automatic Transfer Switch.
  - 48 Hour Diesel Storage.
  - Sound Attenuated Enclosure.
  - Wire from the SES to the Transfer Switch and continued to the power distribution blocks in the wireway to feed the pump panels.
  - Conduit and necessary appurtenances.

Exclusions:

- Permits
- Site Work
- Concrete Pads
- Taxes
- Modifications to electrical rack for the transfer switch.

Thank you,

Ray Rogers
Project Manager
Ray@SmythSteel.com
Office 520.750.8719

License #ROC154663 A-General Engineering
License #ROC171540 L-11 Electrical
ASME Boiler and Pressure Vessel 'U' Certified
The National Board of Boiler and Pressure Vessel Inspectors 'R' Certified
UL 508A Manufacturing #E306021

SMYTH INDUSTRIES

4010 E. Illinois St.
Tucson, AZ 85714
(520) 750-8719
(520) 750-9544

Load Summary	
Well Pump (400HP)	477
Booster Pump #1 (100HP)	124
Booster Pump #2 (100HP)	124
Booster Pump #3 (100HP)	124
Booster Pump #4 (100HP)	124
Booster Pump #5 (100HP)	124
20/240 Volt XFMR (10KVA)	20.8
Sub Total:	1117.8
25% Largest Motor	119.25
Total:	**1237.05**

Well Pump (350HP)	414
Booster Pump #1 (125HP)	156
Booster Pump #2 (125HP)	156
Booster Pump #3 (125HP)	156
Booster Pump #4 (125HP)	156
Booster Pump #5 (125HP)	156
20/240 Volt XFMR (10KVA)	20.8
Sub Total:	1214.8
25% Largest Motor	103.5
Total:	**1318.3**

License #ROC154663 A-General Engineering
License #ROC171540 L-11 Electrical
ASME Boiler and Pressure Vessel 'U' Certified
The National Board of Boiler and Pressure Vessel Inspectors 'R' Certified
UL 508A Manufacturing #E306021

EMPIRE POWER SYSTEMS
3830 N. Highway Drive
Tucson, AZ 85705

Steve Maddox

Steve Maddox
Empire Power Systems
520-407-3106 Office, 520-955-3106 Mobile, steve.maddox@empire-cat.com

BILL OF MATERIALS

Caterpillar Components Features
101 I 1 LV0011 G3516 PGS 1800 RPM HIGH CR
Sub-items 102 to 104 belong to item 101
102 I 1 4385936 GENERAL AR
103 I 1 4356444 ENGINE AR-GENSET
104 I 1 1441696 GENERATOR AR-PWR (A679)
105 I 1 5N9597 VOLTAGE INDICATOR 480V, 60HZ
106 I 1 3571662 CERTIFICATION GP (EU)
107 I 1 0V1065 END USE: GENERAL EPG
108 I 1 1214713 ENGLISH DISPLAY UNITS
109 I 1 9Y8156 NOTE - STAMP FOR STANDBY POWER
110 I 1 1214712 PANEL LIGHTS/AUXILIARY RELAY
111 S 1 1315451 2301A SPEED CONTROLLER
112 I 1 3612453 CONVERSION GP-S (LVEB)(EC)
113 I 1 LE0617 SPACE HEATER RELAY
114 I 1 5Z3333 ***SPECIAL SETTING REQUEST****
115 I 1 3729106 COVER GP
116 I 1 LE7827 LUBE OIL - DRAIN PRIOR TO SHIP
200 I 1 0V8707 G3516A STANDBY W/ AFRC & RAD
300 I 1 1441696 GENERATOR AR-PWR (A679) L
400 I 1 1441692 GENERATOR AR-PWR (A678)
500 I 1 0V2319 DTO- CONTROL GP (AFRC)
600 I 1 0V2319 DTO - HARNESS GP - WRG
700 I 1 0V2319 DTO - HARNESS GP - WRG
800 I 1 LV0011 G3516 PGS 1800 RPM HIGH CR L
Sub-items 801 to 803 belong to item 800
801 I 1 4385936 GENERAL AR L
802 I 1 4356444 ENGINE AR-GENSET L
803 I 1 1441696 GENERATOR AR-PWR (A679) L
900 I 1 LV0023 G3516 PGS 1800 RPM HIGH CR
Sub-items 901 to 903 belong to item 900
901 I 1 3994460 ENGINE AR-GENSET
902 I 1 3996905 GENERAL ARRANGEMENT
903 I 1 1441696 GENERATOR AR-PWR (A679)
1000 I 1 0V2319 DTO - 52 SQ FT ENG DRIVEN RADIATOR
This line item provides a 52 square foot engine driven radiator that provides 104F with 7F rise ambient capability at 1000ft a.s.l. and 0.5" of water external static.
Radiator will be supplied loose for on-site installation due to the size.
Drop over Sound Attenuated Enclosure complete with exhaust system, distribution panel and lighting

CATERPILLAR CTS 1500 AMP AUTOMATIC TRANSFER SWITCH

Caterpillar Components Features

Feature Code	**Qty**	**Description**
DELATRN_I	1	DELAYED TRANSITION
STANBYP_I	1	STANDARD - NO BYPASS
CONTACT_I	1	CONTACTOR

NEMA03R_I	1	NEMA 3R ENCLOSURE
1600AMP_I	1	1600 AMPS
003POLE_I	1	3 POLES
ATS00V7_I	1	277/480V, 3 PHASE, 4 WIRE, 60H
MX00250_I	1	MX250 CONTROLLER
MCONS01_I	1	24VDC MX250 CONTROL PACKAGE
24DC0Q2_I	1	MX PK SHAVE/REMOTE TEST(24VDC)
ZNETM00_I	1	MX MODBUS COMM CARD
GNDBAR6_I	1	MX GndBus 12-#2 600M 600-4000A
CTSD00B03160E		

NOTE: ALL SHIP LOOSE ITEMS TO BE INSTALLED BY OTHERS – PART OF GENSET INSTALLATION

GENERAL
Parts book and operation manual
Generator test report
0.8 factory load test

Freight is included FOB truck job site, Green Valley, AZ

Basic Packaged Generator Set Start up includes:
All work to be performed during regular business hours, 7:00 a.m. to 4:00 p.m. Monday – Friday.

- Install acid in the batteries
- Hook up batteries
- Visually inspect unit for damage or missing parts
- Check Fluid levels – install coolant in installed cooling system
- Check isolators adjustments
- Hook up auto start wires to Generator
- Verify Battery Charger is working
- Verify Block Heater is working
- Prime fuel system
- Hook up to EMCP 2+ panel verify settings are at factory default settings
- Copy Configuration of panel and give to sales department
- Service meter extend days out
- Start up unit verify operation at no-load
- Verify correct voltage and hertz
- Check Safeties
- Verify all gauges are reading correctly
- Connect and disconnect pure resistive load bank with one 75 foot run.
- Load bank for 4 hours
- Perform Startup Inspection Form and give paper work to the sales department
- Perform facility load tests
- Perform basic training session in conjunction with start-up services

Automatic Transfer Switch Start up includes: (To be performed at time of genset startup)
All work to be performed during regular business hours, 7:00 a.m. to 4:00 p.m. Monday – Friday.

- Visually inspect switch for damage or loose items
- Covers are installed and secured
- Manually transfer switch with no voltage
- Verify limit switches are working
- Verify all electrical connections are secure
- Power up switch
- Check voltages on normal and emergency circuit
- Calibrate voltage sensing
- Check phase rotation
- Record settings and timers

- Make sure generator is in auto and breaker closed
- Perform a power outage test on the transfer switch
- Time each phase of the switch functions and record
- Verify the times are the same as the settings
- Verify bypass system (by-pass switches only)
- **Perform ATS start-up in conjunction with genset start-up services**

Thank you for the opportunity to quote this project. ***Empire Power Systems*** remains at your disposal for any additional information or assistance that you may require.

Best regards,

Empire Power Systems

Steve Maddox

Steve Maddox, Account Manager
Direct: (520) 407-3106 - Fax: (520) 407-3153 - Cell: (520) 955-3106 - Email: smaddox@empire-cat.com

This Quote Specifically Excludes:

- Any applicable Taxes
- Installation, electrical, mechanical, permits, and engineering
- Crane or Rigging at Job Site

Subject to the attached terms and conditions. This quote automatically expires 11/30/2014.

TERMS & CONDITIONS

A) Customer is responsible for any and all installation of the equipment supplied by **Empire Power Systems**, unless otherwise specified in writing. All equipment needed to perform any loading or unloading of the equipment supplied by **Empire Power Systems** is the responsibility of the buyer.

B) Empire Power Systems limits the scope of supply for this quotation to the equipment and services listed in our bill of material. Unless specifically listed in our bill of material, equipment not indicated is assumed to be supplied by others. We have detailed the equipment proposed in the bill of material. Please check it to be certain that it meets your requirements.

C) Empire Power Systems reserves the right to correct any errors or omissions. Standard warranty of the manufacturer applies. Copies are available upon request.

D) Contracts which include penalty or liquidated damage clauses, waivers of subrogation, or naming a third party additionally insured are not acceptable or binding on **Empire Power Systems**, unless accepted and confirmed in writing by an officer of **Empire Power Systems** at its Phoenix division office.

E) Unless agreed to in writing, **Empire Power Systems** will not accept purchase orders which:

- Require Empire Power Systems to pay any and all legal expenses for the purchaser in the event of a dispute
- Require that Empire Power Systems be responsible for design work and/or guarantee that a performance standard for a system be met
- Require completion and acceptance of the project by the owner before payment

F) There will be a **25%** of order cancellation fee for any orders cancelled, once placed and accepted by **Empire Power Systems**.

G) Empire Power Systems' standard and extended terms and conditions are included in the quotation and hereby become part of this quotation. These same terms need to be noted on any purchase order received by **Empire Power Systems** in order to process your order.

H) Empire Power Systems will not be responsible for any labor or material charges by others associated with the start-up and installation of this equipment unless previously agreed upon, in writing by **Empire Power Systems**.

I) Empire Power Systems is a supplier of materials and related services and not a contractor. Retention is not acceptable.

J) Credit is subject to **Empire Power Systems,** approval at its sole discretion. This quote in no way constitutes approval of credit.

K) Empire Southwest LLC has entered a like-kind exchange (LKE) program. If the equipment described herein qualifies and is purchased, notice is hereby given that **Empire Southwest LLC** will assign its rights under the sales contract to **Empire Exchange LLC** including, if applicable, the right to purchase any trade-in property. If this contract is assigned to **Empire Exchange LLC** sales proceeds must be remitted according to the invoice rendered.

L) Sales payments are due Net 10; all others Net 30. Unless otherwise agreed in writing by a corporate officer of Empire Southwest, LLC ("Empire"), the purchase of goods (including, but not limited to, new and used equipment, attachments, parts and technology) or services from Empire will be governed solely by Empire's Terms and Conditions of Sales and Service (the "Terms"), which are available at www.empire-cat.com/termsandconditions or such other successor website at which Empire posts its Terms from time to time. A hard copy of the Terms is available upon written request to terms.conditions@empire-cat.com. Empire's Terms are hereby incorporated by reference into this document and all other documents related to your purchase of goods or services from Empire. By purchasing goods or services from Empire, you agree to be bound by Empire's Terms.

Terms and conditions of this quotation govern over any conflict between this document and customer's purchase order or other document.

Proposal / Submittal Attachment
Emissions Compliance Section

The generator engine supplied specific to this project is labeled, **EPA Stationary Emergency.**

- The engine configuration supplied meets USA Environmental Protection Agency, (EPA) Stationary Emergency Certifications established January 1, 2011 for Stationary Use Only during Defined Emergency Conditions.

The engine is EPA certified to the following operating conditions:

- Normal source power is lost.
- User starts the emergency generator set to supply power to the electrical loads.
- Normal source power returns.
- User shuts down the emergency generator set and supplies the electrical loads from the normal source.

The engine is **not** certified to the following operational conditions:

- Non-emergency operation.
- Prime Power applications.
- Load management / peak shaving applications.
- Electric Power Rental and other mobile units.
- Installations which run for storm avoidance.

There is no restriction on the number of hours that an emergency installation may run under true emergency conditions, but the EPA regulation only allows operators to run their emergency gen sets for 100 hours per year for maintenance and exercise purposes. However if local regulations dictate, operators may petition the EPA for an increased number of annual maintenance hours. All operation of an emergency generator set must be recorded by the operator and referenced to a non-resettable hour meter fitted to the generator set. New emergency engines built after the

effective date of the tier 4 regulations for their power class, must also be fitted with a permanent label stating that they are for emergency use only.

Image shown may not reflect actual package

SUB BASE FUEL TANK for C27 and C32 ENCLOSURE

Diesel Generator Set

Dual Wall sub base fuel tanks offer an integrated fuel solution for your Cat® diesel generator set.

FEATURES

- UL 142 (US) and ULC S601 (Canada) Listed
- NFPA 30, 37 and 110 installation compliant
- CSA C282-09 and B139-04 installation compliant
- Dual wall, secondary containment (minimum of 110% of primary tank capacity)
- Tank design provides capacity for thermal expansion of fuel
- Direct reading fuel level gauge
- Fuel supply dip tube is positioned so as not to pick up fuel sediment
- Fuel return and supply dip tubes are separated by an internal baffle to prevent recirculation of heated return fuel
- Fuel fill – 101.6 mm (4 in), lockable flip top cap
- Primary tank level detection switch in containment basin
- Primary and secondary tanks are leak tested at 20.7 kPa (3 psi) minimum
- Interior tank surfaces coated with a solvent-based thin-film rust preventative
- Heavy gauge steel gussets suitable for lifting package
- Gloss black polyester alkyd acrylic enamel exterior paint over epoxy based primer
- Primary tanks are equipped with customer connections for remote fuel transfer, return, and vent. Additional ports provided for customer use.
- 2" Atmospheric screened vent cap
- Lockable 2" raised fuel fill with optional seven gallon spill containment
- Leak detection switch
- Port for access to containment tank
- Removable engine supply and return dip tubes
- Fittings for opt fuel levels or auxiliary fuel pump
- Excellent stub-up access beneath circuit breaker (within fuel tank)
- Emergency vents on primary and secondary tanks are sized in accordance with NFPA 30, external to enclosure.
- Compatible with factory enclosures only
- Optional installed fuel level indication at the generator set control panel.
- Seismic certification per applicable building codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007
- Tested and analyzed in accordance with: ASCE 7-98, ASCE 7-02, ASCE 7-05, ICC-ES AC-156
- Anchoring details are site specific, and are dependant on many factors such as generator set size, weight, and concrete strength. IBC Certification requires that the anchoring system used is reviewed and approved by a Professional Engineer.

ATTACHMENTS

Rating			Engine	Strategy	Run Time @ 100% Load (Hrs)		
ekW	kVA	SB/PP/CN			1000 gal	2000 gal	3600 gal
1000	1250	SB	C32	Low BSFC	14.4	28.8	51.9
910	1138	PP	C32	Low BSFC	15.9	31.7	57.1
830	1038	CN	C32	Low BSFC	17.4	34.7	62.5
800	1000	SB	C27	Low BSFC	17.8	35.5	63.9
725	906	PP	C27	Low BSFC	19.3	38.6	69.5
750	938	SB	C27	Low BSFC	18.9	37.8	68.1
680	850	PP	C27	Low BSFC	20.7	41.3	74.4

Rating			Engine	Strategy	Run Time @ 100% Load (Hrs)		
ekW	kVA	SB/PP/CN			1000 gal	2000 gal	3600 gal
1000	1250	SB	C32	ESE (Tier 2)	13.9	27.8	50.1
910	1138	PP	C32	ESE (Tier 2)	15.2	30.4	54.8
830	1038	CN	C32	ESE (Tier 2)	16.3	32.6	58.7
800	1000	SB	C27	ESE (Tier 2)	17.5	34.9	62.8
725	906	PP	C27	ESE (Tier 2)	19.0	38.0	68.3
750	938	SB	C27	ESE (Tier 2)	18.7	37.3	67.2
680	850	PP	C27	ESE (Tier 2)	20.2	40.4	72.7

Rating			Engine	Strategy	Run Time @ 100% Load (Hrs)		
ekW	kVA	SB/PP/CN			1000 gal	2000 gal	3600 gal
800	640	SB	C27	Tier 4 Interim	17.0	34.0	61.1
725	580	PP	C27	Tier 4 Interim	18.8	37.6	67.7

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Materials and specifications are subject to change without notice.
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LEHE0408-00 (01/13)

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DIESEL GENERATOR SET

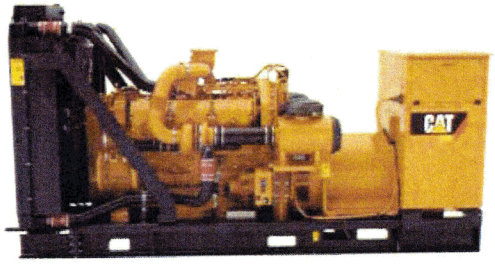

Image shown may not reflect actual package.

STANDBY
800 ekW 1000 kVA
60 Hz 1800rpm 480Volts

Caterpillar is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

FEATURES

FUEL/EMISSIONS STRATEGY
- EPA Certified for Stationary Emergency Application (EPA Tier 2 emissions levels)

DESIGN CRITERIA
- The generator set accepts 100% rated load in one step per NFPA 110 and meets ISO 8528-5 transient response.

UL 2200/ CSA - Optional
- UL 2200 listed packages
- CSA Certified

Certain restrictions may apply. Consult with your Cat® Dealer.

FULL RANGE OF ATTACHMENTS
- Wide range of bolt-on system expansion attachments, factory designed and tested
- Flexible packaging options for easy and cost effective installation

SINGLE-SOURCE SUPPLIER
- Fully prototype tested with certified torsional vibration analysis available

WORLDWIDE PRODUCT SUPPORT
- Cat dealers provide extensive post sale support including maintenance and repair agreements
- Cat dealers have over 1,800 dealer branch stores operating in 200 countries
- The Cat S•O•S℠ program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

CAT C27 ATAAC DIESEL ENGINE
- Utilizes ACERT™ Technology
- Reliable, rugged, durable design
- Four-cycle diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

CAT GENERATOR
- Designed to match the performance and output characteristics of Cat diesel engines
- Single point access to accessory connections
- UL 1446 recognized Class H insulation

CAT EMCP 4 CONTROL PANELS
- Simple user friendly interface and navigation
- Scalable system to meet a wide range of customer needs
- Integrated Control System and Communications Gateway

SEISMIC CERTIFICATION
- Seismic Certification available
- Anchoring details are site specific, and are dependent on many factors such as generator set size, weight, and concrete strength.

  IBC Certification requires that the anchoring system used is reviewed and approved by a Professional Engineer
- Seismic Certification per Applicable Building Codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007
- Pre-approved by OSHPD and carries an OSP-0084-10 for use in healthcare projects in California

STANDBY 800 ekW 1000 kVA

60 Hz 1800rpm 480 Volts

FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	• Air cleaner	
Cooling	• Package mounted radiator	
Exhaust	• Exhaust flange outlet	[ ] Exhaust mufflers
Fuel	• Primary fuel filter with integral water separator • Secondary fuel filters • Fuel priming pump	
Generator	• Matched to the performance and output characteristics of Cat engines	[ ] Oversize and premium generators [ ] Permanent magnet excitation (PMG) [ ] Internal excited (IE) [ ] Anti-condensation space heaters
Power Termination	• Bus bar	[ ] Circuit breakers, UL listed [ ] Circuit breakers, IEC compliant
Control Panel	• EMCP 4 Genset Controller	[ ] EMCP 4.2 [ ] EMCP 4.3 [ ] EMCP 4.4 [ ] Generator temperature monitoring and protection [ ] Load share module [ ] Digital I/O module [ ] Remote monitoring software
Mounting		[ ] Rubber vibration isolators
Starting/Charging		[ ] Battery chargers [ ] Oversize batteries [ ] Jacket water heater [ ] Heavy duty starting system [ ] Charging alternator
General	• Paint - Caterpillar Yellow except rails and radiators gloss black	The following options are based on regional and product configuration: [ ] Seismic Certification per Applicable Building Codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007 [ ] EU Certificate of Conformance (CE) [ ] UL 2200 package [ ] CSA Certification [ ] EEC Declaration of Conformity [ ] Enclosures- sound attenuated, weather protective [ ] Automatic transfer switches (ATS) [ ] Integral & sub-base fuel tanks [ ] Integral & sub-base UL listed dual wall fuel tanks

STANDBY 800 ekW 1000 kVA

60 Hz 1800rpm 480 Volts

SPECIFICATIONS

CAT GENERATOR

Frame size 1268
Excitation ..... Permanent Magnet
Pitch 0.6667
Number of poles 4
Number of bearings ..... Single bearing
Number of Leads 012
Insulation ..... UL 1446 Recognized Class H with tropicalization and antiabrasion
- Consult your Caterpillar dealer for available voltages

IP Rating ..... Drip Proof IP23
Alignment ..... Pilot Shaft
Overspeed capability 150
Wave form Deviation (Line to Line) ..... Less than 5% deviation
Voltage regulator..... ..... 3 Phase sensing with selectible volts/Hz
Voltage regulation ..... Less than +/- 1/2% (steady state) Less than +/- 1% (no load to full load)

CAT DIESEL ENGINE

C27 TA, V-12, 4-Stroke Water-cooled Diesel
Bore ..... 137.20 mm (5.4 in)
Stroke ..... 152.40 mm (6.0 in)
Displacement ..... 27.03 L (1649.47 in^3)
Compression Ratio 16.5:1
Aspiration ..... TA
Fuel System ..... MEUI
Governor Type ..... ADEM™ A4

CAT EMCP 4 SERIES CONTROLS

EMCP 4 controls including:
- Run / Auto / Stop Control
- Speed and Voltage Adjust
- Engine Cycle Crank
- 24-volt DC operation
- Environmental sealed front face
- Text alarm/event descriptions

Digital indication for:
- RPM
- DC volts
- Operating hours
- Oil pressure (psi, kPa or bar)
- Coolant temperature
- Volts (L-L & L-N), frequency (Hz)
- Amps (per phase & average)
- ekW, kVA, kVAR, kW-hr, %kW, PF

Warning/shutdown with common LED indication of:
- Low oil pressure
- High coolant temperature
- Overspeed
- Emergency stop
- Failure to start (overcrank)
- Low coolant temperature
- Low coolant level

Programmable protective relaying functions:
- Generator phase sequence
- Over/Under voltage (27/59)
- Over/Under Frequency (81 o/u)
- Reverse Power (kW) (32)
- Reverse reactive power (kVAr) (32RV)
- Overcurrent (50/51)

Communications:
- Six digital inputs (4.2 only)
- Four relay outputs (Form A)
- Two relay outputs (Form C)
- Two digital outputs
- Customer data link (Modbus RTU)
- Accessory module data link
- Serial annunciator module data link
- Emergency stop pushbutton

Compatible with the following:
- Digital I/O module
- Local Annunciator
- Remote CAN annunciator
- Remote serial annunciator

STANDBY 800 ekW 1000 kVA

60 Hz 1800rpm 480 Volts

TECHNICAL DATA

Open Generator Set - - 1800rpm/60 Hz/480 Volts	DM7696	
EPA Certified for Stationary Emergency Application (EPA Tier 2 emissions levels)		
Generator Set Package Performance		
Genset Power rating @ 0.8 pf	1000 kVA	
Genset Power rating with fan	800 ekW	
Fuel Consumption		
100% load with fan	216.9 L/hr	57.3 Gal/hr
75% load with fan	171.7 L/hr	45.4 Gal/hr
50% load with fan	122.3 L/hr	32.3 Gal/hr
Cooling System [1]		
Air flow restriction (system)	0.12 kPa	0.48 in. water
Engine coolant capacity	55.0 L	14.5 gal
Inlet Air		
Combustion air inlet flow rate	62.8 m^3/min	2217.8 cfm
Exhaust System		
Exhaust stack gas temperature	511.4 °C	952.5 °F
Exhaust gas flow rate	170.3 m^3/min	6014.1 cfm
Exhaust flange size (internal diameter)	203 mm	8 in
Exhaust system backpressure (maximum allowable)	10.0 kPa	40.2 in. water
Heat Rejection		
Heat rejection to coolant (total)	330 kW	18767 Btu/min
Heat rejection to exhaust (total)	796 kW	45268 Btu/min
Heat rejection to aftercooler	162 kW	9213 Btu/min
Heat rejection to atmosphere from engine	110 kW	6256 Btu/min
Heat rejection to atmosphere from generator	40.3 kW	2293.9 Btu/min
Alternator [2]		
Motor starting capability @ 30% voltage dip	3641 skVA	
Frame	1268	
Temperature Rise	125 °C	225 °F
Lube System		
Sump refill with filter	68.0 L	18.0 gal
Emissions (Nominal) [3]		
NOx g/hp-hr	5.18 g/hp-hr	
CO g/hp-hr	.23 g/hp-hr	
HC g/hp-hr	.03 g/hp-hr	
PM g/hp-hr	.024 g/hp-hr	

[1] For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.
[2] Generator temperature rise is based on a 40°C ambient per NEMA MG1-32. UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics.
[3] Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NOx. Data shown is based on steady state operating conditions of 77°F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 btu/lb. The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle.

RATING DEFINITIONS AND CONDITIONS

Applicable Codes and Standards: AS1359, CSA C22.2 No 100-04, UL142, UL489, UL601, UL869, UL2200, NFPA 37, NFPA 70, NFPA 99, NFPA 110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG 1-22, NEMA MG 1-33, 72/23/EEC, 98/37/EC, 2004/108/EC

Standby - Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

Fuel Rates are based on fuel oil of 35° API (16° C or 60° F) gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.).

STANDBY 800 ekW 1000 kVA

60 Hz 1800rpm 480 Volts

DIMENSIONS

Package Dimensions		
Length	4141.6 mm	163.05 in
Width	1823.3 mm	71.78 in
Height	2210.5 mm	87.03 in

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions.

Feature Code: C27DR70

Gen. Arr. Number: 385-0624

Source: U.S. Sourced

LEHE0452-00 (08/13)

www.Cat-ElectricPower.com

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Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication.

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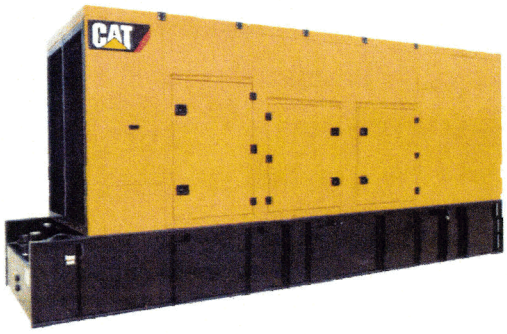


Image shown may not reflect actual package

SOUND ATTENUATED ENCLOSURES FOR C27 and C32 GENERATOR SETS

These sound attenuated, factory installed enclosures are designed for safety and aesthetic value. Rugged construction provides weather protection and the ability to withstand exposure to the elements.

FEATURES

ROBUST/HIGHLY CORROSION RESISTANT CONSTRUCTION

- Environmentally friendly, polyester powder baked paint in Caterpillar yellow.
- Zinc plated or stainless steel fasteners
- 14 gauge steel construction
- Pitched roof for improved rain ingress protection
- Critical grade internally mounted muffler/exhaust system
- Vibration spring isolators
- 75 dBA at 7m

EXCELLENT ACCESS

- Control panel mounted on left side or right side of package
- Large cable entry area for ease of installation
- Left hand or right hand bottom entry access to power cable bus or circuit breaker
- Double doors on both sides
- Lube oil and coolant drains piped to exterior of enclosure and terminated drain valves

OPTIONS

- Interior AC lighting system and AC receptacles (interior and exterior)
- AC distribution box
- Interior DC lighting system with automatic shutoff timer
- Cold weather bundle, including motorized louvers (powered closed), back draft dampers and enclosure space heater
- Yellow (default), white, grey, or beige paint
- 1000 gal., 2000 gal., 3600 gal. fuel tanks
- 120 mph wind loading

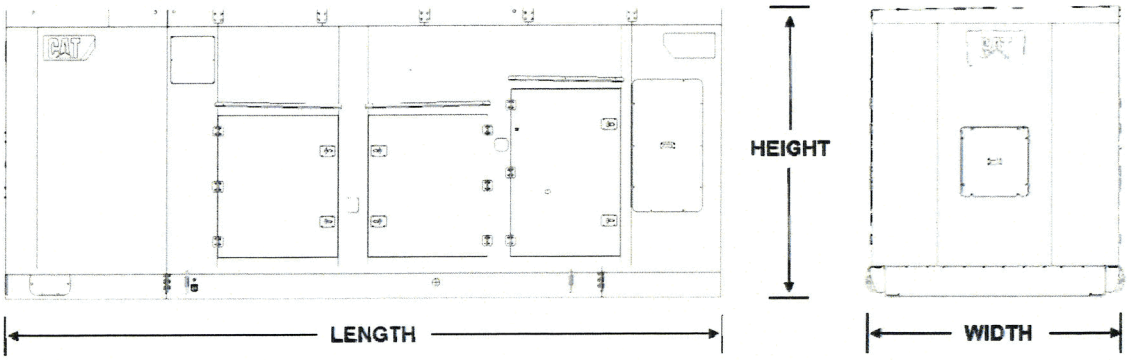
SECURITY AND SAFETY

- Lockable access doors with standard key utilization
- Cooling fan and battery charging alternator fully guarded
- Oil fill and battery can only be reached via lockable access
- External fuel connections.
- Externally mounted emergency stop button
- Designed for spreader-bar lifting to ensure safety

Certifications

- UL Listed
- Seismic certification per applicable building codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, IBC 2012 CBC 2007
- IBC certifiable for 120 mph wind loading
- Tested and analyzed in accordance with: ASCE 7-98, ASCE 7-02, ASCE 7-05, ICC-ES AC-156

ENCLOSURES



Note: For reference only – do not use for installation design. Please contact your dealer for exact weights and dimensions.

ENCLOSURE WEIGHTS AND DIMENSIONS

	Length		Width		Height		Weight*	
	mm	in	mm	in	mm	in	kg	lbs.
Enclosure with sub base	7,010.4	276.0	2,554.1	100.6	2,844.4	112.0	3,500.0	7,716.2
Enclosure with 1000 gal tank base	7,645.4	301.0	2,554.1	100.6	3,213.1	126.5	5,920.0	13,051.4
Enclosure with 2000 gal tank base	7,645.4	301.0	2,554.1	100.6	3,454.4	136.0	6,050.0	13,338.0
Enclosure with 3600 gal tank	9,750.0	383.9	2,554.1	100.6	3,758.8	148.0	7,000.0	15,432.4

*Weight does not include package generator set weight.

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions.

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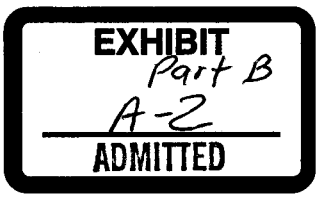


Exhibit RP-3

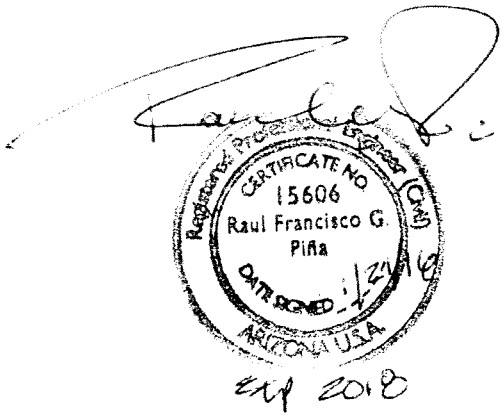
WATER RESERVOIR NO.5
COMPLETION REPORT

Prepared for:

Community Water Company of Green Valley
1501 S. La Cañada Drive
Green Valley, AZ 85622

Prepared by:

CPE Consultants



January 4, 2016

CPE
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CPE
CONSULTANTS

January 4, 2016

Mr. Arturo Gabaldón
President
Community Water Company of Green Valley
1501 S. La Cañada Drive
Green Valley, AZ 85622

RE: Water Reservoir No. 5 Completion Report

Dear Mr. Gabaldón:

Enclosed please find the Completion Report for Water Reservoir #5. In our report, we include all of the available project descriptive information and revisit the criteria shown to the Arizona Corporation Commission (ACC), as the basis for selection of a steel tank for the new reservoir.

The report is formatted so as to provide a self-sufficient narrative about the new reservoir project, from inception to construction completion. In order to keep the main text brief and concise, we have supplemented it with appendices, where a review in depth can be made about the project particulars regarding design and construction of the new reservoir.

Accordingly, our report provides and introduction that describes the CWC service area, and references the ACC approval decision. A copy of the approval document is included in Appendix A of the report.

The following two sections restate the basis for design and selection of the new reservoir, as was made in the ACC petition. Appendix B of the report includes an inventory of the major CWC distribution system components, and a copy of the latest CWC Water Utility report to the ACC.

In the discussion section, we identify the major components of WR#2, which has been demolished and removed (see Appendix C). In this section we also describe the WR#5 project, including construction contract documents and agency permits for the new water reservoir (see Appendix D); and we provide copy of the "as-built" plans, as supplement reference (see Appendix E). One important item addressed at the conclusion of this section is that the documents you have provided us indicate that the new reservoir was completed within the budget requested, which further validates your discussions with the ACC, in the matter of best advisable investment option. We include copies of the project invoices in Appendix F.

We have also included a progress photographic log for the project, comprised of a selection of photographs you provided us. It is organized in a reverse timeline, from project completion to project start.

♦ ♦

3895 N. Business Center Dr., Suite 115 • Tucson, AZ 85705
PH: 520.545.7001 • FX: 520.545.7003 • www.cpeconsultants.com

The report provides a comprehensive description of the project and its intent, as well as reiteration of the assurances made to the ACC. An operation cost savings supplement can be added in the future, once the data is available.

We are herewith providing your hard and digital copies. Please let me know if you need additional information.

Sincerely,

CPE CONSULTANTS, LLC

Raul F. Piña, P.E.

RFP:cs

cc: Mr. John Meyer, CWCGV

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3.	Background	1
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5.	Summary and Conclusions	6

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2.	Service Area Map	3
3.	Major System Components	4
4.	Continental Road Site and Water Reservoir #5 Improvements	7

APPENDICES

A. ACC Decision #74809 Docket #W-02304A-14-0041

B. CWC Major Water System Components

B1 – Major System Components Summary – July 13, 2015

B2 – CWC Annual Water Report 2014

C. Water Reservoir #2 Historic Documents

C1 – WR #2 Aerial – Appendix C, Water Reservoir #2, Historic Documents

C2 – WR #2 Plan 2MG Tank – CWCGV Continental Road Reservoir Improvements Exhibit (Figure 3)

C3 – WR #2 Side View – Photo 2004 8 19

TABLE OF CONTENTS (Continued)

C4 – WR #2 Vulnerability Responses – CWCGV's Responses to Staff's Second Set of Data Requests Docket #W-02304A-14-0041, dated March 10, 2004

C5 – Smyth Tank Alternatives – Smyth Industries Letter, dated July 1, 2014

D. Water Reservoir #5 Project Documents

D1 – PDEQ Approval to Construct

D2 – Community Water Contract – 2MG Storage – CWCGV Contract, 2MG Storage Executed 12/02/14

D3 – Res 5 Preliminary Plans – Continental Road Water Tank, 2MG Reservoir S1-S4 January 2015

D4 – Concrete Compression Test Reports – Report of Compression Test Results, April 15, 2015

D5 – Earthwork Compaction Test Reports – Nuclear Method Field Density Testing Method January 6, 7, 8 and Lab Compaction Characteristics of Soils 12/22/14

E. Water Reservoir #5 "As-Built" Plans

E1 – PDEQ Approval of Construction (Water), September 18, 2015

E2 – CW New 2MG Reservoir "As Builts"

E3 – Engineer's Certificate of Completion, PDEQ File No. P002315, Completed September 11, 2015

F. Water Reservoir #5 Construction Budget

F1 – Summary of Expenditures

F2 – Summary of Construction Contract Expenditures

G. WR #5 Project Progress Record Photographs

1. Introduction

Community Water Company of Green Valley (CWC) is a municipal water provider in southern Arizona. It primarily serves the communities of Green Valley and the Town of Sahuarita; both communities are in southeastern Pima County, Arizona (see Figure 1, Location Map). According to official records on file in the Arizona Corporation Commission (ACC), its service area is about 9.44 square miles or 6,000 acres, and it provides water to nearly 13,000 connections/customers (see Figure 2, Service Area Map). The most current CWC "Annual Water Withdrawal Report" to ADWR informs that a total of 771.4 million gallons (MG) was pumped from its wells in 2014.

CWC has recently completed construction of a new 2MG steel tank reservoir, identified as Water Reservoir #5 (WR#5) in the CWC system (see figure 3, Major System Components). WR#5 replaces one the oldest CWC water reservoirs, a hypalon bladder tank that was originally placed in operation in 1975 and which was identified as Water Reservoir #2 (WR#2) in the CWC system. Construction of the new reservoir was approved by the Arizona Corporation Commission (ACC), who authorized this new CWC acquisition with Decision 74809, dated 13NOV14, and filed in Docket W-02304A-14-0041 (see Appendix A, ACC Decision 74809).

2. Purpose

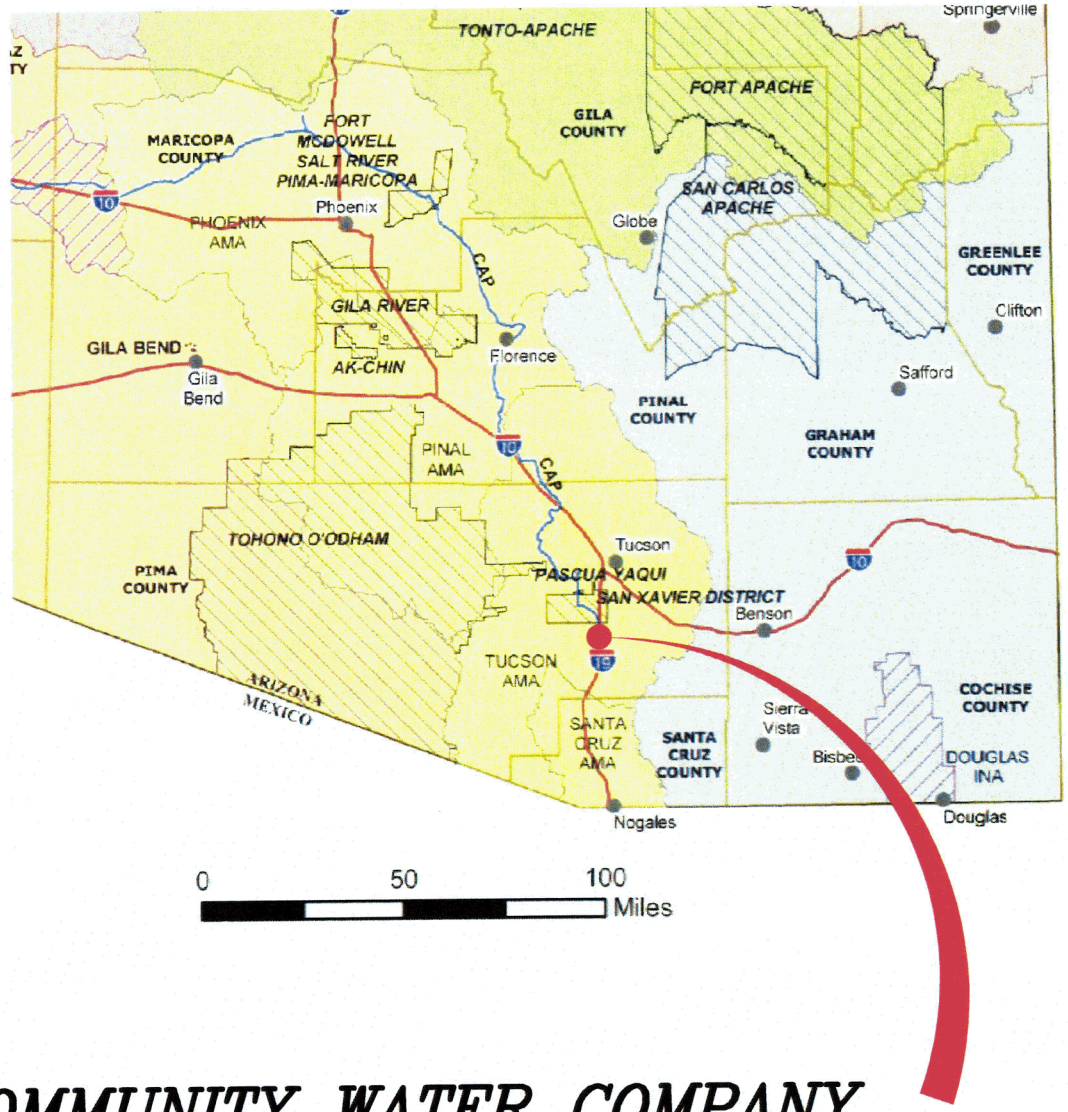
The purpose of this report is to inform the ACC about the successful completion of the new WR#5 replacement construction project and of achieving the benefits outlined in the above approved application.

3. Background

CWC is classified as a multiple-well community water system by the State of Arizona. Its water system is served by four wells, which together are rated as having a water production capacity of 6,250 gallons per minute (GPM), equipped with electric motor driven pumps (see Table 1, below). A major system components list is included at the end of this report (see Appendix B, CWC System Components).

Operating Capacity		
Well No.	Discharge Pressure (psi)	Discharge Volume (gpm)
6	104	570
9	96	980
10	5	2,250
11	5	2,450
Totals		6,250

Table 1. Well Water Production Capacity
(from CWC records)



COMMUNITY WATER COMPANY OF GREEN VALLEY

LOCATION MAP

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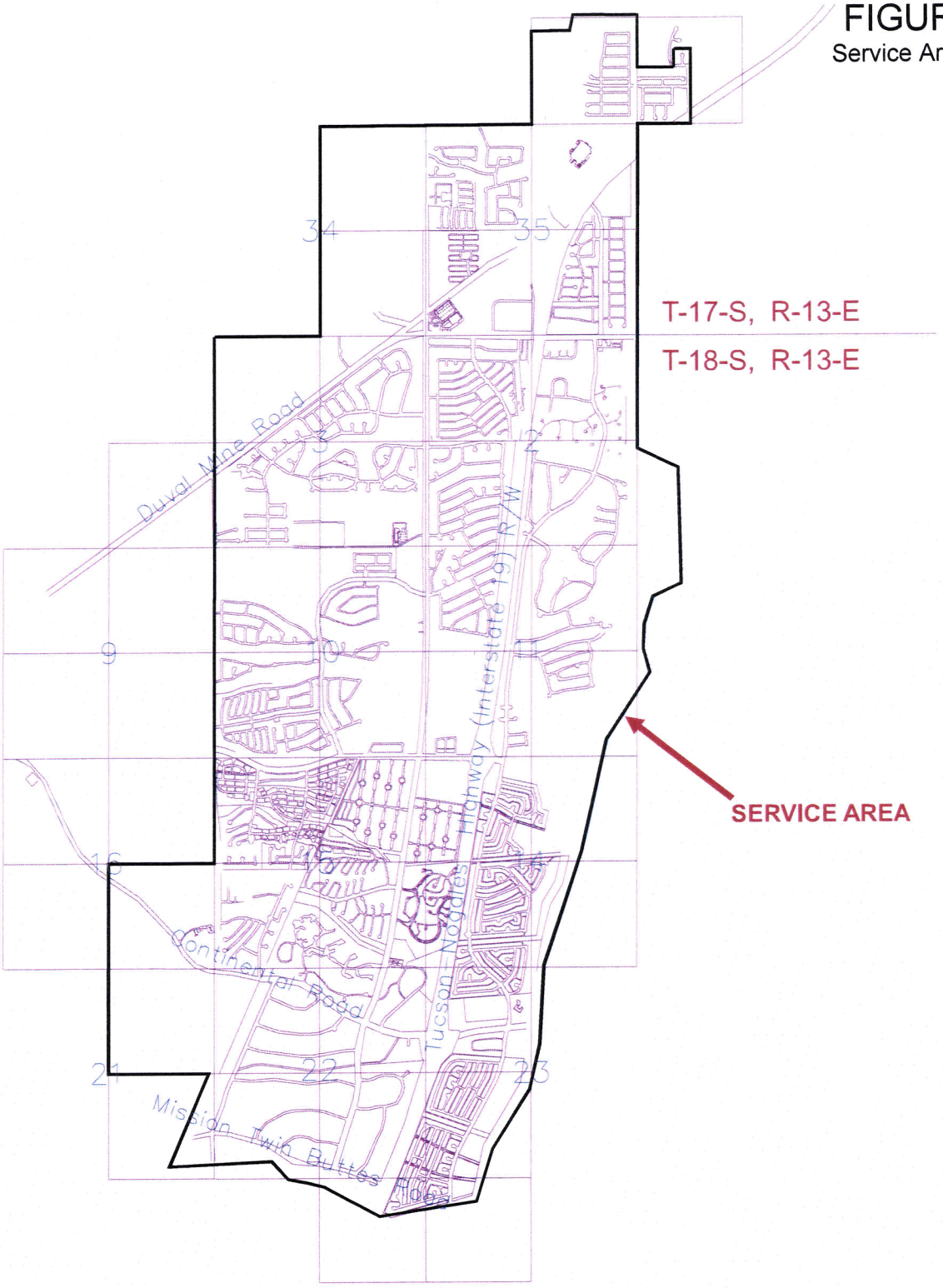
Tucson, AZ 85705
520•545•7001

FIGURE 1

FIGURE 2
Service Area Map



Excerpted from Stantec Report.

Stantec

Legend:

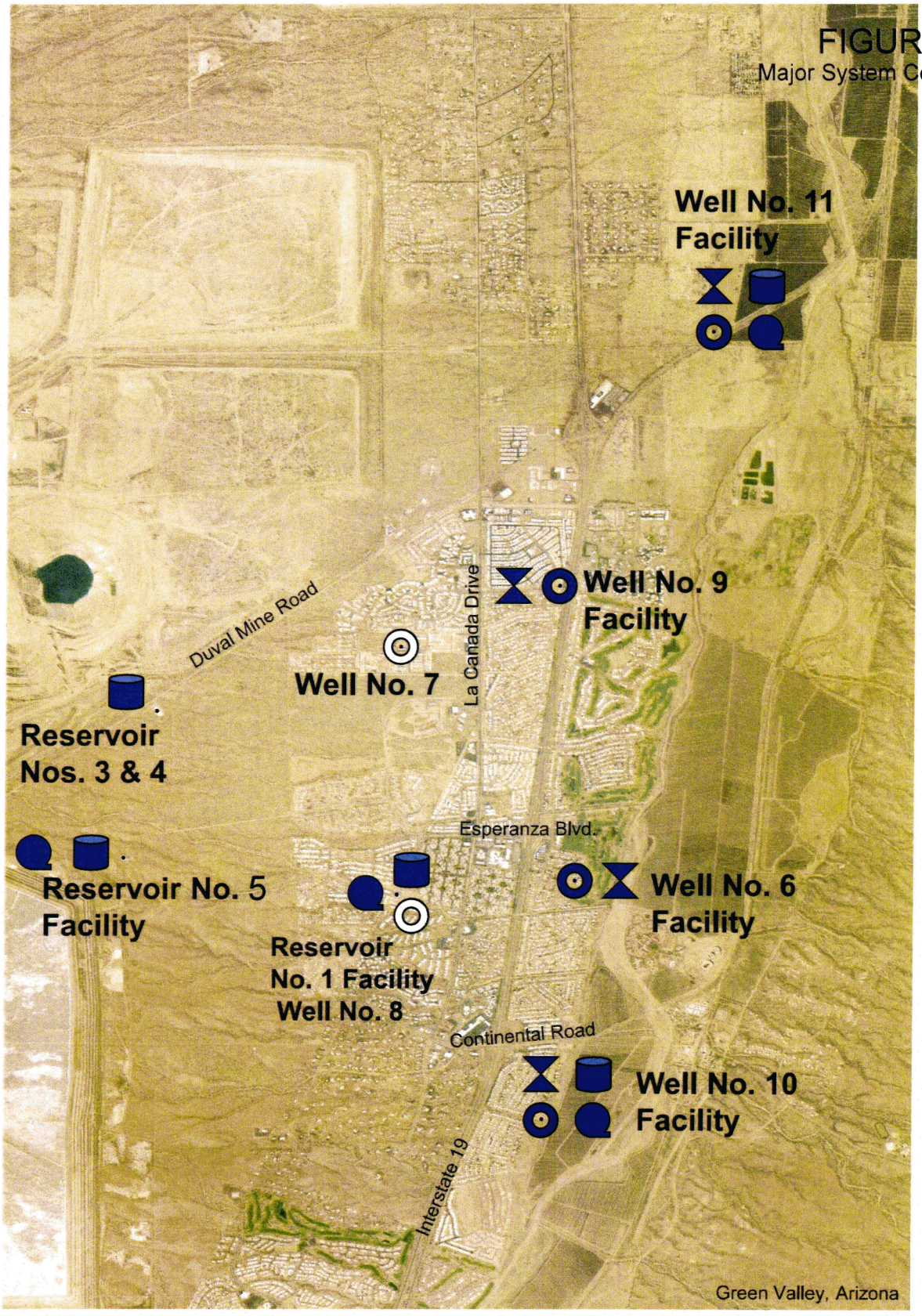
Community Water Company Service Area Boundary

Client / Project
Community Water Company of Green Valley
Water System Improvement Design Plan

Figure No.
1.1

Title
Location Map of Service Area

FIGURE 3
Major System Components



Excerpted from
Stantec Report.
Revised by CPE.

Legend:

- Active Reservoir
- Active Booster Station
- Arsenic Treatment Plant
- Active Well
- Inactive Well
- Facility Location

Client / Project
Community Water Company of Green Valley
Water System Improvement
Design Plan

Figure No.
2.1

Title
System Facilities

The wells deliver water to four storage reservoirs and two water tanks, with a combined design storage capacity of 6.6MG and an average operating capacity of 4.52MG (see Table 2, below). An aerial map is included for location of the reservoirs and wells in the system (see figure 3, Major System Components).

Operating Capacity				
Reservoir No.	Facility Storage Type	High Water Level (ft)	Reservoir Design Capacity (gallons)	Average Reservoir Operating Capacity (gallons)
WR# 1	Forebay	2,970.0	1,000,000	793,000
WR# 3	High Water	3,181.0	1,000,000	792,000
WR# 4	High Water	3,181.0	2,000,000	1,333,000
WR# 5	High Water	3,181.0	2,000,000	1,333,000
Well #10	Forebay	2,875.0	300,000	143,750
Well #11	Forebay	2,791.2	300,000	121,875
Totals			6,600,000	4,516,625

Table 2. CWC Water Storage Facilities
(from CWC records)

This operating capacity provides approximately 48.7 hours of water storage, when compared to the average daily demand in the CWC system. CWC has elected to observe a more conservative standard than the state minimum requirement, mainly because its service population is almost entirely retired senior citizens, who are extremely vulnerable to interruptions or disruption of utility service and who have communicated to CWC management a strong desire to have a robust water system.

In adopting this more conservative water storage standard, CWC reviewed the following technical design references:

a) The State of Arizona Administrative Code, which defines the minimum storage capacity required of a community water system in R18-503, Storage Requirements. The State further qualifies that this minimum storage must also provide for the anticipated fire flow demand, in AHD Bulletin 10, Design of Water Systems. Accordingly, the minimum storage capacity CWC is required to maintain is

$D_{storage}$ = Demand in Average Day of Peak Month + 4-hr Fire Flow (= 2,000 GPM*4 hrs*60 min)

= 2.56 MG + 0.48 MG = 3.04 MG.

b) A more prudent recommendation is given in multiple other sources (AWWA, EPA, and HDR Engineering's "Handbook of Water Systems", 2nd Edition), which recommend a minimum storage based on the 48-hour average demand, or

$D_{storage}$ = 2 * Average Daily Demand = 2 * 2.22 MG = 4.44 MG.

c) As presented in Table 2, above, the average reservoir operating capacity in the constructed facilities is slightly more than 4.44 MG, which meets or exceeds the above parameters.

The data used for determining average daily demand and average day of peak month demand are based on the latest information on water deliveries to consumers, which CWC provided to the ACC in May of 2014.

4. Discussion

Construction of the new reservoir was awarded to Smyth Industries in May of 2015. Construction was initiated with the demolition and removal of the existing WR#2, which was in need of extensive repairs (see Appendix C, Water Reservoir #2 Historic Documents).

The new WR#5 that replaces it is a 2MG steel tank, which makes use of the same site for the reservoir (see Figure 4, Continental Road Site and WR#5 Improvements). Construction of the new reservoir was accomplished during the period May through September of 2015; the corresponding ADEQ Approval of Construction was issued on September 18, 2015 (see Appendix D, Water Reservoir #5 Project Documents). The construction effort was carried out in compliance with the project specifications; all required agency inspections and certifications were successfully passed; copies of the construction documents, inspection documents and materials certifications are provided herewith (see Appendix D).

WR#5 was successfully brought on line on or about September 18, 2015. A copy of the WR#5 "As-Built" plans is included in this report (see Appendix E, Water Reservoir #5 "As-Built" Plans). In connection its ACC application, CWC had previously disclosed and obtained authorization to spend $1.2 million for construction of the new reservoir. Construction expenditures amounted to just over $1.126 million (see Appendix F, Water Reservoir #5 Construction Budget), so that WR#5 was successfully completed within the authorized budget.

In addition, the various system benefits that were contemplated for this project have been realized as follows:

a) The new 2MG steel tank WR#2 was constructed at an operating high water elevation of 3181.0, which is identical to that of the two other reservoirs in its pressure zone, WR#3 and WR#4.

b) It is anticipated that the new WR#2 configuration will enable CWC to realize a significant pumping cost savings at the Well #10 booster site, because it eliminates the water transportation friction losses resulting from water pumping through an extra mile of pipeline, from WR#2 to WR#4. No specific data is as yet available, due to the recent completion of the new water reservoir project.

5. Summary and Conclusions

The new WR#5 was constructed and brought on line, on or about September 18, 2015. The benefits achieved with this new project include, among others:

a) Full compliance with the more conservative recommended system operating storage capacity that CWC has elected to observe, at 4.52 MG. The CWC system thus exceeds the minimum AAC and AHD requirements of 3.04 MG, even if one of the system larger reservoirs is brought off-line for repairs or maintenance.
b) Anticipated lower maintenance costs and a reduced potential for interruption of service during maintenance activities in the CWC system.

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FIGURE 4
Continental Road Site and
Water Reservoir #5 Improvements

c) Lower risk for contingencies and repairs than if a standby generator had been purchased and placed on line, as was recommended by ACC staff, since reservoir storage is always at hand and not awaiting activation in case of an emergency and it does not require additional operating and maintenance costs associated with keeping a standby generator at full readiness.
d) Minimal adverse impact to operating storage in the CWC system, since the replacement 2MG steel tank reservoir in WR#5 matches the capacity of WR#4, should the any of the CWC reservoirs be brought off-line for repairs or maintenance.
e) Constructing a new reservoir that equalized operating levels with WR#3 and WR#4 simplifies the interconnectivity of the system and reduces pumping cost for routine filling of reservoirs.
f) Having system storage capacity at recommended levels rather than minimum required levels addresses concerns about service to the very vulnerable population in the CWC service area, since they are mostly retired senior citizens.
g) Furthermore, the new steel tank reservoir offers a significantly lower vulnerability to vandalism than the previous reservoir replaced by this project. The new steel tank provides CWC with a sturdier and more secure material than the hypalon covered tank it replaced. In the past, the hypalon cover had been torn by trespassing individuals.

Therefore, ACC approval of the acquisition of a 2MG steel tank reservoir provides a great advantage in terms of storage and system operation to CWC, and a high level of reliability to its customers.

APPENDIX A

ACC DECISION #74809

DOCKET # W-02304A-14-0041

0000159275

BEFORE THE ARIZONA CORPORATION COMMISSION

Arizona Corporation Commission
DOCKETED
NOV 13 2014
DOCKETED BY nr

COMMISSIONERS

BOB STUMP - Chairman
GARY PIERCE
BRENDA BURNS
BOB BURNS
SUSAN BITTER SMITH

IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY FOR AUTHORITY TO BORROW UP TO $3.4 MILLION FROM COMPASS BANK AND COMPASS MORTGAGE CORPORATION FOR THE PURPOSES OF (1) REFINANCING UP TO $2.2 MILLION IN EXISTING LONG-TERM DEBT; AND (2) ISSUING AN ADDITIONAL $1.2 MILLION IN LONG-TERM DEBT, UNDER A.R.S. §§ 40-301 AND 40-302.

DOCKET NO. W-02304A-14-0041

DECISION NO. 74809

ORDER

Open Meeting
November 5 and 6, 2014
Phoenix, Arizona

BY THE COMMISSION:

* * * * * * * * * *

Having considered the entire record herein and being fully advised in the premises, the Commission finds, concludes, and orders that:

FINDINGS OF FACT

Procedural History

1. On February 12, 2014, Community Water Company of Green Valley ("CWCGV" or "Company") filed an application with the Arizona Corporation Commission ("Commission") requesting authorization to incur long-term debt from Compass Bank and Compass Mortgage Corporation ("Compass Bank") in an amount up to $3.4 million, at a fixed interest rate not to exceed 5.8 per cent per annum, for two purposes: (1) to refinance up to $2.2 million in existing long-term debt; and (2) to issue up to $1.2 million in additional long-term debt to replace CWCGV's existing 1,000,000 gallon below-ground storage tank ("Existing Storage Tank") with an above-ground 2,000,000 gallon steel storage tank ("New Storage Tank") at the Reservoir No. 2 site ("Financing

Application").

2. On February 19, 2014, CWCGV filed its unaudited 2014 *pro forma* income statement.

3. On March 10, 2014, CWCGV filed an affidavit of publication verifying that notice of the Financing Application was published in the *Green Valley News and Sun* on February 23, 2014.

4. On April 14, 2014, CWCGV filed its 2013 Annual Report, which included audited financial statements for the year ending December 31, 2013.

5. On June 23, 2014, the Commission's Utilities Division ("Staff") filed a Staff Report recommending approval for authorization to refinance up to $2.12 million in existing long-term debt, along with recommended conditions. Staff further recommended denial of the Company's financing request to issue $1.2 million in long-term debt to construct the New Storage Tank.

6. On July 2, 2014, CWCGV filed a Response to Staff Report ("Response") objecting to, among other things, Staff's recommended denial of the Company's financing request to incur long-term debt for the purpose of constructing the New Storage Tank.

7. On July 3, 2014, a Procedural Order was issued scheduling a procedural conference for July 10, 2014.

8. On July 9, 2014, CWCGV filed a Notice of Filing Supplement to its July 2, 2014 Response and Notice of Errata.

9. On July 10, 2014, the procedural conference was held, as scheduled, during which discussions occurred regarding, among other things, the necessity of an evidentiary hearing. Although neither party requested an evidentiary hearing, it was determined that additional information was necessary before a Recommended Order could be issued.

10. On July 11, 2014, a Procedural Order was issued directing Staff to address certain issues and allowing the Company to file comments in response.

11. On July 31, 2014, Staff filed a Response to the July 11, 2014 Procedural Order.

12. On August 14, 2014, CWCGV filed a Response to Staff's July 31, 2014 Reply.

13. On August 19, 2014, CWCGV filed a Notice of Errata.

14. On August 26, 2014, CWCGV filed an Amendment to the Financing Application ("Amended Financing Application") indicating that the fixed interest rate of the loan with Compass

Bank may exceed 5.8 percent depending upon market conditions at the time the loan is closed. According to the Company, the maximum interest rate is unlikely to be more than 8.0 percent and will likely range between 5.5 percent and 6.5 percent.

15. On September 9, 2014, CWCGV filed an affidavit of publication verifying that notice of the Amended Financing Application was published in the *Green Valley News and Sun* on September 7, 2014.

16. On September 12, 2014, a Procedural Order was issued directing Staff to file an updated financial analysis and recommendation and allowing the Company to file comments in response.

17. On September 19, 2014, Staff filed a Response to the September 12, 2014 Procedural Order.

18. On September 24, 2014, CWCGV filed a Response to Staff's Reply to September 12, 2014 Procedural Order.

19. There were no customer comments filed in response to the Financing Application or Amended Financing Application.

Background

20. CWCGV is a member-owned, non-profit water utility cooperative located in Green Valley, Arizona, approximately 25 miles south of Tucson. CWCGV provides water utility service to approximately 13,000 customers, most of whom are residential. CWCGV's current rates and charges were established in Decision No. 71478 (February 3, 2010).

21. The Commission granted CWCGV its initial Certificate of Convenience and Necessity ("CC&N") to provide water utility service in Pima County, Arizona, pursuant to Decision No. 47912 (May 1, 1977). The Commission granted CC&N extensions to CWCGV in Decision Nos. 57549 (September 9, 1991), 63310 (January 11, 2001), 70164 (February 27, 2008), and 70551 (October 23, 2008). CWCGV also acquired the CC&N of New Pueblo Water pursuant to Decision No. 60082 (February 20, 1997).

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22. CWCGV's water system consists of four wells capable of producing approximately 6,150 gallons per minute ("GPM") with total storage capacity of 5,600,000 gallons.[1] CWCGV has one 250 kW generator located at the Well No. 10 site and one 350 kW generator located at the Well No. 11 site. The Company indicates that these generators are used for operational support of the boosters at the well sites.

23. According to a Department of Environmental Quality ("ADEQ") Compliance Status Report dated April 1, 2014, CWCGV is currently delivering water that meets the water quality standards required by 40 C.F.R. §§ 141.1, *et seq.* (National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4.

24. CWCGV is located within the Arizona Department of Water Resources ("ADWR") Tucson Active Management Area. ADWR reported to Staff that CWCGV is in compliance with ADWR requirements governing water providers and/or community water systems.

25. Staff's Compliance Section database shows no outstanding compliance issues for CWCGV.

26. Staff's Consumer Services Section database shows that two complaints were filed against CWCGV from January 1, 2011 to June 5, 2014. According to Staff, both complaints have been resolved and closed.

27. CWCGV is in good standing with the Commission's Corporations Division.

Loan Terms

28. CWCGV filed a copy of Compass Bank's Summary Terms and Conditions as "Exhibit 2" to the Financing Application. The terms and conditions of the loan include a fixed principal repayment based on a 20-year amortization with a balloon payment for the remaining principal due in 2029.[2] In its Amended Financing Application, CWCGV states that the interest rate of the loan will depend upon the market conditions existing at the time the loan is closed. According to CWCGV, the maximum interest rate is unlikely to be more than 8.0 percent and will more likely range between 5.5

[1] The Company notes that due to operational limitations, the system has approximately 4,470,000 gallons of available water storage.

[2] Although the loan terms indicate an obligation amount of $4 million, CWCGV is only requesting authorization to borrow up to $3.4 million.

percent and 6.5 percent. The loan will be secured by granting Compass Bank first position pledge on CWCGV's net revenues and a blanket lien on its business assets.

Request to Refinance up to $2.2 million in Existing Long-Term Debt

29. CWCGV requests authorization to refinance existing indebtedness approved in the Company's last financing application in Decision No. 71259 (September 3, 2009). In that Decision, the Commission authorized CWCGV to incur up to $2.81 million of debt financing to pay off a non-revolving line of credit balance of $2.5 million[3] and to fund $310,000 of planned capital improvements. Under the terms and conditions of that loan, CWCGV was required to make 59 equal principal and interest payments starting in November of 2009, with a final balloon payment due on November 18, 2014. In order to avoid defaulting on that obligation, the Company requests authorization to refinance its existing indebtedness prior to November 18, 2014.

30. Staff made several adjustments to the Company's proposed refinancing amount, resulting in a decrease of $80,000, from $2.2 million to $2.12 million. The decrease to the refinancing amount is due to Staff's determinations that the Company included funds that did not need to be refinanced prior to November 18, 2014 and the Company's rounding methodology was excessive. As a result, Staff recommends authorizing CWCGV to borrow up to $2.12 million to refinance the existing long-term debt.

31. Since the Company will refinance its existing indebtedness on or near November 18, 2014, we find that Staff's adjustments to the Company's proposed refinancing amount are reasonable and should be adopted.

Request to Incur Long-Term Debt to Construct the New Storage Tank

32. CWCGV requests financing authority to fund a project to replace an Existing Storage Tank that has reached the end of its useful life. Under the proposed project, the Company seeks to increase the available water storage for the system by replacing the Existing Storage Tank with the larger New Storage Tank. Based on the Company's analysis, the available water storage for the system would be: 3,183,625 gallons, or approximately 34 hours of water storage, if the Existing

[3] The non-revolving line of credit was authorized in Decision No. 67515 (January 20, 2005). According to the Company, the $2.5 million drawn on the non-revolving line of credit was used to fund arsenic treatment facilities, Central Arizona Project rights, and other miscellaneous equipment.

Storage Tank is removed from the system with no replacement; 3,842,625 gallons, or approximately 38 hours of water storage, if the Existing Storage Tank is replaced by a comparable sized tank; and 4,516,625 gallons, or approximately 48 hours of water storage, if the Existing Storage Tank is replaced by the New Storage Tank.

33. The Company states that a 48 hour supply of water available for emergency purposes meets the intent of applicable regulations and guidelines for water utilities to provide safe and reliable service.[4] In addition to providing 48 hours of emergency water supply, the Company claims the New Storage Tank will benefit the water system by: reducing pumping costs; eliminating the need for a pressure pump at the Reservoir No. 2 site; eliminating the maintenance costs associated with repairing the Existing Storage Tank; providing better protection from contamination and vandalism at the Reservoir No. 2 site; and improving system reliability.

34. Staff states that ADEQ regulations require the Company's system to maintain a minimum storage capacity of 2,318,533 gallons.[5] Based on Staff's engineering analysis, the Company's water system has adequate storage capacity to serve its existing customers without the Existing Storage Tank and additional storage capacity is not needed in the foreseeable future. As a result, Staff recommends denial of the Company's financing request to fund the proposed project. Rather than construct the New Storage Tank, Staff recommends that CWCGV investigate the possibility of upgrading one of its two existing generators to power the well pumps in the event of an emergency.[6] Staff maintains the use of a generator is a more cost effective option to address the Company's desire to maintain 48 hours of emergency water supply.

35. The Company contends that Staff's recommended denial of the requested financing is an impermissible interference with a management decision of CWCGV. According to the Company, "it is not...the job of Staff to dictate what it perceives is a 'better' option other than what CWCGV's board and management have determined to be the appropriate option for its customer-members." The

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[4] The Company states that the installation of the New Storage Tank will meet the 48 hour standard recommended by both the United States Environmental Protection Agency ("EPA") and American Water Works Association ("AWWA") when an emergency situation arises.

[5] *See* A.A.C. R18-5-503.

[6] According to the Company, the minimum sized generator needed to power the well, boosters, and arsenic treatment plant is 500 kW.

Company states that many of its residential customers are retirees over the age of 75 and are particularly vulnerable to extended water outages. Further, the Company states that its member-customers have communicated a desire to have a robust water system that goes above the minimum standards to better maintain safe and reliable service. The Company asserts that its financing request complies with A.R.S. § 40-301(C)[7] and should therefore be approved by the Commission.

36. In response to Staff's recommendation to investigate the possibility of upgrading an existing generator, CWCGV provided a professional engineering report from CPE Consultants, LLC ("CPE") evaluating the standby generator alternative to constructing the New Storage Tank. Based on the analysis of CPE, the cost of acquiring a standby generator will approach the cost of the New Storage Tank over a 20-year time period due to higher annual costs to maintain a generator. In addition, CPE states that there are significant concerns associated with a standby generator, including the price of fuel, safety requirements for storing adequate amounts of fuel near a potable water supply, permitting issues, sound and odor issues, and a shorter estimated useful life compared to the New Storage Tank.[8] The Company states that it evaluated the possibility of acquiring a generator, but determined the New Storage Tank to be the safest, most reliable means to assure an appropriate emergency supply of water while preserving the integrity of the Company's system.

37. Staff made several adjustments to the Company's proposed financing amount for the New Storage Tank, resulting in an overall decrease of $114,925, from $1,200,000 to $1,085,075. The decrease to the proposed amount is due to Staff's downward adjustments to attorneys' fees, overhead costs, and contingency costs.[9] Staff states that it made an adjustment to attorneys' fees because the Company did not explain whether the proposed amount was for the New Storage Tank or the entire

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[7] Pursuant to A.R.S. § 40-301(C),

> The commission shall not make any order or supplemental order granting any application as provided by this article unless it finds that such issue is for lawful purposes which are within the corporate powers of the applicant, are compatible with the public interest, with sound financial practices, and with the proper performance by the applicant of service as a public service corporation and will not impair its ability to perform that service.

[8] According to the Company, the estimated useful lives of a standby generator and the New Storage Tank are 20 years and 40 years, respectively.

[9] Staff reduced attorneys' fees from $20,000 to $0, overhead costs from $51,000 to $0, and contingency costs from $131,491 to $87,566.

financing process. Staff did not address why adjustments were made to the proposed overhead and contingency costs for the New Storage Tank.

38. The Company argues that Staff's adjustments are unwarranted because the proposed costs are reasonable components to installing and operating the New Storage Tank. According to the Company, its attorneys' fees for this proceeding have already exceeded its proposed cost. In addition, the Company states that its proposed contingency costs represent approximately 11% of the total budget proposal which is consistent with past Commission decisions.[10]

39. We find that the Company's proposed financing amount of $1,200,000 for the New Storage Tank is reasonable and should be adopted.

Financial Analysis

40. Staff used CWCGV's audited financial report for the year ending December 31, 2013 to conduct its financial analysis to determine the effects of the *pro forma* financial information to reflect the refinancing with a $2.12 million loan amortized for 20 years at fixed interest rates of 5.8 percent, 6.5 percent, and 8.0 percent. Staff also conducted a similar financial analysis to reflect the issuance of a new $3.4 million loan amortized for 20 years at fixed interest rates of 5.8 percent, 6.5 percent, and 8.0 percent.

41. Staff's analysis indicates that for the year ending December 31, 2013, CWCGV had a 5.16 debt service coverage ratio ("DSC"). Assuming the loan is subject to the maximum interest rate of 8.0 percent, Staff's recommended authorization for refinancing will result in a *pro forma* DSC of 5.82 and the Company's requested authorization for refinancing and a new loan will result in a *pro forma* DSC of 3.63.[11] Staff's *pro forma* DSC analysis indicates that CWCGV will be able to meet all obligations with cash generated from operations under either scenario.

42. As of December 31, 2013, CWCGV's capital structure consisted of 4.0 percent short-term debt, 19.6 percent long-term debt, and 76.4 percent equity. CWCGV's capital structure

[10] The Company states that a contingency of 18% was approved in Decision No. 71168 (June 16, 2009) as part of Arizona American Water Company's request to finance an arsenic removal project.

[11] Based on the Company's analysis, Staff's recommended authorization will result in a *pro forma* DSC of 4.55 and the Company's requested authorization will result in a *pro forma* DSC of 2.84. Staff and the Company employed different methodologies for projecting loan payment amounts which caused a slight difference in their respective DSC calculations. We note that the Company's *pro forma* DSC analysis also indicates that CWCGV will be able to meet all obligations with cash generated from operations under either scenario.

inclusive of Advances in Aid of Construction ("AIAC") and net Contributions in Aid of Construction ("CIAC") consisted of 1.5 percent short-term debt, 7.3 percent long-term debt, 28.5 percent equity, 24.1 percent AIAC, and 38.7 percent CIAC.

43. A *pro forma* capital structure reflecting Staff's recommended authorization results in 4.5 percent short-term debt, 18.3 percent long-term debt, and 77.2 percent equity. A *pro forma* capital structure reflecting the Company's requested authorization results in 4.2 percent short-term debt, 26.4 percent long-term debt, and 69.4 percent equity.

44. CWCGV is not seeking a rate increase to provide debt service on the loan.

Staff Recommendations

45. Staff recommends that the Commission:

a) Grant authorization to incur a loan with a 20-year amortization and a 15-year maturity with any principal not paid due in 2029 in an amount not to exceed $2.12 million for existing long-term debt pursuant to a loan agreement with Compass Bank and at a fixed interest rate not to exceed 8.0 percent per annum. The remainder of the Company's $3,400,000 request for authorization to borrow funds should be denied;

b) Authorize the Company to pledge its assets and revenues in the State of Arizona pursuant to A.R.S. § 40-285 and A.A.C. R18-15-104 in connection with the Compass Bank loan;

c) Direct the Company to file, as a compliance item in this docket, within 60 days of the execution of any financing transaction authorized herein, a notice confirming that such execution has occurred and a certification by an authorized Company representative that the terms of the financing fully comply with the authorizations granted herein;

d) Direct the Company to provide to the Utilities Division, upon Staff request, a copy of any Compass Bank loan documents executed pursuant to the authorizations granted herein;

e) Direct the Company to file, as a compliance item in this docket, within 120 days of the effective date of this Decision, a repayment plan by year for the balloon payment for the remaining principal due in 2029;

f) Rescind any unused authorizations to issue debt granted from the previous financing authorization in Decision No. 71259;

g) Establish an expiration date for any unused authorization to incur debt granted in this proceeding at December 31, 2017;

h) Deny the Company's request to incur debt to finance the installation of an above-ground 2,000,000 gallon steel storage tank; and

i) Direct the Company to investigate the possibility of upgrading one of its two on-site generators so the upgraded on-site generator can power the well pumps in case of emergency.

Resolution

46. The Company is a non-profit cooperative owned by its customers, there have been no customer comments filed in opposition to the requested financing, the Company is not seeking a rate increase to provide debt service for repayment of the loan, the Company has performed extensive research and demonstrated the benefits of the New Storage Tank, and the Company's requested financing creates a more balanced capital structure. For the foregoing reasons, we find that it is reasonable, consistent with sound financial practices, and in the public interest to grant CWCGV the authority to issue up to $3.32 million in long-term debt for the purposes stated in its application, as amended.

47. Staff's position that installation of the New Storage Tank is not necessary puts CWCGV on notice that it must demonstrate that newly constructed plant is used and useful during a future rate increase proceeding.

48. Given our approval of the financing and because the Company engaged a professional engineering firm to evaluate the option of acquiring a standby generator to power the well pumps in case of emergency, we decline to adopt Staff's recommendation to require the Company to further

investigate that option at this time.

49. Staff's recommendations set forth in Findings of Fact No. 45, as modified herein, are reasonable and in the public interest and should be adopted.

CONCLUSIONS OF LAW

1. Community Water Company of Green Valley is a public service corporation within the meaning of Article XV of the Arizona Constitution and A.R.S. §§ 40-285, 40-301, and 40-302.

2. The Commission has jurisdiction over Community Water Company of Green Valley and of the subject matter of the application, as amended.

3. Notice of the application, as amended, was given in accordance with the law.

4. The financing approved herein is for lawful purposes within Community Water Company of Green Valley's corporate powers, is compatible with the public interest, with sound financial practices, and with the proper performance by Community Water Company of Green Valley of service as a public service corporation, and will not impair Community Water Company of Green Valley's ability to perform that service.

5. The financing approved herein is for the purposes stated in the application, as amended, and is reasonably necessary for those purposes, and such purposes are not, wholly or in part, reasonably chargeable to operating expenses or to income.

6. Approval of the proposed financing should not guarantee or imply any specific treatment of any capital additions for ratemaking or rate base purposes.

ORDER

IT IS THEREFORE ORDERED that Community Water Company of Green Valley is hereby authorized to incur long-term financing, in the form of a 20 year amortizing loan and a 15 year maturity with any principal not paid due in 2029, in an amount of $3.32 million, pursuant to a loan agreement with Compass Bank and Compass Mortgage Corporation, at a fixed interest rate not to exceed 8.0 percent per annum.

IT IS FURTHER ORDERED that such authority is expressly contingent upon Community Water Company of Green Valley's use of the proceeds for the purposes set forth herein.

. . .

IT IS FURTHER ORDERED that any unused debt authorization granted in this proceeding shall terminate on December 31, 2017.

IT IS FURTHER ORDERED that Community Water Company of Green Valley is hereby authorized to pledge, mortgage, lien, and/or otherwise encumber its assets and revenues in the State of Arizona pursuant to A.R.S. § 40-285 and A.A.C. R18-15-104, in connection with the indebtedness authorized herein.

IT IS FURTHER ORDERED that Community Water Company of Green Valley is hereby authorized to engage in any transaction and to execute or cause to be executed any documents necessary to effectuate the authorizations granted herein.

IT IS FURTHER ORDERED that Community Water Company of Green Valley shall file with Docket Control, as a compliance item in this docket, within 60 days of the execution of any financing transaction authorized herein, a notice confirming that such execution has occurred and a certification by an authorized representative of Community Water Company of Green Valley that the terms of the financing fully complies with the authorizations granted herein.

IT IS FURTHER ORDERED that Community Water Company of Green Valley shall provide to the Commission's Utilities Division a copy of any loan documents executed pursuant to the authorizations granted herein.

IT IS FURTHER ORDERED that Community Water Company of Green Valley shall file with Docket Control, as a compliance item in this docket, within 120 days of the effective date of this Decision, a repayment plan by year for the balloon payment for the remaining principal due in 2029.

IT IS FURTHER ORDERED that any unused authorization to issue debt pursuant to Decision No. 71259 (September 2, 2009) is hereby revoked.

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IT IS FURTHER ORDERED that approval of the financing set forth herein does not constitute or imply approval or disapproval by the Commission of any particular expenditure of the proceeds derived thereby for purposes of establishing just and reasonable rates.

IT IS FURTHER ORDERED that this Decision shall become effective immediately.

BY ORDER OF THE ARIZONA CORPORATION COMMISSION.

CHAIRMAN COMMISSIONER

COMMISSIONER COMMISSIONER COMMISSIONER

IN WITNESS WHEREOF, I, JODI JERICH, Executive Director of the Arizona Corporation Commission, have hereunto set my hand and caused the official seal of the Commission to be affixed at the Capitol, in the City of Phoenix, this 13th day of November 2014.

JODI JERICH
EXECUTIVE DIRECTOR

DISSENT _____

DISSENT _____
SMH:tv

SERVICE LIST FOR: COMMUNITY WATER COMPANY OF GREEN VALLEY

DOCKET NO.: W-02304A-14-0041

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APPENDIX B
CWCGV MAJOR WATER SYSTEM COMPONENTS

COMMUNITY WATER COMPANY OF GREEN VALLEY

Major Water System Components

July 13, 2015

General

Community Water Company of Green Valley's ("Community Water") water system is a groundwater-based system serving portions of the Town of Sahuarita and the unincorporated community of Green Valley, both located in southern Pima County, Arizona. Community Water serves approximately 12,500 customers with about 96% of the customers being residential customers.

Water System

Community Water's water system consists of a looped distribution system with multiple pressure zones, four wells, four arsenic treatment facilities, five water storage tanks and four booster stations. The system is designed to provide a 1,500-gallon per minute fire flow. Each of Company's four wells is equipped with a coagulation filtration process arsenic treatment facility. In addition to the existing facilities, the Company is currently constructing an additional water storage tank.

Community Water's system facilities are summarized below:

Wells:

Well 6 – ADWR #55-627485 – 304 N. Abrego Dr.
Equipped with line shaft turbine pump and 250 hp motor and related piping and electrical gear. Pumps to arsenic treatment facility and then to distribution system.

Well 9 – ADWR #55-588121 – 1526 N. La Canoa
Equipped with line shaft turbine pump and 250 hp motor and related piping and electrical gear. Pumps to arsenic treatment facility and then to distribution system.

Well 10 – ADWR #55-207982 – 1667 S. Abrego Dr.
Equipped with line shaft turbine pump and 400 hp motor and related piping and electrical gear. Pumps to arsenic treatment and then to forebay storage.

Well 11 – ADWR #55-608518 – 18460 S. Calle Valle Verde
Equipped with line shaft turbine pump and 350 hp motor and related piping and electrical gear. Pumps to arsenic treatment and then to forebay storage.

Arsenic Treatment Facilities:

Well 6 – 304 N. Abrego Dr.
1,200 gpm, 8 pressure filtration vessel coagulation filtration process arsenic treatment facility with chlorination of finished water.

Well 9 – 1526 N. La Canoa
1,200 gpm, 8 pressure filtration vessel coagulation filtration process arsenic treatment facility with chlorination of finished water.

Well 10 – 1667 S. Abrego Dr.
2,500 gpm, 6 pressure filtration vessel coagulation filtration process arsenic treatment facility with chlorination of finished water.

Well 11 – 18460 S. Calle Valle Verde
2,500 gpm, 6 pressure filtration vessel coagulation filtration process arsenic treatment facility with chlorination of finished water.

Booster Stations:

Well 10 – 1667 S. Abrego Dr.
1 – 300,000 gallon storage tank (forebay/ground storage)
5 – 100 hp booster pumps
1 – 5,000 gallon Hydropneumatic tank
1 – Diesel driven backup generator
Associated piping and electrical gear

Well 11 – 18460 S. Calle Valle Verde
1 – 300,000 gallon storage tank (forebay/ground storage)
5 – 125 hp booster pumps
1 – 5,000 gallon Hydropneumatic tank
1 – Diesel driven backup generator
Associated piping and electrical gear

Reservoir 1 Booster Station – 630 W. Camino Bondadoso
1 – 1,000,000 gallon storage tank (forebay/ground storage)
1 – 40 hp booster pump
1 – 152 hp booster pump (natural gas)
1 – 7,500 gallon Hydropneumatic tank

La Canada Transfer Station – 960 S. La Canada Dr.
1 – 30 hp booster pump

Storage Facilities:

Forebay/Ground Storage:

Well 10	– 300,000 gallon storage tank	- 1667 S. Abrego Dr.
Well 11	– 300,000 gallon storage tank	- 18460 S. Calle Valle Verde
Reservoir 1	– 1,000,000 gallon storage tank	- 630 W. Camino Bondadoso

Elevated Storage:

Reservoir 3	– 1,000,000 gallon storage tank	- 1901 W. Duval Mine Rd.
Reservoir 4	– 2,000,000 gallon storage tank	- 1901 W. Duval Mine Rd.
Reservoir 5	– 2,000,000 gallon storage tank (under construction)	- 1951 W. Continental Rd.

COMPANY NAME: Community Water Company of Green Valley	
Name of System:	ADEQ Public Water System Number:

WATER UTILITY PLANT DESCRIPTION

WELLS

ADWR ID Number*	Pump Horsepower	Pump Yield (gpm)	Casing Depth (Feet)	Casing Diameter (Inches)	Meter Size (inches)	Year Drilled
55-627485	250	650	837	16"	1-6" & 1-10"	1977
55-588121	250	1000	1000	16"	1-8" & 1-12"	2002
55-207982	400	2100	1140	20"	1-12"	2005
55-608518	350	2400	2786	16"	1-12"	1964

* Arizona Department of Water Resources Identification Number

OTHER WATER SOURCES

Name or Description	Capacity (gpm)	Gallons Purchased or Obtained (in thousands)
N/A		

BOOSTER PUMPS		FIRE HYDRANTS	
Horsepower	Quantity	Quantity Standard	Quantity Other
40 HP @ Res #1; 152 HP Gas Engine	1 & 1	1,009	
30 HP LCB	1		
100 HP @ Well 10	5		
125HP @ Well 11; 10HP/2 fml/service	5 & 2		

STORAGE TANKS		PRESSURE TANKS	
Capacity	Quantity	Capacity	Quantity
1 million gal	2	7500	1
2 million gal	1	5000	2
300,000 gal	2		

Note: If you are filing for more than one system, please provide separate sheets for each system.

COMPANY NAME: Community Water Company of Green Valley	
Name of System:	ADEQ Public Water System Number:

WATER UTILITY PLANT DESCRIPTION (CONTINUED)

MAINS

Size (in inches)	Material	Length (in feet)
2	CU & PVC	7,050
3	CU & PVC	8,167
4	CA & DI	53,152
5	CA & DI	0
6	CA & DI	314,312
8	CA & DI	241,677
10	CA & DI	6,799
12	CA & DI	111,119
16	CA & DI	45,450

CUSTOMER METERS

Size (in inches)	Quantity
5/8 X ¾	10,321
3/4	94
1	516
1 1/2	76
2	162
Comp. 3	3
Turbo 3	32
Comp. 4	
Turbo 4	1
Comp. 6	
Turbo 6	4
Turbo 8	1

For the following three items, list the utility owned assets in each category for each system.

TREATMENT EQUIPMENT:
Four (4) Arsenic Treatment Systems

STRUCTURES:
Office Building, Warehouse and Storage Building

OTHER:
Flat bed trailer, Service Trucks, Backhoes, dump bed trailer, air compressor/equipment trailer, welding, sanding, plumbing, painting and other equipment necessary to perform duties of water utilities

Note: If you are filing for more than one system, please provide separate sheets for each system.

COMPANY NAME: Community Water Company of Green Valley	
Name of System:	ADEQ Public Water System Number:

WATER USE DATA SHEET BY MONTH FOR CALENDAR YEAR 2014

MONTH	NUMBER OF CUSTOMERS	GALLONS SOLD (Thousands)	GALLONS PUMPED (Thousands)	GALLONS PURCHASED (Thousands)
JANUARY	12,920	55,404	62,343	
FEBRUARY	12,926	55,338	53,194	
MARCH	12,929	57,717	66,650	
APRIL	12,938	60,971	65,938	
MAY	12,924	66,065	72,842	
JUNE	12,920	68,340	70,123	
JULY	12,930	68,994	67,361	
AUGUST	12,924	59,330	68,490	
SEPTEMBER	12,930	61,192	59,771	
OCTOBER	12,936	60,912	69,568	
NOVEMBER	12,942	60,665	57,131	
DECEMBER	12,939	55,123	58,013	
TOTALS →		730,051	771,424	

#6-.006, #9-.006, #10-.007, #11-.008

What is the level of arsenic for each well on your system? _____mg/l
(If more than one well, please list each separately.)

If system has fire hydrants, what is the fire flow requirement? 1500 GPM for 2 hrs
(This is a preference from the fire district, not a requirement, as we are not a municipality)

If system has chlorination treatment, does this treatment system chlorinate continuously?
(X) Yes ( ) No

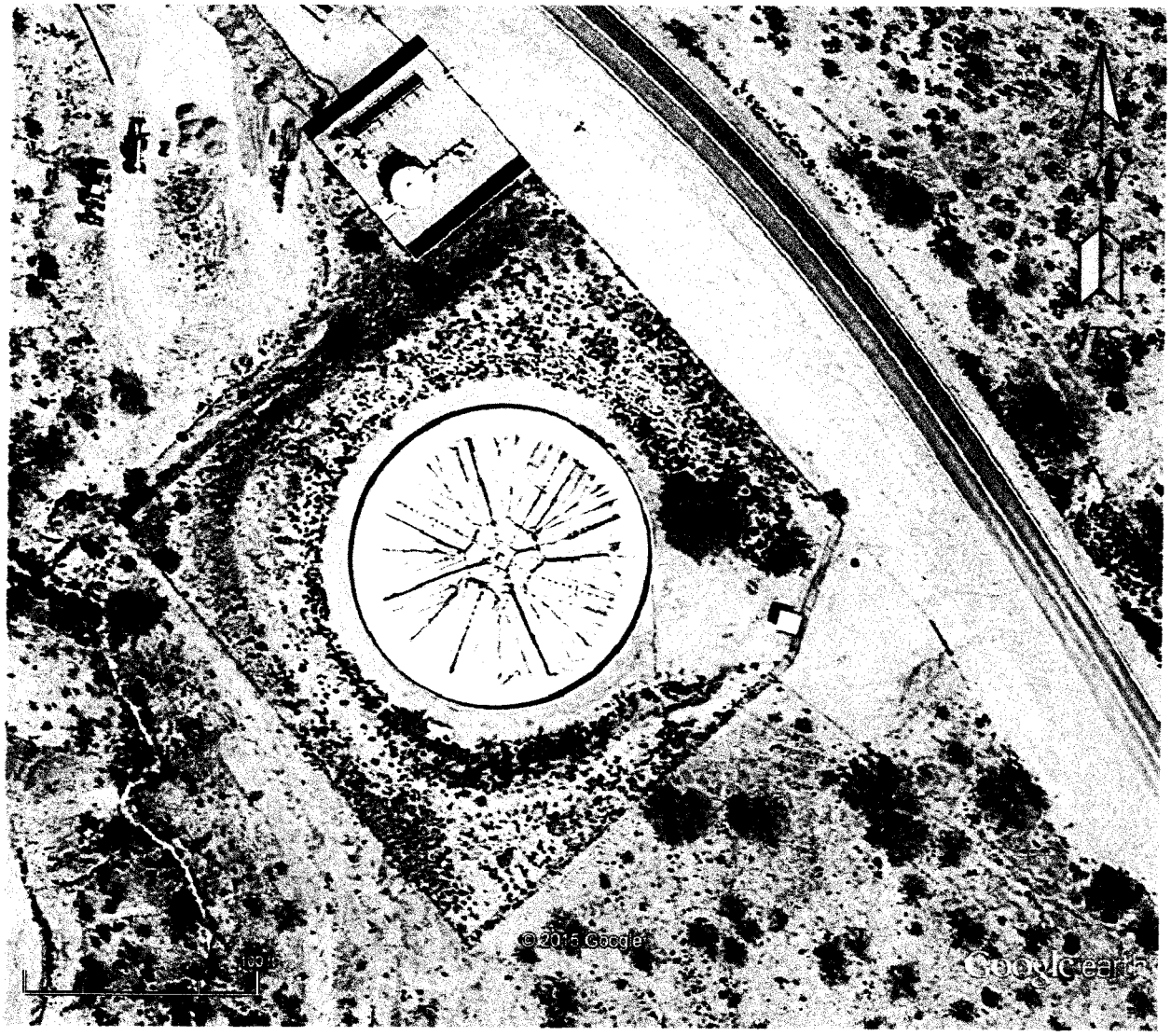
Is the Water Utility located in an ADWR Active Management Area (AMA)?
(X) Yes ( ) No

Does the Company have an ADWR Gallons Per Capita Per Day (GPCPD) requirement?
( ) Yes (X) No

If yes, provide the GPCPD amount:_____

Note: If you are filing for more than one system, please provide separate data sheets for each system.

APPENDIX C
WATER RESERVOIR #2 DOCUMENTS



CPE
CONSULTANTS
3895 N. Business Center Drive, Suite 115
Tucson, AZ 85705
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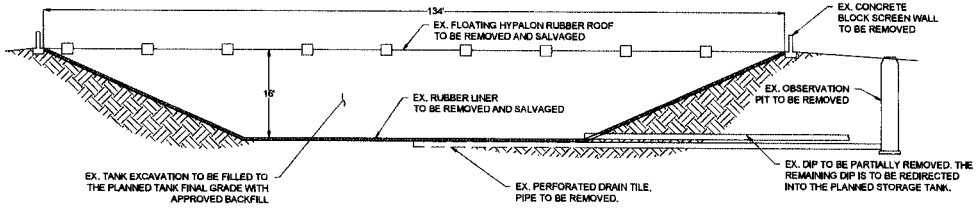
APPENDIX C
Water Reservoir #2
Historic Documents

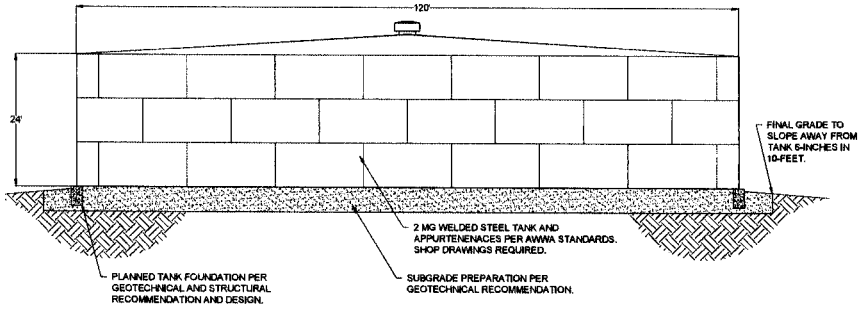
COMMUNITY WATER COMPANY

CONTINENTAL ROAD RESERVOIR IMPROVEMENTS EXHIBIT

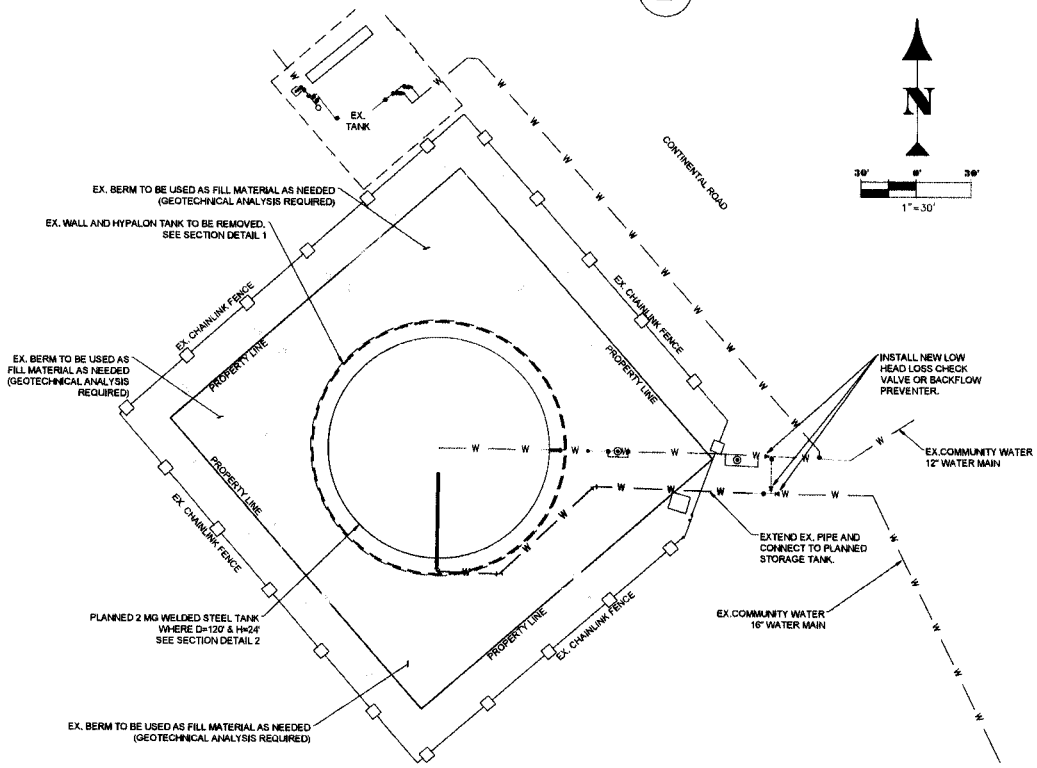
Figure 3



1 EXISTING HYPALON TANK SECTION DETAIL N.T.S.



2 PLANNED 2MG WELDED STEEL TANK SECTION DETAIL N.T.S.



NOTES:
1. THIS PLAN IS CONCEPTUAL ONLY. FINAL TANK DESIGN, PIPE LAYOUT, AND GRADING DESIGN AND RECOMMENDATIONS PER APPROVED PLANS.
2. THE INFORMATION SHOWN ON THIS PLAN IS FOR PLANNING AND SCHEMATIC PURPOSES ONLY.
3. A DETAILED SITE SURVEY WILL BE NECESSARY TO LOCATE AND IDENTIFY ALL PROPERTY LINES, EASEMENTS, AND EXISTING IMPROVEMENTS. THOSE SHOWN HERE-ON ARE SCHEMATIC ONLY.

PRELIMINARY
NOR FOR
CONSTRUCTION

COMMUNITY WATER COMPANY
1501 S. LA CANADA DR
GREEN VELLEY, AZ 85622
PH: 520-625-8409

SMYTH INDUSTRIES

2004 - 15

Exhibit 1

COMMUNITY WATER COMPANY OF GREEN VALLEY'S RESPONSES TO STAFF'S SECOND SET OF DATA REQUESTS DOCKET NO. W-02304A-14-0041 Dated March 10, 2014

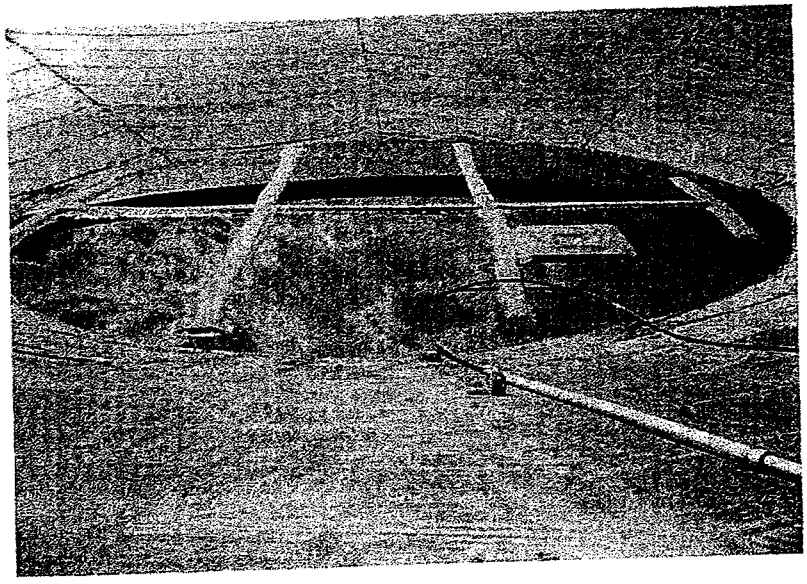
JL 2.2 Risk for Contamination — Please provide all historic information regarding the contamination of the existing Reservoir #2.

RESPONSE: See attached.

Respondent: John Meyer, CWCGV Treatment Supervisor

The following pictures represent some of the sources and causes of contamination at CWC Reservoir #2

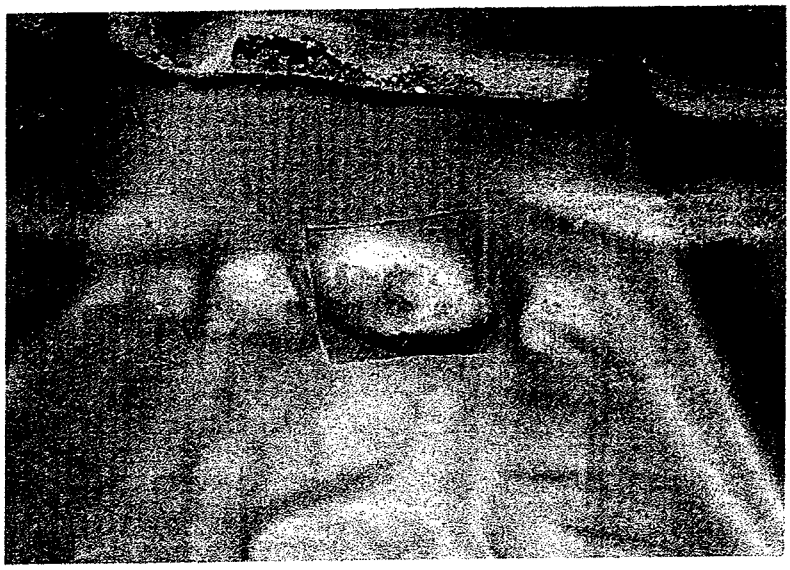
Res. #2: Large patch failure.



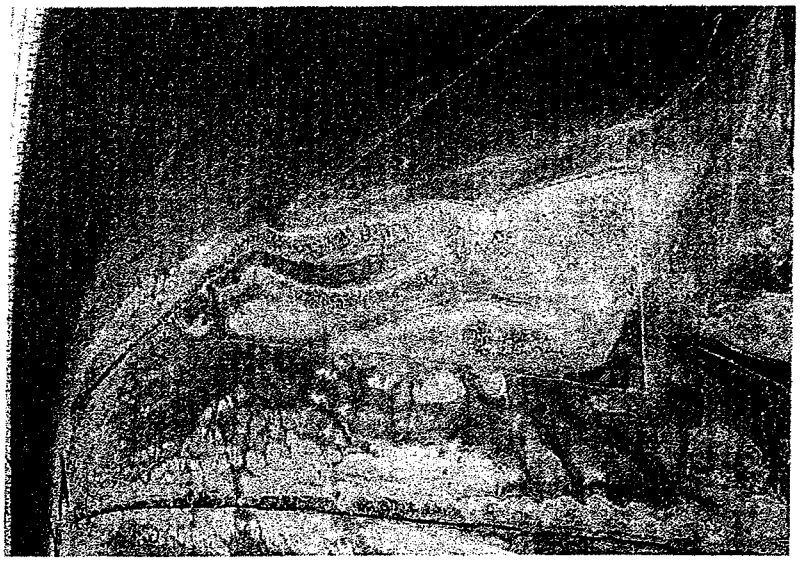
Res. #2: Drained after vandalism.

Res. #2: Small patch failure.

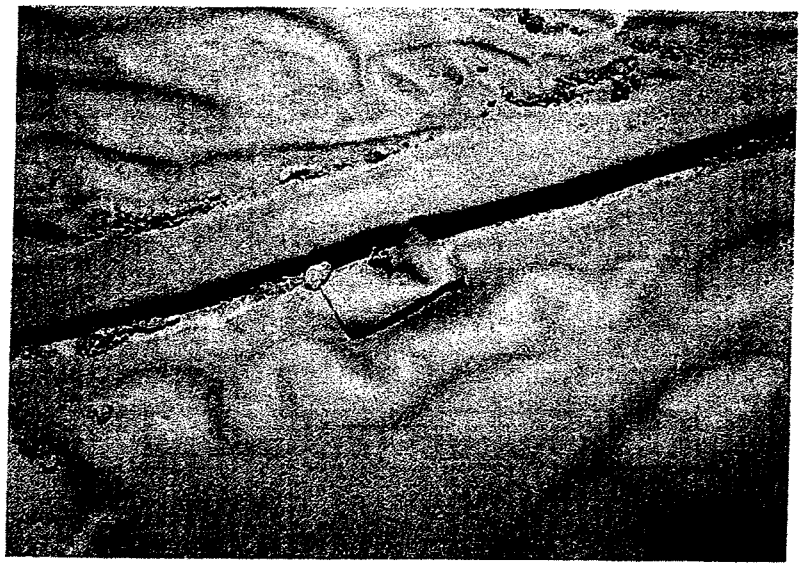
Res. #2: Temporary patch.



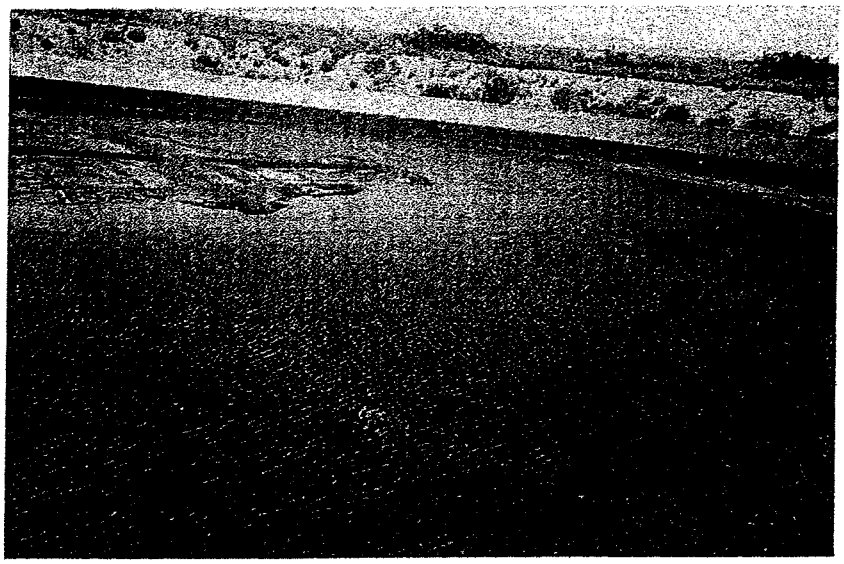
Res. #2: Small patch failure.



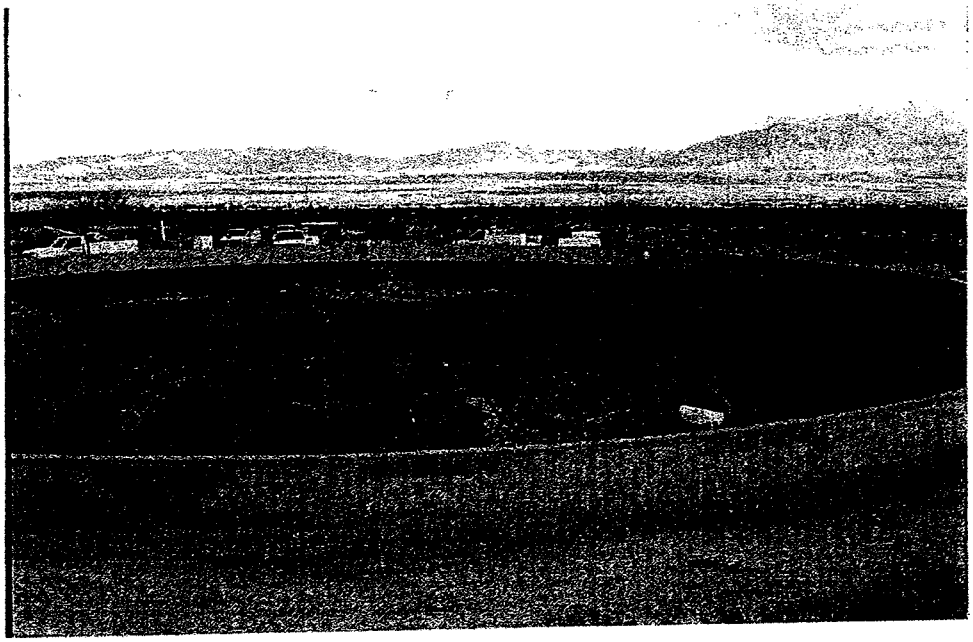
Res. #2: Debris on top of liner.



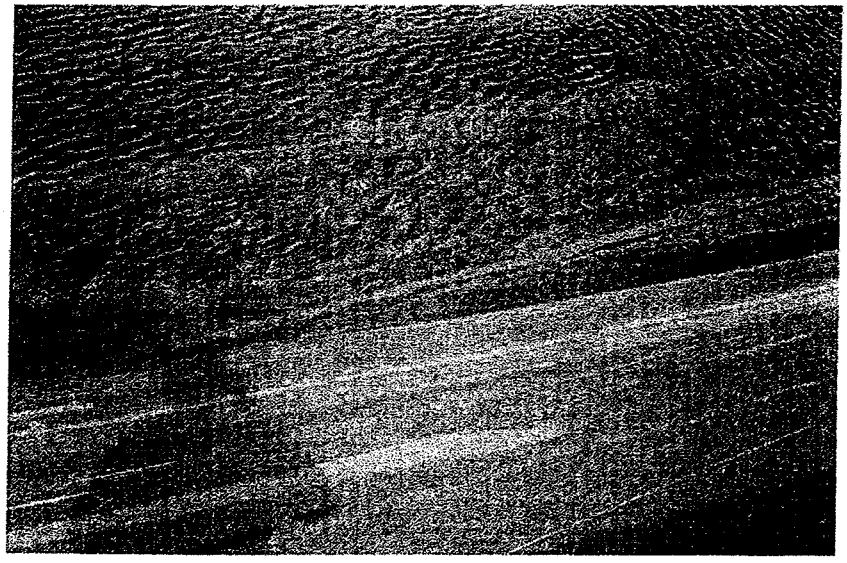
Res. #2: Small patch failure.



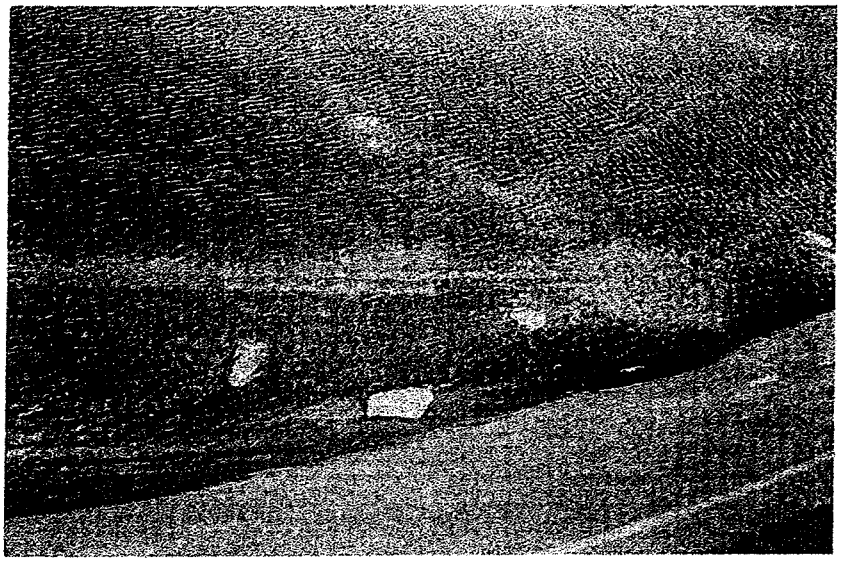
Res. #2: Water on top after vandals sliced liner.



Res. #2: Drained after vandalism.



Res. #2: Aftermath of vandalism.

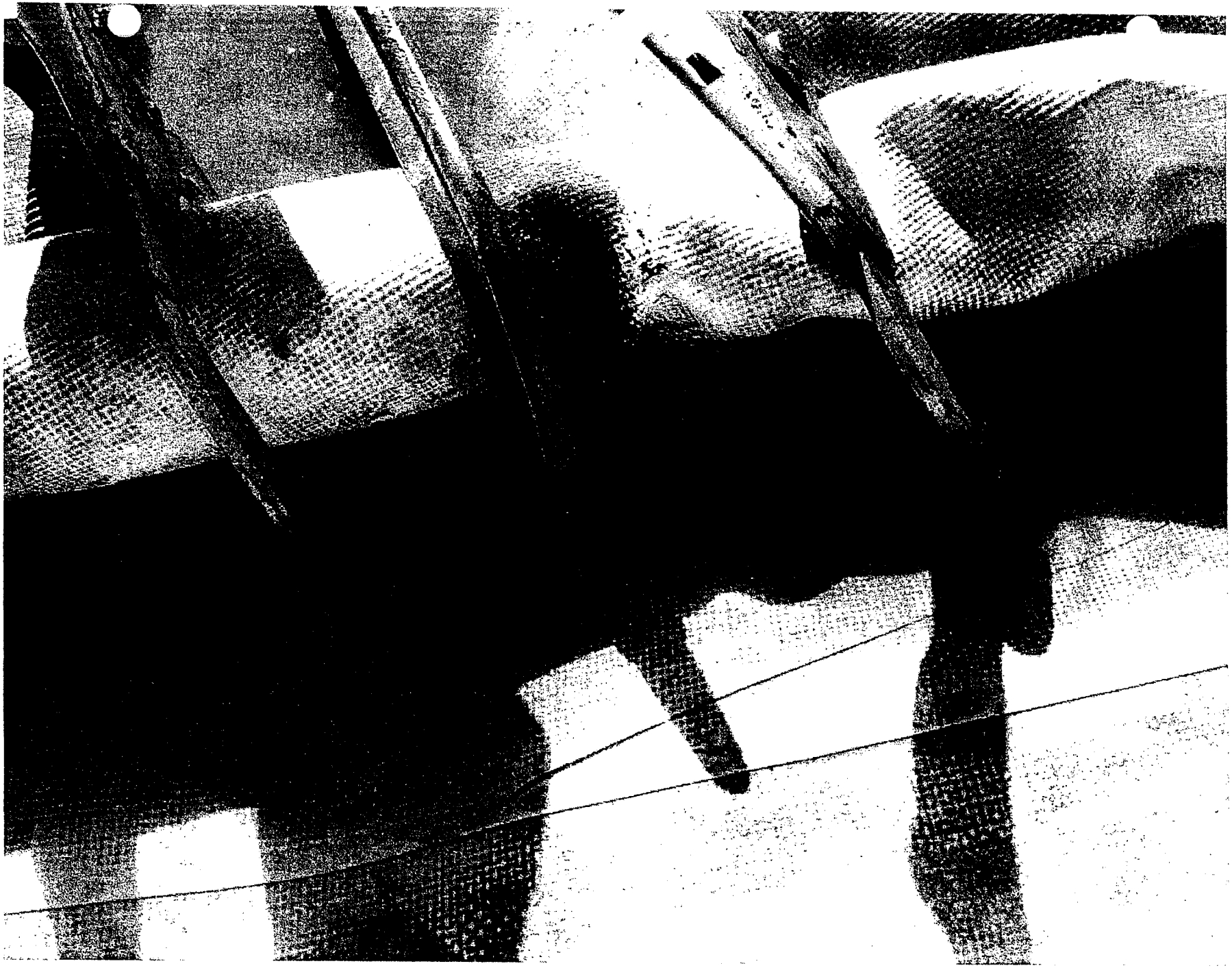


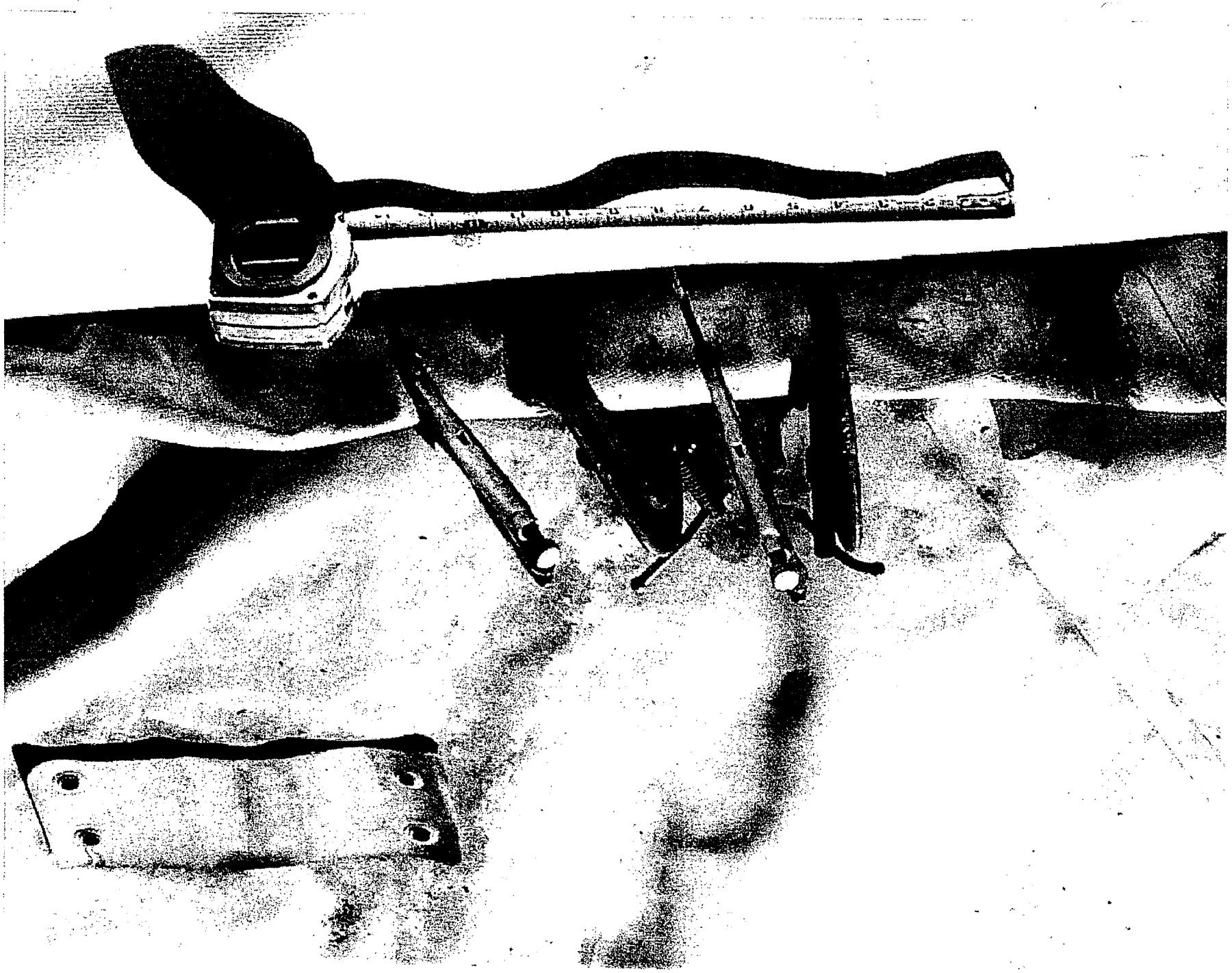
Res. #2: Large rocks and slice in liner by vandals.

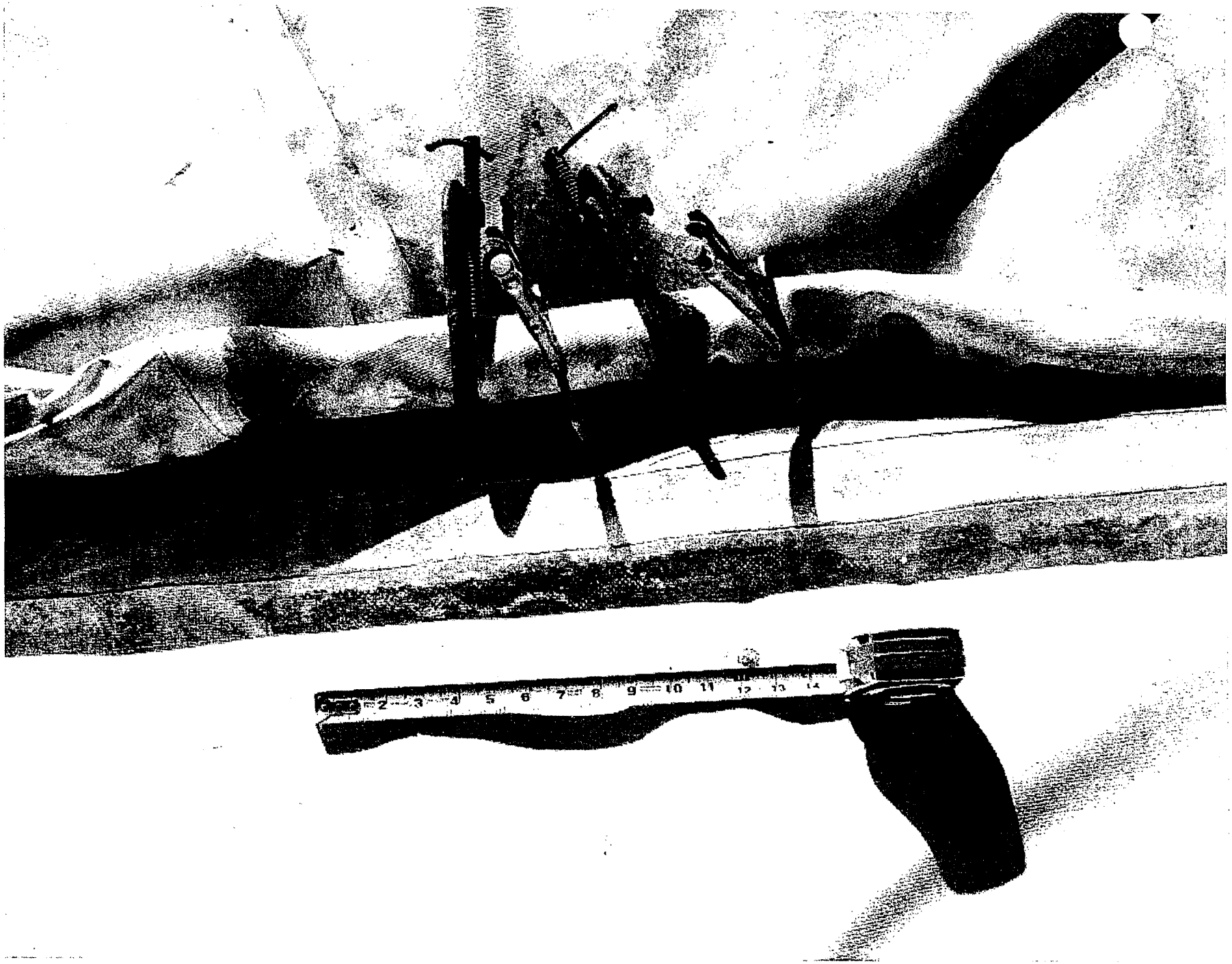
Res. #2: Algae growth under failing patch.

Reservoir #2 safety concerns:

Res. #2: Employee partially submerged on top of liner performing maintenance.







SMYTH INDUSTRIES INC.
4010 E. Illinois St.
Tucson, AZ 85714
(520) 750-8719 Phone | (520) 750-9544 Fax

July 1, 2014

Community Water Company of Green Valley
1501 S. La Canada Dr.
Green Valley, AZ 85622

Dear Community Water,

This letter is in response to your request for Smyth Industries to evaluate the two options being considered to replace the existing hypalon tank at the Reservoir #2 site on Continental Road. The two options being considered are:

1. Install a new above-ground welded steel potable water storage tank.
2. Replace the existing below-ground hypalon tank.

We conclude that there are many advantages gained with the construction of a welded steel tank, including health and safety, cost, security, and maintenance while there are only minimal benefits gained with the installation of a new hypalon tank. The pros and cons are described in greater detail below.

Cost

The approximate cost to replace the Reservoir #2 hypalon tank is $500,000 and the estimated service life of that tank is 12-13 years. The cost of the new welded steel tank is about $1,000,000 with an estimated service life of 30 years. The cost per year of the hypalon tank is about $38,000-42,000 while the cost per year of the welded steel tank is about $33,000-34,000. Additionally the hypalon tank would require about 250 man hours of maintenance annually for the following actions:

- Dewatering the hypalon cover after rainfall
- Cleaning the hypalon cover
- Maintaining the motor operated valve
- Maintaining the pressure pump
- Maintaining the control system

The maintenance required for steel tanks is usually repair of the interior coatings. Typically these repairs are under warranty for the first 2 years of service. After warranty, about every 8-10 years coating maintenance is required at a cost of about $5,000-$10,000, and a full recoating of the tank interior may be needed after 15-20 years at a rough cost of about $100,000.

Health and Safety

During site visits we observed and noticed the existing hypalon tank cover (which is at ground level and exposed to the elements) has been repaired, likely due to splitting or vandalism. These penetrations of the hypalon cover allow for contaminants to enter the tank prior to their repair.

SMYTH INDUSTRIES INC.
4010 E. Illinois St.
Tucson, AZ 85714
(520) 750-8719 Phone | (520) 750-9544 Fax

Additionally the connection of the hypalon tank cover to the concrete ring at the edge of the tank is made via plates and bolts. Said connection is not likely watertight which may permit contaminants to enter the tank via rainwater runoff. This is of concern when considering the proximity to the existing mine and desert animal fecal material. Another safety concern is that there is no way to inspect the inside of the hypalon tank, and Community Water has been unable to contract a certified diver to inspect the inside of the tank to date.

A welded steel tank would eliminate all of the health and safety concerns described above.

Hydraulic Advantages

As mentioned prior, the existing hypalon tank is a below-ground storage vessel. Per plan documents provided by Community Water the bottom of the existing tank is 16-feet below ground surface. This requires that the inlet/outlet is at that level as well which reduces the amount of available head pressure within the system. Also the shared inlet/outlet in the existing system results in poor water exchange or circulation within the tank leading to stagnation and less desirable water quality.

An above-ground welded steel tank would increase the amount of head pressure available within the system and based on the information provided by Community Water it would reduce pumping costs at well #10. It would also allow for the elimination of the pressure pump at this site and create a redundant source of water pressure within the distribution system. Additionally the welded steel tank design would include an inlet and outlet with at least 90-degrees of separation between which would increase circulation in the tank, thereby increasing water quality. Another benefit resulting from the above ground steel tank is that the Reservoir #2 site would then be under positive pressure which is generally more secure against contamination.

If you have any questions, comments, or concerns regarding the opinions and recommendations described herein please contact Smyth Industries.

Sincerely,

Jesse Schultz, PE
Project Manager

APPENDIX D
WATER RESERVOIR #5 PROJECT DOCUMENTS

PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY
ENGINEERING REVIEW UNIT
33 N. Stone Ave., Suite 700, Tucson, Arizona 85701-1429
Telephone: (520) 724-7400

CERTIFICATE OF APPROVAL TO CONSTRUCT
Water Facilities

System Name: COMMUNITY WATER COMPANY OF GREEN VALLEY System No.: 10-004

Project Owner: COMMUNITY WATER COMPANY OF GREEN VALLEY

Address: 1501 S. LA CANADA DRIVE, GREEN VALLEY, AZ 85622-1078

Location: T-18-S, R-13-E, SECTION 16 Latitude: 31° 52' 07.12" Longitude: -111° 01' 35.50" County: Pima

Description: 2 MILLION GALLON RESERVOIR

Approval to construct the above, described facilities as represented in the approved plan on file with the Pima County Department of Environmental Quality is hereby given subject to the following provisions:

AFTER COMPLETION OF CONSTRUCTION, A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF ARIZONA SHALL COMPLETE A FINAL INSPECTION AND SUBMIT AN ENGINEER'S CERTIFICATE OF COMPLETION, ACCURATE "AS BUILT" PLANS, PRESSURE TEST RESULTS, CHLORINATION RESULTS AND MICROBIOLOGICAL TESTING RESULTS TO PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY IN ORDER TO OBTAIN AN APPROVAL OF CONSTRUCTION. THOSE PLANS MUST BE CLEAR BLUELINE PRINTS SUITABLE FOR MICROFILMING AND SHALL CLEARLY AND ADEQUATELY REPRESENT THE FACILITIES AS THEY ARE CONSTRUCTED.

The State law, A.R.S. 49-353, requires that construction of the project must be in accordance with the rules and regulations of the Arizona Department of Environmental Quality and the Pima County Department of Environmental Quality. For the purposes of Licensing Time Frames, under AAC Title 18, Chapter 1, Article 5, this Approval to Construct suspends the licensing time frames and constitutes a Notice of Deficiencies. According to AAC R18-9-A301(D)(f), the applicant, after completion of construction of the facility specified herein, is required to submit all applicable documents. The submittal of **all** the required documents restarts the licensing time frames. Construction shall conform with the approved design documents.

If this project includes trenching, land stripping, earthmoving or road construction, an air quality activity permit may be required pursuant to P. C. C. Title 17.12.470. For inquires, regarding air quality activity permits, please call (520) 724-7400.

If construction has not started within one year, this certificate will be void and a written extension of time shall be required within 90 days of the expiration of the approval date.

Date Approved: February 17, 2015

URSULA K. NELSON, P.E.
Director

By: Rene Gomez
Rene Gomez
Sr. Civil Engineering Assistant

cc: P-File No. PO02315
Engineer: Smyth Industries
Community Water Co. of Green Valley

Z:_Shared Data\Water\Water-Sewer Plan Review\Approvals\PO02315.wtr.doc

PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY - TECHNICAL SERVICES DIVISION
33 N. STONE AVENUE, SUITE 700, TUCSON, AZ 85701 TEL: (520) 724-7400

APPLICATION FOR APPROVAL TO CONSTRUCT WATER PROJECTS

(PLEASE SUBMIT TO THE PDEQ ENGINEERING REVIEW DESK AT 33 N. STONE AVE, SUITE 700, TUCSON, AZ 85701)

A. PROJECT NAME: CWC Reservoir 5

B. PROJECT TYPE (Please check all applicable components for the OVERALL PROJECT):

__ New Drinking Water Well or Source 1 Storage Tanks __ Other:

__ Water Line and Appurtenances __ Pressure Tanks

C. SYSTEM NAME/OWNER ADDRESS/ADEQ SYSTEM NUMBERS/OPERATIONAL STATUS:

WATER Community Water Co. of Green Valley SYSTEM NUMBER 1 0 0 0 4

__ New System __ Extension to Existing System

D. PROJECT LOCATION (Please provide approximate center. Information is required to accept application):

LATITUDE 3 1 5 2 0 7 .12 N LONGITUDE 1 1 1 0 1 3 5 .50 W

TOWNSHIP 18S RANGE 13E SECTION 16 QUARTER SECTION (CIRCLE ALL APPLICABLE) NE SE SW (NW)

COUNTY Pima

E. PROJECT DESCRIPTION: 2 Million Gallon aboveground Steel Tank

	F. PROJECT ENGINEER (PLEASE PRINT):	**G. PROJECT OWNER** (PLEASE PRINT):
FIRM NAME/NAME	Jesse Schultz/Smyth Industries	Arturo Gabaldon
ADDRESS	4010 E. Illinois	1501 S. La Canada Dr.
	Tucson, AZ 85714	Green Valley, AZ 85622
PHONE NO./FAX NO.	520-750-8719	520-625-8409/520-625-1951
SIGNATURE/DATE	2-9-15	

H. PLAN DOCUMENTS SUBMITTED (PLEASE SEE PDEQ PLAN REVIEW SUBMITTAL CHECKLIST)
NOTE: INCOMPLETE SUBMITTALS WILL NOT BE LOGGED IN.

J. OWNER/AGENT AGREEMENT AND SCHEDULE: AGREEMENT-The undersigned as Projec t Owner or as acting Agent for the Project Owner hereby a) grants PDEQ permission to enter the site for inspections; b) authorizes the Project Engineer to prepare and submit plan docum ents to the PDEQ ENGINEERING REVIEW DESK; and c) agrees to constr uct the sanitary facilities accord ing to the PDEQ Cer tificate of Approval and the approved plan documents.

CONSTRUCTION SCHEDULE: Estimated start date: 12/1/2014 Estimated completion date: 3/1/2015

TYPE OR PRINT NAME: John Meyer SIGNATURE:

AFFILIATION: Treatment Supervisor CWCGV DATE: 11/06/2014

1. Scope of Work: Contractor (Smyth Industries), having examined the conditions surrounding the Work and the Contract Documents, identified as the Bid Documents, General Contract, General Conditions, Special Conditions, Plans, Specifications, and all Addenda, agrees to be bound by the Contract Documents as if fully set forth herein, which binds Contractor to the Owner (Community Water) for performance in the same manner and subject to the same obligations and liabilities as Owner is bound to Contractor. Anything mentioned in the Specification and not shown on the drawings, or shown on the drawings and not mentioned in the Specifications, shall be of like effect as if shown and mentioned in both. In case of conflict or inconsistency between the Contract Documents and this agreement or the Specifications and the drawings, or in case of discrepancies, omissions and/or errors therein, the matter shall be submitted immediately to Owner for determination; however, the terms of this agreement shall govern. Contractor agrees to furnish all labor, material, equipment, supplies, plants, service, utilities, fuels, competent supervision, tools, appliances, licenses, fees, interest, penalties, certificates, shop drawings, transportation costs, insurance, scaffolding and all taxes but for sales tax and all items necessary for complete performance.

Contractor is employed as a licensed independent to perform the following work on the Project: 2.0MG Reservoir.

Includes: Per Attachment 'A'

Excludes: Per Attachment 'A'

Price - $ 940,384.00

Contractor agrees to perform the Work in strict accordance with the Contract Documents at the direction of the Owner and subject to final approval of the Owner and Architect/Engineer or other representative of the Owner for the sum of $(940,384.00)

Contractor agrees to submit request for payment on work completed.

2. Performance: Contractor shall commence work immediately and be responsible for performance and coordination of the Work in accordance with Owner's directions and progress schedule. Contractor shall attend all meetings required by Owner. Within THIRTY (30) days of signing this contract, Contractor shall furnish Owner, a written progress schedule and list of all information required to fully perform and coordinate the Work with other trades.

Completion date for Project is May 15, 2015. Failure to perform in accordance with progress schedule, or cause delay of other Contractors or Owner is a breach of this contract and Contractor, in addition to other remedies, shall be responsible for additional costs to Owner or other Contractors, including overhead, profit and attorney's fees.

2.1 Shop Drawings: ____1____copies of detailed shop drawings, brochures, samples, tests, field dimensions, and color selection for Architect/Engineer approval shall be submitted to Owner within ___21_____days of signing this Agreement. Approval does not relieve Contractor of responsibility for complying in strict accordance with the Contract Documents. All drawings and specifications are and shall be the property of Owner.

2.2 Contractor shall use all new material, remove and replace promptly, at Contractor's expense, all defective or nonconforming Work or materials, and report in writing any errors, inconsistencies or omissions relating to the Work. Contractor shall, remove all waste and maintain premises in a clean and orderly condition, and upon completion remove all debris and temporary structures to Owner's satisfaction.

Contractor shall provide all storage, shops, phones and offices as necessary, and provide safe and proper facilities for inspection at all times of the work at the Project, at shops or elsewhere.

2.3 Damage to Other Contractors: Contractor shall take all necessary steps to insure that it does not damage any other Contractor's work on the project. If Contractor and/or any other entity for which Contractor is responsible should cause damage to any other Contractor's work, Contractor will immediately repair the damage so as not to cause delay to the project. Should a claim arise due to damage to the work, Contractor agrees to defend, indemnify and hold harmless Owner from any and all claims including attorney's fees.

3. Assignment: This is a specialized performance contract and Contractor shall not assign or sublet the whole or any part of this Contract nor any funds accrued or to accrue without prior written consent of Owner; no assignment or sublet shall be binding on Owner unless and until accepted. Any assignment or sublet without prior written consent of Owner shall be void. Owner retains the right to refuse any and all assignments or subletting. Assignment in whole or part is cause for termination.

4. Changes and Delay: Contractor shall not deviate from the Contract Documents except on written order of Owner. Owner may make written change in the Contract Documents, which may add or deduct from the amount of Work covered by this Agreement. Contractor shall be governed by such changes on presentation and even in case of disagreement as to adjustment of contract amount; Contractor shall proceed with the work as changed so as not to delay the progress of the Work.

If Contractor believes that work that it is being asked to perform is a change to the contract work, Contractor must notify Owner within 48 hours or Contractor will waive any claim it may have to additional compensation.

No extra compensation for extra work, materials, or any time extension shall be allowed unless Owner has issued a written change order. Recovery by Contractor for Owner caused delays shall be limited to time extensions only; Contractor shall not be entitled to damages, compensation or reimbursement for any losses on account of delay from any cause whatsoever including, but not limited to, changes in scope or design, failure of Owner to make payments, any act, neglect, default or failure of performance by Owner or other Contractor or suppliers, delay in obtaining title or possession of land or acquiring rights-of-way, failure to furnish required materials, Owner delay in obtaining financing, delay in obtaining permits, or other conditions contained in the Contract Documents. If material is not delivered promptly, Owner may expedite delivery of material to be supplied by Contractor and back charge Contractor any cost incurred.

5. Infringements: The Contractor agrees to indemnify and save harmless the Owner against all damages which they may sustain by reason of anything to be supplied hereunder being covered by a patent not owned by the Contractor, and at the expense of the Contractor to defend any action brought against the Owner and/or the Owner founded upon the claim that any such thing or any part thereof infringes any such patent.

6. Use of Material Hoists, Derricks, Etc.: The Contractor understands that the Owner has issued or shall issue orders prohibiting any persons from using any material hoist or derrick to carry them to and from the various floors of the Project and the Contractor shall not permit its employees to ride on any material hoist or derrick used in connection with the Project. No one in the Owner's employ has any right to grant the Contractor or its agents or employees the right to ride on any material hoist or derrick except the executive officers of the Owner, and then only in writing.

Whenever the Contractor shall use any scaffold, derrick material hoist or other tools and plant furnished by the Owner, it shall satisfy itself as to the safety of said scaffold, derrick, material hoist or other tools and plant before using the same and shall be fully responsible for the safety thereof to the same extent as if such scaffold, derrick, material hoist or other tools and plans were owned by and in the sole control of the Contractor.

7. Warranty: Contractor shall warrant and guarantee the Work and material incorporated and, without cost to Owner or Owner, correct any and all defects due to faulty workmanship and/or materials which may appear within one year from date of completion and acceptance by Owner, unless the Contract Documents require a longer period. All guaranties and special guaranties required by the Contract Documents and operating instructions, part lists and manuals shall be provided prior to final payment.

8. Breach, Termination for Default: If Contractor should refuse or neglect to prosecute the Work as per Contract Documents, fail to provide sufficient material or equipment of proper quality, fail to promptly correct defective Work, fail to perform any term of this Agreement, be unable to meet its debts or fail to promptly pay for labor or material or other obligations, fail to perform other construction projects for any other Owner, be financially insecure, disregard any law, by act or omission cause delay or interfere with Owner, other Owners or Contractors, assign this contract, or voluntarily or involuntarily file bankruptcy, liquidation or assignment for the benefit of creditors, Owner may, without prejudice to any other remedy, and upon serving written notice to Contractor's last known address with directions to cure the specific default within TWO (2) working days, declare a breach of this contract and at Owner's discretion employ another Contractor, take possession of Contractor's tools, equipment and materials at the building site or elsewhere, and complete the project by any means; in the event of Contractor's default, Contractor shall assign all material, equipment, tools, service and supplies to Owner. Thereafter, Contractor shall remain liable to Owner for any costs incurred in completing Contractor's Work, including all charges, losses, cost, damages, Owner's overhead and profit, and attorney's fees incurred as a result of Subcontract's failure to perform.

If Owner terminates this Agreement for default, Contractor shall not be entitled to any further payments under this Agreement until the accepted Subcontract Work has been completed and accepted by Owner, payment received by Owner from Owner and all above-described expenses deducted from Contractor and paid Owner. Contractor shall be responsible if the expense exceeds the balance due and shall promptly pay Owner.

Owner may terminate this contract without default by Contractor. In that event, Contractor shall receive, less all previous payments, (1) payment for actual cost for labor and material incorporated into the Project, (2) actual cost for firm obligations reasonably incurred in good faith by Contractor, (3) reasonable overhead incurred, and (4) an amount equal to FIVE PERCENT (5%) of the total of (1), (2), and (3) IN LIEU PROFIT, but in no event shall (1), (2), and (4), exceed the total Subcontract price; provided that all work performed or materials purchased met contract requirements and are assigned to Owner, including all shop drawings, manuals, samples tools, equipment and materials.

9. Disputes: All controversies, disputes and claims arising under or in reference to this contract between Owner and Contractor shall be subject to mediation conducted by the architect including performance, non-performance, and termination. In such instance (s), Contractor will be bound to Owner to the same extent that Owner is bound to Contractor by the terms of the Contract Documents and by any and all decisions or determinations made hereunder. Contractor will also be bound to Owner to the extent that Owner is bound to Contractor by the final decision of a court proceeding. With respect to any and all work done or agreed to be done by the Contractor and with respect to any and all materials or services furnished or agreed to by furnished by Contractor, and with respect to any and all damages, if any, incurred by Contractor in connection with this Project, Owner in no event shall be liable to Contractor to any greater extent that Owner is liable to Owner. No dispute shall interfere with the progress of the Project, and Contractor shall proceed with its Work as directed.

If, at any time, a dispute, claim or controversy should arise between Owner and Contractor with respect to any matter or thing involved in this Contract or Project, which controversy is not determined by the herein above Section, or other provisions of this Contract, then the decision of the Owner shall be followed by Contractor, and said controversy shall be decided as follows: Contractor shall conclusively be bound by and abide by Owner's decision unless Contractor shall commence litigation within 30 days following such decision. No dispute shall interfere with the progress of the Project, and Contractor shall proceed with its work as directed of the Project and Contractor shall proceed with its work as directed by Owner.

In the event Owner or others institute litigation regarding matters relating to this contract, Contractor shall be responsible for Owner's costs, including reasonable attorney's fees or, at Owner's option, Contractor shall prepare and present Owner's case to the extent matters are related to this contract. Contractor further agrees to defend, indemnify and hold harmless Owner from any and all damages relating to any claims concerning the work covered by this contract.

Should litigation commence between the parties, the prevailing party shall be entitled to an award of its reasonable attorney's fees and costs. Venue and jurisdiction shall be in Tucson, Pima County, Arizona.

10. Provisions: If any condition of this Agreement is invalid, the remaining conditions shall nevertheless be in full force and effect. Each and every term of this Agreement is material and the breach of any term by Contractor is breach of the entire and grounds for termination. Waiver by Owner shall not constitute waiver of any subsequent breach of the same or any other conditions of this contract. This contract shall not be changed except on written consent of Owner and Contractor. The laws of the State of Arizona shall govern this agreement. Time is of the essence in the performance of this Agreement.

11. Insurance and Indemnity: The Contractor shall effectually secure and protect the Work and shall bear and be liable for and shall repair and replace all loss and damage of any kind which may happen to the Work, from any cause whatsoever, at any time prior to the final completion and acceptance thereof, and the Owner will not in any manner be answerable or responsible for any loss or damage that shall happen to the Work or any part thereof, nor for any materials, equipment, tools, plant, facilities or other things that may be employed therein or placed upon the premises by the Contractor, the latter being solely responsible therefore until the Work has been fully completed and approved by the Owner and accepted by the Architect.

Unless a different Indemnification and Hold Harmless is specified in an Insurance Rider annexed hereto, (which if so specified shall be the applicable Indemnification and Hold Harmless) Contractor hereby agrees (to the extent permitted by law) to assume the entire responsibility and liability for and defense of and to defend, pay, hold harmless, and indemnify the Owner, their agents, employees, and surety against any loss, expense, claims, demands, liens or liability and will hold each of them harmless from and pay any loss, damage, consequential damages, cost or expense (including, without limitation, judgments, attorney's fees, court cost and the cost of appellate proceedings), which the Owner, their agents or employees, incur because of sickness, disease, injury to or death of any person or on account of damage to property, including loss of use thereof, or any other claim caused, occasioned or arising out of, directly or indirectly caused, in connection with, or as a consequence of the performance of the Work, whether arising before or after final acceptance, and/or any act, fault, negligence or omission of the Contractor or any of its officers directors, employees, agents or anyone directly or indirectly employed by Contractor or anyone for whose acts Contractor may be liable as it related to the scope of this Contract, whether such injuries to person or damage to property are claimed to be due to any negligence of the Owner, its or their employees or agents or any other person. Contractor will purchase and maintain such insurance as will protect him including contractual coverage. Contractor will name Community Water Co. of Green Valley as additional insured on the insurance certificate.

The Contractor shall, through agents, in amounts and in companies authorized to do business in the State of Arizona for the purposes intended, take out, maintain in force during the period covered by this Contract and pay for such insurance as the Owner shall require. If the Contractor shall fail to deliver certificates for such insurance to the Owner within FORTY-EIGHT (48) hours after demand, and in any event prior to commencement of the Work on the Project site, the Owner may obtain such insurance for the Contractor and pay the premiums thereon, and the Contractor shall repay the Owner, on demand, any sum or sums paid therefore, or the Owner may deduct such premiums from an money due or to become due to the Contractor under this Contract.

Failure of the Contractor to maintain required insurance shall be a breach of the Contract. Every policy of insurance required hereunder shall provide for giving to the Owner THIRTY (30) days' prior written notice of the cancellation thereof.

Any policy of insurance covering the Contractor's own tools, plant and facilities against loss by physical damage shall include an endorsement providing that the underwriters waive their right of subrogation against the Owner and the Owner.

In addition, Contractor shall maintain not less than the following insurance:

a)	Worker's Compensation	Statutory	
	Employer's Liability	Each Accident	$100,000.00
		Disease-Policy Limit	$100,000.00
		Disease-Each Employee	$100,000.00
b)	Comprehensive General Liability	General Aggregate	$1,000,000.00
	Commercial General Liability	Products-Comp/Op Agg	$1,000,000.00
		Occurrence Basis Personal & Adv Injury	$1,000,000.00
		Each Occurrence	$1,000,000.00
c)	Fire Damage	Any One Fire	$50,000.00
d)	Medical Expense	Any One Person	$5,000.00
e)	Automobile Liability Any Auto	Bodily Injury & Property Damage Combined	$1,000,000.00
		Each Occurrence	Aggregate
	Umbrella Form	$	$

12. Compliance with Laws: Contractor shall comply with all Federal, State and Municipal laws, codes and regulations including, but not limited to, Fair Labor Standards Act, health, safety, OSHA, environmental, worker's compensation, social security, employment and wage and hour laws, shall maintain a safety program and pay all taxes and penalties. Contractor shall comply with all requirements of Title VII of the Civil Rights Act of 1964, 41 C.F.C. 60-4.3, Executive Order 11246 of 1965 as amended, and all affirmative action programs. Contractor will not discriminate in the employment or advancement of any employee or applicant because of race, national origin, sex, color, age, religion, creed or physical handicap. Contractor acknowledges receipt of Owner's EEO/Affirmative Action Policy. Contractor shall maintain all records and accounts for the employment of labor and the furnishing of materials and supplies in accordance with proper accounting procedures and all Federal, State and Municipal laws, codes and regulations. Copies of such records shall be provided Owner upon request. This Contract does/does not require certified payrolls.

13. Payments: A. Owner upon receipt of payment from Owner for the amount claimed by Contractor will make payment for the approved value of Work and material incorporated in the construction for the billing period. As a condition of payment, Contractor must submit to Owner's office a statement of payments made by Owner on behalf of Contractor with a written application for progress payment by the 25th day of each month with Owner Job Number and Cost Code, if applicable. Subject to Owner's prior approval, payment may be made for materials or equipment not incorporated into the work but delivered and suitably stored at the site or another location, provided assurances satisfactory to Owner are received for storage, transportation and insurance. Payment will be less the aggregate of previous payments; payment is not considered as approval and/or acceptance of the Work done or materials furnished. As a further condition of payment, Contractor must submit with each monthly application a lien waiver for labor and material, and lien releases from suppliers for all material and supplies, in a form satisfactory to Owner for all Work performed during the billing period. Owner reserves the right to issue joint checks payable to Contractor and its material men and suppliers. Contractor will keep separate accounts of labor and material for this Project; payments will be used only for this Project and not commingled to satisfy other obligations of Contractor. If current labor and material or other bills relating to the Project are not being paid, Owner may, at any time, take all steps necessary to insure such payment, pay Contractor's bills and charge Owner's overhead and profit to Contractor, or terminate this Agreement. In the event Contractor's material men, suppliers or Contractors file a lien or claim, Contractor shall do all things necessary to immediately remove the lien or claim by bonding or payment; if Contractor fails to immediately do so, Owner may, in addition to right of termination of subcontract, do all acts necessary to remove the lien and back charge Contractor all cost, including attorney fees.

B. The completion date for this project is May 1, 2015.

C. Final payment shall be upon completion of Work, payment by Owner, approval by Architect/Engineer or other representative of Owner and upon receipt of all warranties, operating instructions, manuals, submittals, part lists, replacement items and material, release of lien, suppliers lien releases and affidavits of payment and agreement to hold Owner harmless from all claims, all in forms acceptable to Owner. Acceptance of final payment shall act as a waiver and release of any and all claims by Contractor for the Project.

D. Owner may retain out of sums due or to become due contract amounts sufficient to indemnify Owner, including attorney's fees, for any sums owed Owner or for any loss or claim against Contractor which claim or lien arises out of Contractor's performance on this or other contracts, regardless of any bond posted by Contractor.

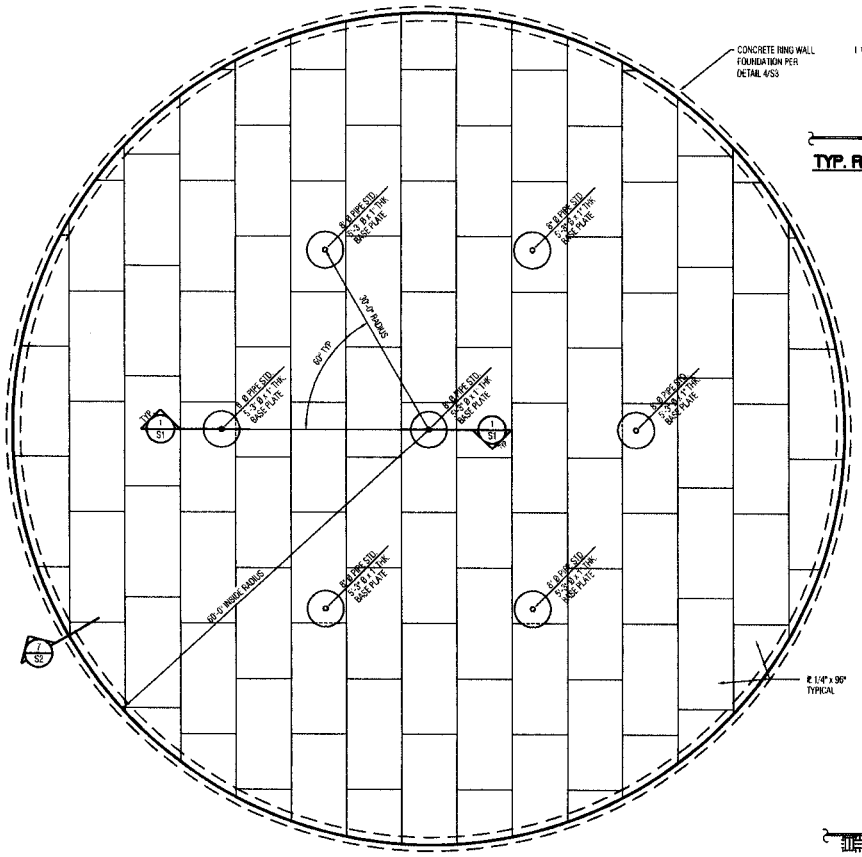
14. Performance Bond and Labor and Material Bond: A performance bond and a labor material bond may be required of Contractor at any time paid for by Owner. Failure to provide the required bond by a surety authorized to do business in the State of Arizona is cause for breach of Contract and termination.

15. The Contractor will comply fully with all provisions of the Immigration Reform and Control Act of 1986 and Regulation issued in connection with the Act.

16. Owner and Contractor Records: The Owner, Contractors and all suppliers shall keep and maintain all books, papers, records, files, accounts, reports, bid documents with backup data, and all other material relating to the contract and project for five years following completion and acceptance of the work.

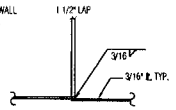
OWNER	CONTRACTOR
COMMUNITY WATER CO. OF GREEN VALLEY	SMYTH INDUSTRIES
BY: [signature]	BY: [signature]
TITLE: President	TITLE: PRESIDENT
Date: 12/2/14	Date: 12/2/14
	(X) Corporation ( ) Partnership ( ) Sole Proprietorship
ATTEST: [signature]	ATTEST: [signature]
TITLE: Controller	TITLE: Accounting

State License No: ROC 154663A

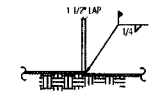


BOTTOM PLATES LAYOUT PLAN

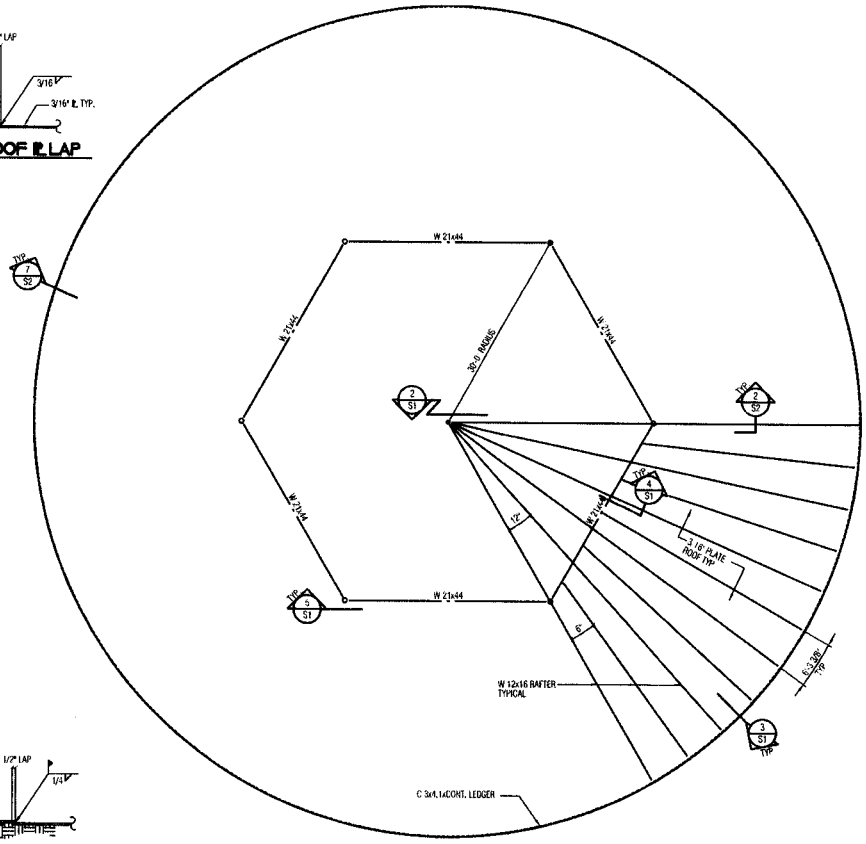
1/8" = 1'-0"



TYP. ROOF ℄ LAP

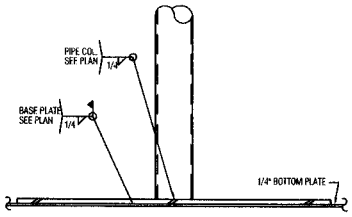


TYP. FLOOR ℄ LAP



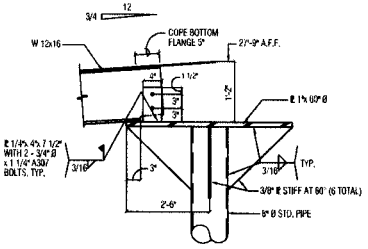
ROOF FRAMING PLAN

1/8" = 1'-0"



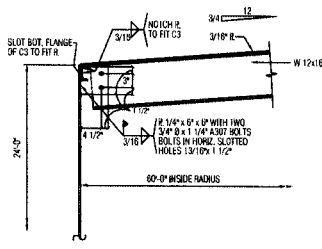
1 TYPICAL CONN. DETAIL

1" = 1'-0"



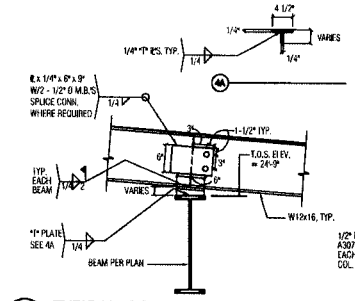
2 TYPICAL CONN. DETAIL

1" = 1'-0"



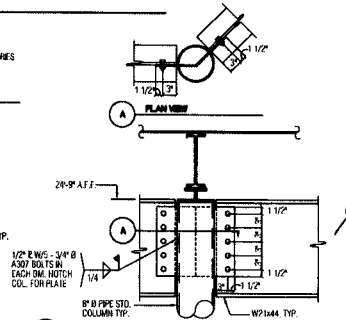
3 TYPICAL CONN. DETAIL

1" = 1'-0"



4 TYPICAL CONN. DETAIL

1" = 1'-0"



5 TYPICAL CONN. DETAIL

1" = 1'-0"

REVISIONS	

TURNER STRUCTURAL ENGINEERING COMPANY
3308 S. Country Club · Tucson, Arizona, 85713 · (520) 323-3422

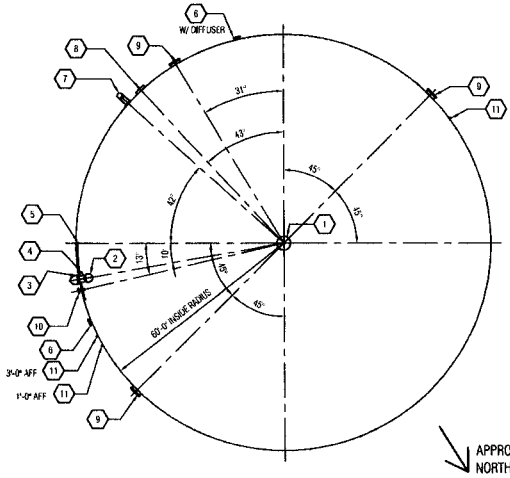
FLOOR AND ROOF FRAMING PLANS AND DETAILS

CONTINENTAL ROAD WATER TANK
2.0 MG. RESERVOIR
PREPARED FOR
SMYTH STEEL MFG.

STATE OF ARIZONA
JAMES D. HART

JOB NO.	14063
Design	L.M.
Drafting	M.D.M.
Checked	J.D.H.
Appr.	
Date	01/09/15

SHEET NO.
S1

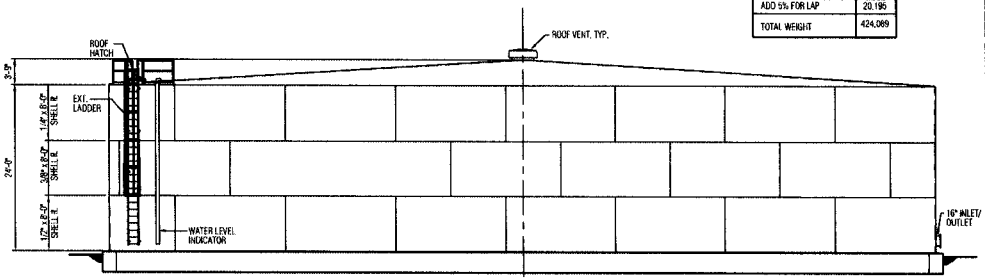


	DESCRIPTION	REMARKS
1	ROOF VENT	SEE DETAIL 3/S3
2	ROOF HATCH	SEE DETAIL 2/S3
3	OUTSIDE LADDER	SEE DETAIL 1/S4
4	INSIDE LADDER	SEE DETAIL 2/S4
5	GUARDRAIL	SEE DETAIL 3/S4
6	16" TANK INLET/OUTLET	SEE DETAIL 4/S2
7	18" OVERFLOW	SEE DETAIL 1/S2
8	CLEANOUT	SEE DETAIL 4/S4
9	36" MANWAY	SEE DETAIL 1/S3
10	LEVEL INDICATOR	SEE DETAIL 5/S4
11	3/4" TAP	*

* OWNER SHALL VERIFY ALL SIZES, LOCATION, AND DETAIL REQUIREMENTS

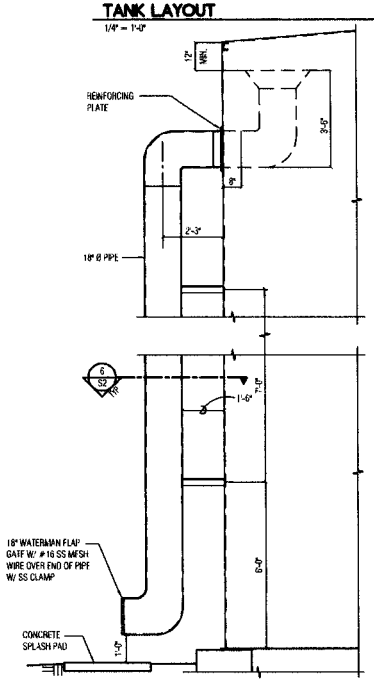
NOTE:
SHELL PLATES WERE DESIGNED USING AWWA SECTION 14: ALTERNATIVE DESIGN FOR STANDPIPES AND RESERVOIRS. THE MANUFACTURER SHALL COMPLY WITH ALL THE WELDING INSPECTION REQUIREMENTS OF SECTION 14.

WEIGHT OF TANK	(LBS)
ROOF PLATE	86,592
ROOF JOISTS/BEAMS	51,120
COLUMNS & BASE PLATES	12,176
SHELL PLATE	138,549
BOTTOM PLATE	115,456
ADD 5% FOR LAP	20,195
TOTAL WEIGHT	424,069

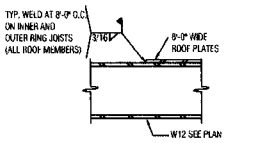


TANK LAYOUT
1/4" = 1'-0"

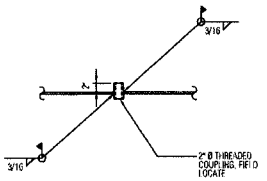
TANK ELEVATION
1/8" = 1'-0"



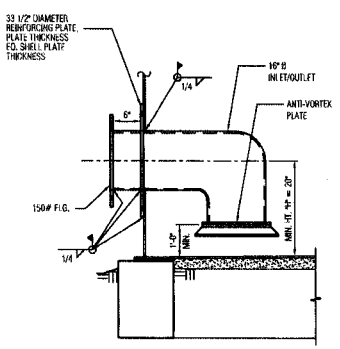
1 TYP. OVERFLOW
1/2" = 1'-0"



2 ROOF TO CONN. TO ROOF JOIST
1/2" = 1'-0"

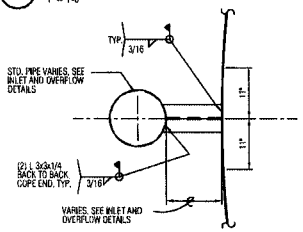


3 TYP. TRANSDUCER PORT
1" = 1'-0"

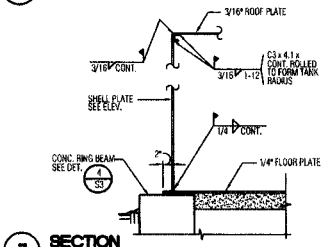


4 TYPICAL FLANGED INLET OR OUTLET
NO SCALE

5 TYP. OUTLET FOR PROBE CONTROLS
1" = 1'-0"



6 OVERFLOW PIPE BRACING
1" = 1'-0"



7 SECTION
1" = 1'-0"

EARTHWORK NOTES

- SEE GEOTECHNICAL REPORT BY CONFORMATECH, JOB NO. 14-0428, DATED DECEMBER 12, 2014, PREPARE TANK PAD PER GEOTECHNICAL REPORT TO DEVELOP 2,000 PSF ALLOWABLE BEARING AT CONCRETE RING FOUNDATION AND THE FOLLOWING MINIMUM ALLOWABLE BEARING AT TANK BOTTOM: 2,000 PSF EMPTY, 3,150 PSF FULL. OVEREXCAVATION AND RECOMPACTION AS ENGINEERED FILL IS REQUIRED. SEE GEOTECHNICAL REPORT FOR ALL REQUIREMENTS.
- PROVIDE A COMPACTED GRANULAR BASE COURSE BELOW THE TANK BOTTOM.
- TOP OF COMPACTED BASE SHOULD BE 6 INCHES MINIMUM ABOVE ADJACENT FINISH GRADE.
- FINISH GRADE SHALL SLOPE AWAY FROM TANK AT EXTERIOR.
- GRADE AND BASE COURSE SHOULD GRADE UNIFORMLY TO A HIGH POINT AT THE CENTER OF THE TANK AT A 1:10 SLOPE TYPICAL (1" VERTICAL TO 10'-0" HORIZONTAL)

REVISIONS

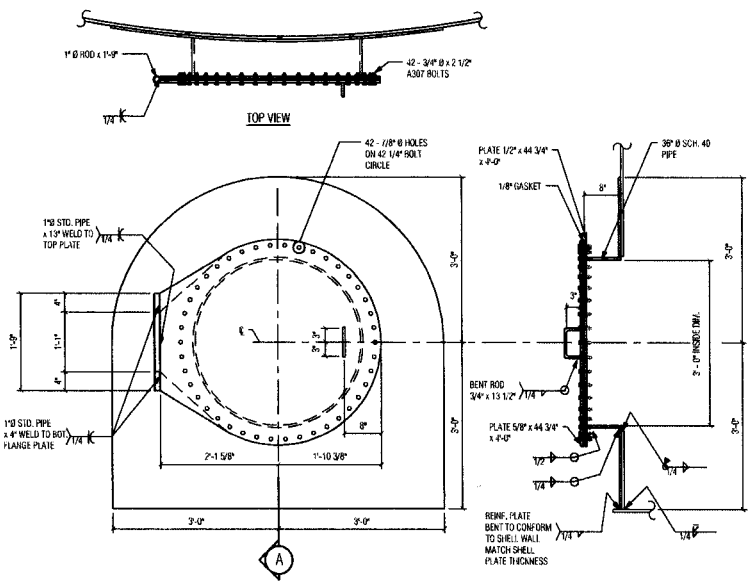
TURNER STRUCTURAL ENGINEERING COMPANY
3205 N. Country Club • Tucson Arizona, 85716 • (520) 322-3422

FLOOR AND ROOF FRAMING PLANS AND DETAILS

CONTINENTAL ROAD WATER TANK
2.0 MG RESERVOIR
PREPARED FOR
SMYTH STEEL MFG.

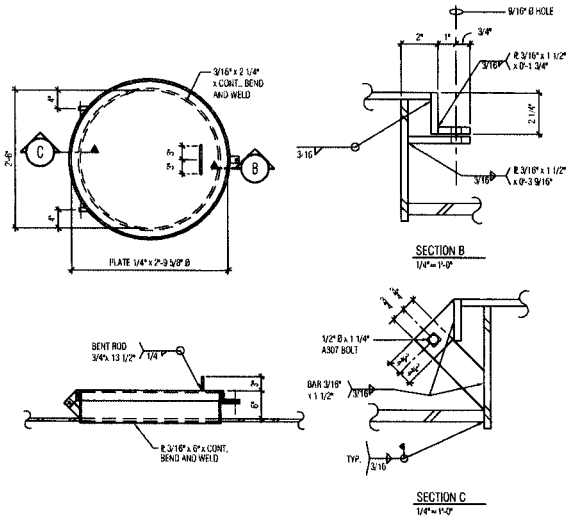
JOB NO.	14063
Design	J.M.
Drafting	M.D.M.
Checked	J.D.H.
Appr.	
Date	01/08/15

SHEET NO.
S2

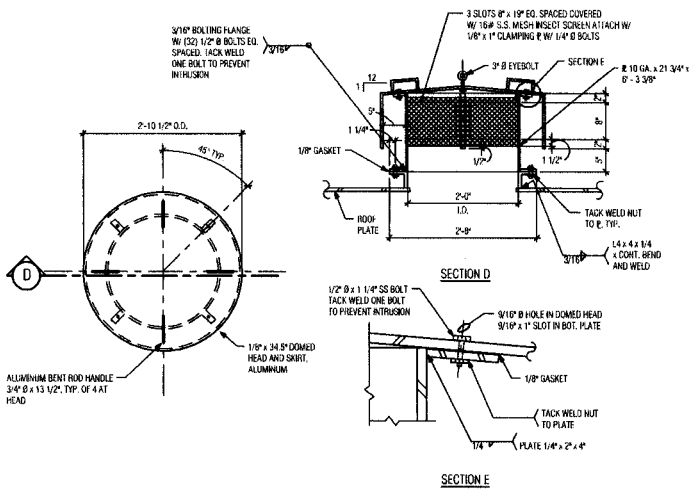


1 36" SHELL MANHOLE

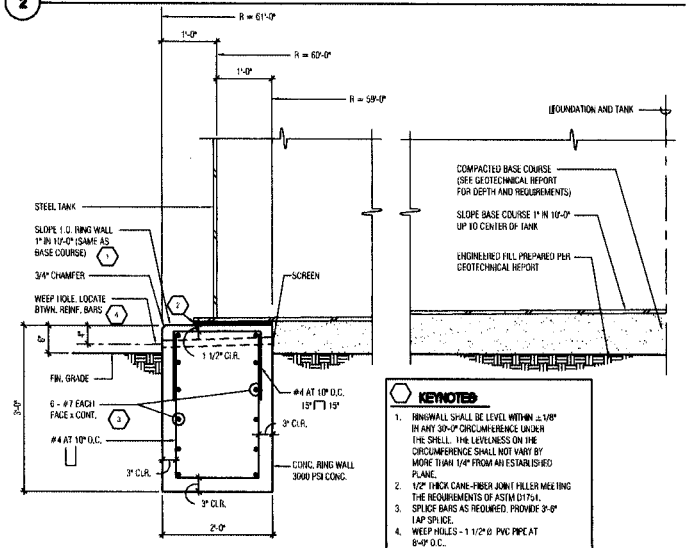
UNLESS NOTED OTHERWISE 1" = 1'-0"



2 ROOF HATCH



3 ROOF VENT



4 CONCRETE RING WALL FOUNDATION DETAIL

REVISIONS

TURNER STRUCTURAL ENGINEERING COMPANY
3008 N. Country Club · Tucson, Arizona, 85716 · (520) 323-3422

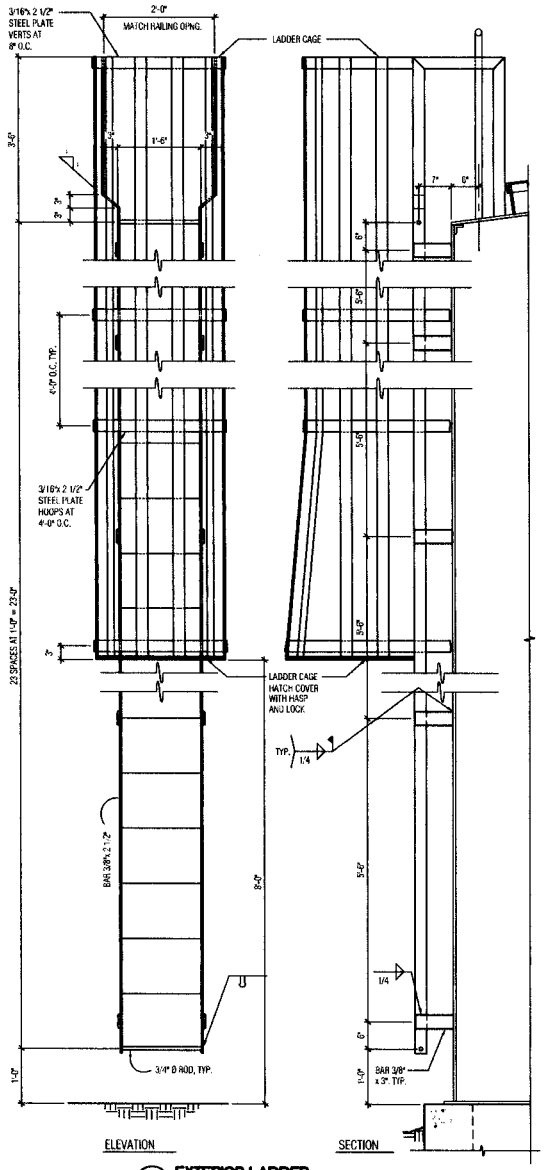
RESERVOIR DETAILS

CONTINENTAL ROAD WATER TANK
2.0 MG. RESERVOIR
PREPARED FOR
SMYTH STEEL MFG.

87343 JAMES D. HART

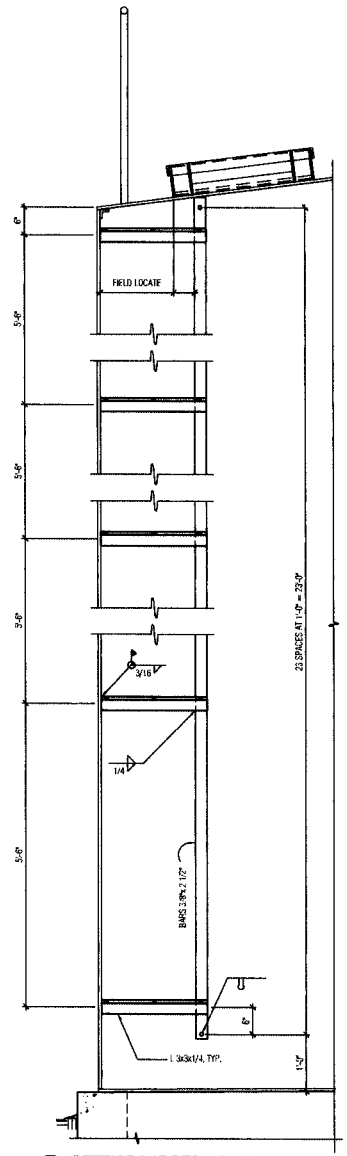
JOB NO.	14063
Design	E.A.A.
Drafting	M.D.M.
Checked	J.D.H.
Appr.	
Date	01/05/15

SHEET NO.
S3

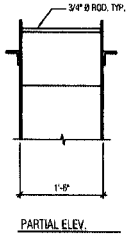


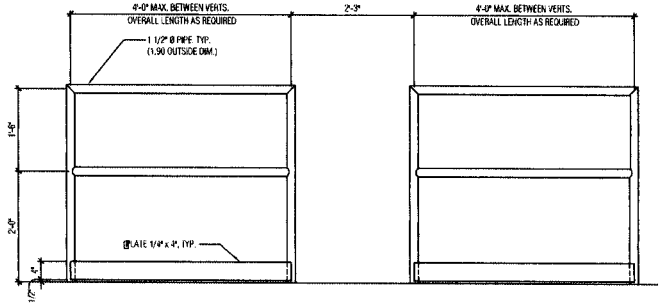
1 **EXTERIOR LADDER**

UNLESS NOTED OTHERWISE 1" = 1'-0"

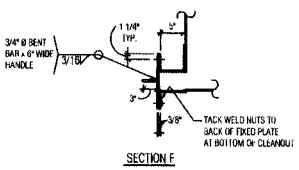


2 **INTERIOR LADDER - SECTION**

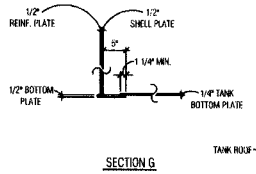




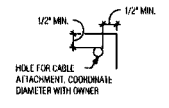
3 **TYPICAL RAILING**



SECTION F

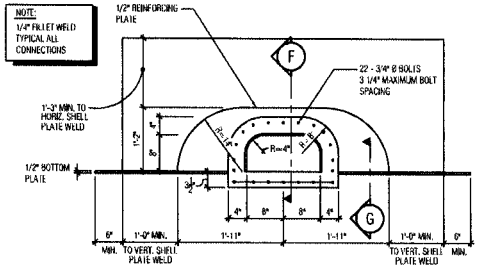


SECTION G

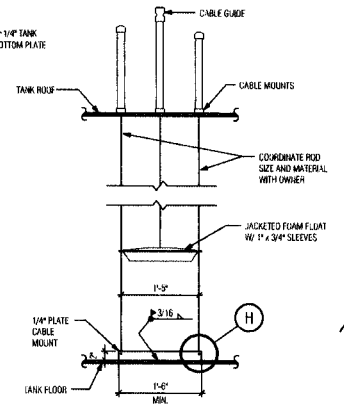


SECTION H

NOTE:
MOUNT EXTERIOR TARGET AND GAUGE BOARD TO TANK EXTERIOR AND INSTALL PER MANUFACTURERS REQUIREMENTS



4 **FLUSH-TYPE CLEANOUT DETAIL**



5 **LIQUID LEVEL INDICATOR**

REVISIONS

TURNER STRUCTURAL ENGINEERING COMPANY
3838 N. Country Club · Tucson, Arizona, 85716 · (520) 323-1422

INT./EXT. LADDER AND GUARDRAIL ELEVATIONS

CONTINENTAL ROAD WATER TANK
2.0 MG. RESERVOIR
PREPARED FOR
SMYTH STEEL MFG.

27243 JAMES D. HART

JOB NO.	14163
Design	LAS
Drafting	MGM
Checked	JDH
Appr.	
Date	01/09/15

SHEET NO.
S4

ConformaTECH

Report of Compression Test Results

Client: Smyth Steel MFG
4010 East Illinois
Tucson, AZ 85714-

Attn: Gary Smyth

Report Date: April 15, 2015
Project #: 13-3922
Project Name: Smyth Steel M/T
Address: See Remarks
Tucson, AZ
Project Manager:
Architect:
Engineer:

Specimen Type: Concrete **ASTM-C39/ASTM-C1231**

Mix and Field Data

CastDate: 3/17/2015

Contractor:

Type of Placement: Footing
Location: Northeast quad of ring foundation, North to Northeast

Strength: Required (f'c) : 3000 psi @ 28 Days

Inspector: Thomas English

Mix #: 3714703
Supplier: Staker Parson
Load: 2 of 9
Truck #: 568709
Ticket #: 57163321
Plant #:
Batch Size (cy): 11
Water Added (gal):
Admixture:

	Actual	Specs
Slump (in) ASTM C-143:	3.25	
Air Content (%) ASTM C231:		
Unit Weight (pcf) ASTM C-138:		
Sample Temperature (°F) ASTM C-1064:	78	
Ambient Temperature (°F):	60	

Yield (cy):
Water Content Ratio:
Cement Content (lbs/cy):

Clouds Condition: Partly Cloudy
Precipitation: Dry
Wind Condition: Breezy (5-9mph)

Time

Batch Time: 6:09
Sampled Time: 7:20
Finish Time:

Remarks: Community Water Company of Green Valley Reservoir No. 5,
2051 West Continental Road
Set 1 of 2

Test Result

Lab Id	Spec Id	Date Received	Test Date	Age (Days)	Diam.	Lngth.	Actual Area (in²)	Compressive (lbs)	Strength (psi)	Break Type	Field Cure	Type of Cap	Percent of Req.
1392232	29	3/18/2015	3/24/2015	7	4x8		12.57	46660	3710	CSp	☐	Un	124%
	30	3/18/2015	4/14/2015	28	4x8		12.57	55540	4420	CSp	☐	Un	147%
	31	3/18/2015	4/14/2015	28	4x8		12.57	56730	4510	CSp	☐	Un	150%
	32	3/18/2015	4/21/2015	35	4x8		12.57			Hold	☐		
								Average of 28 Day Breaks:	4466				

Break Types: -- (Cn) Cone, (CSp) Cone Split, (SCh) Cone Shear, (Sh) Shear, (Co) Columnar
Type of Caps: -- (Un) Unbonded, (Su) Sulfur Based Compound, (Gr) Grinding

Reviewed By: Bin Mohr

Distribution: Client ☑ File: ☐ Supplier: ☐ Other: Addressee (1)

ConformaTech, Inc.
1425 East Apache Park Place
Tucson, AZ 85714
Tel (520) 573-2045
Fax (520) 573-0528

ConformaTECH

Report of Compression Test Results

Client: Smyth Steel MFG
4010 East Illinois
Tucson, AZ 85714-

Attn: Gary Smyth

Report Date: April 15, 2015
Project #: 13-3922
Project Name: Smyth Steel M/T
Address: See Remarks
Tucson, AZ
Project Manager:
Architect:
Engineer:

Specimen Type: Concrete **ASTM-C39/ASTM-C1231**

Mix and Field Data

CastDate: 3/17/2015

Contractor:

Type of Placement: Footing
Location: Tank foundation, South quad of ring

Strength: Required (f'c) : 3000 psi @ 28 Days

Inspector: Thomas English

Mix #: 3714703
Supplier: Staker Parson
Load: 7 of 9
Truck #: 567600
Ticket #: 57163332
Plant #:
Batch Size (cy): 11
Water Added (gal):
Admixture:

	Actual	Specs
Slump (in) ASTM C-143:	2.75	
Air Content (%) ASTM C231:		
Unit Weight (pcf) ASTM C-138:		
Sample Temperature (°F) ASTM C-1064:	74	
Ambient Temperature (°F):	65	

Yield (cy):
Water Content Ratio:
Cement Content (lbs/cy):

Clouds Condition: Partly Cloudy
Precipitation: Dry
Wind Condition: Breezy (5-9mph)

Time

Batch Time: 7:47
Sampled Time: 9:00
Finish Time: 9:18

Remarks: Community Water Company of Green Valley Reservoir No. 5
2051 West Continental Road
Set 2 of 2

Test Result

Lab Id	Spec Id	Date Received	Test Date	Age (Days)	Diam. Lngth.	Actual Area (in^2)	Compressive (lbs)	Strength (psi)	Break Type	Field Cure	Type of Cap	Percent of Req.
1392236	33	3/18/2015	3/24/2015	7	4x8	12.57	45690	3630	CSp	☐	Un	121%
	34	3/18/2015	4/14/2015	28	4x8	12.57	54350	4320	CSp	☐	Un	144%
	35	3/18/2015	4/14/2015	28	4x8	12.57	53700	4270	CSp	☐	Un	142%
	36	3/18/2015	4/21/2015	35	4x8	12.57			Hold	☐		
							Average of 28 Day Breaks:	4298				

Break Types: -- (Cn) Cone, (CSp) Cone Split, (SCh) Cone Shear, (Sh) Shear, (Co) Columnar
Type of Caps: -- (Un) Unbonded, (Su) Sulfur Based Compound, (Gr) Grinding

Reviewed By: Bin Mohn

Distribution: Client ☑ File: ☐ Supplier: ☐ Other: Addressee (1)

ConformaTech, Inc.
1425 East Apache Park Place
Tucson, AZ 85714
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Fax (520) 573-0528

ConformaTECH

NUCLEAR METHOD
FIELD DENSITY TESTING REPORT

12 January 2015
CTEC Job No. 13-3922

Smyth Industries, Inc.
Attn: Gary Smyth
4010 East Illinois Avenue
Tucson, AZ 85714

Project: Smyth Industries, Inc. Miscellaneous Testing
Project Location: Community Water Company of Green Valley Reservoir No. 5
2051 West Continental Road

Area Description: Water Tank

Test Date: January 6, 2015
Datum Reference: Finish Grade = Assumed 100.0

Test No.:	Test Location	Elevation	FIELD TESTING			REFERENCE CURVE			% Compaction Req'd	PASS/FAIL
			Dry Density Lbs/cu.ft.	Moisture Content %	% of Maximum Dry Density	Lab No.	Maximum Dry Density lbs/cu.ft.	Optimum Moisture Content %		
1	Tank Backfill Native 20' North of center	98.5	126.8	6.5	99%	5617*	127.6	8.5	97%	PASS
2	Tank Backfill Native 10' South and 20' East of center	98.5	127.1	6.7	100%	5617*	127.6	8.5	97%	PASS
3	Tank Backfill Native 20' West of center	99.0	128.1	5.0	100%	5617*	127.6	8.5	97%	PASS
4	Tank Backfill Native 20' South and 10' West of center	99.0	125.3	5.1	98%	5617*	127.7	8.5	97%	PASS

*Rock Corrected

Reviewed By: Brian M Lohr

ConformaTech, Inc.
1425 East Apache Park Place
Tucson, Arizona 85714
Tel.: (520) 573-2045
Fax: (520)573-0528

ConformaTECH

NUCLEAR METHOD
FIELD DENSITY TESTING REPORT

12 January 2015
CTEC Job No. 13-3922

Smyth Industries, Inc.
Attn: Gary Smyth
4010 East Illinois Avenue
Tucson, AZ 85714

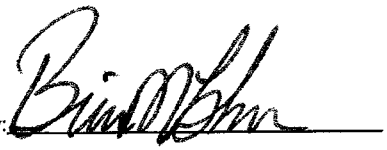
Project: Smyth Industries, Inc. Miscellaneous Testing
Project Location: Community Water Company of Green Valley Reservoir No. 5
2051 West Continental Road

Area Description: Water Tank

Test Date: January 7, 2015
Datum Reference: Finish Grade = Assumed 100.0

Test No.:	Test Location	Elevation	FIELD TESTING			REFERENCE CURVE			% Compaction Req'd	PASS/FAIL
			Dry Density Lbs/cu.ft.	Moisture Content %	% of Maximum Dry Density	Lab No.	Maximum Dry Density lbs/cu.ft.	Optimum Moisture Content %		
1	Tank Ring ABC Near center of trench Northside of tank ring	97.5	125.4	4.8	98%	5624*	127.7	7.7	97%	PASS
2	Tank Ring ABC Near center of trench Southside of tank ring	97.5	126.2	5.9	99%	5624*	127.7	7.7	97%	PASS
3	Tank Ring ABC Near center of trench Eastside of tank ring	98.5	127.1	5.0	100%	5624*	127.7	7.7	97%	PASS
4	Tank Ring ABC Near center of trench Westside of tank ring	98.5	128.1	5.3	100%	5624*	127.7	7.7	97%	PASS

*Rock Corrected

Reviewed By: 

ConformaTech, Inc.
1425 East Apache Park Place
Tucson, Arizona 85714
Tel.: (520) 573-2045
Fax: (520)573-0528

ConformaTECH

NUCLEAR METHOD
FIELD DENSITY TESTING REPORT

12 January 2015
CTEC Job No. 13-3922

Smyth Industries, Inc.
Attn: Gary Smyth
4010 East Illinois Avenue
Tucson, AZ 85714

Project: Smyth Industries, Inc. Miscellaneous Testing
Project Location: Community Water Company of Green Valley Reservoir No. 5
2051 West Continental Road

Area Description: Water Tank

Test Date: January 8, 2015
Datum Reference: Finish Grade = Assumed 100.0

Test No.:	Test Location	Elevation	FIELD TESTING			REFERENCE CURVE			% Compaction Req'd	PASS/FAIL
			Dry Density Lbs/cu.ft.	Moisture Content %	% of Maximum Dry Density	Lab No.	Maximum Dry Density lbs/cu.ft.	Optimum Moisture Content %		
1	Tank Ring and Tank center ABC 30' East and 15' South of center of tank	99.0	126.7	6.2	99%	5624*	127.7	7.7	97%	PASS
2	Tank Ring and Tank center ABC 20' West of center of tank	99.0	125.4	6.5	98%	5624*	127.7	7.7	97%	PASS
3	Tank Ring and Tank center ABC Center of tank	100.0	125.0	5.8	98%	5624*	127.7	7.7	97%	PASS
4	Tank Ring and Tank center ABC Northside of tank ring	100.0	127.2	5.5	100%	5624*	127.7	7.7	97%	PASS

*Rock Corrected

Reviewed By: Brian M Shaw

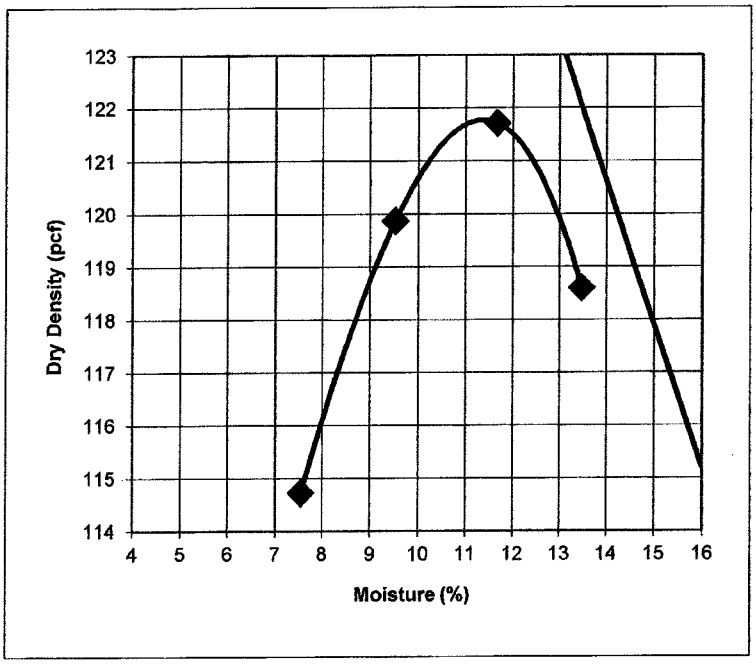
ConformaTech, Inc.
1425 East Apache Park Place
Tucson, Arizona 85714
Tel.: (520) 573-2045
Fax: (520)573-0528

ConformaTECH

PROJECT:	Community Water Company of Green Valley, Reservoir No. 6	**JOB NO:**	13-3922
LOCATION:	2051 West Continental Road		
MATERIAL:	Native	**LAB NO:**	5617
SAMPLE SOURCE:	On Site	**SAMPLE DATE:**	12/22/2014

LABORATORY COMPACTION CHARACTERISTICS OF SOILS USING STANDARD EFFORTS (12,400ft-lb-ft/cu.ft) (ASTMD698A)
SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES (ASTM C136/C117)
LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS (ASTM D4318) (DRY PREP)

Maximum dry density: 121.8 pcf
Optimum moisture: 11.4 %



SIEVE SIZE	PERCENT PASSING
6 in / 152mm	100
4 in / 100mm	100
3 in / 75mm	100
2 in / 50mm	100
1 1/2 in / 37.5mm	100
1 1/4 in / 32 mm	100
1 in / 25 mm	100
3/4 in / 19 mm	99
1/2 in / 12.5 mm	98
3/8 in / 9.5 mm	98
1/4 in / 6.4 mm	96
#4, 4.75mm	93
#8, 2.36mm	81
#10, 2.00mm	77
#16, 1.18mm	61
#30, 0.60mm	45
#40, .425mm	36
#50, .300mm	30
#100, .150mm	21
#200, .075mm	15.1

LL:	26
PL:	16
PI:	10

NOTES:

- The zero air void curve represents a specific gravity of: 2.65 assumed, (also used in the 'Rock Correction Calculation)
- This is a summarized report of the referenced procedures and does not include all reporting requirements. Additional data can be provided at clients request.

Reviewed by:

ConformaTech, Inc.
1425 East Apache Park Place
Tucson, Arizona 85714
Tel.: (520) 573-2045
Fax: (520) 573-0528

APPENDIX E
WATER RESERVOIR #5 "AS-BUILT" PLANS

PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY
ENGINEERING REVIEW UNIT
33 N. Stone Ave., Suite 700, Tucson, Arizona 85701-1429
Telephone: (520) 724-7400

APPROVAL OF CONSTRUCTION (WATER)

Project Description: TWO MILLION GALLON RESERVOIR

Location: T-18-S, R-13-E, Section 16 Latitude: 31° 52' 07.12" Longitude: -111° 01' 35.50" County: PIMA

Project Owner: COMMUNITY WATER CO. – GREEN VALLEY System Number: 10-004

This Approval of Construction is based upon the following items:

1. Pima County Department of Environmental Quality Certificate of Approval to Construct for PDEQ File No. PO02315 signed on 02/17/15.

2. Original sealed Engineer's Certificate of Completion, sealed on 09/15/15 by JESSE S. SCHULTZ P.E., Certificate No. 52757, dated and submitted after the completion of construction and final inspection.

3. 3 pages of as-built plans for the above-described project dated 09/15/15, sealed by JESSE S. SCHULTZ, P.E., Certificate No. 52757, and approved for construction under PDEQ File No. PO02315 sealed on 02/06/15 by JESSE S. SCHULTZ, P.E., Certificate No. 52757.

4. Test results for pressure, signed by John Meyer, dated 08/26/15, consisting of 1 page. Test results for microbiological, signed by Amanda Fish and Kaitlyn Martel (Legend Technical Services), dated 08/28/15, 09/02/15 and 09/15/15, consisting of 6 pages.

Approval to operate the above, described facilities as represented in the approved plan documents on file with the Pima County Department of Environmental Quality is hereby given subject to the following provisions:

1. Arizona Revised Statutes require that the operation of the project must be in accordance with the rules of the Arizona Department of Environmental Quality.

2. The Department reserves the right of entry for State or local officials to inspect the facility and collect any samples needed to determine compliance with any standards.

3. **The Project owner and each subsequent owner shall notify each buyer about all operation, maintenance, inspection and reporting requirements, and all other terms and conditions of the certificate of Approval to Construct and this certificate of Approval of Construction.**

Arizona Revised Statutes require that the operation of the project must be in accordance with the rules of the Arizona Department of Environmental Quality.

Date Approved: September 18, 2015

URSULA K. NELSON, P.E.
DIRECTOR

By: Rene Gomez
Rene Gomez
Sr. Civil Engineering Assistant

cc: PDEQ File No: PO02315
Project Owner: Community Water Co. – Green Valley

SITE PLAN FOR
COMMUNITY WATER
NEW 2MG RESERVOIR

PARCEL # 304-13-100B

ENGINEER'S NOTES:

1. THE PIMA COUNTY AND TUCSON STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENT, (2003 EDITION) ARE INCORPORATED INTO THIS PLAN IN THEIR ENTIRETY.
2. A STORM WATER POLLUTION PREVENTION PLAN SHALL (SWPPP) SHALL BE SUBMITTED TO PIMA COUNTY PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS (IF APPLICABLE - SITES OF 1 ACRE OR MORE)
3. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AN EARTH MOVING PERMIT FROM PIMA COUNTY AIR QUALITY DEPARTMENT AND THE EPA, AND FOR COMPLYING WITH THEIR REQUIREMENTS FOR DUST CONTROL.
4. ANY WORK DONE IN A DRAINAGE CHANNEL OR WASH MUST COMPLY WITH STATE AND FEDERAL REGULATIONS.
5. ALL WORK REQUIRED TO COMPLETE THE CONSTRUCTION WITHIN THE COUNTY RIGHT-OF-WAY COVERED BY THESE PLANS SHALL BE IN ACCORDANCE WITH PIMA COUNTY DESIGN MANUAL AND APPLICABLE STANDARD SPECIFICATIONS AND DETAILS.
6. CONTRACTOR IS RESPONSIBLE FOR BLUE STAKE MARKING AS CONSTRUCTION IS IN PROCESS.
7. NO TRENCH TO BE LEFT OPEN OR UNCOVERED DURING WORK HOURS.
8. AN APPROVED SET OF PLANS SHALL BE MAINTAINED ON THE JOB SITE AT ALL TIMES WHILE WORK IS IN PROGRESS. DEVIATION FROM THE PLANS SHALL NOT BE ALLOWED WITHOUT AN APPROVED PLAN REVISION.
9. ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE COUNTY ENGINEER AND/OR ALL WORK AND MATERIALS NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
10. CONTRACTOR SHALL COMPLY WITH APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS.
11. ALL UNDERGROUND CONNECTOR PIPING SHALL BE D.I.P. MECHANICALLY RESTRAINED PER MANUFACTURERS RECOMMENDATION.
12. ALL UNDERGROUND PIPING SHALL HAVE TRACER WIRE INSTALLED AT THE TIME THE TRENCH IS BACKFILLED.
13. ABOVE GROUND PIPING TO BE CARBON STEEL SCHEDULE 40 AND SHALL BE COATED INTERIOR AND EXTERIOR PER NSF 61 AND ADEQ APPROVED COATING SYSTEM FOR POTABLE WATER APPLICATIONS. EXTERIOR COLOR TO BE SELECTED BY OWNER/DEVELOPER.
14. TRENCH BACKFILL PER PIMA COUNTY STANDARD AND SPECIFICATION.
15. ALL VALVES, FLOW METERS, FITTINGS AND OTHER MECHANICAL OR INSTRUMENTATION AND CONTROL MATERIALS TO BE NSF 61 AND ADEQ APPROVED FOR POTABLE WATER APPLICATIONS.
16. ALL CARBON STEEL FLANGES TO BE AWWA CLASS D FLAT-FACED SLIP-ON FOR FABRICATED PIPE PIECES.
17. ALL TRANSITIONS BETWEEN UNLIKE MATERIALS SHALL BE MADE USING APPROVED FLANGE ISOLATION KITS AND ADAPTERS.
18. DISINFECTION SHALL BE PERFORMED IN ACCORDANCE WITH A.S.T.D. TRALLEHA NO. B.
19. THE STEEL STORAGE TANK SHALL BE CONSTRUCTED PER CURRENT AWWA STANDARDS AND SPECIFICATIONS. A STRUCTURAL PLAN SHALL BE PREPARED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF ARIZONA, AND SUBMITTED FOR REVIEW AND APPROVAL.
20. THE CONTRACTOR IS TO VERIFY THE LOCATION AND THE ELEVATIONS OF ALL EXISTING UTILITIES AT POINTS OF TIE-IN PRIOR TO COMMENCING ANY NEW CONSTRUCTION. SHOULD ANY LOCATION OR ELEVATION DIFFER FROM THAT SHOWN ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER'S AGENT.

BENCHMARK

BASIS OF ELEVATION IS PIMA COUNTY G.D.I. CPUS CONTROL POINT PID - AA40179 AS SHOWN ON THE PIMA COUNTY GIS WEBSITE LOCATED APPROXIMATELY 1/3 MILE SOUTHEAST OF THE SITE. BENCHMARK IS A 1/2" REBAR WITH TAG "PC001 BM". PUBLISHED ELEVATION IS 3120.466' NAVD88 DATUM.

BASIS OF BEARINGS

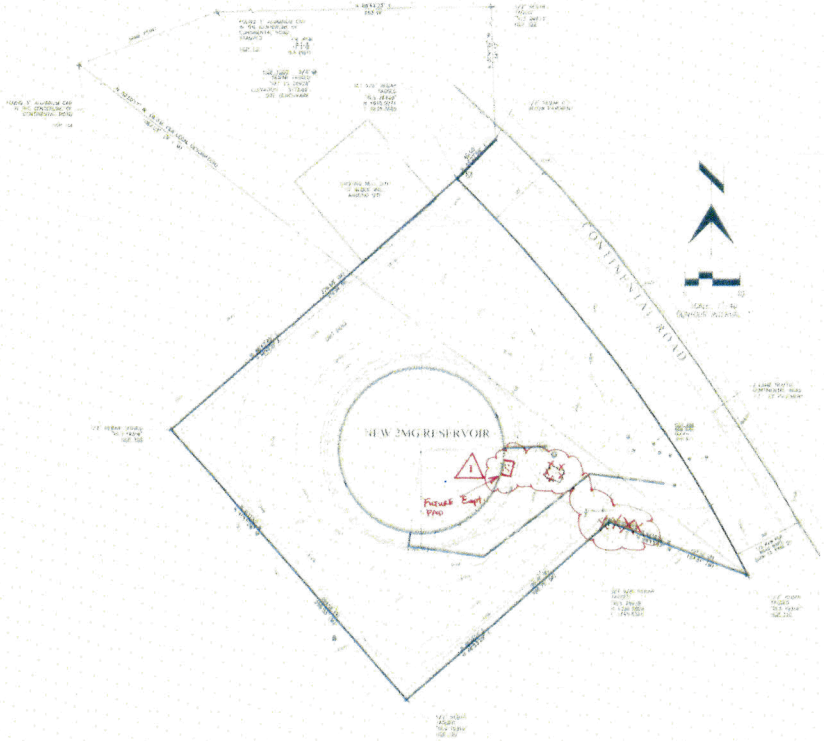
BASIS OF BEARING IS FROM THE NORTHWEST CORNER OF SECTION 16 TO THE EASTMOST CORNER OF THE WELL SITE. RECORD BEARING AND DISTANCE BEING S 32° 50' 17" E AT 1082.03'.

SITE BENCHMARK

THE SITE BENCHMARK IS HCP 1906, A 5/8" REBAR NORTHWEST OF THE SITE AS SHOWN, TAGGED "RLS 26928" APPROXIMATELY 50' NORTHWEST OF NORTH WALL CORNER, & NORTHEAST OF BARBED WIRE FENCE. ELEV. = 3173.69'

NEW TANK ELEVATION DETERMINATION

THE ELEVATION OF THE EXISTING TANK APPROXIMATELY 0.9 MILES NORTH WAS DETERMINED BY A SPIRIT LEVEL LOOP FROM THAT EXISTING TANK TO THE BASIS OF ELEVATION POINT AND CONTROL POINTS 1000 AND 998. CLOSURE ERROR WAS 0.02'. ALL OTHER ON-SITE ELEVATIONS WERE OBTAINED VIA GPS OBSERVATIONS. ELEVATION OF THE EXISTING TANK BASE IS 3162.66'. THE NEW TANK BASE (FLOOR) PER THESE PLANS SHALL MATCH THAT EXISTING TANK BASE ELEVATION.



LOCATION MAP

SCALE: 1" = 1 MILE

SECTIONS 9 & 16, T 15 S., R 13 E., GILA & SALT RIVER B.&M., (ASSESSOR, PIMA COUNTY)
LAT. 31° 52' 7.13"
LONG. -110° 31' 30.2956"

LEGEND

- PROJECT BOUNDARY
- PROPERTY CORNER (AS NOTED)
- BASIS OF BEARING
- NEW WATER MAIN
- EXISTING OVERHEAD POWER
- EXISTING ELECTRIC LINE
- EXISTING ELECTRIC METER
- EXISTING ELECTRIC TRANSFORMER
- EXISTING PAVEMENT
- EXISTING STORM DRAIN PIPING
- EXISTING WATER LINE
- EXISTING CONTOUR
- NEW CONTOUR
- NEW RIPRAP SCOUR PROTECTION

SHEET INDEX

1. COVER SHEET
2. STORAGE TANK SITE
3. DETAILS

APPROVAL FOR CONSTRUCTION
DEPARTMENT OF ENVIRONMENTAL QUALITY
ATTN: By: Date:

7-15-2015
Expires 9-30-2017

AS BUILT ONLY

COMMUNITY WATER APPROVAL SIGNATURE — DATE 2/6/2015

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY APPROVAL SIGNATURE — DATE

ENGINEER
SMYTH INDUSTRIES, INC.
4010 EAST ILLINOIS ST
TUCSON, AZ 85714
CONTACT: JESSE D. SCHULTZ, P.E.
PHONE: (520) 750-8779

OWNER/DEVELOPER
COMMUNITY WATER COMPANY
1501 S. LA CANADA DR
GREEN VALLEY, AZ 85622
CONTACT: JOHN WEBER
PH: 520-625-8405

Call at least two full working days before you begin excavation. ARIZONA811 Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County (602) 263-1100

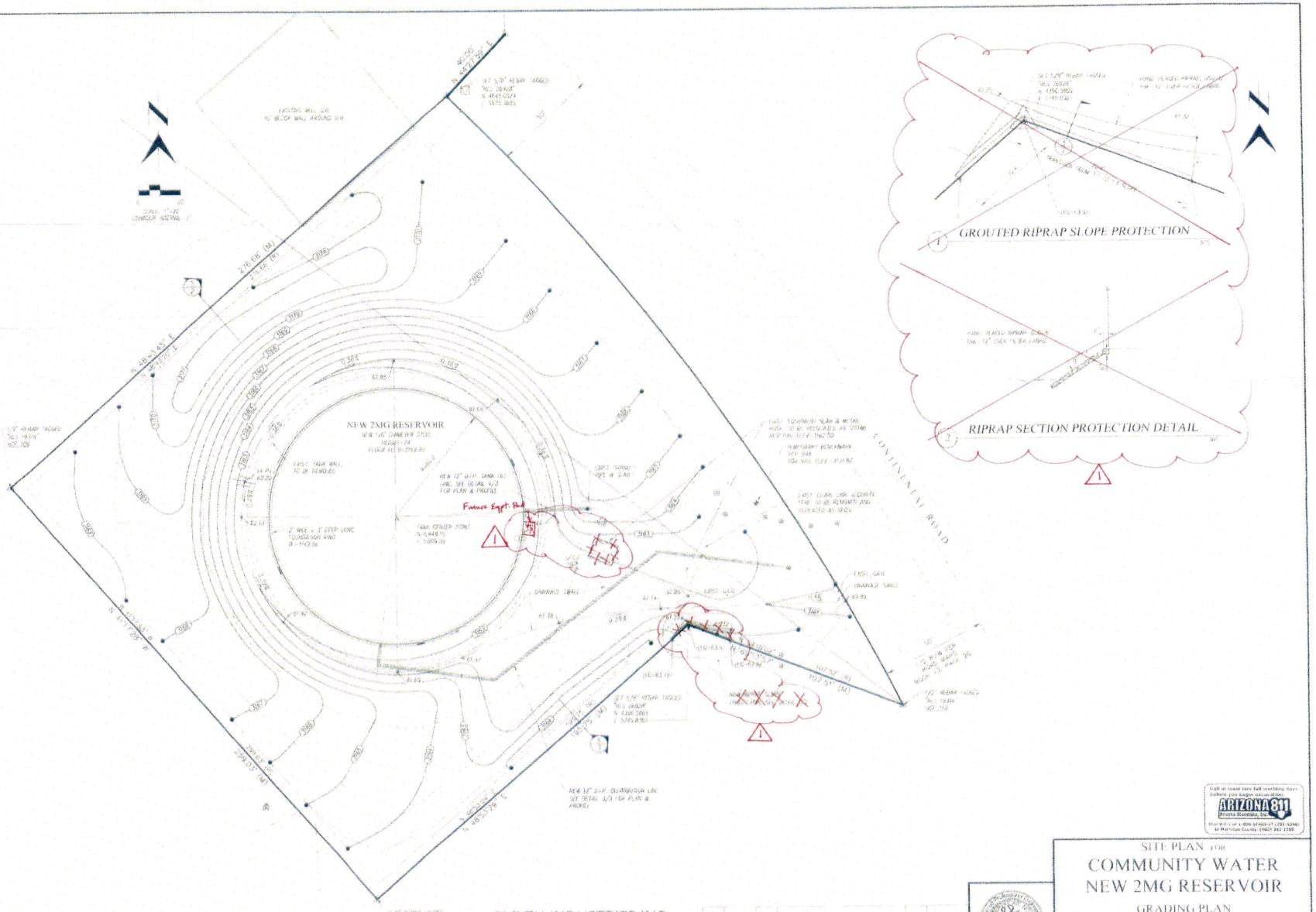
SMYTH INDUSTRIES INC.
4010 E. Illinois St.
Tucson, AZ 85714
(520) 750-8719 Phone | (520) 750-9544 Fax

NO.	DATE	BY	REVISION	APP.	DATE
1	7-15-15	JSS	AS-BUILT		

Expires Sept. 30, 2017

SITE PLAN FOR
COMMUNITY WATER
NEW 2MG RESERVOIR
COVER SHEET

DESIGNED BY	DRAWN BY	CHECKED BY	
JSS	JSS/LH	JSS	1
DATE	HORIZ. SCALE	VERT. SCALE	OF
FEB. 2015	AS NOTED	AS NOTED	3

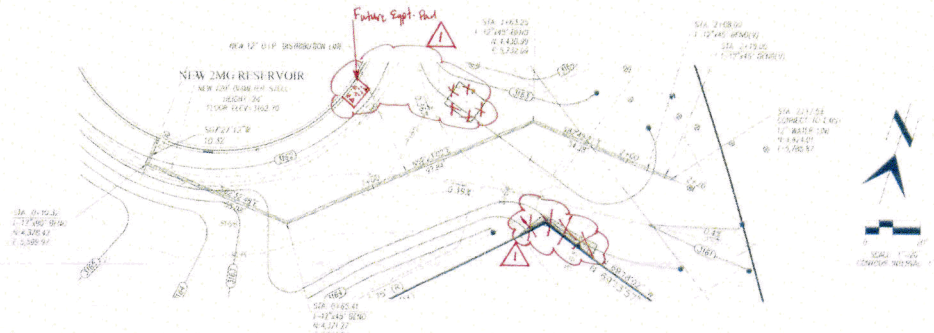


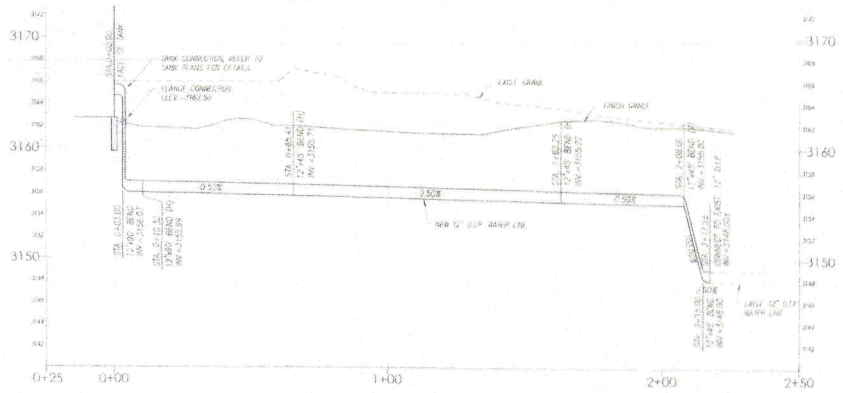
SMYTH INDUSTRIES INC.
4010 E. Illinois St.
Tucson, AZ 85714
(520) 750-8719 Phone | (520) 750-9544 Fax

Call at least two full working days before you begin excavation
ARIZONA 811
Arizona Blue Stake, Inc.

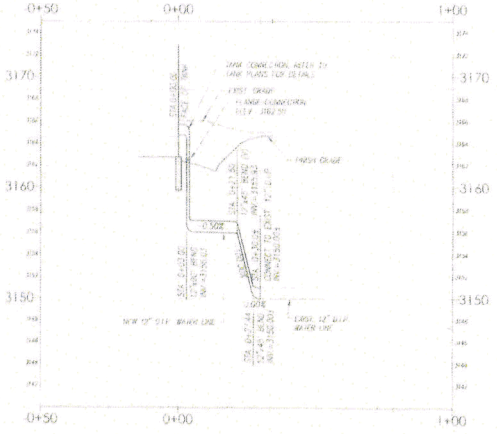
SITE PLAN FOR
COMMUNITY WATER
NEW 2MG RESERVOIR
GRADING PLAN

DESIGNED BY	DRAWN BY	CHECKED BY	SHEET
JSS	JSS/LB	JSS	2
DATE	HORZ. SCALE	VERT. SCALE	OF
FEB 2015	AS NOTED	AS NOTED	3

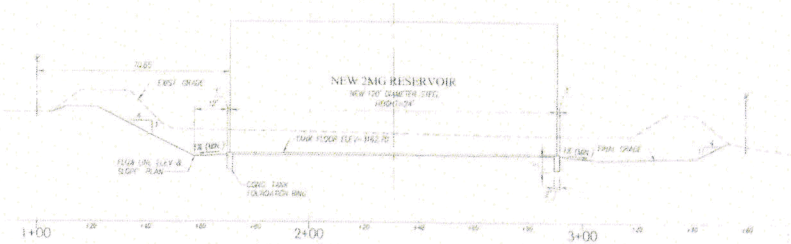




3 TANK DISTRIBUTION LINE



4 TANK FILL LINE



5 SITE SECTION

SMYTH INDUSTRIES INC.
4010 E. Illinois St.
Tucson, AZ 85714
(520) 750-8719 Phone | (520) 750-9544 Fax

NO.	DATE	BY	REVISION	NO.	DATE	BY

EXPIRES 09/30/2015

SITE PLAN FOR
COMMUNITY WATER
NEW 2MG RESERVOIR
GRADING PLAN

DESIGNED BY	DRAWN BY	CHECKED BY	SHT.
JSS	JSS / LH	JSS	3
DATE	HORZ. SCALE	VERT. SCALE	OF
FEB 2015	AS NOTED	AS NOTED	4

ENGINEER CERTIFICATE OF COMPLETION AND FINAL INSPECTION

PIMA COUNTY DEPT OF ENVIRONMENTAL QUALITY, 33 N. STONE AVENUE, SUITE 700, TUCSON, AZ 85701 TEL: 724-7400

PDEQ FILE NO.: PO 02315 ___ DRINKING WATER SECTION If separate Drinking Water & Wastewater Approvals to Construct were issued, separate E.C.C.'s required	COUNTY: PIMA PROJECT OWNER:

Project Description: 2 MG above ground steel tank

ACCURATELY DESCRIBE THE COMPLETED PROJECT. USE THE SAME DETAIL AS IN APPROVAL TO CONSTRUCT PROJECT DESCRIPTION (Continue on Reverse, if needed)

I, Jesse S. Schultz, a Professional Engineer registered in the State of Arizona, have inspected the construction of the above project, and certify that (check all applicable boxes, complete applicable blanks):

ITEMS 1) THRU 4) MUST BE COMPLETED

X 1) The work on this project was completed on Sept. 11, 2015 (date).

X 2) On Sept. 14, 2015 (date) a final construction inspection was conducted by X myself [check one] ___ under MY DIRECT SUPERVISION by _____ (print name).

X 3) The materials utilized and the installation and construction of those materials and equipment are in conformance with the approved plans and specifications and the Pima County Department of Environmental Quality (PDEQ) Certificate of Approval to Construct issued on Feb 17, 2015 (date in certificate signature block).

X 4) All construction and preoperational tests (infiltration, exfiltration, pressure, deflection, chlorination, microbiological, etc.) [circle types performed] were properly conducted, met ADEQ requirements, and are represented in attachments to this Certificate. The total number of pages of test results attached is 9.

EITHER 5A) or 5B) MUST BE CHECKED

X 5A) Any deviation from the approved plans and the PDEQ Certificate of Approval to Construct have been noted on the attached As-Built plans (as stipulated in the Approval to Construct provisions) prepared and sealed pursuant to A.R.S. 32-125 on Sept. 15, 15 (date). Of the total 3 sheets of As-Built plans attached, deviations from the approved plans are shown on sheets numbered 1, 2, 3.

___ 5B) The completed project did not deviate from the approved plans which received the Approval to Construct.

EITHER 6A) OR 6B) MUST BE CHECKED

X 6A) This project did not require the preparation of an Operation and Maintenance Manual.

___ 6B) An Operation and Maintenance manual has been prepared for this project and a copy is attached. This manual meets all ADEQ minimum design and construction standards contained in statute, rule, bulletin, and referenced codes, the key elements of the approved plans, and, if applicable, with Attachment B of the September 10, 1994 Engineering Advisory for Individual Systems.

ADDITIONAL INFORMATION

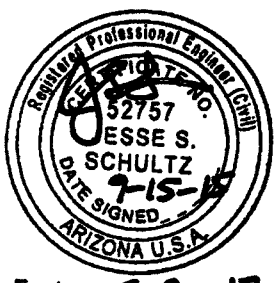
ENGINEER'S SEAL per AAC R4-30-304.B

Engineer's Name: Jesse S. Schultz

Engineer's Address: 4010 E. Illinois St

Tucson, AZ 85714

Phone Number: (520) 750 - 8719



Expires 9-30-17

LEGEND
Technical Services, Inc.
www.legend-group.com

4585 S. Palo Verde Rd., Ste. 423 • Tucson, AZ 85714
P (520) 327-1234 • F (520) 327-0518

John Meyer
Community Water Co.
1501 S. La Canada Dr.
Green Valley, AZ85622-1600

Project: Colilert Analysis
Project Number: 04-10-004

Reported:
09/09/15 10:17

Analyte

#5 Res Construction (5090646-01) Drinking Water (Grab) Sampled: 09/08/15 11:30 Received: 09/08/15 13:58

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Legend Technical Services of Arizona, Inc.									
Microbiology									
E. coli	Absent		P/A	1	B5I1037	09/08/15 14:28	09/08/15 14:28	SM 9223B	
Total Coliforms	Absent		P/A	1	B5I1037	09/08/15 14:28	09/08/15 14:28	SM 9223B	

Sample Condition Upon Receipt:

Temperature: 2.00 C
All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.
QA/QC Criteria: All analyses met method requirements unless otherwise qualified.
Accreditations: AZ(PHX)0004, AZ(TUC)OOO4, AIHA#102982, CDC ELITE Member.
Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.
Comments: There were no problems encountered during the processing of the samples, unless otherwise noted.
All samples were analyzed on a "wet" basis unless designated as "dry weight".

Notes and Definitions

Legend Technical Services of Arizona, Inc.
Amanda Fish
Client Services Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Phone Number: (602) 324-6100

John Meyer Community Water Co. 1501 S. La Canada Dr. Green Valley, AZ85622-1600	Project: Colilert Analysis Project Number: 04-10-004	**Reported:** 09/09/15 10:17

5090646

CHAIN OF CUSTODY RECORD

LEGEND Technical Services, Inc.
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☐ 17631 N. 25th Avenue • Phoenix, AZ 85023 • (602) 324-6100 • Fax (602) 324-6101
☐ 4585 S. Palo Verde Rd. Ste 423 • Tucson, AZ 85714 • (520) 327-1234 • Fax (520) 327-0518

Page 1 of 1

Please Print Clearly

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax or Email
Community Water Co of GV	1501 S La Canada Dr	Green Valley	AZ	85622	(520) 625-3409	(520) 625-R51

System Name	PWS#	Contact	P.O. No.	
" " " "	04-10004	John Meyer		Fax Results ☐ QC Report ☐ EDD ☐ Email Results ☐ Special Detection Limits ☐

IOC OPTIONS

IOC's I: Sb, As, Ba, Be, Cd, Cr, Hg, Ni, Se, Tl, CN, F
IOC's II (New Source): Sb, As, Ba, Be, Ca, Cd, Cr, Cu, Pb, Hg, Mg, Ni, Se, Na, Tl, Ca Hardness, Total Hardness, Alk, Asbestos, CN, F, Langelier, NO_2, NO_3, pH, SO_4, TDS, Temp (in field)

REQUESTED ANALYSES

Client's Sample Identification	Date	Time	POE # / DWR #	Compliance	No. of Containers	pH ✓ (Legend Use)	Colilert	IOCs (see left)	IOCs II (see left)	Lead & Copper	Nitrate, Nitrite	Radiochemicals	524 (TTHM)	552 (HAA)	524 (VOCs)	SOCs: 504	505	515	525	531	547	548	549	1613 (Dioxin)	Perchlorate	Bromate	Chloride				LAB NO.
#5 Res Construction	9-8-15	1130		NO	1		X																							01

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 6 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments: This Sample is not for Compliance

TURN AROUND TIME
☐ Standard 15 - 20 day
☐ Other
Laboratory Authorization Required for Rush

☐ Yes, I have followed the instructions provided by the laboratory for dechlorination of my samples.

SAMPLE CONDITION UPON RECEIPT

No. of Containers		
Temperature	2.5°C	
Custody Seals	Y	(N)
Seals Intact	Y	N
Preserved	(Y)	N

White- Lab Yellow- Client
FORM GEN-173 (6/06)

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Sampler Signature: [signature]	Date 9-8-15	Signature: [signature]	Date 9/8/15
	Sampler Printed Name: Trey Harris	Time ~~1150~~	Printed Name: RAMON FLORES	Time 1350
②	Sampler Signature	Date 1338	Signature	Date
	Sampler Printed Name	Time	Printed Name	Time
③	Sampler Signature	Date	Signature	Date
	Sampler Printed Name	Time	Printed Name	Time

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John Meyer
Community Water Co.
1501 S. La Canada Dr.
Green Valley, AZ85622-1600

Project: Colilert Analysis
Project Number: 04-10-004

Reported:
09/02/15 11:02

Analyte

#5 Res Tie-In #2 (5090117-01) Drinking Water (Grab) Sampled: 09/01/15 10:10 Received: 09/01/15 13:50

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
			Legend Technical Services of Arizona, Inc.						
Microbiology									
E. coli	Absent		P/A	1	B5I0863	09/01/15 14:19	09/01/15 14:19	SM 9223B	
Total Coliforms	Absent		P/A	1	B5I0863	09/01/15 14:19	09/01/15 14:19	SM 9223B	

Sample Condition Upon Receipt:

Temperature: 2.00 C
All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.
QA/QC Criteria: All analyses met method requirements unless otherwise qualified.
Accreditations: AZ(PHX)0004, AZ(TUC)OOO4, AIHA#102982, CDC ELITE Member.
Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.
Comments: There were no problems encountered during the processing of the samples, unless otherwise noted.
All samples were analyzed on a "wet" basis unless designated as "dry weight".

Notes and Definitions

Legend Technical Services of Arizona, Inc.
Kaitlyn Martel
Client Services Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Phone Number: (602) 324-6100

John Meyer Community Water Co. 1501 S. La Canada Dr. Green Valley, AZ85622-1600	Project: Colilert Analysis Project Number: 04-10-004	**Reported:** 09/02/15 11:02

5090117

CHAIN OF CUSTODY RECORD

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Page 1 of 1

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CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax or Email
Comm. Water Co of Green Valley	1501 S La Canada Dr	Green Valley	AZ	85622	(520)625-9409	(520) 625-1951

System Name: " " " "
PWS# 04-10004
Contact: John Meyer
P.O. No.
Fax Results ☐ QC Report ☐ EDD ☐
Email Results ☐ Special Detection Limits ☐

IOC OPTIONS

IOC's I: Sb, As, Ba, Be, Cd, Cr, Hg, Ni, Se, Tl, CN, F
IOC's II (New Source): Sb, As, Ba, Be, Ca, Cd, Cr, Cu, Pb, Hg, Mg, Ni, Se, Na, Tl, Ca Hardness, Total Hardness, Alk, Asbestos, CN, F, Langelier, NO_2, NO_3, pH, SO_4, TDS, Temp (in field)

REQUESTED ANALYSES

Client's Sample Identification	Date	Time	POE # / DWR #	Compliance	No. of Containers	pH ✓ (Legend Use)	Colilert	IOCs (see left)	IOCs II (see left)	Lead & Copper	Nitrate, Nitrite	Radiochemicals	524 (TTHM)	552 (HAA)	524 (VOCs)	SOCs 504	505	515	525	531	547	548	549	1613 (Dioxin)	Perchlorate	Bromate	Chlorite	LAB NO
#5 Res Tie-in #2	9-1-15	1010		NO	1		X																				-01

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 6 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments: This sample is not for compliance

☐ Yes, I have followed the instructions provided by the laboratory for dechlorination of my samples.

TURN AROUND TIME
☐ Standard 15 - 20 day
☐ Other
Laboratory Authorization Required for Rush

SAMPLE CONDITION UPON RECEIPT

No. of Containers	1	
Temperature	2.0°C	
Custody Seals	Y	(N)
Seals Intact	Y	N
Preserved	(Y)	N

White- Lab Yellow- Client
FORM GEN-173 (6/06)

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Sampler Signature	Date 9-1-15	Signature	Date 9/1/15
	Sampler Printed Name Trey Harris	Time 1350	Printed Name Amanda Fish	Time 1350
②	Sampler Signature	Date	Signature	Date
	Sampler Printed Name	Time	Printed Name	Time
③	Sampler Signature	Date	Signature	Date
	Sampler Printed Name	Time	Printed Name	Time

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John Meyer
Community Water Co.
1501 S. La Canada Dr.
Green Valley, AZ85622-1600

Project: Colilert Analysis
Project Number: 04-10-004

Reported:
08/28/15 10:19

Analyte

Res #5 Tie-in (5082449-01) Drinking Water (Grab) Sampled: 08/27/15 09:23 Received: 08/27/15 11:05

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Legend Technical Services of Arizona, Inc.									
Microbiology									
E. coli	Absent		P/A	1	B5H0885	08/27/15 15:14	08/27/15 15:14	SM 9223B	
Total Coliforms	Absent		P/A	1	B5H0885	08/27/15 15:14	08/27/15 15:14	SM 9223B	

Sample Condition Upon Receipt:

Temperature: 7.10 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Accreditations: AZ(PHX)0004, AZ(TUC)OOO4, AIHA#102982, CDC ELITE Member.

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted. All samples were analyzed on a "wet" basis unless designated as "dry weight".

Notes and Definitions

Legend Technical Services of Arizona, Inc.

Amanda Fish

Client Services Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Phone Number: (602) 324-6100

John Meyer Community Water Co. 1501 S. La Canada Dr. Green Valley, AZ85622-1600	Project: Colilert Analysis Project Number: 04-10-004	**Reported:** 08/28/15 10:19

5082449

CHAIN OF CUSTODY RECORD

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Page 1 of 1

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CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax or Email
Comm. Water Co of Green Valley	1501 S La Canada Dr	Green Valley	Az	85622	(520)625-8409	(520)625-1951
System Name " " "	PWS# 04-10004	Contact John Meyer	P.O. No		Fax Results ☐ QC Report ☐ EDD ☐ Email Results ☐ Special Detection Limits ☐	

IOC OPTIONS

IOC's I: Sb, As, Ba, Be, Cd, Cr, Hg, Ni, Se, Tl, CN, F
IOC's II (New Source): Sb, As, Ba, Be, Ca, Cd, Cr, Cu, Pb, Hg, Mg, Ni, Se, Na, Tl, Ca Hardness, Total Hardness, Alk, Asbestos, CN, F, Langelier, NO_2, NO_3, pH, SO_4, TDS, Temp (in field)

REQUESTED ANALYSES

Client's Sample Identification	Date	Time	POE # / DWR #	Compliance	No. of Containers	pH ✓ (Legend Use)	Colilert	IOCs (see left)	IOCs II (see left)	Lead & Copper	Nitrate, Nitrite	Radiochemicals	524 (TTHM)	552 (HAA)	524 (VOCs)	SOCs 504	505	515	525	531	547	548	549	1613 (Dioxin)	Perchlorate	Bromate	Chlorite				LAB NO.
Res #5 Tie-in	8-27-15	0923		No	1		X																								-01

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 6 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments: This Sample is not for compliance

TURN AROUND TIME
☐ Standard 15 - 20 day
☐ Other
Laboratory Authorization Required for Rush

☐ Yes, I have followed the instructions provided by the laboratory for dechlorination of my samples.

SAMPLE CONDITION UPON RECEIPT		
No. of Containers	1	
Temperature	7.1°C	
Custody Seals	Y	(N)
Seals Intact	Y	N
Preserved	(Y)	N

White- Lab Yellow- Client
FORM GEN-173 (6/06)

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Sampler Signature	Date 8-27-15	Signature	Date 8/27/15
	Sampler Printed Name Trey Harris	Time 0935	Printed Name John R Meyer	Time 0935
②	Sampler Signature	Date 8/27/15	Signature	Date 8/27/15
	Sampler Printed Name John Meyer	Time 1105	Printed Name Amanda Fish	Time 1105
③	Sampler Signature	Date	Signature	Date
	Sampler Printed Name	Time	Printed Name	Time

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CHLORINATION RESULTS

CWC Job No. 140006 DEQ File No. _____

Project Name: Reservoir #5

Project Description: 2 million gal. (Tie in from Well #10 transmission main) Reservoir

INITIAL CHLORINE RESIDUALS		24-HOUR RESIDUALS	
DATE: 8/25/2015		DATE: 8/26/2015	
Location	PPM	Location	PPM
Res. #5 Inlet	50+	Res. #5 Inlet	10+

Approval Signature: _____ Approval Signature: _____

WATER MAIN PRESSURE TESTING FORM

JOB NO. 140006 DATE OF TEST: 8/26/2015

JOB NAME/DESCRIPTION: Res. #5 Tie-in

CONTRACTOR: Days Excavation

Size	Length (ft)	Pipe Type	Test Pressure	Allowable Loss per Hour (gal)
16"	150	DI	200psi	0.255

Total gallons per hour: _____

Allowable total loss (gal/hr x 2)	Time Started	Time Finished	Actual Total Loss	Results (Pass/Fail)
0.51	0826	1031	0	Pass

NOTES: _____

(If failed, note total loss) _____

(Indicate if retest) _____

Observer Signature: John Zinn

Calculations for Res. #5 Tie-in

150ft/1000 = .150ft

.150 x 1.70 = 0.255 gph

0.255gph x 2 hours = 0.51 gal max loss of water

PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY
ENGINEERING REVIEW UNIT
33 N. Stone Ave., Suite 700, Tucson, Arizona 85701-1429
Telephone: (520) 724-7400

APPROVAL OF CONSTRUCTION (WATER)

Project Description: TWO MILLION GALLON RESERVOIR

Location: T-18-S, R-13-E, Section 16 Latitude: 31° 52' 07.12" Longitude: -111° 01' 35.50" County: PIMA

Project Owner: COMMUNITY WATER CO. – GREEN VALLEY System Number: 10-004

This Approval of Construction is based upon the following items:

1. Pima County Department of Environmental Quality Certificate of Approval to Construct for PDEQ File No. PO02315 signed on 02/17/15.

2. Original sealed Engineer's Certificate of Completion, sealed on 09/15/15 by JESSE S. SCHULTZ P.E., Certificate No. 52757, dated and submitted after the completion of construction and final inspection.

3. 3 pages of as-built plans for the above-described project dated 09/15/15, sealed by JESSE S. SCHULTZ, P.E., Certificate No. 52757, and approved for construction under PDEQ File No. PO02315 sealed on 02/06/15 by JESSE S. SCHULTZ, P.E., Certificate No. 52757.

4. Test results for pressure, signed by John Meyer, dated 08/26/15, consisting of 1 page. Test results for microbiological, signed by Amanda Fish and Kaitlyn Martel (Legend Technical Services), dated 08/28/15, 09/02/15 and 09/15/15, consisting of 6 pages.

Approval to operate the above, described facilities as represented in the approved plan documents on file with the Pima County Department of Environmental Quality is hereby given subject to the following provisions:

1. Arizona Revised Statutes require that the operation of the project must be in accordance with the rules of the Arizona Department of Environmental Quality.

2. The Department reserves the right of entry for State or local officials to inspect the facility and collect any samples needed to determine compliance with any standards.

3. **The Project owner and each subsequent owner shall notify each buyer about all operation, maintenance, inspection and reporting requirements, and all other terms and conditions of the certificate of Approval to Construct and this certificate of Approval of Construction.**

Arizona Revised Statutes require that the operation of the project must be in accordance with the rules of the Arizona Department of Environmental Quality.

Date Approved: September 18, 2015

URSULA K. NELSON, P.E.
DIRECTOR

By: Rene Gomez
Rene Gomez
Sr. Civil Engineering Assistant

cc: PDEQ File No: PO02315
Project Owner: Community Water Co. – Green Valley

Z:_Shared Data\Water\Water-Sewer Plan Review\Approvals\PO02315.aoc.doc

APPENDIX F
WATER RESERVOIR #5 CONSTRUCTION BUDGET

Community Water Company of Green Valley
Summary of Expenditures
CWC Water Reservoir #5
Continental Road
Green Valley, Pima County , Arizona

Summary			
Construction			
Smyth Industries	$ 946,689.03		
Denny Nolen	32,375.00		
Engineering	12,090.00		
Direct OH (Payroll/Veh Exp)	25,225.19		
Indirect OH	41,425.42		
		$	1,057,804.64
Legal			
Legal Counsel with ACC filing	47,674.25		
Legal Counsel, Financing	6,652.38		
			54,326.63
Miscellaneous and Other			
Debt Financing Fees	7,528.97		
Miscellaneous	6,640.02		
			14,168.99
Total Cost		**$**	**1,126,300.26**

Community Water Company of Green Valley
Summary of Expenditures
CWC Water Reservoir #5
Continental Road
Green Valley, Pima County , Arizona

Less Summarized Row Labels	Sum of Amount
Smyth Industries	
Smyth	**946,689.03**
Denny Nolen	
Denny Nolen	**32,375.00**
Legal Counsel with ACC filing	
Snell & Willmer	1,314.00
Roshka DeWulf & Patten	**46,360.25**
Legal Counsel, Financing	
Udall Law Firm	6,652.38
Engineering	
CPE Consulting	**12,090.00**
Direct OH (Payroll/Veh Exp)	
Direct OH (Payroll/Veh Exp)	**25,225.19**
Indirect OH	
Indirect OH	**41,425.42**
Debt Financing Fees	
BBVA Compass	7,528.97
Miscellaneous	
Ashby	1,325.00
Border State	584.53
Crescent Electric Supply	731.46
Day's Excavating	460.00
Farnsworth	501.82
Grainger	109.47
Graybar Electronics	340.96
GV Ace Hardware	415.10
GV Decorative Rocks	14.95
GV True Value	52.71
HD Waterworks	196.01
Legend	45.00
Merle	59.50
Santa Rita Steel	500.00
Sportsman's Warehouse	262.66
True Value	44.16
Tucson Recycle	81.58
USA BlueBook	482.90
GMEI	220.00
GV News	141.76
Parcel Plus	25.45
ACC Filing	45.00
Grand Total	**1,126,300.26**

Community Water Company of Green Valley
Summary of Construction Contract Expenditures
CWC Water Reservoir #5
Continental Road
Green Valley, Pima County, Arizona

Entity	Item Description	Period/Date	Amount	Entity Subtotal
Denny Nolen Corp.	Perimeter Fencing for WR #5 Site	26Jan2015		32,375.00
Smyth Industries, Inc.	Invoice #1, Construction of WR #5	Start to 31 Dec 2014	201,860.78	
	Invoice #2, Construction of WR #5	to 28 Feb 2015	28,582.23	
	Invoice #3, Construction of WR #5	to 31 Mar 2015	20,250.00	
	Invoice #4, Construction of WR #5	to 30 Apr 2015	168,593.75	
	Invoice #5, Construction of WR #5	to 31 May 2015	73,504.81	
	Invoice #6, Construction of WR #5	to 30 Jun 2015	47,513.25	
	Invoice #7, Construction of WR #5	to 31 Jul 2015	223,991.90	
	Invoice #8, Construction of WR #5	to 31 Aug 2015	77,102.39	
	Invoice #9, Construction of WR #5	to 01 Oct 2015	10,621.02	
	Retention Release, Construction of WR #5	01Oct2015	94,668.90	946,689.03

WR #5 Cumulative Construction Contract Expenditures	979,064.03
WR #5 Cumulative Administrative Expenditures	147,236.23
WR #5 Cumulative Expenditures	1,126,300.26

Date: January 26, 2015 Invoice No. 178

DENNY NOLEN CORP

Contractor License No.
General: 076849
dennynolen@msn.com

HC 70 Box 4610
Sahuarita, AZ 85629
520-625-0980

Billing for work performed for Community Water Company.

Labor and materials for

Approximately 980 feet of 8 foot chain link fencing
3 strands of barb wire on top with rolled razor wire
1 16 foot gate
1 3 foot man gate

TOTAL INVOICE:	$32,375.00
Materials Paid	-12,371.00
TOTAL DUE:	**$20,003.34**

1051 OPS 140006 3001
Fence @ Res. 5
JDen

MR Date		MR No.	
Approved	DW	PO No.	
Charge Acct. No.	1051 OPS 140006 3001	20003	34
	Total		

American Fence Company of Arizona, Inc.
1111 E. Valencia Rd.
Tucson, Arizona 85706
Telephone (520) 746-1400 Fax (520) 746-1494
Arizona Contractor's License #'s 069390, 069389, 016349

R55120N

American Fence & Security Co.
Quote
*** THIS IS NOT AN INVOICE ***
*** THIS IS NOT A LOADING SLIP ***

Date- 12/30/14
Time- 11.20.17

Order Number . . . . 151914 BQ
Customer PO Number . DENNY /HH

Taken By . . HOLGUIN

Sold To:
234123 DENNY NOLEN
HC 70 BOX 4610
SAHUARITA, AZ 85629
(520) 625-0980

Ship To:
234123 DENNY NOLEN
HC 70 BOX 4610
SAHUARITA, AZ 85629
(520) 625-0980

Description	UM	Order	Open	Unit Price	Open Price	Ordered Price
96" 9GA 2" 1.2 GBW KB FABRIC	FT	950	950	3.9400	3743.00	3743.00
15/8 X AP-40 GALV. PIPE 46-21' TOPRAIL LENGTHS	FT	966	966	1.6900	1632.54	1632.54
SLEEVE 1 5/8 X 6 PS	EA	46	46	1.9500	89.70	89.70
TENSION WIRE STRAIGHT 9GA C1 GALV	FT	1000	1000	.0800	80.00	80.00
4" X AP-40 GALV. PIPE 11-12' TERMINAL POSTS	FT	132	132	6.2700	827.64	827.64
2 3/8 AP-40 GALV. PIPE 88-10'6" LINE POSTS	FT	924	924	2.8900	2670.36	2670.36
TENSION BAR 94" 3/16"X3/4" GALV	EA	18	18	4.3500	78.30	78.30
RAIL-END 1 5/8 PS	EA	18	18	2.0800	37.44	37.44
BRACE BAND 4 REG 12GA X 3/4"	EA	18	18	.8700	15.66	15.66
TENSION BAND 4 REG 14GA X 3/4"	EA	126	126	1.2500	157.50	157.50
BARB ARM 2 3/8 X 1 5/8 PS 45 DEGREE	EA	88	88	3.8200	336.16	336.16
BALL CAP 4 ALUM	EA	11	11	4.0300	44.33	44.33
TIE 8 1/2" 11GA GALV	EA	1500	1500	.0700	105.00	105.00
CARRIAGE BOLT 5/16 X 1 1/4 GALV W/NUT	EA	200	200	.0800	16.00	16.00
HOG RINGS 12 1/2 GA GALV	LB	5	5	3.1600	15.80	15.80
3'OPEN X 8'PLUS BARB GATE 1 7/8 FRAME 9GA. FABRIC	EA	1	1	325.0000	325.00	325.00
16'OPEN X 8'PLUS BARB DOUBLE GATE 1 7/8 FRAME 9GA. FABRIC	EA	1	1	880.0000	880.00	880.00
IND HINGE 180 4 X 1 5/8 OR 1 7/8 PS	EA	6	6	16.3300	97.98	97.98
LATCH ASSEMBLY 1 7/8 IND PS INCLUDES 3 GUIDES & 1 FORK	EA	1	1	46.3600	46.36	46.36

HOME OFFICE COPY

American Fence Company of Arizona, Inc.
1111 E. Valencia Rd.
Tucson, Arizona 85706
Telephone (520) 746-1400 Fax (520) 746-1494
Arizona Contractor's License #'s 069390, 069389, 016349

R55120N

American Fence & Security Co.
Quote
*** THIS IS NOT AN INVOICE ***
*** THIS IS NOT A LOADING SLIP ***

Date- 12/30/14
Time- 11.20.17

Order Number . . . . 151914 BQ
Customer PO Number . DENNY /HH

Taken By . . HOLGUIN

Sold To:
234123 DENNY NOLEN
HC 70 BOX 4610
SAHUARITA, AZ 85629
(520) 625-0980

Ship To:
234123 DENNY NOLEN
HC 70 BOX 4610
SAHUARITA, AZ 85629
(520) 625-0980

Description	UM	Order	Open	Unit Price	Open Price	Ordered Price
FORK LATCH 1 7/8 X 4 MALL	EA	1	1	11.3100	11.31	11.31
2PT 12 1/2 GA COMM 5" SP BARBED WIRE	RO	3	3	73.1900	234.57	234.57
			Order Total-		11444.65	11444.65
		Taxable Amount-	11444.65	@ 8.100	% Tax	927.01
					Quote Total-	12371.66

MR Date 12/31/14	MR No.		
Approved BM HH	PO No.		
Charge Acct. No.	1051 140006 3002	12,371	66
	Total		

HOME OFFICE COPY

SMYTH INDUSTRIES, INC.
4010 E. Illinois St.
Tucson, AZ 85714
(520) 750-8719
(520) 750-9544

RETENTION REQUEST FORM

10/1/15

This form is submitted to request release of retention billed on the Community Water Job in the amount of $ 94,668.90.

The release of these monies would be greatly appreciated.

Thank You,

Gary Smyth
Owner / President

HR Date	MR No.		
Approved	PO No.		
Charge Acct. No.	1051 OPS 140006		
	3001	94668	90
	Total		

License #ROC154663 A-General Engineering
License #ROC171540 L-11 Electrical
UL 508 A – Industrial Control Panels
ASME Boiler and Pressure Vessel 'U' Certified
The National Board of Boiler and Pressure Vessel Inspectors 'R' Certified

#17 1051
14000 6 OPS 3001

SMYTH INDUSTRIES, INC.

SUBCONTRACTOR	Smyth Industries	**PAY ESTIMATE NO**	1 **DATE** 12/19/2014
ADDRESS	4010 E Illinois St	**JOB NUMBER**	**PERIOD ENDING** 12/31/2014
	Tucson, AZ 85714	**JOB NAME**	Community Water 2 MG Steel Tank
PHONE #	520-750-8719		
FAX #	520-750-9644		
CONTACT / EMAIL	kristin@smythindustries.com		
EIN #			

BID ITEM	DESCRIPTION	QTY BID	UNIT	QTY PREV. TOTAL	QTY THIS PERIOD	QTY TO DATE	SUBCONT UNIT PRICE	AMOUNT THIS PERIOD	AMOUNT PREV. PERIOD	TOTAL AMOUNT TO DATE
				0		0.00		-	-	-
1	Demo & Backfill	35000		0	1	1	35,000.00	35,000.00	-	35,000.00
2	Tank	509115		0	0.355	0.355	509,115.00	180,735.83	-	180,735.83
3	Tank Foundation	25000		0		0	25,000.00	-	-	-
4	Mixing Piping	5980		0		0	5,980.00	-	-	-
5	Coating	240000		0		0	240,000.00	-	-	-
5	Sitework	91800		0		0	91,800.00	-	-	-
				0		0		-	-	-
6	Tax	33509.03		0	0.2552723	0.2552723	33,509.03	8,553.93	-	8,553.93
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-

SMYTH INDUSTRIES, INC.

SUBCONTRACTOR	Smyth Industries	PAY ESTIMATE NO	2	DATE 2/24/2015
ADDRESS	4010 E Illinois St	JOB NUMBER		PERIOD ENDING 2/28/2015
	Tucson, AZ 85714	JOB NAME	Community Water 2 MG Steel Tank	
PHONE #	520-750-8719			
FAX #	520-750-9544			
CONTACT / EMAIL	kristin@smythindustries.com			
EIN #				

BID ITEM	DESCRIPTION	QTY BID	UNIT	QTY PREV. TOTAL	QTY THIS PERIOD	QTY TO DATE	SUBCONT UNIT PRICE	AMOUNT THIS PERIOD	AMOUNT PREV. PERIOD	TOTAL AMOUNT TO DATE
				0		0.00		-	-	-
1	Demo & Backfill	35000		1		1	35,000.00	-	35,000.00	35,000.00
2	Tank	509115		0.355	0.05	0.405	509,115.00	25,455.75	180,735.83	206,191.58
3	Tank Foundation	25000		0		0	25,000.00	-	-	-
4	Mixing Piping	5960		0	0.8	0.8	5,960.00	4,768.00	-	4,768.00
5	Coating	240000		0		0	240,000.00	-	-	-
5	Sitework	91800		0		0	91,800.00	-	-	-
				0		0		-	-	-
6	Tax	33509.03		0.2552723	0.0159445	0.2712168	33,509.03	534.26	8,553.93	9,088.21
				0		0		-	-	-
CO1	PDEQ Submittals and Permit Fees	1000		0	1	1	1,000.00	1,000.00	-	1,000.00
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
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				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-

ORIGINAL CONTRACT	940,384.03
CHANGE ORDERS (+ -)	1,000.00
TOTAL CONTRACT	941,384.03

	AMOUNT THIS PERIOD	AMOUNT PREV. PERIOD	TOTAL AMOUNT TO DATE
CONTRACT WORK TOTAL	31,758.03	224,289.75	256,047.79
LESS: RETENTION	3,175.80	22,428.98	25,604.78
SUBTOTAL	28,582.23	201,860.78	230,443.01
LESS: PREVIOUS PAYMENTS			201,860.78
LESS: BACKCHARGES			
NET AMOUNT	28,582.23	201,860.78	28,582.23

MR Date	MR No.
Approved	PO No.
17007	28582.23
Charge Acct.	Total

SMYTH INDUSTRIES, INC.

SUBCONTRACTOR	Smyth Industries	**PAY ESTIMATE NO**	
ADDRESS	4010 E Illinois St	**JOB NUMBER**	
	Tucson, AZ 85714	**JOB NAME**	Community Water 2 MG Steel Tank
PHONE #	520-750-8719	**DATE**	3/23/2015
FAX #	520-750-9544	**PERIOD ENDING**	3/31/2015
CONTACT / EMAIL	kristin@smythindustries.com		
EIN #			

BID ITEM	DESCRIPTION	QTY BID	UNIT	QTY PREV. TOTAL	QTY THIS PERIOD	QTY TO DATE	SUBCONT UNIT PRICE	AMOUNT THIS PERIOD	AMOUNT PREV. PERIOD	TOTAL AMOUNT TO DATE
				0		0.00		-	-	-
1	Demo & Backfill	35000		1		1	35,000.00	-	35,000.00	35,000.00
2	Tank	509115		0.405		0.405	509,115.00	-	206,191.58	206,191.58
3	Tank Foundation	25000		0	0.9	0.9	25,000.00	22,500.00	-	22,500.00
4	Mixing Piping	5960		0.8		0.8	5,960.00	-	4,768.00	4,768.00
5	Coating	240000		0		0	240,000.00	-	-	-
5	Sitework	91800		0		0	91,800.00	-	-	-
				0		0		-	-	-
6	Tax	33509.03		0.2712168		0.2712168	33,509.03	-	9,088.21	9,088.21
				0		0		-	-	-
CO1	PDEQ Submittals and Permit Fees	1000		1		1	1,000.00	-	1,000.00	1,000.00
CO2	View Port	2490		0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
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				0		0		-	-	-
				0		0		-	-	-

ORIGINAL CONTRACT	940,384.03
CHANGE ORDERS (+ -)	1,000.00
	2,490.00
TOTAL CONTRACT	943,874.03

	AMOUNT THIS PERIOD	AMOUNT PREV. PERIOD	TOTAL AMOUNT TO DATE
CONTRACT WORK TOTAL	22,500.00	256,047.79	278,547.79
LESS: RETENTION	2,250.00	25,604.78	27,854.78
SUBTOTAL	20,250.00	230,443.01	250,693.01
LESS: PREVIOUS PAYMENTS			230,443.01
LESS: BACKCHARGES			
NET AMOUNT	20,250.00	230,443.01	20,250.00

90

SMYTH INDUSTRIES, INC.

SUBCONTRACTOR	Smyth Industries	**PAY ESTIMATE NO**	4 **DATE** 4/22/2015
ADDRESS	4010 E Illinois St	**JOB NUMBER**	**PERIOD ENDING** 4/30/2015
	Tucson, AZ 85714	**JOB NAME**	Community Water 2 MG Steel Tank
PHONE #	520-750-8719		
FAX #	520-750-9544		
CONTACT / EMAIL	kristin@smythindustries.com		
EIN #			

BID ITEM	DESCRIPTION	QTY BID	UNIT	QTY PREV. TOTAL	QTY THIS PERIOD	QTY TO DATE	SUBCONT UNIT PRICE	AMOUNT THIS PERIOD	AMOUNT PREV. PERIOD	TOTAL AMOUNT TO DATE
				0		0.00		-	-	-
1	Demo & Backfill	35000		1		1	35,000.00	-	35,000.00	35,000.00
2	Tank	509115		0.405	0.345	0.75	509,115.00	175,644.68	206,191.58	381,836.25
3	Tank Foundation	25000		0.9	0.1	1	25,000.00	2,500.00	22,500.00	25,000.00
4	Mixing Piping	5960		0.8		0.8	5,960.00	-	4,768.00	4,768.00
5	Coating	240000		0		0	240,000.00	-	-	-
5	Sitework	91800		0		0	91,800.00	-	-	-
				0		0		-	-	-
6	Tax	33509.03		0.2712168	0.19	0.4612168	33,509.03	6,366.72	9,088.21	15,454.93
				0		0		-	-	-
CO1	PDEQ Submittals and Permit Fees	1000		1		1	1,000.00	-	1,000.00	1,000.00
CO2	View Port	2490		0	0.9	0.9		-	-	-
CO3	Digging and Backfill for AC Pipe Removal	2815		0	1	1	2,815.00	2,815.00	-	2,815.00
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
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				0		0		-	-	-
				0		0		-	-	-

ORIGINAL CONTRACT	940,384.03
CHANGE ORDERS (+ -)	1,000.00
	2,490.00
	2,815.00
TOTAL CONTRACT	946,689.03

CONTRACT WORK TOTAL	187,326.39	278,547.79	465,874.18
LESS: RETENTION	18,732.64	27,854.78	46,587.42
SUBTOTAL	168,593.75	250,693.01	419,286.76
LESS: PREVIOUS PAYMENTS			250,693.01
LESS: BACKCHARGES			
NET AMOUNT	168,593.75	250,693.01	168,593.75

SMYTH INDUSTRIES, INC.

SUBCONTRACTOR	Smyth Industries	PAY ESTIMATE NO	5	DATE 5/22/2015
ADDRESS	4010 E Illinois St	JOB NUMBER		PERIOD ENDING 5/31/2015
	Tucson, AZ 85714	JOB NAME	Community Water 2 MG Steel Tank	
PHONE #	520-750-8719			
FAX #	520-750-9544			
CONTACT / EMAIL	kristin@smythindustries.com			
EIN #				

BID ITEM	DESCRIPTION	QTY BID	UNIT	QTY PREV. TOTAL	QTY THIS PERIOD	QTY TO DATE	SUBCONT UNIT PRICE	AMOUNT THIS PERIOD	AMOUNT PREV. PERIOD	TOTAL AMOUNT TO DATE
				0		0.00		-	-	-
1	Demo & Backfill	35000		1		1	35,000.00	-	35,000.00	35,000.00
2	Tank	509115		0.75	0.15	0.9	509,115.00	76,367.25	381,836.25	458,203.50
3	Tank Foundation	25000		1		1	25,000.00	-	25,000.00	25,000.00
4	Mixing Piping	5960		0.8		0.8	5,960.00	-	4,768.00	4,768.00
5	Coating	240000		0		0	240,000.00	-	-	-
5	Sitework	91800		0		0	91,800.00	-	-	-
				0		0		-	-	-
6	Tax on Materials	33509.03		0.4612168	0.084	0.5452168	33,509.03	2,814.76	15,454.93	18,269.69
				0		0		-	-	-
CO1	PDEQ Submittals and Permit Fees	1000		1		1	1,000.00	-	1,000.00	1,000.00
CO2	View Port	2490		0	1	1	2,490.00	2,490.00	-	2,490.00
CO3	Digging and Backfill for AC Pipe Removal	2815		1		1	2,815.00	-	2,815.00	2,815.00
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
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				0		0		-	-	-
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				0		0		-	-	-
				0		0		-	-	-

ORIGINAL CONTRACT	940,384.03
CHANGE ORDERS (+ -)	1,000.00
	2,490.00
	2,815.00
TOTAL CONTRACT	946,689.03

	AMOUNT THIS PERIOD	AMOUNT PREV. PERIOD	TOTAL AMOUNT TO DATE
CONTRACT WORK TOTAL	81,672.01	465,874.18	547,546.19
LESS: RETENTION	8,167.20	46,587.42	54,754.62
SUBTOTAL	73,504.81	419,286.76	492,791.57
LESS: PREVIOUS PAYMENTS			419,286.76
LESS: BACKCHARGES			
NET AMOUNT	73,504.81	419,286.76	73,504.81

1051 OPS 14006 3021

[signature] 6/14

SMYTH INDUSTRIES, INC.

SUBCONTRACTOR	Smyth Industries	**PAY ESTIMATE NO**	6 **DATE** 6/23/2015
ADDRESS	4010 E Illinois St	**JOB NUMBER**	**PERIOD ENDING** 6/30/2015
	Tucson, AZ 85714	**JOB NAME**	Community Water 2 MG Steel Tank
PHONE #	520-750-8719		
FAX #	520-750-9544		
CONTACT / EMAIL	kristin@smythindustries.com		
EIN #			

BID ITEM	DESCRIPTION	QTY BID	UNIT	QTY PREV. TOTAL	QTY THIS PERIOD	QTY TO DATE	SUBCONT UNIT PRICE	AMOUNT THIS PERIOD	AMOUNT PREV. PERIOD	TOTAL AMOUNT TO DATE
				0		0.00		-	-	-
1	Demo & Backfill	35000		1		1	35,000.00	-	35,000.00	35,000.00
2	Tank	509115		0.9	0.1	1	509,115.00	50,911.50	456,203.50	509,115.00
3	Tank Foundation	25000		1		1	25,000.00	-	25,000.00	25,000.00
4	Mixing Piping	5960		0.8		0.8	5,960.00	-	4,768.00	4,768.00
5	Coating	240000		0		0	240,000.00	-	-	-
5	Sitework	91800		0		0	91,800.00	-	-	-
				0		0		-	-	-
6	Tax on Materials	33509.03		0.5452186	0.056134	0.6013508	33,506.03	1,881.00	18,269.69	20,150.68
				0		0		-	-	-
CO1	PDEQ Submittals and Permit Fees	1000		1		1	1,000.00	-	1,000.00	1,000.00
CO2	View Port	2490		1		1	2,490.00	-	2,490.00	2,490.00
CO3	Digging and Backfill for AC Pipe Removal	2815		1		1	2,815.00	-	2,815.00	2,815.00
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
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				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-

ORIGINAL CONTRACT	940,384.03
CHANGE ORDERS (+ -)	1,000.00
	2,490.00
	2,815.00
TOTAL CONTRACT	946,689.03

CONTRACT WORK TOTAL	52,792.50	547,546.19	600,338.68
LESS: RETENTION	5,279.25	54,754.62	60,033.87
SUBTOTAL	47,513.25	492,791.57	540,304.81
LESS: PREVIOUS PAYMENTS			492,791.57
LESS: BACKCHARGES			
NET AMOUNT	47,513.25	492,791.57	47,513.25

SMYTH INDUSTRIES, INC.

SUBCONTRACTOR	Smyth Industries	**PAY ESTIMATE NO**	7 **DATE** 7/23/2015
ADDRESS	4010 E Illinois St	**JOB NUMBER**	**PERIOD ENDING** 7/31/2015
	Tucson, AZ 85714	**JOB NAME**	Community Water 2 MG Steel Tank
PHONE #	520-750-8719		
FAX #	520-750-9544		
CONTACT / EMAIL	kristin@smythindustries.com		
EIN #			

BID ITEM	DESCRIPTION	QTY BID	UNIT	QTY PREV. TOTAL	QTY THIS PERIOD	QTY TO DATE	SUBCONT UNIT PRICE	AMOUNT THIS PERIOD	AMOUNT PREV. PERIOD	TOTAL AMOUNT TO DATE
				0		0.00		-	-	-
1	Demo & Backfill	35000		1		1	35,000.00	-	35,000.00	35,000.00
2	Tank	509115		1		1	509,115.00	-	509,115.00	509,115.00
3	Tank Foundation	25000		1		1	25,000.00	-	25,000.00	25,000.00
4	Mixing Piping	5960		0.8		0.8	5,960.00	-	4,768.00	4,768.00
5	Coating	240000		0	1	1	240,000.00	240,000.00	-	240,000.00
5	Sitework	91800		0		0	91,800.00	-	-	-
				0		0		-	-	-
6	Tax on Materials	33509.03		0.6013508	0.265	0.8663508	33,509.03	8,879.89	20,150.68	29,030.57
				0		0		-	-	-
CO1	PDEQ Submittals and Permit Fees	1000		1		1	1,000.00	-	1,000.00	1,000.00
CO2	View Port	2490		1		1	2,490.00	-	2,490.00	2,490.00
CO3	Digging and Backfill for AC Pipe Removal	2815		1		1	2,815.00	-	2,815.00	2,815.00
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
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				0		0		-	-	-
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				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-

ORIGINAL CONTRACT	940,384.03	**CONTRACT WORK TOTAL**	248,879.89	600,338.68	849,218.57
CHANGE ORDERS (+ -)	1,000.00	**LESS: RETENTION**	24,887.99	60,033.87	84,921.86
	2,490.00	**SUBTOTAL**	223,991.90	540,304.81	764,296.72
	2,815.00	**LESS: PREVIOUS PAYMENTS**			540,304.81
		LESS: BACKCHARGES			
TOTAL CONTRACT	946,689.03	**NET AMOUNT**	223,991.90	540,304.81	223,991.90

SMYTH INDUSTRIES, INC.

SUBCONTRACTOR	Smyth Industries	**PAY ESTIMATE NO**	8 **DATE** 8/24/2015
ADDRESS	4010 E Illinois St	**JOB NUMBER**	**PERIOD ENDING** 8/31/2015
	Tucson, AZ 85714	**JOB NAME**	Community Water 2 MG Steel Tank
PHONE #	520-750-8719		
FAX #	520-750-9544		
CONTACT / EMAIL	kristin@smythindustries.com		
EIN #			

BID ITEM	DESCRIPTION	QTY BID	UNIT	QTY PREV. TOTAL	QTY THIS PERIOD	QTY TO DATE	SUBCONT UNIT PRICE	AMOUNT THIS PERIOD	AMOUNT PREV. PERIOD	TOTAL AMOUNT TO DATE
				0		0.00		-	-	-
1	Demo & Backfill	35000		1		1	35,000.00	-	35,000.00	35,000.00
2	Tank	509115		1		1	509,115.00	-	509,115.00	509,115.00
3	Tank Foundation	25000		1		1	25,000.00	-	25,000.00	25,000.00
4	Mixing Piping	5960		0.8		0.8	5,960.00	-	4,768.00	4,768.00
5	Coating	240000		1		1	240,000.00	-	240,000.00	240,000.00
5	Sitework	91800		0	0.9	0.9	91,800.00	82,620.00	-	82,620.00
				0		0		-	-	-
6	Tax on Materials	33509.03		0.8663508	0.091	0.9573508	33,509.03	3,049.32	29,030.57	32,079.90
				0		0		-	-	-
CO1	PDEQ Submittals and Permit Fees	1000		1		1	1,000.00	-	1,000.00	1,000.00
CO2	View Port	2490		1		1	2,490.00	-	2,490.00	2,490.00
CO3	Digging and Backfill for AC Pipe Removal	2815		1		1	2,815.00	-	2,815.00	2,815.00
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
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				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-

ORIGINAL CONTRACT	940,384.03
CHANGE ORDERS (+ -)	1,000.00
	2,490.00
	2,815.00
TOTAL CONTRACT	946,689.03

CONTRACT WORK TOTAL	85,669.32	849,218.57	934,887.90
LESS: RETENTION	8,566.93	84,921.86	93,488.79
SUBTOTAL	77,102.39	764,296.72	841,399.11
LESS: PREVIOUS PAYMENTS			764,296.72
LESS: BACKCHARGES			
NET AMOUNT	77,102.39	764,296.72	77,102.39

SMYTH INDUSTRIES, INC.

SUBCONTRACTOR	Smyth Industries	**PAY ESTIMATE NO**	9 **DATE** 10/1/2015
ADDRESS	4010 E Illinois St	**JOB NUMBER**	**PERIOD ENDING** 10/1/2015
	Tucson, AZ 85714	**JOB NAME**	Community Water 2 MG Steel Tank
PHONE #	520-750-8719		
FAX #	520-750-9544		
CONTACT / EMAIL	kristin@smythindustries.com		
EIN #			

BID ITEM	DESCRIPTION	QTY BID	UNIT	QTY PREV. TOTAL	QTY THIS PERIOD	QTY TO DATE	SUBCONT UNIT PRICE	AMOUNT THIS PERIOD	AMOUNT PREV. PERIOD	TOTAL AMOUNT TO DATE
				0		0.00		-	-	-
1	Demo & Backfill	35000		1		1	35,000.00	-	35,000.00	35,000.00
2	Tank	509115		1		1	509,115.00	-	509,115.00	509,115.00
3	Tank Foundation	25000		1		1	25,000.00	-	25,000.00	25,000.00
4	Mixing Piping	5960		0.8	0.2	1	5,960.00	1,192.00	4,768.00	5,960.00
5	Coating	240000		1		1	240,000.00	-	240,000.00	240,000.00
5	Sitework	91800		0.9	0.1	1	91,800.00	9,180.00	82,620.00	91,800.00
				0		0		-	-	-
6	Tax on Materials	33509.03		0.9573508	0.0426492	1	33,509.03	1,429.13	32,079.90	33,509.03
				0		0		-	-	-
CO1	PDEQ Submittals and Permit Fees	1000		1		1	1,000.00	-	1,000.00	1,000.00
CO2	View Port	2490		1		1	2,490.00	-	2,490.00	2,490.00
CO3	Digging and Backfill for AC Pipe Removal	2815		1		1	2,815.00	-	2,815.00	2,815.00
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-
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				0		0		-	-	-
				0		0		-	-	-
				0		0		-	-	-

ORIGINAL CONTRACT	940,384.03
CHANGE ORDERS (+ -)	1,000.00
	2,490.00
	2,815.00
TOTAL CONTRACT	946,689.03

CONTRACT WORK TOTAL	11,801.13	934,887.90	946,689.03
LESS: RETENTION	1,180.11	93,488.79	94,668.90
SUBTOTAL	10,621.02	841,399.11	852,020.13
LESS: PREVIOUS PAYMENTS			841,399.11
LESS: BACKCHARGES			
NET AMOUNT	10,621.02	841,399.11	10,621.02

$\Sigma K = 105,289.92$

APPENDIX G
WR #5 Progress Record Photographs

Community Water Company of Green Valley

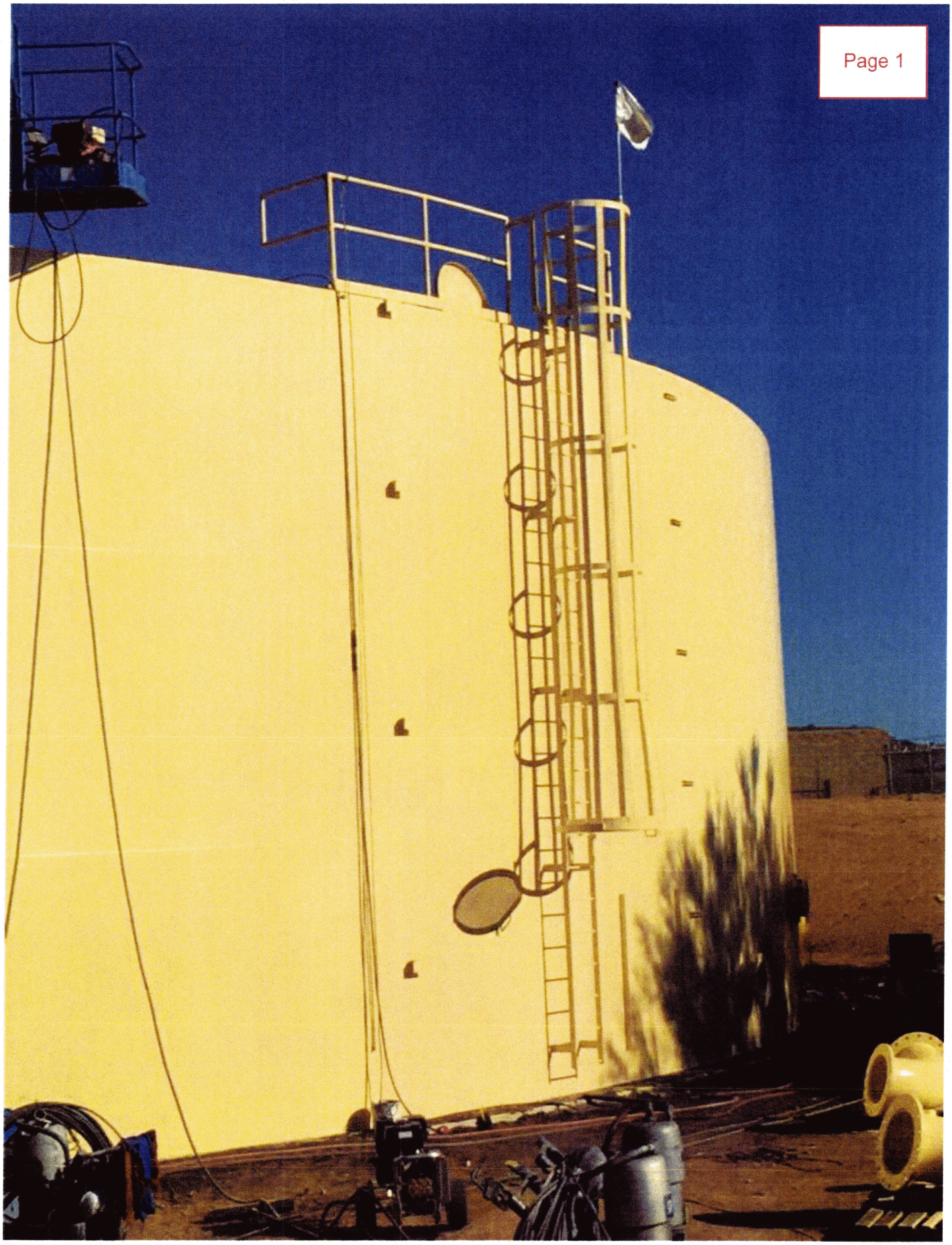
Progress Record Photographs

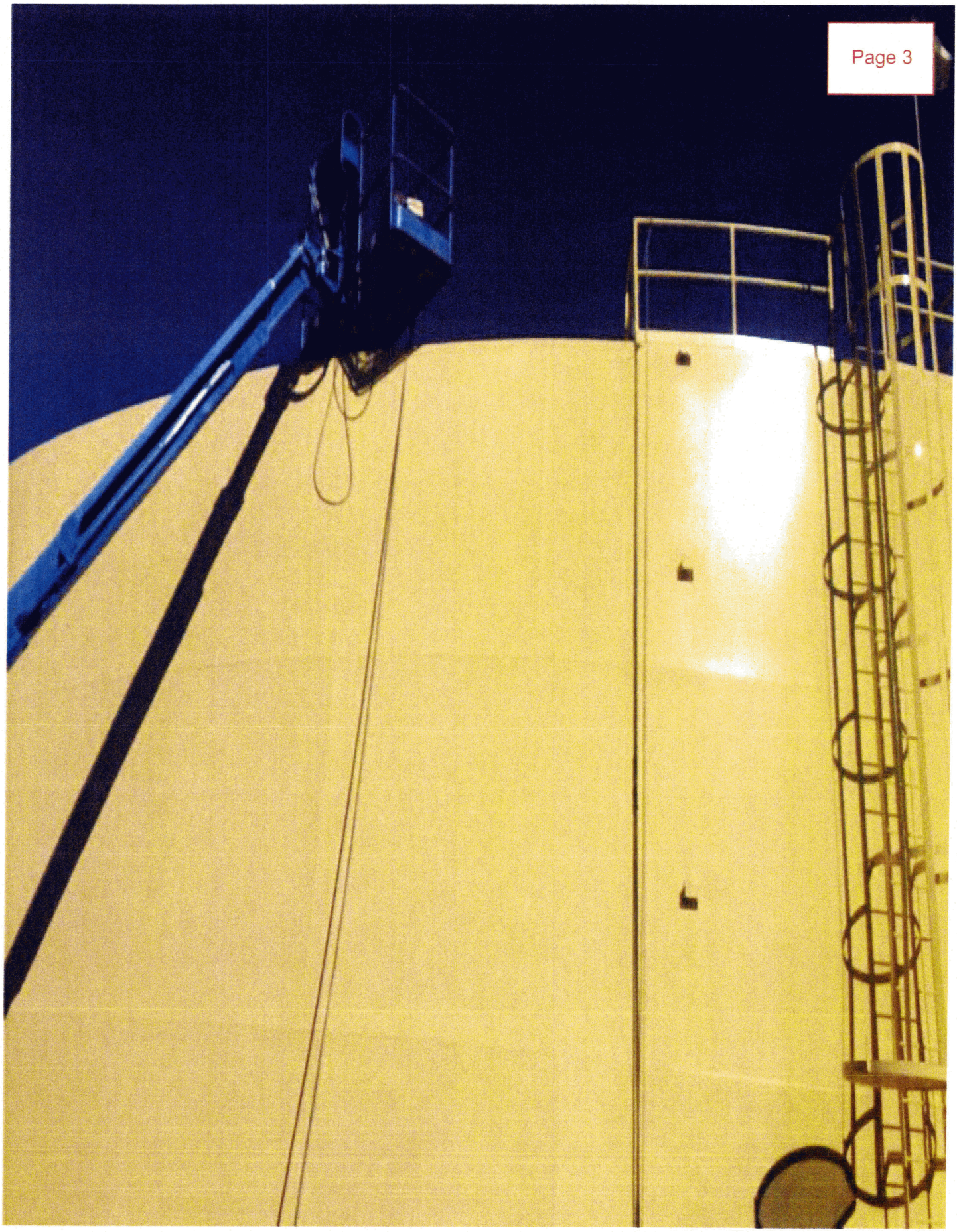
CWC Water Reservoir #5

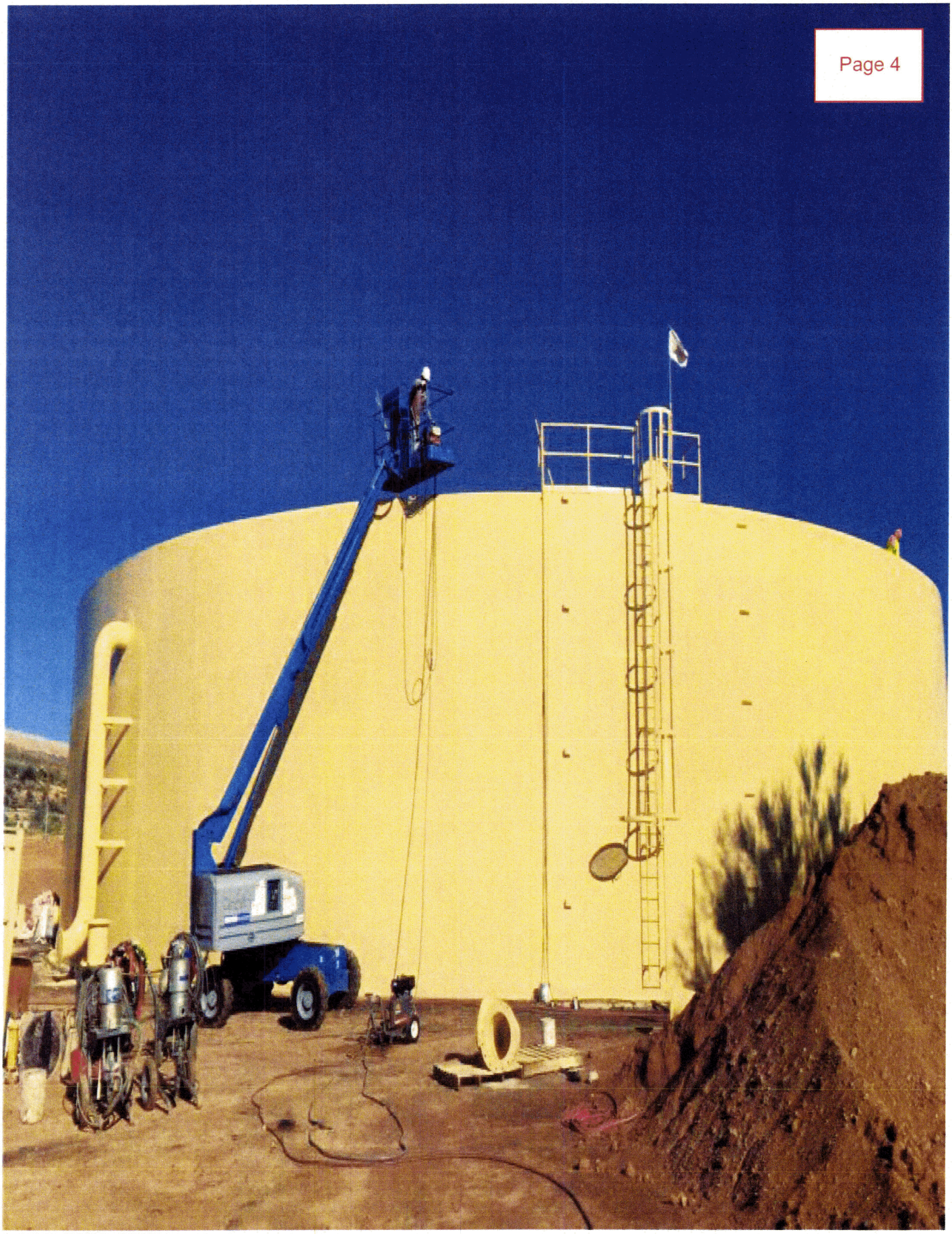
Located along Continental Road in Green Valley, Arizona

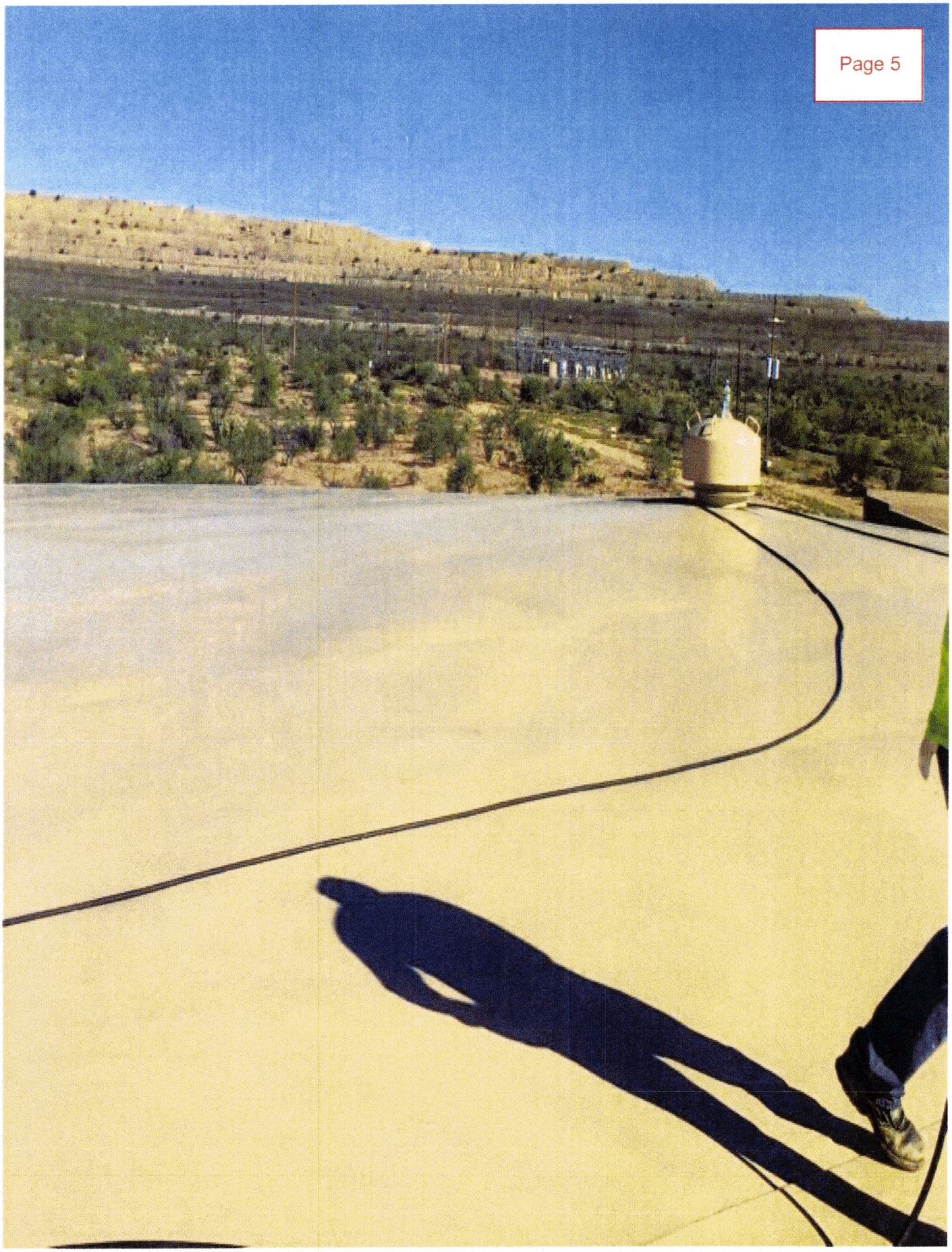
Lying w/in NW¼, NW¼, Sec 16, T18S, R13E, G&SRM, Pima County, Arizona

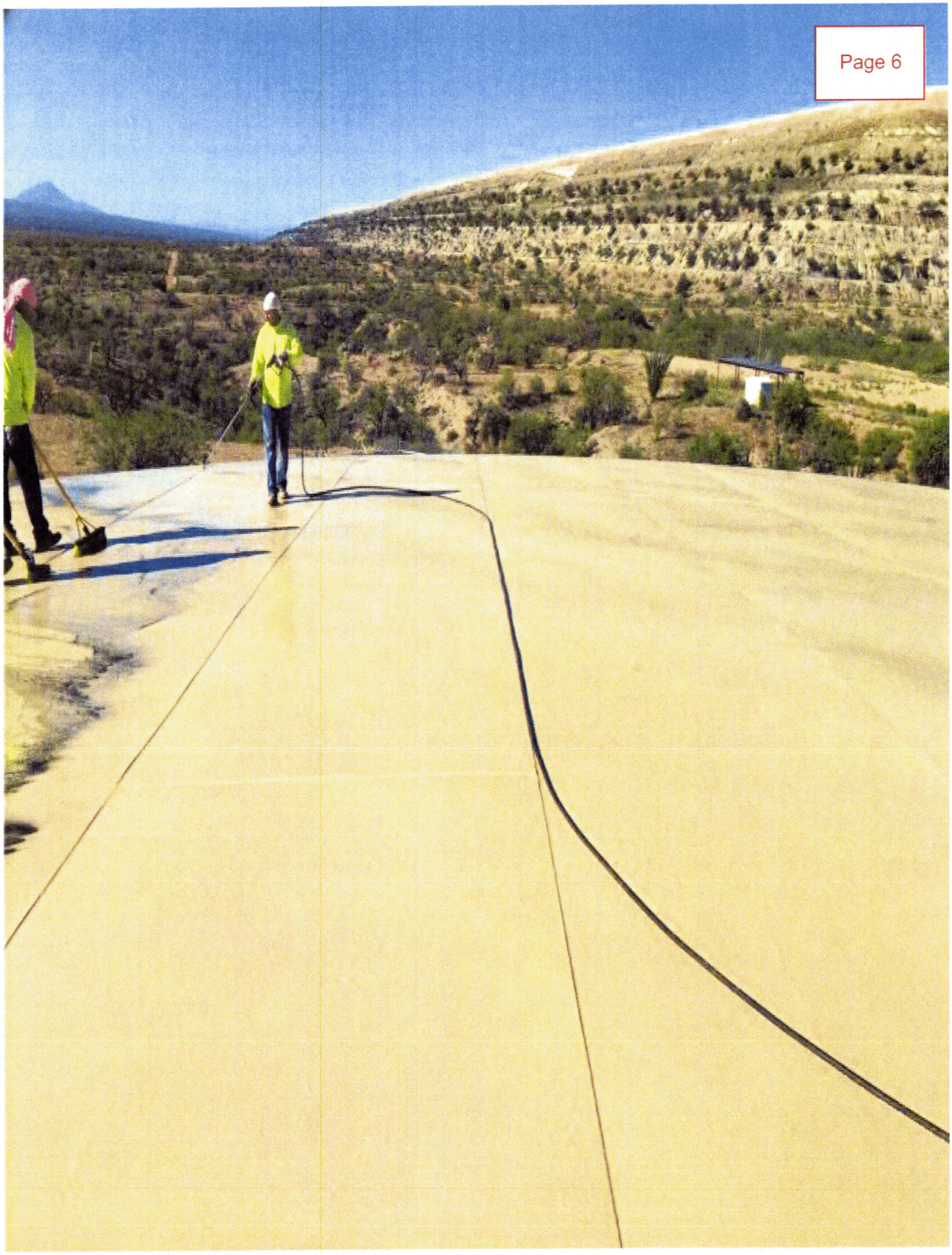
No.	Item Description
1	Completed Reservoir w/ Finish Paint Coat
2	Water Reservoir, Access Porthole Hatch and Inflow/Outflow Pipe
3	Water Reservoir, Roof Access Ladder
4	Water Reservoir, panoramic view of Access Ladder and Overflow Drain
5	Water Reservoir, final paint inspection on roof exterior
6	Water Reservoir, preparations for final roof exterior paint coat
7	Water Reservoir Roof at Access Ladder, inspecton prior to prime coat
8	Water Reservoir, final inspection of roof interior paint coat
9	Water Reservoir, panoramic view of interior painted finish
10	Water Reservoir, panoramic view of interior paint coat prior to final coat
11	Water Reservoir Inflow/Outflow Pipe, close up view
12	Water Reservoir, preparations for interior paint coat
13	Water Reservoir, preparations for interior primer coat
14	Water Reservoir, internal structure seal inspection, prior to primer coat
15	Reservoir Tank, near completion of Roof Support Structure
16	Reservoir Tank, placement of Roof Support Rafters
17	Reservoir Tank, final inspection of Roof Support Beams
18	Reservoir Tank, begin placement of Roof Support Rafters
19	Reservoir Tank, begin placement of Roof Support Beams and Columns
20	Reservoir Tank, crane delivery of Roof Support Structure componenets
21	Reservoir Tank, crane delivery of Self Propelled Hoist
22	Reservoir Tank, exterior panoramic view of completed tank walls
23	Reservoir Tank, crane extraction of interior construction scaffolding
24	Reservoir Tank, final exterior tank wall welding inspection
25	Reservoir Tank, view of interior construction scaffolding (high)
26	Reservoir Tank, final interior tank wall welding inspection
27	Reservoir Tank, view of interior construction scaffolding (low)
28	Reservoir Tank, panoramic view tank wall base seal (looking West)
29	Reservoir Tank, panoramic view tank wall base seal (looking East)
30	Reservoir Tank, panoramic view of completed lower tank wall ring
31	Reservoir Tank, near completion of lower tank wall ring
32	Reservoir Tank, completed Foundation Ring and Reservoir Floor
33	Reservoir Tank, final inspection of Foundation Ring and Floor
34	Reservoir Tank, panoramic view of Reservoir Floor and Foundation
35	Reservoir Tank, final inspection of Foundation Ring Reinforcement
36	Reservoir Tank, inspection of Foundation Trench and Reinforcement
37	Reservoir Tank, neat line finishing activities in Foundation Trench
38	Reservoir Tank, begin neat line excavation in Foundation Trench
39	Reservoir Site, Foundation Trench rough excavation nearly completed
40	Reservoir Site, completed compaction and Finish Grade for Subgrade
41	Reservoir Site, completed final rough grading at Backfill Subgrade Pad
42	Reservoir Site, ongoing Subgrade backfill and compaction
43	Reservoir Site, begin Subgrade backfill and compaction
44	Reservoir Site, completed Subgrade overexcavation
45	Reservoir Site, began Subgrade overexcavation
46	Reservoir Site, completed removal of WR #2

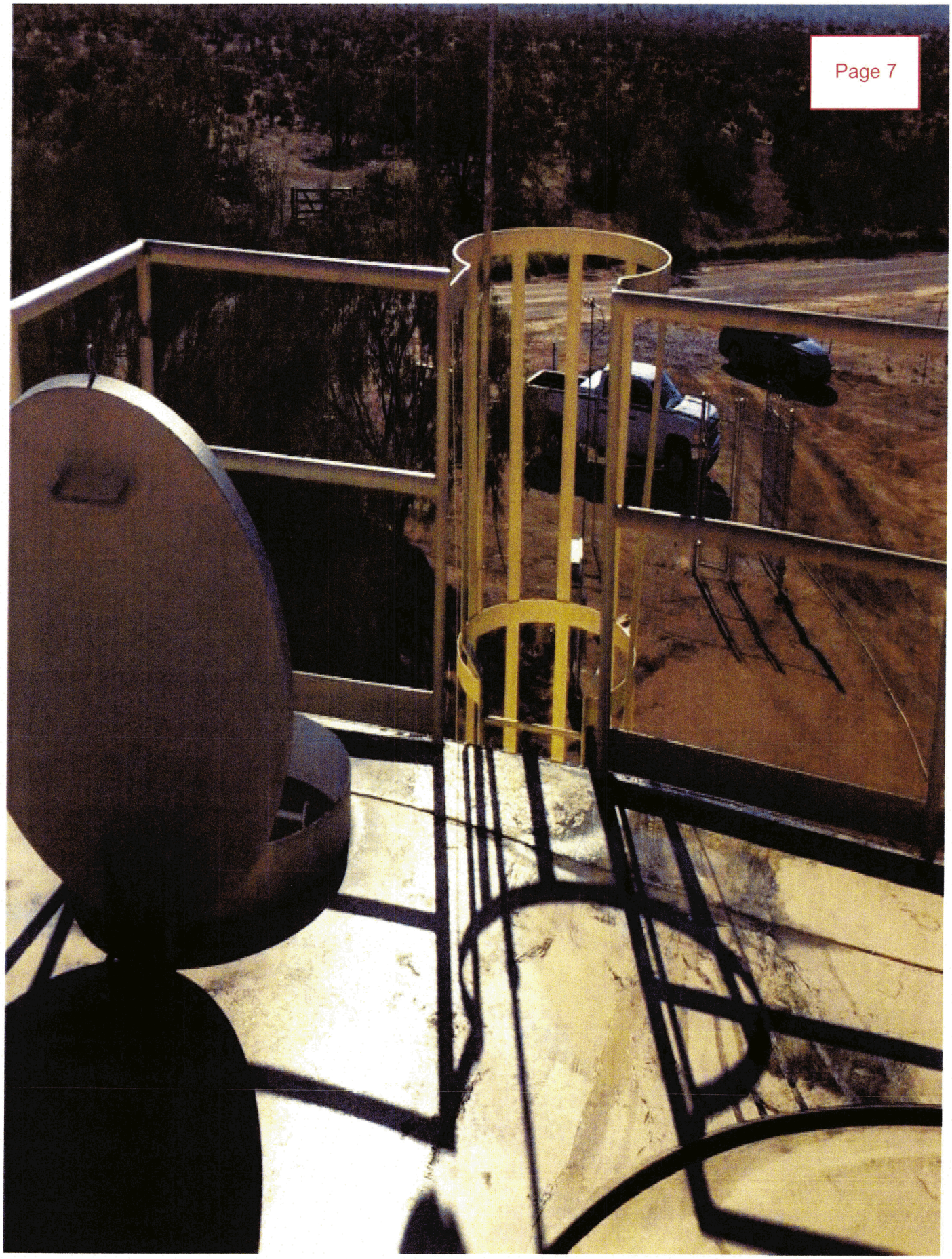


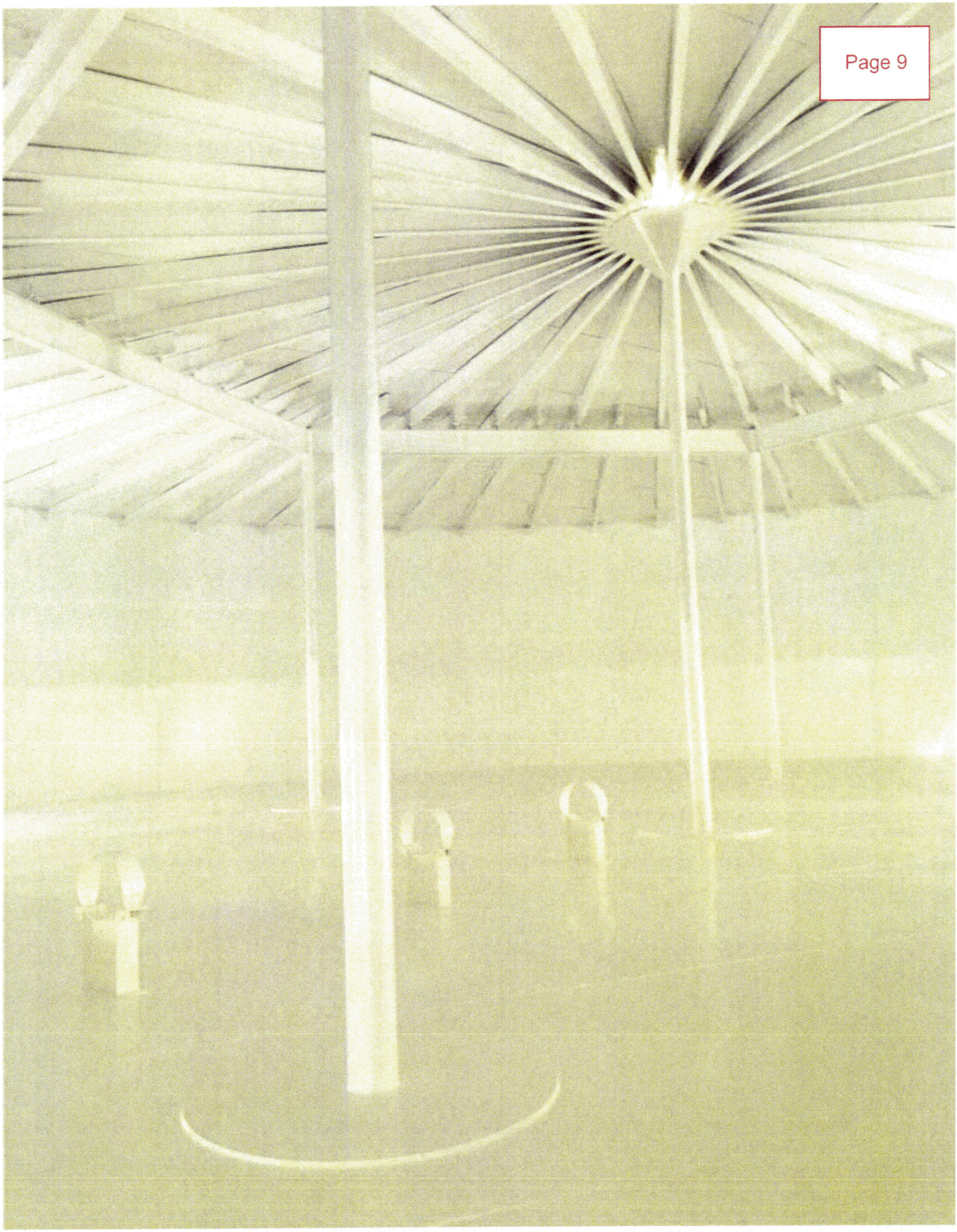


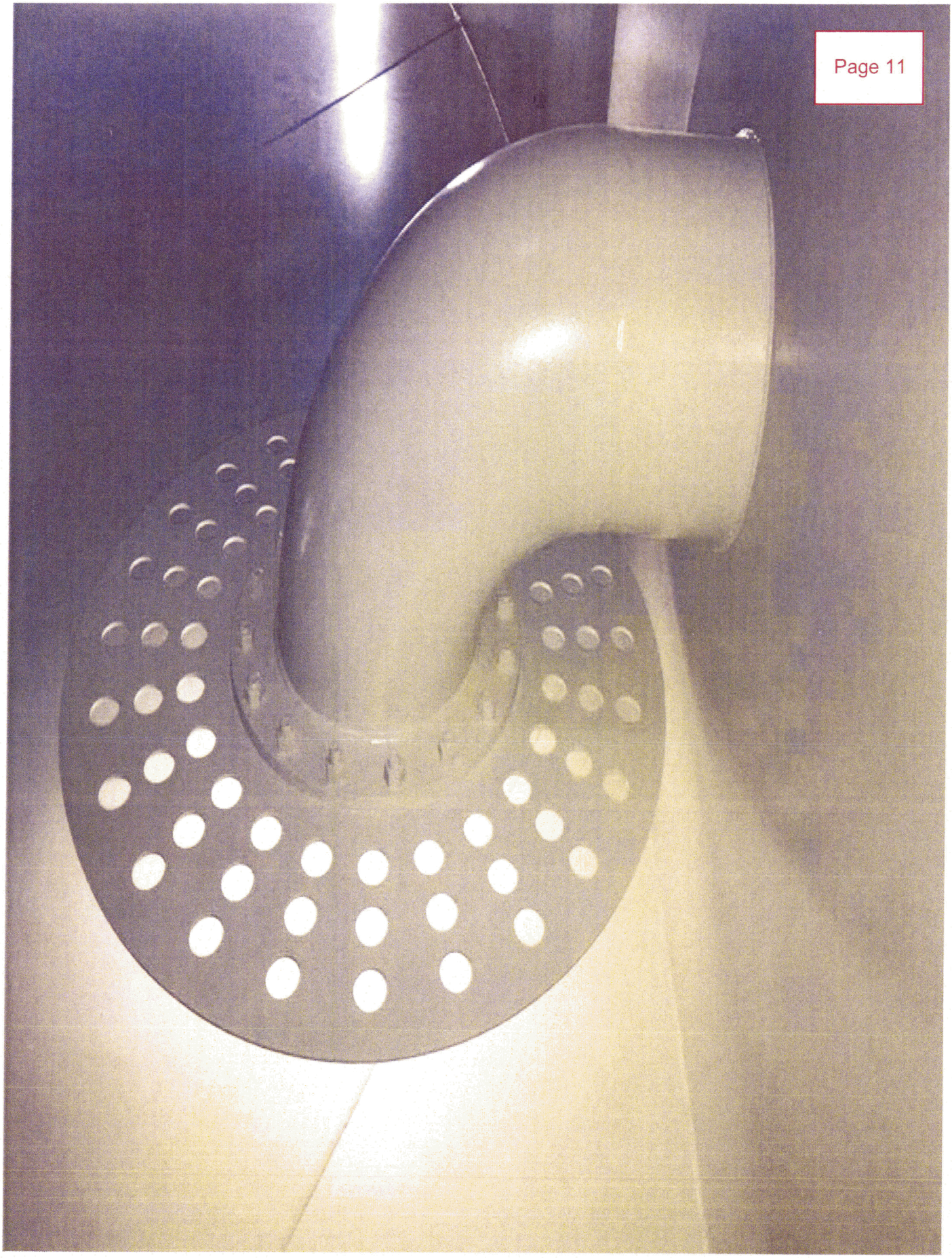


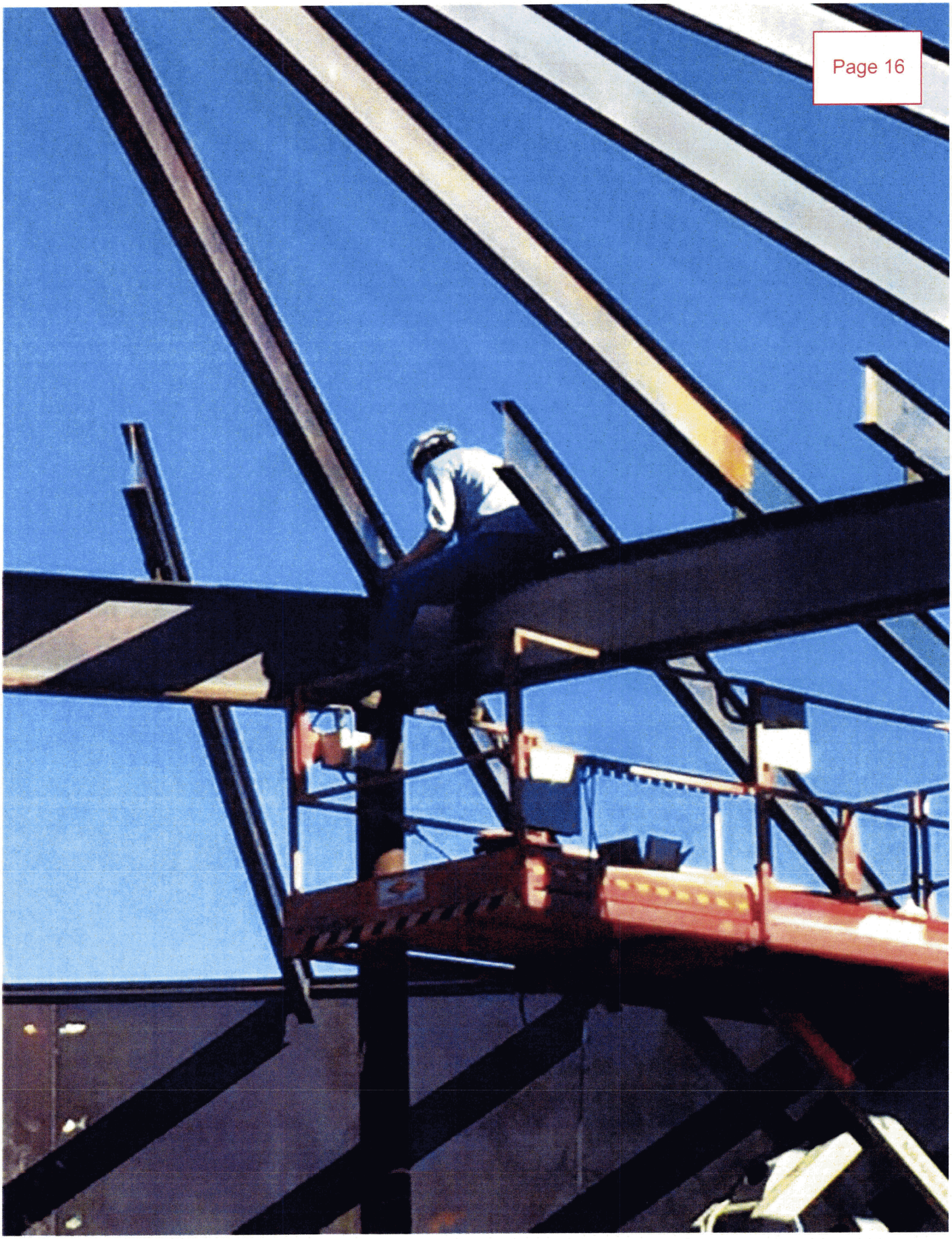


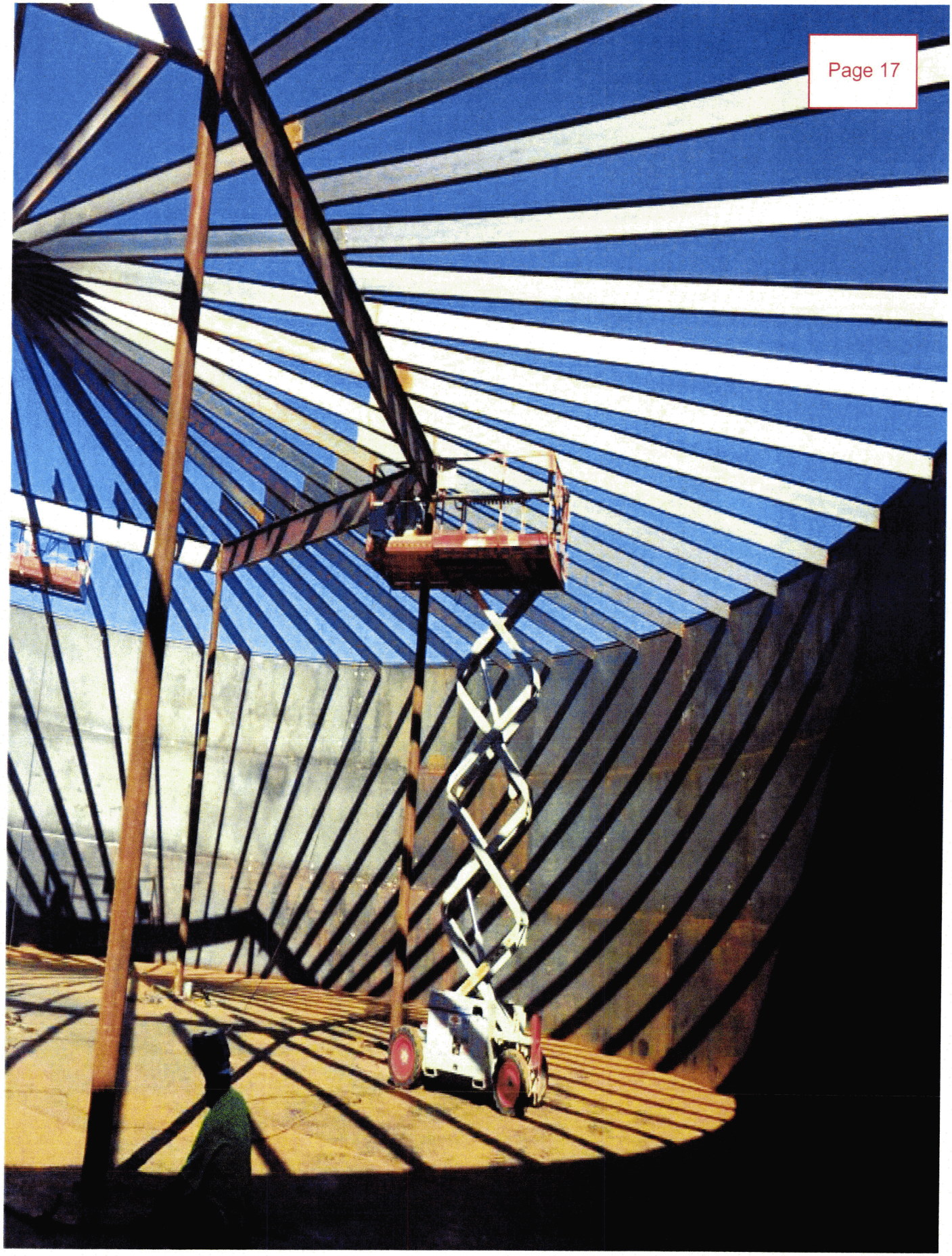


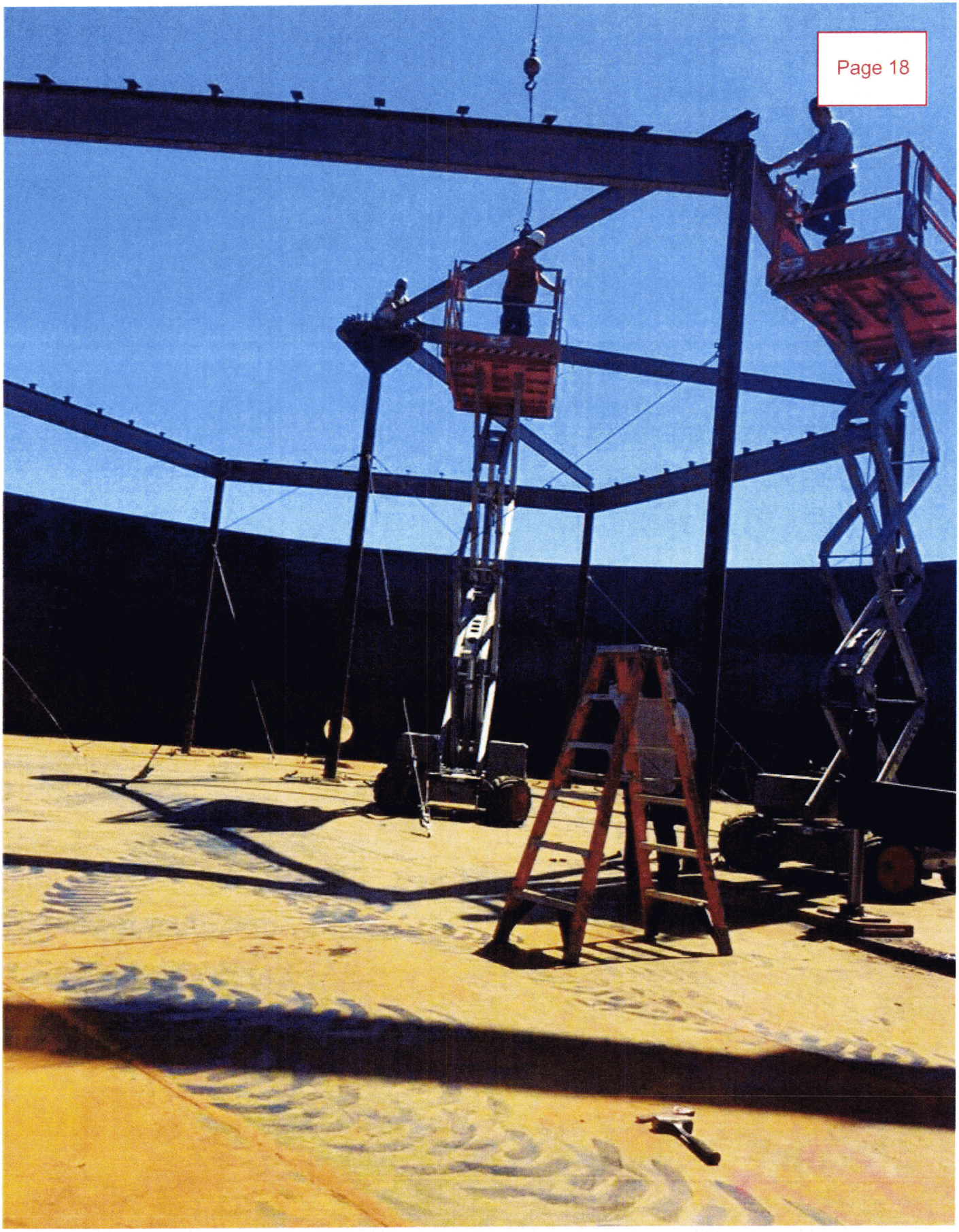


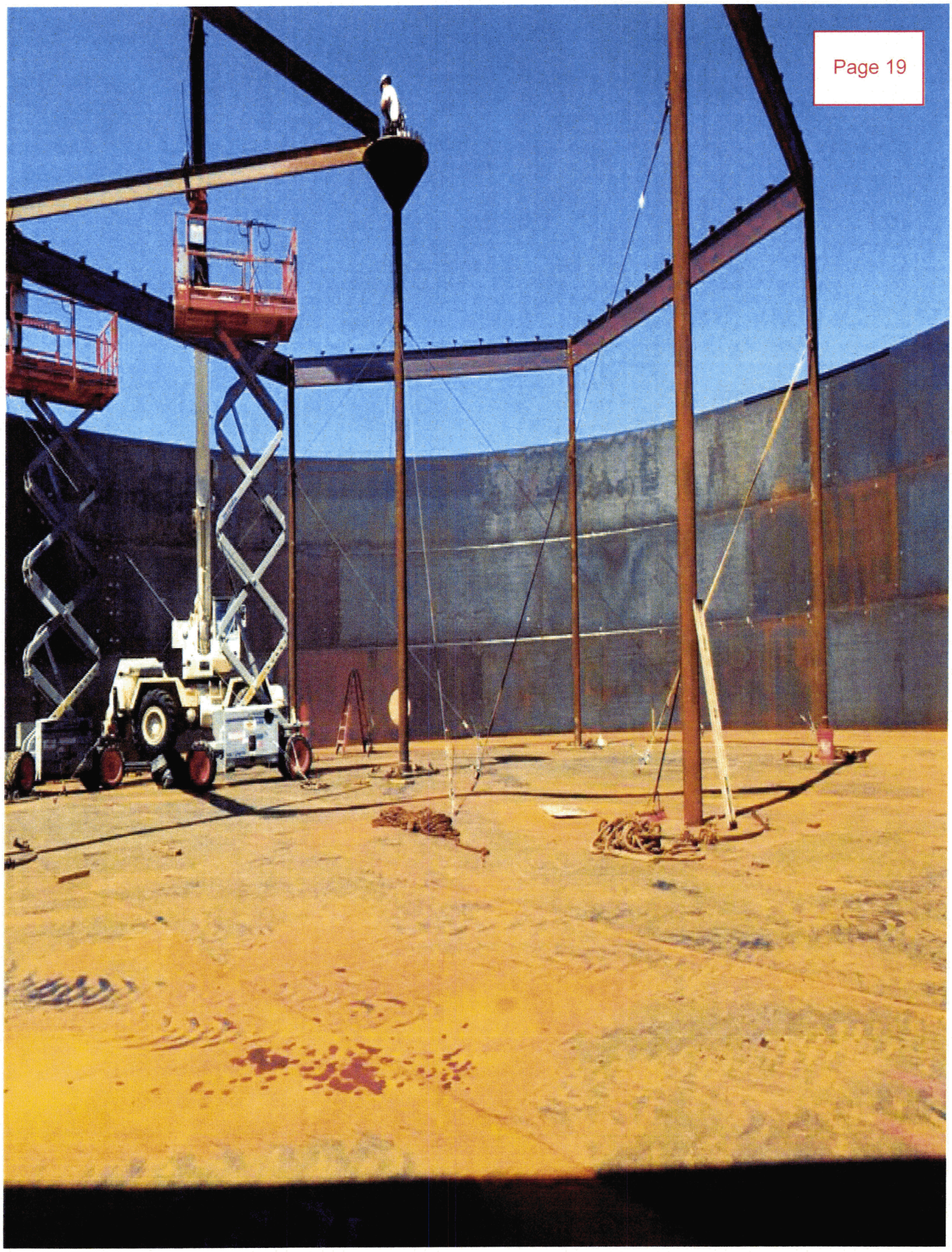












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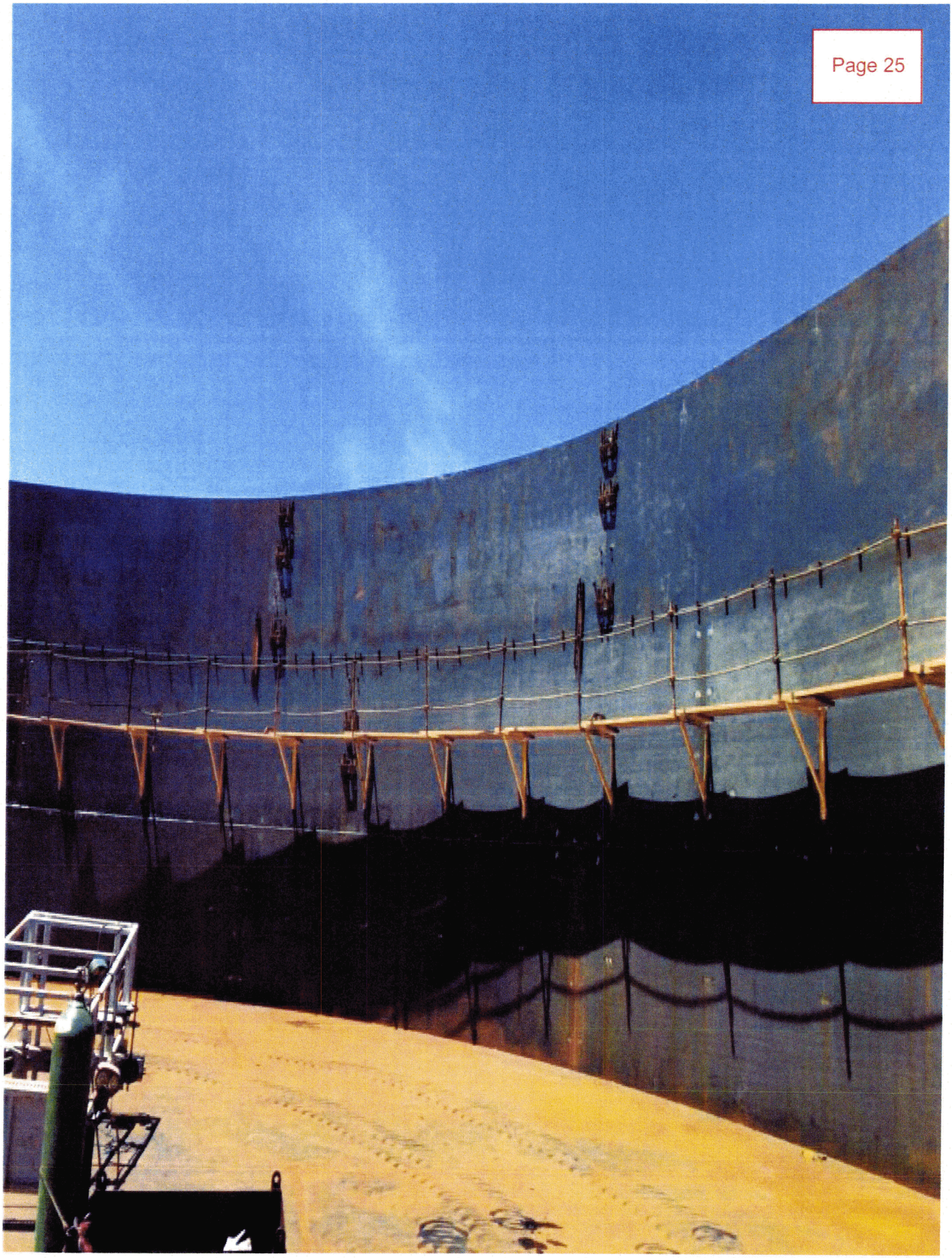

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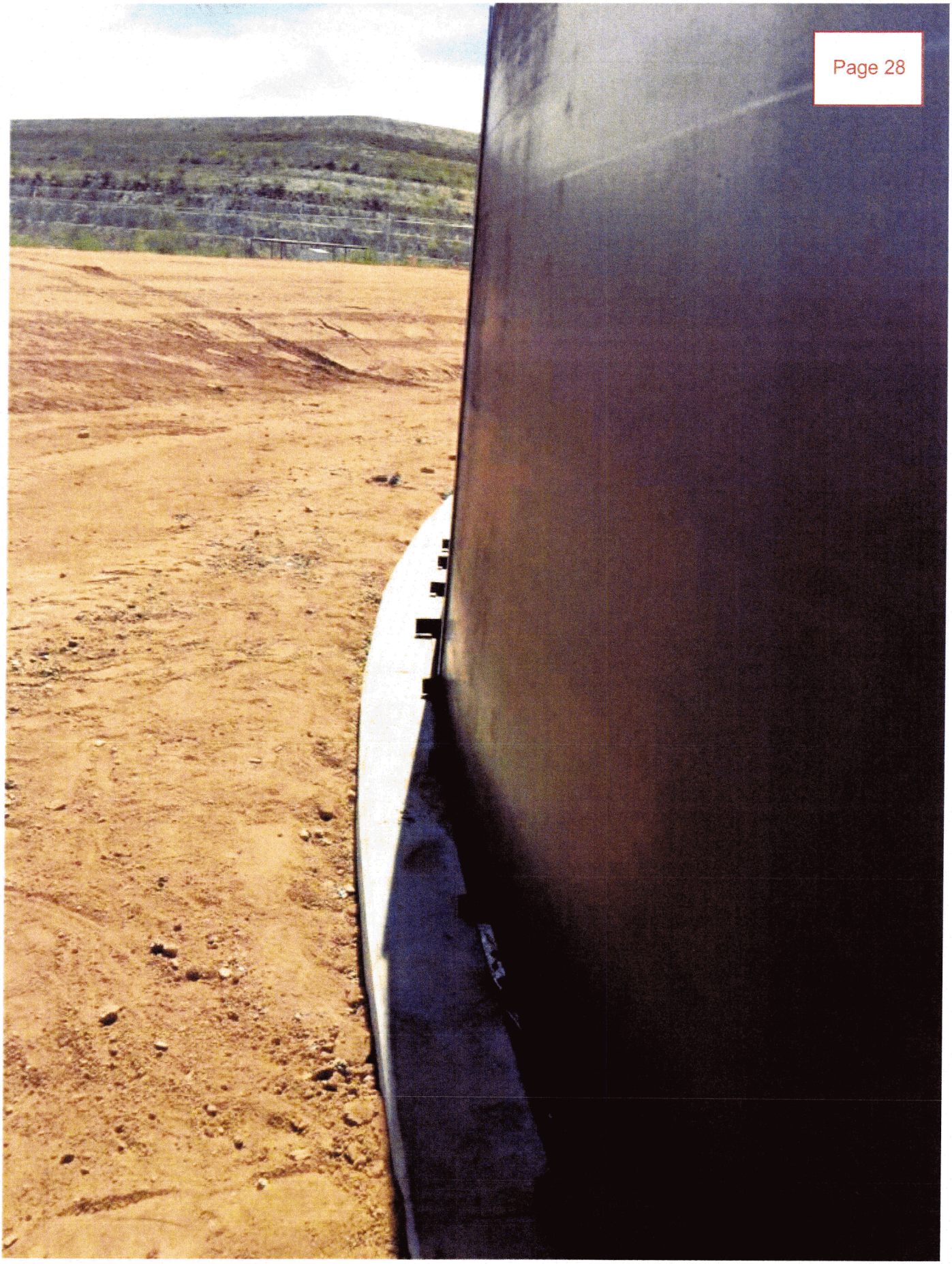

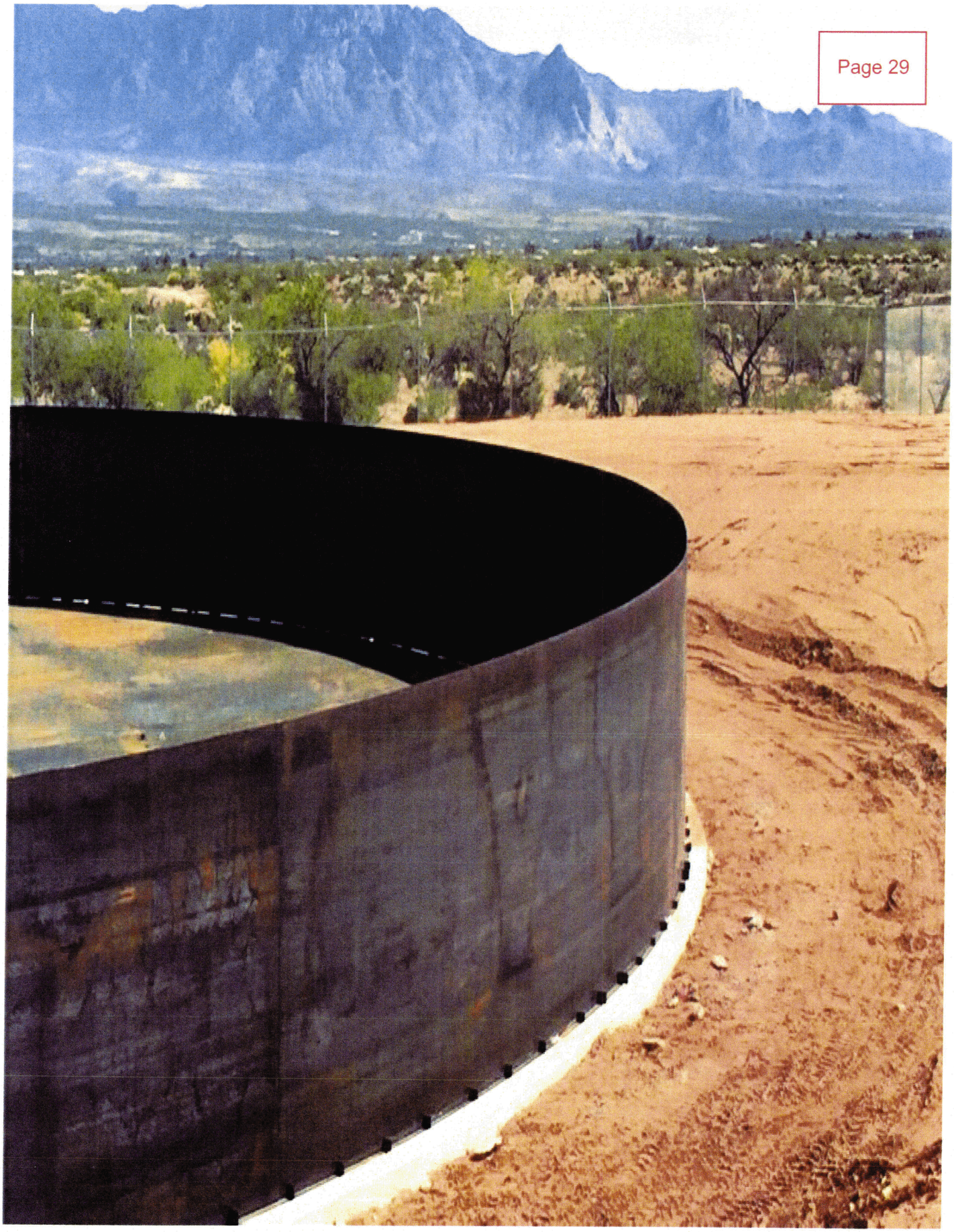

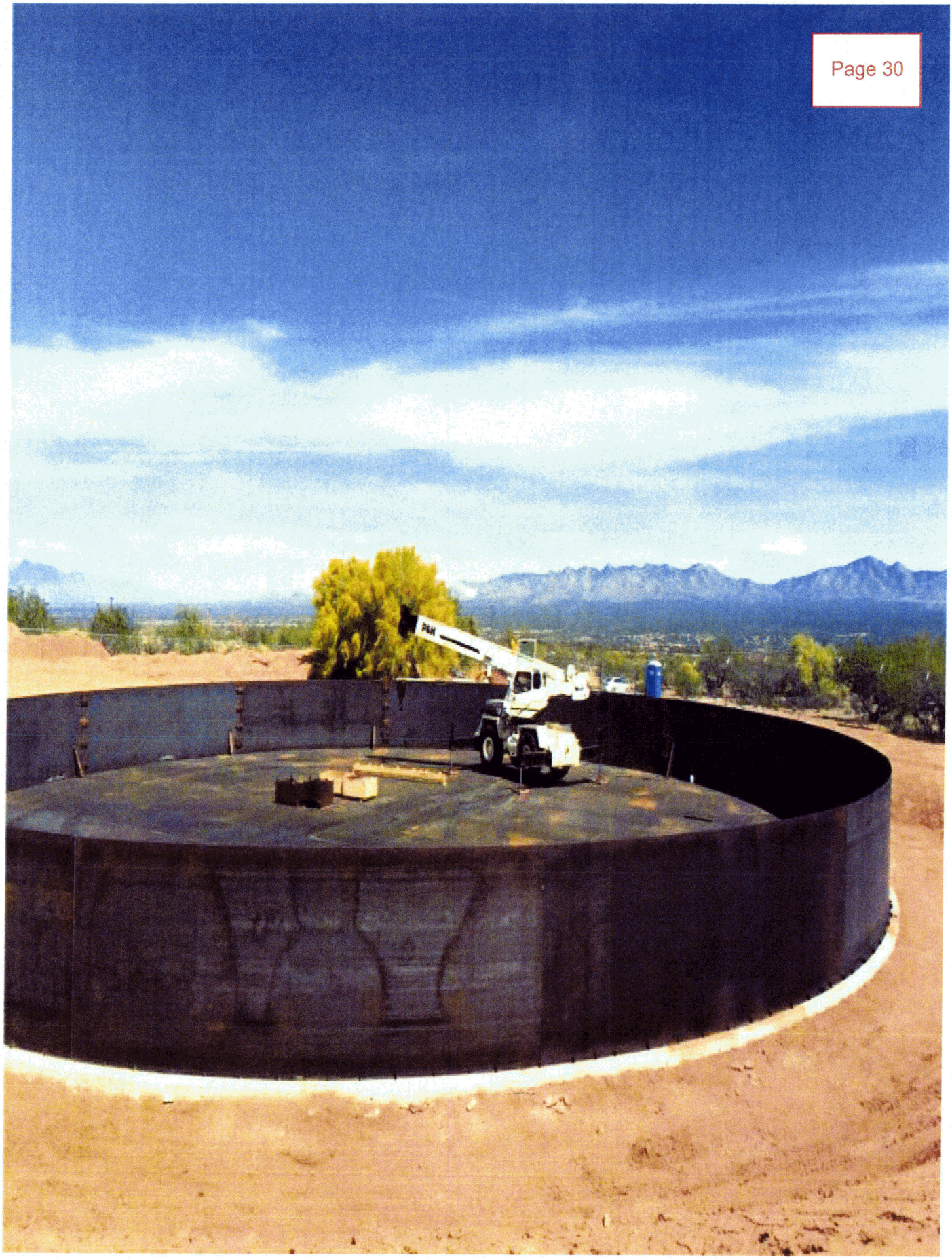
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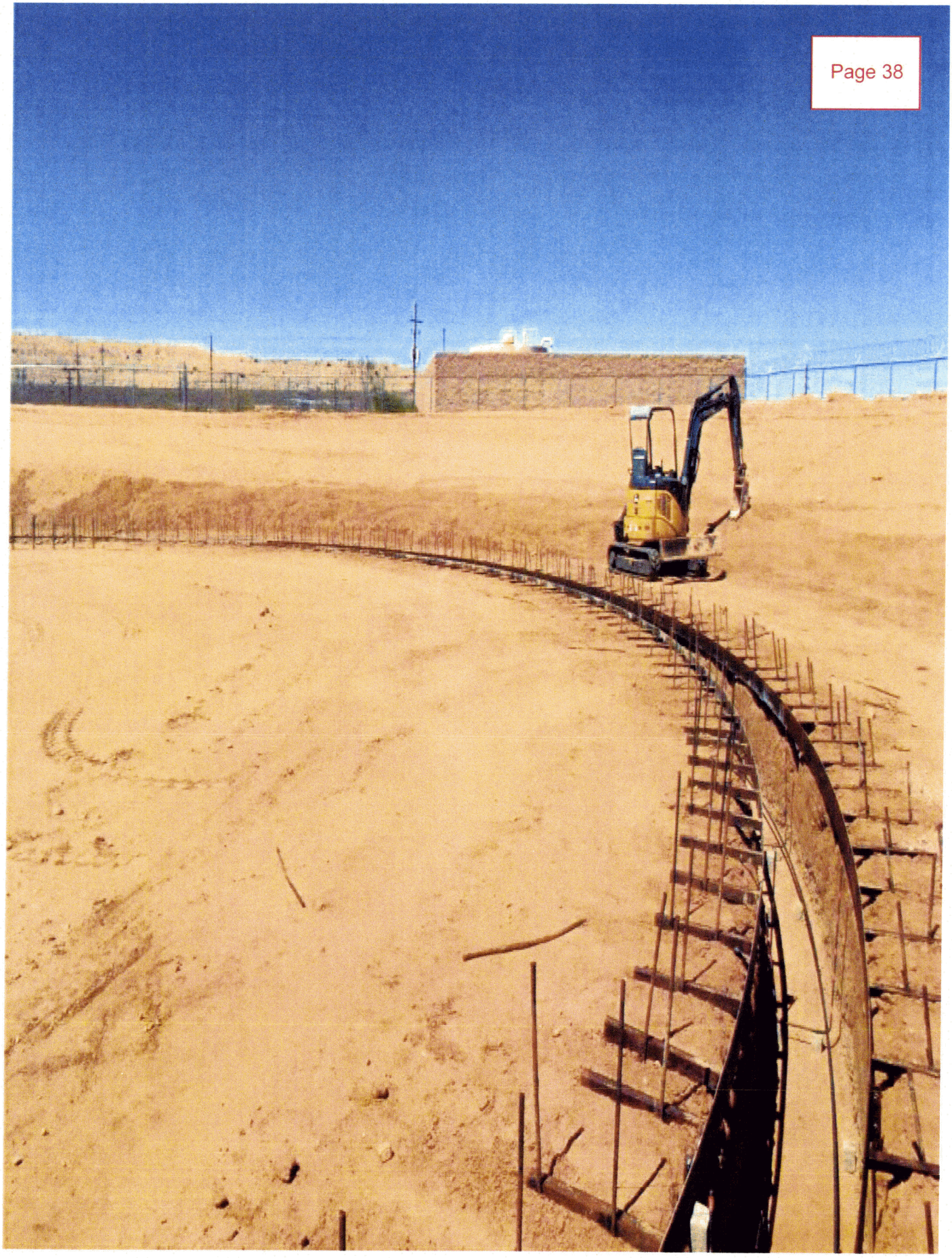

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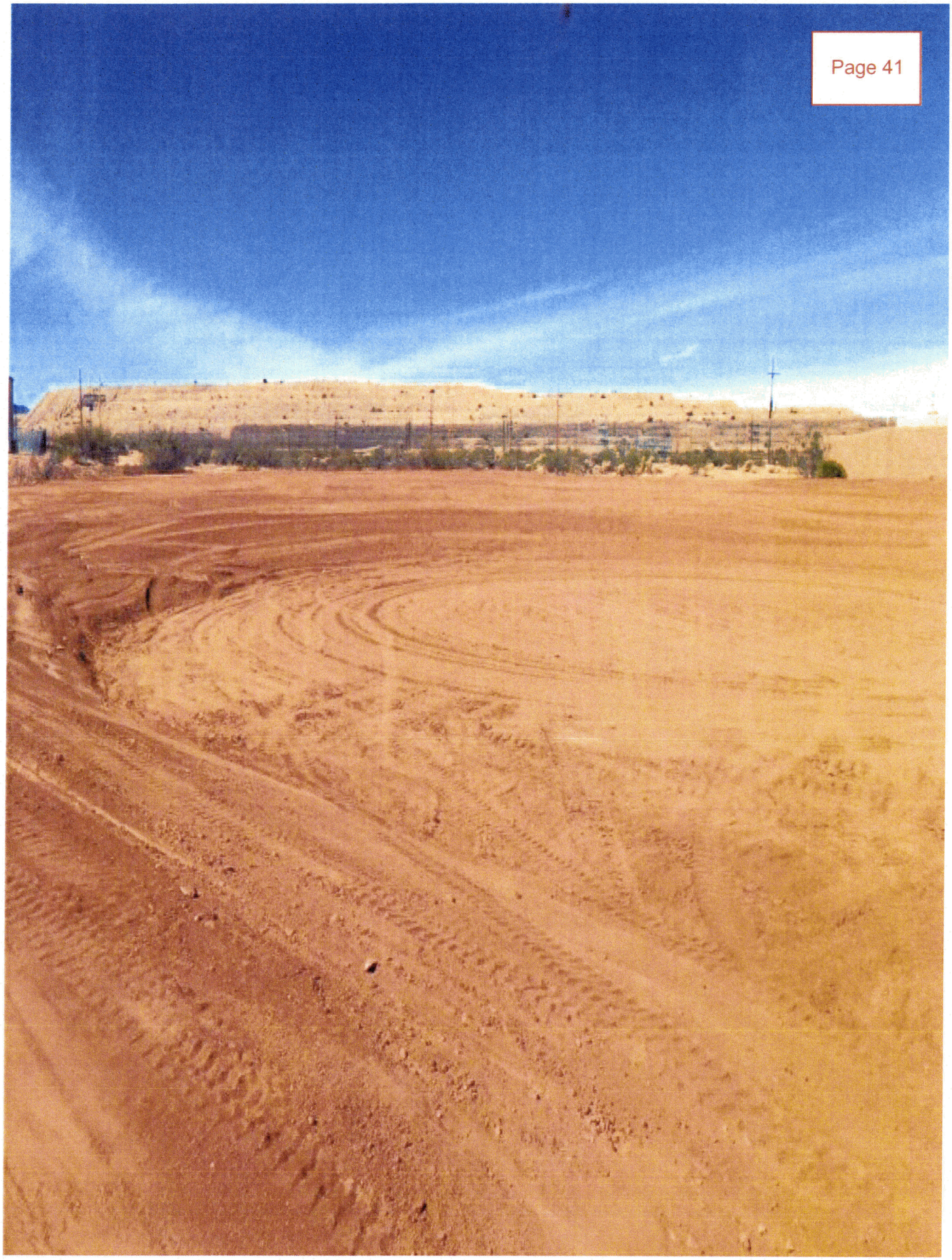

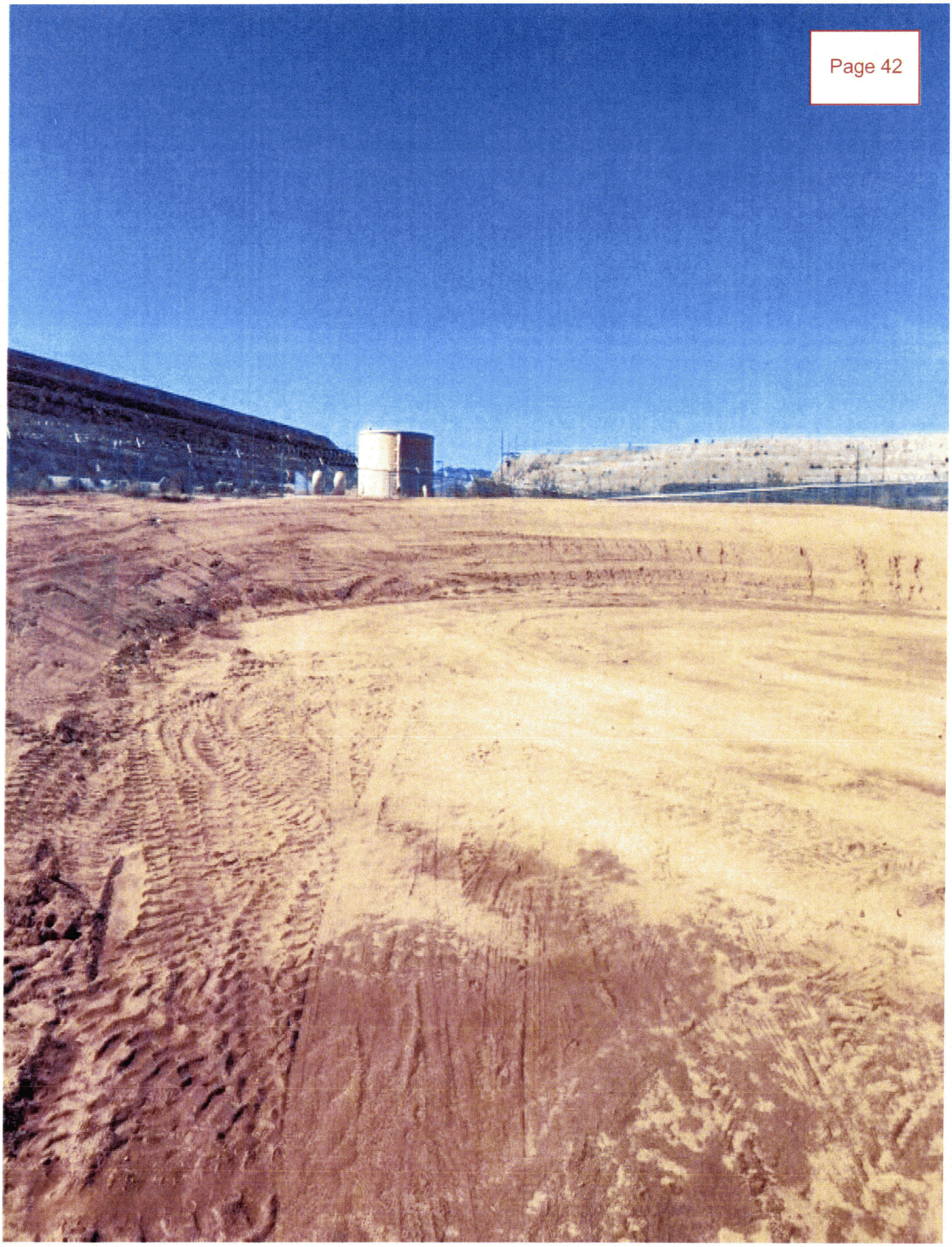

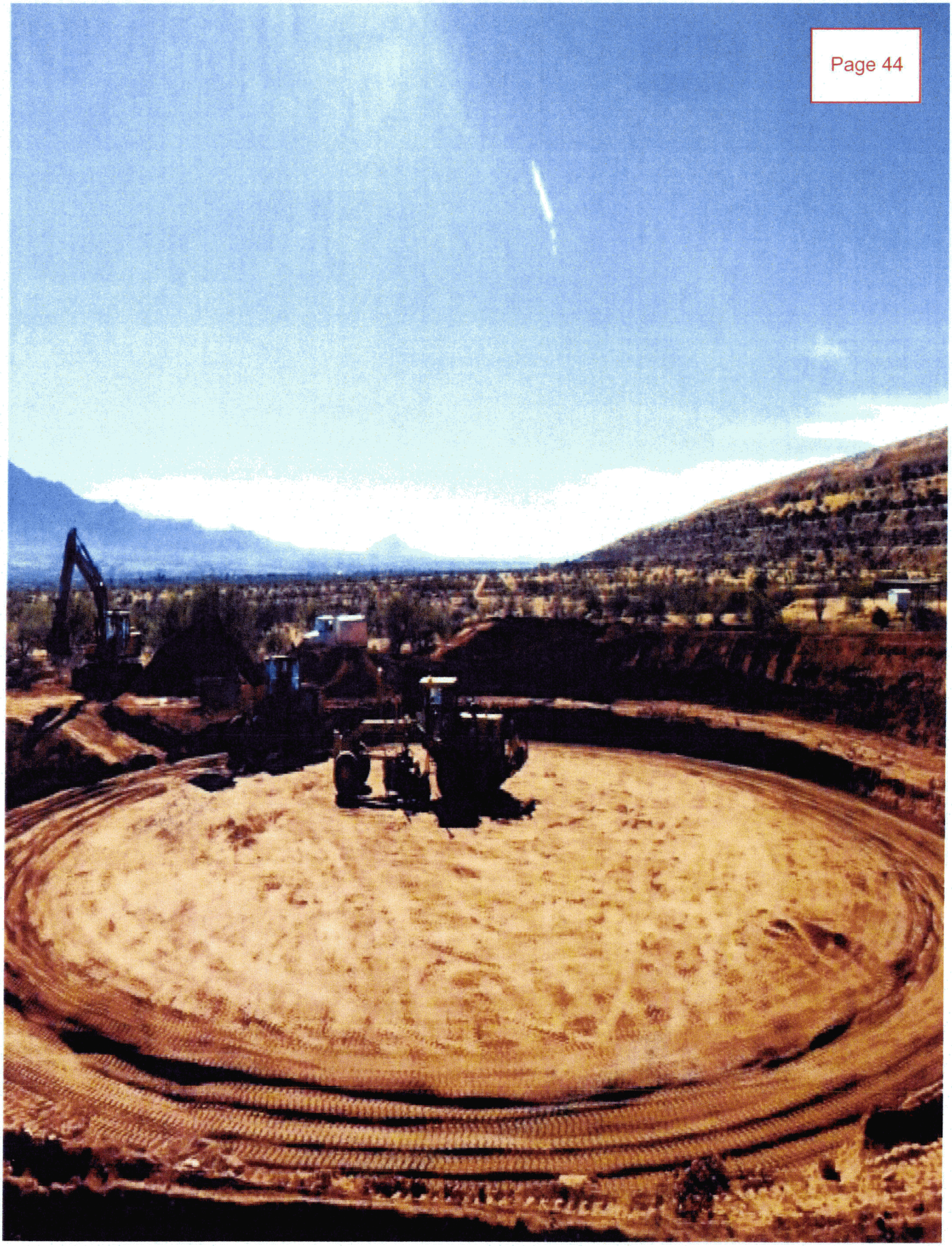

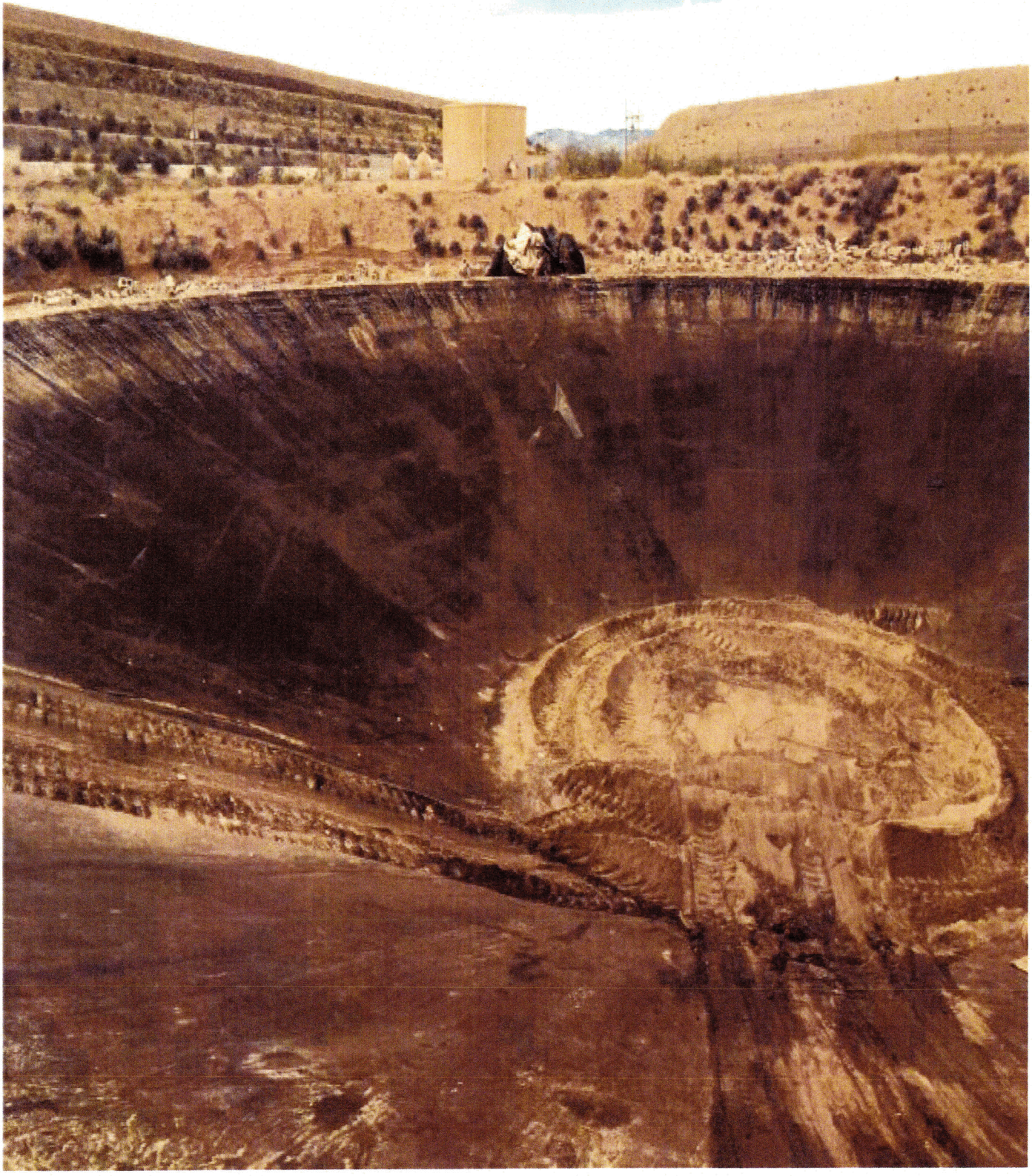

Exhibit RP-4

Community Water Company of Green Valley
Summary Operating Storage Capacity
Reservoir #2 & Reservoir #5

Operating Storage Capacity									
Reservoir No.	WR#2 Reservoir Design Capacity (gallons)	WR#2 Low Level Operating Capacity (gallons)	WR#2 Average Reservoir Operating Capacity (gallons)	Alternative 1a WR#2 Off-Line Capacity at Low Operating Levels	Alternative 1b WR#2 Off-Line Capacity at Operating Levels (gallons)	Reservoir No.	WR#5 Design Capacity	Alternative 3a New WR#5 Average Reservoir Operating Capacity 1MG (gallons)	Alternative 3b New WR#5 Average Reservoir Operating Capacity 2MG (gallons)
1	1,000,000	715,000	793,000	715,000	793,000	1	1,000,000	793,000	793,000
2	1,000,000	569,000	659,000	0	0	2	0	0	0
3	1,000,000	667,000	792,000	667,000	792,000	3	1,000,000	792,000	792,000
4	2,000,000	1,083,000	1,333,000	1,083,000	1,333,000	4	2,000,000	1,333,000	1,333,000
5	0	0	0	0	0	5	2,000,000	792,000	1,333,000
W#10 Tank	300,000	125,000	143,750	125,000	143,750	W#10 Tank	300,000	143,750	143,750
W#11 Tank	300,000	56,250	121,875	56,250	121,875	W#11 Tank	300,000	121,875	121,875
Totals	5,600,000	3,215,250	3,842,625	2,646,250	3,183,625	**Totals**	6,600,000	3,975,625	4,516,625

Exhibit RP-5

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Handbook of Public Water Systems

Second Edition

HDR Engineering, Inc.

RH-5 Excerpt HDR Engineering Handbook, pg 957

TABLE 17–1 Typical Range of Storage Requirements for Fire Protection

Type of Development	Storage Volume, gallons	Storage Volume, MG
Low-density residential, 2 hr at 500 gpm	60,000	0.06
Suburban residential, 3 hr at 2,500 gpm	450,000	0.45
Light commercial, 4 hr at 3,000 gpm	720,000	0.8
Commercial, 5 hr at 4,000 gpm	1,200,000	1.2

Emergency Storage

The emergency storage volume needed depends upon the risk of interruption of one or more water sources and the length of time that may be needed to make repairs or connect to an alternative source. Unplanned interruptions of supply may occur as a result of well and/or intake contamination, transmission main failures, or treatment plant pump or power failures. Typically, with only one source of supply, a minimum emergency storage volume would be enough to supply two days of average demand in the area served by the storage facility. If the area is served by multiple supply sources this emergency volume could be reduced by the volume that could be provided if only the largest source were out of service. The risks of emergency source outages should be evaluated on a case-by-case basis.

Emergency storage can also provide for outages associated with planned periods of supply interruptions. Planned interruptions may be a result of transient shutdowns for inspection, maintenance, or improvement projects. The probable length of such planned outages should be estimated and scheduled to minimize impacts. The necessary emergency storage volume is then based upon the probable demands during this period.

Dead Storage

It is important to consider that although a storage tank contains a certain total volume, the hydraulic head of that volume may be unusable in the system. This is primarily because as the storage volume is drawn down toward the bottom the tank, the water pressure becomes inadequate to meet the needs of the system. This condition is especially true in standpipes where only the higher component of the storage volume is usable. Therefore, depending upon such conditions, this dead storage must be considered when determining total beneficial storage.

Total Storage

The total storage required is typically the sum of operating storage, equalizing storage, fire flow or emergency storage, and dead storage volumes. Rather than applying both fire and emergency storage, some local fire and water agencies will allow the use of the larger of either fire or emergency storage volumes. These total capacity requirements

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
DOUG LITTLE – CHAIRMAN
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN

EXHIBIT
A-3
ADMITTED

IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE.	DOCKET NO. W-02304-15-0263

REJOINDER TESTIMONY OF

RAUL FRANCISCO G. PINA

ON BEHALF OF

COMMUNITY WATER COMPANY OF GREEN VALLEY

April 26, 2016

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II. Response to Staff Surrebuttal Testimony 1

I. INTRODUCTION.

Q. Please state your name and address.

A. My name is Raul Francisco G. Piña. My work and mailing address is CPE Consultants, LLC, 3895 N. Business Center Drive, Suite 115, Tucson, AZ 85705.

Q. Have you submitted Rebuttal Testimony in this case?

A. Yes, I prepared Rebuttal Testimony on behalf of Community Water Company of Green Valley ("Company") in response to the Arizona Corporation Commission Utilities Division Staff ("Staff") Direct Testimony filed on January 15, 2015 – specifically, Staff's Direct Testimony and Engineering Report regarding Reservoir No. 5.

Q. What is the purpose of your Rejoinder Testimony?

A. I am providing Rejoinder Testimony in response to the Surrebuttal Testimony filing by Staff – specifically responding to testimony from Staff engineering witness Jian Liu regarding Reservoir No. 5.

II. RESPONSE TO STAFF SURREBUTTAL TESTIMONY.

Q. Do you agree with Staff that a major outage is highly improbable, as Mr. Liu states on page 2 of his Surrebuttal Testimony?

A. I do not agree with the conclusion of Staff. The Green Valley area is susceptible to high winds and lightning strikes during the monsoon season. Wells located near the Santa Cruz River are exposed to interruption during a catastrophic flood event. Without standby power to the production wells, it is irresponsible for the Company to include the production wells as providing available storage capacity.

Q. Staff takes issue with your analysis of the Company's system as a single-well system. Why should the Company's design storage capacity be calculated by using the Company as a single-well system?

A. The 5,400,000-gallon available storage capacity from the production wells assumes that if there is an emergency (*e.g.,* power outage, flood) then only one well will be disrupted, and the Company can include the production of the remaining wells as available storage. It is reasonable that production wells could lose power and become incapacitated. In order to include a well as available storage the Company would need a standby generator at that well. The cost of providing a single standby generator did not compare favorably to the replacement of Reservoir No. 2, while a two-million-gallon storage facility provided numerous additional benefits.

Q. Mr. Liu, on page 3 of his Surrebuttal Testimony, implies that you recommended a standby generator for one of the Company's production wells. Is that accurate?

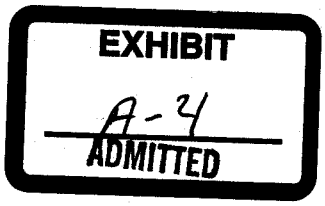
A. No. One of the tasks of the Engineer's Reservoir Selection Report (Exhibit RP-2 from my Rebuttal Testimony) was to evaluate the option to provide a standby generator in one of the production wells in lieu of construction of a new reservoir. This option was rejected, because our evaluation showed that it was more expensive and less dependable to provide a standby generator than to construct a new reservoir, (see page 7 of my Rebuttal Testimony at lines 23 through 25). The cost required to purchase the standby generator, to accommodate the standby generator within the existing well site, and to provide the necessary long-term maintenance and replacement was a more expensive alternative. In addition, the replacement of Reservoir No. 2 with a new reservoir enabled the Company to install the new reservoir at a different base elevation, which in turn improved the system. Therefore, I recommended construction of a new reservoir. Put simply, Reservoir No. 5 is useful and needed to achieve the Company's desired goal of maintaining the American Water Works Association 48-hours of emergency storage standard.

Q. Does this conclude your Rejoinder Testimony?

A. Yes

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
SUSAN BITTER SMITH – CHAIRMAN
BOB STUMP
BOB BURNS
DOUG LITTLE
TOM FORESE



IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE.	DOCKET NO. W-02304-15-_____

DIRECT TESTIMONY OF

RAY L. JONES

ON BEHALF OF

COMMUNITY WATER COMPANY OF GREEN VALLEY

July 15, 2015

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I. INTRODUCTION.

Q. Please state your name and address.

A. My name is Ray L. Jones. My business address is 18835 North Thompson Peak Parkway, Suite 215, Scottsdale, AZ 85255.

Q. On whose behalf are you testifying in the proceeding?

A. I am testifying on behalf of the Applicant, Community Water Company of Green Valley ("Community Water" or "Company").

Q. With whom are you employed and in what capacity?

A. I am the owner and principal of ARICOR Water Solutions LC ("ARICOR"), a consulting firm providing services to the water and wastewater utility industry.

Q. Please describe your professional background.

A. I began my working career with Citizens Utilities Company ("Citizens") in 1985 as a Staff Engineer for the Maricopa County water and wastewater division. I was employed at Citizens for 17 years, ascending to Vice President and General Manager for the Arizona water and wastewater operations. In 2002, American Water ("American") purchased the water and wastewater assets of Citizens, and I joined American as the President of Arizona-American Company. I left American in 2004 to start ARICOR.

I received a Bachelor of Science in Civil Engineering in 1985 from the University of Kansas, and a Master of Business Administration in 1991 from Arizona State University. I am a Registered Professional Engineer in Arizona and California and a Grade 3 Certified Operator in Arizona for all four water and wastewater classifications. I specialize in water resource issues, regulatory strategies, rate case filings and water and wastewater utility management and operations.

In addition to my consulting practice, I am the Executive Director of the Water Utilities Association of Arizona ("WUAA"). Founded in 1961, WUAA is a non-profit association representing Arizona's private, regulated water and wastewater utilities. My resume is attached as Exhibit 1 to my direct testimony.

Q. Have you previously testified before the commission?

A. In my time with Citizens and American, I prepared or assisted in the preparation of multiple filings before the Arizona Corporation Commission ("Commission"), including rate applications and filings for a certificate of convenience and necessity ("CC&N") . Since starting ARICOR, I have prepared several filings and assisted in the preparation of several more filings before the Commission, including rate applications and CC&N filings. I have also provided testimony in all of these cases before the Commission. A summary of my regulatory work experience is included in my resume.

Q. What is the purpose of your direct testimony?

A. To support Community Water's application for rate relief. Specifically, I will provide an overview of Community Water's water system and operations, including providing support for the proposed post-test year plant addition of Reservoir No. 5. I also discuss the Company's water conservation program and provide support for the Company's proposed cash reserves.

II. COMPANY'S WATER SYSTEM AND OPERATIONS.

Q. What is your relationship to Community Water?

A. I have been retained by Community Water to provide consulting services to Community Water in support of its application for rate relief.

Q. Would you describe Community Water's water system?

A. Community Water's water system is a groundwater-based system serving portions of the Town of Sahuarita and the unincorporated community of Green Valley, both located in southern Pima County, Arizona. Community Water serves approximately 12,500 customers with about 96% of the customers being residential customers.

Community Water's water system consists of a looped distribution system with multiple pressure zones, four wells, four arsenic treatment facilities, five water storage tanks and four booster stations. The system is designed to provide a 1,500-gallon per minute fire flow.

Each of Company's four wells is equipped with a coagulation filtration process arsenic treatment facility. Treated water from Well No. 6 and Well No. 9 is pumped directly to the Zone 2 distribution system with water produced in excess of current demand being released into Reservoir No 1 (1,000,000 gallons). Treated water from Well No. 10 and Well No. 11 is pumped into Reservoir No. 3 (1,000,000 gallons) and Reservoir No. 4 (2,000,000 gallons), which serve as elevated storage to the distribution system. Treated water from Well No. 10 and Well No. 11 is transferred to the elevated storage tanks via transfer booster stations. The Well No. 10 Transfer Station consists of a 300,000-gallon forebay tank and a booster station with five booster pumps. Similarly, the Well No. 11 Transfer Station consists of a 300,000-gallon forebay tank and a booster station with five booster pumps. The Company utilizes two additional booster stations. The Reservoir No. 1 Booster Station utilizes one electric booster pump and one gas booster pump to supply water to Zone 2 from Reservoir No. 1. Lastly, the single pump at the La Canada Transfer Station allows water to be transferred from Zone 2 to the elevated storage tanks.

In addition to the existing facilities, the Company is currently constructing Reservoir No. 5 (2,000,000 gallons) to replace Reservoir No. 2 (1,000,000 gallons) that was taken out of service during the test year. Community Water removed Reservoir No. 2 from service based on its vulnerability to contamination, increasing maintenance costs,

operational challenges, safety and security considerations. Reservoir No. 5 is being constructed on the former Reservoir No. 2 site at the same elevation as Reservoir No. 3 and Reservoir No. 4. Since it is being constructed at the same elevation as Reservoir No. 3 and Reservoir No. 4, Reservoir No. 5 will provide additional elevated storage for the system and eliminate one of the existing pressure zones. With the addition of Reservoir No. 5, the Community Water system will meet the Company's target of 48 hours of average day demand being available in storage to meet emergency requirements.

A detailed description of Community Water's major water system components is attached as Exhibit 2 to my direct testimony.

Q. What is your opinion of Community Water's water facilities and operations?

A. My observations indicate that Community Water's water facilities are well designed and well maintained. The system is designed to provide reliable service to the community and to provide operational resiliency during time of emergency or natural disaster. Community Water's operations staff is highly knowledgeable regarding water system operations and operates the systems in an effective and efficient manner.

Q. Is the Company requesting that the cost of Reservoir No. 5 be included in rates?

A. Yes. As more fully explained in the direct testimony of Thomas J. Bourassa, the Company proposes to include the cost of Reservoir No. 5 in rate base as post-test year plant.

Q. When will Reservoir No. 5 be placed into service?

A. The Company projects that the facility will be completed and placed into service in August of 2015.

Q. How did the Company decide what capacity to construct for Reservoir No. 5?

A. The Company conducted a thorough review of its operations, facilities, and service standards and ultimately adopted a target for emergency water supply of 48 hours of average day demand for its water system. Reservoir No. 5 was sized so that its emergency supply volume in combination with the Company's other storage facilities' emergency supply volumes exceeds the 2013 48-hour average demand of 4,453,037 gallons. Table 1 details the Company's emergency supply volume for the system including Reservoir No. 5.

Table 1

Storage Site	Nominal Storage Capacity	Emergency Supply Volume[1]
Reservoir No. 1	1,000,000	793,000
Reservoir No. 3	1,000,000	792,000
Reservoir No. 4	2,000,000	1,333,000
Reservoir No. 5	2,000,000	1,333,000
Well No. 10 Forebay	300,000	143,750
Well No. 11 Forebay	300,000	121,875
Total	6,600,000	4,516,625
Hrs. of storage (Avg. Day)		48.7

[1] Emergency Storage + Equalization Storage + ½ Operational Storage.

Q. Can you explain the process used by the Company to establish the emergency water supply target of 48 hours?

A. Community Water is an Arizona non-profit company with members and a volunteer board of directors who are also customers of Community Water. The board sets the direction of how Community Water provides service and management works to carry out the mission of the Company as established by the board. In this context, management adopted a customer-focused approach in determining the emergency water supply target.

Customers have communicated to the Company's board and management their strong desire to have a robust water system that goes above the minimum standards to best maintain safe and reliable service to them. Taking into account its customers and its water system, the Community Water board determined that it was in their collective interest that a 48-hour supply of water be available in case of a major emergency – such as a power outage or natural disaster.

In reaching this decision, the Company considered publications from the U.S. Environmental Protection Agency ("EPA") and other agencies. The Company took specific note of a publication by the EPA and six national water and wastewater Associations[1] that, as part of evaluating operational resiliency under emergency conditions, recommends that consideration be given to treatment operations resiliency, or the percent of minimum daily demand met with primary production or treatment offline for 24, 48, and 72 hours - with minimum daily demand meaning the average daily demand for the lowest production month of the year.[2]

The Company also engaged CPE Consultants, LLC ("CPE"), a professional engineering firm, to evaluate the option of fitting wells with emergency generators as an alternative to constructing additional storage capacity[3]. CPE concluded that there were many advantages to constructing additional storage capacity as compared to emergency generators. Consistent with the CPE Report, the Company concluded that constructing storage was the safest, most reliable means to assure an appropriate emergency water supply and preserve the integrity of Community Water's water system. Furthermore, the benefits of the storage option outweigh the costs and meet Community Water's customers'

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[1] American Public Works Association, American Water Works Association, National Association of Water Companies, National Association of Clean Water Agencies, Water Environment Federations and Association of Metropolitan Water Agencies.

[2] See EPA et. al. Publication, *Effective Utility Management – a Primer for Water and Wastewater Utilities,* June 2008, pp. 38-39.

[3] CPE Consultants, LLC retained in response to ACC Staff's recommendation to use emergency generators for its well pumps in Docket No. W-02304A-14-0041.

high expectations that the water system provide safe and reliable water service without exorbitant or unnecessary expense.

Community Water also carefully considered its financial condition and rate structure. Community Water determined that it could afford a system capable of storing a 48 hours supply of water for emergencies without unjust or unreasonable rates.

Q. Was meeting the Company's target for emergency water supply the only reason that Reservoir No. 5 was constructed?

A. No. The Company believes that the new tank will benefit the water system by reducing pumping costs, eliminating the need for a pressure pump associated with Reservoir No. 2, eliminating the maintenance costs associated with Reservoir No. 2, providing better protection from contamination and vandalism at the reservoir site, and improving system reliability.

Q. Has the Commission previously considered Reservoir No. 5 and reached any conclusions?

A. In Decision No. 74809 dated November 13, 2014, the Commission approved the Company's request for financing to construct Reservoir No. 5, noting "…the Company has performed extensive research and demonstrated the benefits of the New Storage Tank…"

Q. Have you reviewed the financing case related to Reservoir No. 5 (Docket No. W-02304A-14-0041)?

A. Yes, I have reviewed the Docket generally and read all of the documents relevant to Reservoir No. 5 filed by the Company and Staff.

Q. What was Commission Staff's position in the financing case regarding Reservoir No. 5?

A. Staff opposed authorizing financing for Reservoir No. 5, citing ADEQ regulations establishing minimum storage capacities required and recommending that the use of emergency generators be investigated to power well pumps in times of emergency.

Q. Did the Commission adopt Staff's recommendations?

A. No. As previously noted the Commission approved the Company's financing request. The Commission also did not adopt Staff's recommendation to have the Company engage a professional engineering firm to evaluate the option of acquiring a standby generator to power the well pumps in case of emergency. This is because the Company had already engaged CPE during the financing case to evaluate the option of acquiring a standby generator to power well pumps in case of emergency.

Q. After reviewing the financing case and discussing the matter with Company management have you reached any conclusions regarding Reservoir No. 5?

A. It is my professional opinion that Community Water has appropriately considered and adopted a target for emergency water supply of 48 hours of average day demand for its water system and that the target results in a reasonable level of water storage for the Community Water system. Furthermore, I have reviewed the Company's calculation of its emergency water supply and agree with that calculation. I consider the approach used by the Company as presented in Table 1 to be a reasonable approach to determining the volume of water likely to be available in storage during an emergency situation. Lastly, I recommend against using regulatory minimum storage requirements to evaluate the appropriateness of Community Water's level of storage. Minimum requirements are just that – minimum requirements. They are not intended to nor do they provide meaningful

guidance for determining the appropriate amount of storage capacity that an individual water utility should have given its particular circumstances and customer profile.

Q. Upon being placed into service by the Company, will Reservoir No. 5 be used and useful in the provision of water service to Community Water's customers?

A. Yes. Reservoir No. 5 will provide immediate benefits to Community Water existing customers, including reduced pumping costs, reduced maintenance costs and improved system reliability. Additionally, Reservoir No. 5 will bring the Company's emergency water supply to its target of 48 hours of average day demand, providing a level of service desired by the customers as set forth by the customer-elected Board of Directors.

III. WATER CONSERVATION PROGRAM.

Q. Would you summarize Community Water's water conservation program?

A. Community Water is located in the Tucson Active Management Area and is enrolled as a regulated tier 2 municipal provider in ADWR's Modified Non-Per Capita Conservation Program ("NPCCP"). As a part of the program, Community Water reviewed its water system and proposed five Best Management Practices ("BMPs") for implementation in the Community Water service area. ADWR has approved the following BMPs for Community Water:

- Meter Repair and/or Replacement Program
- Customer High Water Use Inquiry Resolution
- Customer High Water Use Notification
- Residential Interior Retrofit Program
- Special events/programs and community presentation

In addition to the five BMPs, Community Water has implemented a Public Education Program as required by the NPCCP.

Q. What are the components of Community Water's Public Education Program?

A. Community Water provides water conservation education through several communication channels. Community Water provides water conservation tips to each of its customers through a note on the water bill on a bi-monthly basis. Community Water also provides water conservation messages to everyone that logs onto the Company's website. Community Water makes various water conservation brochures available at the Company's office or, when requested, by mail.

Q. Has Community Water's water conservation program been effective?

A. The Company believes that it has been effective. As noted in the Arturo Gabaldon's direct testimony, the Company has been experiencing decreasing water consumption over the past several years. As noted by Mr. Gabaldon, based on data from a study that Community Water participated in, most water conservation is occurring as a result of technology improvements and Community Water's customers' water use reductions appear to be tracking national trends.

Q. Does Community Water have a program to address water losses?

A. Yes. All water providers in the Tucson Active Management Area are required to track and report water losses to ADWR. Community Water closely monitors this data and implements corrective action as warranted.

Q. Has Community Water done a good job controlling water loss?

A. Yes, Community Water's water loss remains well below 10 percent as the Company reported the following lost and unaccounted for water to ADWR for the past three years.

- 2012 – 6.88%
- 2013 – 8.21%
- 2014 – 4.54%

IV. CASH RESERVES.

Q. As part of your work on this case, did you evaluate Community Water's need for cash reserves?

A. Yes, at the direction of Company management I investigated the issue of reserves generally with a specific focus on capital reserves that would be used to fund replacement of specific categories of long-lived assets. Based on my investigation, I recommended an initial target level of capital reserves for the Company.

Q. Why is it appropriate for Community Water to maintain reserves?

A. In my experience as a water and wastewater utility manager and consultant, I have observed that investor-owned water utilities do not rely exclusively on new debt and operating cash flow to fund major system maintenance and capital requirements. Rather, from time to time, investor-owned water utilities must ask the shareholders to infuse new equity into the company to provide funds, typically for investment in capital assets.

As an Arizona non-profit company with members, Community Water does not have shareholders and therefore does not have an outside source of equity capital. As such they can only rely on new debt and operating cash flow to fund major system maintenance and capital requirements. Due to the uneven nature of major maintenance and capital expenditures, over the long-term, reliance exclusively on new debt and operating cash flow is likely to cause adverse impacts to the Company's financial condition and drive unplanned and unacceptable rate increases.

Through the use of a capital reserve established from enhanced levels of operating cash flow, the Company can better provide adequate funding to meet its needs, better avoid negative financial impacts, mitigate rate increases and provide more financial stability over the long-term.

Q. Are capital reserves for non-profit water utilities common and appropriate?

A. My investigation showed that many municipal districts maintain cash reserves for a number of purposes including major maintenance and capital expenditures. Although, Community Water is not a municipal district, due to their structure as a non-profit corporation with memebers, its financial situation is more similar to a municipal district than a typical investor-owned utility.

In addition, my investigation showed the topic of reserves to be an industry-wide issue. In its 2014 State of the Water Industry Report, AWWA states:

> Water and wastewater utilities should strive to be self-sustaining enterprises that are adequately financed with rates and charges based on sound accounting, engineering, financial, and economic principles. Revenues from service charges, user rates, and capital charges (e.g., impact fees and system development charges) should be sufficient to enable utilities to provide for the full cost of service including:
>
> - Annual operation and maintenance expenses
> - Capital costs (e.g., debt service and other capital outlays)
> - Adequate working capital and **required reserves**
>
> Full-cost pricing, i.e., charging rates and fees that reflect the full cost of providing water, must include renewal or replacement costs of treatment, storage, distribution, and collection systems. Some utilities have previously kept their rates low by minimizing or ignoring these costs, but as the useful life of their systems draws near, current managers and the communities they serve are forced to address these costs, often through painful and unexpected rate increases. [Emphasis Added]

In summary, capital reserves are both common and appropriate for a non-profit water utility like Community Water.

Q. Did you find evidence of standardized recommended levels for reserves?

A. No. My investigation showed that both the level of reserves and the items for which reserves were maintained varied from utility to utility based on the needs and circumstances affecting the particular utility.

Q. Does Community Water currently maintain cash reserves?

A. Community Water has an approximately $2.5 million cash and investment balance. However Community Water has not specifically adopted reserve fund policies or designated this cash balance to be retained for specific purposes. In conjunction with the preparation of this case and in coordination with my work on capital reserves, Community Water has identified reservoir and forebay maintenance and replacement of media at arsenic treatment plants as appropriate uses of current cash balances. On a going forward basis, Community Water proposes to formally establish reserve fund policies and designate cash balances for four future commitments of the Company. The four proposed reserve funds are for (i) reservoir and forebay maintenance, (ii) replacement of media at arsenic treatment plants, (iii) renewal of an Arizona State Land Department lease, and (iv) capital expenditures.

Q. How did you formulate your recommendation for a capital reserve for Community Water?

A. Working with Company management, I reviewed a database listing the original cost of capital assets and selected specific categories of long-lived assets to include in the capital reserve calculation. The selected assets were:

- Pumping Equipment (including structures)
- Water Treatment Equipment (including structures)
- Reservoirs
- Mains and Hydrants
- Fire Line Services

Once the categories of reserve assets had been identified, they were organized by vintage year and a replacement year was assigned based on the expected life to the asset class. Next, based on the replacement year assigned, a schedule was prepared showing the original cost of plant that is projected to be replaced in each year from 2015 forward.

Next, for each year beginning with 2015, the total original cost of plant projected to be replaced over the next ten-year period was calculated (e.g. for 2015 the total original cost of plant projected to be replaced between 2016 and 2025 was calculated) ("Rolling 10-Yr Replacements"). Lastly, the target capital reserve was determined by taking a five-year average of the Rolling 10-Yr Replacements.

Using this method, the target capital reserve for each year is the average over a forward-looking five-year period of the total original cost of projected retirements over a forward-looking ten-year period. Effectively, the target capital reserve is the original cost of replacements projected for the next ten years with averaging included to smooth the target from year to year. The resulting target capital reserve is $2.9 million in 2015. Over the next five years the target capital reserve increases to $3.8 million in 2020.

Q. Why is this an appropriate amount of capital reserves?

A. I believe this level of capital reserves establishes a modest initial capital reserve target that will provide sufficient cash reserves to avoid adverse impacts to the Company's financial condition and unplanned and unacceptable rate increases to its customers over the near-term. It will also provide some flexibility in regard to the amount and timing of debt issuances. Lastly, the cash flow requirements related to the recommended capital reserve, combined with the other reserves maintained by the Company, represent a reasonable percentage of the Company's overall revenue and operating cash flow.

The capital reserve target is modest in that it is based on original cost of the asset being replaced and is likely to represent a minimum level of capital reserves needed by Community Water. Due to inflation and other factors, the replacement cost of an asset will be significantly greater, often by many multiples, of the original cost of the asset. The potential magnitude of the difference between the replacement cost and the original cost of utility assets is evident when comparing the Company test year original cost of gross utility plant in service of approximately $41.45 million to the replacement cost of $144.6 million

estimated by Stantec.[4] This 350 percent increase in replacement cost over original cost represents a significant potential cash flow requirement that could negatively impact capital reserves and increase capital reserve requirements over time.

The levels of replacement of long-lived assets and the impact of the difference between the replacement cost of assets and their original cost on capital reserves should be monitored closely by Community Water over the next several years. Capital reserve targets should be updated periodically based on actual experience and in consideration of actual and projected financial ratios and rates, with consideration given to shifting the reserve target calculation to a replacement cost basis in the future.

Q. Does that conclude your direct testimony?

A. Yes, it does.

[4] Stantec Consulting Inc., *Community Water Company of Green Valley Water System Improvement Design Plan*, 16.

Exhibit RLJ-1

ARICOR
Water Solutions
Ray L. Jones P.E.
Principal

18835 North Thompson Peak Parkway, Suite 215
Scottsdale, Arizona 85255

EXPERTISE

Mr. Jones founded ARICOR Water Solutions in 2004. Through ARICOR Water Solutions, Mr. Jones offers a wide range of engineering and financial analysis services to the private and public sectors. Projects include development of regulatory strategies and preparing rate cases, including preparation of rate studies, cost of service studies, financial schedules and testimony for filings before the Arizona Corporation Commission. Services also include consultation on water and wastewater utility formation, management and operations, and valuation, including due diligence analysis, water resources strategy development and water rights valuation. ARICOR Water Solutions provides water, wastewater and water resource master planning, water and wastewater facilities design, and owner representation; including value engineering, program management and construction oversight. Lastly, ARICOR Water Solutions supports water solutions with contract operations and expert witness testimony and litigation support.

EMPLOYMENT HISTORY

2002 to 2004 — **Arizona-American Water Company**
President
Responsible for leadership of the Arizona business activities of Arizona-American Water Company. Key responsibilities include developing and evaluation new business opportunities, developing strategic plans, establishing effective government and community relations, insuring compliance with all regulatory requirements, and providing management and guidance to key operations and support personnel.

1998 to 2002 — **Citizens Water Resources, Arizona Operations**
Vice President and General Manager
Responsible for leadership of the Arizona regulated and unregulated business activities of Citizens Water Resources. Key responsibilities included developing and evaluation new business opportunities, developing strategic plans, establishing effective government and community relations, insuring compliance with all regulatory requirements, and providing management and guidance to key operations and support personnel.

1990 to 1998 — **Citizens Water Resources, Arizona Operations**
Engineering and Development Services Manager
Responsible for management of a diverse group of business growth related activities. Responsibilities include: marketing of operation and maintenance services (unregulated business growth), management of new development activity (regulated business growth), management of engineering functions (infrastructure planning and construction), management of water resources planning and compliance, management of growth-related regulatory functions (CC&N's and Franchises), and management of capital budgeting functions and capital accounting functions.

1985 to 1990 — **Citizens Water Resources, Arizona Operations**
Civil Engineer
Responsible for the planning, coordination and supervision of capital expansion and major maintenance and rehabilitation projects as assigned. Responsible for development of capital program for Maricopa County Operations.

EDUCATION

Arizona State University – Master of Business Administration (1991)
University of Kansas – Bachelor of Science in Civil Engineering (1985)

ARICOR Water Solutions

PROFESSIONAL CERTIFICATION

Registered Professional Engineer – Civil Engineering – Arizona
Professional Engineer – Civil Engineering – California
Certified Operator – Wastewater Treatment, Wastewater Collection, Water Treatment, Water Distribution – Arizona

PROFESSIONAL AFFILIATIONS

- Executive Director – Water Utilities Association of Arizona
- Member - American Society of Professional Engineers
- Member – American Society of Civil Engineers
- Member - American Water Works Association
- Member - Arizona Water Association
- Member - Water Environment Federation

CIVIC AND COMMUNITY INVOLVEMENT

- Board of Directors – Greater Maricopa Foreign Trade Zone (2009 – Present)
- Advisory Member - Water Resources Development Commission (2010 – 2012)
- Chairman WESTMARC (2008)
- Director and Member of the Executive Committee- WESTMARC (1998 – 2010)
- Co-Chairman, WESTMARC Water Committee (2006 – 2007)
- Chairman-Elect WESTMARC (2007)
- Member – Corporate Contributions Committee, West Valley Fine Arts Council Diamond Ball (Chairman 2005)
- Member – Technical Advisory Committee – Governor's Water Management Commission (2001)
- Board Member, Manager & Past Chairman – North Valley Little League Softball

REGULATORY EXPERIENCE

Testimony has been provided before the Arizona Corporation Commission in the dockets listed below. Unless otherwise indicated testimony was provided on behalf of the utility.

Filing Year	Utility(ies)	Filing Type(s)	Docket(s)
1992	Sun City West Utilities Company	CC&N Extension (Expansion of Sun City West)	U-2334-92-244
1993	Sun City Water Company Sun City Sewer Company	CC&N Extension (Addition of Coyote Lakes)	U-1656-93-060 U-2276-93-060
1993	Tubac Valley Water Co., Inc.	CC&N Extension (Various Subdivisions on western border)	U-1595-93-241
1993	Sun City West Utilities Company	CC&N Extension (Expansion of Sun City West)	U-2334-93-293
1995	Citizens Utilities Company Sun City Water Company Sun City Sewer Company Sun City West Utilities Company Tubac Valley Water Company	Ratemaking	E-1032-95-417 U-1656-95-417 U-2276-95-417 U-2334-95-417 U-1595-95-417
1996	City Water Company Sun City Sewer Company	CC&N Extension (Acquisition of Youngtown)	U-1656-96-282 U-2276-96-282
1996	Citizens Utilities Company	CC&N Extension and Deletion (Realignment of Surprise Bdry.)	E-1032-96-518
1998	Sun City Water Company Sun City West Utilities Company	CAP Water Plan and Accounting Order (Sun Cities CAP plan)	W-01656A-98-0577 SW-02334A-98-0577

ARICOR Water Solutions

Filing Year	Utility(ies)	Filing Type(s)	Docket(s)
2000	Citizens Water Resources Company of Arizona Citizens Water Services Company of Arizona	CC&N Extension and Accounting Order (Anthen Jacka Property and Phoenix Treatment Agreement)	SW-3455-00-1022 SW-3454-00-1022
2000	Citizens Communications Company Citizens Water Services Company of Arizona	CC&N Extension and Approval of Hook-Up Fee (Verrado)	W-0132B-00-1043 SW-0354A-00-1043
2002	Arizona-American Water Company	Ratemaking	WS-01303A-02-0867 WS-01303A-02-0868 WS-01303A-02-0869 WS-01303A-02-0870 WS-01303A-02-0908
2004	Arizona-American Water Company Rancho Cabrillo Water Company Rancho Cabrillo Sewer Company	CC&N Transfer	WS-01303A-04-0089 W-01303A-04-0089 SW-03898A-04-0089
2004	Johnson Utilities Company, LLC (Representing Pulte Home Corporation)	CC&N Extension	WS-02987A-04-0288
2005	Perkins Mountain Utility Company Perkins Mountain Water Company	New CC&N & Initial Rates	WS-20379A-05-0489 W-20380A-05-0490
2005	West End Water Company	CC&N Extension	W-01157A-05-706
2005	Arizona-American Water Company	Approvals Associated with Construction of Surface Water Treatment Facility	W-01303A-05-0718
2006	Arizona-American Water Company	Ratemaking	WS-01303A-06-0403
2008	Sunrise Water Company	Ratemaking	W-02069A-08-0406
2009	Baca Float Water Company	Ratemaking	WS-01678A-09-0376
2009	Aubrey Water Company	Lost Water Evaluation (Rate Case Compliance)	W-03476A-06-0425
2009	White Horse Ranch Owner's Assn.	Ratemaking	W-04161A-09-0471
2010	Litchfield Park Service Company	Ratemaking	W-01427A-09-0104
2010	Chino Meadows II Water Company	Ratemaking	W-02370A-10-0519
2011	Pima Utility Company	Ratemaking	W-021999A-11-0329 WS-02199A-11-0330
2011	Tusayan Water Development Association, Inc. (Representing the Town of Tusayan)	Ratemaking	W-02350A-10-0163
2012	Valley Utilities Water Company, Inc.	Ratemaking	W-01412A-12-0195

ARICOR Water Solutions

Filing Year	Utility(ies)	Filing Type(s)	Docket(s)
2012	Far West Water & Sewer, Inc.	Ratemaking	WS-03478A-12-0307
2012	Sahuarita Water Company, LLC	Amend Off-Site Facilities Hook-Up Fee	W-03718A-09-0359
2012	New River Utility Company	Ratemaking	W-01737A-12-0478
2013	Far West Water & Sewer, Inc.	New Off-Site Facilities Hook-Up Fees	WS-03478A-13-0200
2012	Adman Mutual Water Company	Ratemaking	W-01997A-12-0501
2013	Far West Water & Sewer, Inc.	CC&N Extension	WS-03478A-13-0250
2013	Lago Del Oro Water Company	Ratemaking	W-01944A-13-0215
2013	Lago Del Oro Water Company	Financing	W-01944A-13-0242
2012	Sunrise Water Company	Financing	W-02069A-12-0261
2010	Far West Water & Sewer, Inc.	CC&N Extension	WS-03478A-10-0523
2014	Granite Mountain Water Co., Inc.	Ratemaking	W-02467A-14-0230
2014	Chino Meadows II Water Co., Inc.	Ratemaking	W-02370A-14-0231
2014	Quail Creek Water Company	Ratemaking	W-02514A-14-0343
2015	Cordes Lakes Water Company	Ratemaking	W-02060A-15-0245

Exhibit RLJ-2

COMMUNITY WATER COMPANY OF GREEN VALLEY

Major Water System Components

July 13, 2015

General

Community Water Company of Green Valley's ("Community Water") water system is a groundwater-based system serving portions of the Town of Sahuarita and the unincorporated community of Green Valley, both located in southern Pima County, Arizona. Community Water serves approximately 12,500 customers with about 96% of the customers being residential customers.

Water System

Community Water's water system consists of a looped distribution system with multiple pressure zones, four wells, four arsenic treatment facilities, five water storage tanks and four booster stations. The system is designed to provide a 1,500-gallon per minute fire flow. Each of Company's four wells is equipped with a coagulation filtration process arsenic treatment facility. In addition to the existing facilities, the Company is currently constructing an additional water storage tank.

Community Water's system facilities are summarized below:

Wells:

Well 6 – ADWR #55-627485 – 304 N. Abrego Dr.
Equipped with line shaft turbine pump and 250 hp motor and related piping and electrical gear. Pumps to arsenic treatment facility and then to distribution system.

Well 9 – ADWR #55-588121 – 1526 N. La Canoa
Equipped with line shaft turbine pump and 250 hp motor and related piping and electrical gear. Pumps to arsenic treatment facility and then to distribution system.

Well 10 – ADWR #55-207982 – 1667 S. Abrego Dr.
Equipped with line shaft turbine pump and 400 hp motor and related piping and electrical gear. Pumps to arsenic treatment and then to forebay storage.

Well 11 – ADWR #55-608518 – 18460 S. Calle Valle Verde
Equipped with line shaft turbine pump and 350 hp motor and related piping and electrical gear. Pumps to arsenic treatment and then to forebay storage.

Arsenic Treatment Facilities:

Well 6 – 304 N. Abrego Dr.
1,200 gpm, 8 pressure filtration vessel coagulation filtration process arsenic treatment facility with chlorination of finished water.

Well 9 – 1526 N. La Canoa
1,200 gpm, 8 pressure filtration vessel coagulation filtration process arsenic treatment facility with chlorination of finished water.

Well 10 – 1667 S. Abrego Dr.
2,500 gpm, 6 pressure filtration vessel coagulation filtration process arsenic treatment facility with chlorination of finished water.

Well 11 – 18460 S. Calle Valle Verde
2,500 gpm, 6 pressure filtration vessel coagulation filtration process arsenic treatment facility with chlorination of finished water.

Booster Stations:

Well 10 – 1667 S. Abrego Dr.
1 – 300,000 gallon storage tank (forebay/ground storage)
5 – 100 hp booster pumps
1 – 5,000 gallon Hydropneumatic tank
1 – Diesel driven backup generator
Associated piping and electrical gear

Well 11 – 18460 S. Calle Valle Verde
1 – 300,000 gallon storage tank (forebay/ground storage)
5 – 125 hp booster pumps
1 – 5,000 gallon Hydropneumatic tank
1 – Diesel driven backup generator
Associated piping and electrical gear

Reservoir 1 Booster Station – 630 W. Camino Bondadoso
1 – 1,000,000 gallon storage tank (forebay/ground storage)
1 – 40 hp booster pump
1 – 152 hp booster pump (natural gas)
1 – 7,500 gallon Hydropneumatic tank

La Canada Transfer Station – 960 S. La Canada Dr.
1 – 30 hp booster pump

Storage Facilities:

Forebay/Ground Storage:

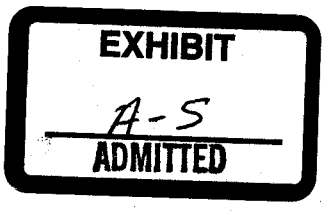
Well 10	– 300,000 gallon storage tank	- 1667 S. Abrego Dr.
Well 11	– 300,000 gallon storage tank	- 18460 S. Calle Valle Verde
Reservoir 1	– 1,000,000 gallon storage tank	- 630 W. Camino Bondadoso

Elevated Storage:

Reservoir 3	– 1,000,000 gallon storage tank	- 1901 W. Duval Mine Rd.
Reservoir 4	– 2,000,000 gallon storage tank	- 1901 W. Duval Mine Rd.
Reservoir 5	– 2,000,000 gallon storage tank (under construction)	- 1951 W. Continental Rd.

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
DOUG LITTLE – CHAIRMAN
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN



IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE.	DOCKET NO. W-02304A-15-0263

REBUTTAL TESTIMONY OF

RAY L. JONES

ON BEHALF OF

COMMUNITY WATER OF GREEN VALLEY

March 15, 2016

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I. INTRODUCTION.

Q. Please state your name and address.

A. My name is Ray L. Jones. My business address is 18835 North Thompson Peak Parkway, Suite 215, Scottsdale, AZ 85255.

Q. Are you the same Ray L. Jones who previously submitted Direct Testimony in this Docket?

A. Yes.

Q. On whose behalf are you testifying in the proceeding?

A. I am testifying on behalf of the Applicant, Community Water Company of Green Valley ("Company").

Q. What is the purpose of your rebuttal testimony?

A. My rebuttal testimony addresses the recommendation made in the Direct Testimony of Jian W. Liu that the Company's Reservoir No. 5 be treated as excess capacity. I also discuss and provide support for the Company's proposed cash reserves.

II. RESERVOIR NO. 5

Q. What was Staff's recommendation regarding the Company's Reservoir No. 5?

A. Mr. Liu has recommended that the water storage tank be considered excess capacity. Based on Mr. Liu's recommendation, Staff is recommending excluding the cost of Reservoir No. 5 in the amount of $1,115,000 from rate base.

Q. Do you disagree with Staff's recommendation?

A. Yes. Staff's recommendation to remove Reservoir No. 5 is flawed for several reasons.

Q. Why do you disagree with Staff's recommendation?

A. We explained in the Company's Application and Direct Testimonies that the Company is an Arizona non-profit company with members and a volunteer board of directors who are also customers of the Company. The customer-elected board sets the direction of how the Company provides service, and management works to carry out the mission of the Company as established by the board. In this context, and as we also explained in the direct filing, the Company conducted a thorough review of its operations, facilities, and service standards before adopting a target for emergency water supply of 48-hours of average day demand for its water system ("48-Hour Standard"). Additionally, prior to committing to the construction of Reservoir No. 5, based on the 48-Hour Standard, the Company retained the services of a professional engineer to evaluate the need for Reservoir No. 5, including comparing several options to the construction of Reservoir No. 5.

The 48-Hour Standard is supported by the board, management and customers of the Company. Absent a severe flaw in the Company's process or conclusions regarding the 48-Hour Standard, as a matter of good public policy, the standards of service adopted by the Company and the community it serves should be respected in the rate making process. There is no such flaw in the Company's analysis here, in my professional opinion. In fact, the analysis made by Staff regarding water storage capacity is flawed and should not be relied upon in determining the appropriateness of including Reservoir No. 5 in the Company's rate base.

Q. Can you summarize the process and research used by the Company to establish the 48-Hour Standard and authorize construction of Reservoir No. 5?

A. As explained in my Direct Testimony, the Company conducted a thorough review of its operations, facilities, and service standards before adopting the 48-Hour Standard and before committing to the construction of Reservoir No. 5. This includes the following considerations that I more fully described in my Direct Testimony:

- Company management adopting a customer-focused approach in determining the emergency water supply target. Through its volunteer board of directors, customers communicated their strong desire to have a robust water system that goes above the minimum standards to best maintain safe and reliable service to them.
- Taking into account its customers and its water system, the Company considered publications from the U.S Environmental Protection Agency ("EPA") and other agencies, taking particular note of a publication by the EPA and *six* national water and wastewater associations.[1] And as part of evaluating operational resiliency under emergency conditions, incorporating the recommendations to consider treatment operations resiliency (the percent of minimum daily demand met with primary production or treatment offline) for 24, 48, and 72 hours - with minimum daily demand, meaning the average daily demand for the lowest production month of the year.[2]
- Also relying upon guidance provided in the HDR Engineering, Inc. Handbook of Public Water Systems[3] in establishing the 48-Hour Standard and determining its storage requirement. Engaging CPE Consultants, LLC ("CPE"), a professional engineering firm, to evaluate the relative need for Water Reservoir No. 2 and

[1] American Public Works Association, American Water Works Association, National Association of Water Companies, National Association of Clean Water Agencies, Water Environment Federations and Association of Metropolitan Water Agencies.

[2] See EPA et. Al. Publication, *Effective Utility Management – a Primer for Water and Wastewater Utilities,* June 2008, pp. 38-39.

[3] HDR Engineering Inc., *Handbook of Public Water Systems,* (2nd Ed. 2001) at 953-57.

possibility of its replacement with new reservoir (Reservoir No. 5).[4] As Mr. Raul Francisco G. Pina discusses in his Rebuttal Testimony, in his capacity as a Professional Engineer, CPE compared the cost and cost-effectiveness of a new reservoir with several options, including the option of acquiring a standby generator for well production. CPE concluded that there were many advantages to constructing additional storage capacity.

- The Company and its board of directors, after carefully considering its financial condition and rate structure, determining that it could afford a system capable of storing a 48-hour supply of water for emergencies without imposing a draconian or extreme increase to rates.

Consistent with its own analysis and the CPE Report, the Company ultimately concluded that constructing Reservoir No. 5 was the safest and most reliable means to assure an appropriate emergency water supply and to preserve the integrity of its water system. Furthermore, the Company established that the benefits of the Reservoir No. 5 outweigh the costs and best meets the Company customers' high expectations that the water system provide safe and reliable water service without exorbitant or unnecessary expense.

Q. In your professional opinion, was the process used by the Company to establish the 48-Hour Standard and authorize construction of Reservoir No. 5 both reasonable and appropriate?

A. Yes it was. The Company's process was thorough and touches on many of the attributes of effectively-managed water sector utilities as presented by the EPA[5], including enhancing customer satisfaction, enhancing operations optimization, assuring financial viability, promoting infrastructure stability, improving operational resiliency and involving stakeholders. In addition, the Company engaged the expertise of a professional engineer to

[4] See Exhibit Nos. 2 and 3 to the Rebuttal Testimony of Raul Francisco G. Pina.

[5] See EPA et. Al. Publication, Effective Utility Management – a Primer for Water and Wastewater Utilities, June 2008, pp. 3-5.

evaluate its conclusions and compare options. The end result of the process was the adoption of a storage standard supported by the community and construction of Reservoir No. 5 to meet that standard – all accomplished while providing safe and reliable water service at fair and reasonable rates. As it did when approving the financing for Reservoir No. 5, the Commission should recognize the thorough and thoughtful process used by the Company in deciding to build Reservoir No. 5, and allow the full cost of Reservoir No. 5 in the Company's rate base.

Q. Why do you consider Staff's analysis of the Company's water storage capacity flawed?

A. There are several reasons. First, Staff's analysis of the usefulness of Reservoir No, 5 is limited to a simplistic and inaccurate comparison of the Company's water storage capacity to the minimum capacity required by A.A.C. R18-5-503. Mr. Liu incorrectly concludes that, since the 2,000,000 gallons of water storage capacity contained in Reservoir No. 5 is not needed to meet minimum storage requirements, it is "excess capacity."

Second, the Staff did not make any meaningful analysis of the Company's adopted 48-Hour Standard. Instead, Staff bases its conclusion that "the Company's target of 48-hours of average day demand being available in storage to meet emergency requirements is not reasonable" on a single statement from Mr. Gabaldón's Direct Testimony regarding the condition of the Company's water system, where he states that "the Company has never had a customer without access to water from more than 12 hours."

Third, Staff ignores several relevant facts, including that Reservoir No. 5 replaced Reservoir No. 2 that had been included in the Company's rate base for many years, the extensive research that the Company performed prior to constructing Reservoir No. 5 and the benefits that Reservoir No. 5 provides to the Company and its customers.

Q. Why is it wrong to limit analysis of storage capacity to comparison with the minimum capacity mandated by A.A.C. R18-5-503?

A. Minimum requirements are just that – minimum requirements. They are neither intended to, nor do they provide, meaningful guidance for determining the appropriate amount of storage capacity beyond the minimum requirement that an individual water utility should have, given its particular circumstances and customer profile.

Determining the appropriate amount of storage capacity for a particular system must be based on a thorough analysis that considers various factors that affect the need for storage capacity in that *particular* system, examining both how the system has been designed and the customer profile it serves. Some of the objectives of water storage in a system is to provide operational flexibility, meet peak flow requirements, equalize system pressures and provide emergency water supply.[6] Reliance on minimum standards to determine storage requirements for a large system with multiple pressure zones, such as the Company system, without consideration of the individual objectives of providing storage, is inappropriate; further, this would constitute a water system design that is not consistent with good engineering practices as required by A.A.C. R18-5-502.

Q. How is Staff's storage capacity analysis inaccurate?

A. As discussed at length in Docket No. W-02304A-14-0041 (where the Commission approved financing for Reservoir No. 5) the Company raised several concerns with Staff's capacity analysis – all of which apply to their analysis in this case. The concerns are summarized as follows:

- Staff uses water sold rather than water pumped in their analysis.
- Staff improperly applies a reduction to minimum storage capacity based on A.A.C. R18-5-503.B. The reduction is improper because the Company wells do not have

[6] Arizona Department of Environmental Quality, *Engineering Bulletin No. 10, Guidelines for the Construction of Water Systems*, May 1978, at page 6-1.

standby power capability as required by Engineering Bulletin No. 10.[7] And as the Company has explained, however, adding standby power capability is not the best option.

- Staff uses the Company's gross or nominal storage rather than the more appropriate maximum operating storage.

Staff's inaccuracies result in Staff's unsupportable conclusion that the Company could serve an additional approximately 44,000 connections with its current level of storage (without Reservoir No. 5).

Q. Does Mr. Gabaldón's statement regarding the condition of the Company's water system have any bearing on the appropriateness of the 48-Hour Standard?

A. No it does not. When Mr. Gabaldón states the Company has never had a customer without access to water from more than 12 hours, Mr. Gabaldón is speaking to the overall condition and reliability of the system, and the Company's capability to respond to problems, such as a main break. He is speaking to the Company's commitment to having a safe and reliable water system that meets and exceeds customers' expectations. Constructing Reservoir No. 5 is completely consistent with the Company's commitment to having a safe and reliable water system that meets customers' expectations. In fact, having Reservoir No. 5 in service helps ensure that no customer will be without water service for more than 12 hours. Staff's use of Mr. Gabaldón's statement as a weapon to justify rejecting the need for Reservoir No. 5 is based on flawed logic and should not be relied upon by the Commission.

Q. What are the benefits that Reservoir No. 5 provides to the Company and its customers?

A. The full benefits are detailed in Mr. Pina's Rebuttal Testimony and CPE's accompanying

[7] Id. at page 6-4.

reports. But the cited benefits are significant and include lower maintenance costs, lower risk, operational flexibility and reduced pumping costs.

Q. Have these benefits been recognized by the Commission?

A. Yes they have. In Decision No. 74809 dated November 13, 2014, the Commission approved the Company's request for financing to construct Reservoir No. 5, noting "...the Company has performed extensive research and demonstrated the benefits of the New Storage Tank..."[8]

Q. Please summarize your conclusions regarding the Company's Reservoir No. 5.

A. It is my professional opinion that the Company has appropriately considered and adopted a target for emergency water supply of 48-hours of average day demand for its water system and that the target results in a reasonable level of water storage for the Company system. The 48-Hour Standard is supported by the Company's customer-elected board of directors and its members, all of which are also customers. I agree with the conclusion of Mr. Pina that Reservoir No. 5 is both used and useful in the provision of service by the Company and does not represent "excess capacity" as argued by Staff. As a matter of good public policy, the Commission should recognize the thorough and thoughtful process used by the non-profit Company in deciding to adopt the 48-Hour Standard and build Reservoir No. 5 and allow the full cost of Reservoir No. 5 in the Company's rate base.

[8] *See* Decision No. 74809 at 10 (Finding of Fact No. 46).

III. CASH RESERVES.

Q. Will Staff's recommendations in this case have an impact on the Company's ability to build needed cash reserves?

A. Yes they will. As noted in my Direct Testimony, I have identified four reserve funds that are appropriate for the Company: (i) reservoir and forebay maintenance, (ii) replacement of media at arsenic treatment plants, (iii) renewal of an Arizona State Land Department lease, and (iv) capital expenditures. To the extent that Staff's recommendations, decrease the Company's net income, they will negatively impact the Company's ability to fund the needed reserves.

Q. What are the specific Staff recommendations that concern you?

A. There are four Staff recommendations that concern me:

- Staff's exclusion of Reservoir No. 5 from rate base, which in turn causes a reduction to depreciation expense of approximately $24,530 and a reduction to repairs and maintenance expense of approximately $15,000.
- Staff's adjustment to repairs and maintenance expense, based on its analysis of the Company's annual reserve calculation for reservoir maintenance (Staff Operating Income Adjustment No. 5). As Mr. Thomas J. Bourassa discusses in his Rebuttal Testimony, Staff's analysis is flawed and results in an additional reduction of repairs and maintenance of $14,146, in addition to the $15,000 reduction related to Reservoir No. 5.
- Staff's reversal of the Company's recommended water usage normalization adjustment, which results in an increase to net income of $78,755, and ignores the Company's actual experience it has observed in declining demand, as Mr. Gary Woodard describes in his pre-filed testimony.
- Staff's proposed decrease in depreciation expense of $202,499.

Q. Why do these adjustments concern you with respect to the Company's ability to build needed cash reserves?

A. In short, it is my opinion that each of these adjustments will reduce the Company's cash flow. Since the Company is a non-profit corporation with members, all net cash flow is used to meet the Company's capital and operating needs, with the unused cash flow in any given year being used to fund reserves. Therefore, any reduction in cash flow will ultimately manifest as a reduction to the Company's reserve balances.

Q. How will the adjustment proposed by Staff reduce cash flow and negatively impact reserve balances?

A. As detailed above, the Staff adjustments reduce depreciation expense by a combined $227,029. Since depreciation is a non-cash expense, depreciation adjustments directly impact cash flow. Any lowering of the Company's depreciation expense lowers cash flow and negatively impacts the Company's ability to build needed reserves. With respect to the repairs and maintenance expense reductions proposed by Staff, no actual reduction in expense will occur. Irrespective of Staff's position, Reservoir No. 5, as well as the Company's other reservoirs, must be maintained and inflation will continue to increase maintenance costs. Since there is no actual reduction to expenses, cash flow is reduced and the Company's ability to build needed reserves is negatively impacted. Lastly, as explained in Mr. Bourassa's testimony, the Company's recommended water usage normalization is necessary and appropriate. Staff's reversal of this adjustment simply causes the Company's projected revenues and in turn net income to be overstated. When the Company realizes a lower level of revenue and net income, its cash flow is reduced and the Company's ability to build needed reserves is negatively impacted because revenues drop considerably faster than costs. As Mr. Bourassa explains in his Rebuttal Testimony, the Company's expenses are mostly fixed, meaning they do not increase or decrease with changes in demand, thus effecting the Company's ability to recover costs.

Q. What is your recommendation to insure that Company's ability to fund the needed cash reserves is preserved?

A. For the reasons detailed in my earlier testimony and in the testimony of the other Company witnesses, my primary recommendation is that Staff's proposed adjustments be denied by the Commission. In the alternative, should any of Staff's proposed adjustments be adopted, the Company's operating margin should be increased to provide an equivalent amount of cash flow that can be used to fund the Company's needed cash reserves.

Q. Does that conclude your Rebuttal Testimony?

A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
DOUG LITTLE – CHAIRMAN
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN

EXHIBIT
A-6
ADMITTED

IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE.	DOCKET NO. W-02304-15-0263

REJOINDER TESTIMONY OF

RAY L. JONES

ON BEHALF OF

COMMUNITY WATER OF GREEN VALLEY

April 26, 2016

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I. Introduction 1

II. Reservoir No. 5 1

I. INTRODUCTION.

Q. Please state your name and address.

A. My name is Ray L. Jones. My business address is 18835 North Thompson Peak Parkway, Suite 215, Scottsdale, AZ 85255.

Q. Are you the same Ray L. Jones who previously submitted Direct and Rebuttal Testimony in this Docket?

A. Yes.

Q. On whose behalf are you testifying in the proceeding?

A. I am testifying on behalf of the Applicant, Community Water Company of Green Valley ("Company").

Q. What is the purpose of your rebuttal testimony?

A. My rebuttal testimony addresses the Surrebuttal Testimony of Jian W. Liu that the Company's Reservoir No. 5 be treated as excess capacity.

II. RESERVOIR NO. 5

Q Have you reviewed Mr. Liu's Surrebuttal Testimony regarding Reservoir No. 5?

A. I have reviewed the testimony.

Q. Why are you responding to Mr. Liu's Surrebuttal Testimony?

A. Although Mr. Liu's states that his Surrebuttal Testimony is in response to the testimony of Mr. Raul F. G. Piña, the concepts he discusses also pertain to topics discussed in my testimony and require a response.

Q. What aspect of Mr. Liu's testimony will you be addressing?

A. Mr. Liu's focuses his Surrebuttal Testimony on the issue of whether or not the Company's system is considered a single well system or a multiple well system for the purpose of calculating storage capacity. Mr. Liu argues that because Community Water evaluates its system as a single well system, it is excluding "5,400,000 gallons of storage capacity from production wells." The Company and Mr. Liu disagree as to whether a reduction to minimum required storage capacity is allowed in this instance. However, this disagreement is irrelevant to the question of determining if Reservoir No. 5 is used and useful and should be included in the Company's rate base.

Q. What is the nature of the disagreement between the Company and Mr. Liu regarding calculation of required storage capacity?

A. The issue in dispute is whether or not A.A.C. R18-5-503.A. and Arizona Department of Environmental Quality ("ADEQ") Engineering Bulletin No. 10, Guidelines for the Construction of Water Systems (May 1978) allow for a reduction in regulatory minimum required storage capacity because the Company has a multiple well system. Mr. Liu believes a reduction in regulatory required minimum storage capacity in the amount of 5,400,000 gallons is allowed. Company witness Raul F. G. Piña argues that a reduction is not allowed in this instance.

Q. Why is this difference regarding the interpretation of A.A.C. R18-5-503 (minimum storage capacity requirements) irrelevant to the question of whether Reservoir No. 5 is used and useful?

A. Because this dispute is related *only* to determining the regulatory minimum amount of storage the Company is required to have in its water system. The Company does not dispute that it has configured its water system to exceed the minimum regulatory

requirements under A.A.C. R18-5-503.A. With or without consideration of the disputed 5,400,000 gallon reduction, the Company meets regulatory minimum storage requirements.

Even so, and as I discussed in my previous testimony, minimum requirements are just that – minimum requirements. They are not intended to, and they do not, provide meaningful guidance for determining the appropriate amount of storage capacity beyond the minimum requirement that an individual water utility should have, given its particular circumstances and customer profile.

Q. Is the issue of whether or not the Community water system is considered a single well system or a multiple well system pertinent to evaluating if Reservoir No. 5 is used and useful and should be included in the Company's rate base?

A. The Company's adopted storage standard is the 48-Hour Standard recommended by Mr. Piña and approved by its Board of Directors. The 48-Hour Standard is a target level of storage, exceeding regulatory minimum requirements, established after careful consideration of multiple factors, including the multiple well configuration of the Company's water system. Unlike the minimum standard established by A.A.C. R18-5-503.A., the 48-Hour Standard adopted by the Company is not subject to being reduced based on multiple wells. Rather, it is a specific target level of storage, adopted after consideration of all of the various factors affecting the amount of water storage that is appropriate for Community Water.

Q. Please summarize your response to Mr. Liu's Surrebuttal Testimony.

A. Mr. Liu's discussion of whether or not the Community water system is considered a single well system or a multiple well system and subject to a reduction to minimum required storage capacity is irrelevant to determining if the Company's system meets regulatory minimum storage requirements. All parties agree that the system does meet regulatory

minimum storage requirements. The discussion of disputed potential reductions to regulatory minimum storage requirements is not relevant to any evaluation of the appropriateness of the 48-Hour Storage Standard adopted by the Company. The 48-Hour Standard was adopted, to provide operational flexibility, meet peak flow requirements, equalize system pressures and provide an emergency water supply. Mr. Liu's reliance on minimum standards to evaluate storage requirements for a large system with multiple pressure zones, such as the Company's system, is inappropriate.

Q. Would you summarize your conclusion regarding the Company's Reservoir No. 5.

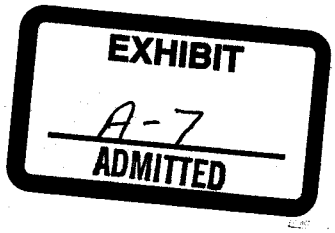
A. Reservoir No. 5 is used and useful in the Company's provision of service, and the 48-hour standard is an appropriate standard for storage capacity for the Company. It is my professional opinion that the Company has appropriately considered and adopted a target for emergency water supply of 48-hours of average day demand for its water system. It does not represent "excess capacity" as argued by Staff. As a matter of good public policy, the Commission should recognize the thorough and thoughtful process used by the non-profit Company in deciding to adopt the 48-Hour Standard and build Reservoir No. 5 and allow the full cost of Reservoir No. 5 in the Company's rate base.

Q. Does this conclude your Rejoinder Testimony?

A. Yes.

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
SUSAN BITTER SMITH – CHAIRMAN
BOB STUMP
BOB BURNS
DOUG LITTLE
TOM FORESE



IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE.	DOCKET NO. W-02304-15-_____

DIRECT TESTIMONY OF

ARTURO GABALDON

ON BEHALF OF

COMMUNITY WATER COMPANY OF GREEN VALLEY

July 15, 2015

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I. INTRODUCTION.

Q. Please state your name and address.

A. My name is Arturo Raul Gabaldon. My work and mailing address is Community Water Company of Green Valley, 1501 South La Canada Drive, Green Valley, Arizona 85622.

Q. With whom are you employed and in what capacity?

A. I have been an employee of the Company since 1990. Currently, I serve as Company President. I served as Controller from 1990 to 2003, General Manager from 2003 to 2006, and was elected to the Board of Directors and appointed President in April 2006.

Q. Please describe your professional background.

A. I am a Certified Public Accountant, and earned my undergraduate degree at the University of Arizona and a Master in Business Administration from the University of Phoenix. I represent the Company as a board member of the Water Utility Association of Arizona ("WUAA"), Southern Arizona Water Utilities Association ("SAWUA") and the Water Conservation Alliance of Southern Arizona ("WaterCASA"). Through the Company, I am a member of the American Water Works Association ("AWWA") and AZ Water Association ("AZWater"). I serve on the AZWater finance committee and the utility council committee. I have served two three-year terms on the Board of Directors of the Green Valley Chamber of Commerce from April 2008 to 2013. I served as an Officer at the Green Valley Elks Lodge from 2005 to 2012.

Q. On whose behalf are you testifying in the proceeding?

A. Community Water Company of Green Valley that I will refer to in my direct testimony as "Community Water" or the "Company".

II. COMPANY OVERVIEW.

Q. Please describe the Company.

A. Community Water was incorporated in 1975 as an Arizona non-profit corporation with members. The Company purchased the Arizona Water Company's Green Valley Division and began operating the water utility in June 1977. The Company delivers potable water to residential and commercial customers in southern Arizona, in a mostly active adult retirement community. The Company files with the Internal Revenue Service as a 501C (12) non-profit Arizona Cooperative. Our service area includes areas within the incorporated Town of Sahuarita and unincorporated Pima County, and we are within the Tucson Active Management Area (TAMA).

Q. Please describe the Company mission.

A. Our mission is to reliably deliver drinking water that meets all regulatory standards to our customers, and to maintain a sustainable water supply for our customers. A set of guiding values was adopted that recognizes the needs of our members, our customers, our employees, and applicable business and regulatory environments.

Q. How many customers does the Company serve?

A. The Company serves approximately 12,500 customers. The majority of our customers (96%) are residential.

Q. Please describe growth in the Green Valley / Sahuarita area.

A. The Company's service area is near full capacity, and the Company has estimated that growth is limited to less than 500 customers. In 2014, there were 36 new meter sets.

Q. What is the general opinion of the Company in the community?

A. The Company performs annual customer satisfaction surveys and evaluates the results for possible issues and for improving our service. The latest surveys were mailed to 360 customers in December 2014. 154 customers responded and only six expressed overall dissatisfaction with the Company. The Company scored high (over 80%) in satisfaction for water service and customer service. The Company also scored high for water quality (over 80% satisfaction). These results are consistent with the survey results over the past four years.

Q. How many employees does the Company have?

A. There are 20 employees with the Company. Of these, 13 are field service employees, which is approximately one field service employee per 1,000 customers. Of the 13 field service employees, we have five senior utility operators with an average age of 59, with an average of 31 years of service with the Company. The remaining eight field service employees have an average age of 30, and an average of three years of service with the Company. Recruitment and retention of skilled employees is a goal of the utility as our senior utility operators approach retirement. The Company practices weekly one-on-one communication throughout the utility, weekly safety and operating meetings, and bi-monthly employee meetings.

Q. Please describe the condition of the Company's system.

A. The Company's system is maintained in excellent condition. The Company has never had a customer without access to water for more than 12 hours. Capital improvements have been identified and have been incorporated into the Company capital budgets. Based on internal reviews the Company noted no major system deficiencies that would deem the Company to be out of regulatory compliance. All system deficiencies were evaluated and have either been corrected or are under evaluation for possible corrections.

III. WATER SUPPLY, QUANTITY, AND QUALITY ISSUES.

Q. Where does the Company's water supply come from?

A. The Company obtains water from the Upper Santa Cruz River aquifer, and relies exclusively on groundwater. The Company has four groundwater wells in its service area. Company personnel and members of the Board of Directors work to develop plans in support of our mission. These plans include utilization of our Central Arizona Project ("CAP") water allocation, and evaluation of risks to our water supply, financial planning, and long-range water system improvements.

Q. What is the current status of the water quality?

A. The water delivered to our customers meets or surpasses all health and safety measures required by the United States Environmental Protection Agency ("EPA"), Arizona Department of Environmental Quality ("ADEQ"), and Pima County Department of Environmental Quality ("PCDEQ"). Our annual water quality report is published on our web page, and is available at our office and at various locations in the Green Valley / Sahuarita area.

Q. Please describe the long-term threats to the area related to the Company's water supply.

A. ADEQ has determined that over 50% of our service area has been impacted by a sulfate plume from Freeport-McMoRan, Inc.'s ("Freeport") tailing ponds to the west of the Company's service territory. Freeport accepted a mitigation plan from ADEQ to address the issue. Arizona Department of Water Resources ("ADWR") has also informed us that the aquifer is depleting at a rate of two-to-four feet per year. From our own measurements we have documented about a 100-foot drop in the water table over 50 years at Well 6; over the past 10 years we have documented a 23 to 39 foot drop in the water table. In addition,

ADWR has provided us with information that indicates that there has been subsidence recorded in parts of Sahuarita that may be the result of pumping in the area.

Q. Is there a group of entities working together to examine and address these issues with the aquifer?

A. Yes, the Company has teamed up with other water providers and users as part of the Upper Santa Cruz Providers and Users Group.

Q. What is the Upper Santa Cruz Providers and Users Group?

A. The Upper Santa Cruz Providers and Users Group ("USCPUG") was formed in 2007 in response to the decline in the Upper Santa Cruz River aquifer and public concern for the sustainability of our water supply. The USCPUG consists of six local water companies, the local agricultural company, the local mining companies, and representatives from Pima County and the Town of Sahuarita. The USCPUG's area of concern is the portion of the Santa Cruz River valley north of the Santa Cruz County Line and south of Pima Mine Road. Early work of the group centered on defining the extent of the existing groundwater over-pumping problem and achieving community consensus on the applicable statistics. That work is completed, after having received a thorough review by Pima County Staff.

Q. Please describe the water situation in the Green Valley / Sahuarita area.

A. The southern portion of TAMA – including the Town of Sahuarita and unincorporated Green Valley, area developments, farms, and mines – traditionally rely exclusively on the use of groundwater to meet water demands. Historic and current major area water users consist of agricultural use for pecan orchard irrigation, metal mining, residential users, commercial uses, and golf course irrigation. New residential development and expansion of existing water uses in the area are projected to increase water consumption. This could

potentially increase the rate of aquifer overdrafts and associated water table declines and subsidence.

In January 2013 the USCPUG reported a water deficit of 36,020 acre-feet (AF) for 2010, and projected a deficit of 36,595 AF for 2015. As the following table (from USCPUG's report) demonstrates, continued overdrafts from the aquifer are significant through 2035:

USCPUG ESTIMATED WATER USAGE AND RECHARGE

Major Providers & Users	*Acre-Feet* **2010**	*Acre-Feet* **2015**	*Acre-Feet* **2025**	*Acre-Feet* **2035**
FICO	25,465	25,000	20,500	17,500
Freeport	25,875	25,875	25,875	25,875
Asarco - Aquifer	5,280	6,000	6,000	6,000
Asarco - Cap	7,920	9,000	9,000	9,000
Direct Water Providers	7,180	7,690	9,430	10,090
Golf Courses	4,335	4,335	4,335	4,335
Sand & Gravel	255	275	300	300
Homeowner Wells	330	400	480	560
Potential Major Users				
State Trust Land Use			*135*	*300*
FICO Residential Dev			*335*	*990*
Rosemont Mine			*6000*	*6000*
Total Usage	76,640	78,575	82,390	80,950
Total Recharge	40,620	41,980	47,985	47,905
Overdraft	36,020	36,595	34,405	33,045

Q. Please describe the regulatory environment that the Company exists within.

A. The Company is under the jurisdiction of the Arizona Corporation Commission ("Commission") as well as ADEQ, PCDEQ, and ADWR. Regarding ADWR, the Company is subject to the 1980 Arizona Groundwater Management Act that established a

statutory goal of achieving safe yield within TAMA by 2025. ADWR is responsible for administering water resource management within the TAMA to achieve this goal. The Company believes that surface water from the CAP can play an important role in attaining safe yield.

Q. Is it possible to get CAP water to the Green Valley area?

A. Yes, we believe so. The CAP terminus is located near Pima Mine Road and Interstate 19, nine miles north of the Company's service area. Feasibility studies have been performed to explore the augmenting of existing groundwater supplies with the CAP water in the Green Valley area. In 1996, the Company worked in collaboration with State and Federal agencies and other water entities toward the goal of bringing surface water supplies to the area. A feasibility report dated September 1998 was prepared by the consulting firm Malcolm Pirnie. This report has been helpful in our planning, as it presented preliminary investigations, conceptual and preliminary design of alternatives for optimal routes, and evaluation of the financial feasibility.

Q. Please describe the Company's participation in the CAP.

A. The Company acquired its first CAP subcontract for 1,337 AF of Colorado River water in 1993. The Company acquired its second CAP subcontract for 1,521 AF of Colorado River Water in 2007, for a total CAP entitlement of 2,858 AF of Colorado River Water. The Company has met all required annual CAP capital charge payments to date.

Q. Is the Company asking for recovery of its CAP capital charges?

A. No, only because Community Water is not currently using its CAP allocation to provide water service to its customers. The Company will ask for cost recovery when the CAP water is being used to provide service or delivered to its customers. Because of the risks to

Community Water's current water supplies, the CAP allocation is a key component to its strategy for ensuring a reliable supply in the future.

Q. What other risks are there to the water supplies?

A. In addition to mining contamination, depletion, and subsidence, there are other risks to the existing ground water supplies. First, the ground water flows from south to north. It flows through the Nogales area where treated waste water is discharged to the aquifer. Nogales, Sonora, Mexico has begun using this treated water, thus reducing a major inflow to the aquifer. Second, development along the Santa Cruz River is increasing, notably in Rio Rico and Tubac. As more groundwater is pumped upstream of the Upper Santa Cruz River aquifer, there is less inflow to the aquifer, contributing to the overdraft identified by USCPUG. Third, agricultural activities along the Santa Cruz River from Nogales north to Pima Mine Road may be contributing additional nitrates and salts to the aquifer inflows from the south. Nitrate contamination from the adjacent agri-business and numerous golf courses in the community have historically contributed to high nitrate levels over the action level of 5 mg/L (MCL is 10 mg/L) and required us to shut down our old Well #5. The Company works to protect the interest of its customers by maintaining possible alternatives to our current water source. In short, due to the risks posed to our aquifer, it is prudent and necessary for the Company to maintain its CAP allocation.

Q. Can you provide an example of the risk to the water supply Community Water has faced?

A. Yes. In August 2005, 15,000 gallons of sulfuric acid contaminated the Santa Cruz River in Nogales, Sonora. While it did not affect our wells, this example highlights the risks associated with reliance on a single source for water. Also, while sulfates are not a regulated contaminant, it does present an esthetic and maintenance problem by increasing mineral salt deposits on equipment and piping.

IV. PURPOSE FOR THE RATE FILING.

Q. Please describe the Company's rate request in its Application.

A. The Company is seeking a rate increase of approximately $708,244, or approximately 20.10% for a proposed revenue requirement of $4,231,930, to be effective no later than July 15, 2016. The Company is employing a test year that ends on December 31, 2014. The Company seeks a 16.50% operating margin, so that it has sufficient cash flow to cover its operations and to fund future necessary plant replacements and improvements. A 16.50% operating margin also enables the Company to pay its debt service as well as have revenue sufficient to avoid incurring operating losses over the next three-to-five years. The Company is also proposing to raise the monthly customer fixed charges in a gradual manner, but in a way that results in the Company being less dependent on volumetric charges to cover fixed costs. This will improve revenue stability and lessens dependence on water usage to cover fixed costs. Gradually raising the customer "availability charge" will align the Company rates with its cost structure.

Q. Why is the Company requesting a rate increase?

A. The Company is requesting a rate increase to meet increasing operating costs. Also, necessary infrastructure additions will require additional debt, resulting in increased interest charges and principal payments, and additional operating and maintenance expenses. Past infrastructure additions, such as meeting the EPA's arsenic standard are contributing to our higher operating and maintenance costs; those were not addressed in prior rate cases.

Q. Please describe projected capital expenditures over the next seven years.

A. The Company projected capital improvements of $10.5 million for the years 2015-2021, for a new reservoir, a replacement well, and other plant facilities.

Q. What has contributed to the projected capital expenditure needs?

A. In 2014, the EPA changed the lead and copper rules that impacted the types of brass meters that the Company could install and maintain within its system. Our vendors expect an increase in cost between 25% and 50%. The Company has been able to mitigate this increase by switching to polymer for small meters to keep the cost down. However, large meters are expected to have a significant impact as the Company will be required to change the whole meter – rather than changing the chamber as we would have done in the past.

The Company has also changed its program to replace meters with radio-read capacity to better communicate with the customers on their consumption. This will require the Company to replace its small meters every 20 years rather than 30 years, as the life of the radio component is expected to be only 20 years. Moreover, it would not be cost effective to replace only a portion of the meter at that moment.

Q. What cost savings has the Company been able to implement?

A. In 2014, the Company installed arsenic sludge drying beds at three of its water treatment facilities. As part of the treatment process, a partially dewatered arsenic sludge is produced, which periodically needs to be disposed of at a non-hazardous waste facility. The annual cost of having an outside contractor collect and haul this non-hazardous waste was approximately $42,000. The Company benefits from a 98% reduction in weight and volume through the evaporation of water with the arsenic sludge drying beds. This weight reduction reduced the total waste removed from over 500 tons per year to about 10 tons per year for a savings of about $40,000 annually. The capital cost of these facilities is approximately $23,600.

Q. Regarding usage, has the Company observed a decline in per-customer water use over the past few years?

A. Yes. The following table shows how the number of customers has increased since the last rate case test year of 2007, yet the total water consumption has decreased.

Company Customer Data			
Description	**2007**	**2014**	**Change**
Residential Units at Year End *(YE Units)*	11,385	12,459	1.074 (+10.0%)
Commercial & Other Units *(YE Units)*	469	480	11 (+2.0%)
Water Pumped; 12 Months *(Acre-Feet)*	2,795.0	2,367.4	-427.6 (-15.0%)
Water Sold & Accounted for; 12 Months *(Acre-Feet)*	2,620.7	2,239.3	-381.4 (-15.5%)
Unaccounted for Water for; 12 Months *(Acre-Feet)*	174.3 (6.2%)	116.1 (4.9%)	

Q. Do you believe the decrease in consumption is a temporary or permanent change?

A. We believe this is a permanent change. In 2014, the Company participated with other stakeholders in a 2014 study performed by Montgomery and Associates, Water Resource Consultants, on Residential Water Demands. An analysis of annual change demand shows that the Company's customer declining water demands are consistent with declining national, state, and area trends. The study concludes that decreases in consumption are permanent because they have been led by technological and infrastructure improvements; low-flow fixtures and appliances, and no pools or swamp coolers being added. The demand is no longer tightly tied to population, economic output, conservation efforts, or quality of life. The downward trends in per-household demand are expected to continue through 2020 and into the next decade.

Q. Please describe the Company's water conservation efforts.

A. The Company is in compliance with the ADWR Best Management Practices ("BMP") Program. As part of that program we continue to work on educating homeowners, by presenting 13 months of water usage and conservation messages on the monthly water bills, and include conservation reminders in any communication with our members. New customers are provided with welcome packages that include water conservation information. We display conservation material prominently in our lobby, participate in community events, and distribute conservation information. The Company regularly sponsors free programs to the local community related to water conservation.

Our web site has a dynamic feature that allows customers to view their individual consumption in comparison to their neighborhood averages, and a customized conservation messages based on the type of home and level of consumption. We are an active charter member of WaterCASA, a nonprofit organization comprised of water utilities organized for the purpose of developing effective water conservation programs. However, as noted in the prior question, it appears that technological changes are the major contributor to water conservation and our customers are participating in the use of these technologically improved devices.

Q. What is the Company's view regarding rate structure and moving towards a more cost-based rate design?

A. The Company believes that the rate structure should more closely reflect actual costs to provide service. This is more equitable to the Company's members and customers. Excluding sales tax, we estimate that 91% of our expenses are fixed, and only 9% would be deemed variable (mostly treatment and energy costs). But only 54% of the Company's fixed costs are recovered through the monthly customer charge. This makes the Company more dependent on customer usage to cover its operations and fund

necessary capital improvements. Unlike an investor-owned utility, the Company cannot raise funds by issuing outside equity; and its financial institutions will not accept exclusive reliance on debt financing.

Q. Does the Company's proposed rate design move toward a more cost-based rate structure?

A. Yes, but it does so in a gradual manner. Even with the adoption of our proposed rates, the Company will only recover approximately 57.2% through the monthly service charge, leaving 42.8% to be recovered through the commodity charge. The Company recommends that the percentage of its fixed costs recovered through the monthly customer charge be gradually increased over the next three rate cases in order to send better price signals to customers about the true costs of providing water service.

Q. Are the proposed rates designed to provide the Company a sufficient amount of reserves to address future capital requirements?

A. The proposed rates will start funding of the capital reserves. Ray L. Jones, in his direct testimony, details the analysis regarding Community Water's need to maintain an appropriate level of reserves to address future requirements without the need for unacceptably large rate increases or adverse impacts to the Company's financial condition. Even so, the rates proposed in our Application are not intended to entirely fund the future reserve needs as determined in Mr. Jones's analysis.

Q. Does the Company need to prepare for additional capital expenditures to continue to provide safe and reliable service?

A. Yes. Having an adequate operating margin is important to assuring the Company has sufficient cash flows to fund operations and be able to fund capital improvements required to maintain the performance life of existing plant equipment.

Q. The cash balance of the Company seems to be healthy. Why it the Company concerned about its ability to fund capital replacement through its rates?

A. The Company has experienced the benefits of having a fairly new system, experienced significant system growth up to 2006, and received an $11,845,200 contribution from Freeport to mitigate water quality impacts on the local supply. As a result, the Company has experienced moderate capital replacement expenses, and a significant portion of those projects were financed through funds received from members via developer contributions.

The contribution from Freeport was used to replace two wells and supporting infrastructure that are providing benefits to its existing customers. As a contribution, the Company does not have rates that reflect these used and useful plant facilities. Consequently, the Company's rates are significantly lower than what they could be had this plant been included. The Company's rates are among the lowest in the region. Likewise, this results in a lower operating margin being generated from rates. The Company will need sufficient funds for its operations to provide continuous, safe, and reliable service to existing customers.

Simply put, the Company needs to prepare for additional maintenance and replacement of its aging infrastructure. As a non-profit corporation, the Company has only two options to pay for its capital projects: cash (through rates) and debt. As a result, the Company needs to build adequate cash reserves to meet expected and unplanned capital replacements in a financially-responsible manner to keep costs down for its customers.

Q. Is a 16.50% operating margin sufficient to fully fund all of its anticipated capital replacement and maintenance reserves?

A. No. Based on the cash flow requirement identified on Mr. Jones's study (described in his direct testimony) the Company believes it would need an operating margin around 21.60%

to fully fund the reserves within five years. The Company understands that some of the reserves include capital expenses which may happen later than projected. As such the reserves do not need to be entirely funded with cash today. Rather the Company is planning for the right balance of cash reserves and access to debt. The Company proposes to gradually increase the operating margin over the next three rate cases to fully fund these reserves.

Q. What is the Company's philosophy on the balance of cash and debt?

A. The Company is looking for a debt ratio between 20% and 35%. This leaves plenty of borrowing capacity to address the need for additional capital due to unexpected events that happen from time to time. A 16.50% operating margin enables the Company to be building its cash position for unfunded reserves in the event that the company needs to borrow additional funds to maintain a fully functioning plant. A 16.50% operating margin also accounts for the Company's expectation that it will file periodic rate applications every three to five years.

Q. How does the Company feel about the terminology of 'Monthly Customer Charge' on its tariffs?

A. The Company would like Monthly Customer Charge to be referred to as 'Availability Charge.' This terminology would emphasize to our customers that this charge is the cost the customer must pay to have access to our water whenever they need or want it, and that they should not expect to have any water included in that charge.

V. LOW-INCOME ASSISTANCE.

Q. What provisions has the Company made for customers who cannot afford to pay their water bills?

A. In April 2015, the Company announced the kick-off of the Round-Up program at the Annual Meeting of Members. The Round-Up program is a voluntary pass-through program that collects donations and provides financial support to individuals within the Green Valley / Sahuarita area and is administered by the Salvation Army. Round-Up was designed to provide financial assistance to the Company's customers in need. In this program, participating customers agree to have their utility bill rounded up to the next whole dollar amount; or rounded up plus a few dollars more. The money from the Round-Up program will help the less fortunate pay their utility bills.

Q. Why did the Company choose to have the Salvation Army administer the program?

A. The charitable organization is within the Green Valley / Sahuarita area and has agreed to segregate the various forms of charitable support. The Salvation Army has agreed to support needy individuals with their utility bills, while other entities focus on housing, or medical and mental health. The Company has observed that the Salvation Army already provides utility payment support to some of our customers; we have estimated that in 2014 about $3,000 in payments were made directly by the Salvation Army to the Company. An expanded media announcement effort is planned before year-end.

Q. Do you have any other comments?

A. Special recognition and thanks are due to our staff that represents the Company in our community. Their skills are highly valued and their participation in the success of our Company is appreciated. Special recognition and thanks are also extended to our unpaid board members who volunteer their time and technical skills in support of our Company.

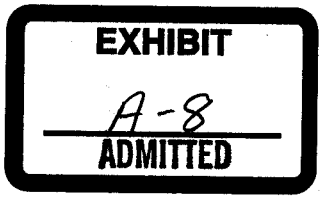
The board members have contributed countless hours in research and evaluation in technical areas of this highly-regulated industry. Their concerted efforts have successfully guided our Company since it was first organized in 1975. As we look into the future, we see continuing challenges to our water supply, rate pressures, and higher regulatory standards. However, we also see opportunities to make a positive difference in our community.

Q. Does that conclude your direct testimony?

A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
DOUG LITTLE – CHAIRMAN
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN



IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE.	DOCKET NO. W-02304A-15-0263

REBUTTAL TESTIMONY OF

ARTURO GABALDON

ON BEHALF OF

COMMUNITY WATER COMPANY OF GREEN VALLEY

March 15, 2016

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Exhibit AG-2 Customer Satisfaction Survey

I. INTRODUCTION.

Q. Please state your name and address.

A. My name is Arturo Raul Gabaldon. My work and mailing address is Community Water Company of Green Valley, 1501 South La Canada Drive, Green Valley, Arizona 85622.

Q. Have you submitted Direct Testimony in this case?

A. Yes.

Q. On whose behalf are you providing Rebuttal Testimony in the proceeding?

A. Community Water Company of Green Valley that I will refer to in my Rebuttal Testimony as the "Company".

Q. What is the purpose of your Rebuttal Testimony?

A. I am responding to recommendations made by Arizona Corporation Commission – Utilities Division Staff ("Staff") on several adjustments to revenue requirements – including depreciation, used and usefulness of Reservoir No. 5, maintenance reserve, future water demands, and operating margin. Additionally, I discuss conclusions from engineering and hydrological studies that we commissioned to support the Company conclusions.

II. RESPONSE TO STAFF TESTIMONY ON REVENUE REQUIREMENTS.

A. Depreciation Expense.

Q. How do you respond to Staff's recommendation to decrease depreciation expense by $202,499 and its criticism of Company's depreciation method?

A. The Company opposes Staff's recommendation to decrease depreciation expense, as it has followed what has been ordered in prior Commission orders. The Company's depreciation method was properly implemented, incorporating depreciation rates Staff recommended and the Commission approved in its last rate case (Decision No. 71478 issued February 3, 2010) and its prior rate cases. To have required a depreciation study as Staff implies is costly to the Company and unprecedented in our view.

Q. Has the Company maintained proper depreciation methods?

A. Our Company has maintained accurate records for the depreciation of equipment since it started water delivery service in 1977. As we are a public service corporation regulated by the Commission, our method of depreciation has always conformed to Commission requirements, as well as Generally Accepted Accounting Principles ("GAAP") requirements that are subject to our auditor's examination each year. These requirements focus on accuracy and maintaining consistency over past years, so that our members and the Commissioners can have confidence in the results of our financial records that we present each year to our members. In short, the Company has properly implemented its depreciation methodology in accordance with past Commission orders.

Q. Please describe your concern with Staff's depreciation expense recommendations.

A. Although Staff does not state this in testimony, its recommendations essentially may compel us to change the depreciation methodology that the Company employs going

forward. To make a major change in the depreciation method that results in a material change in our financial records will likely result in our auditor raising concerns about the reliability of our financial reports in its annual opinion review. This may be problematic when the Company seeks to borrow funds from banks or other lenders. Additionally, as will be noted later in this testimony, the Company will need to increase its equity through increased financial reserves, as noted in Mr. Ray L Jones's Rebuttal Testimony. Put simply, significant changes in our depreciation method can have strong negative impact on developing and maintaining adequate financial reserves.

The Staff recommendation for depreciation accounting also appears to contradict the depreciation method the Commission has accepted in prior rate cases for the Company. Management objects to a change in depreciation method that is contrary to the depreciation method accepted in past rate cases. Mr. Thomas J. Bourassa describes the problems with Staff's recommendation in further detail in his pre-filed Rebuttal Testimony.

B. <u>Reservoir No. 5 as Used and Useful Plant in Rate Base</u>.

Q. How do you respond to Staff's recommendation to remove Reservoir No. 5 from plant as not used and useful?

A. I disagree with Staff's conclusion and believe that Reservoir No. 5 is in fact useful and is necessary to the safety and security of our customers. This is a conclusion that is shared by the Company's volunteer board of directors (the "Board" – consisting of highly educated and capable individuals with successful and accomplished careers – and who are also Company customers) who determined that Reservoir No. 5 is in the best interests of the Company and customers in both the immediate and long term. The Board provides and has provided superb leadership over the Company's 39 years of existence.

The Board has always placed a high priority on our water system reliability to ensure that our customers have full confidence in the delivery of water. Our customers, for the most part, are retired and many have physical restrictions on their activities; they are concerned about the reliability of their utility services, particularly water and electricity.

The Board approved the recommendation of its Company management and water system operator to construct Reservoir No. 5 as a replacement for an aging rubber fabric reservoir. The result is an increase in the reliability of our water delivery system in that we meet a target of two days of water delivery with no pumping required. Further, we improved the resistance of our reservoir system from damage due to hunting accidents or malicious vandalism, and reduced the amount of energy required to operate our water delivery system. This continues a long Company tradition to maintain accomplished and qualified leadership on the board teamed with experienced management to ensure that our water delivery system meets better-than-minimum reliability standards at reasonable costs for our customers.

I also note here that the Green Valley / Sahuarita area depends on maintaining a strong and reliable water infrastructure. The Company is committed to maintain and update our investment in a reliable water delivery system. Mr. Raul Francisco G. Pina, an Arizona Registered Professional Engineer, demonstrates in his report how Reservoir No. 5 places the Company in a position of responsibly and cost-effectively providing for reliable service under normal and emergency operating conditions. In fact, not having such facilities places the Company in an irresponsible position of being under the minimum standards for water storage.

Q. Did the Company evaluate any recommendations from industry groups and other considerations before going forward with Reservoir No. 5?

A. Yes. The Company evaluated the American Water Works Association ("AWWA") recommendations for water supply storage and took into account that we are located in rural Southern Arizona. Assuming that immediate help is available in the case of a failure of our water delivery system is not an acceptable plan. The Company has performed its due diligence. The Company evaluated quotes for both a 1-million-gallon and a 2-million-gallon reservoir and the cost difference was approximately $200,000. The 2-million-gallon reservoir would meet the Company's target of a 48-hour water supply, in accordance with what AWWA proposes that water utilities consider. Management believed that it would have been irresponsible not to take advantage of the opportunity for a water storage level that would make our water delivery system more reliable and secure for our customers.

We also enlisted the services of Mr. Pina to evaluate options to replace Reservoir No. 2. His professional engineering opinion was that Reservoir No. 5 is both a reasonable and appropriate means of ensuring a safe and reliable water system – and exceeding the minimum requirements is prudent. He provides pre-filed Rebuttal Testimony justifying the construction of Reservoir No. 5; and Mr. Jones also provides pre-filed Rebuttal Testimony providing further evidence in support of Reservoir No. 5 as being in the customers' best interests.

C. Maintenance Reserve Expense.

Q. How do you respond to Staff's recommendation to decrease maintenance reserve?

A. I disagree with the Staff's adjustment to maintenance reserves and believe that a higher maintenance reserve level is justified. The Company initially proposed recovery of maintenance expense equal to $55,886 as reasonable and is justified. It was based on

evaluating the need for maintenance and quotes for such maintenance. Essentially, the Company amortized the total maintenance expenses of its Reservoirs and Tanks over a reasonable number of years (10 or 20 depending on the item) to determine a reasonable amount of maintenance expense to recover annually for facilities used by existing customers.

The Company based its initial request on a methodology it has used since 1977 to determine a proper amount—which is a combination of historic actual costs and recent quotes, adjusted for a conservative estimate of inflation, to the time the maintenance will be required, and then prorated to bring the estimated reserve amount to the current test year. Referencing Staff's Operating Income Adjustment No. 5 – Repairs and Maintenance Expense – the Company obtained current quotes and prorated those amounts to annual charges. This resulted in an updated annual required maintenance reserve of $67,000.

It is management's responsibility to make reasonable judgments relative to the reserves needed to pay for maintenance of facilities that current customers use. The Company believes its request, which will not include an estimated inflation amount, is a reasonable and conservative amount based on actual and known information. Based on its most current analysis, Company is now proposing an annual expense of $67,000 to maintain adequate reserves. This also ensures that current customers who receive water service from these facilities provide funding for the maintenance due to their use.

D. Operating Margin.

Q. What is your response to Staff's concerns regarding the Company's requested 16.5% operating margin as expressed on page 18 of Phan Tsan's Direct Testimony submitted on February 2, 2016?

A. The Company understands Staff's concerns, but believes the requested operating margin does strike the right balance, by enabling the Company to fund future capital expenditure needs through a combination of lower-cost debt together with funds from customers. Since the Company cannot obtain equity, it must use funds provided by current customers in part to fund these expenditures. Even so, the Company's request avoids double recovery and avoids two problems. The first is present customers having to incur costs for future infrastructure, and the second is future customers having to incur additional costs to pay for present and past infrastructure. Given Staff's adjustments to depreciation expense and maintenance reserves, and removing Reservoir No. 5 from plant, Staff's recommendations jeopardize the Company's ability to fund future capital expenditures in a balanced way. As Mr. Jones notes, a higher operating margin is warranted if Staff's recommendations are approved.

In addition, I note that the Company does not recover any costs related to Well Nos. 10 and 11 in rates, because these facilities were funded by Freeport McMoRan. It does not recover depreciation expense for these facilities. These wells provided the Company access to our local water aquifer away from an expanding sulfate contamination plume from Freeport McMoRan's mining operations. The Company notes that these wells are used by the Company to provide water service to all its customers; in effect the Company's full costs are substantially higher than being recognized in our present rate structure. At some point, the Company will need to deal with financing the replacement of these wells—and must do so in a cost-effective and prudent manner. Further, the Company cannot fund

these future well replacements solely from debt financing. Thus, the Company must evaluate and develop adequate financial reserves to support the additional borrowing required to fund the replacement of this infrastructure at the appropriate time in the future. This may also require consideration of a higher operating margin in the future. Even so, while the Company is mindful of Staff's comments and will carefully consider the requirements of such a proposal in the future, the Company believes Staff's recommendation makes it likely that it will need to have higher operating margins in the future, in order to ensure safe, adequate and reliable service to its customers.

Q. Please explain what the Company has done to match the recovery of costs of plant from those customers who utilize such assets.

A. The Company has consistently worked to match infrastructure cost funding with those who actually utilize such assets over the economic life of those assets; or, to put it another way, to match current customer payments to the full cost of only what they use. One of the tools available to the Company to achieve this match is to borrow funds to pay for infrastructure costs. These infrastructure costs can include: (a) the replacement of our depleted or obsolete plant; (b) enhancement of our water system reliability (by improvements to: (1) fire flow capability, (2) system redundancies to reduce possible downtimes, (3) system improvements to reduce ongoing or future maintenance costs, and (4) system enhancements to reduce operating costs); and (c) other system enhancements. These infrastructure costs become part of our rate base. We have funded almost $3.4 million worth of capital costs with debt financing and will likely seek additional authority to fund capital expenditures with debt in the near future.

Q. Can you provide an example of how the Company has sought to balance how it obtains capital for needed infrastructure?

A. Certainly. An example is the Company's recently-constructed Reservoir No. 5 to replace an obsolete reservoir with ongoing high maintenance cost and, for a small additional cost, expanded the capacity of the reservoir to improve system reliability (to meet the goal of a 48-hour water supply without system pumping, as I described earlier). The Company funded Reservoir No. 5 by debt financing from an outside financial institution. This was possible because the Company maintains a good balance sheet. The net result is that current and future users of the Reservoir No. 5 will pay the capital cost of this project through a depreciation charge to expenses as part of our rates.

Q. What other considerations should be taken into account when examining what is an appropriate operating margin for the Company?

A. The Company is a non-profit company with members, but without the ability to obtain an equity infusion from the markets. Further, there is little expansion room in the Company's service area and only so much of our funding of infrastructure replacement costs can be through continued increases in the amount of funds we borrow. We must also achieve and maintain a strong balance sheet; adequate equity is required to ensure access to borrowed funds through financial institutions and at reasonable cost. The Company does not have investors and we maintain this equity in the form of financial reserves accumulated over long periods. Unfortunately, we have encountered significant periods in the past when our operating margin was low or negative, and this has depleted some accumulation of past financial reserves. Mr. Jones discusses in his testimonies the importance of maintaining adequate reserves to fund future capital expenditures. The maintaining of adequate financial reserves is a current customer cost as they benefit from the ability of our Company to obtain access to borrowed funds to finance infrastructure costs on reasonable terms.

E. Water Usage Normalization / Declining Usage Revenue Adjustment.

Q. How do you respond to Staff's recommendation to eliminate $94,433 in Water Usage Normalization?

A. I take exception with the Staff's conclusion that the Company did not give consideration to various factors in projecting a decrease in water use. It is widely accepted that there is a permanent change in water appliance technology that supports the downward trend in water use being permanent and that water use will continue to decrease. This position is supported by studies of Mr. Gary Woodward who will be testifying on this point on the Company's behalf. He will specifically speak to the seasonality and rainfall variances, and that those factors do not explain away the actual experienced decline in metered water revenue and demand.

Q. What are the expectations regarding municipal water demand trends of the service area?

A. It is reasonable to assume a permanent decrease in future water demands. The Company, along with other municipal water providers in Pima and Maricopa Counties, participated in a study of historic demand patterns to understand better the steady decline in water usage of our area.

Q. What is the conclusion of this study?

A. The decline in use is mainly due to technological changes, such as more water efficient appliances and other water fixtures, and that these declines will continue for several more years. It is therefore reasonable for the Company to expect a continued drop in water sales, and thus water revenues. The results are further addressed in the Mr. Woodard's Rebuttal Testimony.

Q. Regarding declining use, has there been any subsequent events since the Company's direct filing in July, 2015, which will lead to the Company experiencing further loss of revenue?

A. Yes. On October 22, 2015 Freeport-McMoRan Sierrita ("Sierrita") which had about 1,300 employees announced that it would dramatically cutting output and workforce at its Sierrita Mine west of Sahuarita, and could potentially close the operation altogether. At that time the mine planned to cut production by 50 percent and reduce its workforce by 430 employees. Subsequently additional workforce cuts were announced. Sierrita's output and workforce reduction was reported on in the Green Valley News on October 22, 2015; I have attached the article to my Rebuttal Testimony as Exhibit AG-1.

Based on actual 2015 sales, the Company observed the following declines in water sales to Sierrita:

Sierrita	Annual Water Sales	Annual Gallons Sold	Average Monthly Gallons
2014	$102,047	29,803,400	2,483,617
2015	$68,545	20,102,200	1,675,183
Difference	$33,502 Decline	9,701,200	808,434 (33%)

Based on subsequent communications with Sierrita, we believe that Sierrita expects to use between 1,100,000 and 1,200,000 gallons per month in 2016. This projection is based on lower usage due to a reduced workforce, as well as Sierrita actively seeking to repair leaks on its customer-owned facilities. We believe that the average decline will be approximately 28% in 2016 from 2015 – as shown in the following table:

Sierrita	**Annual Water Sales**	**Annual Gallons Sold**	**Average Monthly Gallons**
2015	$68,545	20,102,200	1,675,183
2016 & beyond	$47,315	13,800,000	1,150,000
Difference	$21,230 Decline	6,302,200	474,817 (28%)

III. RESPONSE TO STAFF TESTIMONY ON RATE DESIGN.

Q. Do you have any general comments regarding Staff's rate design testimony submitted on February 16, 2016?

A. The Company, and its Board in particular, believes that the water availability and the water commodity rates should better match the fixed and variable expenses to ensure financial sustainability for the Company. As I noted above, the Company's variable costs are only 15% of total costs, and only about 6% at the margin. So with the current rate design, and with decreasing per-customer demand, revenues will drop considerably faster than costs. The major driver in decreased water use has been technological change; and declining demand will continue to occur regardless of tiered rates. The Company is not proposing a change in the current rate design at this time, but plans to address the issue in future rate cases.

IV. COMMUNICATION WITH CUSTOMERS.

Q. How does the Company maintain communication with its customers?

A. Our Long-range Planning and Communication Committee annually reviews management's communication plan for customer outreach. This plan includes various methods to keep our customers well informed about their Company, including:

(1) hosting our annual meeting of the membership;

(2) rotating monthly messages on the monthly bills;

(3) speaking with our customers at their homeowner association ("HOA") meetings;

(4) hosting public workshops at least twice a year;

(5) maintaining a presence at public events (such as the Fiesta Sahuarita and the Annual Chamber of Commerce Business Expo);

Based on the anticipated decline, we expect revenues for usage from Sierrita will drop by approximately $54,732 – as shown in the following table:

Sierrita	Annual Water Sales	Annual Gallons Sold	Average Monthly Gallons
Test Year	$102,047	29,803,400	2,483,617
2016 & beyond	$47,315	13,800,000	1,150,000
Difference	$54,732 Decline	16,003,400	1,333,617 (54%)

The Company has updated its usage normalization adjustment to reflect water usage data in 2015, as Mr. Bourassa explains in his Rebuttal Testimony. This includes actual observed declining use from Sierrita that the Company experienced in 2015. Nevertheless, at this time, the Company is only proposing to use the actual data experienced from Sierrita through 2015, as part of its revised adjustment. We believe, however, that all of the information regarding expected decline use should be taken into consideration when evaluating the Company's updated request, in its rebuttal filing.

Q. How does lower demand impact the utilities ability to address costs?

A. The Company's expenses are mostly fixed, meaning they do not increase or decrease with changes in demand. Variable costs, which do drop with decreasing demand, are primarily the cost of energy and chemicals. Based on numbers contained in Schedule C-1 prepared by Mr. Bourassa and submitted with the Application on July 15, 2015, these variable costs are only about 15% of total costs. At the margin, they are even less, constituting about 6% of costs. Thus, when the Company experiences decreasing per-customer demand, the Company's revenues drop considerably faster than its costs. The Company believes it is reasonable to adjust for a planned decreased in sales, supported by both Mr. Woodard and Mr. Bourassa in their respective Rebuttal Testimonies.

(6) maintaining a web page and a Facebook page with current information on various topics including required notices for rate changes, conservation messages, annual meeting information, a video on Project Renews; and

(7) other additional measures.

Q. How effective has the Company communication been and why do you believe this?

A. The results of our efforts are positive. Our customers feel appreciated and that we have listened to and tried to address their concerns. The conclusion is confirmed and supported through the results of our annual customer satisfaction survey that I have attached to my Rebuttal Testimony as Exhibit AG-2. The bottom line is 96% of our respondents' report satisfaction with their Company. Water service and customer service has consistently received high marks (above 90%), and satisfaction of the water quality and price has steadily increased over time. Our customers surveyed believe that sustainability and water conservation are important attributes. An overwhelming number of respondents agree that this Company gives good value for the money, serves the public well, is active in our community, can be trusted to do the right thing, and keeps the public informed. About half of those in our survey are either familiar or very familiar with the governance of their Company. Annual results of our survey are presented at our annual meeting of members.

Q. What other evidence supports your belief that the Company is doing a good job communicating with its customers?

A. The Company mails about 11,000 bills monthly. Consistently, about 1,000 of those customers make the effort to visit our office to make their monthly payments. The Company listens to their issues and water concerns, and my observations support the high customer service results from the survey. When I am at the HOA meetings, hosting a public workshop, or operating a booth at a local event I hear countless compliments on the exceptional work from our field crews. Our staff (administrative and field) is the heart of

this Company, and their good stewardship has resulted in a reliable and robust water delivery system.

Q. What has been the response to the Company's proposed rate change?

A. Two comments were received through the public comment process and are part of the public record. We have reviewed the comments and appreciate the time the customers have taken to participate in the process. One of those customers did provide me with a courtesy copy of their comments, to which I responded with thanks, and was able to provide them with water saving information and strategies that might save them money on their sewer bills. We have also received a total of about five phone calls; and verbal comments were received as a result of the notice from customers – each of whom were asking questions that we were able to respond to.

Q. Does that conclude your Rebuttal Testimony?

A. Yes, it does.

Exhibit AG-1

http://www.gvnews.com/news/output-jobs-to-be-cut-at-sierrita-mine-full-shutdown/article_bcd7d1f4-78f9-11e5-a05b-a31a79e8362f.html

FEATURED

Output, jobs to be cut at Sierrita mine; full shutdown considered

By David Rookhuyzen drookhuyzen@gvnews.com Oct 22, 2015

Green Valley News

Former U.S. Rep. Gabrielle Giffords looks out over the Sierrita Mine during a 2009 tour.

Freeport-McMoRan is dramatically cutting output and workforce at its Sierrita Mine

west of Sahuarita, and could potentially close the operation altogether.

The mine will cut production by 50 percent and reduce its workforce by 430 employees, according to an email sent to Town of Sahuarita officials Thursday by Collette Brown, Freeport's regional community development manager for Southern Arizona. Sierrita currently has about 1,300 employees.

In 2014, the mine produced 195 million pounds of copper and 24 million pounds of molybdenum. In the first nine months of 2015, Sierrita produced 140 million pounds of copper and 17 million pounds of molybdenum, according to a Freeport official.

The mine's annual output would drop by 100 million pounds of copper and 10 million pounds of molybdenum, according to a Reuters report. But these reductions may only be the beginning. According to the email, "(t)he company is evaluating the economics of a full shutdown."

Freeport declined to comment on the contents of the email, including specifics of a potential full shutdown. A similar email was also sent to a bevy of local stakeholders, including local law enforcement, utilities, charitable foundations, school districts, FICO and the county Board of Supervisors.

The news came the same day Freeport reported a sluggish third quarter, missing analyst estimates on both earnings and revenue.

The reduction in workforce is expected to be fully implemented in January, with layoffs happening over a two-week period, according to the email. Affected employees will be encouraged to apply for open jobs at other Freeport mines, such as Morenci, Chino in New Mexico, and Climax in Colorado, according to the email.

The layoffs follow close on the heels of the elimination of 150 jobs at the mine in August.

According to the email, the production and workforce cuts are based on the deterioration of the global demand for molybdenum, a mineral often found in copper-bearing ores. Sierrita's cost structure "depends heavily on molybdenum prices," the email said.

Those prices have dropped because of a reduced consumption of high-grade and stainless steel, which contain molybdenum, commonly called moly. The dip in consumption was prompted by a decline in oil and gas drilling and reduced investment in heavy equipment, Brown's email said.

Freeport has also been hit hard by declining copper prices, which have tumbled over the past year due to decreased demand from China.

The email also touched on potential affects on the company's philanthropic community outreach, saying Freeport has not considered eliminating its environmental and community engagement grants, but is evaluating reducing the amounts of those grants.

More from our site

BUILT FROM SCRATCH: Craftsman constructs classical guitar

Mar 2, 2016

Exhibit AG-2

Gauging Customer Satisfaction and Perception

For presentation at the
2016 Annual Meeting of Members
Results of a survey taken in December 2015

Arturo Gabaldón
President
Community Water Company of Green Valley

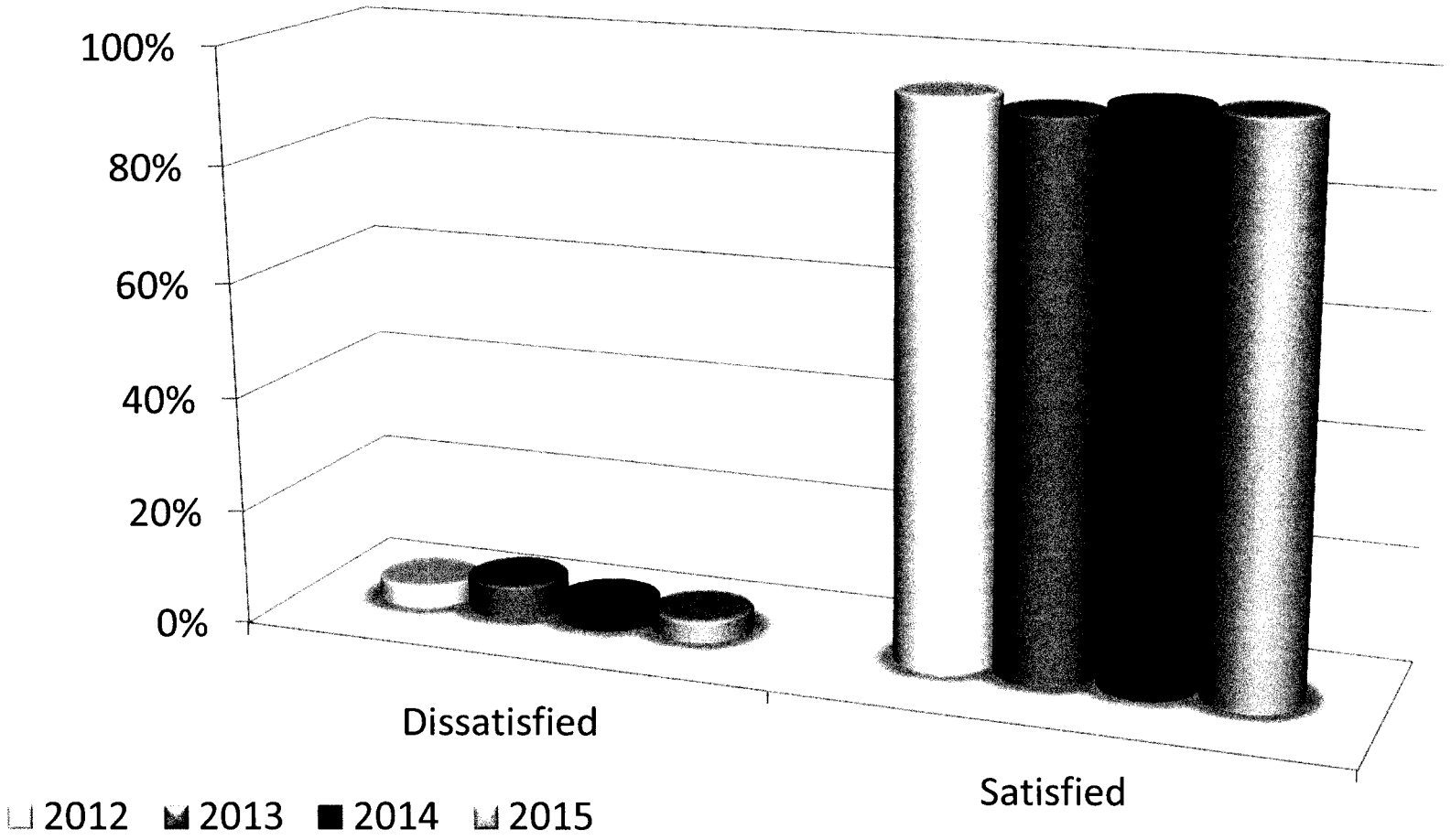
Customer-Driven

- Community Water Company has served our community since 1977
- Our mission is to reliably deliver drinking water to our customers and to maintain a sustainable water supply for our customers
- As of December 31, 2015 we were serving 12,551 residential units and 374 commercial accounts
- Our board members are volunteers from our community

Methodology & Response

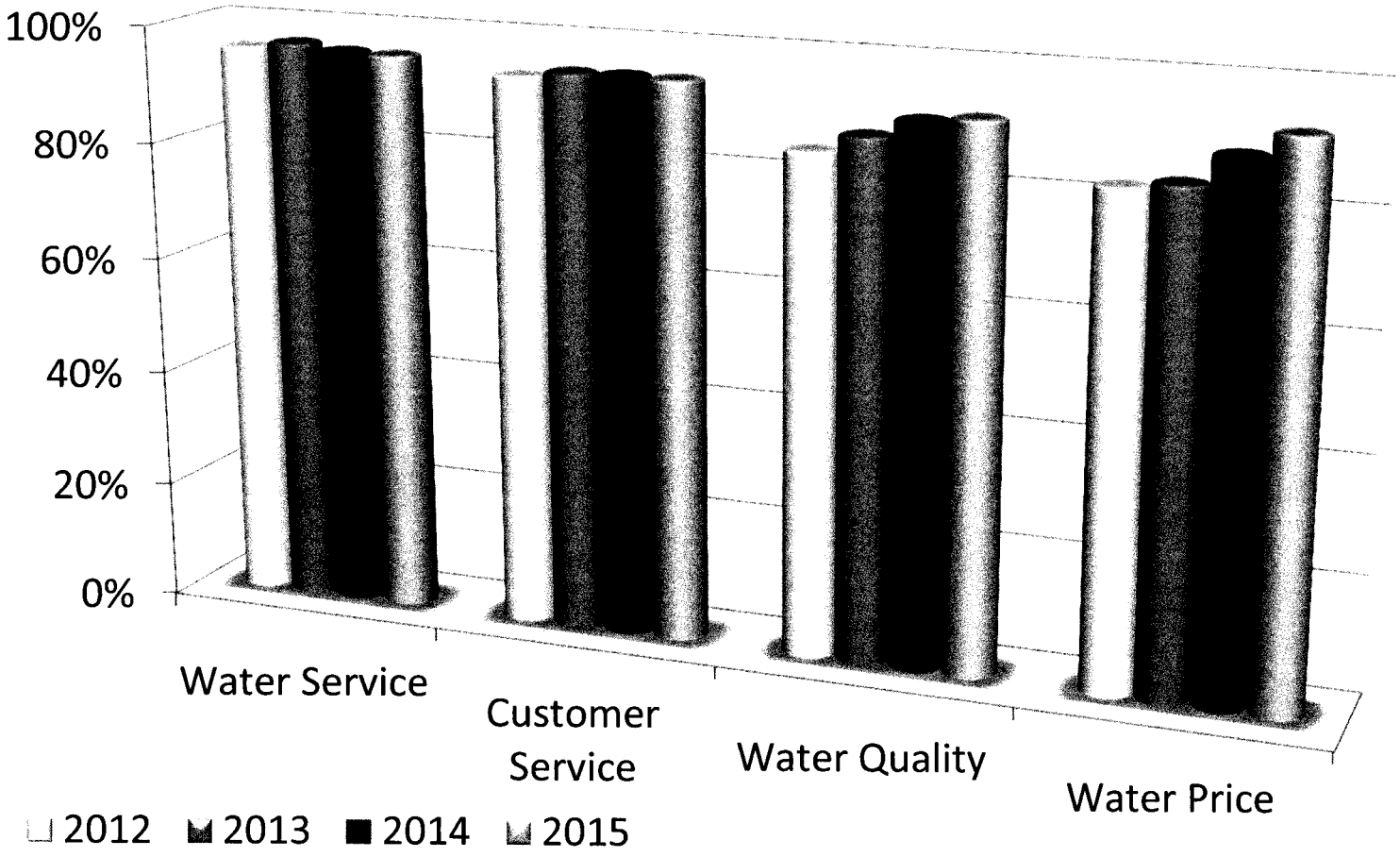
- Evaluated and updated prior customer surveys
- Randomly selected and asked for feedback from 360 residential customers throughout the system
- Timeline
  - December - surveys distributed & received
  - January-March - results summarized
  - April – formal presentation at member's annual meeting
- We received 181 responses (>50%) from our survey
- We continue to build on what we are learning from our surveys

96% of our Customers responded as satisfied with Community Water Company

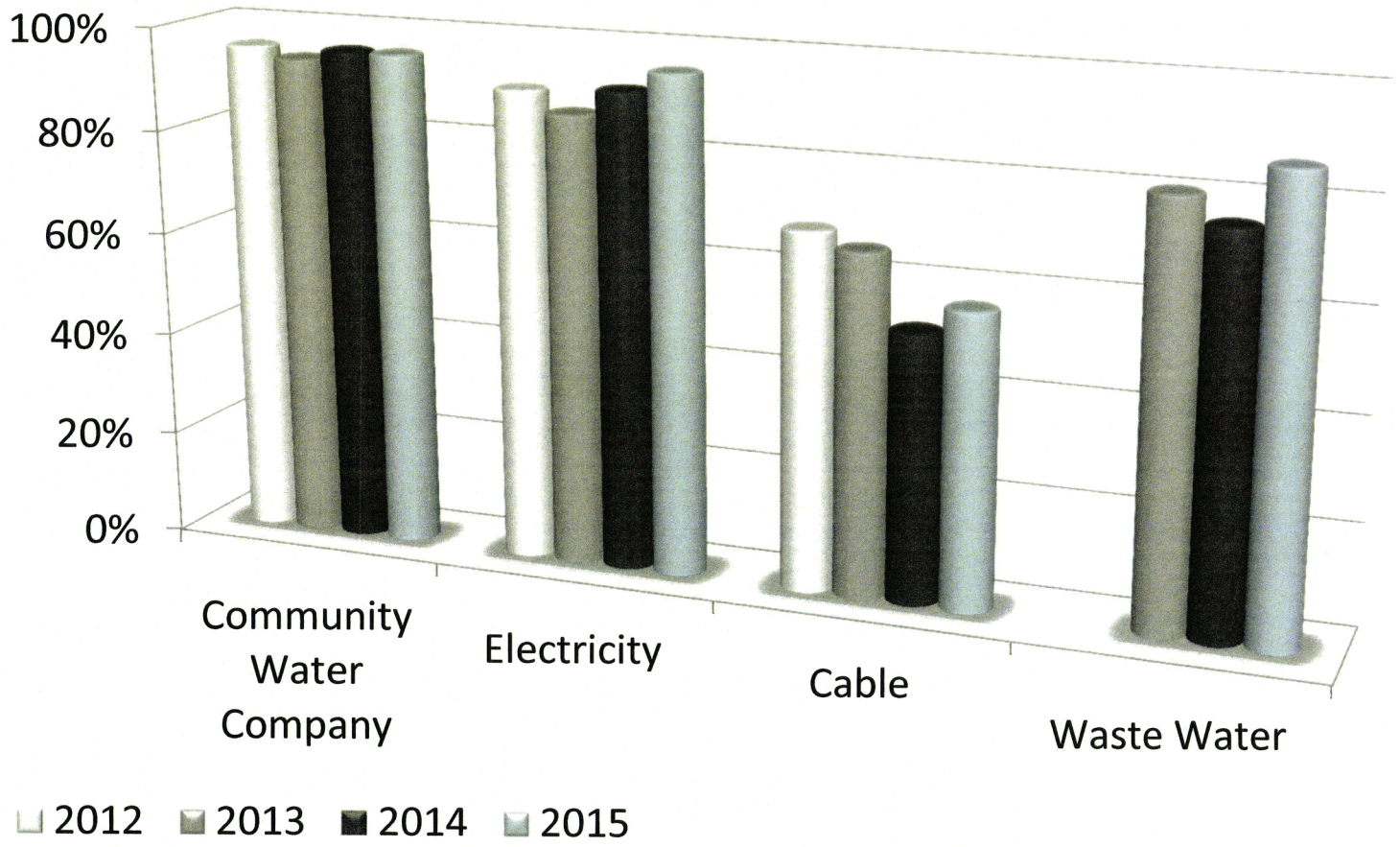


Customer Satisfaction

Community Water Company rates have not changed since 2009

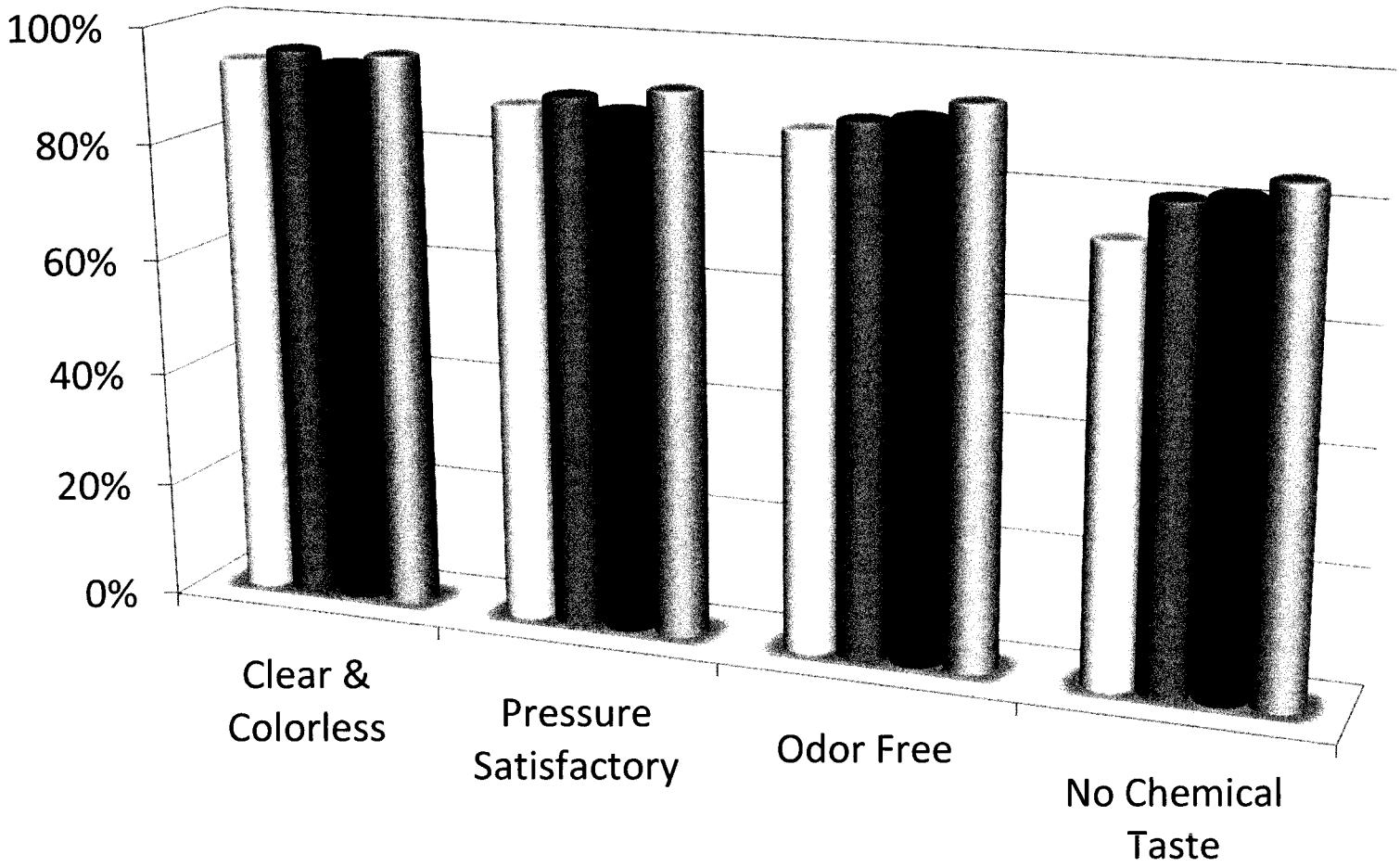


Customer Satisfaction with Other Utilities

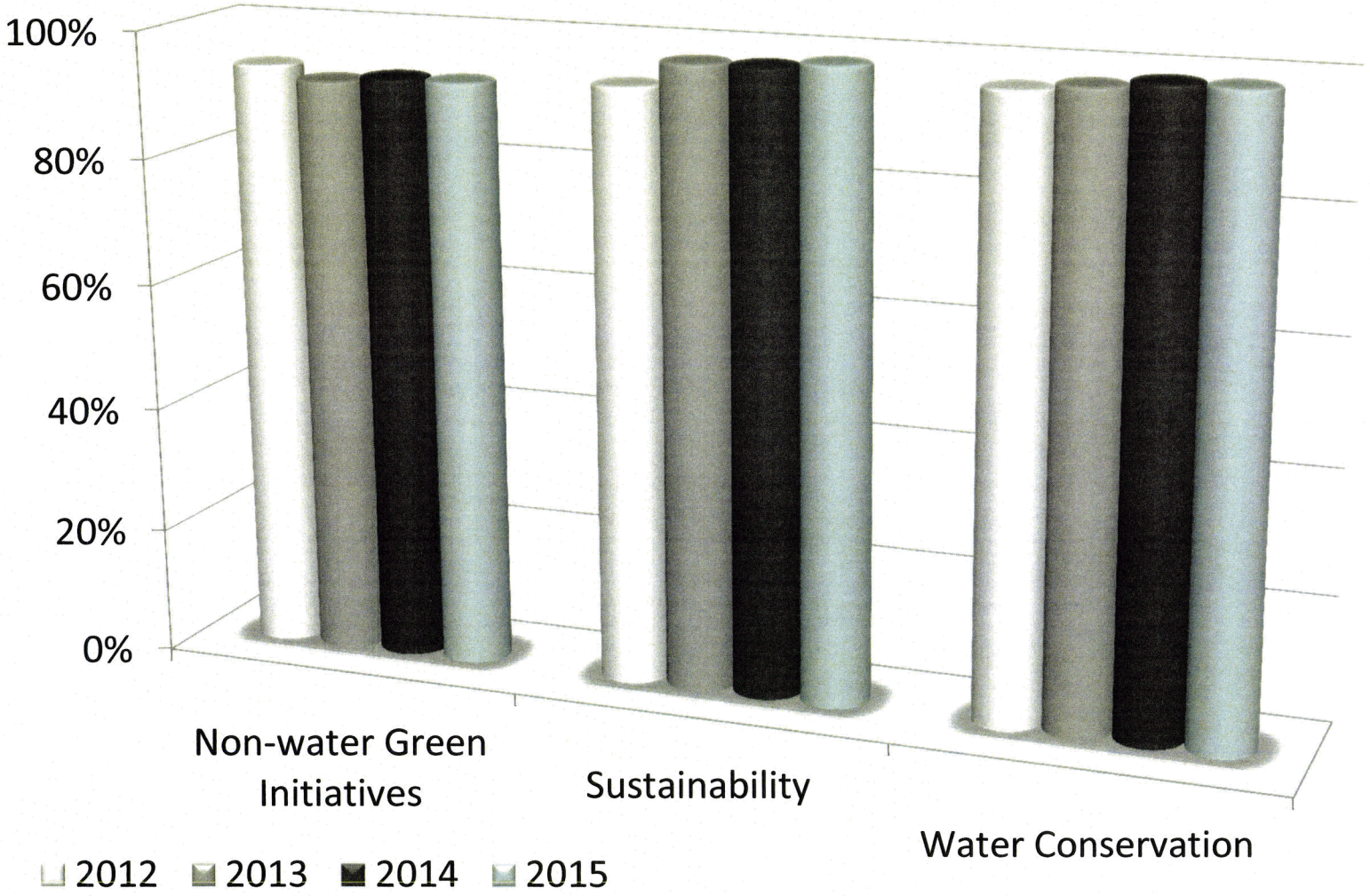


Water Quality Trends

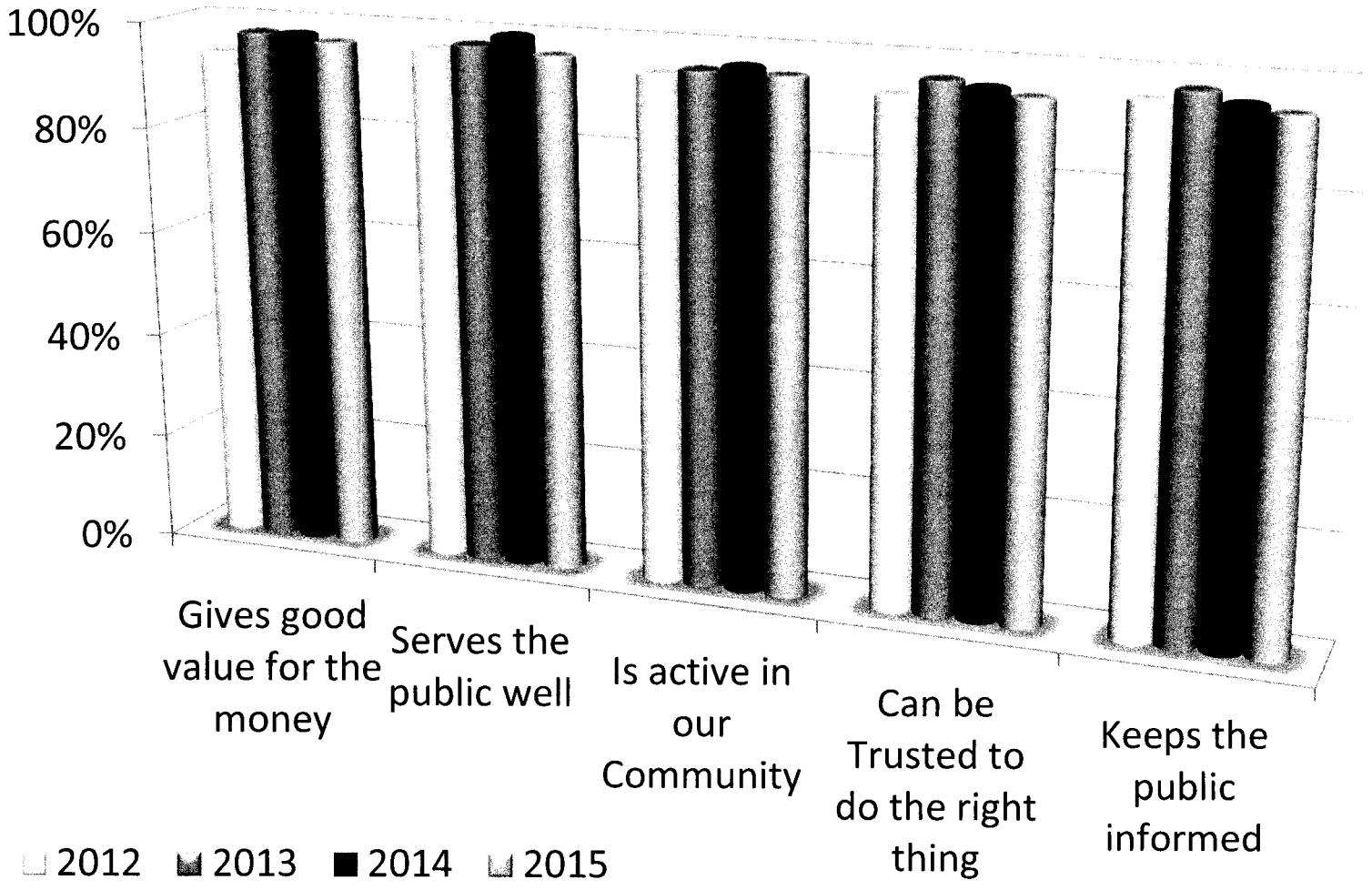
Water quality perceptions mostly unchanged.
Customers agree that water is …



Important Attributes

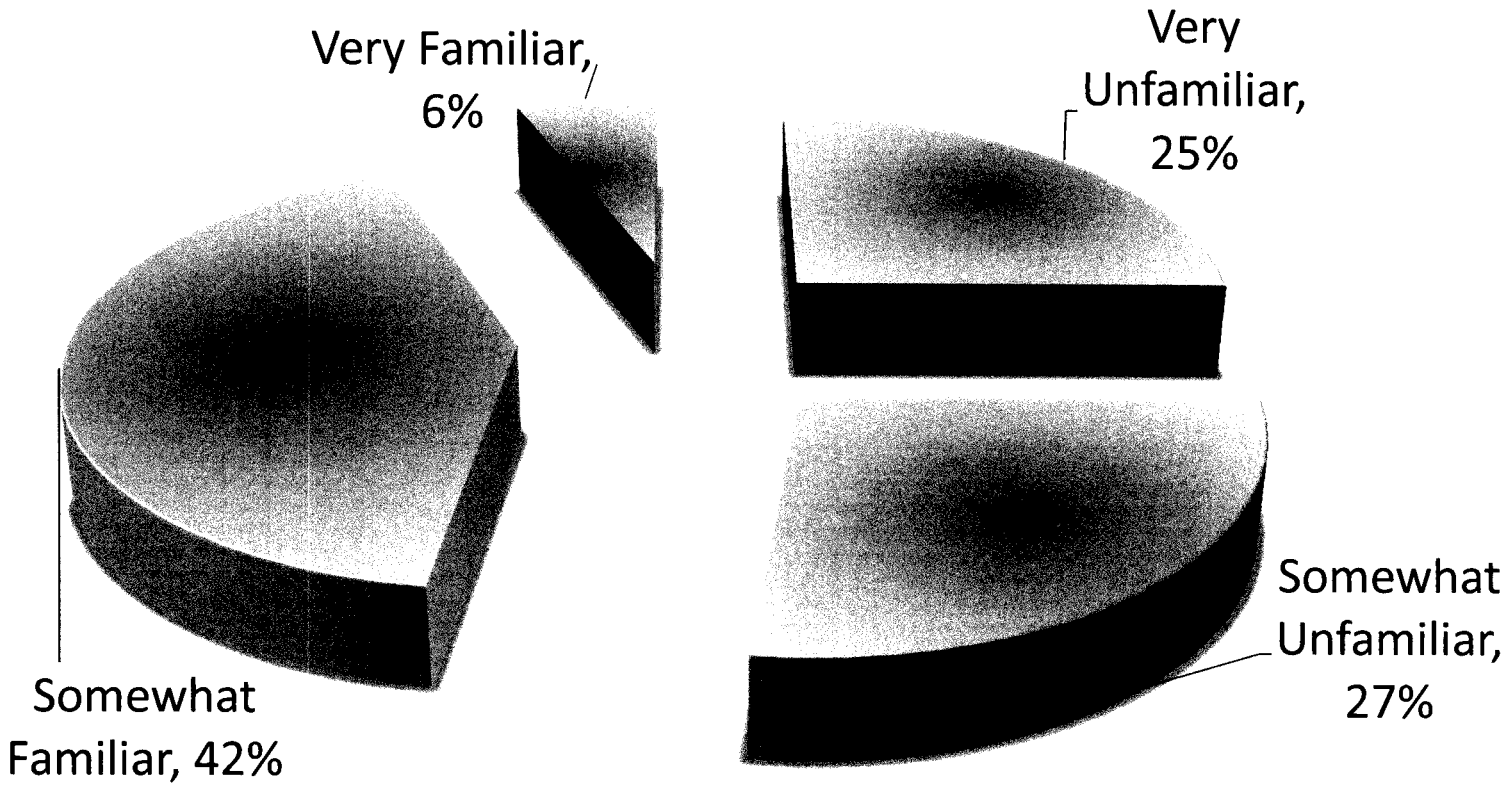


General Reputation



Familiar with Governance

Community Water Company is a not-for-profit corporation with members. We asked our members how familiar they were with our governance:



Summary

- Satisfaction remains high
- Customers value water quality as most important followed by quality customer service

Comments

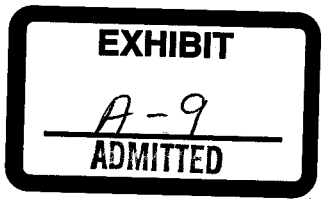
- I am very new in GV and I am not very informed about how things work here - so far I have not had any problems with any service. It is a very appreciated to have my trash picked up and mail a few feet from my door. I lived in the country 77 years.
- All is well. No issue.
- I don't know enough to have an opinion
- Our water doesn't seem hard. The faucets don't corrode. When we lived in GV Estates our water wasn't the best but I think the well that serviced that has changed.
- Where I lived before we had lake water and city wells but still had restrictions on water usage. I can't believe I live in a desert and there are no restrictions. I'm old so I won't see it but the day will come where our water here will have to be rationed.
- I'm very pleased with the service at this time I can't complain.
- No complaints!
- For living in the desert we are pretty happy with the water
- The meter man is very concerned when he notices a high jump in water consumption he personally stops & tells us about it. To check for water leak etc... The man at the curb is your best customer service rep.
- Very happy with service one huge water bill over Thanksgiving water sprinkler stuck open & flooded yard while we were gone to CA for Thanksgiving still think I pay extra on storm water since that happened. Not your fault very satisfied with you.
- Have been a customer for almost 20 years and only had one problem concerning the meter reading at the time the meter was changed. The rep in the office readily made a correction to my bill when the error was pointed out. The office and field personnel all very nice.
- The service and cost have been more than fair. I have no complaint at all.
- I have been using Water Co for 5 years - and worked for 20 years in the community with no problems - you have always been found to be a great service to Green Valley
- Excellent water company!
- We were notified when we had a slow water leak. This was critical to get issue resolved before more water was wasted. Thank you
- Keep up the good work & providing good value!
- We have our own well back in Wisconsin so it is very hard to compare. I think you're doing a good job
- Your maintenance crews are the best. Had a main break and the crew was just outstanding, kept me informed of progress, cleaned up the street and my yard. Apologized to my wife for unexpectedly shutting off the water when they broke the line load to my box.
- We appreciate being notified if water co. suspects any leaks or unusually high volume! Very comforting!

- We are very pleased with your company. Your staff is very accommodating and friendly. The public needs to be more aware of water saving measures as water is our most precious resource.
- Growing up I lived on a farm for 20 years we had to have water for 10-40 milk cows. Water was very important to us, at times we ran out and had to haul in water this was not an easy or pleasant chore. We lived in Phoenix for 15 years and had good service we have lived here for 15 years and have had good service. I hope we have good service with the new program.
- Could the company go to "Paperless" billing & pass the savings on to customers?? My water bill is deducted from my bank acct, but I still get a paper bill.
- I have been missed on several of my billing statements in the last year!
- PLEASE provide a drop box for payments - I have asked for this repeatedly - Thank you
- Need more visibility in the community (i.e.) door to door ask basic question
- It would be nice if the utility (water) company would be prompt notification if possible suspected water leak or spike in usage: over normal average use!
- Administration treats customer like their enemy. They don't need to be so rude.
- 9 board members seem too many for size of company if they are paid members, reduce number and five seniors a better rate. This is only company not willing to respect the income folks! Every other utility shows this respect.
- Hopefully you won't be merging with any other company in the area
- I feel that your company should offer payment extensions. With the economy not so great yet, sometimes the extra time is needed to make the money stretch.
- Am concerned about copper mine runoff in drinking water
- CWC should be actively opposing additional copper mining and other non-residential uses of water in the areas from which they draw supplies. It should not be making deals with commercial users that lower the availability and quality of future water supplies for residents who depend on it.
- Canyon View of Green Valley does "NOT" allow collection of rain water to water yard planets. We could help water conservation if we could. Is there any way you could help a HOA that is living in the Stone Age??
- Water pressure varies at times during day
- My water pressure is very low. It used to be very good now my irrigation system for shrubs & fruit trees does NOT work well. Up till two years ago the pressure was good and my watering system work good. Can this be changed?
- I refuse to drink water treated with fluoride. I prefer not to bathe in that type of water also and use a filter to remove it

- The water is fine but tastes bad
- Water is still a bit hard, but better than a few years ago.
- Water is more chemically tasting than other waters but your records show it is not going to hurt us. I make coffee with bottled/filtered water but find the tap water is usable, just not preferred for use. Price for value - excellent.
- Would like to have fluoride removed from our water supply
- Water is too hard. Occasional foul taste.
- Always a "film" in water. Constant cleaning due to film/scum in water
- The tap water we drink is filtered by reverse osmosis the calcium content of the tap water is way too high
- The water seems to be unhealthy
- 1-Since our water is very hard we must all have water softeners or have water damage to our pipes and appliances. Could the water company centrally soften the water so we wouldn't have to have water softeners in our homes? 2- Since so many GV customers are only part-timers, could the water company provide the waste water company with usage for all 12 months rather than just the one or two months in the winter when we are in AZ? I know we can contact the waste water co ourselves to report this but not everyone knows this or forgets since it must be done each year. You should be able to report all 12 months' usage so that part timers are not unfairly over charged.
- We use / drink tap water with filters at primary sources.
- We use reverse osmosis. Thank you!
- I drink water out of the refrigerator door because it's filtered, otherwise bottled water.
- We drink the tap water after it is put thru our Brita Water Filter.
- We have reverse osmosis for drinking water
- We have a reverse osmosis system
- We usually drink tap water from refrigerator tap, cold & filtered again!! Future availability and cost depends on conservation. We are in the desert.....
- We prefer to drink tap water but feel we must filter it at this time.
- While water has a taste that is not great our RO filter takes care of it
- We filter any water we drink for the most part. Also we filter water for making tea or coffee - since heating the water without filtering brings out unpleasant taste. This is true anywhere we are - here or traveling or at our home in the Pacific Northwest.
- I prefer to drink tap water as long as I filter the bad taste.
- I drink filtered water or bottled flavored water as I am not a water drinker

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
DOUG LITTLE – CHAIRMAN
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN



IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE.	DOCKET NO. W-02304A-15-0263

REJOINDER TESTIMONY OF

ARTURO GABALDON

ON BEHALF OF

COMMUNITY WATER COMPANY OF GREEN VALLEY

April 26, 2016

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I. Introduction 1

II. Response to Staff Surrebuttal Testimony 1

I. INTRODUCTION.

Q. Please state your name and address.

A. My name is Arturo Raul Gabaldon. My work and mailing address is Community Water Company of Green Valley, 1501 South La Canada Drive, Green Valley, Arizona 85622.

Q. Have you submitted Direct and Rebuttal Testimonies in this case?

A. Yes.

Q. On whose behalf are you providing Rejoinder Testimony in the proceeding?

A. Community Water Company of Green Valley that I will refer to in my Rebuttal Testimony as the "Company."

Q. What is the purpose of your Rebuttal Testimony?

A. I respond to Surrebuttal Testimony submitted by Arizona Corporation Commission – Utilities Division Staff ("Staff") regarding a few of the issues still in dispute.

II. RESPONSE TO STAFF'S SURREBUTTAL TESTIMONY.

Q. What is your response to Staff's modified position on water usage normalization (Staff's Operating Income Adjustment No. 1)?

A. We appreciate Staff modifying its position to recognize declining use for residential customers and the $100,062 declining-use revenue adjustment. We understand Staff does not believe future usage from Freeport McMoran Sierrita ("Sierrita") is known and measurable and that Staff did not accept the Company's proposed $64,296 additional adjustment to reflect declining usage from Sierrita.

Q. Do you believe the Company's proposed declining usage adjustment for Sierrita is a known and measurable adjustment?

A. Yes, we do. Our proposed adjustment was based on actual observed declines in water sales from Sierrita in 2015. My Rebuttal Testimony included projections for 2016 to support the adjustment the Company proposes. Also, I provided an article that highlights the workforce and production reductions to Sierrita. All information points to Sierrita closing for the foreseeable future, with no indication of whether or when operations may resume. We believe, based on this information, the declining use from Sierrita is known and measurable, as well as significant to the Company.

Q. Regarding depreciation expense (Staff's Operating Income Adjustment No. 7), Staff maintains that the Company did not properly implement the Broad Group method. How do you respond?

A. We disagree with Staff. First, Staff points to the Company's response to Staff data request PNT 2.2 as evidence of the Company not implementing depreciation methodology properly. That is simply not the case. The response states that the Company was informed that changes to depreciation rates are to be done in a rate case. This is the rate case, and the proper place to consider changes to depreciation rates. The Company is under no obligation, however, to undertake a depreciation study, especially when it did not propose any changes to depreciation rates.

More importantly, the Company is using depreciation rates that Staff recommended in its last rate case. Specifically, Decision No. 71478 (February 3, 2010) has a finding pointing out that "Engineering Staff recommends that [the Company] use the depreciation rates by individual NARUC category . . . on a going forward basis."[1] I do not understand how Staff

[1] Finding of Fact No. 29 at page 17.

can now accuse the Company of improperly implementing the Broad Group method using depreciation rates that Staff recommended the Company use on a going forward basis.

Q. Did Staff's engineer, Mr. Jian Liu, make a recommendation regarding the depreciation rates the Company should use in this case?

A. Yes, on page 7 of Mr. Liu's Engineering Report (Exhibit JWL) submitted with Staff's direct filing on revenue requirements, Mr. Liu states the following regarding depreciation rates:

> "In the prior rate case, the Company adopted Staff's typical and customary water depreciation rates. These 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 ("NARUC") category."

It appears to me that Mr. Liu is recommending the same depreciation rates that Ms. Tsan implies may no longer be appropriate. The Company believes agreeing to maintain the depreciation rates that Staff's engineer recommends is not improperly implementing the Broad Group method.

Q. Does Ms. Tsan admit to using the Vintage Group method to make adjustments to the Company's depreciation expense amount?

A. Yes, and as Mr. Thomas J. Bourassa explained in his Rebuttal Testimony, it is improper to apply the Vintage Group method to make adjustments to the Company's depreciation expense amount – since the Company used the Broad Group method that is supported by NARUC. Mr. Bourassa will detail the problems with Staff's analysis on depreciation further in his Rejoinder Testimony.

Q. Has the Company offered to submit a depreciation study in its next rate case?

A. Yes, as long as the cost of conducting that study is recovered in rates.

Q. Regarding Mr. Liu's Surrebuttal Testimony regarding Reservoir No. 5, do you have any additional comments?

A. Yes. Mr. Raul Francisco G. Pina, in his Rejoinder Testimony, will specifically rebut some of the statements Mr. Liu makes regarding the Company analysis as a single well system and storage capacity. I know that Reservoir No. 5 has been discussed at great lengths over two proceedings, but the bottom line is that Reservoir No. 5 is in use and providing benefits under normal operating conditions, as well as providing the desired 48-hours of supply should a major event occur. Just because a major event, such as a system-wide outage, has not occurred does not mean preparing for an event is imprudent. Given the Company's customer profile, we believe Reservoir No. 5 was a wise decision.

I also note here that the Company had received multiple bids to design and construct Reservoir No. 5, and selected the lowest-cost bid. The Company provided information to Staff in discovery that it received bids of $1.345 million, $1.275 million, and $1.2 million and selected the $1.2 million bid. Also, the Company updated this figure to indicate that design and construction cost approximately $1.065 million. So the evidence supports the cost of Reservoir No. 5 as reasonable.

Q. Mr. Gabaldon, is Reservoir No. 5 benefiting the Company's system as you prepare this testimony?

A. Yes, Reservoir No. 5 is operating, and it is providing the benefits Mr. Pina lists on pages eight and nine of his Rebuttal Testimony.

Q. Mr. Darron Carlson submitted Surrebuttal Testimony for Staff regarding statements by Company witnesses on operating margin. What is your understanding of his concerns?

A. Mr. Carlson discusses his concern over a statement I made in Direct Testimony that "[the] Company proposes to gradually increase the operating margin over the next three rate cases to fully fund these [cash] reserves."[2] But I understand that such a proposal would be subject to review from Staff and the Commission. And I also stated that "the Company is planning for the right balance of cash reserves and debt" in that same response.[3]

Q. Will the Company try to obtain additional debt financing for future capital items?

A. Yes, it is our plan to do so in the near future. We are currently trying to ascertain the means to obtain debt financing on the best terms.

Q. Do you believe a healthy amount of cash reserves benefits the Company in obtaining debt financing on the most reasonable terms?

A. Yes. It is becoming increasingly challenging for a small business to secure funding through a bank. When the Company wanted to borrow funds for the construction of Reservoir No. 5 in 2014, it first approached JPMorgan Chase ("Chase"), a bank that we have had continued relationships since 1977. Chase denied the Company request to bid on the loan stating that it was not acceptable for their loan portfolio; management believes that, had its financial condition been stronger, Chase would have participated. Fortunately, other banks were available to us, and we were able to obtain debt financing on competitive terms. The major driver for the banks were assets such as adequate cash reserves. The

[2] Page 15, lines 4-6.

[3] Page 15, lines 3-4.

banks recognized that this was the result of the good decisions by our volunteer board and a strong top-level leadership in management.

Q. Is the Company also concerned about intergenerational fairness when determining the best means to fund capital items and improvements?

A. Of course. But while we do not want present customers having too much of the burden for future infrastructure, we also want to ensure future customers are not overly-burdened for costs that present customers avoid. It is a balance. The fact is that present customers are the beneficiaries of comparatively low rates and do not have to pay rates on infrastructure used to serve them that was essentially contributed (Well Nos. 10 and 11). To have healthy cash reserve balances also provides benefits to present customers when the Company seeks debt financing for infrastructure to be used by current customers. All I was attempting to state was that the Company would seek to increase its operating margin as necessary, so that it can continue to maintain what it believes is a healthy mix of debt and reserves for now and for the foreseeable future.

Q. With all that said, is the Company supportive of a 16.5 percent operating margin if the Commission adopted the majority of its adjustments?

A. Yes, if we have adequate ability to build up our cash reserves, then a 16.5 percent operating margin is acceptable. This is why we are concerned about some of Staff's adjustments to operating income such as depreciation expense.

Q. Does that conclude your Rejoinder Testimony?

A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
SUSAN BITTER SMITH – CHAIRMAN
BOB STUMP
BOB BURNS
DOUG LITTLE
TOM FORESE

EXHIBIT
A-10
ADMITTED

IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE.	DOCKET NO. W-02304-15-_____

DIRECT TESTIMONY OF

THOMAS J. BOURASSA

ON BEHALF OF

COMMUNITY WATER COMPANY OF GREEN VALLEY

July 15, 2015

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I. INTRODUCTION AND QUALIFICATIONS.

Q. PLEASE STATE YOUR NAME AND ADDRESS.

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

Q. WHAT IS YOUR PROFESSION AND BACKGROUND?

A. I am a Certified Public Accountant and am self-employed, providing consulting services to utility companies as well as general accounting services. I have a B.S. in Chemistry and Accounting from Northern Arizona University (1980) and an M.B.A. with an emphasis in Finance from the University of Phoenix (1991).

Q. COULD YOU BRIEFLY SUMMARIZE YOUR PRIOR WORK AND REGULATORY EXPERIENCE?

A. Yes. Prior to becoming a private consultant, I was employed by High-Tech Institute, Inc., and served as controller and chief financial officer. Prior to working for High-Tech Institute, I worked as a division controller for the Apollo Group, Inc. Before joining the Apollo Group, I was employed at Kozoman & Kermode, CPAs. In that position, I prepared compilations and other write-up work for water and wastewater utilities, as well as tax returns.

In my private practice, I have prepared and/or assisted in the preparation of several water and wastewater utility rate applications before the Arizona Corporation Commission ("Commission"). A summary of my regulatory work experience is attached as Exhibit TJB- 1.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying in this proceeding on behalf of the applicant, Community Water Company of Green Valley ("Community Water" or "the Company"). Community Water is seeking increases in its rates and charges for water utility service in its certificated service area in Pima County.

II. OVERVIEW OF THE COMPANY'S APPLICATION.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. I will testify in support of the Company's proposed rates. I am sponsoring Schedules "A" through "H" (excluding the "G" Schedules), which are also being filed in support of the Company's application. I was responsible for and/or supervised the preparation of these schedules based on my investigation and review of the Company's relevant books and records. The Company has not prepared a cost of service study ("G" schedules). Consequently, the "G" Schedules are omitted.

Q. WHY DIDN'T THE COMPANY PREPARE A COST OF SERVICE STUDY?

A. Because the Commission does not typically set rates for water utility service based on cost of service, and because the changes to the rate design the Company is proposing does not necessitate a cost of service study, the substantial expense of doing a cost of service study could not be justified. I have taken a similar approach in other cases without complaint.

Q. PLEASE SUMMARIZE THE COMPANY'S APPLICATION.

A. The test year used by Community Water is the 12-month period that ended December 31, 2014. Since the Company is a non-profit, a cost of capital analysis has not been performed. Instead, the revenue requirement is determined based on an operating margin approach.

The Company proposes a 16.5 percent operating margin which will provide revenues sufficient to service long-term debt as well as provide sufficient funds for on-going expense, fund expected capital requirements, and partially fund cash reserves for items of major maintenance and plant replacements (which Ray L. Jones describes in his direct testimony). The 16.5 percent operating margin results in a 9.09 percent return on fair value rate base ("FVRB").

Community Water has also proposed certain pro forma adjustments to take into account known and measurable changes to rate base, expenses and revenues. These pro forma adjustments are consistent with normal ratemaking principles and with the Commission's rules and regulations. They are also necessary to obtain a normal or realistic relationship between revenues, expenses and rate base.

The Company's FVRB is approximately $7,678,586. The increase in revenues to provide a 16.5 percent operating margin is approximately $708,244, an increase of approximately 20.10 percent over the adjusted and annualized test year revenues.

Q. WHY IS THE COMPANY FILING FOR RATE INCREASES AT THIS TIME?

A. The Company's last rate increase was approved on February 3, 2010 (in Decision No. 71478) using a test year ending December 31, 2007. Since that time, the Company has made significant investments in plant, and various operating expenses have increased. Consequently, rate increases are necessary to ensure that the Company has the ability to cover its operating expenses, service debt, fund expected capital requirements, and partially fund cash reserves for major maintenance items and plant replacements.

III. SUMMARY OF "A", "E" AND "F" SCHEDULES.

Q. MR. BOURASSA, LET'S TURN TO THE COMPANY'S SCHEDULES. PLEASE DESCRIBE THE SCHEDULES LABELED AS "A", "E", AND "F".

A. I will describe each of the schedules individually, starting with the "A" Schedules. First is the A-1 Schedule, which is a summary of the rate base, operating income, current operating margin, required operating margin, operating income deficiency, and the increase in gross revenue. A 16.5 percent operating margin is requested. Revenues at present and proposed and customer classifications are also shown on this schedule.

Q. WHY ARE YOU RECOMMENDING A 16.5 PERCENT OPERATING MARGIN?

A. The higher percent operating margin is warranted for Community Water in this instance based on the Company's cash flow requirements for debt service and capital improvements, as well as for the Company's need to fund operations and maintenance, and to address contingencies. The Company is also requesting 16.5 percent in this application in order to help minimize the rate increase to customers in the future. Mr. Gabaldon also discusses the need for at least a 16.5 percent operating margin in his direct testimony.

Q. IS A 16.5 PERCENT OPERATING MARGIN HIGHER THAN THE COMPANY HAS RECEIVED IN ITS PRIOR TWO CASES?

A. Yes, but the requested operating margin is only slightly higher than what the Commission has approved for Community Water in the past. The Commission approved an operating margin of 15 percent for Community Water in Decision No. 71748, but approved a 16 percent operating margin in the Company's previous rate case that concluded on December 21, 2006 (in Decision No. 69205). Given the facts and circumstances existing here, a slightly higher operating margin is appropriate.

Q. PLEASE DESCRIBE THE OTHER "A" SCHEDULES.

A. Schedule A-2 is a summary of results of operations for the test year, prior years, and a projected year at present rates and proposed rates.

Schedule A-3 contains the Company's capital structure for the test year and the two prior years.

Schedule A-4 contains the plant construction, and plant in service for the test year and prior years. The projected plant additions are also shown on this schedule.

Schedule A-5 is the summary of the Company's changes in financial position (cash flow) for the prior two years, the test year at present rates, and a projected year at present and proposed rates.

Q. WHAT ABOUT THE "E" SCHEDULES FOR THE COMPANY?

A. The "E" Schedules are based on the Company's actual operating results, as reported by the Company in annual reports filed with the Commission. Schedule E-1 contains the comparative balance sheet data the years 2012, 2013, and 2014.

Schedule E-2, page 1, contains the income statement for the years 2012, 2013, and 2014.

Schedule E-3 contains the statements of changes in the Company's financial position for the test year and the two prior years.

Schedule E-4 provides the changes in membership equity.

Schedule E-5 contains the Company's plant in service at the end of the test year, and one year prior to the end of the test year.

Schedule E-7 contains operating statistics for the years 2012, 2013, and 2014.

Schedule E-8 contains the taxes charged to operations for the years 2012, 2013, and 2014.

The accountant's notes to the financial statements and the financial assumptions used in preparing the rate filing schedules are shown on Schedules E-9 and F-4,

respectively, in accordance with the Commission's standard filing requirements. The Company does prepare audited financial statements. A copy of the latest audit report is attached to my Testimony as Exhibit TJB-2.

Q. PLEASE DESCRIBE THE "F" SCHEDULES.

A. Schedule F-1 contains the results of operations at the present rates (actual and adjusted), and at proposed rates.

Schedule F-2 contains the summary of changes in financial position (cash flow) for the prior two years, the test year at present rates, and a projected year at present and proposed rates.

Schedule F-3 shows the Company's projected construction requirements for 2013, 2014, and 2015.

Schedule F-4 contains the assumptions used in developing the adjustments and projections contained in the rate filing.

IV. RATE BASE ("B" SCHEDULES).

Q. WOULD YOU EXPLAIN THE RATE BASE SCHEDULES, WHICH ARE LABELED AS THE "B" SCHEDULES?

A. Yes. I will start with Schedule B-5, which is the working capital allowance. The results produced by the "formula method" of computing the working capital allowance are shown on each. This Company is not requesting a working capital component in rate base.

Q. DID YOU PREPARE SCHEDULES B-3 AND B-4 FOR COMMUNITY WATER?

A. No, I did not prepare these schedules because the Company is requesting that its original cost rate base ("OCRB") be used as its FVRB. Thus, these schedules are unnecessary.

Q. HAVE YOU PREPARED SCHEDULES SHOWING ADJUSTMENTS TO OCRB?

A. Yes. Schedule B-2 shows adjustments to OCRB proposed by the Company. Schedule B-2, pages 2 through 4, provides the supporting information. There are four adjustments shown in Schedule B-2.

Q. PLEASE DESCRIBE ADJUSTMENT NUMBER 1.

A. Adjustment number 1, as shown on Schedule B-2, page 2, adjusts plant-in-service ("PIS"). There are two PIS adjustments included in Adjustment 1. These are shown on Schedule B-2, page 3, and are labeled as adjustments "1 – A" and "1 – B".

Q. DO ANY OF THESE "A" OR "B" ADJUSTMENTS REFLECT INCLUSION OF POST-TEST YEAR PLANT?

A. Yes. Adjustment "1 – A" in Schedule B-2 (as detailed on page 3.1) increases PIS to reflect post-test year plant. Post-test year plant consists of water storage plant and transportation equipment, both of which are scheduled to be placed into service after the end of the test year. All of the post-test year plant adjustment, which will be used to serve existing customers, is known and measurable. They are revenue neutral and are necessary to serve existing Company customers as of the end of the test year.

Q. WHAT CRITERIA FOR INCLUSION OF POST-TEST YEAR PLANT CAN BE FOUND, IF ANY, IN RECENT COMMISSION DECISIONS?

A. The Commission approved the inclusion of post-test year plant in rate base in several cases when (i) the plant is revenue neutral (i.e., providing service to those customers who were customers of the Company as of the end of the test year); and (ii) it has been completed and placed into service at a reasonable time before the hearing, so that it could be inspected and audited.

Q. PLEASE DESCRIBE THE "B" ADJUSTMENT TO ADJUSTMENT NUMBER 1 ON SCHEDULE B-2.

A. Adjustment "1 – B" of Schedule B-2 (as detailed on page 3.2) adjusts PIS to reflect the reconciliation of the Company's PIS detail to recorded general ledger amounts as reflected on Schedule E-1.

Q. WHAT IS THE PURPOSE OF ADJUSTMENT NUMBER 2 ON SCHEDULE B-2 REGARDING ACCUMULATED DEPRECIATION?

A. Adjustment 2, shown on Schedule B-2 at page 2, adjusts accumulated depreciation ("A/D"). The details of the A/D adjustments are shown on Schedule B-2, page 4. There are two A/D adjustments included in Adjustment 2. These are shown on Schedule B-2, page 4, and are labeled as adjustments "2 – A", and "2 – B".

Adjustment "A" adjusts A/D for the proposed retirements related to PTY plant and is shown on page 4.1 of Schedule B-2.

Adjustment "B" adjusts A/D to reflect the re-computed amounts of reconciling A/D to A/D reconstruction per the Company's B-2 plant detail schedule, pages 3.3 to 3.9, and is shown on page 4.2 of Schedule B-2.

Q. DO THE PLANT IN SERVICE AND ACCUMULATED DEPRECIATION BALANCES SHOWN ON SCHEDULE B-2 REFLECT THE LAST COMMISSION RATE ORDER FOR THE COMPANY?

A. Yes. The Company's reconstruction of the PIS balance started with the PIS balance approved in the last rate case. Reconciliation to the starting balances for PIS and accumulated depreciation are shown on Schedule B-2, page 3.3. Plant additions and retirements since the end of the last test year have been added to and deducted from total plant shown on Schedule B-2, pages 3.4 to 3.9. Those pages also show the details for the

accumulated depreciation, from the end of the last test year through the end of the test year, using the half-year convention for depreciation.

Q. HOW WAS THE PROPOSED "FAIR VALUE" RATE BASE SHOWN ON A-1 DETERMINED?

A. The FVRB shown on Schedule A-1 is based on OCRB.

V. INCOME STATEMENT ("C" SCHEDULES).

Q. LET'S MOVE ON TO THE "C" SCHEDULES. PLEASE EXPLAIN THE ADJUSTMENTS YOU ARE PROPOSING TO THE INCOME STATEMENT AS SHOWN ON SCHEDULES C-1 AND C-2.

A. The following is a summary of adjustments shown on Schedule C-1:

Adjustment 1 annualizes depreciation expense. The proposed depreciation rate for each component of utility plant is shown on Schedule C-2, page 2. The depreciation rates approved in the Company's last rate case were account-specific rates. The Company proposes to continue to use these rates.

Adjustment 2 increases the property taxes based on proposed revenues. The details of the computation are shown on Schedule C-2, page 3.

Q. HOW DID YOU COMPUTE THE PROPERTY TAXES AT PROPOSED RATES?

A. To determine full cash value, I used the method employed by the Arizona Department of Revenue - Centrally Valued Properties ("ADOR" or "the Department"). This method determines full cash value by using twice the average of three years of revenue, plus an addition for construction-work in progress ("CWIP") and a deduction for the book value of transportation equipment. In the instant case, I used two times the adjusted revenues for the year ending December 31, 2014, and one year of revenues at proposed rates. The

assessed value (18 percent of full cash value) was then multiplied by the property tax rate to determine adjusted property tax expense.

Q. IS THIS CONSISTENT WITH PRIOR COMMISSION DECISIONS?

A. Yes. The Commission approved this method for ascertaining property tax expense in cases including in *Chaparral City Water Company*, Decision No. 68176 (September 30, 2005) and in *Litchfield Park Service Company*, Decision No. 67279 (October 5, 2004).

Q. IS THIS SYNCHRONIZATION OF PROPERTY TAX EXPENSE WITH REVENUES PROPER RATE MAKING?

A. Yes. Like income taxes, property taxes must be adjusted to ensure that the new rates are sufficient to produce the revenue requirement. For this reason, the Commission has repeatedly approved the use of proposed revenues to determine an appropriate level of property tax expense to be recovered through rates.

Q. PLEASE CONTINUE WITH YOUR DISCUSSION OF THE INCOME STATEMENT ADJUSTMENTS.

A. Adjustment 3 shows the rate case expense estimated by the Company. The Company estimates rate case expense of $150,000. The Company proposes that rate case expense be recovered over five years because it believes a five-year cycle for future rate cases is reasonable given this utility's circumstances.

Q. HOW DID YOU ARRIVE AT THIS AMOUNT?

A. Based on my experience with rate cases before the Commission, and that of the Company's counsel. Given Community Water's size and the anticipated nature, length and complexity of the proceedings, I estimate this rate case to cost a total of $150,000.

Q. PLEASE EXPLAIN WHY YOU REFER TO THIS AMOUNT AS AN "ESTIMATE"?

A. Because ultimately several different factors contribute to what the final actual rate case expense will be for a particular case. Thus, I can only make an educated guess based on my experience. The specifics of who may intervene, what unique issues may come into dispute, and what kind of procedural issues will arise, are just some of the factors that determine the final total expense to process a rate case through the Commission. Thus, it is necessary to propose a reasonable estimate reflective of past experience with similar sized utilities.

Q. PLEASE DESCRIBE THE OTHER INCOME STATEMENT ADJUSTMENTS DETAILED IN THE "C" SCHEDULES.

A. Adjustment 4 annualizes revenues to the year-end number of customers. The annualization was based on the number of customers at the end of the test year, compared to the actual number of customers during each month of the test year. Average revenues by month were computed for the test year. The average revenues were then multiplied by the increase (or decrease) in number of customers for each month of the test year. Adjustment number 4 also increases purchased power expense and chemicals expense based upon the expected additional gallons to be sold from the revenue annualization.

Adjustment 5 reduces revenues based upon water usage normalization. Usage normalization reflects the expected reduction in gallons sold primarily due to conservation and is based upon an analysis of trends in customer usage from 2010 through 2014. Adjustment 5 also reduces purchased power expense and chemicals expense based upon the expected reduction in gallons to be sold from the usage normalization.

Adjustment 6 increases Salaries and Wages expense and reflects the additional expense related to the filling of two vacant positions as well as expected wage increases over the next year (approximately the time new rates will be approved).

Adjustment 7 increases Insurance – Health and Life for expected increases in this expense.

Adjustment 8 reduces sludge removal expense by annualizing the expected savings in the removal of arsenic water treatment sludge. As discussed by Mr. Gabaldon, the Company recently installed arsenic sludge drying beds at three of its water treatment facilities. As part of the treatment process, a partially dewatered arsenic sludge is produced which results in lower disposal costs.

Adjustments 9 through 12 are intentionally left blank.

Q. ARE THERE ANY OTHER REVENUE AND/OR EXPENSE ADJUSTMENTS?

A. No.

VI. "D" SCHEDULES.

Q. WOULD YOU PLEASE DISCUSS THE "D" SCHEDULES?

A. Schedule D-1 shows the summary membership equity and long-term debt. Since the Company is a non-profit corporation with members, a cost of capital analysis has not been performed. Schedule D-2 reflects the current and projected balances of long-term debt.

VII. RATE DESIGN.

Q. WHAT ARE THE COMPANY'S PRESENT AND PROPOSED RATES FOR WATER SERVICE?

A. The Company's present and proposed rates are shown on Schedule H-3.

Q. WHAT IS THE IMPACT OF THE COMPANY'S PROPOSED RATES ON A 5/8-X-3/4-INCH METERED RESIDENTIAL CUSTOMER WITH AN AVERAGE BILL?

A. As shown on Schedule H-2, page 1, the present monthly bill for a 5/8-x-3/4 inch metered residential customer using an average of 3,897 gallons is $19.14. The proposed monthly bill for a 5/8-x-3/4-inch metered residential customer using an average of 3,897 gallons would be $23.46, an increase of $4.32, or 22.55 percent above the present rates.

Q. HAS THE COMPANY PROPOSED A CHANGE IN THE OVERALL RATE DESIGN STRUCTURE AS PART OF ITS PROPOSAL?

A. No. The Company's rate design reflects the inverted-tier design adopted in the last case, including the respective break-over points. The monthly minimums and commodity charges were increased slightly more than the commodity rates to improve the revenue recovery from the monthly minimums and provide more revenue stability. In other words, under present rates, the Company recovered approximately 53.7 percent of revenues from the monthly minimums and 46.3 percent from the commodity rates – while under the proposed rates, the Company will recover approximately 57.2 percent of revenues from the monthly minimums and 42.8 percent from the commodity rates. Schedule H-3, pages 3 and 4, show the revenue recovery from the monthly minimums and commodity rates under present and proposed rates.

Q. ARE THERE ANY CHANGES TO THE MISCELLANEOUS SERVICE CHARGES?

A. No.

Q. ARE THERE ANY CHANGES TO THE METER AND SERVICE LINE INSTALLATION CHARGES?

A. No.

Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

Exhibit TJB-1

RESUME OF THOMAS J. BOURASSA, CPA

EDUCATIONAL BACKGROUND

B.S. Northern Arizona University Chemistry/Accounting (1980)
M.B.A. University of Phoenix with Emphasis in Finance (1991)
C.P.A. State of Arizona (1995)
Continuing Professional Education – In areas of tax, accounting, management, economics, finance, business valuation, consulting, and ethics (80 hrs every two years)

MEMBERSHIPS

Arizona Society of CPAs
Water Utilities Association of Arizona
American Water Works Association
Society of Regulatory Financial Analysts

EMPLOYMENT EXPERIENCE

1995 – Present	CPA - Self Employed Consultant to utilities on regulatory matters including all aspects of rate applications (rate base, income statement, cost of capital, cost of service, and rate design), rate reviews, certificates of convenience and necessity (CC&N), CC&N extensions, financing applications, accounting order applications, and off-site facilities hook-up fee applications. Provide expert testimony as required. Consult on various aspects of business, financial and accounting matters including best business practices, generally accepted accounting principles, generally accepted ratemaking principles, project analysis, cash flow analysis, regulatory treatment of certain expenditures and investments, business valuations, and rate reviews. Litigation support services.
1992-1995	Employed by High-Tech Institute, Phoenix, Arizona as Controller and C.F.O.
1989-1992	Employed by Alta Technical School, a division of University of Phoenix as Division Controller.
1985-1989	Employed by M.L.R. Builders, Tampa and Pensacola, Florida as Operations/Accounting Manager
1982-1985	Employed by and part owner in Area Sand and Clay Company, Pensacola, Florida.

1981-1982	Employed by Purdue University, West Lafayette, Indiana as Teaching Assistant.

SUMMARY OF REGULATORY WORK EXPERIENCE AS SELF EMPLOYED CONSULTANT

COMPANY/CLIENT	FUNCTION
Tierra Buena Water Company ACC Docket No. W-02076A-15-013	Permanent Rate Application – Water. Assisted in preparation of short-form schedules.
Red Rock Utilities, LLC ACC Docket No. W-04245A-14-0295	Permanent Rate Application – Water and Wastewater. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Quail Creek Water Company ACC Docket No. W-02514A-14-0370	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Tonto Basin Water Company ACC Docket No. W-03515A-14-0310	Permanent Rate Application – Water. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.
Navajo Water ACC Docket No. W-03511A-14-304	Permanent Rate Application – Water. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.
Alaska Power Company Regulatory Commission of Alaska Docket No. U-14-002	Prepared schedules and testified on cost of capital.
Anchorage Municipal Light & Power Regulatory Commission of Alaska Docket No. U-13-184	Prepared schedules and testified on cost of capital.
Liberty Utilities (Pine Bluff) Inc. Arkansas Public Service Commission Docket No. 14-020-U	Permanent Rate Application – Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Cost of Service, Rate Design, and Cost of Capital.
Abra Water Company	Permanent Rate Application – Prepared

COMPANY/CLIENT	FUNCTION
ACC Docket No. W-01782A-14-0084	schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
EPCOR Water Arizona, Inc. ACC Docket No. W-01303A-14-0010	Permanent Rate Application – Prepared rate designs and cost of Service studies for Mohave Water District, Mohave Wastewater District, Paradise Valley Water District, Tubac Water District, and Sun City Water District.
Liberty Utilities (Midstates Natural Gas), Inc. Missouri Public Service Commission Case No. GR-2014-0152	Permanent Rate Application – Assist in preparing required rate application schedules for Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Hydro Resources, LLC. ACC Docket No. W-20770A-13-0313	Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and initial rates.
Little Park Water Company ACC Docket No. W-02192A-13-0336	Permanent Rate Application – Water. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.
Utility Source, LLC. ACC Docket No. WS-04235A-13-0331	Permanent Rate Application – Water and Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Payson Water Company ACC Docket No. W-03514A-13-0111 ACC Docket No. W-03514A-13-0142	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital. Financing Application. Prepared financial ratios and debt surcharge mechanism.
Goodman Water Company	Valuation

COMPANY/CLIENT	FUNCTION
Verde Santa Fe Wastewater ACC Docket No. SW-03437A-13-0292	Permanent Rate Application – Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Lago Del Oro Water Company ACC Docket No. W-01944A-13-0215	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Cost of Service, Rate Design, and Cost of Capital.
Chaparral City Water Company ACC Docket No. W-02113A-13-0118	Permanent Rate Application – Prepared and testified on cost of service study.
Las Quintas Serenas Water Company ACC Docket No. W-01583A-13-0117	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Southwest Environmental Utilities. Inc. ACC Docket No. WS-20878A-13-0065	Certificate of Convenience and Necessity – Water and Wastewater. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and initial rates.
Litchfield park Service Company ACC Docket No. SW-01428A-13-0043 ACC Docket No. W-01428A-13-0042	Permanent Rate Application – Water and Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, Cost of Service, and Cost of Capital.
Beaver Dam Water Company ACC Docket No. WS-03067A-12-0232	Permanent Rate Application. Prepared schedules on Plant, Income Statement, Revenue Requirement, and Rate Design.
Rio Rico Utilities ACC Docket No. WS-02676A-12-0196	Permanent Rate Application – Water and Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Cost of Service, Rate Design, and Cost of Capital.
Vail Water Company ACC Docket No. W-01651B-12-0339	Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue

COMPANY/CLIENT	FUNCTION
	Requirement, Cost of Service, Rate Design, and Cost of Capital.
Avra Water Co-Op. ACC Docket No. W-02126A-11-0480	Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Cost of Service, Rate Design, and Cost of Capital.
Pima Utility Company ACC Docket No. W-02199A-11-0329 ACC Docket No. SW-02199A-11-0330	Permanent Rate Application – Water and Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Cost of Service, Rate Design, and Cost of Capital. Work on financing application.
Liberty Utilities (CALPECO Electric), LLC) Docket No. 11202020	Work on preparation of permanent rate application. Prepared schedules on Rate Base, Plant, Income Statement, Revenue Requirement.
Livco Water Company ACC Docket No. SW-02563A-11-0213	Permanent Rate Application – Water and Sewer. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.
Orange Grove Water Company ACC Docket No. W-02237A-11-0180	Permanent Rate Application. Prepared schedules on Plant, Income Statement, Revenue Requirement, and Rate Design.
Goodman Water Company ACC Docket No. W-02500A-10-0382	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Doney Park Water ACC Docket No. W-01416A-10-0450	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Grimmelmann, et. al. v. Pulte Home Corporation, et. al., case no. CV-08-1878-PHX-FJM, the United States District Court	Consultant to defendant and expert witness for defendant on rates and ratemaking.

COMPANY/CLIENT	FUNCTION
for the District of Arizona.	
Southern Arizona Home Builders Association	Consultant on ratemaking aspects to line extension policies (electric).
H2O Water Company	Valuation
Tierra Linda HOA Water Company	Valuation
Las Quintas Serenas Water Company ACC Docket No. W-01583A-09-0589	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Coronado Utilities ACC Docket No. SW-04305A-09-0291	Permanent Rate Application – Wastewater. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Little Park Water Company ACC Docket No. W-02192A-09-0531	Permanent Rate Application. Prepared schedules on Plant, Income Statement, Revenue Requirement, and Rate Design.
Sahuarita Water Company ACC Docket No. W-03718A-09-0359	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, Cost of Service, and Cost of Capital.
Bella Vista Water Company Southern Sunrise Water Company Northern Sunrise Water Company ACC Docket No. W-02465A-09-0414 ACC Docket No. W-02453A-09-0414 ACC Docket No. W-02454A-09-0414	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, Cost of Service, and Cost of Capital.
Rio Rico Utilities, Inc ACC Docket No. WS-02676A-09-0257	Permanent Rate Application – Water and Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.

COMPANY/CLIENT	FUNCTION
Litchfield park Service Company ACC Docket No. SW-01428A-09-0103 ACC Docket No. W-01428A-09-0104	Permanent Rate Application – Water and Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, Cost of Service, and Cost of Capital.
Town of Thatcher v. City of Safford, CV 2007-240, Superior Court of Arizona	Consultant to plaintiff on ratemaking and cost of service.
Valencia Water Company California Public Utility Commission Case No. 09-05-002	Cost of Capital
Valley Utilities ACC Docket No. W-01412A-08-0586	Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Black Mountain Sewer Company ACC Docket No. SW-02361A-08-0609	Permanent Rate Application – Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Far West Water and Sewer Company ACC Docket No. WS-03478A-08-0608	Interim Rate Application (Emergency Rates)
Farmers Water Company ACC Docket No. W-01654A-08-0502	Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Far West Water and Sewer Company ACC Docket No. WS-03478A-08-0454	Permanent Rate Application. Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design and Cost of Capital.
Ridgeline Water Company, LLC ACC Docket No. W-20589A-08-0173	Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and intitial rates.

COMPANY/CLIENT	FUNCTION
Sacramento Utilities, Inc. ACC Docket No. SW-20576A-08-0067	Certificate of Convenience and Necessity – Wastewater. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and financing.
Johnson Utilities ACC Docket No. WS-02987A-08-0180	Permanent Rate Application. Water and Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design and Cost of Capital. Participate in 40-252 proceeding.
Orange Grove Water Company ACC Docket No. W-02237A-08-0455	Permanent Rate Application. Prepared schedules on Plant, Income Statement, Revenue Requirement, and Rate Design.
Far West Water and Sewer Company ACC Docket No. WS-03478A-07-0442	Financing Application. Prepare schedules to support application.
Oak Creek Water No.1 ACC Docket No. W-01392A-07-0679	Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
ICR Water Users Association Docket W-02824-07-0388	Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Johnson Utilities	Valuation consultant in the matter of the sale of Johnson Utilities assets to the Town of Florence.
H2O, Inc ACC Docket No. W-02234A-07-0550	Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Chaparral City Water Company ACC Docket No. W-02113A-07-0551	Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.

COMPANY/CLIENT	FUNCTION
Valley Utilities ACC Docket No. W-01412A-07-0561	Financing Application. Prepare schedules to support application.
Valley Utilities ACC Docket No. W-01412A-07-280	Emergency Rate Application. Prepare schedules to support application.
Valley Utilities ACC Docket No. W-01412A-07-0278	Accounting Order. Assist in preparing definition and scope of costs for deferral for future regulatory consideration and treatment.
Litchfield Park Service Company ACC Docket No. W-01427A-06-0807	Accounting Order. Assist in preparing definition and scope of costs for deferral for future regulatory consideration and treatment.
Golden Shores Water Company ACC Docket No. W-01815A-07-0117	Permanent Rate Application. Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Diablo Village Water Company ACC Docket No. W-02309A-07-0140	Off-site facilities hook-up fee application. Prepare schedules to support application.
Diablo Village Water Company ACC Docket No. W-02309A-07-0399	Permanent Rate Application (Class C). Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Sahuarita Water Company (Rancho Sahuarita Water Co.) ACC Docket No. W-03718A-07-0687	Extension Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and financing.
Utility Source, L.L.C. ACC Docket No. WS-04235A-06-0303	Permanent Rate Application- Water and Wastewater. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.

COMPANY/CLIENT	FUNCTION
Tierra Buena Water Company	Valuation of Tierra Buena Water Company for estate purposes.
Goodman Water Company ACC Docket No. W-02500A-06-0281	Permanent Rate Application (Class C). Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, and Cost of Capital.
Links at Coyote Wash Utilities ACC Docket No. SW-04210A-06-0220	Certificate of Convenience and Necessity – Sewer. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and initial rate design.
New River Utilities ACC Docket No. W-0173A-06-0171	Extension Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, and financing.
Johnson Utilities ACC Docket No. WS-02987A-04-0501 Docket WS-02987A-04-0177	Extension of Certificate of Convenience and Necessity – Sewer. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and initial rate design.
Bachmann Springs Utility ACC Docket No. WS-03953A-07-0073	Permanent Rate Application – Water and Sewer. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.
Avra Water Cooperative ACC Docket No. W-02126A-06-0234	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Gold Canyon Sewer Company ACC Docket No. SW-025191A-06-0015	Permanent Rate Application – Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
State of Arizona v. Far West Water and Sewer, No. 1 CA-CR 06-0160	Expert witness on behalf of defendant in penalty phase of case.
Far West Water and Sewer Company	Permanent Rate Application – Sewer.

COMPANY/CLIENT	FUNCTION
ACC Docket No. WS-03478A-05-0801	Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Black Mountain Sewer Company ACC Docket No. SW-02361A-05-0657	Permanent Rate Application – Sewer. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, Rate Design, and Cost of Capital.
Balterra Sewer Company ACC Docket No. SW-02304A-05-0586	Certificate of Convenience and Necessity – Sewer. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and initial rate design.
Community Water Company of Green Valley ACC Docket No. W-02304A-05-0830	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
McClain Water Systems Northern Sunrise Water Southern Sunrise Water ACC Docket No. W-020453A-06-0251	Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and initial rate design.
Valley Utilities Water Company ACC Docket No. W-01412A-04-0376	Off-site facilities hook-up fee application. Prepare schedules to support application.
Valley Utilities Water Company ACC Docket No. W-01412A-04-0376	Permanent Rate Application – Water. Prepared schedules and testified on Rate Base, Plant, Income Statement, and Revenue Requirement. Assisted in preparation of Rate Design.
Beardsley Water Company ACC Docket No. W-02074A-04-0358	Permanent Rate Application – Water. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.
Pine Water Company, Inc. ACC Docket No. W-03512A-03-0279	Interim and Permanent Rate Application, Financing Application - Water. Prepared schedules and testified on Rate Base,

COMPANY/CLIENT	FUNCTION
	Plant, Income Statement, Cost of Capital, and Rate Design.
Chaparral City Water Company ACC Docket No. W-02113A-04-0616	Permanent Rate Application. Prepared schedules and testified on Rate Base, Plant, and Income Statement. Assisted in preparation Rate Design.
Tierra Linda Home Owners Association ACC Docket No. W-0423A-04-0075	Certificate of Convenience and Necessity – Water. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and initial rate design.
Diamond Ventures - Red Rock Utilities ACC Docket No. WS-04245A-04-0184	Certificate of Convenience and Necessity – Water and Sewer. Prepared pro-forma balance sheets, income statements, plant schedules, rate base, financing, and initial rate design.
Arizona-American Water Company, Inc. ACC Docket No. WS-01303A-02-0867 ACC Docket No. WS-01303A-02-0868 ACC Docket No. WS-01303A-02-0869 ACC Docket No. WS-01303A-02-0870 ACC Docket No. WS-01303A-02-0908	Permanent Rate Application Water and Sewer (10 divisions). Prepared schedules and testimony on Rate Base, Plant, Income Statement, and Revenue Requirement. Assisted in preparation of Rate Design.
Bella Vista Water Company, Inc. ACC Docket No. W-02465A-01-0776	Permanent Rate Application - Water. Prepared schedules and testimony on Rate Base, Plant, Income Statement, and Revenue Requirement. Assisted in preparation of Cost of Capital and Rate Design.
Green Valley Water Company Docket (2000 Not Filed)	Permanent Rate Application. Prepared schedules and testimony on Rate Base, Plant, Income Statement, and Revenue Requirement. Assisted in preparation of Cost of Capital and Rate Design.
Gold Canyon Sewer Company ACC Docket No. SW-02519A-00-0638	Permanent Rate Application - Sewer. Prepared schedules and testimony on Rate

COMPANY/CLIENT	FUNCTION
	Base, Plant, Revenue Requirement, and Income Statement. Assisted in preparation of Cost of Capital and Rate Design.
Rio Verde Utilities, Inc. ACC Docket No. WS-02156A-00-0321	Permanent Rate Application – Water and Sewer. Prepared schedules and testimony on Rate Base, Plant, Revenue Requirement, and Income Statement. Assisted in preparation of Cost of Capital and Rate Design.
Livco Water Company Livco Sewer Company ACC Docket No. SW-02563A-05-0820	Permanent Rate Application – Water. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.
Livco Water Company ACC Docket No. SW-02563A-07-0506	Permanent Rate Application – Water and Sewer. Prepared short-form schedules for Rate Base, Income Statement, Plant, Bill Counts, and Rate Design.
Cave Creek Sewer Company	Revenue Requirement, Rate Adjustment and Rate Design - Sewer.
Avra Water Cooperative ACC Docket No. W-02126A-00-0269	Permanent Rate Application – Water. Assisted in preparation of Rate Base, Plant, Income Statement, Revenue Requirement, and Rate Design.
Town of Oro Valley	Revenue Requirements, Water Rate Adjustments and Rate Design.
Far West Water Company ACC Docket No. WS-03478A-99-0144	Permanent Rate Application – Water. Assisted in preparation of schedules for Rate Base, Income Statement, Revenue Requirement, Lead-Lag Study, Cost of Capital, and Rate Design.
MHC Operating Limited Partnership Sedona Venture Wastewater ACC Docket No. W-	Permanent Rate Application – Sewer. Assisted in preparation of schedules for Rate Base, Plant, Income Statement, and Rate Design.
Vail Water Company	Permanent Rate Application. Assisted in

COMPANY/CLIENT	FUNCTION
ACC Docket No. W-01651B-99-0406	preparation of schedules for Rate Base, Plant, Income Statement, and Rate Design.
E&T Water Company ACC Docket No. W-01409A-95-0440	Permanent Rate Application - Water. Assisted in preparation of schedules for Rate Base, Plant, Income Statement, and Rate Design.
New River Utility ACC Docket No. W-01737A-99-0633	Permanent Rate Application - Water. Assisted in preparation of schedules for Rate Base, Plant, Income Statement, and Rate Design.
Golden Shores Water ACC Docket No. W-01815A-98-0645	Permanent Rate Application – Water. Assisted in preparation of schedules for Rate Base, Plant, Income Statement, and Rate Design.
Ponderosa Utility Company ACC Docket No. W-01717A-99-0572	Permanent Rate Application – Water. Assisted in preparation of schedules for Rate Base, Plant, Income Statement, and Rate Design.
Chaparral City Water Company Docket (1999 Not Filed)	Permanent Rate Application - Water. Prepared schedules and testimony on Rate Base, Plant, Revenue Requirement, and Income Statement. Assisted in preparation of Cost of Capital and Rate Design.

Exhibit TJB-2

Our Mission . . .

is to reliably deliver drinking water
to our customers
(that meets all regulated standards),
and to maintain a sustainable water supply
for our customers.

Our Guiding Values

To be good stewards of our members' trust and economic values;
To provide responsible, professional service to our customers;
To promote a safe work environment and to encourage the continued development of a highly skilled staff;
To advocate for responsible local and regional development and management of water resources;
To seek prudent acquisition opportunities for the benefit of our members and community; and
To be civic minded.

Community Water Company
Serving the Green Valley- Sahuarita area since 1977 . . .

2014
Annual Report

Community Water Company of Green Valley
(Consolidated)

MANAGEMENT

Arturo R Gabaldón, President
Community Water Company of Green Valley

Pierre Y Hanbart
Controller & Assistant Treasurer

Patricia A Carlstad
Office Manager & Clerk of the Board

VOLUNTEER BOARD CONSULTANTS

Richard W Cox
Retired Insurance Agent

Kenneth M Taylor, Jr
Brigadier General

Edith J Webber, Assistant Secretary
Retired Educator and Public Representative

Community Water Company of Green Valley
1501 South La Canada Drive
Green Valley, AZ 85622
(520) 625-8409
Communitywater.com

DIRECTORS & OFFICERS

Virgil W Davis, Chair
Retired Director, Electronic Programs,
University Research Foundation, Inc.

Thomas E Cooke, Vice Chair/Secretary
Retired Trial Attorney,
Cooke Lamanna Smith & Cogswell

Thomas J Six, Treasurer
Retired Chief Financial Officer,
Ameritech Information Systems

Arturo R Gabaldón, President
Community Water Company of Green Valley

Clarence M Ebert
Retired Contractor

Donna J Severidt
Retired Computer Consultant & Manager

Sandra L Stone
Retired Secondary School Educator

Donald G Weaver
Retired Executive Management

Paul D Williamsen
Retired Scheduling Supervisor,
United Technologies Chemical Systems

As of March 23, 2015

To the Members of
Community Water Company of Green Valley,
(An Arizona non-profit corporation)

It has been nine years since we installed treatment facilities to meet the tighter arsenic standards that were enacted by the EPA. And it's been eight years since we made major upgrades to your water delivery system; moving two of our operating wells east to avoid increasing sulfate levels. These system enhancements share two common characteristics—higher operating costs and increased complexity.

Coming forward to the present our application for debt to replace an obsolete reservoir with a larger—more secure—reservoir was approved in November by the Arizona Corporation Commission. As a result your reservoirs will store enough water for about two days of water deliveries under normal demand conditions and improve operating efficiencies.

Your company continues to work on reducing operating and maintenance costs. This year was no exception with excellent results obtained from the startup of company-developed arsenic drying beds. These drying beds dramatically reduce the cost associated with handling the waste from our arsenic treatment facilities. Other cost savings continue as we find better ways to manage the billing and work order systems using our recently upgraded computer system. These efforts are increasingly important, as our total water deliveries are continuing a long term downward trend, as is occurring in other Arizona areas.

While 2014 financial results are acceptable, the trend for the future is poor. We are delighted with the major system enhancements made to our system and our ability to cut costs in our operations. However, complicated financial guidelines that are in place to ensure that we only pay for assets that are necessary for reliable and safe operation of your system can, in certain situations, make it nearly impossible to recover the full cost of an asset. Your management team has been working diligently to overcome this basic cost recovery problem for many years, and yet our operating margin continues to decline.

It is important to maintain the financial sustainability of your company, and to continue generating sufficient revenues to fully meet our expenses, and develop reserves for dealing with unexpected system breakage and capital investments required to maintain aging infrastructure in good working order. Rate increases are necessary to meet these increased costs and maintain financial sustainability.

Looking forward, we continue delivery of water that meets or surpasses

all health and safety measures that we are subject to. We conduct all of the required tests to check delivered water quality, and publish our report in June of each year. Our Water Quality Report is available on our website at http://www.communitywater.com/wqr.pdf. Please visit our office if you would like a paper copy.

Project Renews was started in 2007 to bring renewable water supplies to the Green Valley-Sahuarita area. It has the approval of the Bureau of Reclamation and continues to be developed at no cost to our members. All necessary rights-of-way have been acquired, and a segment of pipeline has been installed in Sahuarita. The final Sahuarita bridge cost sharing payment was made to the town; and pipeline construction is expected to resume in 2016.

Our December 2014 survey shows that customer satisfaction remains high. Overall, 84% of respondents were satisfied or very satisfied with your company. Please congratulate our employees for their exemplary service. They are the heart of your company, and their good stewardship has resulted in a reliable and robust water delivery system. We are proud of our safety record and training programs. In 2014, Marc Levesque, an employee of 29 years, was recognized by AZWater Association as the Small System Operator of the Year.

Thanks also to our volunteer directors who represent our members' interests. Their knowledge of the community and our local water issues are valuable and we continue to be delighted with the expertise of the directors serving your company. We extend our best wishes to Mr. Tom Six who will complete his term as a director in 2015. We thank him for sharing his time and judgment with us during his dedicated service to your Company.

Our annual meeting of members is on Thursday, April 30, 2015 9:30 a.m., at the Joyner-Green Valley Branch Library, located at 601 N La Canada Drive, Green Valley, AZ. Registration begins at 9:00 a.m.

We invite you to attend and are looking forward to seeing you there.

Sincerely,
Community Water Company of Green Valley

Virgil W Davis
Chair of the Board

Arturo R Gabaldón
President

March 23, 2015

REPORT OF INDEPENDENT AUDITORS

To the Board of Directors and Members of
Community Water Company of Green Valley
(An Arizona non-profit corporation):

We have audited the accompanying consolidated financial statements of Community Water Company of Green Valley, which comprise the consolidated balance sheets as of December 31, 2014 and 2013, and the related consolidated statements of revenues and expenses, membership interest, and cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion.

An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Community Water Company of Green Valley as of December 31, 2014 and 2013, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Our audit was conducted for the purpose of forming an opinion on the consolidated basic financial statements as a whole. The Management and Volunteer Consultants listing, Directors & Officers listing, Letter to the Members, and Mission Statement, are presented for purposes of additional analysis and are not a required part of the consolidated basic financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the consolidated basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Ullmann & Company

ULLMANN & COMPANY
Certified Public Accountants
Phoenix, Arizona

March 27, 2015

Consolidated Balance Sheets
For the years ended December 31, 2014 and 2013
(In Thousands)

Assets

	2014	2013
Utility plant		
Plant in service, at cost	$ 42,375	$ 41,700
Construction work in progress	277	15
	42,652	41,715
Less accumulated depreciation	17,142	15,719
Total utility plant	25,510	25,996
Investment in LLC	229	263
Current assets		
Cash and cash equivalents	889	694
Securities available-for-sale, at market	1,757	1,418
Accounts receivable, less allowance for doubtful accounts of $3,000 and $4,000 in 2014 and in 2013, respectively	270	297
Materials and supplies	39	41
Deferred tax assets	3	5
Prepayments	52	28
Total current assets	3,010	2,483
Deferred charges		
Central Arizona Project (CAP)	1,899	1,839
Right-of-way (ROW) use permits	506	127
Other	145	99
Total deferred charges	2,550	2,065
Total assets	$ 31,299	$ 30,807

Membership Interest and Liabilities

	2014	2013
Membership interest		
Memberships and contributions	$ 48	$ 48
Accumulated surplus	9,366	8,694
Accumulated other comprehensive income	(242)	(64)
Total membership interest	9,172	8,678
Long-term debt	2,336	0
Current liabilities		
Accounts payable (A/P)	153	111
Current maturities of long-term debt	66	2,236
Accrued taxes	111	100
Other liabilities	275	266
Total current liabilities	605	2,713
Deferred credits		
Refundable advances for construction	7,384	7,392
Noncurrent accrued taxes	3	0
Mark-to-market value of interest rate swap	223	0
Other	201	149
Total deferred credits	7,811	7,541
Contributions in-aid-of construction (CIAC), net	11,375	11,875
Total membership interest and liabilities	$ 31,299	$ 30,807

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated Statements of Revenues and Expenses
For the years ended December 31, 2014 and 2013
(In Thousands)

	2014	2013
Operating revenues	$ 3,894	$ 3,863
Operating expenses		
Operations	1,823	1,895
Maintenance	279	238
Depreciation and amortization	922	876
Taxes - other	487	471
Total operating expenses	3,511	3,480
Excess of operating revenues over operating expenses	383	383
Other revenues (expenses)		
Passthrough expense investment in LLC	(34)	(54)
Interest income	13	11
Contributions for ROW use permits	389	0
Interest expense	(99)	(108)
Other income, net	24	27
Total other revenues (expenses)	293	(124)
Income before income tax	676	259
Income tax		
Current tax expense	0	(5)
Deferred tax expense	(4)	(1)
Total income tax	(4)	(6)
Excess of revenues over expenses	672	253
Other comprehensive income, net of tax:		
Unrealized gain (loss) on securities	45	(61)
Unrealized loss on mark-to-market value of interest swap	(223)	0
Total other comprehensive income	(178)	(61)
Total comprehensive income	$ 494	$ 192

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated Statements of Membership Interest
For the years ended December 31, 2014 and 2013
(In Thousands)

	Accumulated surplus	Accumulated other comprehensive	Memberships and contributions	Total membership interest
December 31, 2012				
Membership interest	$8,441	$ (3)	$48	$8,486
December 31, 2013				
Comprehensive income	253	(61)	0	192
December 31, 2013				
Membership interest	8,694	(64)	48	8,678
December 31, 2014				
Comprehensive income	672	(178)	0	494
December 31, 2014				
Membership interest	$9,366	$(242)	$48	$9,172

The accompanying notes are an integral part of the consolidated financial statements.

Consolidated Statements of Cash Flow
For the years ended December 31, 2014 and 2013
(In Thousands)

	2014	2013
Excess of revenues over expenses	$ 672	$ 253
Adjustments to reconcile excess of revenues over expenses to net cash provided by operating activities		
Depreciation and amortization	922	876
Depreciation and amortization included in operations and maintenance expense	97	87
Decrease (increase) in:		
Investment in LLC	34	53
Accounts receivable	27	25
Materials and supplies	2	(2)
Deferred tax assets	2	0
Prepayments	(24)	38
ROW use permits	(389)	0
Other deferred charges	(61)	(98)
Accounts payable	(18)	47
Accrued taxes	11	(1)
Other current liabilities	(1)	(7)
Total adjustments	602	1,018
Net cash provided by operating activities	1,274	1,271
Cash flow from investing activities		
Capital expenditures	(1,045)	(626)
Proceeds from maturities of securities available-for-sale	1,934	1,712
Purchase of securities available-for-sale	(2,228)	(2,331)
Capital charges for CAP	(60)	(48)
Investment in ROW use permits	(389)	(127)
Net cash used in investing activities	(1,788)	(1,420)
Cash flow from financing activities		
Proceeds from long-term debt	283	0
Repayment of long-term debt	(117)	(141)
Proceeds from refundable advances and CIAC	333	90
Repayment of refundable advances	(179)	(173)
Proceeds from contributions for ROW use permits	389	0
Net cash provided by (used in) financing activities	709	(224)
Net increase (decrease) in cash and cash equivalents	195	(373)
Cash and cash equivalents at beginning of year	694	1,067
Cash and cash equivalents at end of year	$ 889	$ 694
Non cash investing activities		
A/P purchases of utility plant	$ 65	$ 5
Non cash financing activities		
Repayment of long-term debt	$ 2,119	$ 0

The accompanying notes are an integral part of the consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. NATURE OF OPERATIONS:

Community Water Company of Green Valley ("CWC") was incorporated in 1975 as an Arizona non-profit corporation with members. It purchased an existing water utility business from Arizona Water Company and began operation of the water utility in 1977. The water utility is a regulated public service corporation that delivers water to residential and commercial customers in a southern Arizona active adult community.

These consolidated financial statements include the accounts of all entities in which CWC has a controlling financial interest. In 2011, CWC established a wholly-owned subsidiary corporation named SICAN, Inc. ("SICAN") for the purpose of business investments. In 2012, CWC created a variable interest entity named Community Water Company of Green Valley ROW Trust ("TRUST") in which CWC is the Trustor and the beneficiary, and SICAN is the Trustee. The entity is to hold and manage right-of-ways required for Project Renews construction. CWC has incorporated TRUST's financial results into the consolidated financial statements.

The accompanying consolidated financial statements present the results of consolidating CWC, SICAN, and TRUST (collectively referred to as "CWC Consolidated").

All significant intercompany accounts and transactions have been eliminated in consolidation.

2. SIGNIFICANT ACCOUNTING POLICIES:

Maintenance of Accounting Records – CWC Consolidated maintains its accounting records on the accrual basis of accounting in which revenue is recognized when earned and expenses are recognized when the obligation has been incurred. CWC maintains its records in accordance with the Uniform System of Accounts prescribed for Class A water utilities by the National Association of Regulatory Utility Commissioners.

Utility Plant - Utility plant is stated at original cost and consists of contract costs, labor, material and allowances for indirect costs. The cost of maintenance, repairs, and minor renewals is charged to expense in the year incurred. Depreciation and amortization expense is provided for on the straight-line basis utilizing the following annual rates based on the estimated useful lives of the asset. The depreciation rates and plant in service balances by major classes of depreciable assets are as follows:

	Depreciation Rate (in Percent)	**Balance At December 31, 2014 (In Thousands)**	Balance At December 31, 2013 (In Thousands)
Utility Plant	**2.00 to 12.50**	**$ 41,046**	$ 40,435
Computer Equipment	**20.00**	**609**	571
Backhoe	**5.00**	**107**	107
Vehicles	**20.00**	**442**	416
Land	**N/A**	**171**	171
Total		**$ 42,375**	$ 41,700

Cash and Cash Equivalents - CWC Consolidated considers cash in banks and all highly liquid investments purchased with a maturity of three months or less to be cash equivalents for purposes of reporting cash flows.

Investment Securities - CWC Consolidated accounts for its investment securities in accordance with FASB ASC 320-10-45 which provides that CWC Consolidated classify investments in securities as either trading securities, securities to be held to maturity or securities available-for-sale. CWC Consolidated has classified all investments as securities available-for-sale. Securities available-for-sale consists of U.S. Government investments, mortgage-backed securities, and certificates of deposits. These securities are recorded at fair value with any unrealized gains and losses being reflected as a separate component of membership interest. Gains (losses) on the sale of securities available-for-sale are determined using the specific identification method.

2. SIGNIFICANT ACCOUNTING POLICIES (continued):

Utility Customer Accounts Receivable - Regulated utility customer accounts receivable represent amounts billed customers on a cycle basis. Credit is extended based on the guidelines of the applicable regulators and generally, collateral is not required.

Allowance for Uncollectible Accounts - Allowances for uncollectible accounts are maintained for estimated probable losses resulting from CWC's inability to collect receivables from customers. Accounts that are outstanding longer than the payment terms are considered past due, and the allowance for doubtful accounts is computed based on an analysis of collectability of accounts receivable at the balance sheet date. For 2014 and 2013, there was an allowance of $3,000 and $4,000 respectively. SICAN and TRUST did not have allowances for uncollectible accounts for 2014 and 2013.

Materials and Supply Inventory - Inventory is stated at the lower of cost or market. Cost is determined on a weighted average basis.

TRUST's Intangible Assets – At December 31, 2014, TRUST holds intangible assets that are reviewed for impairment when circumstances indicate the carrying amount of an asset may not be recoverable. Impairment is recognized if the sum of undiscounted estimated future cash flows expected to result from the use of the asset is less than the carrying value. When an impairment loss is recognized, the asset's carrying value is reduced to its estimated fair value. Right of ways are initially measured based on their fair values and are being amortized on a straight-line basis over the life of the right of way and are stated at cost net of accumulated amortization.

Refundable Advances and Contributions for Construction - The cost of constructing certain expansions to utility plant has been advanced or contributed to CWC by the owners of the property served by the expansions. CWC repays advances by refunding to the owners specified percentages of the annual water revenue which CWC derives from the expansions. These repayments continue until the advances are fully repaid or until the expiration of an agreed-upon repayment term. Contributions for construction are not repaid. Further, if the repayment term of an advance expires before an advance is fully repaid the unpaid balance is reclassified as contributions in-aid-of construction. Amounts classified as contributions in-aid-of construction are amortized on a straight-line basis utilizing the plant composite rate set by the Arizona Corporation Commission. The amortization rate in effect for 2014 and 2013 was 3.98%.

2. SIGNIFICANT ACCOUNTING POLICIES (continued):

Refundable advances for construction are non-interest bearing. As of December 31, 2014 and 2013 CWC's refundable advances for construction specify repayment rates up to 20% of applicable annual water revenues and the majority of these contracts contain remaining repayment terms up to 15 years.

Revenue Recognition - CWC's operating revenues are generated through sales of water to residential and commercial customers in the Green Valley area. Revenue consists of monthly cycle customer billings for water service at rates authorized by the Arizona Corporation Commission. Revenue from metered accounts includes unbilled amounts based on the estimated usage from the latest meter reading to the end of the accounting period.

Comprehensive Income - Other comprehensive income consists of securities available-for-sale net unrealized holding gains and losses, and the initial recognition of the value of the interest rate swap.

Income Taxes - CWC is an Internal Revenue Code ("IRC") Section 501(a) organization, exempt from taxes by application of IRC Section 501(c)(12) for CWC's operations.

SICAN and TRUST are not exempt from income taxes. Income taxes are recognized for the tax effects of transactions reported in the financial statements and consist of taxes currently due plus deferred taxes related primarily to differences between the bases of certain assets and liabilities for financial and tax reporting. The deferred taxes represent the future tax return consequences of those differences, which will either be deductible or taxable when the assets and liabilities are recovered or settled.

Accounting for Uncertainty in Income Taxes - CWC, SICAN, and TRUST have adopted the provisions of FASB ASC 740, Income Taxes, related to accounting for uncertainty in income taxes on any unrelated business income. CWC files an informational return in the U.S. federal jurisdiction and also in Arizona. SICAN and TRUST each file income tax returns in the U.S. federal jurisdiction and also in Arizona.

Tax returns for all years after 2009 are subject to future examinations by tax authorities. The implementation of FASB ASC 740 had no effect on CWC Consolidated's financial statements for the years ended December 31, 2014 and 2013.

2. SIGNIFICANT ACCOUNTING POLICIES (continued):

No penalties were recognized for CWC, SICAN and TRUST in 2013 and 2014.

Use of Estimates - The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions. The estimates and assumptions affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements. They also affect the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Concentration of Credit Risk - Financial instruments that potentially subject CWC Consolidated to concentrations of credit risk consist principally of temporary cash investments and cash equivalents. CWC Consolidated places its temporary cash investments with financial institutions and limits the amount of credit exposure to any one financial institution since they are insured by the Federal Deposit Insurance Corporation or Securities Investor Protection Corporation. Concentrations of credit risk with respect to cash equivalents are limited due to the diversification of the investments. As of December 31, 2014 and 2013, CWC Consolidated had no significant concentrations of risk.

3. SICAN's INVESTMENT IN LLC:

SICAN has an investment in a Limited Liability Company ("LLC"), a development company that was established in November 2011 to manage Project Renews. This investment is recognized at book value. It was funded from non-member non-utility income. The following data reflects the book value items related to SICAN's investment in LLC. SICAN's cumulative interest in LLC's book value is as follows:

SICAN's cumulative interest in LLC	**Balance At December 31, 2014 (In Thousands)**	Balance At December 31, 2013 (In Thousands)
SICAN Capital Contribution in LLC	**$ 340**	$340
Cumulative Share of Net Loss	**$(111)**	$ (77)
Book Value	**$ 229**	$263

3. SICAN's INVESTMENT IN LLC (continued):

Net losses are due to timing; LLC is in the development phase of operations, and losses are expected until construction is complete. LLC's financial results can be summarized as follows:

LLC's Financial Summary	Balance At December 31, 2014 (In Thousands)	Balance At December 31, 2013 (In Thousands)
Total Assets	**$ 2,115**	$ 1,618
Total Liabilities	**36**	40
Total Equity	**$ 2,079**	$1,578
Revenues	**$ 0**	$ 0
Expenses	**222**	256
Net Loss	**$ (222)**	$ (256)

SICAN's share of net loss for the year is calculated using the weighted average capital accounts during the year. During the year ended December 31, 2014 and 2013, SICAN's loss was 15% and 21% respectively, which represented net loss of around $34,000 and $53,000 (a cumulative to date of $111,000). Although SICAN owns less than 20% of the profit and loss percentages of LLC at December 31, 2014, CWC Consolidated accounts for the investment using the equity method since SICAN is the managing member of LLC and has significant influence over LLC's operations.

4. SECURITIES AVAILABLE-FOR-SALE, AT MARKET:

The carrying amounts of investment securities available-for-sale are as follows:

	At December 31, 2014 (In Thousands) Cost	Unrealized Gains (Losses)	Fair Value
Certificates of Deposit with maturities within one-year	**$ 1,058**	**$ 0**	**$ 1,058**
Certificates of Deposit with maturities of 1-5 years	**451**	**0**	**451**
Mortgage Backed Securities U.S.	**267**	**(19)**	**248**
Total	**$ 1,776**	**$ (19)**	**$1,757**

4. SECURITIES AVAILABLE-FOR-SALE, AT MARKET (continued):

	At December 31, 2013 (In Thousands) Cost	Unrealized Gains (Losses)	Fair Value
Certificates of Deposit with maturities within one-year	$ 728	$ 0	$ 728
Certificates of Deposit with maturities of 1-5 years	447	0	447
Mortgage Backed Securities U.S.	307	(64)	243
Total	$ 1,482	$(64)	$ 1,418

Expected maturities will differ from contractual maturities since issuers may have the right to call or prepay obligations with or without call or prepayment penalties.

5. TRUST'S RIGHT-OF-WAY USE PERMITS:

TRUST's right-of-way use permits consist of the following:

	Balance At December 31, 2014 (In Thousands)	Balance At December 31, 2013 (In Thousands)
ROW Use Permits	**$ 517**	$ 128
Less: Accumulated Amortization	**(11)**	(1)
Total	**$ 506**	$ 127

This investment was funded from non-member non-utility income. Total amortization expense amounted to $9,891 and $1,397 for the years ended December 31, 2014 and 2013, respectively. TRUST's right of ways acquired during the years ended December 31, 2014, 2013 and prior were valued at a cost of $389,057, $126,031, and $2,399, respectively, and will be amortized over periods ranging from 10 years to 50 years. The following schedule by year relates to the estimated amortization expense for right of ways:

	At Year End December 31 (In Thousands)
2015	**$ 13**
2016	**14**
2017	**13**
2018	**14**
2019	**13**
Total	**$ 67**

6. DEFERRED CHARGES:

Advance payments relating to future water allocation from Central Arizona Project will be amortized to expense when usage occurs. Other deferred charges include stored water credits with the Arizona Department of Water Resources, rate case expenses and advance land lease rental. The water credits will be expensed when used, rate case expenses have been amortized over three years and land rental is amortized over the term of the lease.

CWC incurred municipal and industrial water service capital charges for its 2,858 acre-feet allocation of $60,018 and $50,015 in 2014 and 2013 respectively.

7. LONG-TERM DEBT:

On November 5, 2014, the Arizona Corporation Commission approved a $3,320,000, 15-year debt instrument with Compass Bank and Compass Mortgage Corporation ("CB"). CWC entered into a loan agreement with CB on November 14, 2014 to apply $2,119,208 to extinguish CWC's outstanding debt instrument with JPMorgan Chase and committed to borrow $1,115,000 for the purpose of building a two million gallon reservoir.

At December 31, 2014, CWC borrowed $283,000 toward construction and financing costs, bringing CWC's long-term debt to $2,402,208. The remaining $832,000 was drawn in March 2015 (see **Note 14, Subsequent Events**).

The note to CB matures on November 14, 2029, when the remaining unpaid balance is due in full. It is CWC's intent to extend the maturity of this note. Future maturities of long-term debt outstanding at December 31, 2014, based on the terms of the signed commitment are as follows:

	At Year End December 31 (In Thousands)
2015	$ 66
2016	93
2017	98
2018	104
2019	109
2020-2024	656
2025-2029	2,108
Future Maturities	3,234
Amounts Drawn Subsequent to 12/31/2014	(832)
Amount Due at 12/31/2014	$2,402

7. LONG-TERM DEBT (continued):

CB has first Deed of Trust on CWC's utility plant and the utility's revenues.

CWC's current debt agreement contains various covenants and requires CWC to maintain a debt service ratio of at least 1.2 as of the end of any year.

Long-term debt monthly payments equal to the accrued interest on the note commence December 14, 2014. Monthly principal and interest payments of $22,730 commence April 14, 2015. Interest accrues at a variable rate of LIBOR plus 2.7%.

The outstanding long-term balances of long-term debt were $2,402,208 and $2,236,291 at December 31, 2014 and December 31, 2013, respectively.

8. MARK-TO-MARKET VALUE OF INTEREST RATE SWAP:

On November 14, 2014, CWC entered into an interest rate Swap agreement with CB which CWC designated as a hedge against the variability in future interest payments due on $3,234,208. CWC will pay CB 2.98%; in return CB will pay LIBOR rate to CWC. The terms of the swap agreement effectively convert the variable rate interest payments due on the note to a fixed rate of 5.68% through maturity on November 15, 2029.

CWC is exposed to interest rate risk associated with CWC's floating rate debt. CWC entered into an interest rate swap in order to manage interest rate risk and adjust the interest rate profile of CWC's debt to achieve a target mix of floating and fixed rate debt. Any unrealized gains and losses as a result of the derivative will be presented as Other Comprehensive Income. In 2014, CWC recognized $222,529 as unrealized loss.

9. INCOME TAX:

As a 501(c)(12), CWC was not subject to income tax in 2014 and 2013. SICAN and TRUST incurred the following income tax for 2014 and 2013:

	At December 31, 2014		
	SICAN	TRUST	Total
Current			
Federal	$ 0	$ 0	$ 0
State	50	0	50
Total Current Tax Expense	50	0	50
Deferred			
Federal	261	$3,019	3,280
State	128	331	459
Total Deferred Tax Expense	389	3,350	3,739
Income Tax Expense	$ 439	$ 3,350	$3,789

	At December 31, 2013		
	SICAN	TRUST	Total
Current			
Federal	$ 351	$ 3,726	$ 4,077
State	176	363	539
Total Current Tax Expense	527	4,089	4,616
Deferred			
Federal	(30)	1,301	1,271
State	(15)	93	78
Total Deferred Tax Exp. (Benefit)	(45)	1,394	1,349
Income Tax Expense	$ 482	$ 5,483	$ 5,965

Deferred taxes are recognized for temporary differences between the bases of assets and liabilities for financial statements and income tax purposes. The differences relate primarily to accrual to cash differences and the amortization lives of intangible assets.

For SICAN, a valuation allowance of $23,792 is not recognized as a deferred tax asset at December 31, 2014 since the future benefit from accrual to cash differences from the Investment in LLC are not expected to be realized due to expected changes in profit and loss allocations in future years. The valuation increased by $6,827 during the year ended December 31, 2014.

The components of the net deferred tax asset (liability) at December 31, 2014 and December 31, 2013 are as follows:

9. INCOME TAX (continued):

	At December 31, 2014		
	SICAN	TRUST	Total
Deferred Tax Asset			
Current	$ 221	$ 2,690	$ 2,911
Total Deferred Tax Asset	221	2,690	2,911
Deferred Tax Liability			
Noncurrent	0	(3,050)	(3,050)
Total Deferred Tax Liability	0	(3,050)	(3,050)
Net Deferred Tax Asset (Liability)	$ 221	$ (360)	$ (139)

	At December 31, 2013		
	SICAN	TRUST	Total
Deferred Tax Asset			
Current	$ 610	$ 4,023	$ 4,633
Total Deferred Tax Asset	610	4,023	4,633
Deferred Tax Liability			
Noncurrent	0	(1,033)	(1,033)
Total Deferred Tax Liability	0	(1,033)	(1,033)
Net Deferred Tax Asset (Liability)	$ 610	$ 2,990	$ 3,600

10. SUPPLEMENTAL CASH FLOW INFORMATION:

CWC, SICAN, and TRUST engaged in the following investing and financing noncash transactions.

CWC's expired Advance in Aid of Construction contracts totaled $106,929 and $352,465 in 2014 and 2013, respectively.

CWC Consolidated Statements of Cash flow recognized $89,657 and $99,622 in interest payments in 2014 and 2013, respectively. No income taxes were paid by CWC in 2014 and 2013. SICAN paid $527 and $588 in income tax during 2014 and 2013, respectively. TRUST paid $2,696 and $11,255 in income tax during 2014 and 2013, respectively.

11. RETIREMENT PLAN:

CWC has defined contribution retirement plans which cover substantially all employees who worked more than 1000 hours in a given year. Under the provisions of these plans, 10% to 21% of qualified employees' salaries and wages are contributed by CWC to the Retirement Plans for investment by the plan trustees.

CWC recorded expenses for these contributions of $124,576 and $160,409 for the years ended December 31, 2014 and 2013, respectively.

Under the terms of the 401(k) plan and 401(k) Roth plan, qualified employees can contribute to the plan. Qualified employees become fully vested in the employer's contributions after five years of eligible service, as defined in the plan.

12. FAIR VALUE MEASUREMENTS:

FASB ASC 820, Fair Value Measurements and Disclosures, (ASC 820) establishes a framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements).

The three levels of the fair value hierarchy are described as follows:

Level 1: Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that CWC Consolidated has the ability to access.

Level 2: Inputs to the valuation methodology include:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability;
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

If the asset or liability has a specified (contractual) term, the level 2 input must be observable for substantially the full term of the asset or liability.

Level 3: Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

12. FAIR VALUE MEASUREMENTS (continued):

The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

The following is a description of the valuation methodologies used for assets measured at fair value. There have been no changes in the methodologies used at December 31, 2014 and 2013.

Securities Available-for-Sale – Certificates of Deposits: The fair values of available-for-sale Certificates of Deposits are based on quoted market prices for those or similar investments.

Mark-to-Market Value of Interest Rate Swap: The fair value of mark-to-market swap interest is based on the current and present value of projected 1-month LIBOR rates.

Securities Available-for-Sale – Mortgage-Backed Securities: The fair values of available-for-sale securities are based on quoted market prices for those or similar investments.

The preceding methods described may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair value. Furthermore, although CWC believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date. SICAN and TRUST did not hold securities in 2013 and 2014.

The following table sets forth by level, within the fair value hierarchy, CWC's assets and liabilities at fair value:

Level 1	**Balance At December 31, 2014 (In Thousands)**	Balance At December 31, 2013 (In Thousands)
Securities Available-for-Sale Certificates of Deposits	**$ 1,509**	$ 1,175
Securities Available-for-Sale Mortgage Backed Securities	248	243
Total Assets	$ 1,757	$ 1,418

12. FAIR VALUE MEASUREMENTS (continued):

	Balance At December 31, 2014 (In Thousands)	Balance At December 31, 2013 (In Thousands)
Level 2 Liabilities -- Mark-to-Market Value of Interest Rate Swap	$ 223	$ 0

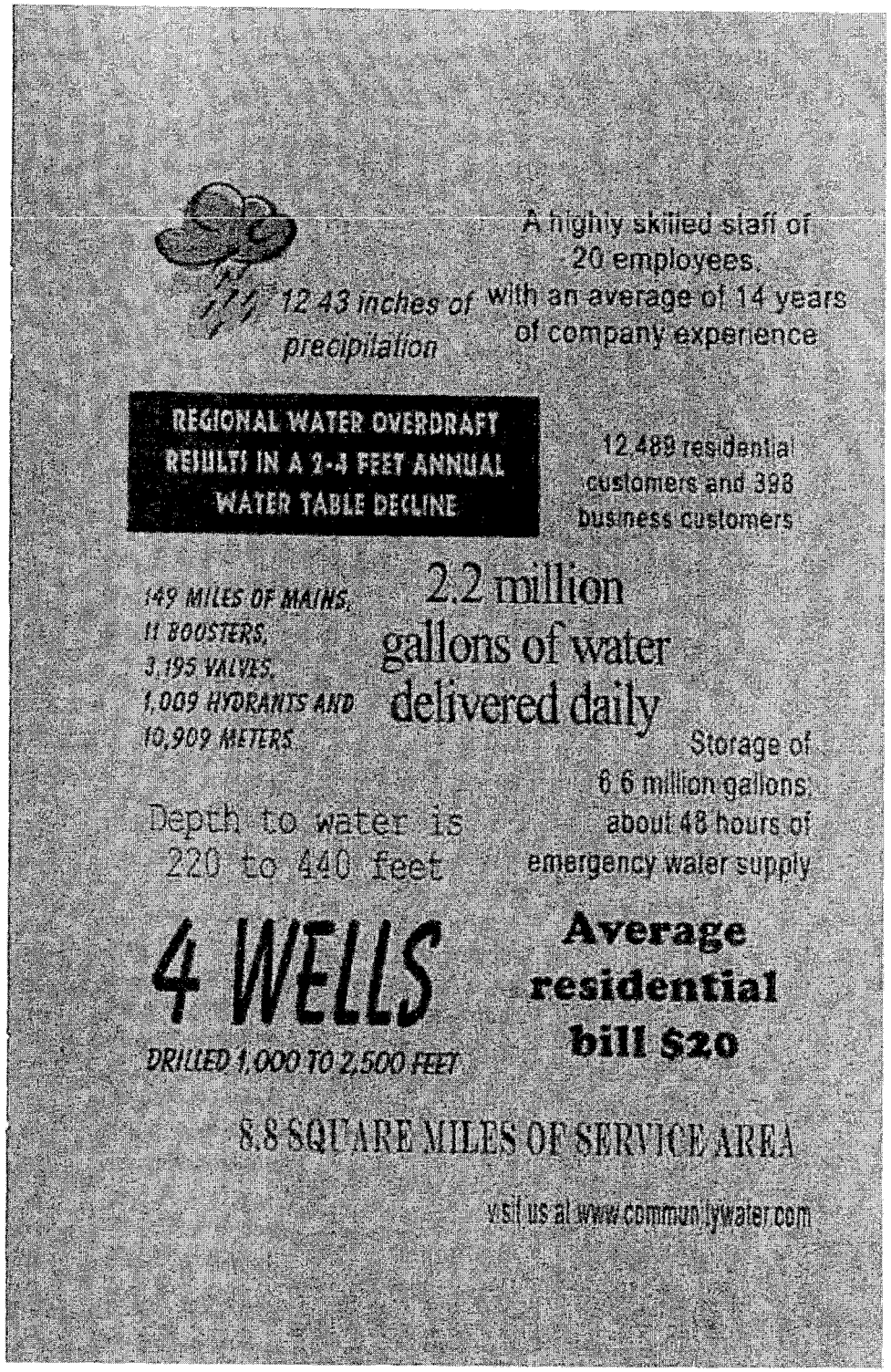
13. SALES TAXES:

Some transactions require CWC to collect sales tax from its customers. These transactions are presented in CWC Consolidated Statements of Revenues and Expenses as Operating Revenues. These taxes totaled $243,161 and $249,574 in 2014 and 2013, respectively.

14. SUBSEQUENT EVENTS:

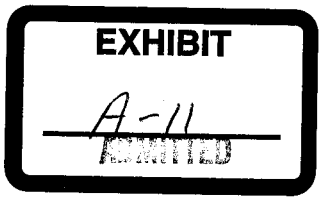
Management has evaluated subsequent events through March 27, 2015, the date on which the financial statements were available to be issued.

On March 12, 2015, CWC drew down the remaining $832,000 available on the long-term debt.



BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
DOUG LITTLE – CHAIRMAN
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN



IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE.	DOCKET NO. W-02304-15-0263

REBUTTAL TESTIMONY OF

THOMAS J. BOURASSA

ON BEHALF OF

COMMUNITY WATER COMPANY OF GREEN VALLEY

March 15, 2016

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Exhibits:

Exhibit TJB-RT-1 Depreciation Analysis (Vintage Group)

I. INTRODUCTION.

Q. PLEASE STATE YOUR NAME AND ADDRESS.

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

Q. HAVE YOU PREVIOUSLY SUBMITTED DIRECT TESTIMONY IN THE INSTANT CASE?

A. Yes, my Direct Testimony was submitted in support of the initial application in this docket by Community Water Company of Green Valley ("Company").

Q. WHAT IS THE PURPOSE OF THIS REBUTTAL TESTIMONY?

A. I am providing Rebuttal Testimony in response to the Direct Testimony filing by Arizona Corporation Commission Utilities Division Staff ("Staff") with respect to rate base, revenues and expenses, operating margin and rate design.

Q. WHAT IS THE REVENUE INCREASE THAT THE COMPANY IS PROPOSING IN ITS REBUTTAL FILING?

A. The Company is now proposing a total revenue requirement of $4,165,106, which constitutes an increase in revenues of $682,357, or 19.59 percent over test year revenues.

Q. HOW DOES THIS COMPARE WITH THE COMPANY'S DIRECT FILING?

A. In its Direct Filing, the Company requested a total revenue requirement of $4,231,490, which required an increase in revenues of $708,244 or 20.10%. The Company's revenue requirement request is approximately $66,384 less in its Rebuttal Filing from what it requested in its Direct Filing. The Company's requested revenue increase is lower by $25,887 from $708,244 in the Direct Filing to $682,357 in the Rebuttal Filing.

Q. WHY IS THE REQUESTED REVENUE INCREASE LOWER?

A. In its Rebuttal filing, the Company has adopted a number of adjustments recommended by Staff, as well as proposing a number of its own adjustments. The Company adjustments reduce its proposed test year Operating Expenses by $55,415 and reduce its proposed test year operating revenues by $40,938.

Q. HAS THE COMPANY PROPOSED RATE BASE CHANGED?

A. Yes. The Company's rebuttal proposed Original Cost Rate Base ("OCRB") is $7,628,678 compared to the Direct Filing OCRB of $7,678,586, a reduction of $49,908. This change is the result of a true-up to actual cost of the Company proposed post-test year plant (Reservoir No. 5). The Company continues to propose that its OCRB be used as its Fair Value Rate Base ("FVRB").

II. REVENUE REQUIREMENT.

Q. WHAT ARE THE PROPOSED REVENUE REQUIREMENTS AND RATE INCREASES FOR THE COMPANY AND STAFF AT THIS STAGE OF THE PROCEEDING?

A. The proposed revenue requirements and proposed rate increases are as follows:

	Revenue Req.	Revenue Incr.	% Increase
Company-Direct	$4,231,490	$ 708,244	20.18%
Staff	$3,899,354	$ 257,877	7.08%
Company Rebuttal	$4,165,106	$ 682,357	19.59%

Q. DOES STAFF AGREE WITH THE COMPANY'S PROPOSED 16.5 PERCENT OPERATING MARGIN?

A. Yes. The Company proposed a 16.5 percent operating margin in its Direct Filing. Staff proposed the same in its Direct Testimony. The Company, in its Rebuttal Filing, maintains its proposal for a 16.5 percent operating margin.

III. RATE BASE.

Q. WOULD YOU PLEASE IDENTIFY THE PARTIES' RESPECTIVE RATE BASE RECOMMENDATIONS?

A. The rate bases proposed by all parties in the case are as follows:

	OCRB	FVRB
Company-Direct	$7,678,586	$7,678,586
Staff	$6,563,586	$6,563,586
Company Rebuttal	$7,628,678	$7,628,678

a. PLANT-IN-SERVICE.

Q. WOULD YOU PLEASE DISCUSS THE COMPANY'S PROPOSED ORIGINAL COST RATE BASE, AND IDENTIFY THE ADJUSTMENTS YOU HAVE ACCEPTED FROM STAFF?

A. The Company's rebuttal rate base adjustments to plant-in-service ("PIS") are shown on my rebuttal schedules, at Schedule B-2, pages 3.

Q. PLEASE IDENTIFY THE COMPANY'S REBUTTAL RATE BASE ADJUSTMENTS.

A. Rate Base Adjustment 1 – A, as shown on Rebuttal Schedule B-2, at page 3.1, reduces the cost of the Company proposed post-test year PIS for Reservoir No. 5 by $49,908, in order to true up the Company's estimate in its Direct Filing to actual cost.

Rate Base Adjustment 1 – B , as shown on Rebuttal Schedule B-2, at page 3.2, reflects the reconciliation of the proposed PIS balance to the reconstruction of the PIS balances, as shown on Schedule B-2, pages 3.3 to 3.9.

There are no other proposed adjustments to PIS.

Q. DO THE COMPANY AND STAFF AGREE ON THE TOTAL PIS BALANCE?

A. No. The Company proposes a total PIS balance of $42,402,220 while Staff proposes a total PIS balance of $41,337,128, a difference of $1,065,082.[1] The difference is due to a disagreement regarding whether Reservoir No. 5 (Plant Account 330 – Distribution Reservoirs and Standpipe) is used and useful. Staff proposes to remove the costs of the post-test year PIS for asserting this plant is not needed.[2] The Company disagrees with Staff. Arturo Gabaldón, Raul Francisco G. Pina, and Ray L. Jones all discuss why Reservoir No. 5 is used and useful and should be in rate base in their respective Rebuttal Testimonies.

[1] *See* Rebuttal Schedule B-2, page 1 and Staff Schedule PNT-2.

[2] *See* Direct Testimony of Phan Tsan ("Tsan Dt.) at 6.

b. ACCUMULATED DEPRECIATION

Q. PLEASE EXPLAIN THE COMPANY'S ACCUMULATED DEPRECIATION ADJUSTMENTS.

A. Rate Base Adjustment 2 – A , as shown on Rebuttal Schedule B-2, page 4.1, is intentionally left blank.

Rate Base Adjustment 2 – B , as shown on Rebuttal Schedule B-2, page 4.2, reflects the reconciliation of the proposed PIS balance to the reconstruction of the PIS balances as shown on Schedule B-2, pages 3.3 to 3.9.

There are no other proposed adjustments to PIS.

Q. DO THE COMPANY AND STAFF AGREE ON THE TOTAL A/D BALANCE?

A. Yes. Both the Company and Staff propose a total A/D balance of $16,014,775.[3]

c. OTHER RATE BASE ITEMS.

Q. DO THE PARTIES AGREE ON THE BALANCES FOR CONTRIBUTIONS-IN-AID OF CONSTRUCTION (CIAC), AND ADVANCES IN AID-OF CONSTRUCTION (AIAC)?

A. Yes.[4]

[3] *See* Rebuttal Schedule B-2, page 1 and Staff Schedule PNT-2.

[4] Compare Rebuttal Schedule B-2, page 1 and Staff Schedule PNT-2.

IV. INCOME STATEMENT.

a. DEPRECIATION EXPENSE.

Q. PLEASE DISCUSS THE COMPANY'S PROPOSED ADJUSTMENTS TO REVENUES AND EXPENSES AND IDENTIFY ANY ADJUSTMENTS YOU HAVE ACCEPTED FROM STAFF.

A. The Company rebuttal adjustments are detailed on Rebuttal Schedule C-2, pages 1-13. The rebuttal income statement with adjustments is shown on Rebuttal Schedule C-1, pages 2.1 and 2.2.

In rebuttal Adjustment 1, the depreciation expense is annualized, reflecting the PIS adjustments discussed above. Depreciation expense has decreased from the Company's direct filing primarily due to a reduction in PIS and revision to the CIAC amortization rate. The Company's proposed depreciation expense is now $1,021,412 – approximately $4,971 less than in its direct filing. Staff proposes a depreciation expense of $823,885[5], which is $197,527 lower than the Company's proposed depreciation expense.

The primary reason for this difference is two-fold. First Staff excludes post-test year PIS, the proposed cost of which is $1,065,082, at this stage of the proceeding, which I discussed earlier in my Rebuttal Testimony. Second, Staff reduces the depreciable PIS balances for several plant accounts, which the Company does not.[6] Specifically, Staff reduces the depreciable PIS balances for Account 311 – Electric Pumping Equipment (by $1,163,886), Account 340.1 – Computers and Software (by $105,743), Account 341 – Transportation

[5] *See* Direct Testimony of Phan Tsan ("Tsan Dt.") at 17.

[6] Compare Rebuttal Schedule C-2, page 2 and Staff Schedule PNT-14.

Equipment (by $300,372), Account 345.1 – Power Operated Equipment (by $107,179), and Account 346 – Communications Equipment (by $50,299).[7]

Q. IS THERE FULLY DEPRECIATED PLANT FOR THESE ACCOUNTS?

A. No. Based upon the Company's reconstruction of the PIS and A/D balances, using the Broad Group procedure for computing depreciation, the only fully depreciated PIS account is Account 311.1 - Pumping Equipment – Gas.[8]

Q. WHAT IS THE BROAD GROUP PROCEDURE?

A. Under the Broad Group procedure, all units of plant within a particular depreciation category (usually a plant account or subaccount) are considered to be one depreciable property group.[9] It does not matter when an asset is added to the group as each depreciable property group has some "average" life. Annual depreciation is computed at the group level based upon the average life of the group. The average life is the result of a calculation, and there is no assurance that any of the property items within the group equals the average. In other words, some plant will last longer than the average life and some plant will last shorter that the average life.

In addition, the Broad Group is widely used and produces reasonably stable depreciation rates from year to year, because of its averaging effects.[10] It is a procedure that requires the least accounting records of annual additions and balances.

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[7] *See* Staff Schedule PNT-14.

[8] *See* Rebuttal Schedule B-2, page 3.9, line 14.

[9] *Public Utility Depreciation Practices*, National Association of Regulatory Commissioners, August 1996.

[10] *Id.*

For accounting purposes, every item in the depreciable group under the Broad Group procedure is assumed to have the life of the group and to be fully depreciated at the time of retirement. This is consistent with the National Association of Regulatory Commissioners ("NARUC") Uniform System of Accounts ("USOA") which states that when a retirement is recorded, the cost is removed from both the PIS balance and the A/D balance regardless of how much depreciation was recorded.[11]

Q. IS THE BROAD GROUP PROCEDURE AN ACCEPTABLE METHOD FOR DEPRECIATING PLANT?

A. Yes. The Broad Group procedure is a commonly used and accepted method in regulatory utility accounting. In fact, it is has been used by Staff in many rate cases. As stated in *Accounting for Public Utilities* published by Mathew Bender and Company:

> The group concept has been an integral part of utility depreciation accounting practice for many years. Though the concept is applicable to nonregulated entities, it is not often applied. Nonregulated entities tend to depreciate individual property units independently. Under the group concept, no attempt is made to keep track of the depreciation reserve applicable to individual items of property. This does not imply loss of control, but rather is a practical approach for utilities because they possess millions of items of property.[12]

Thus, the Company has properly depreciated plant using this method.

[11] Accounting Instruction 27.B (2), *Uniform System of Accounts for Class A Water Utilities*, National Association of Regulatory Commissioners, 1996.

[12] Deloitte & Touche LLP, et al. *Accounting for Public Utilities*. Lexus-Nexis (Mathew-Bender & Co.) 2009, Sec. 6.04 ("Deloitte & Touche").

Q. HOW DID STAFF DETERMINE ITS FULLY DEPRECIATED PLANT AMOUNTS?

A. It's not entirely clear. But, it appears that Staff analysis is based upon a Vintage Group procedure.[13] Under the Vintage Group procedure each vintage (or placement year) within the depreciation category (plant account) is considered to be a separate group. For example, plant added to Account 311 in 2007 would be s separate Vintage Group from plant added to Account 311 in 2008. Based on my review of Staff's testimony and workpapers, it appears that Staff is trying to impose the Vintage Group procedure onto the Broad Group, to justify its position that certain plant is fully depreciated.

Q. IS THE ATTEMPT TO IMPOSE FULLY DEPRECIATED PLANT, AS DETERMINED BY THE VINTAGE GROUP PROCEDURE TO A BROAD GROUP, A VIOLATION OF THE BROAD GROUP PROCEDURE?

A. Yes. Moreover, to impose fully depreciated plant, as Staff has done here, essentially means that neither method is being used. In other words, Staff is using some other method, other than either the Broad Group procedure or the Vintage Group procedure, to depreciate PIS. That is not appropriate.

Q. HAS STAFF RECOMMENDED THE COMPANY USE A VINTAGE GROUP PROCEDURE FOR ITS PIS ACCOUNTING AND DEPRECIATION?

A. No. And this further confuses the issue. If a Vintage Group procedure is used to determine whether there are fully depreciated plant amounts or groups within a Broad Group, then that would require a change in methods. In other words, the Broad Group procedure no longer works as intended. Further, this new procedure is neither the Broad

[13] Tsan Dt. at 12-14.

Group procedure nor the Vintage Group procedure. Rather, it becomes something akin to a hybrid procedure, which is not an accepted method.[14]

Q. DID YOU FIND ADDITIONAL ERRORS IN STAFF'S DEPRECIATION ANALYSIS, IN ADDITION TO ITS UNACCEPTED HYBRID PROCEDURE?

A. Yes. After examining the Staff workpapers, I found errors in the Staff analysis. If these errors are corrected, the conclusions regrading full depreciated plant would be much different. First, Staff went back to 2004 as the starting point for its vintage groups. 2004 is the test year from two prior rate cases ago. The Company's last rate case used a test-year ending on December 31, 2007 – and reached resolution in Decision No. 71748 (February 3, 2010). Based on my professional opinion, beginning the analysis from 2004 and forward inappropriately challenges the findings and determinations made in Decision No. 71748. The Company opposes using the Vintage Group; but if the Vintage Group is to be used, then I believe that the vintage groups should be constructed from 2007 and forward, so as to avoid changes to the A/D balances set in the prior rate case that used a test year of 2007. Second, if retirements are handled properly, the total amount of fully depreciated plant is only $559,575.[15] Compare this to Staff's fully depreciated plant total of $1,845,973.[16]

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[14] *See Public Utility Depreciation Practices*, National Association of Regulatory Commissioners, August 1996.

[15] As shown in Rebuttal Exhibit TJB-RT-1. Fully depreciated plant as follows: $0 for account 311 – Electric Pumping Equipment, $118,494 for account 311.1 – Electric Pumping Equipment, $89,293 for account 340.1 – Computers and Software, $194,310 for account 341 – Transportation Equipment, $107,179 for account 345.1 – Power Operated Equipment, and $50,299 for account 346 – Communications Equipment.

[16] As shown in Staff Schedule PNT-14. Fully depreciated plant as follows: $1,163,886 for account 311 – Electric Pumping Equipment, $118,494 for account 311.1 – Electric Pumping Equipment, $105,743 for account 340.1 – Computers and Software, $300,372 for account 341 – Transportation Equipment, $107,179 for account 345.1 – Power Operated Equipment, and $50,299 for account 346 – Communications Equipment.

Q. DO YOU HAVE AN EXHIBIT SHOWING HOW YOU DETERMINED THERE WOULD ONLY BE $559,575 OF FULLY DEPRECIATED PLANT?

A. Yes. I have attached as Rebuttal Exhibit TJB-RT-1 showing my analysis using a Vintage Group procedure.

Q. ARE YOU RECOMMENDING THAT THE COMMISSION ADOPT YOUR FULLY DEPRECIATED PLANT NUMBERS?

A. Absolutely not. My intention with the exhibit is to simply show how different the amount of so-called fully depreciated plant there would be if the Staff errors in its analysis are corrected. Staff's analysis is flawed and should not be adopted – never mind the fact that you cannot impose a Vintage Group procedure on to a Broad Group procedure. The Company recommends continuing with the use of the Broad Group procedure, which is a perfectly acceptable method, and rate payers are not harmed by its use. As I stated previously, the Broad Group procedure is a common method, easy to administer and has the advantage providing reasonably stable depreciation from year to year because of its averaging effect. At the end of the day, the amount of depreciation proposed by the Company is reasonable and should be adopted.

Q. HAS THE COMPANY USED THE BROAD GROUP PROCEDURE IN ITS PAST RATE CASES?

A. Yes. I prepared the Company's last two rate cases. In each case, the Broad Group was used to reconstruct the A/D balances which were ultimately adopted by the Commission.

Q. PLEASE RESPOND TO THE STAFF TESTIMONY THAT UNDER THE BROAD GROUP METHOD RATE PAYERS ARE BEING ASKED TO PAY FOR MORE THAN THE ORIGINAL INVESTMENTS IN ASSETS?

A. That is simply not true. Depreciation stops when the plant account is fully depreciated under the Broad Group, just as depreciation stops under any of the other methods when the group or individual asset becomes fully depreciated. For example, the Company is not seeking depreciation expense for PIS Account 311.1 – Pumping Equipment – Gas because this account is fully depreciated at the end of the test year. Rate payers do not pay for more than the cost of the plant, no matter what procedure is used.

Q. ARE THE DEPRECIATION RATES APPLIED TO THE DEPRECIABLE PROPERTY GROUPS IMPORTANT?

A. Yes. In any procedure used for depreciation accounting (Broad Group, Vintage Group, Equal Life Group, or Specific Asset) requires that the expected average life used to compute the depreciation rate should reasonably reflect the actual average lives of the property group. A depreciation study can provide a basis for determining the average life of each depreciable property group. However, most utilities in Arizona do not conduct depreciation studies, not only because of the cost but the inevitable disputes over the study and the resulting depreciation rates. Staff's Engineering Section typically recommends depreciation rates by plant account based upon their expertise and utilities typically adopt them. The Company has used the Staff typical and customary depreciation rates since they were approved in Decision No. 69205 (December 21, 2006).

Q. DOES THE BROAD GROUP PROCEDURE PROVIDE RATIONAL AND SYSTEMATIC MANNER IN WHICH TO RECOVER DEPRECIATION?

A. Yes. And both NARUC and Mathew Bender, who are recognized authorities on this subject, agree.

Q. WOULD THE COMPANY AGREE TO PERFORM DEPRECIATION STUDIES IN THE FUTURE IF IT IS ALLOWED TO CONTINUE USING THE BROAD GROUP PROCEDURE?

A. Yes, as long as the Company is allowed an opportunity to recover the costs of depreciation studies which I estimate to be at least $30,000 for each study.

b. INCOME STATEMENT ADJUSTMENTS 3-4.

Q. PLEASE CONTINUE WITH YOUR DISCUSSION OF THE INCOME STATEMENT ADJUSTMENTS.

A. The Company and Staff agree on the method of computing property taxes, the assessment ratio and the property tax rate. I computed the property taxes based on the Company's adjusted test-year proposed revenues and proposed revenues with the rate increase, whereas Staff's uses its own adjusted test year proposed revenues and proposed revenues with the rate increase. Therefore, the difference in the adjusted test-year property tax expense is simply a difference in the revenue proposals of each of the parties.

Adjustment 3 is reserved for changes to Rate Case Expense. The Company is not proposing a change at this time.

Adjustment 4 increases Miscellaneous Revenues by $23,358 and reflects the adoption of the Staff proposal to reclassify Other Non-utility Revenues to Miscellaneous Revenues.[17]

[17] Tsan Dt. at 8.

c. **USAGE NORMALIZATION.**

Q. PLEASE DESCRIBE ADJUSTMENT 5.

A. Adjustment 5 reduces Metered Revenues by an additional $63,902 over and above the Company's Direct Filing usage normalization adjustment of $94,433. The Company's total usage normalization adjustment at this stage of the proceeding is $158,335. The Company's updated usage normalization reflects the expected reduction in gallons sold primarily based upon an analysis of trends in customer usage from 2010 through 2015. Adjustment 5 also reduces purchased power expense and chemicals expense based upon the expected reduction in gallons to be sold from the usage normalization.

Q. WHAT WAS UPDATED IN THE USAGE NORMALIZATION ANALYSIS?

A. The Company added another actual year (2015) of water usage data.

Q. DOES THE UPDATED USAGE NORMALIZATION ANALYSIS SHOW FURTHER REDUCTIONS IN WATER USAGE?

A. Yes it does.

Q. WHY DOES THAT ANALYSIS SHOW FURTHER REDUCTIONS IN WATER USAGE?

A. Not surprisingly, residential average usage has declined steadily from 2010 and 2014 and declined further in 2015. Commercial usage has declined significantly from 2014 to 2015. The greatest impact on the reduction in commercial water usage has been from a reduction in usage from Freeport McMoRan Sierrita ("Sierrita"). Sierrita's water usage declined from 29.8 million gallons in 2014 to 20.1 million gallons in 2015, equivalent to an approximate 32.6-percent reduction. Further, Sierrita's water usage so far in 2016 is on

pace to reflect another 25-to-30 percent reduction. The loss of commercial revenues from Sierrita from 2014 to 2105 alone amounted to nearly $35,000.

Q. WHAT IS STAFF POSITION ON THE COMPANY'S REVENUE NORMALIZATION ADJUSTMENT?

A. Staff has rejected the Company's revenue normalization adjustment.[18]

Q. PLEASE COMMENT ON THE STAFF TESTIMONY REGARDING THE COMPANY'S USAGE NORMALIZATION ADJUSTMENT.

A. Staff asserts that the Company's usage normalization adjustment is faulty because it does not take into consideration such things as seasonality and weather.[19] Nothing can be further from the truth. The usage normalization adjustment considers the annual changes on average customer usage, which may be due to such factors as changes in weather and customer usage patterns among others. The impact on water usage from seasonality, if any, occurs within each year and are encompassed in each year's usage data. The same is true of weather and its impacts on the annual water usage. Thus, a comparison of the annual average usage from year-to-year represents a comparison of all the factors (including conservation) which have an impact on water usage. It is not necessary to single out individual factors impacting water usage, particularly when comparing five or more years of usage data and developing an overall trend in water usage. Mr. Gary Woodard discusses the Company's actual experienced declining use in further detail, including the implication of the Company's rate design, in his pre-filed Rebuttal Testimony.

[18] Tsan Dt. at 7.

[19] *Id.*

Q. WOULD YOU EXPECT DECLINING USAGE, GIVEN THE TREND TO ESTABLISHING INVERTED-TIER RATES FOR WATER COMPANIES OVER THE PAST DECADE AND A HALF?

A. Yes, we should expect a further decline in usage. Putting aside the mandates for low flow toilets and fixtures, advances in automating irrigation, and other measures, the Commission has imposed inverted-tier rates over the 10 to 15 years. Inverted-tier rates are water conservation rates specifically designed to reduce water usage. If inverted tier rates do not result in water conservation, then why impose them? If inverted-tier rates are effective, then there should be an acknowledgement of this fact when evaluating what are just and reasonable rates; otherwise, the rates we set in a rate case will not generate the intended revenue requirement going forward, and they would not be just and reasonable.

Q. COMPARED TO THE LAST TEST YEAR, HOW MUCH LESS REVENUE IS BEING GENERATED FROM RATES AS A RESULT OF REDUCED WATER USAGE?

A. Comparing the prior test year (2007) to the current test year (2014), about $250,000 less annual revenue is being generated. In other words, had usage remained at the levels in 2007, the Company would have generated $250,000 more in revenues. So roughly 37 percent of the revenue increase the Company is requesting in the instant case is to address the reduction in usage. If we do not recognize the effects of declining usage in the instant case then future rate increases will be higher than they otherwise would be.

Q. HAS THE COMMISSION APPROVED USAGE NORMALIZATION ADJUSTMENTS IN THE PAST?

A. Yes. I have proposed usage normalization adjustments (declining usage adjustments) in

several recent cases using similar methods as I employ in the instant case.[20] In many of those cases, the Commission has adopted the revenue normalization adjustment.[21] This is why I am surprised by Staff's rejection of the usage normalization adjustment in the instant case. In the pending Sahuarita Water Company rate case, for example, Staff is not opposing Sahuarita Water Company's revenue normalization adjustment, which I prepared.[22]

d. ADJUSTMENTS 6-9 (INCLUDING REPAIRS & MAINTENANCE).

Q. PLEASE CONTINUE WITH YOUR DISCUSSION OF THE REBUTTAL REVENUE AND/OR EXPENSE ADJUSTMENTS.

A. Adjustment 6 reduces Salaries and Wages by $72,833 reflects the adoption of the Staff proposal to reduce this expense.[23]

Adjustment 7 reclassifies certain expenses from Miscellaneous Expense to Employee Pension and Benefits and reflects the adoption of the Staff proposals.[24]

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[20] *See* Epcor Water Inc. Docket No. WS-01303A-14-0010, Decision No. 75268; Liberty Utilities (Litchfield Park Water & Sewer) Corp., Docket No. W-01427A-13-0043, Decision No. 74437; Rio Rico Utilities, Inc., Docket No. WS-02676A- 12-01 96, Decision 73996; Sahuarita Water Company, Docket No. W-03718A-15-0213, pending Decision; Liberty Utilities (Bella Vista Water) Corp., Docket No. W-02465A-15-0367, pending Decision; and, Liberty Utilities (Rico Rico Water & Sewer) Corp., Docket No. WS-02676A-15-0368, pending Decision.

[21] In some case, there may have been a settlement agreement that may have excluded the adoption of a revenue normalization adjustment.

[22] *See* Sahuarita Water Company, Docket No. W-03718A-15-0213.

[23] Tsan Dt. at 9.

[24] Tsan Dt. at 9 and 11.

Adjustment 8 increases Repairs and Maintenance Expense by $11,114 which reflects the Company's updated estimated required annual accrual of expense for large maintenance items such as reservoir and tank maintenance.

Q. WHAT IS STAFF'S RECOMMENDATION REGARDING REPAIRS AND MAINTENANCE EXPENSE?

A. Staff proposes to reduce Repairs and Maintenance Expense by $29,126.[25] Staff does not agree with the test year level of accrual totaling $55,886, because Staff does not agree with the development of the cost estimates in the Company's direct filing, which used a 3% inflation factor.[26] Further, Staff excludes projected maintenance on Reservoir No. 5, which Staff asserts is not used and useful. However, putting aside the disagreement on Reservoir No. 5, the Company's current estimates do not contain any inflation factor and are instead based upon current quotes and/or actual cost.[27] Mr. Gabaldón describes the Company's analysis regarding necessary repairs and maintenance expense in his Rebuttal Testimony.

Q. HOW MUCH OUT OF THE $67,000 REQUEST FOR MAINTENANCE AND REPAIRS EXPENSE IS RELATED TO RESERVOIR NO. 5?

A. $15,000. So $52,000 is to cover maintenance and repair expense for tank and reservoir facilities where there is no dispute between Staff and the Company as to the used and usefulness of those facilities.

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[25] Tsan Dt. at 10.

[26] *Id.*

[27] *Id.*

Q. PLEASE DESCRIBE ADJUSTMENT 9.

A. Adjustment 9 reduces Outside Services by $7,050 and reflects the partial adoption of the Staff proposal to reduce Outside Services.[28] The Company rejects the Staff proposal to reduce Outside Services for legal costs totaling $10,911.[29] Staff's reasoning for excluding these costs is that these costs were related to a legal matter with one of its employees that Staff considers the expense to be a one-time, non-recurring event.[30]

Q. DOES THE COMPANY AGREE WITH STAFF'S PROPOSAL TO REDUCE LEGAL EXPENSE?

A. No. The Company disagrees with the Staff proposal to reduce legal expense. The Company has incurred legal expense every year. Since 2010 the Company has incurred nearly $15,000 of annual legal costs on average. The specifics of legal matters may change for year to year; but the Company will continue incur legal expense going forward, regardless of the specific nature of the matters. Eliminating $10,911 of legal costs from the test year will leave the level of expense to less than $7,500, which is roughly half of the average annual legal expense since 2010. The Company believes the test-year level of legal expense is a reasonable representation of the annual legal costs the Company expects to incur on a going forward basis.

Q. ARE THERE ANY OTHER PROPOSED REBUTTAL ADJUSTMENTS.

A. No.

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[28] Tsan Dt. at 10-11.

[29] *Id.*

[30] *Id.*

Q. ARE THERE ANY OTHER DISPUTES BETWEEN THE PARTIES REGARDING REVENUES AND/OR EXPENSES?

A. No.

V. RATE DESIGN.

Q. WHAT ARE SWC'S PROPOSED RATES FOR WATER SERVICE?

A. The Company's proposed rates are shown on Rebuttal Schedule H-3, pages 1 and 2.

Q. WHAT WILL BE THE AVERAGE 5/8 x 3/4-INCH METERED CUSTOMER AVERAGE MONTHLY BILL UNDER THE COMPANY'S REBUTTAL PROPOSED RATES?

A. As shown on Schedule H-2, page 1, the average monthly bill under proposed rates for a 5/8 x ¾-inch metered customer, using an average of 3,897 gallons, is $23.25 – equivalent to a $4.11 increase over the present monthly bill of $19.14 or a 21.45 percent increase.

Q. IS THE COMPANY MODIFYING ITS PROPOSED RATE DESIGN FROM ITS DIRECT FILING?

A. No.

Q. PLEASE DISCUSS THE STAFF PROPOSED RATE DESIGN.

A. Before I begin, I would note that the Staff proposed rates do not generate Staff's proposed revenue requirement. According to my revenue proof of the Staff rates, Staff's proposed rates produce approximately $48,000 less revenue than the Staff proposed revenue requirement. That said, the rate designs proposed by each of the parties are similar; an inverted 3-tier design for the ¾-inch and smaller residential metered customers and an inverted 2-tier design for other meter sizes and classes (residential, commercial, and

commercial/residential). The proposed break-over points are the same between the parties.

Q. WHAT ABOUT REVENUE RECOVERY FROM THE MONTHLY MINIMUMS AND COMMODITY RATES?

A. Revenue recovery from the monthly minimums and the commodity rates are similar. For example, under the Company's proposed rates, recovery from the monthly minimums is 56.64 percent whereas under the Staff proposed rates revenue recovery from the monthly minimums is 56.03 percent.

Revenue recovery from the first, second and third tier commodity rates are 18.64 percent, 21.73 percent, and 2.98 percent, respectively under the Company's proposed rates whereas Revenue recovery from the first, second and third tier commodity rates are 18.91 percent, 22.04 percent, 3.03 percent, respectively under Staff's proposed rates.

Q. IS THERE ANY DISAGREEMENT BETWEEN THE PARTIES WITH RESPECT TO THE MISCELLANEOUS SERVICE CHARGES?

A. No.

Q. IS THERE ANY DISAGREEMENT BETWEEN THE PARTIES WITH RESPECT TO THE METER AND SERVICE LINE CHARGES?

A. No.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY ON RATE BASE, INCOME STATEMENT AND RATE DESIGN?

A. Yes.

Exhibit TJB-RT-1

Comminity Water Company of Green Valley
Plant Additions and Retirements
Vintage Year Analysis

Exhibit
Page 1

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	Company Plant at 12/31/2007	Order Adopted Adjustments	Order Plant at 12/31/2007	Accum. Deprec. At 12/31/2007	Net Plant 12/31/2007	Plant at 12/31/2007	Accum. Deprec. At 12/31/2007
1	311.1	Pumping Equipment - Gas	12.50%	122,126	-	122,126	26,024	96,102	122,126	26,024
2	311.1	Pumping Equipment - Gas	12.50%	-	-	-	-	-	-	-
3	311.1	Pumping Equipment - Gas	12.50%	-	-	-	-	-	-	-
4	311.1	Pumping Equipment - Gas	12.50%	-	-	-	-	-	-	-
5	311.1	Pumping Equipment - Gas	12.50%	-	-	-	-	-	-	-
6	311.1	Pumping Equipment - Gas	12.50%	-	-	-	-	-	-	-
7	311.1	Pumping Equipment - Gas	12.50%	-	-	-	-	-	-	-
8	311.1	Pumping Equipment - Gas	12.50%	-	-	-	-	-	-	-
9	**311.1**	**Pumping Equipment - Gas**	**12.50%**	**122,126**	**-**	**122,126**	**26,024**	**96,102**	**122,126**	**26,024**
23	340	Office Furniture & Equipment	6.67%	150,571	-	150,571	20,996	129,575	150,571	20,996
24	340	Office Furniture & Equipment	6.67%	-	-	-	-	-	-	-
25	340	Office Furniture & Equipment	6.67%	-	-	-	-	-	-	-
26	340	Office Furniture & Equipment	6.67%	-	-	-	-	-	-	-
27	340	Office Furniture & Equipment	6.67%	-	-	-	-	-	-	-
28	340	Office Furniture & Equipment	6.67%	-	-	-	-	-	-	-
29	340	Office Furniture & Equipment	6.67%	-	-	-	-	-	-	-
30	340	Office Furniture & Equipment	6.67%	-	-	-	-	-	-	-
31	**340**	**Office Furniture & Equipment**	**6.67%**	**150,571**	**-**	**150,571**	**20,996**	**129,575**	**150,571**	**20,996**
32	340.1	Computers & Software	20.00%	265,818	-	265,818	237,831	27,987	265,818	237,831
33	340.1	Computers & Software	20.00%	-	-	-	-	-	-	-
34	340.1	Computers & Software	20.00%	-	-	-	-	-	-	-
35	340.1	Computers & Software	20.00%	-	-	-	-	-	-	-
36	340.1	Computers & Software	20.00%	-	-	-	-	-	-	-
37	340.1	Computers & Software	20.00%	-	-	-	-	-	-	-
38	340.1	Computers & Software	20.00%	-	-	-	-	-	-	-
39	340.1	Computers & Software	20.00%	-	-	-	-	-	-	-
40	**340.1**	**Computers & Software**	**20.00%**	**265,818**	**-**	**265,818**	**237,831**	**27,987**	**265,818**	**237,831**
41	341	Transportation Equipment	20.00%	464,094	-	464,094	398,371	65,723	464,094	398,371
42	341	Transportation Equipment	20.00%	-	-	-	-	-	-	-
43	341	Transportation Equipment	20.00%	-	-	-	-	-	-	-
44	341	Transportation Equipment	20.00%	-	-	-	-	-	-	-
45	341	Transportation Equipment	20.00%	-	-	-	-	-	-	-
46	341	Transportation Equipment	20.00%	-	-	-	-	-	-	-
47	341	Transportation Equipment	20.00%	-	-	-	-	-	-	-
48	341	Transportation Equipment	20.00%	-	-	-	-	-	-	-
49	**341**	**Transportation Equipment**	**20.00%**	**464,094**	**-**	**464,094**	**398,371**	**65,723**	**464,094**	**398,371**
50	345.1	Power Operated Equipment - Backhoe	5.00%	107,179	-	107,179	87,657	19,522	107,179	87,657
51	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-	-	-	-	-
52	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-	-	-	-	-
53	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-	-	-	-	-
54	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-	-	-	-	-
55	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-	-	-	-	-
56	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-	-	-	-	-
57	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-	-	-	-	-
58	**345.1**	**Power Operated Equipment - Backhoe**	**5.00%**	**107,179**	**-**	**107,179**	**87,657**	**19,522**	**107,179**	**87,657**
59	346	Communication Equipment	10.00%	69,340	-	69,340	32,224	37,116	69,340	32,224
60	346	Communication Equipment	10.00%	-	-	-	-	-	-	-
61	346	Communication Equipment	10.00%	-	-	-	-	-	-	-
62	346	Communication Equipment	10.00%	-	-	-	-	-	-	-
63	346	Communication Equipment	10.00%	-	-	-	-	-	-	-
64	346	Communication Equipment	10.00%	-	-	-	-	-	-	-
65	346	Communication Equipment	10.00%	-	-	-	-	-	-	-
66	346	Communication Equipment	10.00%	-	-	-	-	-	-	-
67	**346**	**Communication Equipment**	**10.00%**	**69,340**	**-**	**69,340**	**32,224**	**37,116**	**69,340**	**32,224**

Comminity Water Company of Green Valley
Plant Additions and Retirements
Vintage Year Analysis

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Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2008 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	311.1	Pumping Equipment - Gas	12.50%		(0)	(0)	-		-		15,266	122,126	41,290
2	311.1	Pumping Equipment - Gas	12.50%	-		-			-		-	-	-
3	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
4	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
5	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
6	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
7	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
8	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
9	**311.1**	**Pumping Equipment - Gas**	**12.50%**	-	**(0)**	**(0)**	-	-	-	-	**15,266**	**122,126**	**41,290**
23	340	Office Furniture & Equipment	6.67%		(345)	(345)	5,000		5,000		9,865	145,226	25,861
24	340	Office Furniture & Equipment	6.67%	5,899		5,899			-		197	5,899	197
25	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
26	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
27	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
28	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
29	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
30	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
31	**340**	**Office Furniture & Equipment**	**6.67%**	**5,899**	**(345)**	**5,554**	**5,000**	-	**5,000**	-	**10,062**	**151,125**	**26,058**
32	340.1	Computers & Software	20.00%		(1)	(1)	18,076		18,076		27,985	247,741	247,741
33	340.1	Computers & Software	20.00%	48,326		48,326			-		4,833	48,326	4,833
34	340.1	Computers & Software	20.00%			-			-		-	-	-
35	340.1	Computers & Software	20.00%			-			-		-	-	-
36	340.1	Computers & Software	20.00%			-			-		-	-	-
37	340.1	Computers & Software	20.00%			-			-		-	-	-
38	340.1	Computers & Software	20.00%			-			-		-	-	-
39	340.1	Computers & Software	20.00%			-			-		-	-	-
40	**340.1**	**Computers & Software**	**20.00%**	**48,326**	**(1)**	**48,324**	**18,076**	-	**18,076**	-	**32,818**	**296,066**	**252,573**
41	341	Transportation Equipment	20.00%		(1)	(1)	69,759		69,759		65,723	394,335	394,335
42	341	Transportation Equipment	20.00%	58,540		58,540			-		5,854	58,540	5,854
43	341	Transportation Equipment	20.00%			-			-		-	-	-
44	341	Transportation Equipment	20.00%			-			-		-	-	-
45	341	Transportation Equipment	20.00%			-			-		-	-	-
46	341	Transportation Equipment	20.00%			-			-		-	-	-
47	341	Transportation Equipment	20.00%			-			-		-	-	-
48	341	Transportation Equipment	20.00%			-			-		-	-	-
49	**341**	**Transportation Equipment**	**20.00%**	**58,540**	**(1)**	**58,540**	**69,759**	-	**69,759**	-	**71,577**	**452,875**	**400,189**
50	345.1	Power Operated Equipment - Backhoe	5.00%		0	0	-		-		5,359	107,179	93,016
51	345.1	Power Operated Equipment - Backhoe	5.00%	-		-			-		-	-	-
52	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
53	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
54	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
55	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
56	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
57	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
58	**345.1**	**Power Operated Equipment - Backhoe**	**5.00%**	-	**0**	**0**	-	-	-	-	**5,359**	**107,179**	**93,016**
59	346	Communication Equipment	10.00%		0	0	7,042		7,042		6,582	62,298	31,764
60	346	Communication Equipment	10.00%	-		-			-		-	-	-
61	346	Communication Equipment	10.00%			-			-		-	-	-
62	346	Communication Equipment	10.00%			-			-		-	-	-
63	346	Communication Equipment	10.00%			-			-		-	-	-
64	346	Communication Equipment	10.00%			-			-		-	-	-
65	346	Communication Equipment	10.00%			-			-		-	-	-
66	346	Communication Equipment	10.00%			-			-		-	-	-
67	**346**	**Communication Equipment**	**10.00%**	-	**0**	**0**	**7,042**	-	**7,042**	-	**6,582**	**62,298**	**31,764**

Comminity Water Company of Green Valley
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Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2009 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	311.1	Pumping Equipment - Gas	12.50%			-	-		-		15,266	122,126	56,556
2	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
3	311.1	Pumping Equipment - Gas	12.50%	-	-	-			-		-	-	-
4	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
5	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
6	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
7	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
8	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
9	**311.1**	**Pumping Equipment - Gas**	**12.50%**	-	-	-	-	-	-	-	**15,266**	**122,126**	**56,556**
23	340	Office Furniture & Equipment	6.67%			-	6,000		6,000		9,486	139,226	29,347
24	340	Office Furniture & Equipment	6.67%			-			-		393	5,899	590
25	340	Office Furniture & Equipment	6.67%	-	-	-			-		-	-	-
26	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
27	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
28	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
29	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
30	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
31	**340**	**Office Furniture & Equipment**	**6.67%**	-	-	-	**6,000**	-	**6,000**	-	**9,880**	**145,125**	**29,937**
32	340.1	Computers & Software	20.00%			-	70,102		70,102		-	177,638	177,638
33	340.1	Computers & Software	20.00%			-			-		9,665	48,326	14,498
34	340.1	Computers & Software	20.00%	48,325	-	48,325			-		4,832	48,325	4,832
35	340.1	Computers & Software	20.00%			-			-		-	-	-
36	340.1	Computers & Software	20.00%			-			-		-	-	-
37	340.1	Computers & Software	20.00%			-			-		-	-	-
38	340.1	Computers & Software	20.00%			-			-		-	-	-
39	340.1	Computers & Software	20.00%			-			-		-	-	-
40	**340.1**	**Computers & Software**	**20.00%**	**48,325**	-	**48,325**	**70,102**	-	**70,102**	-	**14,498**	**274,289**	**196,968**
41	341	Transportation Equipment	20.00%			-	-		-		-	394,335	394,335
42	341	Transportation Equipment	20.00%			-			-		11,708	58,540	17,562
43	341	Transportation Equipment	20.00%	52,437	-	52,437			-		5,244	52,437	5,244
44	341	Transportation Equipment	20.00%			-			-		-	-	-
45	341	Transportation Equipment	20.00%			-			-		-	-	-
46	341	Transportation Equipment	20.00%			-			-		-	-	-
47	341	Transportation Equipment	20.00%			-			-		-	-	-
48	341	Transportation Equipment	20.00%			-			-		-	-	-
49	**341**	**Transportation Equipment**	**20.00%**	**52,437**	-	**52,437**	-	-	-	-	**16,952**	**505,312**	**417,141**
50	345.1	Power Operated Equipment - Backhoe	5.00%			-	-		-		5,359	107,179	98,375
51	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
52	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-			-		-	-	-
53	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
54	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
55	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
56	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
57	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
58	**345.1**	**Power Operated Equipment - Backhoe**	**5.00%**	-	-	-	-	-	-	-	**5,359**	**107,179**	**98,375**
59	346	Communication Equipment	10.00%			-	-		-		6,230	62,298	37,993
60	346	Communication Equipment	10.00%			-			-		-	-	-
61	346	Communication Equipment	10.00%	8,606	-	8,606			-		430	8,606	430
62	346	Communication Equipment	10.00%			-			-		-	-	-
63	346	Communication Equipment	10.00%			-			-		-	-	-
64	346	Communication Equipment	10.00%			-			-		-	-	-
65	346	Communication Equipment	10.00%			-			-		-	-	-
66	346	Communication Equipment	10.00%			-			-		-	-	-
67	**346**	**Communication Equipment**	**10.00%**	**8,606**	-	**8,606**	-	-	-	-	**6,660**	**70,904**	**38,424**

Comminity Water Company of Green Valley
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Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2010 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	311.1	Pumping Equipment - Gas	12.50%			-	-		-		15,266	122,126	71,822
2	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
3	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
4	311.1	Pumping Equipment - Gas	12.50%	-	-	-			-		-	-	-
5	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
6	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
7	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
8	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
9	**311.1**	**Pumping Equipment - Gas**	**12.50%**	-	-	-	-	-	-	-	**15,266**	**122,126**	**71,822**
23	340	Office Furniture & Equipment	6.67%			-	10,000		10,000		8,953	129,226	28,300
24	340	Office Furniture & Equipment	6.67%			-			-		393	5,899	984
25	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
26	340	Office Furniture & Equipment	6.67%	14,142	-	14,142			-		472	14,142	472
27	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
28	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
29	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
30	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
31	**340**	**Office Furniture & Equipment**	**6.67%**	**14,142**	-	**14,142**	**10,000**	-	**10,000**	-	**9,818**	**149,267**	**29,755**
32	340.1	Computers & Software	20.00%			-	14,000		14,000		-	163,638	163,638
33	340.1	Computers & Software	20.00%			-			-		9,665	48,326	24,163
34	340.1	Computers & Software	20.00%			-			-		9,665	48,325	14,497
35	340.1	Computers & Software	20.00%	16,450	-	16,450			-		1,645	16,450	1,645
36	340.1	Computers & Software	20.00%			-			-		-	-	-
37	340.1	Computers & Software	20.00%			-			-		-	-	-
38	340.1	Computers & Software	20.00%			-			-		-	-	-
39	340.1	Computers & Software	20.00%			-			-		-	-	-
40	**340.1**	**Computers & Software**	**20.00%**	**16,450**	-	**16,450**	**14,000**	-	**14,000**	-	**20,975**	**276,739**	**203,943**
41	341	Transportation Equipment	20.00%			-	129,462		129,462		-	264,873	264,874
42	341	Transportation Equipment	20.00%			-			-		11,708	58,540	29,270
43	341	Transportation Equipment	20.00%			-			-		10,487	52,437	15,731
44	341	Transportation Equipment	20.00%	72,179	-	72,179			-		7,218	72,179	7,218
45	341	Transportation Equipment	20.00%			-			-		-	-	-
46	341	Transportation Equipment	20.00%			-			-		-	-	-
47	341	Transportation Equipment	20.00%			-			-		-	-	-
48	341	Transportation Equipment	20.00%			-			-		-	-	-
49	**341**	**Transportation Equipment**	**20.00%**	**72,179**	-	**72,179**	**129,462**	-	**129,462**	-	**29,413**	**448,029**	**317,093**
50	345.1	Power Operated Equipment - Backhoe	5.00%			-	-		-		5,359	107,179	103,733
51	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
52	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
53	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-			-		-	-	-
54	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
55	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
56	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
57	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
58	**345.1**	**Power Operated Equipment - Backhoe**	**5.00%**	-	-	-	-	-	-	-	**5,359**	**107,179**	**103,733**
59	346	Communication Equipment	10.00%			-	-		-		6,230	62,298	44,223
60	346	Communication Equipment	10.00%			-			-		-	-	-
61	346	Communication Equipment	10.00%			-			-		861	8,606	1,291
62	346	Communication Equipment	10.00%	2,680	-	2,680			-		134	2,680	134
63	346	Communication Equipment	10.00%			-			-		-	-	-
64	346	Communication Equipment	10.00%			-			-		-	-	-
65	346	Communication Equipment	10.00%			-			-		-	-	-
66	346	Communication Equipment	10.00%			-			-		-	-	-
67	**346**	**Communication Equipment**	**10.00%**	**2,680**	-	**2,680**	-	-	-	-	**7,224**	**73,584**	**45,648**

Comminity Water Company of Green Valley
Plant Additions and Retirements
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Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2011 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	311.1	Pumping Equipment - Gas	12.50%			-	-		-				
2	311.1	Pumping Equipment - Gas	12.50%			-			-		15,266	122,126	87,087
3	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
4	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
5	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
6	311.1	Pumping Equipment - Gas	12.50%	-	-	-			-		-	-	-
7	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
8	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
9	**311.1**	**Pumping Equipment - Gas**	**12.50%**			-			-		-	-	-
23	340	Office Furniture & Equipment	6.67%	-	-	-	-	-	-	-	**15,266**	**122,126**	**87,087**
24	340	Office Furniture & Equipment	6.67%			-	-		-		8,619	129,226	36,919
25	340	Office Furniture & Equipment	6.67%			-			-		393	5,899	1,377
26	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
27	340	Office Furniture & Equipment	6.67%			-			-		943	14,142	1,415
28	340	Office Furniture & Equipment	6.67%	-	-	-			-		-	-	-
29	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
30	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
31	**340**	**Office Furniture & Equipment**	**6.67%**			-			-		-	-	-
32	340.1	Computers & Software	20.00%	-	-	-	-	-	-	-	**9,956**	**149,267**	**39,712**
33	340.1	Computers & Software	20.00%			-	-		-		-	163,638	163,638
34	340.1	Computers & Software	20.00%			-			-		9,665	48,326	33,828
35	340.1	Computers & Software	20.00%			-			-		9,665	48,325	24,162
36	340.1	Computers & Software	20.00%	3,359	-	3,359			-		3,290	16,450	4,935
37	340.1	Computers & Software	20.00%			-			-		336	3,359	336
38	340.1	Computers & Software	20.00%			-			-		-	-	-
39	340.1	Computers & Software	20.00%			-			-		-	-	-
40	**340.1**	**Computers & Software**	**20.00%**	**3,359**	-	**3,359**	-	-	-	-	-	-	-
41	341	Transportation Equipment	20.00%			-	-		-		**22,956**	**280,098**	**226,899**
42	341	Transportation Equipment	20.00%			-			-		-	264,873	264,874
43	341	Transportation Equipment	20.00%			-			-		11,708	58,540	40,978
44	341	Transportation Equipment	20.00%			-			-		10,487	52,437	26,218
45	341	Transportation Equipment	20.00%			-			-		14,436	72,179	21,654
46	341	Transportation Equipment	20.00%	57,165	-	57,165			-		5,716	57,165	5,716
47	341	Transportation Equipment	20.00%			-			-		-	-	-
48	341	Transportation Equipment	20.00%			-			-		-	-	-
49	**341**	**Transportation Equipment**	**20.00%**			-			-		-	-	-
50	345.1	Power Operated Equipment - Backhoe	5.00%	**57,165**	-	**57,165**	-	-	-	-	**42,348**	**505,193**	**359,440**
51	345.1	Power Operated Equipment - Backhoe	5.00%			-	-		-		3,446	107,179	107,179
52	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
53	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
54	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
55	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-			-		-	-	-
56	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
57	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
58	**345.1**	**Power Operated Equipment - Backhoe**	**5.00%**			-			-		-	-	-
59	346	Communication Equipment	10.00%	-	-	-	-	-	-	-	**3,446**	**107,179**	**107,179**
60	346	Communication Equipment	10.00%			-	-		-		6,230	62,298	50,453
61	346	Communication Equipment	10.00%			-			-		-	-	-
62	346	Communication Equipment	10.00%			-			-		861	8,606	2,151
63	346	Communication Equipment	10.00%			-			-		268	2,680	402
64	346	Communication Equipment	10.00%	-	-	-			-		-	-	-
65	346	Communication Equipment	10.00%			-			-		-	-	-
66	346	Communication Equipment	10.00%			-			-		-	-	-
67	**346**	**Communication Equipment**	**10.00%**			-			-		-	-	-
				-	-	-	-	-	-	-	**7,358**	**73,584**	**53,007**

Comminity Water Company of Green Valley
Plant Additions and Retirements
Vintage Year Analysis

Exhibit
Page 6

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2012 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	311.1	Pumping Equipment - Gas	12.50%			-	3,632		3,632		15,039	118,494	98,494
2	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
3	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
4	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
5	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
6	311.1	Pumping Equipment - Gas	12.50%	-	-	-			-		-	-	-
7	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
8	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
9	**311.1**	**Pumping Equipment - Gas**	**12.50%**	-	-	-	**3,632**	-	**3,632**	-	**15,039**	**118,494**	**98,494**
23	340	Office Furniture & Equipment	6.67%			-	2,601		2,601		8,533	126,625	42,851
24	340	Office Furniture & Equipment	6.67%			-			-		393	5,899	1,771
25	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
26	340	Office Furniture & Equipment	6.67%			-			-		943	14,142	2,358
27	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
28	340	Office Furniture & Equipment	6.67%	2,771	-	2,771			-		92	2,771	92
29	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
30	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
31	**340**	**Office Furniture & Equipment**	**6.67%**	**2,771**	-	**2,771**	**2,601**	-	**2,601**	-	**9,962**	**149,438**	**47,073**
32	340.1	Computers & Software	20.00%			-	25,792		25,792		-	137,846	137,846
33	340.1	Computers & Software	20.00%			-			-		9,665	48,326	43,493
34	340.1	Computers & Software	20.00%			-			-		9,665	48,325	33,827
35	340.1	Computers & Software	20.00%			-			-		3,290	16,450	8,225
36	340.1	Computers & Software	20.00%			-			-		672	3,359	1,008
37	340.1	Computers & Software	20.00%	22,336	-	22,336			-		2,234	22,336	2,234
38	340.1	Computers & Software	20.00%			-			-		-	-	-
39	340.1	Computers & Software	20.00%			-			-		-	-	-
40	**340.1**	**Computers & Software**	**20.00%**	**22,336**	-	**22,336**	**25,792**	-	**25,792**	-	**25,526**	**276,642**	**226,633**
41	341	Transportation Equipment	20.00%			-	119,073		119,073		-	145,800	145,800
42	341	Transportation Equipment	20.00%			-			-		11,708	58,540	52,686
43	341	Transportation Equipment	20.00%			-			-		10,487	52,437	36,706
44	341	Transportation Equipment	20.00%			-			-		14,436	72,179	36,089
45	341	Transportation Equipment	20.00%			-			-		11,433	57,165	17,149
46	341	Transportation Equipment	20.00%	64,145	-	64,145			-		6,414	64,145	6,414
47	341	Transportation Equipment	20.00%			-			-		-	-	-
48	341	Transportation Equipment	20.00%			-			-		-	-	-
49	**341**	**Transportation Equipment**	**20.00%**	**64,145**	-	**64,145**	**119,073**	-	**119,073**	-	**54,479**	**450,265**	**294,846**
50	345.1	Power Operated Equipment - Backhoe	5.00%			-	-		-		-	107,179	107,179
51	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
52	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
53	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
54	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
55	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-			-		-	-	-
56	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
57	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
58	**345.1**	**Power Operated Equipment - Backhoe**	**5.00%**	-	-	-	-	-	-	-	-	**107,179**	**107,179**
59	346	Communication Equipment	10.00%			-	3,200		3,200		6,070	59,098	53,323
60	346	Communication Equipment	10.00%			-			-		-	-	-
61	346	Communication Equipment	10.00%			-			-		861	8,606	3,012
62	346	Communication Equipment	10.00%			-			-		268	2,680	670
63	346	Communication Equipment	10.00%			-			-		-	-	-
64	346	Communication Equipment	10.00%	3,159	-	3,159			-		158	3,159	158
65	346	Communication Equipment	10.00%			-			-		-	-	-
66	346	Communication Equipment	10.00%			-			-		-	-	-
67	**346**	**Communication Equipment**	**10.00%**	**3,159**	-	**3,159**	**3,200**	-	**3,200**	-	**7,356**	**73,543**	**57,163**

Comminity Water Company of Green Valley
Plant Additions and Retirements
Vintage Year Analysis

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2013 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	311.1	Pumping Equipment - Gas	12.50%			-	-		-		14,812	118,494	113,306
2	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
3	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
4	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
5	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
6	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
7	311.1	Pumping Equipment - Gas	12.50%	-	-	-			-		-	-	-
8	311.1	Pumping Equipment - Gas	12.50%			-			-		-	-	-
9	**311.1**	**Pumping Equipment - Gas**	**12.50%**	-	-	-	-	-	-	-	**14,812**	**118,494**	**113,306**
23	340	Office Furniture & Equipment	6.67%			-	-		-		8,446	126,625	51,297
24	340	Office Furniture & Equipment	6.67%			-			-		393	5,899	2,164
25	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
26	340	Office Furniture & Equipment	6.67%			-			-		943	14,142	3,302
27	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
28	340	Office Furniture & Equipment	6.67%			-			-		185	2,771	277
29	340	Office Furniture & Equipment	6.67%	-	-	-			-		-	-	-
30	340	Office Furniture & Equipment	6.67%			-			-		-	-	-
31	**340**	**Office Furniture & Equipment**	**6.67%**	-	-	-	-	-	-	-	**9,968**	**149,438**	**57,040**
32	340.1	Computers & Software	20.00%			-	137,846		137,846		-	0	(0)
33	340.1	Computers & Software	20.00%			-	7,357		7,357		4,833	40,969	40,969
34	340.1	Computers & Software	20.00%			-			-		9,665	48,325	43,492
35	340.1	Computers & Software	20.00%			-			-		3,290	16,450	11,515
36	340.1	Computers & Software	20.00%			-			-		672	3,359	1,680
37	340.1	Computers & Software	20.00%			-			-		4,467	22,336	6,701
38	340.1	Computers & Software	20.00%	439,786	-	439,786			-		43,979	439,786	43,979
39	340.1	Computers & Software	20.00%			-			-		-	-	-
40	**340.1**	**Computers & Software**	**20.00%**	**439,786**	-	**439,786**	**145,203**	-	**145,203**	-	**66,906**	**571,224**	**148,335**
41	341	Transportation Equipment	20.00%			-	33,883		33,883		-	111,916	111,917
42	341	Transportation Equipment	20.00%			-			-		5,854	58,540	58,540
43	341	Transportation Equipment	20.00%			-			-		10,487	52,437	47,193
44	341	Transportation Equipment	20.00%			-			-		14,436	72,179	50,525
45	341	Transportation Equipment	20.00%			-			-		11,433	57,165	28,582
46	341	Transportation Equipment	20.00%			-			-		12,829	64,145	19,243
47	341	Transportation Equipment	20.00%	-	-	-			-		-	-	-
48	341	Transportation Equipment	20.00%			-			-		-	-	-
49	**341**	**Transportation Equipment**	**20.00%**	-	-	-	**33,883**	-	**33,883**	-	**55,039**	**416,382**	**316,001**
50	345.1	Power Operated Equipment - Backhoe	5.00%			-	-		-		-	107,179	107,179
51	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
52	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
53	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
54	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
55	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
56	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-			-		-	-	-
57	345.1	Power Operated Equipment - Backhoe	5.00%			-			-		-	-	-
58	**345.1**	**Power Operated Equipment - Backhoe**	**5.00%**	-	-	-	-	-	-	-	-	**107,179**	**107,179**
59	346	Communication Equipment	10.00%			-	-		-		5,775	59,098	59,098
60	346	Communication Equipment	10.00%			-			-		-	-	-
61	346	Communication Equipment	10.00%			-			-		861	8,606	3,873
62	346	Communication Equipment	10.00%			-			-		268	2,680	938
63	346	Communication Equipment	10.00%			-			-		-	-	-
64	346	Communication Equipment	10.00%			-			-		316	3,159	474
65	346	Communication Equipment	10.00%	45,256	-	45,256			-		2,263	45,256	2,263
66	346	Communication Equipment	10.00%			-			-		-	-	-
67	**346**	**Communication Equipment**	**10.00%**	**45,256**	-	**45,256**	-	-	-	-	**9,482**	**118,800**	**66,645**

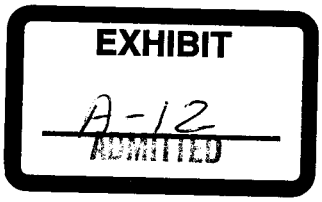
Comminity Water Company of Green Valley
Plant Additions and Retirements
Vintage Year Analysis

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2014 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	PTY Plant	PTY Retirement	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	311.1	Pumping Equipment - Gas	12.50%			-	-		-						
2	311.1	Pumping Equipment - Gas	12.50%			-			-				5,188	118,494	118,494
3	311.1	Pumping Equipment - Gas	12.50%			-			-				-	-	-
4	311.1	Pumping Equipment - Gas	12.50%			-			-				-	-	-
5	311.1	Pumping Equipment - Gas	12.50%			-			-				-	-	-
6	311.1	Pumping Equipment - Gas	12.50%			-			-				-	-	-
7	311.1	Pumping Equipment - Gas	12.50%			-			-				-	-	-
8	311.1	Pumping Equipment - Gas	12.50%			-			-				-	-	-
9	**311.1**	**Pumping Equipment - Gas**	**12.50%**	-	-	-	-	-	-	-	-	-	-	-	-
23	340	Office Furniture & Equipment	6.67%			-	-		-				**5,188**	**118,494**	**118,494**
24	340	Office Furniture & Equipment	6.67%			-			-				8,446	126,625	59,743
25	340	Office Furniture & Equipment	6.67%			-			-				393	5,899	2,558
26	340	Office Furniture & Equipment	6.67%			-			-				-	-	-
27	340	Office Furniture & Equipment	6.67%			-			-				943	14,142	4,245
28	340	Office Furniture & Equipment	6.67%			-			-				-	-	-
29	340	Office Furniture & Equipment	6.67%			-			-				185	2,771	462
30	340	Office Furniture & Equipment	6.67%	2,180	-	2,180			-				-	-	-
31	**340**	**Office Furniture & Equipment**	**6.67%**	**2,180**	-	**2,180**	-	-	-	-	-	-	73	2,180	73
32	340.1	Computers & Software	20.00%			-	-		-				**10,040**	**151,618**	**67,080**
33	340.1	Computers & Software	20.00%			-			-				0	0	(0)
34	340.1	Computers & Software	20.00%			-			-				-	40,969	40,969
35	340.1	Computers & Software	20.00%			-			-				4,833	48,325	48,325
36	340.1	Computers & Software	20.00%			-			-				3,290	16,450	14,805
37	340.1	Computers & Software	20.00%			-			-				672	3,359	2,351
38	340.1	Computers & Software	20.00%			-			-				4,467	22,336	11,168
39	340.1	Computers & Software	20.00%	37,537	-	37,537			-				87,957	439,786	131,936
40	**340.1**	**Computers & Software**	**20.00%**	**37,537**	-	**37,537**	-	-	-	-	-	-	3,754	37,537	3,754
41	341	Transportation Equipment	20.00%			-	-		-	9,141		28,583	**104,973**	**608,761**	**253,308**
42	341	Transportation Equipment	20.00%			-			-				-	83,333	92,475
43	341	Transportation Equipment	20.00%			-			-				-	58,540	58,540
44	341	Transportation Equipment	20.00%			-			-				5,244	52,437	52,437
45	341	Transportation Equipment	20.00%			-			-				14,436	72,179	64,961
46	341	Transportation Equipment	20.00%			-			-				11,433	57,165	40,015
47	341	Transportation Equipment	20.00%	26,082	-	26,082			-				12,829	64,145	32,072
48	341	Transportation Equipment	20.00%			-			-		55,896		2,608	26,082	2,608
49	**341**	**Transportation Equipment**	**20.00%**	**26,082**	-	**26,082**	-	-	-	**9,141**	**55,896**	**28,583**	-	55,896	-
50	345.1	Power Operated Equipment - Backhoe	5.00%			-	-		-				**46,550**	**469,777**	**343,109**
51	345.1	Power Operated Equipment - Backhoe	5.00%			-			-				-	107,179	107,179
52	345.1	Power Operated Equipment - Backhoe	5.00%			-			-				-	-	-
53	345.1	Power Operated Equipment - Backhoe	5.00%			-			-				-	-	-
54	345.1	Power Operated Equipment - Backhoe	5.00%			-			-				-	-	-
55	345.1	Power Operated Equipment - Backhoe	5.00%			-			-				-	-	-
56	345.1	Power Operated Equipment - Backhoe	5.00%			-			-				-	-	-
57	345.1	Power Operated Equipment - Backhoe	5.00%	42,260	-	42,260			-				-	-	-
58	**345.1**	**Power Operated Equipment - Backhoe**	**5.00%**	**42,260**	-	**42,260**	-	-	-	-	-	-	1,056	42,260	1,056
59	346	Communication Equipment	10.00%			-	8,800		8,800				**1,056**	**149,439**	**108,236**
60	346	Communication Equipment	10.00%			-			-				-	50,298	50,298
61	346	Communication Equipment	10.00%			-			-				-	-	-
62	346	Communication Equipment	10.00%			-			-				861	8,606	4,733
63	346	Communication Equipment	10.00%			-			-				268	2,680	1,206
64	346	Communication Equipment	10.00%			-			-				-	-	-
65	346	Communication Equipment	10.00%			-			-				316	3,159	790
66	346	Communication Equipment	10.00%	14,656	-	14,656			-				4,526	45,256	6,788
67	**346**	**Communication Equipment**	**10.00%**	**14,656**	-	**14,656**	**8,800**	-	**8,800**	-	-	-	733	14,656	733
													6,703	**124,656**	**64,548**

Total Fully Depreciated Plant	$	559,575

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
DOUG LITTLE – CHAIRMAN
BOB STUMP
BOB BURNS
TOM FORESE
ANDY TOBIN



IN THE MATTER OF THE APPLICATION OF COMMUNITY WATER COMPANY OF GREEN VALLEY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES FOR UTILITY SERVICE.	DOCKET NO. W-02304-15-0263

REJOINDER TESTIMONY OF

THOMAS J. BOURASSA

ON BEHALF OF

COMMUNITY WATER COMPANY OF GREEN VALLEY

APRIL 26, 2016

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a. Remaining Issues in Dispute 3

IV. Income Statement 5

a. Remaining Issues in Dispute 5

V. Rate Design 10

I. INTRODUCTION.

Q. PLEASE STATE YOUR NAME AND ADDRESS.

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

Q. HAVE YOU PREVIOUSLY SUBMITTED DIRECT AND REBUTTAL TESTIMONY IN THE INSTANT CASE?

A. Yes, my Direct Testimony was submitted in support of the initial application in this docket by Community Water Company of Green Valley (the "Company"). I also prepared Rebuttal Testimony in response to the Arizona Corporation Commission Utilities Division Staff ("Staff") Direct Testimony filed on January 15, 2015.

Q. WHAT IS THE PURPOSE OF THIS REJOINDER TESTIMONY?

A. I am providing Rejoinder Testimony in response to the Surrebuttal Testimony filing by Staff with respect to rate base, revenues and expenses, operating margin and rate design.

Q. WHAT IS THE REVENUE INCREASE THAT THE COMPANY IS PROPOSING IN ITS REJOINDER FILING?

A. The Company is proposing a total revenue requirement of $4,165,106, which constitutes an increase in revenues of $682,357, or 19.59 percent over test year revenues.

Q. HOW DOES THIS COMPARE WITH THE COMPANY'S REBUTTAL FILING?

A. The revenue requirement and requested rate increase are the same as in the Company's rebuttal filing.

II. REVENUE REQUIREMENT.

Q. WHAT ARE THE PROPOSED REVENUE REQUIREMENTS AND RATE INCREASES FOR THE COMPANY AND STAFF AT THIS STAGE OF THE PROCEEDING?

A. The proposed revenue requirements and proposed rate increases are as follows:

	Revenue Req.	Revenue Incr.	% Increase
Company-Rebuttal	$4,165,106	$ 682,357	19.59%
Staff	$3,899,354	$ 257,877	7.08%
Company-Rejoinder	$4,165,106	$ 682,357	19.57%

III. RATE BASE.

Q. WOULD YOU PLEASE IDENTIFY THE PARTIES' RESPECTIVE RATE BASE RECOMMENDATIONS?

A. The rate bases proposed by all parties in the case are as follows:

	OCRB	FVRB
Company-Rebuttal	$7,628,678	$7,628,678
Staff	$6,563,586	$6,563,586
Company-Rejoinder	$7,628,678	$7,628,678

a. Remaining Issues in Dispute

Q. DOES THE COMPANY PROPOSE TO REVISE OR TO PROPOSE ADDITIONAL ADJUSTMENT TO REVENUES AND/OR EXPENSES?

A. No. The Company's proposed adjustments to rate base for rejoinder are the same as I discussed in my Rebuttal Testimony.[1]

Q. WHAT ARE THE REMAINING ISSUES IN DISPUTE WITH RESPECT TO RATE BASE?

A. Only two. First there is the issue of whether Reservoir No. 5 should be included in rate base. Other Company witnesses discuss the reasons why including this reservoir in rate base is appropriate. Second, while both the Company and Staff recommend an accumulated depreciation ("A/D") balance of $16,014,775[2], the Company disagrees with the Staff balance because Staff is asserting that there is more fully depreciated plant than the Company does. If there is additional fully depreciated plant, then the Staff A/D balance must be $15,841,411 – approximately $173,364 lower. Let me explain.

There can only be more fully depreciated plant if a different method of depreciation accounting is used (Vintage Group procedure versus Broad Group procedure).[3] The Company uses the Broad Group procedure.[4] Staff uses a Vintage Group procedure,

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[1] See Rebuttal Testimony of Thomas J. Bourassa ("Bourassa Rb.") at 3.

[2] *See* CWC Rejoinder Schedule B-2, page 1 and Staff Surrebuttal Schedule PNT-2.

[3] Bourassa Rb. at 10.

[4] Bourassa Rb. at 11.

although Staff does not actually state that it uses the Vintage Group procedure in its Surrebuttal Testimony.[5]

Q. DOES THE NARUC USOA REQUIREMENT TO CONDUCT PERIODIC DEPRECIATION STUDIES APPLY ONLY TO THE BROAD GROUP PROCEDURE?

A. No. *All* depreciation methods rely on depreciation rates which reasonably reflect the useful lives of the underlying plant. But, traditionally, utilities have accepted the Staff recommended depreciation rates instead of preparing costly depreciation studies. The Company adopted the *Staff recommended* depreciation rates in the past two rate cases and has done so again in the instant case. The Broad Group procedure had been used in the past two rate cases to determine the A/D balances. Moreover, Staff *did not recommend* that the Company modify its depreciation practices from the Broad Group to the Vintage Group or that it conduct depreciation studies in either rate case. The Company should not be required to retroactively change from a Broad Group procedure to a Vintage Group procedure.

Q. WILL THE COMPANY PREPARE A DEPRECIATION STUDY IN ITS NEXT RATE CASE?

A. Yes, provided the cost of the depreciation study is included in rate case expense. But, it will not change its depreciation accounting from Broad Group to Vintage Group in a future rate case.

[5] *See* Surrebuttal Testimony of Phan Tsan ("Tsan Sb.") at Mr. Bourassa knows Staff uses a Vintage Group procedure because Staff 's recommended fully depreciated plant balances reflected its depreciation expense calculation on Staff Surrebuttal Schedule PNT-14 match Mr. Bourassa's rebuttal exhibit TJB-RB-RT-1 which reflected a vintage procedure approach.

Q. ARE RATEPAYERS HARMED BY THE USE OF THE BROAD GROUP PROCEDURE?

A. No. Just as with the Vintage Group procedure, the Company will not over recover its plant investment through depreciation.[6] Further, the level of depreciation expense the Company is seeking to include in rates is reasonable.[7]

IV. INCOME STATEMENT.

Q. DOES THE COMPANY PROPOSE TO REVISE OR TO PROPOSE ADDITIONAL ADJUSTMENT TO REVNUES AND/OR EXPENSES?

A. No. The Company's proposed adjustments to revenues and/or expenses for rejoinder are the same as discussed in my rebuttal testimony.[8]

a. Remaining Issues in Dispute

Q. WHAT ARE THE REMAINING ISSUES IN DISPUTE WITH RESPECT TO REVENUES AND/OR EXPENSES?

A. There are four issues in dispute: (1) depreciation expense; (2) repairs and maintenance expense; (3) usage revenue normalization; and (4) legal expense.

Regarding depreciation expense, the Company recommends depreciation expense of $1,021,412 while Staff recommends depreciation expense of $926,682, which is a

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[6] Bourassa Rb. at 11.

[7] After accounting for the difference in annual depreciation expense due to inclusion of Reservoir No. 5, the difference in annual depreciation between the Broad Group and vintage is about $50,700. This translates about 1.2% of the Company's proposed revenue requirement and about $0.40 per customer per month.

[8] Bourassa Rb. at 5.

difference of $94,730. The disagreement between the Company and Staff regarding depreciation expense is two-fold. First, it involves a dispute regarding fully depreciated plant which I previously discussed earlier in my Rejoinder Testimony. This dispute accounts for approximately $51,000 of the difference. The second reason for the difference in each of the party's depreciation expense recommendations involves the dispute over inclusion/exclusion of the costs for Reservoir No. 5. The Company recommends inclusion of the cost of Reservoir No. 5 whereas Staff does not. This dispute accounts for approximately $44,000 of the difference.

Q. WHAT IS THE DISPUTE BETWEEN STAFF AND THE COMPANY REGARDING REPAIRS AND MAINTENANCE?

A. Staff's recommended repairs and maintenance expense recommendation excludes recovery of the annual maintenance accrual for Reservoir No. 5. Further, Staff credits back prior year maintenance expense accruals for Reservoir No. 5 against other maintenance expense accruals in its computation, further lowering the annual maintenance expense accrual.[9] At this stage of the proceeding, Staff recommends total maintenance expense accruals totaling $44,129 whereas the Company recommends $67,000, a difference of $22,871.

Q. WHAT IS WRONG WITH THE STAFF RECOMMENDATION?

A. Staff incorrectly computed its required annual reserve. When Staff uses the current balance on the maintenance reserves as of December 31, 2014, Staff is making the statement that the Company overfunded its maintenance reserves through December 31, 2014. That is not correct. In fact, the maintenance reserves have been underfunded.

[9] *See* Staff Surrebuttal Schedule PNT-11.

Specifically, Staff's calculations as shown on Staff Surrebuttal Schedule PNT-11 make the following incorrect assumptions:

(1) Reservoir No. 1 has 10 years remaining before the next scheduled maintenance; in fact, Reservoir No. 1 has only nine years remaining in the maintenance cycle;

(2) Reservoir No. 3 and Reservoir No. 4 have 20 years remaining – but each has only nine years remaining in the maintenance cycle;

(3) Tanks at Wells 10 and 11 have 10 years left before their next scheduled maintenance, but these two have only three years remaining in the maintenance cycle.

Thus, if Staff wanted to account for the maintenance reserve balances as of December 31, 2014, Staff should have computed the required annual reserves as the total needed reserves divided by the years remaining in the maintenance cycle, and not the total years in a maintenance cycle. Consequently, Staff's required total annual maintenance reserve should have been $101,274 (which still excludes maintenance expense for Reservoir No. 5) as shown below:

Reservoir Maintenance Annual Reserve calculation

[A]	[B]	[C]	[D]	[E]	[F]	[G]
	Estimated Cost	**GL Balance**	**Distribution from Reservoir 2 balance**	**Total needed [B]-[C]-[D]**	**Years Remaining**	**Annual cost [E]/[F]**
Reservoir 1	$ 75,000	$ (62,870)	$17,298	$120,572	9 years	$13,397
Reservoir 3	190,000	48,516	17,298	124,186	9 years	13,798
Reservoir 4	300,000	64,368	17,298	218,334	9 years	24,259
Tank 10	100,000	5,685	17,298	77,016	3 years	25,672
Tank 11	100,000	10,260	17,298	72,442	3 years	24,147
Reservoir 5 (removed)		86,492				
Total	$765,000	$152,451		$ 612,549		**$101,274**

Had Reservoir No. 5's annual maintenance accrual been included, the total required annual maintenance accrual should have been $116,274 ($101,274 + $15,000).

Q. IF THAT IS THE CASE, THEN WHY IS THE COMPANY ONLY REQUESTING $67,000?

A. The Company is limiting its request as a compromise in this case.

Q. ASSUMING THE COMMISSION RECOGNIZES RESERVOIR NO. 5 IN RATES, SHOULD THE ANNUAL EXPENSE ACCRUAL BE $67,000?

A. Yes.

Q. PLEASE COMMENT ON THE DISPUTE BETWEEN THE COMPANY AND STAFF ON THE REVENUE NORMALIZATION.

A. In its Surrebuttal Testimony, Staff is now recognizing a usage normalization adjustment for residential customers.[10] But Staff does not recognize a usage normalization adjustment for commercial customers because it asserts that future usage for commercial customers is not known and measurable.[11] The Company recommends a net reduction to revenues and expenses for its usage normalization adjustment of $132,570 whereas Staff recommends a

[10] Tsan Sb. at 3.

[11] Id.

net reduction to revenues and expenses for its usage normalization adjustment of $81,944, a difference of $50,626 ($132,570 - $81,944).[12]

Q. PLEASE COMMENT ON STAFF'S ASSERTION THAT THE REDUCTION IN COMMERCIAL WATER USAGE IS NOT KNOWN AND MEASURABLE AND SHOULD BE REJECTED.

A. I disagree for several reasons. First, the reduction of water usage from Freeport McMoran Sierrita ("Sierrita") in 2015 (the year after the test year) *is* known and measurable. In fact, 2015 revenues were lower by $35,000 from reduced water usage by Sierrita in 2015. Second, based upon year-to-date 2016 information, the additional revenue loss from reduced usage by Sierrita in 2016 is likely to range between $17,000 and $20,000. Third, Sierrita's reduction in water usage is not only from discontinued operations, but also from changes to how Sierrita uses water. In other words, Sierrita is using water more efficiently, similar to other commercial water customers, as indicated by the Company's five-year historical analysis. Finally, the expected annual revenue reductions from Sierrita alone will total $52,000 to $55,000 since the end of the test year, which is significantly higher that the Company's proposed downward commercial usage normalization adjustment of about $46,000. If the Company's proposed usage normalization adjustment

[12] The Company's net adjustment of $132,570 is the product of loss revenues and decreased purchased power and chemicals expenses. In the Company's direct filing, usage normalization adjustment reduced revenues by $94,433 and reduced purchased power and chemicals expense by $13,599 and $2,079, respectively, for a net reduction in revenues and expenses of $78,555 ($94,433 - $13,599-$2,079). *See* Direct Schedule C-1, page 1, In the Company's rebuttal, the Company updated its analysis using 2015 data and reduced revenues further by another $64,298 and reduced purchased power and chemicals expense by $9,091 and $1,390, respectively, for an additional net reduction to revenues and expense of $53,815 ($64,298 - $9,091-$1,390). See Rebuttal Schedule C-1, page 1. The net reduction to revenue and expense proposed by the Company is $132,570 ($78,555 + $64,298). In its surrebuttal, Staff adjusts the Company direct filing amounts increasing the revenue reduction from $94,433 to $100,026 proposing a $5,629 adjustment. Staff also increased the Company direct filing reductions to purchased power from $13,599 to $15,716 proposing a further reduction of $2,117. Finally, Staff increased the Company direct filing reductions to chemicals from $2,079 to $2,402 proposing a further reduction of $323. *See* Staff Surrebuttal Schedule PNT-6. The net reduction to revenue and expense proposed by Staff is $81,944 ($100,026 – 15,716 - $2,402).

is not adopted, the Company will have no chance of achieving the revenue authorized by the Commission.

Q. HAS STAFF PROVIDED ANY RESPONSE TO YOUR REBUTTAL TESTIMONY ON LEGAL EXPENSE?

A. No. The Company continues to believe the test-year level of legal expenses represents the normal level of legal expense going forward and which should be included in rates at this time.[13]

Q. ARE THERE ANY OTHER PROPOSED REBUTTAL ADJUSTMENTS?

A. No.

Q. ARE THERE ANY OTHER DISPUTES BETWEEN THE PARTIES REGARDING REVENUES AND/OR EXPENSES?

A. No.

V. RATE DESIGN.

Q. WHAT ARE THE COMPANY'S PROPOSED RATES FOR WATER SERVICE?

A. The Company's proposed rates are shown on Rebuttal Schedule H-3, pages 1 and 2.

Q. WHAT WILL BE THE AVERAGE 5/8 x 3/4-INCH METERED CUSTOMER AVERAGE MONTHLY BILL UNDER THE COMPANY'S REJOINDER PROPOSED RATES?

A. As shown on Schedule H-2, page 1, the average monthly bill under proposed rates for a 5/8

[13] Bourassa Rb. at 18.

x ¾-inch metered customer, using an average of 3,897 gallons, is $23.25 – equivalent to a $4.11 increase over the present monthly bill of $19.14 or a 21.45 percent increase.

Q. IS THE COMPANY MODIFYING ITS PROPOSED RATE DESIGN FROM ITS REBUTTAL FILING?

A. No.

Q. PLEASE DISCUSS THE STAFF PROPOSED RATE DESIGN.

A. The rate designs proposed by each of the parties are similar; an inverted 3-tier design for the ¾-inch and smaller residential metered customers and an inverted 2-tier design for other meter sizes and classes (residential, commercial, and commercial/residential). The proposed break-over points are the same between the parties.

Q. WHAT ABOUT REVENUE RECOVERY FROM THE MONTHLY AVAILABILITY CHARGES AND COMMODITY RATES?

A. Revenue recovery from the monthly availability charges and the commodity rates are similar. For example, under the Company's proposed rates, recovery from the monthly availability charges is 56.64 percent whereas under the Staff proposed rates revenue recovery from the monthly availability charges is 54.80 percent.

Revenue recovery from the first, second and third tier commodity rates are 18.64 percent, 21.73 percent, and 2.98 percent, respectively under the Company's proposed rates whereas revenue recovery from the first, second and third tier commodity rates are 19.24 percent, 22.82 percent, 3.13 percent, respectively under Staff's proposed rates.

Q. IS THERE ANY DISAGREEMENT BETWEEN THE PARTIES WITH RESPECT TO THE MISCELLANEOUS SERVICE CHARGES?

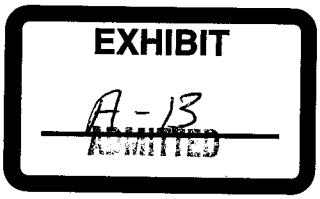
A. No.

Q. IS THERE ANY DISAGREEMENT BETWEEN THE PARTIES WITH RESPECT TO THE METER AND SERVICE LINE CHARGES?

A. No.

Q. DOES THIS CONCLUDE YOUR REJOINDER TESTIMONY ON RATE BASE, INCOME STATEMENT AND RATE DESIGN?

A. Yes.



Schedules

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Computation of Increase in Gross Revenue
Requirements As Adjusted

Exhibit
Rejoinder Scehdule A-1
Page 1
Witness: Bourassa

Line No.			
1	Fair Value Rate Base		$ 7,628,678
2			
3	Adjusted Operating Income		15,001
4			
5	Current Rate of Return		0.20%
6			
7	Required Operating Income		$ 687,242
8			
9	Required Operating Margin		16.50%
10			
11	Operating Income Deficiency		$ 672,241
12			
13	Gross Revenue Conversion Factor		1.0150
14			
15	Increase in Gross Revenue		
16	Requirement		$ 682,357
17			
18	Adjusted Test Year Revenues		$ 3,482,749
19	Increase in Gross Revenue Revenue Requirement		$ 682,357
20	Proposed Revenue Requirement		$ 4,165,106
21	% Increase		19.59%
22			
23	Return on Fair Value Rate Base		9.01%
24			

25	**Customer Classification**		**Present Rates**	**Proposed Rates**	**Dollar Increase**	**Percent Increase**
27	5/8X3/4 Inch	Residential	$ 2,413,514	$ 2,916,802	$ 503,288	20.85%
28	3/4 Inch	Residential	18,813	23,057	4,244	22.56%
29	1 Inch	Residential	219,446	258,842	39,396	17.95%
30	1 1/2 Inch	Residential	86,475	99,456	12,982	15.01%
31	2 Inch	Residential	111,665	128,653	16,988	15.21%
32	3 Inch	Residential	8,330	9,847	1,517	18.21%
33	5/8X3/4 Inch	Commercial	22,429	26,572	4,143	18.47%
34	3/4 Inch	Commercial	199	244	46	22.98%
35	1 Inch	Commercial	104,870	123,449	18,579	17.72%
36	1 1/2 Inch	Commercial	49,028	56,968	7,940	16.20%
37	2 Inch	Commercial	342,018	395,523	53,505	15.64%
38	3 Inch	Commercial	6,084	7,158	1,073	17.64%
39	4 Inch	Commercial	102,047	114,675	12,628	12.37%
40	5/8X3/4 Inch	Commercial/Residential	270	324	54	20.00%
41	1 Inch	Commercial/Residential	5,732	6,692	960	16.75%
42	2 Inch	Commercial/Residential	22,471	26,254	3,783	16.83%
43	6 Inch	Bulk	20,239	24,114	3,875	19.14%
44		Fire Lines up to 6 Inch	8,770	8,770	-	0.00%
45		Fire Lines up to 8 Inch	1,440	1,440	-	0.00%
46						
47	Revenue Annualuzation		(1,072)	(1,322)	(249)	23.25%
48	Usage Normalization		(158,729)	(158,729)	-	0.00%
49	**Subtotal**		$ 3,384,038	$ 4,068,789	$ 684,751	20.23%
50						
51	Misc Revenues		96,191	96,191	-	0.00%
52	Reconciling Amount		2,520	126	(2,394)	-95.00%
53	Rounding		-	-		0.00%
54	**Total of Water Revenues**		$ 3,482,748	$ 4,165,106	$ 682,357	19.59%
55						

56		
57	SUPPORTING SCHEDULES:	
58	B-1	
59	C-1	
60	C-3	
61	H-1	

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Summary of Rate Base

Exhibit
Rejoinder Scehdule B-1
Page 1
Witness: Bourassa

Line No.		Original Cost Rate base	Fair Value Rate Base
1			
2	Gross Utility Plant in Service	$ 42,402,220	$ 42,402,220
3	Less: Accumulated Depreciation	16,014,775	16,014,775
4			
5	Net Utility Plant in Service	$ 26,387,445	$ 26,387,445
6			
7	Less:		
8	Advances in Aid of Construction	7,383,569	7,383,569
9			
10	Contributions in Aid of Construction	16,784,118	16,784,118
11			
12	Accumulated Amortization of CIAC	(5,408,920)	(5,408,920)
13			
14	Customer Meter Deposits	-	-
15	Custmer Security Deposits	-	-
16	Accumulated Deferred Income Tax	-	-
17			
18			
19	Plus:		
20			
21	Deferred Regulatory Assets	-	-
22	Prepayments	-	-
23	Materials and Supplies	-	-
24	Allowance for Cash Working Capital	-	
25			
26	Total Rate Base	$ 7,628,678	$ 7,628,678
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41	SUPPORTING SCHEDULES:		
42	B-2		
43	B-3		
44	B-5		
45			
46			
47			
48			
49			
50			

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Original Cost Rate Base Proforma Adjustments

Exhibit
Rejoinder Scehdule B-2
Page 1
Witness: Bourassa

Line No.		Actual at End of Test Year	Proforma Adjustment	Adjusted at end of Test Year
1	Gross Utility			
2	Plant in Service	$ 42,452,128	(49,908)	$ 42,402,220
3				
4	**Less:**			
5	Accumulated			
6	Depreciation	16,014,775	-	16,014,775
7				
8				
9	Net Utility Plant			
10	in Service	$ 26,437,353		$ 26,387,445
11				
12	**Less:**			
13	Advances in Aid of			
14	Construction	7,383,569	-	7,383,569
15				
16	Contributions in Aid of			
17	Construction - Gross	16,784,118	-	16,784,118
18				
19	Accumulated Amortization of CIAC	(5,408,920)	-	(5,408,920)
20				
21	Customer Meter Deposits	-	-	-
22	Custmer Security Deposits	-	-	-
23	Accumulated Deferred Income Tax	-		-
24				-
25				-
26				
27	**Plus:**			
28				
29	Deferred Regulatory Assets	-		-
30	Prepayments	-		-
31	Materials and Supplies	-		-
32	Working capital	-	-	-
33				-
34				
35	Total	$ 7,678,586		$ 7,628,678
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46	SUPPORTING SCHEDULES:			RECAP SCHEDULES:
47	B-2, pages 2			B-1
48				
49				
50				
51				

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Original Cost Rate Base Proforma Adjustments

Exhibit
Rejoinder Scehdule B-2
Page 2
Witness: Bourassa

Line No.		Actual at End of Test Year	Proforma Adjustments 1 Plant-in-Service	2 Accumulated Depreciation	3 Intentionally Left Blank	4 Intentionally Left Blank	5 Intentionally Left Blank	Adjusted at end of Test Year
1	Gross Utility							
2	Plant in Service	$ 42,452,128	(49,908)					$ 42,402,220
3								
4	**Less:**							
5	Accumulated							
6	Depreciation	16,014,775		-				16,014,775
7								
8								
9	Net Utility Plant							
10	in Service	$ 26,437,353	$ (49,908)	$ -	$ -	$ -	$ -	$ 26,387,445
11								
12	**Less:**							
13	Advances in Aid of							
14	Construction	7,383,569						7,383,569
15								
16	Contributions in Aid of							
17	Construction (CIAC)	16,784,118						16,784,118
18								
19	Accumulated Amort of CIAC	(5,408,920)						(5,408,920)
20								
21	Customer Meter Deposits	-						-
22	Customer Security Deposits	-						-
23	Accumulated Deferred Income Taxes	-						-
24								
25								
26	**Plus:**							
27								
28	Deferred Regulatory Assets	-						-
29	Prepayments	-						-
30	Materials and Supplies	-						-
31	Allowance for Cash Working Capital	-						-
32								
33	Total	$ 7,678,586	$ (49,908)	$ -	$ -	$ -	$ -	$ 7,628,678
34								
35								
36								
37	SUPPORTING SCHEDULES:							
38	B-2, pages 3-4							
39								
40								
41								

RECAP SCHEDULES:
B-1

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1

Exhibit
Rejoinder Scehdule B-2
Page 3
Witness: Bourassa

Plant-in-Service

Line No.	Acct. No.	Description	Actual Orginal Cost	A Post TY Plant	B Adjustments to Reconcile Plant to Reconstruction	C Intentionally Left Blank	D Intentionally Left Blank	E Intentionally Left Blank	Adjusted Original Cost
				Adjustments					
6	301	Organization Cost	47,863		-				47,863
7	302	Franchise Cost	244		-				244
8	303	Land and Land Rights	170,589		-				170,589
9	304	Structures & Improvements	-		-				-
10	304.1	Structures and Improv - Pumping	30,695		-				30,695
11	304.2	Structures and Improv - Water Tr	141,261		-				141,261
12	305	Collecting & Impounding Reservoirs	-		-				-
13	306	Lake, River, Canal Intakes	-		-				-
14	307	Wells & Springs	2,013,049		-				2,013,049
15	308	Infiltration Galleries	-		-				-
16	309	Raw Water Supply Mains	-		-				-
17	310	Power Generation Equipment	-		-				-
18	311	Pumping Equipment	3,289,327		-				3,289,327
19	311.1	Pumping Equipment - Gas	118,494		-				118,494
20	320	Water Treatment Equipment	4,440,527		-				4,440,527
21	320.1	Water Treatment Plants	-		-				-
22	320.2	Solution Chemical Feeders	-		-				-
23	330	Distribution Reservoirs & Standpipes	2,061,545	(49,908)	-				2,011,637
24	330.1	Storage Tanks	-		-				-
25	330.2	Pressure Tanks	-		-				-
26	331	Transmission & Distribution Mains	19,123,697		-				19,123,697
27	333	Services	4,696,522		-				4,696,522
28	333.1	Fire Taps	332,174		-				332,174
29	334	Meters	1,600,133		-				1,600,133
30	335	Hydrants	2,031,665		-				2,031,665
31	336	Backflow Prevention Devices	-		-				-
32	339	Other Plant & Misc Equipment	583,181		-				583,181
33	340	Office Furniture & Equipment	151,618		-				151,618
34	340.1	Computers & Software	608,761		-				608,761
35	341	Transportation Equipment	469,777		-				469,777
36	342	Stores Equipment	2,441		-				2,441
37	343	Tools, Shop & Garage Equipment	103,018		-				103,018
38	344	Laboratory Equipment	12,000		-				12,000
39	345	Power Operated Equipment	136,512		-				136,512
40	345.1	Power Operated Equipment - Backh	149,439		-				149,439
41	346	Communication Equipment	124,656		-				124,656
42	347	Miscellaneous Equipment	-		-				-
43	348	Other Tangible Plant	12,938		-				12,938
44		Plant Held for Future Use	-						-
45		TOTALS	$ 42,452,128	$ (49,908)	$ -	$ -	$ -	$ -	$ 42,402,220
46									
47	Plant-in-Service per Books								$ 42,452,128
48									
49	Increase (decrease) in Plant-in-Service								$ (49,908)
50									
51	Adjustment to Plant-in-Service								$ (49,908)
52									
53	SUPPORTING SCHEDULES								
54	B-2, pages 3.1 and, 3.2								
55									

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1 - A

Exhibit
Rejoinder Scehdule B-2
Page 3.1
Witness: Bourassa

Line No.		
1	Post Test Year Plant	
2		
3		
4	Revised Cost of New Reservoir #5	$1,065,092
5	Cost of New Reservoir #5 per Direct	1,115,000
6	Increase (decrease) in Acct. 330 - Distribution Reservoirs and Standpipe	$ (49,908)

SUPPORTING SCHEDULE
Testimony
Work papers

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Original Cost Rate Base Proforma Adjustments
Adjustment Number 1 - B

Exhibit
Rejoinder Scehdule B-2
Page 3.2
Witness: Bourassa

Reconciliation of Plant to Plant Reconstruction

Line No.	Acct. No.	Description	Orginal Cost	B-2 Adjustments	Adjusted Orginal Cost	Plant Per Reconstruction	Difference
6	301	Organization Cost	47,863	-	47,863	47,863	-
7	302	Franchise Cost	244	-	244	244	-
8	303	Land and Land Rights	170,589	-	170,589	170,589	-
9	304	Structures & Improvements	-	-	-	-	-
10	304.1	Structures and Improv - Pumpir	30,695	-	30,695	30,695	-
11	304.2	Structures and Improv - Water	141,261	-	141,261	141,261	-
12	305	Collecting & Impounding Reservoi	-	-	-	-	-
13	306	Lake, River, Canal Intakes	-	-	-	-	-
14	307	Wells & Springs	2,013,049	-	2,013,049	2,013,049	-
15	308	Infiltration Galleries	-	-	-	-	-
16	309	Raw Water Supply Mains	-	-	-	-	-
17	310	Power Generation Equipment	-	-	-	-	-
18	311	Pumping Equipment	3,289,327	-	3,289,327	3,289,327	-
19	311.1	Pumping Equipment - Gas	118,494	-	118,494	118,494	-
20	320	Water Treatment Equipment	4,440,527	-	4,440,527	4,440,527	-
21	320.1	Water Treatment Plants	-	-	-	-	-
22	320.2	Solution Chemical Feeders	-	-	-	-	-
23	330	Distribution Reservoirs & Standpip	2,061,545	(49,908)	2,011,637	2,011,637	-
24	330.1	Storage Tanks	-	-	-	-	-
25	330.2	Pressure Tanks	-	-	-	-	-
26	331	Transmission & Distribution Mains	19,123,697	-	19,123,697	19,123,697	-
27	333	Services	4,696,522	-	4,696,522	4,696,522	-
28	333.1	Fire Taps	332,174	-	332,174	332,174	-
29	334	Meters	1,600,133	-	1,600,133	1,600,133	-
30	335	Hydrants	2,031,665	-	2,031,665	2,031,665	-
31	336	Backflow Prevention Devices	-	-	-	-	-
32	339	Other Plant & Misc Equipment	583,181	-	583,181	583,181	-
33	340	Office Furniture & Equipment	151,618	-	151,618	151,618	-
34	340.1	Computers & Software	608,761	-	608,761	608,761	-
35	341	Transportation Equipment	469,777	-	469,777	469,777	-
36	342	Stores Equipment	2,441	-	2,441	2,441	-
37	343	Tools, Shop & Garage Equipment	103,018	-	103,018	103,018	-
38	344	Laboratory Equipment	12,000	-	12,000	12,000	-
39	345	Power Operated Equipment	136,512	-	136,512	136,512	-
40	345.1	Power Operated Equipment - Bacl	149,439	-	149,439	149,439	-
41	346	Communication Equipment	124,656	-	124,656	124,656	-
42	347	Miscellaneous Equipment	-	-	-	-	-
43	348	Other Tangible Plant	12,938	-	12,938	12,938	-
44		Plant Held for Future Use					-
45		TOTALS	$ 42,452,128	$ (49,908)	$ 42,402,220	$ 42,402,220	$ -

SUPPORTING SCHEDULE
B-2, pages 3.1
B-2, pages 3.3 through 3.10

Community Water Company of Green Valley
Plant Additions and Retirements

Exhibit
Rejoinder Scehdule B-2
Page 3.3
Witness: Bourassa

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	Company Plant at 12/31/2007	Order Adopted Adjustments	Order Plant at 12/31/2007	Accum. Deprec. At 12/31/2007	Net Plant 12/31/2007	Plant at 12/31/2006	Accum. Deprec. At 12/31/2006
1	301	Organization Cost	0.00%	47,863	-	47,863	-	47,863	47,863	-
2	302	Franchise Cost	0.00%	244	-	244	-	244	244	-
3	303	Land and Land Rights	0.00%	169,578	-	169,578	-	169,578	169,578	-
4	304	Structures & Improvements	3.33%	-	-	-	-	-	-	-
5	304.1	Structures and Improv - Pumping	3.33%	24,640	-	24,640	1,542		24,640	1,542
6	304.2	Structures and Improv - Water Trmnt	3.33%	138,396	-	138,396	9,290		138,396	9,290
7	305	Collecting & Impounding Reservoirs	2.50%	-	-	-	-	-	-	-
8	306	Lake, River, Canal Intakes	2.50%	-	-	-	-	-	-	-
9	307	Wells & Springs	3.33%	1,999,899	10,903	2,010,802	80,014	1,930,788	2,010,802	80,014
10	308	Infiltration Galleries	6.67%	-	-	-	-	-	-	-
11	309	Raw Water Supply Mains	2.00%	-	-	-	-	-	-	-
12	310	Power Generation Equipment	5.00%	-	-	-	-	-	-	-
13	311	Pumping Equipment	12.50%	3,459,933	-	3,459,933	347,865	3,112,068	3,459,933	347,865
14	311.1	Pumping Equipment - Gas	12.50%	122,126	-	122,126	26,024		122,126	26,024
15	320	Water Treatment Equipment	3.33%	4,373,993	-	4,373,993	126,848	4,247,145	4,373,993	126,848
16	320.1	Water Treatment Plants	3.33%	-	-	-	-	-	-	-
17	320.2	Solution Chemical Feeders	20.00%	-	-	-	-	-	-	-
18	330	Distribution Reservoirs & Standpipes	2.22%	1,064,732	-	1,064,732	378,309	686,423	1,064,732	378,309
19	330.1	Storage Tanks	2.22%	-	-	-	-	-	-	-
20	330.2	Pressure Tanks	5.00%	-	-	-	-	-	-	-
21	331	Transmission & Distribution Mains	2.00%	18,042,745	-	18,042,745	3,522,013	14,520,732	18,042,745	3,522,013
22	333	Services	3.33%	3,725,465	-	3,725,465	902,155	2,823,310	3,725,465	902,155
23	333.1	Fire Taps	3.33%	239,551	-	239,551	55,565		239,551	55,565
24	334	Meters	8.33%	711,853	-	711,853	118,871	592,982	711,853	118,871
25	335	Hydrants	2.00%	1,862,371	-	1,862,371	458,220	1,404,151	1,862,371	458,220
26	336	Backflow Prevention Devices	6.67%	-	-	-	-	-	-	-
27	339	Other Plant & Misc Equipment	6.67%	549,839	-	549,839	274,355	275,485	549,839	274,355
28	340	Office Furniture & Equipment	6.67%	150,571	-	150,571	20,996	129,575	150,571	20,996
29	340.1	Computers & Software	20.00%	265,818	-	265,818	237,831	27,987	265,818	237,831
30	341	Transportation Equipment	20.00%	464,094	-	464,094	398,371	65,723	464,094	398,371
31	342	Stores Equipment	4.00%	2,441	-	2,441	1,018	1,423	2,441	1,018
32	343	Tools, Shop & Garage Equipment	5.00%	110,595	-	110,595	15,474	95,121	110,595	15,474
33	344	Laboratory Equipment	10.00%	(246)	12,000	11,754	(780)	12,534	11,754	(780)
34	345	Power Operated Equipment	5.00%	72,281	-	72,281	5,081	67,200	72,281	5,081
35	345.1	Power Operated Equipment - Backhoe	5.00%	107,179	-	107,179	87,657		107,179	87,657
36	346	Communication Equipment	10.00%	69,340	-	69,340	32,224	37,116	69,340	32,224
37	347	Miscellaneous Equipment	10.00%	-	-	-	-	-	-	-
38	348	Other Tangible Plant	10.00%	738	-	738	120	619	738	120
39		Rounding			1	1	-	1	1	0
40		CWIP				-				
41		TOTALS		37,776,038	22,904	37,798,942	7,099,063	30,248,066	37,798,942	7,099,063

Community Water Company of Green Valley
Plant Additions and Retirements

Exhibit
Rejoinder Scehdule B-2
Page 3.4
Witness: Bourassa

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2008 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	301	Organization Cost	0.00%	-	-	-	-		-		-	47,863	-
2	302	Franchise Cost	0.00%	-	-	-	-		-		-	244	-
3	303	Land and Land Rights	0.00%	887	0	887	-		-		-	170,465	-
4	304	Structures & Improvements	3.33%	-	-	-	-		-		-	-	-
5	304.1	Structures and Improv - Pumping	3.33%	11	1	12	-		-		821	24,652	2,363
6	304.2	Structures and Improv - Water Trmnt	3.33%	3,486	(0)	3,486	-		-		4,667	141,882	13,956
7	305	Collecting & Impounding Reservoirs	2.50%	-	-	-	-		-		-	-	-
8	306	Lake, River, Canal Intakes	2.50%	-	-	-	-		-		-	-	-
9	307	Wells & Springs	3.33%	79,934	-	79,934	-		-		68,291	2,090,736	148,305
10	308	Infiltration Galleries	6.67%	-	-	-	-		-		-	-	-
11	309	Raw Water Supply Mains	2.00%	-	-	-	-		-		-	-	-
12	310	Power Generation Equipment	5.00%	-	-	-	-		-		-	-	-
13	311	Pumping Equipment	12.50%	52,403	0	52,404	50,000		50,000		432,642	3,462,336	730,506
14	311.1	Pumping Equipment - Gas	12.50%	-	(0)	(0)	-		-		15,266	122,126	41,290
15	320	Water Treatment Equipment	3.33%	4,130	(0)	4,130	16,372		16,372		145,450	4,361,751	255,927
16	320.1	Water Treatment Plants	3.33%	-	-	-	-		-		-	-	-
17	320.2	Solution Chemical Feeders	20.00%	-	-	-	-		-		-	-	-
18	330	Distribution Reservoirs & Standpipes	2.22%	-	(0)	(0)	-		-		23,637	1,064,732	401,946
19	330.1	Storage Tanks	2.22%	-	-	-	-		-		-	-	-
20	330.2	Pressure Tanks	5.00%	-	-	-	-		-		-	-	-
21	331	Transmission & Distribution Mains	2.00%	321,320	(3,719)	317,601	-		-		364,031	18,360,346	3,886,044
22	333	Services	3.33%	227,060	(0)	227,060	7,647		7,647		127,711	3,944,879	1,022,220
23	333.1	Fire Taps	3.33%	2,383	23,361	25,744	-		-		8,406	265,294	63,971
24	334	Meters	8.33%	55,312	7,290	62,602	32,916		32,916		60,534	741,539	146,488
25	335	Hydrants	2.00%	63,820	(26,932)	36,888	-		-		37,616	1,899,259	495,836
26	336	Backflow Prevention Devices	6.67%	-	-	-	-		-		-	-	-
27	339	Other Plant & Misc Equipment	6.67%	8,773	344	9,117	-		-		36,978	558,957	311,333
28	340	Office Furniture & Equipment	6.67%	5,899	(345)	5,554	5,000		5,000		10,062	151,125	26,058
29	340.1	Computers & Software	20.00%	48,326	(1)	48,324	18,076		18,076		56,188	296,066	275,944
30	341	Transportation Equipment	20.00%	58,540	(1)	58,540	69,759		69,759		91,697	452,875	420,309
31	342	Stores Equipment	4.00%	-	0	0	-		-		98	2,441	1,116
32	343	Tools, Shop & Garage Equipment	5.00%	3,126	(2,591)	535	7,748		7,748		5,349	103,382	13,075
33	344	Laboratory Equipment	10.00%	-	2,591	2,591	-		-		1,305	14,345	525
34	345	Power Operated Equipment	5.00%	3,124	0	3,125	-		-		3,692	75,406	8,773
35	345.1	Power Operated Equipment - Backhoe	5.00%	-	0	0	-		-		5,359	107,179	93,016
36	346	Communication Equipment	10.00%	-	0	0	7,042		7,042		6,582	62,298	31,764
37	347	Miscellaneous Equipment	10.00%	-	-	-	-		-		-	-	-
38	348	Other Tangible Plant	10.00%	-	-	-	-		-		74	738	194
39		Rounding											
40		CWIP											
41		TOTALS		938,535	(2)	938,533	214,559	-	214,559	-	1,506,455	38,522,915	8,390,959

Community Water Company of Green Valley
Plant Additions and Retirements

Exhibit
Rejoinder Scehdule B-2
Page 3.5
Witness: Bourassa

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2009 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	301	Organization Cost	0.00%	-	-	-	-		-		-	47,863	-
2	302	Franchise Cost	0.00%	-	-	-	-		-		-	244	-
3	303	Land and Land Rights	0.00%	124	-	124	-		-		-	170,589	-
4	304	Structures & Improvements	3.33%	-	-	-	-		-		-	-	-
5	304.1	Structures and Improv - Pumping	3.33%	17	-	17	-		-		821	24,669	3,184
6	304.2	Structures and Improv - Water Trmnt	3.33%	-	-	-	-		-		4,725	141,882	18,681
7	305	Collecting & Impounding Reservoirs	2.50%	-	-	-	-		-		-	-	-
8	306	Lake, River, Canal Intakes	2.50%	-	-	-	-		-		-	-	-
9	307	Wells & Springs	3.33%	3,112	-	3,112	-		-		69,673	2,093,848	217,978
10	308	Infiltration Galleries	6.67%	-	-	-	-		-		-	-	-
11	309	Raw Water Supply Mains	2.00%	-	-	-	-		-		-	-	-
12	310	Power Generation Equipment	5.00%	-	-	-	-		-		-	-	-
13	311	Pumping Equipment	12.50%	7,450	-	7,450	-		-		433,258	3,469,786	1,163,764
14	311.1	Pumping Equipment - Gas	12.50%	-	-	-	-		-		15,266	122,126	56,556
15	320	Water Treatment Equipment	3.33%	6,178	-	6,178	-		-		145,349	4,367,928	401,276
16	320.1	Water Treatment Plants	3.33%	-	-	-	-		-		-	-	-
17	320.2	Solution Chemical Feeders	20.00%	-	-	-	-		-		-	-	-
18	330	Distribution Reservoirs & Standpipes	2.22%	-	-	-	-		-		23,637	1,064,732	425,583
19	330.1	Storage Tanks	2.22%	-	-	-	-		-		-	-	-
20	330.2	Pressure Tanks	5.00%	-	-	-	-		-		-	-	-
21	331	Transmission & Distribution Mains	2.00%	274,162	-	274,162	743		743		369,941	18,633,766	4,255,242
22	333	Services	3.33%	138,721	-	138,721	6,414		6,414		133,567	4,077,186	1,149,373
23	333.1	Fire Taps	3.33%	24,341	-	24,341	-		-		9,240	289,636	73,211
24	334	Meters	8.33%	113,799	-	113,799	27,956		27,956		65,346	827,381	183,877
25	335	Hydrants	2.00%	23,061	-	23,061	990		990		38,206	1,921,329	533,052
26	336	Backflow Prevention Devices	6.67%	-	-	-	-		-		-	-	-
27	339	Other Plant & Misc Equipment	6.67%	-	-	-	-		-		37,282	558,957	348,616
28	340	Office Furniture & Equipment	6.67%	-	-	-	6,000		6,000		9,880	145,125	29,937
29	340.1	Computers & Software	20.00%	48,325	-	48,325	70,102		70,102		57,036	274,289	262,877
30	341	Transportation Equipment	20.00%	52,437	-	52,437	-		-		85,003	505,312	505,312
31	342	Stores Equipment	4.00%	-	-	-	-		-		98	2,441	1,214
32	343	Tools, Shop & Garage Equipment	5.00%	65	-	65	495		495		5,158	102,951	17,738
33	344	Laboratory Equipment	10.00%	-	-	-	-		-		1,434	14,345	1,959
34	345	Power Operated Equipment	5.00%	481	-	481	1,196		1,196		3,752	74,691	11,330
35	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-	-		-		5,359	107,179	98,375
36	346	Communication Equipment	10.00%	8,606	-	8,606	-		-		6,660	70,904	38,424
37	347	Miscellaneous Equipment	10.00%	-	-	-	-		-		-	-	-
38	348	Other Tangible Plant	10.00%	-	-	-	-		-		74	738	268
39		Rounding											
40		CWIP											
41		TOTALS		700,878	-	700,878	113,896	-	113,896	-	1,520,765	39,109,897	9,797,827

Community Water Company of Green Valley
Plant Additions and Retirements

Exhibit
Rejoinder Scehdule B-2
Page 3.6
Witness: Bourassa

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2010 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	301	Organization Cost	0.00%	-	-	-	-		-		-	47,863	-
2	302	Franchise Cost	0.00%	-	-	-	-		-		-	244	-
3	303	Land and Land Rights	0.00%	-	-	-	-		-		-	170,589	-
4	304	Structures & Improvements	3.33%	-	-	-	-		-		-	-	-
5	304.1	Structures and Improv - Pumping	3.33%	-	-	-	-		-		821	24,669	4,006
6	304.2	Structures and Improv - Water Trmnt	3.33%	-	-	-	-		-		4,725	141,882	23,406
7	305	Collecting & Impounding Reservoirs	2.50%	-	-	-	-		-		-	-	-
8	306	Lake, River, Canal Intakes	2.50%	-	-	-	-		-		-	-	-
9	307	Wells & Springs	3.33%	-	-	-	-		-		69,725	2,093,848	287,703
10	308	Infiltration Galleries	6.67%	-	-	-	-		-		-	-	-
11	309	Raw Water Supply Mains	2.00%	-	-	-	-		-		-	-	-
12	310	Power Generation Equipment	5.00%	-	-	-	-		-		-	-	-
13	311	Pumping Equipment	12.50%	5,260	-	5,260	-		-		434,052	3,475,047	1,597,816
14	311.1	Pumping Equipment - Gas	12.50%	-	-	-	-		-		15,266	122,126	71,822
15	320	Water Treatment Equipment	3.33%	-	-	-	-		-		145,452	4,367,928	546,728
16	320.1	Water Treatment Plants	3.33%	-	-	-	-		-		-	-	-
17	320.2	Solution Chemical Feeders	20.00%	-	-	-	-		-		-	-	-
18	330	Distribution Reservoirs & Standpipes	2.22%	-	-	-	-		-		23,637	1,064,732	449,220
19	330.1	Storage Tanks	2.22%	-	-	-	-		-		-	-	-
20	330.2	Pressure Tanks	5.00%	-	-	-	-		-		-	-	-
21	331	Transmission & Distribution Mains	2.00%	26,518	-	26,518	594		594		372,935	18,659,690	4,627,583
22	333	Services	3.33%	151,649	-	151,649	6,940		6,940		138,180	4,221,896	1,280,613
23	333.1	Fire Taps	3.33%	-	-	-	-		-		9,645	289,636	82,856
24	334	Meters	8.33%	152,453	-	152,453	35,010		35,010		73,812	944,824	222,680
25	335	Hydrants	2.00%	518	-	518	-		-		38,432	1,921,847	571,484
26	336	Backflow Prevention Devices	6.67%	-	-	-	-		-		-	-	-
27	339	Other Plant & Misc Equipment	6.67%	-	-	-	-		-		37,282	558,957	385,898
28	340	Office Furniture & Equipment	6.67%	14,142	-	14,142	10,000		10,000		9,818	149,267	29,755
29	340.1	Computers & Software	20.00%	16,450	-	16,450	14,000		14,000		27,863	276,739	276,740
30	341	Transportation Equipment	20.00%	72,179	-	72,179	129,462		129,462		72,178	448,029	448,028
31	342	Stores Equipment	4.00%	-	-	-	-		-		98	2,441	1,311
32	343	Tools, Shop & Garage Equipment	5.00%	108	-	108	-		-		5,150	103,059	22,889
33	344	Laboratory Equipment	10.00%	-	-	-	-		-		1,434	14,345	3,394
34	345	Power Operated Equipment	5.00%	2,046	-	2,046	-		-		3,786	76,736	15,115
35	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-	-		-		5,359	107,179	103,733
36	346	Communication Equipment	10.00%	2,680	-	2,680	-		-		7,224	73,584	45,648
37	347	Miscellaneous Equipment	10.00%	-	-	-	-		-		-	-	-
38	348	Other Tangible Plant	10.00%	-	-	-	-		-		74	738	341
39		Rounding											
40		CWIP											
41		TOTALS		444,004	-	444,004	196,006	-	196,006	-	1,496,948	39,357,895	11,098,770

Community Water Company of Green Valley
Plant Additions and Retirements

Exhibit
Rejoinder Scehdule B-2
Page 3.7
Witness: Bourassa

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2011 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	301	Organization Cost	0.00%	-	-	-	-		-		-	47,863	-
2	302	Franchise Cost	0.00%	-	-	-	-		-		-	244	-
3	303	Land and Land Rights	0.00%	-	-	-	-		-		-	170,589	-
4	304	Structures & Improvements	3.33%	-	-	-	-		-		-	-	-
5	304.1	Structures and Improv - Pumping	3.33%	-	-	-	-		-		821	24,669	4,827
6	304.2	Structures and Improv - Water Trmnt	3.33%	-	-	-	-		-		4,725	141,882	28,130
7	305	Collecting & Impounding Reservoirs	2.50%	-	-	-	-		-		-	-	-
8	306	Lake, River, Canal Intakes	2.50%	-	-	-	-		-		-	-	-
9	307	Wells & Springs	3.33%	-	-	-	-		-		69,725	2,093,848	357,428
10	308	Infiltration Galleries	6.67%	-	-	-	-		-		-	-	-
11	309	Raw Water Supply Mains	2.00%	-	-	-	-		-		-	-	-
12	310	Power Generation Equipment	5.00%	-	-	-	-		-		-	-	-
13	311	Pumping Equipment	12.50%	18,571	-	18,571	46,750		46,750		432,620	3,446,868	1,983,686
14	311.1	Pumping Equipment - Gas	12.50%	-	-	-	-		-		15,266	122,126	87,087
15	320	Water Treatment Equipment	3.33%	88,246	-	88,246	50,024		50,024		146,088	4,406,150	642,793
16	320.1	Water Treatment Plants	3.33%	-	-	-	-		-		-	-	-
17	320.2	Solution Chemical Feeders	20.00%	-	-	-	-		-		-	-	-
18	330	Distribution Reservoirs & Standpipes	2.22%	-	-	-	-		-		23,637	1,064,732	472,857
19	330.1	Storage Tanks	2.22%	-	-	-	-		-		-	-	-
20	330.2	Pressure Tanks	5.00%	-	-	-	-		-		-	-	-
21	331	Transmission & Distribution Mains	2.00%	69,478	-	69,478	8,360		8,360		373,805	18,720,808	4,993,028
22	333	Services	3.33%	118,731	-	118,731	5,043		5,043		142,482	4,335,584	1,418,052
23	333.1	Fire Taps	3.33%	13,163	-	13,163	2,255		2,255		9,826	300,543	90,427
24	334	Meters	8.33%	169,121	-	169,121	57,169		57,169		83,367	1,056,775	248,877
25	335	Hydrants	2.00%	19,157	-	19,157	-		-		38,629	1,941,004	610,112
26	336	Backflow Prevention Devices	6.67%	-	-	-	-		-		-	-	-
27	339	Other Plant & Misc Equipment	6.67%	-	-	-	-		-		37,282	558,957	423,180
28	340	Office Furniture & Equipment	6.67%	-	-	-	-		-		9,956	149,267	39,712
29	340.1	Computers & Software	20.00%	3,359	-	3,359	-		-		3,359	280,098	280,099
30	341	Transportation Equipment	20.00%	57,165	-	57,165	-		-		57,165	505,193	505,193
31	342	Stores Equipment	4.00%	-	-	-	-		-		98	2,441	1,409
32	343	Tools, Shop & Garage Equipment	5.00%	-	-	-	-		-		5,153	103,059	28,042
33	344	Laboratory Equipment	10.00%	-	-	-	-		-		1,434	14,345	4,828
34	345	Power Operated Equipment	5.00%	-	-	-	-		-		3,837	76,736	18,952
35	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-	-		-		3,446	107,179	107,179
36	346	Communication Equipment	10.00%	-	-	-	-		-		7,358	73,584	53,007
37	347	Miscellaneous Equipment	10.00%	-	-	-	-		-		-	-	-
38	348	Other Tangible Plant	10.00%	-	-	-	-		-		74	738	415
39		Rounding											
40		CWIP											
41		TOTALS		556,990	-	556,990	169,601	-	169,601	-	1,470,153	39,745,284	12,399,322

Community Water Company of Green Valley
Plant Additions and Retirements

Exhibit
Rejoinder Scehdule B-2
Page 3.8
Witness: Bourassa

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2012 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	301	Organization Cost	0.00%	-	-	-	-		-		-	47,863	-
2	302	Franchise Cost	0.00%	-	-	-	-		-		-	244	-
3	303	Land and Land Rights	0.00%	-	-	-	-		-		-	170,589	-
4	304	Structures & Improvements	3.33%	-	-	-	-		-		-	-	-
5	304.1	Structures and Improv - Pumping	3.33%	-	-	-	410		410		815	24,260	5,232
6	304.2	Structures and Improv - Water Trmnt	3.33%	-	-	-	-		-		4,725	141,882	32,855
7	305	Collecting & Impounding Reservoirs	2.50%	-	-	-	-		-		-	-	-
8	306	Lake, River, Canal Intakes	2.50%	-	-	-	-		-		-	-	-
9	307	Wells & Springs	3.33%	-	-	-	80,799		80,799		68,380	2,013,049	345,009
10	308	Infiltration Galleries	6.67%	-	-	-	-		-		-	-	-
11	309	Raw Water Supply Mains	2.00%	-	-	-	-		-		-	-	-
12	310	Power Generation Equipment	5.00%	-	-	-	-		-		-	-	-
13	311	Pumping Equipment	12.50%	22,434	-	22,434	183,580		183,580		420,787	3,285,722	2,220,892
14	311.1	Pumping Equipment - Gas	12.50%	-	-	-	3,632		3,632		15,039	118,494	98,494
15	320	Water Treatment Equipment	3.33%	46,575	-	46,575	2,105		2,105		147,465	4,450,620	788,153
16	320.1	Water Treatment Plants	3.33%	-	-	-	-		-		-	-	-
17	320.2	Solution Chemical Feeders	20.00%	-	-	-	-		-		-	-	-
18	330	Distribution Reservoirs & Standpipes	2.22%	-	-	-	-		-		23,637	1,064,732	496,494
19	330.1	Storage Tanks	2.22%	-	-	-	-		-		-	-	-
20	330.2	Pressure Tanks	5.00%	-	-	-	-		-		-	-	-
21	331	Transmission & Distribution Mains	2.00%	188,538	-	188,538	4,963		4,963		376,252	18,904,383	5,364,316
22	333	Services	3.33%	140,342	-	140,342	4,930		4,930		146,630	4,470,995	1,559,751
23	333.1	Fire Taps	3.33%	3,444	-	3,444	3,025		3,025		10,015	300,962	97,417
24	334	Meters	8.33%	206,707	-	206,707	19,216		19,216		95,838	1,244,266	325,499
25	335	Hydrants	2.00%	22,719	-	22,719	-		-		39,047	1,963,724	649,160
26	336	Backflow Prevention Devices	6.67%	-	-	-	-		-		-	-	-
27	339	Other Plant & Misc Equipment	6.67%	59,331	-	59,331	35,000		35,000		38,094	583,288	426,274
28	340	Office Furniture & Equipment	6.67%	2,771	-	2,771	2,601		2,601		9,962	149,438	47,073
29	340.1	Computers & Software	20.00%	22,336	-	22,336	25,792		25,792		22,336	276,642	276,643
30	341	Transportation Equipment	20.00%	64,145	-	64,145	119,073		119,073		64,145	450,265	450,265
31	342	Stores Equipment	4.00%	-	-	-	-		-		98	2,441	1,506
32	343	Tools, Shop & Garage Equipment	5.00%	521	-	521	-		-		5,166	103,580	33,208
33	344	Laboratory Equipment	10.00%	-	-	-	2,345		2,345		1,317	12,000	3,801
34	345	Power Operated Equipment	5.00%	-	-	-	-		-		3,837	76,736	22,789
35	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-	-		-		-	107,179	107,179
36	346	Communication Equipment	10.00%	3,159	-	3,159	3,200		3,200		7,356	73,543	57,163
37	347	Miscellaneous Equipment	10.00%	-	-	-	-		-		-	-	-
38	348	Other Tangible Plant	10.00%	-	-	-	-		-		74	738	489
39		Rounding											
40		CWIP											
41		TOTALS		783,022	-	783,022	490,672	-	490,672	-	1,501,014	40,037,635	13,409,664

Community Water Company of Green Valley
Plant Additions and Retirements

Exhibit
Rejoinder Scehdule B-2
Page 3.9
Witness: Bourassa

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2013 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	301	Organization Cost	0.00%	-	-	-	-		-		-	47,863	-
2	302	Franchise Cost	0.00%	-	-	-	-		-		-	244	-
3	303	Land and Land Rights	0.00%	-	-	-	-		-		-	170,589	-
4	304	Structures & Improvements	3.33%	-	-	-	-		-		-	-	-
5	304.1	Structures and Improv - Pumping	3.33%	6,435	-	6,435	-		-		915	30,695	6,147
6	304.2	Structures and Improv - Water Trmnt	3.33%	-	-	-	620		620		4,714	141,261	36,949
7	305	Collecting & Impounding Reservoirs	2.50%	-	-	-	-		-		-	-	-
8	306	Lake, River, Canal Intakes	2.50%	-	-	-	-		-		-	-	-
9	307	Wells & Springs	3.33%	-	-	-	-		-		67,035	2,013,049	412,044
10	308	Infiltration Galleries	6.67%	-	-	-	-		-		-	-	-
11	309	Raw Water Supply Mains	2.00%	-	-	-	-		-		-	-	-
12	310	Power Generation Equipment	5.00%	-	-	-	-		-		-	-	-
13	311	Pumping Equipment	12.50%	23,559	-	23,559	29,317		29,317		410,355	3,279,964	2,601,931
14	311.1	Pumping Equipment - Gas	12.50%	-	-	-	-		-		14,812	118,494	113,306
15	320	Water Treatment Equipment	3.33%	21,608	-	21,608	49,875		49,875		147,735	4,422,353	886,013
16	320.1	Water Treatment Plants	3.33%	-	-	-	-		-		-	-	-
17	320.2	Solution Chemical Feeders	20.00%	-	-	-	-		-		-	-	-
18	330	Distribution Reservoirs & Standpipes	2.22%	-	-	-	-		-		23,637	1,064,732	520,131
19	330.1	Storage Tanks	2.22%	-	-	-	-		-		-	-	-
20	330.2	Pressure Tanks	5.00%	-	-	-	-		-		-	-	-
21	331	Transmission & Distribution Mains	2.00%	24,122	-	24,122	2,162		2,162		378,307	18,926,343	5,740,462
22	333	Services	3.33%	93,910	-	93,910	-		-		150,448	4,564,905	1,710,199
23	333.1	Fire Taps	3.33%	13,981	-	13,981	3,813		3,813		10,191	311,131	103,796
24	334	Meters	8.33%	182,104	-	182,104	27,381		27,381		110,092	1,398,989	408,210
25	335	Hydrants	2.00%	39,242	-	39,242	-		-		39,667	2,002,966	688,827
26	336	Backflow Prevention Devices	6.67%	-	-	-	-		-		-	-	-
27	339	Other Plant & Misc Equipment	6.67%	-	-	-	-		-		38,905	583,288	465,180
28	340	Office Furniture & Equipment	6.67%	-	-	-	-		-		9,968	149,438	57,040
29	340.1	Computers & Software	20.00%	439,786	-	439,786	145,203		145,203		84,787	571,224	216,226
30	341	Transportation Equipment	20.00%	-	-	-	33,883		33,883		-	416,382	416,382
31	342	Stores Equipment	4.00%	-	-	-	-		-		98	2,441	1,604
32	343	Tools, Shop & Garage Equipment	5.00%	1,938	-	1,938	2,500		2,500		5,165	103,018	35,873
33	344	Laboratory Equipment	10.00%	-	-	-	-		-		1,200	12,000	5,001
34	345	Power Operated Equipment	5.00%	-	-	-	-		-		3,837	76,736	26,626
35	345.1	Power Operated Equipment - Backhoe	5.00%	-	-	-	-		-		-	107,179	107,179
36	346	Communication Equipment	10.00%	45,256	-	45,256	-		-		9,617	118,800	66,780
37	347	Miscellaneous Equipment	10.00%	-	-	-	-		-		-	-	-
38	348	Other Tangible Plant	10.00%	-	-	-	-		-		74	738	563
39		Rounding											
40		CWIP											
41		TOTALS		891,942	-	891,942	294,754	-	294,754	-	1,511,558	40,634,823	14,626,468

Community Water Company of Green Valley
Plant Additions and Retirements

Exhibit
Rejoinder Scehdule B-2
Page 3.10
Witness: Bourassa

Line No.	NARUC Account No.	Description	Allowed Deprec. Rate	2014 Plant Additions (Per Books)	Plant Adjustments	Adjusted Plant Additions	Plant Retirements (Per Books)	Retirement Adjustments	Adjusted Plant Retirements	Salvage A/D Only	PTY Plant	PTY Retirement	Depreciation (Calculated)	Plant Balance	Accum. Deprec.
1	301	Organization Cost	0.00%	-	-	-	-		-				-	47,863	-
2	302	Franchise Cost	0.00%	-	-	-	-		-				-	244	-
3	303	Land and Land Rights	0.00%	-	-	-	-		-				-	170,589	-
4	304	Structures & Improvements	3.33%	-	-	-	-		-				-	-	-
5	304.1	Structures and Improv - Pumping	3.33%	-	-	-	-		-				1,022	30,695	7,169
6	304.2	Structures and Improv - Water Trmnt	3.33%	-	-	-	-		-				4,704	141,261	41,653
7	305	Collecting & Impounding Reservoirs	2.50%	-	-	-	-		-				-	-	-
8	306	Lake, River, Canal Intakes	2.50%	-	-	-	-		-				-	-	-
9	307	Wells & Springs	3.33%	-	-	-	-		-				67,035	2,013,049	479,078
10	308	Infiltration Galleries	6.67%	-	-	-	-		-				-	-	-
11	309	Raw Water Supply Mains	2.00%	-	-	-	-		-				-	-	-
12	310	Power Generation Equipment	5.00%	-	-	-	-		-				-	-	-
13	311	Pumping Equipment	12.50%	12,663	-	12,663	3,300		3,300				410,581	3,289,327	3,009,211
14	311.1	Pumping Equipment - Gas	12.50%	-	-	-	-		-				5,188	118,494	118,494
15	320	Water Treatment Equipment	3.33%	24,149	-	24,149	5,975		5,975				147,567	4,440,527	1,027,605
16	320.1	Water Treatment Plants	3.33%	-	-	-	-		-				-	-	-
17	320.2	Solution Chemical Feeders	20.00%	-	-	-	-		-				-	-	-
18	330	Distribution Reservoirs & Standpipes	2.22%	-	-	-	118,187		118,187		1,065,092		22,325	2,011,637	424,270
19	330.1	Storage Tanks	2.22%	-	-	-	-		-				-	-	-
20	330.2	Pressure Tanks	5.00%	-	-	-	-		-				-	-	-
21	331	Transmission & Distribution Mains	2.00%	209,098	-	209,098	11,744		11,744				380,500	19,123,697	6,109,218
22	333	Services	3.33%	135,826	-	135,826	4,208		4,208				154,203	4,696,522	1,860,194
23	333.1	Fire Taps	3.33%	21,043	-	21,043	-		-				10,711	332,174	114,507
24	334	Meters	8.33%	232,095	-	232,095	30,951		30,951				124,913	1,600,133	502,173
25	335	Hydrants	2.00%	28,699	-	28,699	-		-				40,346	2,031,665	729,173
26	336	Backflow Prevention Devices	6.67%	-	-	-	-		-				-	-	-
27	339	Other Plant & Misc Equipment	6.67%	2,148	-	2,148	2,255		2,255				38,902	583,181	501,826
28	340	Office Furniture & Equipment	6.67%	2,180	-	2,180	-		-				10,040	151,618	67,080
29	340.1	Computers & Software	20.00%	37,537	-	37,537	-		-				117,999	608,761	334,225
30	341	Transportation Equipment	20.00%	26,082	-	26,082	-		-	9,141	55,896	28,583	26,081	469,777	423,021
31	342	Stores Equipment	4.00%	-	-	-	-		-				98	2,441	1,702
32	343	Tools, Shop & Garage Equipment	5.00%	-	-	-	-		-				5,151	103,018	41,023
33	344	Laboratory Equipment	10.00%	-	-	-	-		-				1,200	12,000	6,201
34	345	Power Operated Equipment	5.00%	59,776	-	59,776	-		-				5,331	136,512	31,957
35	345.1	Power Operated Equipment - Backhoe	5.00%	42,260	-	42,260	-		-				6,415	149,439	113,595
36	346	Communication Equipment	10.00%	14,656	-	14,656	8,800		8,800				12,173	124,656	70,153
37	347	Miscellaneous Equipment	10.00%	-	-	-	-		-				-	-	-
38	348	Other Tangible Plant	10.00%	12,200	-	12,200	-		-				684	12,938	1,247
39		Rounding													
40		CWIP													
41		TOTALS		860,412	-	860,412	185,420	-	185,420	9,141	1,120,988	28,583	1,593,169	42,402,220	16,014,775

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2

Exhibit
Rejoinder Scehdule B-2
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Witness: Bourassa

Accumulated Depreciation

Line No.	Acct. No.	Description	Per Books Accum. Depr.	Adjustments A Intentionally Left Blank	B Adjustments to Reconcile 'D to Reconstructi	C Intentionally Left Blank	D Intentionally Left Blank	E Intentionally Left Blank	Adjusted Accum. Depr.
6	301	Organization Cost	-		-				-
7	302	Franchise Cost	-		-				-
8	303	Land and Land Rights	-		-				-
9	304	Structures & Improvements	-		-				-
10	304.1	Structures and Improv - Pumping	7,169		-				7,169
11	304.2	Structures and Improv - Water Trr	41,653		-				41,653
12	305	Collecting & Impounding Reservoirs	-		-				-
13	306	Lake, River, Canal Intakes	-		-				-
14	307	Wells & Springs	479,078		-				479,078
15	308	Infiltration Galleries	-		-				-
16	309	Raw Water Supply Mains	-		-				-
17	310	Power Generation Equipment	-		-				-
18	311	Pumping Equipment	3,009,211		-				3,009,211
19	311.1	Pumping Equipment - Gas	118,494		-				118,494
20	320	Water Treatment Equipment	1,027,605		-				1,027,605
21	320.1	Water Treatment Plants	-		-				-
22	320.2	Solution Chemical Feeders	-		-				-
23	330	Distribution Reservoirs & Standpipes	424,270		-				424,270
24	330.1	Storage Tanks	-		-				-
25	330.2	Pressure Tanks	-		-				-
26	331	Transmission & Distribution Mains	6,109,218		-				6,109,218
27	333	Services	1,860,194		-				1,860,194
28	333.1	Fire Taps	114,507		-				114,507
29	334	Meters	502,173		-				502,173
30	335	Hydrants	729,173		-				729,173
31	336	Backflow Prevention Devices	-		-				-
32	339	Other Plant & Misc Equipment	501,826		-				501,826
33	340	Office Furniture & Equipment	67,080		-				67,080
34	340.1	Computers & Software	334,225		-				334,225
35	341	Transportation Equipment	423,021		-				423,021
36	342	Stores Equipment	1,702		-				1,702
37	343	Tools, Shop & Garage Equipment	41,023		-				41,023
38	344	Laboratory Equipment	6,201		-				6,201
39	345	Power Operated Equipment	31,957		-				31,957
40	345.1	Power Operated Equipment - Backhc	113,595		-				113,595
41	346	Communication Equipment	70,153		-				70,153
42	347	Miscellaneous Equipment	-		-				-
43	348	Other Tangible Plant	1,247		-				1,247
44			-						-
45		TOTALS	$ 16,014,775	$ -	$ -	$ -	$ -	$ -	$ 16,014,775
46									
47	Accumulated Depreciation per Books								$ 16,014,775
48									
49	Increase (decrease) in Accumulated Depreciation								$ -
50									
51	Adjustment to Accumulated Depreciation								$ -
52									
53	SUPPORTING SCHEDULES								
54	B-2, page 4.1 and 4.2								
55									

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2 - A

Exhibit
Rejoinder Scehdule B-2
Page 4.1
Witness: Bourassa

Line No.	
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40	SUPPORTING SCHEDULE
41	Testimony
42	Work papers
43	
44	
45	

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Original Cost Rate Base Proforma Adjustments
Adjustment Number 2 - B

Exhibit
Rejoinder Scehdule B-2
Page 4.2
Witness: Bourassa

Reconciliation of A/D to A/D Reconstruction

Line No.	Acct. No.	Description	Adjusted Orginal Cost	B-2 Adjustments	Rebuttal Adjusted Orginal Cost	Rebuttal Plant Per Reconstruction	Difference
6	301	Organization Cost	-	-	-	-	-
7	302	Franchise Cost	-	-	-	-	-
8	303	Land and Land Rights	-	-	-	-	-
9	304	Structures & Improvements	-	-	-	-	-
10	304.1	Structures and Improv - Pumpir	7,169	-	7,169	7,169	-
11	304.2	Structures and Improv - Water	41,653	-	41,653	41,653	-
12	305	Collecting & Impounding Reservoi	-	-	-	-	-
13	306	Lake, River, Canal Intakes	-	-	-	-	-
14	307	Wells & Springs	479,078	-	479,078	479,078	-
15	308	Infiltration Galleries	-	-	-	-	-
16	309	Raw Water Supply Mains	-	-	-	-	-
17	310	Power Generation Equipment	-	-	-	-	-
18	311	Pumping Equipment	3,009,211	-	3,009,211	3,009,211	-
19	311.1	Pumping Equipment - Gas	118,494	-	118,494	118,494	-
20	320	Water Treatment Equipment	1,027,605	-	1,027,605	1,027,605	-
21	320.1	Water Treatment Plants	-	-	-	-	-
22	320.2	Solution Chemical Feeders	-	-	-	-	-
23	330	Distribution Reservoirs & Standpip	424,270	-	424,270	424,270	-
24	330.1	Storage Tanks	-	-	-	-	-
25	330.2	Pressure Tanks	-	-	-	-	-
26	331	Transmission & Distribution Mains	6,109,218	-	6,109,218	6,109,218	-
27	333	Services	1,860,194	-	1,860,194	1,860,194	-
28	331.1	Fire Taps	114,507	-	114,507	114,507	-
29	334	Meters	502,173	-	502,173	502,173	-
30	335	Hydrants	729,173	-	729,173	729,173	-
31	336	Backflow Prevention Devices	-	-	-	-	-
32	339	Other Plant & Misc Equipment	501,826	-	501,826	501,826	-
33	340	Office Furniture & Equipment	67,080	-	67,080	67,080	-
34	340.1	Computers & Software	334,225	-	334,225	334,225	-
35	341	Transportation Equipment	423,021	-	423,021	423,021	-
36	342	Stores Equipment	1,702	-	1,702	1,702	-
37	343	Tools, Shop & Garage Equipment	41,023	-	41,023	41,023	-
38	344	Laboratory Equipment	6,201	-	6,201	6,201	-
39	345	Power Operated Equipment	31,957	-	31,957	31,957	-
40	345.1	Power Operated Equipment - Bacl	113,595	-	113,595	113,595	-
41	346	Communication Equipment	70,153	-	70,153	70,153	-
42	347	Miscellaneous Equipment	-	-	-	-	-
43	348	Other Tangible Plant	1,247	-	1,247	1,247	-
44		Plant Held for Future Use	-				-
45		TOTALS	$ 16,014,775	$ -	$ 16,014,775	$ 16,014,775	$ -

SUPPORTING SCHEDULE
B-2, page 4.1
B-2, pages 3.3 through 3.10

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Computation of Working Capital

Exhibit
Rejoinder Scehdule B-5
Page 1
Witness: Bourassa

Line No.			
1	Cash Working Capital (1/8 of Allowance		
2	Operation and Maintenance Expense)	$	240,030
3	Pumping Power (1/24 of Pumping Power)		8,819
4	Purchased Water (1/24 of Purchased Water)		6,691
5			
6			
7			
8			
9	Total Working Capital Allowance	$	255,540
10			
11			
12	Working Capital Requested	$	-
13			
14			
15			
16			
17			Adjusted Test Year
18	Total Operating Expense	$	3,467,748
19	Less:		
20	Income Tax	$	-
21	Property Tax		153,851
22	Depreciation		1,021,412
23	Purchased Water		160,577
24	Pumping Power		211,665
25	Allowable Expenses	$	1,920,242
26	1/8 of allowable expenses	$	240,030
27			
28			
29	SUPPORTING SCHEDULES:	RECAP SCHEDULES:	
30	E-1	B-1	
31			
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Community Water Company of Green Valley
Test Year Ended December 31, 2014
Income Statement

Exhibit
Rejoinder Scehdule C-1
Page 1
Witness: Bourassa

Line No.		Test Year Book Results	Adjustment	Test Year Adjusted Results	Proposed Rate Increase	Adjusted with Rate Increase
1	**Revenues**					
2	Metered Water Revenues	$ 3,450,854	$ (64,296)	$ 3,386,558	$ 682,357	$ 4,068,915
3	Unmetered Water Revenues	-	-	-		-
4	Other Water Revenues	72,833	23,358	96,191		96,191
5		$ 3,523,686	$ (40,938)	$ 3,482,749	$ 682,357	$ 4,165,106
6	**Operating Expenses**					
7	Salaries and Wages	$ 999,690	(72,685)	$ 927,005		$ 927,005
8	Purchased Water	-	160,577	160,577		160,577
9	Purchased Power	220,756	(9,091)	211,665		211,665
10	Chemicals	33,730	(1,390)	32,340		32,340
11	Repairs and Maintenance	65,908	11,114	77,022		77,022
12	Office Supplies and Expense	16,621	-	16,621		16,621
13	Outside Services	295,318	(7,050)	288,268		288,268
14	Water Testing	15,124	-	15,124		15,124
15	Rents	-	-	-		-
16	Transportation Expenses	54,195	-	54,195		54,195
17	Insurance - General Liability	54,967	-	54,967		54,967
18	Insurance - Health and Life	212,765	-	212,765		212,765
19	Reg. Comm. Exp. - Rate Case	30,000	-	30,000		30,000
20	Miscellaneous Expense	236,192	(129,491)	106,701		106,701
21	Depreciation and Amortization Expense	1,026,384	(4,971)	1,021,412		1,021,412
22	Taxes Other Than Income	105,232	-	105,232	-	105,232
23	Property Taxes	156,279	(2,428)	153,851	10,116	163,966
24	Income Tax		-	-		-
25	**Total Operating Expenses**	$ 3,523,162	$ (55,415)	$ 3,467,748	$ 10,116	$ 3,477,863
26	**Operating Income**	$ 524	$ 14,477	$ 15,001	$ 672,241	$ 687,242
27	**Other Income (Expense)**					
28	Interest Income	12,640	-	12,640		12,640
29	Other income	444,612	(23,358)	421,254		421,254
30	Interest Expense	(98,552)	-	(98,552)		(98,552)
31	Other Expense	(32,579)	-	(32,579)		(32,579)
32		-	-	-		-
33	**Total Other Income (Expense)**	$ 326,120	$ (23,358)	$ 302,762	$ -	$ 302,762
34	**Net Profit (Loss)**	$ 326,644	$ (8,881)	$ 317,763	$ 672,241	$ 990,005
35						
36	SUPPORTING SCHEDULES:				RECAP SCHEDULES:	
37	C-1, page 2				A-1	
38						
39						

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Income Statement

Exhibit
Rejoinder Scehdule C-1
Page 2.1
Witness: Bourassa

Line No.		LABEL>>>>> Test Year Book Results	1 Depreciation	2 Property Taxes	3 Rate Case Expense	4 Reclass Other Income	5 Revenue Normalization	6 Salaries and Wages	7 Expense Reclass
1	**Revenues**								
2	Metered Water Revenues	$ 3,450,854							
3	Unmetered Water Revenues	-					(64,296)		
4	Other Water Revenues	72,833				23,358			
5		$ 3,523,686	$ -	$ -	$ -	$ 23,358	$ (64,296)	$ -	$ -
6	**Operating Expenses**								
7	Salaries and Wages	$ 999,690							
8	Purchased Water	-						(72,685)	
9	Purchased Power	220,756							160,577
10	Chemicals	33,730					(9,091)		
11	Repairs and Maintenance	65,908					(1,390)		
12	Office Supplies and Expense	16,621							
13	Outside Services	295,318							
14	Water Testing	15,124							
15	Rents	-							
16	Transportation Expenses	54,195							
17	Insurance - General Liability	54,967							
18	Insurance - Health and Life	212,765							
19	Reg. Comm. Exp. - Rate Case	30,000							
20	Miscellaneous Expense	236,192			-				
21	Depreciation and Amort. Exp.	1,026,384	(4,971)						(129,491)
22	Taxes Other Than Income	105,232							
23	Property Taxes	156,279		(2,428)					
24	Income Tax	-							
25	**Total Operating Expenses**	$ 3,523,162	$ (4,971)	$ (2,428)	$ -	$ -	$ (10,481)	$ (72,685)	$ 31,086
26	**Operating Income**	$ 524	$ 4,971	$ 2,428	$ -	$ 23,358	$ (53,815)	$ 72,685	$ (31,086)
27	**Other Income (Expense)**								
28	Interest Income	12,640							
29	Other income	444,612							
30	Interest Expense	(98,552)				(23,358)			
31	Other Expense	(32,579)							
32									
33	**Total Other Income (Expense)**	$ 326,120	$ -	$ -	$ -	$ (23,358)	$ -	$ -	$ -
34	**Net Profit (Loss)**	$ 326,644	$ 4,971	$ 2,428	$ -	$ -	$ (53,815)	$ 72,685	$ (31,086)
35									
36	SUPPORTING SCHEDULES:								
37	C-2								
38									
39									

Community Water Company of Green Valle
Test Year Ended December 31, 2014
Income Statement

Exhibit
Rejoinder Scehdule C-1
Page 2.2
Witness: Bourassa

Line No.		8 Repairs & Maintenance	9 Outside Services Expense	10 Intentionally Left Blank	11 Intentionally Left Blank	12 Intentionally Left Blank	Test Year Adjusted Results	Proposed Rate Increase	Adjusted with Rate Increase
1	**Revenues**								
2	Metered Water Revenues						$ 3,386,558	$ 682,357	$ 4,068,915
3	Unmetered Water Revenues						-		-
4	Other Water Revenues						96,191		96,191
5		$ -	$ -	$ -	$ -	$ -	$ 3,482,749	$ 682,357	$ 4,165,106
6	**Operating Expenses**								
7	Salaries and Wages						$ 927,005		$ 927,005
8	Purchased Water						160,577		160,577
9	Purchased Power						211,665		211,665
10	Chemicals						32,340		32,340
11	Repairs and Maintenance	11,114					77,022		77,022
12	Office Supplies and Expense						16,621		16,621
13	Outside Services		(7,050)				288,268		288,268
14	Water Testing						15,124		15,124
15	Rents						-		-
16	Transportation Expenses						54,195		54,195
17	Insurance - General Liability						54,967		54,967
18	Insurance - Health and Life						212,765		212,765
19	Reg. Comm. Exp. - Rate Case						30,000		30,000
20	Miscellaneous Expense						106,701		106,701
21	Depreciation and Amort. Exp.						1,021,412		1,021,412
22	Taxes Other Than Income						105,232		105,232
23	Property Taxes						153,851	10,116	163,966
24	Income Tax						-		-
25	**Total Operating Expenses**	$ 11,114	$ (7,050)	$ -	$ -	$ -	$ 3,467,748	$ 10,116	$ 3,477,863
26	**Operating Income**	$ (11,114)	$ 7,050	$ -	$ -	$ -	$ 15,001	$ 672,241	$ 687,242
27	**Other Income (Expense)**								
28	Interest Income						12,640		12,640
29	Other income						421,254		421,254
30	Interest Expense						(98,552)		(98,552)
31	Other Expense						(32,579)		(32,579)
32							-		-
33	**Total Other Income (Expense)**	$ -	$ -	$ -	$ -	$ -	$ 302,762	$ -	$ 302,762
34	**Net Profit (Loss)**	$ (11,114)	$ 7,050	$ -	$ -	$ -	$ 317,763	$ 672,241	$ 990,005
35									
36	SUPPORTING SCHEDULES:								
37	C-2								
38									
39									

RECAP SCHEDULES:
C-1, page 1

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Adjustments to Revenues and Expenses

Exhibit
Schedule C-2
Page 1
Witness: Bourassa

Line No.		Adjustments to Revenues and Expenses						
		1	2	3	4	5	6	Subtotal
		Depreciation	Property Taxes	Rate Case Expense	Reclass Other Income	Revenue Normalization	Salaries and Wages	
4	Revenues	-	-	-	23,358	(64,296)	-	(40,938)
6	Expenses	(4,971)	(2,428)	-	-	(10,481)	(72,685)	(90,565)
8	Operating							
9	Income	4,971	2,428	-	23,358	(53,815)	72,685	49,627
11	Interest							
12	Expense							-
13	Other							
14	Income /				(23,358)			(23,358)
15	Expense							
17	Net Income	4,971	2,428	-	-	(53,815)	72,685	26,269

		Adjustments to Revenues and Expenses						
		7	8	9	10	11	12	Subtotal
		Expense Reclass	Repairs & Maintenance	Outside Services Expense	Intentionally Left Blank	Intentionally Left Blank	Intentionally Left Blank	
25	Revenues	-	-	-	-	-	-	(40,938)
27	Expenses	31,086	11,114	(7,050)	-	-	-	(55,415)
29	Operating							
30	Income	(31,086)	(11,114)	7,050	-	-	-	14,477
32	Interest							
33	Expense	-						-
34	Other							
35	Income /							(23,358)
36	Expense							
38	Net Income	(31,086)	(11,114)	7,050	-	-	-	(8,881)

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Adjustments to Revenues and Expenses
Adjustment Number 1

Exhibit
Schedule C-2
Page 2
Witness: Bourassa

Depreciation Expense

Line No.	Acct. No.	Description	Adjusted Original Cost	Non-depr/ Fully Depr Plant	Adjusted Original Cost	Proposed Rates	Depreciation Expense
1							
2							
3							
4							
5	301	Organization Cost	47,863	(47,863)	-	0.00%	-
6	302	Franchise Cost	244	(244)	-	0.00%	-
7	303	Land and Land Rights	170,589	(170,589)	-	0.00%	-
8	304	Structures & Improvements	-	-	-	3.33%	-
9	304.1	Structures and Improv - Pumping	30,695	-	30,695	3.33%	1,022
10	304.2	Structures and Improv - Water Trmnt	141,261	-	141,261	3.33%	4,704
11	305	Collecting & Impounding Reservoirs	-	-	-	2.50%	-
12	306	Lake, River, Canal Intakes	-	-	-	2.50%	-
13	307	Wells & Springs	2,013,049	-	2,013,049	3.33%	67,035
14	308	Infiltration Galleries	-	-	-	6.67%	-
15	309	Raw Water Supply Mains	-	-	-	2.00%	-
16	310	Power Generation Equipment	-	-	-	5.00%	-
17	311	Pumping Equipment	3,289,327	-	3,289,327	12.50%	411,166
18	311.1	Pumping Equipment - Gas	118,494	(118,494)	-	12.50%	-
19	320	Water Treatment Equipment	4,440,527	-	4,440,527	3.33%	147,870
20	320.1	Water Treatment Plants	-	-	-	3.33%	-
21	320.2	Solution Chemical Feeders	-	-	-	20.00%	-
22	330	Distribution Reservoirs & Standpipes	2,011,637	-	2,011,637	2.22%	44,658
23	330.1	Storage Tanks	-	-	-	2.22%	-
24	330.2	Pressure Tanks	-	-	-	5.00%	-
25	331	Transmission & Distribution Mains	19,123,697	-	19,123,697	2.00%	382,474
26	333	Services	4,696,522	-	4,696,522	3.33%	156,394
27	333.1	Fire Taps	332,174	-	332,174	3.33%	11,061
28	334	Meters	1,600,133	-	1,600,133	8.33%	133,291
29	335	Hydrants	2,031,665	-	2,031,665	2.00%	40,633
30	336	Backflow Prevention Devices	-	-	-	6.67%	-
31	339	Other Plant & Misc Equipment	583,181	-	583,181	6.67%	38,898
32	340	Office Furniture & Equipment	151,618	-	151,618	6.67%	10,113
33	340.1	Computers & Software	608,761	-	608,761	20.00%	121,752
34	341	Transportation Equipment	469,777	-	469,777	20.00%	93,955
35	342	Stores Equipment	2,441	-	2,441	4.00%	98
36	343	Tools, Shop & Garage Equipment	103,018	-	103,018	5.00%	5,151
37	344	Laboratory Equipment	12,000	-	12,000	10.00%	1,200
38	345	Power Operated Equipment	136,512	-	136,512	5.00%	6,826
39	345.1	Power Operated Equipment - Backhoe	149,439	-	149,439	5.00%	7,472
40	346	Communication Equipment	124,656	-	124,656	10.00%	12,466
41	347	Miscellaneous Equipment	-	-	-	10.00%	-
42	348	Other Tangible Plant	12,938	-	12,938	10.00%	1,294
43		TOTALS	$ 42,402,220	$ (337,190)	$ 42,065,030		$ 1,699,533
44							
45					Gross CIAC	Amort. Rate	
46		Less: Amortization of Contributions					
47		Gross Contributions			$ 16,784,118	4.0403%	$ (678,120)
48							
49							
50							
51							
52		CIAC Totals			$ 16,784,118		$ (678,120)
53		Total Depreciation Expense					$ 1,021,412
54							
55		Adjusted Test Year Depreciation Expense					1,026,384
56							
57		Increase (decrease) in Depreciation Expense					(4,971)
58							
59		Adjustment to Revenues and/or Expenses					$ (4,971)
60							
61		SUPPORTING SCHEDULE					
62		B-2, page 3					

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Adjustment to Revenues and Expenses
Adjustment Number 2

Exhibit
Schedule C-2
Page 3
Witness: Bourassa

Property Taxes

Line No.	DESCRIPTION	Test Year as adjusted	Company Recommended
1	Company Adjusted Test Year Revenues	$ 3,482,749	$ 3,482,749
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	6,965,497	6,965,497
4	Company Recommended Revenue	3,482,749	4,165,106
5	Subtotal (Line 4 + Line 5)	10,448,246	11,130,603
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	3,482,749	3,710,201
8	Department of Revenue Mutilplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	6,965,497	7,420,402
10	Plus: 10% of CWIP (intentionally excluded)	-	-
11	Less: Net Book Value of Licensed Vehicles	46,755	46,755
12	Full Cash Value (Line 9 + Line 10 - Line 11)	6,918,742	7,373,647
13	Assessment Ratio	18.0%	18.0%
14	Assessment Value (Line 12 * Line 13)	1,245,374	1,327,256
15	Composite Property Tax Rate	12.3538%	12.3538%
16	Test Year Adjusted Property Tax Expense (Line 14 * Line 15)	$ 153,851	$ 163,966
17	Tax on Parcels	-	-
18	Total Property Taxes (Line 16 + Line 17)	$ 153,851	
19	Test Year Property Taxes	$ 156,279	
20	Adjustment to Test Year Property Taxes (Line 18 - Line 19)	**$ (2,428)**	
21			
22	Property Tax on Company Recommended Revenue (Line 16 + Line 17)		$ 163,966
23	Company Test Year Adjusted Property Tax Expense (Line 18)		$ 153,851
24	Increase in Property Tax Due to Increase in Revenue Requirement		**$ 10,116**
25			
26	Increase in Property Tax Due to Increase in Revenue Requirement (Line 24)		$ 10,116
27	Increase in Revenue Requirement		$ 682,357
28	Increase in Property Tax Per Dollar Increase in Revenue (Line 26 / Line 27)		1.48245%
29			
30			
31			
32			
33			
34			
35			
36			
37			
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Community Water Company of Green Valley
Test Year Ended December 31, 2014
Adjustment to Revenues and Expenses
Adjustment Number 3

Exhibit
Rejoinder Scehdule C-2
Page 4
Witness: Bourassa

Rate Case Expense

Line No.			
1			
2			
3	Estimated Rate Case Expense	$	150,000
4			
5	Estimated Amortization Period in Years		5
6			
7	Annual Rate Case Expense	$	30,000
8			
9	Adjusted Test Year Rate Case Expense	$	30,000
10			
11	Increase(decrease) Rate Case Expense	$	-
12			
13	Adjustment to Revenue and/or Expense	$	-
14			
15			
16	Reference		
17	Testimony		
18			
19			
20			

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Adjustment to Revenues and Expenses
Adjustment Number 4

Exhibit
Rejoinder Scehdule C-2
Page 5
Witness: Bourassa

Other Revenue Reclassification

Line No.			
1			
2	Other Revenues	$	(23,358)
3	Miscellaneous Revenues		23,358
4			
5			
6	Increase (decrease) in Revenues	$	-
7			
8			
9			
10	Adjustment to Revenue and/or Expense	$	-
11			
12	SUPPORTING SCHEDULES		
13	Testimony		
14	Staff Adjustment No. 2		
15			
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Community Water Company of Green Valley
Test Year Ended December 31, 2014
Adjustment to Revenues and Expenses
Adjustment Number 5

Exhibit
Rejoinder Scehdule C-2
Page 6
Witness: Bourassa

Usage Normalization Revenue Adjustment

Line No.			
1			
2	Declining Usage Adjustment per Rebuttal	$	(158,729)
3	Declining Usage Adjustment per Direct		(94,433)
4	Increase (decrease) in Revenues	$	(64,296)
5			
6	Purchased Power Normalization		
7			
8	Test Year Purchased Power Expense	$	234,393
9	Gallons Sold (in 1,000's)		726,711
10	Cost per 1,0000 gallons		0.3225
11			
12	Normalized Gallons Reduction (in 1,000's) per Rebuttal		(70,356)
13	Normalized Gallons Reduction (in 1,000's) per Direct		(42,167)
14	Increase (decrease) in Gallons Sold		(28,189)
15			
16	Increase (decrease) in Purchased Power Expense	$	(9,091)
17			
18	Chemicals Expense Normalization		
19			
20	Test Year Chemicals Expense	$	35,815
21	Gallons Sold (in 1,000's)		726,711
22	Cost per 1,0000 gallons		0.0493
23			
24	Normalized Gallons Reduction (in 1,000's) per Rebuttal		(70,356)
25	Normalized Gallons Reduction (in 1,000's) per Direct		(42,167)
26	Normalized Gallons Reduction (in 1,000's)		(28,189)
27			
28	Increase (decrease) in Chemicals Expense	$	(1,390)
29			
30			
31			
32	Adjustment to Revenue and/or Expense	$	(53,815)
33			
34	Reference		
35	Testimony		
36	Work papers		
37			
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39			
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Community Water Company of Green Valley
Test Year Ended December 31, 2014
Adjustment to Revenues and Expenses
Adjustment Number 6

Exhibit
Rejoinder Scehdule C-2
Page 7
Witness: Bourassa

Salaries and Wages

Line No.			
1	Staff Recommended Salaries and Wages	$	927,005
2	Adjusted Salaries and Wages		999,690
3			
4	Increase (decrease) in Salaries and Wages	$	(72,685)
5			
6			
7	Adjustment to Revenue and/or Expense	$	(72,685)
8			
9			
10			
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12			
13	Reference		
14	Testimony		
15	Staff Adjustment No. 3		
16			
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Community Water Company of Green Valley
Test Year Ended December 31, 2001
Adjustment to Revenues and Expenses
Adjustment Number 7

Exhibit
Rejoinder Scehdule C-2
Page 8
Witness: Bourassa

Expense Reclassification

Line No.			
1			
2	Expense Reclassification from Miscellanous Expense	$	124,576
3	Retirement Adjustment		36,001
4	Increase (decrease) in Employee Pension and Benefits Expense	$	160,577
5			
6	Remove Food and Entertainment from Misc. Expense	$	(5,545)
7	Reclass Profit Sharing expense from Misc. Expense		(87,871)
8	Reclass 401k Matching Expense from Misc. Expense.		(36,075)
9	Increase (decrease) in Employee Pension and Benefits Expense	$	(129,491)
10			
11			
12	Adjustment to Revenue and/or Expense	$	31,086
13			
14			
15	Reference		
16	Testimony		
17	Staff Adjustment No. 4		
18	Staff Adjustment No. 7		
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Community Water Company of Green Valley
Test Year Ended December 31, 2001
Adjustment to Revenues and Expenses
Adjustment Number 8

Exhibit
Rejoinder Scehdule C-2
Page 9
Witness: Bourassa

Repairs and Maintenance Expense

Line No.			
1			
2	Revised Accrued Maintenance Expense	$	67,000
3	Adjusted Accrued Maintenance Expense		55,886
4			
5	Adjustment to Repairs and Maintenance	$	11,114
6			
7			
8	Adjustment to Revenue and/or Expense	$	11,114
9			
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16			
17	Reference		
18	Testimony		
19	Work papers		
20			

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Adjustment to Revenues and Expenses
Adjustment Number 9

Exhibit
Rejoinder Scehdule C-2
Page 10
Witness: Bourassa

Outside Services

Line No.			
1			
2	Remove costs of Assistant to President	$	(7,050)
3			
4	Increase (decrease) to Outside Services	$	(7,050)
5			
6			
7			
8	Adjustment to Revenue and/or Expense	$	(7,050)
9			
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Community Water Company of Green Valley
Test Year Ended December 31, 2014
Adjustment to Revenues and Expenses
Adjustment Number 10

Exhibit
Rejoinder Scehdule C-2
Page 11
Witness: Bourassa

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Community Water Company of Green Valley
Test Year Ended December 31, 2014
Adjustment to Revenues and Expenses
Adjustment Number 11

Exhibit
Rejoinder Scehdule C-2
Page 12
Witness: Bourassa

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Community Water Company of Green Valley
Test Year Ended December 31, 2014
Adjustment to Revenues and Expenses
Adjustment Number 12

Exhibit
Rejoinder Scehdule C-2
Page 13
Witness: Bourassa

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Community Water Company of Green Valley
Test Year Ended December 31, 2014
Computation of Gross Revenue Conversion Factor

Exhibit
Rejoinder Scehdule C-3
Page 1
Witness: Bourassa

Line No.	Description	Percentage of Incremental Gross Revenues
1	Combined Federal and State Effective Income Tax Rate	0.000%
2		
3	Property Taxes	1.482%
4		
5		
6	Total Tax Percentage	1.482%
7		
8	Operating Income % = 100% - Tax Percentage	98.518%
9		
10		
11		
12		
13	1 = Gross Revenue Conversion Factor	
14	Operating Income %	1.0150
15		
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25	SUPPORTING SCHEDULES:	RECAP SCHEDULES:
26	C-3, page 2	A-1
27		
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Community Water Company of Green Valley
Test Year Ended December 31, 2014

Exhibit
Rejoinder Scehdule C-3
Page 2
Witness: Bourassa

GROSS REVENUE CONVERSION FACTOR

Line No.	Description	(A)	(B)	(C)	(D)	[E]	[F]
	Calculation of Gross Revenue Conversion Factor:						
1	Revenue	100.0000%					
2	Uncollecible Factor (Line 11)	0.0000%					
3	Revenues (L1 - L2)	100.0000%					
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	1.4825%					
5	Subtotal (L3 - L4)	98.5175%					
6	**Revenue Conversion Factor (L1 / L5)**	1.015048					
	Calculation of Uncollectible Factor:						
7	Unity	100.0000%					
8	Combined Federal and State Tax Rate (L17)	0.0000%					
9	One Minus Combined Income Tax Rate (L7 - L8)	100.0000%					
10	Uncollectible Rate	0.0000%					
11	Uncollectible Factor (L9 * L10)		0.0000%				
	Calculation of Effective Tax Rate:						
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%					
13	Arizona State Income Tax Rate	0.0000%					
14	Federal Taxable Income (L12 - L13)	100.0000%					
15	Applicable Federal Income Tax Rate (L55 Col F)	0.0000%					
16	Effective Federal Income Tax Rate (L14 x L15)	0.0000%					
17	Combined Federal and State Income Tax Rate (L13 +L16)		0.0000%				
	Calculation of Effective Property Tax Factor						
18	Unity	100.0000%					
19	Combined Federal and State Income Tax Rate (L17)	0.0000%					
20	One Minus Combined Income Tax Rate (L18-L19)	100.0000%					
21	Property Tax Factor	1.4825%					
22	Effective Property Tax Factor (L20*L21)		1.4825%				
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			1.4825%			
24	Required Operating Income	$ 687,242					
25	AdjustedTest Year Operating Income (Loss)	$ 15,001					
26	Required Increase in Operating Income (L24 - L25)		$ 672,241				
27	Income Taxes on Recommended Revenue (Col. (F), L52)	$ -					
28	Income Taxes on Test Year Revenue (Col. (C), L52)	$ -					
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		$ -				
30	Recommended Revenue Requirement	$ 4,165,106					
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.		$ -				
35	Property Tax with Recommended Revenue	$ 163,966					
36	Property Tax on Test Year Revenue	$ 153,851					
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		$ 10,116				
38	Total Required Increase in Revenue (L26 + L29 + L37)			$ 682,357			

		(A)	(B)	(C)	(D)	[E]	[F]
		Test Year			Company Recommended		
	Calculation of Income Tax:	Total		Water	Total		Water
39	Revenue	$ 3,482,749		$ 3,482,749	$ 4,165,106		$ 4,165,106
40	Operating Expenses Excluding Income Taxes	3,313,897		3,313,897	3,313,897		3,313,897
41	Synchronized Interest (L47)	56,760		56,760	56,760		56,760
42	Arizona Taxable Income (L39 - L40 - L41)	$ 112,092		$ 112,092	$ 794,450		$ 794,449
43	Arizona State Effective Income Tax Rate (see work papers)	0.0000%		0.0000%	0.0000%		0.0000%
44	Arizona Income Tax (L42 x L43)	$ -		$ -	$ -		$ -
45	Federal Taxable Income (L42- L44)	$ 112,092		$ 112,092	$ 794,450		$ 794,449
46							
47	Federal Tax on First Income Bracket ($1 - $50,000) @ 15%	$ -			$ -		
48	Federal Tax on Second Income Bracket ($50,001 - $75,000) @ 25%	$ -			$ -		
49	Federal Tax on Third Income Bracket ($75,001 - $100,000) @ 34%	$ -			$ -		
50	Federal Tax on Fourth Income Bracket ($100,001 - $335,000) @ 39%	$ -			$ -		
51	Federal Tax on Fifth Income Bracket ($335,001 -$10,000,000) @ 34%	$ -			$ -		
52							
53	Total Federal Income Tax	$ -		$ -	$ -		$ -
54	Combined Federal and State Income Tax (L35 + L42)	$ -		$ -	$ -		$ -

55	COMBINED Applicable Federal Income Tax Rate [Col. [D], L53 - Col. [A], L53 / [Col. [D], L45 - Col. [A], L45]	0.0000%
56	WASTEWATER Applicable Federal Income Tax Rate [Col. [E], L53 - Col. [B], L53] / [Col. [E], L45 - Col. [B], L45]	0.0000%
57	WATER Applicable Federal Income Tax Rate [Col. [F], L53 - Col. [C], L53] / [Col. [F], L45 - Col. [C], L45]	0.0000%

	Calculation of Interest Synchronization:	Water
58	Rate Base	$ 7,628,678
59	Weighted Average Cost of Debt	0.7440%
60	Synchronized Interest (L59 X L60)	$ 56,760

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Summary of Cost of Capital

Exhibit
Rejoinder Scehdule D-1
Page 1
Witness: Bourassa

Consolidated Capital Structure of Water and Wastewater Division

Line No.	Item of Capital	Adjusted End of Test Year Dollar Amount	Adjusted End of Test Year Percent of Total	Adjusted End of Test Year Cost Rate	Adjusted End of Test Year Weighted Cost	Projected Capital Structure Dollar Amount	Projected Capital Structure Percent of Total	Projected Capital Structure Cost Rate	Projected Capital Structure Weighted Cost
1	Long-Term Debt	2,402,208	20.22%	3.68%	0.74%	3,167,674	24.43%	5.68%	1.39%
2									
3	Stockholder's Equity	9,479,094	79.78%	N/A	N/A	9,796,857	75.57%	N/A	N/A
4									
5	Totals	11,881,302	100.00%		N/A	12,964,531	100.00%		N/A
6									
7									
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22	SUPPORTING SCHEDULES:					RECAP SCHEDULES:			
23	D-1					A-3			
24	D-3								
25	D-4								
26	E-1								
27	Testimony								
28									
29									
30									

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Cost of Long Term Debt

Exhibit
Rejoinder Scehdule D-2
Page 1
Witness: Bourassa

Line No.	Description of Debt	End of Test Year Amount Outstanding	Annual Interest	Effective Interest Rate	Weighted Cost	End of Projected Year Amount Outstanding	Annual Interest	Effective Interest Rate	Weighted Cost
1									
2	Compass Bank Loan	2,402,208	89,627	3.68%	3.68%	3,167,674	179,924	5.68%	5.68%
3			-	0.00%	0.00%	-	-	0.00%	0.00%
4			-	0.00%	0.00%		-	0.00%	0.00%
5			-	0.00%	0.00%		-	0.00%	0.00%
6			-	0.00%	0.00%		-	0.00%	0.00%
7			-	0.00%	0.00%		-	0.00%	0.00%
8			-	0.00%	0.00%		-	0.00%	0.00%
9			-	0.00%	0.00%		-	0.00%	0.00%
10			-	0.00%	0.00%		-	0.00%	0.00%
11									
12									
13	Totals	$ 2,402,208	89,627		3.68%	$ 3,167,674	179,924		5.68%
14									
15									
16	Supporting Schdules:								
17	E-1								
18	E-2								
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Community Water Company of Green Valley
Test Year Ended December 31, 2014
Cost of Preferred Stock

Exhibit
Rejoinder Scehdule D-3
Page 1
Witness: Bourassa

Line No.		End of Test Year			End of Projected Year		
	Description of Issue	Shares Outstanding	Amount	Dividend Requirement	Shares Outstanding	Amount	Dividend Requirement
7	NOT APPLICABLE, NO PREFERRED STOCK ISSUED OR OUTSTANDING						

SUPPORTING SCHEDULES:
E-1

RECAP SCHEDULES:
D-1

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Cost of Common Equity

Exhibit
Rejoinder Scehdule D-4
Page 1
Witness: Bourassa

Line No.	
1	
2	Not Applicable. The Company is proposing an operating margin approach.
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17	SUPPORTING SCHEDULES:
18	E-1
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RECAP SCHEDULES:
D-1

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Revenue Summary
With Annualized Revenues to Year End Number of Customers

Exhibit
Rejoinder Scehdule H-1
Page 1
Witness: Bourassa

Line No.	Meter Size	Class	Present Revenues	Proposed Revenues	Dollar Change	Percent Change	Percent of Present Water Revenues	Percent of Proposed Water Revenues
1	5/8X3/4 Inch	Residential	$ 2,413,514	$ 2,916,802	$ 503,288	20.85%	69.30%	70.03%
2	3/4 Inch	Residential	18,813	23,057	4,244	22.56%	0.54%	0.55%
3	1 Inch	Residential	219,446	258,842	39,396	17.95%	6.30%	6.21%
4	1 1/2 Inch	Residential	86,475	99,456	12,982	15.01%	2.48%	2.39%
	2 Inch	Residential	111,665	128,653	16,988	15.21%	3.21%	3.09%
5	3 Inch	Residential	8,330	9,847	1,517	18.21%	0.24%	0.24%
6								
7								
8		Subtotal	2,858,243	3,436,657	578,414	20.24%	82.07%	82.51%
9								
10	5/8X3/4 Inch	Commercial	$ 22,429	$ 26,572	$ 4,143	18.47%	0.64%	0.64%
11	3/4 Inch	Commercial	199	244	$ 46	22.98%	0.01%	0.01%
12	1 Inch	Commercial	104,870	123,449	18,579	17.72%	3.01%	2.96%
13	1 1/2 Inch	Commercial	49,028	56,968	7,940	16.20%	1.41%	1.37%
14	2 Inch	Commercial	342,018	395,523	53,505	15.64%	9.82%	9.50%
15	3 Inch	Commercial	6,084	7,158	1,073	17.64%	0.17%	0.17%
16	4 Inch	Commercial	102,047	114,675	12,628	12.37%	2.93%	2.75%
17								
18								
19		Subtotal	$ 626,674	$ 724,589	$ 97,915	15.62%	17.99%	17.40%
20								
21	5/8X3/4 Inch	Commercial/Residential	$ 270	$ 324	54	20.00%	0.01%	0.01%
22	1 Inch	Commercial/Residential	5,732	6,692	960	16.75%	0.16%	0.16%
23	2 Inch	Commercial/Residential	22,471	26,254	3,783	16.83%	0.65%	0.63%
24								
25		Subtotal	$ 28,473	$ 33,270	4,797	16.85%	0.82%	0.80%
26								
27	6 Inch	Bulk	$ 20,239	$ 24,114	$ 3,875	19.14%	0.58%	0.58%
28		Fire Lines up to 6 Inch	8,770	8,770	-	0.00%	0.25%	0.21%
29		Fire Lines up to 8 Inch	1,440	1,440	-	0.00%	0.04%	0.03%
30								
31	Total Revenues Before Annualization		$ 3,543,839	$ 4,228,839	$ 685,001	19.33%	101.75%	101.53%
32								
33								
34								

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Revenue Summary
With Annualized Revenues to Year End Number of Customers

Exhibit
Rejoinder Scehdule H-1
Page 2
Witness: Bourassa

Line No.	Meter Size	Class	Present Revenues	Revenue Annualization: Proposed Revenues	Dollar Change	Percent Change	Additional Bills	Additional Gallons to be Pumped (In 1,000's)
1	5/8X3/4 Inch	Residential	$ (504)	$ (610)	(106)	20.95%	(25)	(108)
2	3/4 Inch	Residential	(245)	(301)	(57)	23.13%	(15)	(0)
3	1 Inch	Residential	618	732	114	18.39%	12	132
4	1 1/2 Inch	Residential	814	937	124	15.23%	5	226
5	2 Inch	Residential	-	-	-	0.00%	-	-
6	3 Inch	Residential	-	-	-	0.00%	-	-
7								
8		Subtotal	$ 682	$ 758	75	11.03%	(23)	250
9								
10	5/8X3/4 Inch	Commercial	$ (259)	$ (308)	(49)	18.90%	(10)	(52)
11	3/4 Inch	Commercial	-	-	-	0.00%	-	-
12	1 Inch	Commercial	(1,700)	(2,010)	(309)	18.18%	(32)	(373)
13	1 1/2 Inch	Commercial	-	-	-	0.00%	-	-
14	2 Inch	Commercial	205	238	34	16.40%	1	55
15	3 Inch	Commercial	-	-	-	0.00%	-	-
16	4 Inch	Commercial	-	-	-	0.00%	-	-
17								
18		Subtotal	$ (1,755)	$ (2,080)	(325)	18.49%	(41)	(370)
19								
20	5/8X3/4 Inch	Commercial/Residential	$ -	$ -	-	0.00%	-	-
21	1 Inch	Commercial/Residential	-	-	-	0.00%	-	-
22	2 Inch	Commercial/Residential	-	-	-	0.00%	-	-
23								
24		Subtotal	$ -	$ -	-	0.00%	-	-
25								
26	Total Revenue Annualization		$ (1,072)	$ (1,322)	(249)	0.00%	(64)	(119)

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Revenue Summary
With Annualized Revenues to Year End Number of Customers

Exhibit
Rejoinder Scehdule H-1
Page 3
Witness: Bourassa

Line No.		Present Revenues	Proposed Revenues	Dollar Change	Percent Change	Percent of Present Water Revenues	Percent of Proposed Water Revenues
1	Subtotal Metered Revenues	$ 3,543,839	$ 4,228,839	$ 685,001	19.33%	101.75%	101.53%
2	Revenue Normalization Adjustment	(158,729)	(158,729)	-	0.00%	-4.56%	-3.81%
3	Subtotal Revenue Annualization	(1,072)	(1,322)	(249)	23.25%	-0.03%	-0.03%
4	Total Metered Revenues	$ 3,384,038	$ 4,068,789	$ 684,751	20.23%	97.17%	97.69%
5							
6	Misc. Revenues	$ 96,191	$ 96,191	-	0.00%	2.76%	2.31%
7	Reconciling Amount	2,520	126	(2,394)	-95.00%	0.07%	0.00%
8	Total Water Revenues	$ 3,482,748	$ 4,165,106	$ 682,357	19.59%	100.00%	100.00%
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Community Water Company of Green Valley
Test Year Ended December 31, 2014
Customer Summary

Exhibit
Rejoinder Scehdule H-2
Page 1
Witness: Bourassa

Line No.	Meter Size, Class		(a) Average Number of Customers at 12/31/2014	Average Consumption	Average Bill Present Rates	Average Bill Proposed Rates	Proposed Increase Dollar Amount	Proposed Increase Percent Amount
1	5/8X3/4 Inch	Residential	9,868	3,897	$ 19.14	$ 23.25	4.11	21.45%
2	3/4 Inch	Residential	91	2,516	16.27	20.04	3.77	23.17%
3	1 Inch	Residential	332	11,504	52.76	62.38	9.62	18.23%
4	1 1/2 Inch	Residential	42	46,724	167.59	192.94	25.35	15.12%
5	2 Inch	Residential	34	71,291	252.86	292.05	39.20	15.50%
6	3 Inch	Residential	3	50,556	231.39	273.53	42.14	18.21%
7								
8		Subtotal	10,370					
9								
10	5/8X3/4 Inch	Commercial	68	5,212	$ 26.03	$ 30.94	4.91	18.87%
11	3/4 Inch	Commercial	1	1,417	$ 16.54	$ 20.34	3.80	22.98%
12	1 Inch	Commercial	153	11,806	53.51	63.22	9.71	18.14%
13	1 1/2 Inch	Commercial	32	30,135	115.34	134.57	19.23	16.68%
14	2 Inch	Commercial	117	59,375	215.44	250.26	34.82	16.16%
15	3 Inch	Commercial	2	58,055	250.14	294.47	44.33	17.72%
16	4 Inch	Commercial	1	2,483,617	8,503.89	9,556.24	1,052.36	12.37%
1		Subtotal	373					
2								
3								
4								
5		Subtotal	-					
6								
7	5/8X3/4 Inch	Commercial/Residential	1	3,792	$ 22.48	$ 26.98	4.50	20.00%
8	1 Inch	Commercial/Residential	7	15,744	$ 63.36	$ 74.22	10.86	17.14%
9	2 Inch	Commercial/Residential	10	43,892	176.73	207.02	30.29	17.14%
10		Subtotal	18					
11								
12	6 Inch	Bulk	8	38,594	201.49	240.13	38.64	19.18%
13		Fire Lines up to 6 Inch	73	-	$ 10.00	$ 10.00	-	0.00%
14		Fire Lines up to 8 Inch	8	-	$ 15.00	$ 15.00	-	0.00%
15								
16		Total	10,834					
17								

18 (a) Average number of customers of less than one (1), indicates that less than 12 bills were issued during the year.
19

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Customer Summary

Exhibit
Rejoinder Scehdule H-2
Page 2
Witness: Bourassa

Line No.	Meter Size, Class		(a) Average Number of Customers at 12/31/2014	Median Consumption	Median Bill Present Rates	Median Bill Proposed Rates	Proposed Increase Dollar Amount	Proposed Increase Percent Amount
1	5/8X3/4 Inch	Residential	9,868	3,500	$ 18.15	$ 22.14	3.99	21.98%
2	3/4 Inch	Residential	91	1,500	14.95	18.56	3.61	24.18%
3	1 Inch	Residential	332	7,500	42.75	51.20	8.45	19.76%
4	1 1/2 Inch	Residential	42	38,500	139.47	161.53	22.06	15.82%
5	2 Inch	Residential	34	36,500	158.25	186.38	28.13	17.78%
6	3 Inch	Residential	42	38,500	139.47	161.53	22.06	15.82%
7								
8		Subtotal	10,409					
9								
10	5/8X3/4 Inch	Commercial	68	2,500	$ 19.25	$ 23.37	4.12	21.39%
11	3/4 Inch	Commercial	1	-	$ 16.75	$ 20.58	3.83	22.84%
12	1 Inch	Commercial	153	6,500	40.25	48.40	8.15	20.26%
13	1 1/2 Inch	Commercial	32	13,500	73.75	88.12	14.37	19.48%
14	2 Inch	Commercial	117	19,500	115.75	138.91	23.16	20.01%
15	3 Inch	Commercial	2	34,500	191.25	228.69	37.44	19.58%
16	4 Inch	Commercial	1	2,203,950	7,547.43	8,487.88	940.45	12.46%
17								
18		Subtotal	373					
19								
20								
21								
22		Subtotal	-					
23								
24	5/8X3/4 Inch	Commercial/Residential	1	5,500	$ 26.75	$ 31.75	5.00	18.67%
25	1 Inch	Commercial/Residential	7	15,715	$ 46.50	$ 55.38	8.88	19.11%
26	2 Inch	Commercial/Residential	10	55,600	145.75	172.42	26.67	18.30%
27		Subtotal	18					
28								
29	6 Inch	Bulk	8	1,500	108.75	136.54	27.79	25.56%
30		Fire Lines up to 6 Inch	73	-	$ 10.00	$ 10.00	-	0.00%
31		Fire Lines up to 8 Inch	8	-	$ 15.00	$ 15.00	-	0.00%
32								
33		Total	10,873					
34								

35 (a) Average number of customers of less than one (1), indicates that less than 12 bills were issued during the year.
36

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Present and Proposed Rates

Exhibit
Rejoinder Scehdule H-3
Page 1
Witness: Bourassa

Line No.	Monthly Availability Charge for: Meter Size (All Classes):	Present Rates	Proposed Rates	Change	Percent Change
1	5/8 Inch	$ 13.00	$ 16.39	$ 3.39	26.05%
2	3/4 Inch	13.00	16.39	3.39	26.05%
3	1 Inch	24.00	30.25	6.25	26.05%
4	1 1/2 Inch	40.00	50.42	10.42	26.05%
5	2 Inch	67.00	84.45	17.45	26.05%
6	3 Inch	105.00	132.35	27.35	26.05%
7	4 Inch	400.00	504.20	104.20	26.05%
8	6 Inch	650.00	819.33	169.33	26.05%
9	8 Inch	1,000.00	1,260.50	260.50	26.05%
10	Construction Water	According to Meter Size Listed Above	According to Meter Size Listed Above		
11					
12	Gallons In Minimum (All Classes)	-	-		
13					
14					
15			(Per 1,000 gallons)		
16	**Commodity Rates**	**Block**	Present Rate	Proposed Rate	
17					
18	5/8x3/4 Inch - Residential	0 gallons to 3,000 gallons	$ 1.30	$ 1.45	
19		3,001 gallons to 10,000 gallons	$ 2.50	$ 2.79	
20		over 10,000 gallons	$ 3.42	$ 3.82	
21					
22	3/4 Inch Meter - Residential	0 gallons to 3,000 gallons	$ 1.30	$ 1.45	
23		3,001 gallons to 10,000 gallons	$ 2.50	$ 2.79	
24		over 10,000 gallons	$ 3.42	$ 3.82	
25					
26	5/8x3/4 Inch - Non-residential	1 gallons to 10,000 gallons	$ 2.50	$ 2.79	
27		over 10,000 gallons	$ 3.42	$ 3.82	
28					
29	3/4 Inch - Non-residential	1 gallons to 10,000 gallons	N/A	$ 2.79	
30		over 10,000 gallons	N/A	$ 3.82	
31					
32	1 Inch Meter - All Classes, except Construction	0 gallons to 21,000 gallons	$ 2.50	$ 2.79	
33		over 21,000 gallons	$ 3.42	$ 3.82	
34					
35	1.5 Inch Meter - All Classes	0 gallons to 35,000 gallons	$ 2.50	$ 2.79	
36		over 35,000 gallons	$ 3.42	$ 3.82	
37					
38					

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Present and Proposed Rates

Exhibit
Rejoinder Scehdule H-3
Page 2
Witness: Bourassa

Line No.			(Per 1,000 gallons) Present Rate	Proposed Rate
1				
2				
3	**Commodity Rates**	**Block**		
4	2 Inch Meter - All Classes, except Construction	0 gallons to 63,000 gallons	$ 2.50	$ 2.79
5		over 63,000 gallons	$ 3.42	$ 3.82
6				
7	3 Inch Meter - All Classes, except Construction	0 gallons to 103,000 gallons	$ 2.50	$ 2.79
8		over 103,000 gallons	$ 3.42	$ 3.82
9				
10	4 Inch Meter - All Classes, except Construction	0 gallons to 424,000 gallons	$ 2.50	$ 2.79
11		over 424,000 gallons	$ 3.42	$ 3.82
12				
13	6 Inch Meter - All Classes, except Construction.	0 gallons to 680,000 gallons	$ 2.50	$ 2.79
14		over 680,000 gallons	$ 3.42	$ 3.82
15				
16	8 Inch Meter - All Classes, except Construction	0 gallons to 1,050,000 gallons	$ 2.50	$ 2.79
17		over 1,050,000 gallons	$ 3.42	$ 3.82
18				
19	Construction Water (all meter sizes)	0 gallons to 1,050,000 gallons	$ 2.50	$ 2.79
20		over 1,050,000 gallons	$ 3.42	$ 3.82
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				

Community Water Company of Green Valley
Changes in Representative Rate Schedules
Test Year Ended December 31, 2014

Exhibit
Rejoinder Scehdule H-3
Page 3
Witness: Bourassa

Line No.	Other Service Charges	Present Rates	Proposed Rates
1	Establishment	$ 25.00	$ 25.00
2	Establishment (After Hours)	$ 35.00	$ 35.00
3	Reconnection (Delinquent)	$ 25.00	$ 25.00
4	Reconnection (Delinquent) - After Hours	$ 35.00	$ 35.00
5	Call out charge (After hours/Saturday)	$ 35.00	$ 35.00
6	Call out charge (Sunday/Holiday)	$ 50.00	$ 50.00
7	Meter test (If Correct)	$ 20.00	$ 20.00
8	Deposit	(a)	(a)
9	Hydrant Meter Deposit:*		
10	5/8 x 3/4 Inch	$ 155.00	$ 155.00
11	3/4 Inch	$ 255.00	$ 255.00
12	1 Inch	$ 315.00	$ 315.00
13	1 1/2 Inch	$ 525.00	$ 525.00
14	2 Inch Turbine	$ 1,045.00	$ 1,045.00
15	2 Inch Compound	$ 1,890.00	$ 1,890.00
16	3 Inch Turbine	$ 1,670.00	$ 1,670.00
17	3 Inch Compound	$ 2,545.00	$ 2,545.00
18	4 Inch Turbine	$ 1,737.00	$ 1,737.00
19	4 Inch Compound	$ 3,645.00	$ 3,645.00
20	6 inch Turbine	$ 3,766.00	$ 3,766.00
21	6 Inch Compound	$ 6,920.00	$ 6,920.00
22	8 Inch	Cost	Cost
23	10 Inch	Cost	Cost
24	12 Inch	Cost	Cost
25	Deposit Interest	6.00%**	6.00%**
26	Reestablishment (within 12 months)	(b)	(b)
27	Reestablishment (within 12 months after hours)	(b)	(b)
28	NSF Check	$ 25.00	$ 25.00
29	Meter Reread (if Correct)	$ 10.00	$ 10.00
30	After Hours Service Charge (per Rule R-14-2-403D)	$ 10.00	$ 10.00
31	Late Payment Penalty	1.5% per month	1.5% per month
32	Deferred Payment (R-01-2-409.G)	1.5% per month	1.5% per month
33	Moving meter at customer request (R-14-2-405(B))	$ 20.00	$ 20.00
34	Meter Tampering Charge	Cost	Cost
35	Meter Box - Cut Lock Charge	Cost	Cost
36	Payment via Visa Charge Card (cost up to 6%	Cost	Cost
37	service charge on bill paid)		
38			
39	Monthly Service Charge for Fire Sprinkler		
40	Less than 6"	$ 10.00	$ 10.00
41	Less than 8"	$ 15.00	$ 15.00
42	Less than 10"	$ 22.50	$ 22.50
43	Less than 12"	$ 33.75	$ 33.75
44			

45 * Shall be refunded entirely upon return of undamaged meter.
46 ** Per Commission Rule A.A.C. R-14-2-403(B)
47 (a) Residential - two times the average bill. Non-residential- two and one-half times the average bill
48 (b) Minimum charge times months off the system.
49
50 IN ADDITION TO THE COLLECTION OF REGULAR RATES, THE UTILITY WILL COLLECT FROM
51 ITS CUSTOMERS A PROPORTIONATE SHARE OF ANY PRIVILEGE, SALES, USE, AND FRANCHISE
52 TAX. PER COMMISSION RULE 14-2-409D(5).

Community Water Company of Green Valley
Test Year Ended December 31, 2014
Meter and Service Line Charges

Exhibit
Rejoinder Scehdule H-3
Page 4
Witness: Bourassa

Refundable Meter and Service Line Charges

Line No.		Present Service Line Charge	Present Meter Install-ation Charge	Total Present Charge	Proposed Service Line Charge	Proposed Meter Install-ation Charge	Total Proposed Charge
1							
2							
3							
4							
5							
6							
7							
8							
9	5/8 x 3/4 Inch	$ 445.00	$ 155.00	$ 600.00	$ 445.00	$ 155.00	$ 600.00
10	3/4 Inch	445.00	225.00	670.00	445.00	225.00	670.00
11	1 Inch	495.00	315.00	810.00	495.00	315.00	810.00
12	1 1/2 Inch	550.00	525.00	1,075.00	550.00	525.00	1,075.00
13	2 Inch Turbine	830.00	1,045.00	1,875.00	830.00	1,045.00	1,875.00
14	2 Inch Compound	830.00	1,890.00	2,720.00	830.00	1,890.00	2,720.00
15	3 Inch Turbine	1,045.00	1,670.00	2,715.00	1,045.00	1,670.00	2,715.00
16	3 Inch Compound	1,165.00	2,545.00	3,710.00	1,165.00	2,545.00	3,710.00
17	4 Inch Turbine	1,490.00	1,737.00	3,227.00	1,490.00	1,737.00	3,227.00
18	4 Inch Compound	1,670.00	3,645.00	5,315.00	1,670.00	3,645.00	5,315.00
19	6 inch Turbine	2,210.00	3,766.00	5,976.00	2,210.00	3,766.00	5,976.00
20	6 Inch Compound	2,330.00	6,920.00	9,250.00	2,330.00	6,920.00	9,250.00
21	8 Inch	Cost	Cost	Cost	Cost	Cost	Cost
22	10 Inch	Cost	Cost	Cost	Cost	Cost	Cost
23	12 Inch	Cost	Cost	Cost	Cost	Cost	Cost
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 5/8x3/4 Inch Residential

Exhibit
Rebuttal Schedule H-4
Page 1
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 13.00	$ 16.39	$ 3.39	26.05%
1,000	14.30	17.84	3.54	24.75%
2,000	15.60	19.29	3.69	23.66%
3,000	16.90	20.74	3.84	22.74%
4,000	19.40	23.54	4.14	21.32%
5,000	21.90	26.33	4.43	20.22%
6,000	24.40	29.12	4.72	19.35%
7,000	26.90	31.91	5.01	18.63%
8,000	29.40	34.71	5.31	18.05%
9,000	31.90	37.50	5.60	17.55%
10,000	34.40	40.29	5.89	17.12%
12,000	41.24	47.93	6.69	16.22%
14,000	48.08	55.57	7.49	15.58%
16,000	54.92	63.21	8.29	15.10%
18,000	61.76	70.85	9.09	14.72%
20,000	68.60	78.49	9.89	14.42%
25,000	85.70	97.59	11.89	13.88%
30,000	102.80	116.69	13.89	13.51%
35,000	119.90	135.79	15.89	13.26%
40,000	137.00	154.89	17.89	13.06%
45,000	154.10	174.00	19.90	12.91%
50,000	171.20	193.10	21.90	12.79%
60,000	205.40	231.30	25.90	12.61%
70,000	239.60	269.50	29.90	12.48%
80,000	273.80	307.70	33.90	12.38%
90,000	308.00	345.90	37.90	12.31%
100,000	342.20	384.10	41.90	12.25%
Average Usage				
3,897	$ 19.14	$ 23.25	$ 4.11	21.45%
Median Usage				
3,500	$ 18.15	$ 22.14	$ 3.99	21.98%

Present Rates:

Monthly Minimum:		$	13.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	3,000	$	1.30
Up to	10,000	$	2.50
Over	10,000	$	3.42

Proposed Rates:

Monthly Minimum:		$	16.39
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	3,000	$	1.45
Up to	10,000	$	2.79
Over	10,000	$	3.82

Over

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 3/4 Inch Residential

Exhibit
Rebuttal Schedule H-4
Page 2
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 13.00	$ 16.39	$ 3.39	26.05%
1,000	14.30	17.84	3.54	24.75%
2,000	15.60	19.29	3.69	23.66%
3,000	16.90	20.74	3.84	22.74%
4,000	19.40	23.54	4.14	21.32%
5,000	21.90	26.33	4.43	20.22%
6,000	24.40	29.12	4.72	19.35%
7,000	26.90	31.91	5.01	18.63%
8,000	29.40	34.71	5.31	18.05%
9,000	31.90	37.50	5.60	17.55%
10,000	34.40	40.29	5.89	17.12%
12,000	41.24	47.93	6.69	16.22%
14,000	48.08	55.57	7.49	15.58%
16,000	54.92	63.21	8.29	15.10%
18,000	61.76	70.85	9.09	14.72%
20,000	68.60	78.49	9.89	14.42%
25,000	85.70	97.59	11.89	13.88%
30,000	102.80	116.69	13.89	13.51%
35,000	119.90	135.79	15.89	13.26%
40,000	137.00	154.89	17.89	13.06%
45,000	154.10	174.00	19.90	12.91%
50,000	171.20	193.10	21.90	12.79%
60,000	205.40	231.30	25.90	12.61%
70,000	239.60	269.50	29.90	12.48%
80,000	273.80	307.70	33.90	12.38%
90,000	308.00	345.90	37.90	12.31%
100,000	342.20	384.10	41.90	12.25%
Average Usage				
2,516	$ 16.27	$ 20.04	$ 3.77	23.17%
Median Usage				
1,500	$ 14.95	$ 18.56	$ 3.61	24.18%

Present Rates:			
Monthly Minimum:		$	13.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	3,000	$	1.30
Up to	10,000	$	2.50
Over	10,000	$	3.42
Proposed Rates:			
Monthly Minimum:		$	16.39
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	3,000	$	1.45
Up to	10,000	$	2.79
Over	10,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 1 Inch Residential

Exhibit
Rebuttal Schedule H-4
Page 3
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 24.00	$ 30.25	$ 6.25	26.05%
1,000	26.50	33.04	6.54	24.70%
2,000	29.00	35.84	6.84	23.58%
3,000	31.50	38.63	7.13	22.63%
4,000	34.00	41.42	7.42	21.83%
5,000	36.50	44.21	7.71	21.14%
6,000	39.00	47.01	8.01	20.53%
7,000	41.50	49.80	8.30	20.00%
8,000	44.00	52.59	8.59	19.53%
9,000	46.50	55.38	8.88	19.11%
10,000	49.00	58.18	9.18	18.73%
12,000	54.00	63.76	9.76	18.08%
14,000	59.00	69.35	10.35	17.54%
16,000	64.00	74.93	10.93	17.08%
18,000	69.00	80.52	11.52	16.69%
20,000	74.00	86.10	12.10	16.35%
25,000	90.18	104.18	14.00	15.52%
30,000	107.28	123.28	16.00	14.91%
35,000	124.38	142.38	18.00	14.47%
40,000	141.48	161.48	20.00	14.13%
45,000	158.58	180.58	22.00	13.87%
50,000	175.68	199.68	24.00	13.66%
60,000	209.88	237.88	28.00	13.34%
70,000	244.08	276.08	32.00	13.11%
80,000	278.28	314.28	36.00	12.94%
90,000	312.48	352.48	40.00	12.80%
100,000	346.68	390.69	44.01	12.69%
Average Usage				
11,504	$ 52.76	$ 62.38	$ 9.62	18.23%
Median Usage				
7,500	$ 42.75	$ 51.20	$ 8.45	19.76%

Present Rates:

Monthly Minimum:		$	24.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	21,000	$	2.50
Over	21,000	$	3.42

Proposed Rates:

Monthly Minimum:		$	30.25
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	21,000	$	2.79
Over	21,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 1 1/2 Inch Residential

Exhibit
Rebuttal Schedule H-4
Page 4
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 40.00	$ 50.42	$ 10.42	26.05%
1,000	42.50	53.21	10.71	25.21%
2,000	45.00	56.01	11.01	24.46%
3,000	47.50	58.80	11.30	23.78%
4,000	50.00	61.59	11.59	23.18%
5,000	52.50	64.38	11.88	22.63%
6,000	55.00	67.18	12.18	22.14%
7,000	57.50	69.97	12.47	21.68%
8,000	60.00	72.76	12.76	21.27%
9,000	62.50	75.55	13.05	20.88%
10,000	65.00	78.35	13.35	20.53%
12,000	70.00	83.93	13.93	19.90%
14,000	75.00	89.52	14.52	19.35%
16,000	80.00	95.10	15.10	18.88%
18,000	85.00	100.69	15.69	18.45%
20,000	90.00	106.27	16.27	18.08%
25,000	102.50	120.23	17.73	17.30%
30,000	115.00	134.20	19.20	16.69%
35,000	127.50	148.16	20.66	16.20%
40,000	144.60	167.26	22.66	15.67%
45,000	161.70	186.36	24.66	15.25%
50,000	178.80	205.46	26.66	14.91%
60,000	213.00	243.66	30.66	14.39%
70,000	247.20	281.86	34.66	14.02%
80,000	281.40	320.06	38.66	13.74%
90,000	315.60	358.27	42.67	13.52%
100,000	349.80	396.47	46.67	13.34%
Average Usage				
46,724	$ 167.59	$ 192.94	$ 25.35	15.12%
Median Usage				

Present Rates:

Monthly Minimum:		$	40.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	35,000	$	2.50
Over	35,000	$	3.42

Proposed Rates:

Monthly Minimum:		$	50.42
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	35,000	$	2.79
Over	35,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 2 Inch Residential

Exhibit
Rebuttal Schedule H-4
Page 5
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 67.00	$ 84.45	$ 17.45	26.05%
1,000	69.50	87.25	17.75	25.53%
2,000	72.00	90.04	18.04	25.05%
3,000	74.50	92.83	18.33	24.61%
4,000	77.00	95.62	18.62	24.19%
5,000	79.50	98.42	18.92	23.79%
6,000	82.00	101.21	19.21	23.43%
7,000	84.50	104.00	19.50	23.08%
8,000	87.00	106.79	19.79	22.75%
9,000	89.50	109.59	20.09	22.44%
10,000	92.00	112.38	20.38	22.15%
12,000	97.00	117.96	20.96	21.61%
14,000	102.00	123.55	21.55	21.13%
16,000	107.00	129.13	22.13	20.69%
18,000	112.00	134.72	22.72	20.28%
20,000	117.00	140.30	23.30	19.92%
25,000	129.50	154.27	24.77	19.12%
30,000	142.00	168.23	26.23	18.47%
35,000	154.50	182.19	27.69	17.92%
40,000	167.00	196.15	29.15	17.46%
45,000	179.50	210.12	30.62	17.06%
50,000	192.00	224.08	32.08	16.71%
60,000	217.00	252.00	35.00	16.13%
70,000	248.44	287.12	38.68	15.57%
80,000	282.64	325.32	42.68	15.10%
90,000	316.84	363.52	46.68	14.73%
100,000	351.04	401.73	50.69	14.44%
Average Usage				
71,291	$ 252.86	$ 292.05	$ 39.20	15.50%
Median Usage				
36,500	$ 158.25	$ 186.38	$ 28.13	17.78%

Present Rates:

Monthly Minimum:		$	67.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	63,000	$	2.50
Over	63,000	$	3.42

Proposed Rates:

Monthly Minimum:		$	84.45
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	63,000	$	2.79
Over	63,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 3 Inch Residential

Exhibit
Rebuttal Schedule H-4
Page 6
Witness: Bourassa
REVISED

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 105.00	$ 132.35	$ 27.35	26.05%
1,000	107.50	135.15	27.65	25.72%
2,000	110.00	137.94	27.94	25.40%
3,000	112.50	140.73	28.23	25.09%
4,000	115.00	143.52	28.52	24.80%
5,000	117.50	146.32	28.82	24.52%
6,000	120.00	149.11	29.11	24.26%
7,000	122.50	151.90	29.40	24.00%
8,000	125.00	154.69	29.69	23.75%
9,000	127.50	157.49	29.99	23.52%
10,000	130.00	160.28	30.28	23.29%
12,000	135.00	165.86	30.86	22.86%
14,000	140.00	171.45	31.45	22.46%
16,000	145.00	177.03	32.03	22.09%
18,000	150.00	182.62	32.62	21.75%
20,000	155.00	188.20	33.20	21.42%
25,000	167.50	202.17	34.67	20.70%
30,000	180.00	216.13	36.13	20.07%
35,000	192.50	230.09	37.59	19.53%
40,000	205.00	244.05	39.05	19.05%
45,000	217.50	258.02	40.52	18.63%
50,000	230.00	271.98	41.98	18.25%
60,000	255.00	299.90	44.90	17.61%
70,000	280.00	327.83	47.83	17.08%
80,000	305.00	355.75	50.75	16.64%
90,000	330.00	383.68	53.68	16.27%
100,000	355.00	411.60	56.60	15.94%
Average Usage				
50,556	$ 231.39	$ 273.53	$ 42.14	18.21%
Median Usage				
47,000	$ 222.50	$ 263.60	$ 41.10	18.47%

Present Rates:			
Monthly Minimum:		$	105.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	103,000	$	2.50
Over	103,000	$	3.42
Proposed Rates:			
Monthly Minimum:		$	132.35
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	103,000	$	2.79
Over	103,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 5/8 Inch Commercial

Exhibit
Rebuttal Schedule H-4
Page 7
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 13.00	$ 16.39	$ 3.39	26.05%
1,000	15.50	19.18	3.68	23.74%
2,000	18.00	21.97	3.97	22.06%
3,000	20.50	24.76	4.26	20.80%
4,000	23.00	27.56	4.56	19.81%
5,000	25.50	30.35	4.85	19.02%
6,000	28.00	33.14	5.14	18.36%
7,000	30.50	35.93	5.43	17.82%
8,000	33.00	38.73	5.73	17.35%
9,000	35.50	41.52	6.02	16.95%
10,000	38.00	44.31	6.31	16.61%
12,000	44.84	51.95	7.11	15.86%
14,000	51.68	59.59	7.91	15.31%
16,000	58.52	67.23	8.71	14.89%
18,000	65.36	74.87	9.51	14.55%
20,000	72.20	82.51	10.31	14.28%
25,000	89.30	101.61	12.31	13.79%
30,000	106.40	120.71	14.31	13.45%
35,000	123.50	139.82	16.32	13.21%
40,000	140.60	158.92	18.32	13.03%
45,000	157.70	178.02	20.32	12.88%
50,000	174.80	197.12	22.32	12.77%
60,000	209.00	235.32	26.32	12.59%
70,000	243.20	273.52	30.32	12.47%
80,000	277.40	311.72	34.32	12.37%
90,000	311.60	349.92	38.32	12.30%
100,000	345.80	388.12	42.32	12.24%
Average Usage				
5,212	$ 26.03	$ 30.94	$ 4.91	18.87%
Median Usage				
2,500	$ 19.25	$ 23.37	$ 4.12	21.39%

Present Rates:

Monthly Minimum:		$	13.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	10,000	$	2.50
Over	10,000	$	3.42

Proposed Rates:

Monthly Minimum:		$	16.39
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	10,000	$	2.79
Over	10,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 3/4 Inch Commercial

Exhibit
Rebuttal Schedule H-4
Page 8
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 13.00	$ 16.39	$ 3.39	26.05%
1,000	15.50	19.18	3.68	23.74%
2,000	18.00	21.97	3.97	22.06%
3,000	20.50	24.76	4.26	20.80%
4,000	23.00	27.56	4.56	19.81%
5,000	25.50	30.35	4.85	19.02%
6,000	28.00	33.14	5.14	18.36%
7,000	30.50	35.93	5.43	17.82%
8,000	33.00	38.73	5.73	17.35%
9,000	35.50	41.52	6.02	16.95%
10,000	38.00	44.31	6.31	16.61%
12,000	44.84	51.95	7.11	15.86%
14,000	51.68	59.59	7.91	15.31%
16,000	58.52	67.23	8.71	14.89%
18,000	65.36	74.87	9.51	14.55%
20,000	72.20	82.51	10.31	14.28%
25,000	89.30	101.61	12.31	13.79%
30,000	106.40	120.71	14.31	13.45%
35,000	123.50	139.82	16.32	13.21%
40,000	140.60	158.92	18.32	13.03%
45,000	157.70	178.02	20.32	12.88%
50,000	174.80	197.12	22.32	12.77%
60,000	209.00	235.32	26.32	12.59%
70,000	243.20	273.52	30.32	12.47%
80,000	277.40	311.72	34.32	12.37%
90,000	311.60	349.92	38.32	12.30%
100,000	345.80	388.12	42.32	12.24%
Average Usage				
1,417	$ 16.54	$ 20.34	$ 3.80	22.98%
Median Usage				
1,500	$ 16.75	$ 20.58	$ 3.83	22.84%

Present Rates:

Monthly Minimum:		$	13.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	10,000	$	2.50
Over	10,000	$	3.42

Proposed Rates:

Monthly Minimum:		$	16.39
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	10,000	$	2.79
Over	10,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 1 Inch Commercial

Exhibit
Rebuttal Schedule H-4
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Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 24.00	$ 30.25	$ 6.25	26.05%
1,000	26.50	33.04	6.54	24.70%
2,000	29.00	35.84	6.84	23.58%
3,000	31.50	38.63	7.13	22.63%
4,000	34.00	41.42	7.42	21.83%
5,000	36.50	44.21	7.71	21.14%
6,000	39.00	47.01	8.01	20.53%
7,000	41.50	49.80	8.30	20.00%
8,000	44.00	52.59	8.59	19.53%
9,000	46.50	55.38	8.88	19.11%
10,000	49.00	58.18	9.18	18.73%
12,000	54.00	63.76	9.76	18.08%
14,000	59.00	69.35	10.35	17.54%
16,000	64.00	74.93	10.93	17.08%
18,000	69.00	80.52	11.52	16.69%
20,000	74.00	86.10	12.10	16.35%
25,000	90.18	104.18	14.00	15.52%
30,000	107.28	123.28	16.00	14.91%
35,000	124.38	142.38	18.00	14.47%
40,000	141.48	161.48	20.00	14.13%
45,000	158.58	180.58	22.00	13.87%
50,000	175.68	199.68	24.00	13.66%
60,000	209.88	237.88	28.00	13.34%
70,000	244.08	276.08	32.00	13.11%
80,000	278.28	314.28	36.00	12.94%
90,000	312.48	352.48	40.00	12.80%
100,000	346.68	390.69	44.01	12.69%
Average Usage				
11,806	$ 53.51	$ 63.22	$ 9.71	18.14%
Median Usage				
6,500	$ 40.25	$ 48.40	$ 8.15	20.26%

Present Rates:

Monthly Minimum:		$	24.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	21,000	$	2.50
Over	21,000	$	3.42

Proposed Rates:

Monthly Minimum:		$	30.25
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	21,000	$	2.79
Over	21,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 1 1/2 Inch Commercial

Exhibit
Rebuttal Schedule H-4
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Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 40.00	$ 50.42	$ 10.42	26.05%
1,000	42.50	53.21	10.71	25.21%
2,000	45.00	56.01	11.01	24.46%
3,000	47.50	58.80	11.30	23.78%
4,000	50.00	61.59	11.59	23.18%
5,000	52.50	64.38	11.88	22.63%
6,000	55.00	67.18	12.18	22.14%
7,000	57.50	69.97	12.47	21.68%
8,000	60.00	72.76	12.76	21.27%
9,000	62.50	75.55	13.05	20.88%
10,000	65.00	78.35	13.35	20.53%
12,000	70.00	83.93	13.93	19.90%
14,000	75.00	89.52	14.52	19.35%
16,000	80.00	95.10	15.10	18.88%
18,000	85.00	100.69	15.69	18.45%
20,000	90.00	106.27	16.27	18.08%
25,000	102.50	120.23	17.73	17.30%
30,000	115.00	134.20	19.20	16.69%
35,000	127.50	148.16	20.66	16.20%
40,000	144.60	167.26	22.66	15.67%
45,000	161.70	186.36	24.66	15.25%
50,000	178.80	205.46	26.66	14.91%
60,000	213.00	243.66	30.66	14.39%
70,000	247.20	281.86	34.66	14.02%
80,000	281.40	320.06	38.66	13.74%
90,000	315.60	358.27	42.67	13.52%
100,000	349.80	396.47	46.67	13.34%
Average Usage				
30,135	$ 115.34	$ 134.57	$ 19.23	16.68%
Median Usage				
13,500	$ 73.75	$ 88.12	$ 14.37	19.48%

Present Rates:

Monthly Minimum:		$	40.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	35,000	$	2.50
Over	35,000	$	3.42

Proposed Rates:

Monthly Minimum:		$	50.42
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	35,000	$	2.79
Over	35,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 2 Inch Commercial

Exhibit
Rebuttal Schedule H-4
Page 11
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 67.00	$ 84.45	$ 17.45	26.05%
1,000	69.50	87.25	17.75	25.53%
2,000	72.00	90.04	18.04	25.05%
3,000	74.50	92.83	18.33	24.61%
4,000	77.00	95.62	18.62	24.19%
5,000	79.50	98.42	18.92	23.79%
6,000	82.00	101.21	19.21	23.43%
7,000	84.50	104.00	19.50	23.08%
8,000	87.00	106.79	19.79	22.75%
9,000	89.50	109.59	20.09	22.44%
10,000	92.00	112.38	20.38	22.15%
12,000	97.00	117.96	20.96	21.61%
14,000	102.00	123.55	21.55	21.13%
16,000	107.00	129.13	22.13	20.69%
18,000	112.00	134.72	22.72	20.28%
20,000	117.00	140.30	23.30	19.92%
25,000	129.50	154.27	24.77	19.12%
30,000	142.00	168.23	26.23	18.47%
35,000	154.50	182.19	27.69	17.92%
40,000	167.00	196.15	29.15	17.46%
45,000	179.50	210.12	30.62	17.06%
50,000	192.00	224.08	32.08	16.71%
60,000	217.00	252.00	35.00	16.13%
70,000	248.44	287.12	38.68	15.57%
80,000	282.64	325.32	42.68	15.10%
90,000	316.84	363.52	46.68	14.73%
100,000	351.04	401.73	50.69	14.44%
Average Usage				
59,375	$ 215.44	$ 250.26	$ 34.82	16.16%
Median Usage				
19,500	$ 115.75	$ 138.91	$ 23.16	20.01%

Present Rates:

Monthly Minimum:		$	67.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	63,000	$	2.50
Over	63,000	$	3.42

Proposed Rates:

Monthly Minimum:		$	84.45
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	63,000	$	2.79
Over	63,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 3 Inch Commercial

Exhibit
Rebuttal Schedule H-4
Page 12
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 105.00	$ 132.35	$ 27.35	26.05%
1,000	107.50	135.15	27.65	25.72%
2,000	110.00	137.94	27.94	25.40%
3,000	112.50	140.73	28.23	25.09%
4,000	115.00	143.52	28.52	24.80%
5,000	117.50	146.32	28.82	24.52%
6,000	120.00	149.11	29.11	24.26%
7,000	122.50	151.90	29.40	24.00%
8,000	125.00	154.69	29.69	23.75%
9,000	127.50	157.49	29.99	23.52%
10,000	130.00	160.28	30.28	23.29%
12,000	135.00	165.86	30.86	22.86%
14,000	140.00	171.45	31.45	22.46%
16,000	145.00	177.03	32.03	22.09%
18,000	150.00	182.62	32.62	21.75%
20,000	155.00	188.20	33.20	21.42%
25,000	167.50	202.17	34.67	20.70%
30,000	180.00	216.13	36.13	20.07%
35,000	192.50	230.09	37.59	19.53%
40,000	205.00	244.05	39.05	19.05%
45,000	217.50	258.02	40.52	18.63%
50,000	230.00	271.98	41.98	18.25%
60,000	255.00	299.90	44.90	17.61%
70,000	280.00	327.83	47.83	17.08%
80,000	305.00	355.75	50.75	16.64%
90,000	330.00	383.68	53.68	16.27%
100,000	355.00	411.60	56.60	15.94%
Average Usage				
58,055	$ 250.14	$ 294.47	$ 44.33	17.72%
Median Usage				
34,500	$ 191.25	$ 228.69	$ 37.44	19.58%

Present Rates:

Monthly Minimum:		$ 105.00
Gallons in Minimum		-
Charge Per 1,000 Gallons		
Up to	103,000	$ 2.50
Over	103,000	$ 3.42

Proposed Rates:

Monthly Minimum:		$ 132.35
Gallons in Minimum		-
Charge Per 1,000 Gallons		
Up to	103,000	$ 2.79
Over	103,000	$ 3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 4 Inch Commercial

Exhibit
Rebuttal Schedule H-4
Page 13
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 400.00	$ 504.20	$ 104.20	26.05%
1,000	402.50	506.99	104.49	25.96%
2,000	405.00	509.79	104.79	25.87%
3,000	407.50	512.58	105.08	25.79%
4,000	410.00	515.37	105.37	25.70%
5,000	412.50	518.16	105.66	25.62%
6,000	415.00	520.96	105.96	25.53%
7,000	417.50	523.75	106.25	25.45%
8,000	420.00	526.54	106.54	25.37%
9,000	422.50	529.33	106.83	25.29%
10,000	425.00	532.13	107.13	25.21%
12,000	430.00	537.71	107.71	25.05%
14,000	435.00	543.30	108.30	24.90%
16,000	440.00	548.88	108.88	24.75%
18,000	445.00	554.47	109.47	24.60%
20,000	450.00	560.05	110.05	24.46%
25,000	462.50	574.01	111.51	24.11%
30,000	475.00	587.98	112.98	23.78%
35,000	487.50	601.94	114.44	23.47%
40,000	500.00	615.90	115.90	23.18%
45,000	512.50	629.86	117.36	22.90%
50,000	525.00	643.83	118.83	22.63%
60,000	550.00	671.75	121.75	22.14%
70,000	575.00	699.68	124.68	21.68%
80,000	600.00	727.60	127.60	21.27%
90,000	625.00	755.53	130.53	20.88%
100,000	650.00	783.45	133.45	20.53%
Average Usage				
2,483,617	$ 8,503.89	$ 9,556.24	$ 1,052.36	12.37%
Median Usage				
2,203,950	$ 7,547.43	$ 8,487.88	$ 940.45	12.46%

Present Rates:

Monthly Minimum:		$ 400.00
Gallons in Minimum		-
Charge Per 1,000 Gallons		
Up to	424,000	$ 2.50
Over	424,000	$ 3.42

Proposed Rates:

Monthly Minimum:		$ 504.20
Gallons in Minimum		-
Charge Per 1,000 Gallons		
Up to	424,000	$ 2.79
Over	424,000	$ 3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 5/8 Inch Commercial/Residential

Exhibit
Rebuttal Schedule H-4
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Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 13.00	$ 16.39	$ 3.39	26.05%
1,000	15.50	19.18	3.68	23.74%
2,000	18.00	21.97	3.97	22.06%
3,000	20.50	24.76	4.26	20.80%
4,000	23.00	27.56	4.56	19.81%
5,000	25.50	30.35	4.85	19.02%
6,000	28.00	33.14	5.14	18.36%
7,000	30.50	35.93	5.43	17.82%
8,000	33.00	38.73	5.73	17.35%
9,000	35.50	41.52	6.02	16.95%
10,000	38.00	44.31	6.31	16.61%
12,000	44.84	51.95	7.11	15.86%
14,000	51.68	59.59	7.91	15.31%
16,000	58.52	67.23	8.71	14.89%
18,000	65.36	74.87	9.51	14.55%
20,000	72.20	82.51	10.31	14.28%
25,000	89.30	101.61	12.31	13.79%
30,000	106.40	120.71	14.31	13.45%
35,000	123.50	139.82	16.32	13.21%
40,000	140.60	158.92	18.32	13.03%
45,000	157.70	178.02	20.32	12.88%
50,000	174.80	197.12	22.32	12.77%
60,000	209.00	235.32	26.32	12.59%
70,000	243.20	273.52	30.32	12.47%
80,000	277.40	311.72	34.32	12.37%
90,000	311.60	349.92	38.32	12.30%
100,000	345.80	388.12	42.32	12.24%
Average Usage				
3,792	$ 22.48	$ 26.98	$ 4.50	20.00%
Median Usage				
5,500	$ 26.75	$ 31.75	$ 5.00	18.67%

Present Rates:

Monthly Minimum:		$	13.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	10,000	$	2.50
Over	10,000	$	3.42

Proposed Rates:

Monthly Minimum:		$	16.39
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	10,000	$	2.79
Over	10,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 1 Inch Commercial/Residential

Exhibit
Rebuttal Schedule H-4
Page 15
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 24.00	$ 30.25	$ 6.25	26.05%
1,000	26.50	33.04	6.54	24.70%
2,000	29.00	35.84	6.84	23.58%
3,000	31.50	38.63	7.13	22.63%
4,000	34.00	41.42	7.42	21.83%
5,000	36.50	44.21	7.71	21.14%
6,000	39.00	47.01	8.01	20.53%
7,000	41.50	49.80	8.30	20.00%
8,000	44.00	52.59	8.59	19.53%
9,000	46.50	55.38	8.88	19.11%
10,000	49.00	58.18	9.18	18.73%
12,000	54.00	63.76	9.76	18.08%
14,000	59.00	69.35	10.35	17.54%
16,000	64.00	74.93	10.93	17.08%
18,000	69.00	80.52	11.52	16.69%
20,000	74.00	86.10	12.10	16.35%
25,000	90.18	104.18	14.00	15.52%
30,000	107.28	123.28	16.00	14.91%
35,000	124.38	142.38	18.00	14.47%
40,000	141.48	161.48	20.00	14.13%
45,000	158.58	180.58	22.00	13.87%
50,000	175.68	199.68	24.00	13.66%
60,000	209.88	237.88	28.00	13.34%
70,000	244.08	276.08	32.00	13.11%
80,000	278.28	314.28	36.00	12.94%
90,000	312.48	352.48	40.00	12.80%
100,000	346.68	390.69	44.01	12.69%
Average Usage				
15,744	$ 63.36	$ 74.22	$ 10.86	17.14%
Median Usage				
9,000	$ 46.50	$ 55.38	$ 8.88	19.11%

Present Rates:

Monthly Minimum:		$	24.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	21,000	$	2.50
Over	21,000	$	3.42

Proposed Rates:

Monthly Minimum:		$	30.25
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	21,000	$	2.79
Over	21,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 2 Inch Commercial/Residential

Exhibit
Rebuttal Schedule H-4
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Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 67.00	$ 84.45	$ 17.45	26.05%
1,000	69.50	87.25	17.75	25.53%
2,000	72.00	90.04	18.04	25.05%
3,000	74.50	92.83	18.33	24.61%
4,000	77.00	95.62	18.62	24.19%
5,000	79.50	98.42	18.92	23.79%
6,000	82.00	101.21	19.21	23.43%
7,000	84.50	104.00	19.50	23.08%
8,000	87.00	106.79	19.79	22.75%
9,000	89.50	109.59	20.09	22.44%
10,000	92.00	112.38	20.38	22.15%
12,000	97.00	117.96	20.96	21.61%
14,000	102.00	123.55	21.55	21.13%
16,000	107.00	129.13	22.13	20.69%
18,000	112.00	134.72	22.72	20.28%
20,000	117.00	140.30	23.30	19.92%
25,000	129.50	154.27	24.77	19.12%
30,000	142.00	168.23	26.23	18.47%
35,000	154.50	182.19	27.69	17.92%
40,000	167.00	196.15	29.15	17.46%
45,000	179.50	210.12	30.62	17.06%
50,000	192.00	224.08	32.08	16.71%
60,000	217.00	252.00	35.00	16.13%
70,000	248.44	287.12	38.68	15.57%
80,000	282.64	325.32	42.68	15.10%
90,000	316.84	363.52	46.68	14.73%
100,000	351.04	401.73	50.69	14.44%
Average Usage 43,892	$ 176.73	$ 207.02	$ 30.29	17.14%
Median Usage 31,500	$ 145.75	$ 172.42	$ 26.67	18.30%

Present Rates:

Monthly Minimum:		$	67.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	63,000	$	2.50
Over	63,000	$	3.42

Proposed Rates:

Monthly Minimum:		$	84.45
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	63,000	$	2.79
Over	63,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: 3 Inch Bulk

Exhibit
Rebuttal Schedule H-4
Page 17
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 105.00	$ 132.35	$ 27.35	26.05%
1,000	107.50	135.15	27.65	25.72%
2,000	110.00	137.94	27.94	25.40%
3,000	112.50	140.73	28.23	25.09%
4,000	115.00	143.52	28.52	24.80%
5,000	117.50	146.32	28.82	24.52%
6,000	120.00	149.11	29.11	24.26%
7,000	122.50	151.90	29.40	24.00%
8,000	125.00	154.69	29.69	23.75%
9,000	127.50	157.49	29.99	23.52%
10,000	130.00	160.28	30.28	23.29%
12,000	135.00	165.86	30.86	22.86%
14,000	140.00	171.45	31.45	22.46%
16,000	145.00	177.03	32.03	22.09%
18,000	150.00	182.62	32.62	21.75%
20,000	155.00	188.20	33.20	21.42%
25,000	167.50	202.17	34.67	20.70%
30,000	180.00	216.13	36.13	20.07%
35,000	192.50	230.09	37.59	19.53%
40,000	205.00	244.05	39.05	19.05%
45,000	217.50	258.02	40.52	18.63%
50,000	230.00	271.98	41.98	18.25%
60,000	255.00	299.90	44.90	17.61%
70,000	280.00	327.83	47.83	17.08%
80,000	305.00	355.75	50.75	16.64%
90,000	330.00	383.68	53.68	16.27%
100,000	355.00	411.60	56.60	15.94%
Average Usage				
38,594	$ 201.49	$ 240.13	$ 38.64	19.18%
Median Usage				
1,500	$ 108.75	$ 136.54	$ 27.79	25.56%

Present Rates:

Monthly Minimum:		$	105.00
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	1,050,000	$	2.50
Over	1,050,000	$	3.42

Proposed Rates:

Monthly Minimum:		$	132.35
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	1,050,000	$	2.79
Over	1,050,000	$	3.82

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: Fire Lines Up to 6 Inch

Exhibit
Rebuttal Schedule H-4
Page 18
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 10.00	$ 10.00	$ -	0.00%
1,000	10.00	10.00	-	0.00%
2,000	10.00	10.00	-	0.00%
3,000	10.00	10.00	-	0.00%
4,000	10.00	10.00	-	0.00%
5,000	10.00	10.00	-	0.00%
6,000	10.00	10.00	-	0.00%
7,000	10.00	10.00	-	0.00%
8,000	10.00	10.00	-	0.00%
9,000	10.00	10.00	-	0.00%
10,000	10.00	10.00	-	0.00%
12,000	10.00	10.00	-	0.00%
14,000	10.00	10.00	-	0.00%
16,000	10.00	10.00	-	0.00%
18,000	10.00	10.00	-	0.00%
20,000	10.00	10.00	-	0.00%
25,000	10.00	10.00	-	0.00%
30,000	10.00	10.00	-	0.00%
35,000	10.00	10.00	-	0.00%
40,000	10.00	10.00	-	0.00%
45,000	10.00	10.00	-	0.00%
50,000	10.00	10.00	-	0.00%
60,000	10.00	10.00	-	0.00%
70,000	10.00	10.00	-	0.00%
80,000	10.00	10.00	-	0.00%
90,000	10.00	10.00	-	0.00%
100,000	10.00	10.00	-	0.00%
Average Usage				
-	$ 10.00	$ 10.00	$ -	0.00%
Median Usage				
-	$ 10.00	$ 10.00	$ -	0.00%

Present Rates:
Monthly Minimum: $ 10.00

Proposed Rates:
Monthly Minimum: $ 10.00

Community Water Company of Green Valley
Bill Comparison Present and Proposed Rates
Meter Size: Fire Lines Up to 8 Inch

Exhibit
Rebuttal Schedule H-4
Page 19
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 15.00	$ 15.00	$ -	0.00%
1,000	15.00	15.00	-	0.00%
2,000	15.00	15.00	-	0.00%
3,000	15.00	15.00	-	0.00%
4,000	15.00	15.00	-	0.00%
5,000	15.00	15.00	-	0.00%
6,000	15.00	15.00	-	0.00%
7,000	15.00	15.00	-	0.00%
8,000	15.00	15.00	-	0.00%
9,000	15.00	15.00	-	0.00%
10,000	15.00	15.00	-	0.00%
12,000	15.00	15.00	-	0.00%
14,000	15.00	15.00	-	0.00%
16,000	15.00	15.00	-	0.00%
18,000	15.00	15.00	-	0.00%
20,000	15.00	15.00	-	0.00%
25,000	15.00	15.00	-	0.00%
30,000	15.00	15.00	-	0.00%
35,000	15.00	15.00	-	0.00%
40,000	15.00	15.00	-	0.00%
45,000	15.00	15.00	-	0.00%
50,000	15.00	15.00	-	0.00%
60,000	15.00	15.00	-	0.00%
70,000	15.00	15.00	-	0.00%
80,000	15.00	15.00	-	0.00%
90,000	15.00	15.00	-	0.00%
100,000	15.00	15.00	-	0.00%
Average Usage				
-	$ 15.00	$ 15.00	$ -	0.00%
Median Usage				
-	$ 15.00	$ 15.00	$ -	0.00%

Present Rates:
Monthly Minimum: $ 15.00

Proposed Rates:
Monthly Minimum: $ 15.00