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BEFORE THE ARIZONA CORPORATION CO.

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**COMMISSIONERS**

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

IN THE MATTER OF THE APPLICATION OF  
APPALOOSA WATER COMPANY FOR  
APPROVAL OF A FINANCING  
APPLICATION

DOCKET NO. W-03443A-10-0143

IN THE MATTER OF THE APPLICATION OF  
APPALOOSA WATER COMPANY FOR  
APPROVAL OF A RATE INCREASE

DOCKET NO. W-03443A-11-0040

**STAFF'S NOTICE OF FILING DIRECT  
TESTIMONY**

On November 18, 2011, Utilities Division Staff ("Staff") filed a Request asking that the timeclock and filing deadlines associated with the consolidated dockets be suspended indefinitely in order to allow Appaloosa additional time to provide Staff with information essential to processing the applications, including information related to a Water Infrastructure Financing Authority ("WIFA") loan. On December 2, 2011, the Administrative Law Judge ("ALJ") issued a Procedural Order ("Procedural Order") granting Staff's requests and suspending the timeclock and filing deadlines. The ALJ further ordered that once Staff has received the necessary information and completed their analysis, Staff shall file notice of such in this docket. Staff hereby submits this filing as notice of receiving the necessary information and completing their analysis, as required in the Procedural Order.

AZ CORP COMMISSION  
DOCKET CONTROL

2012 FEB 17 P 4: 35

RECEIVED

Arizona Corporation Commission

DOCKETED

FEB 17 2012

DOCKETED BY

1 Staff hereby files the Direct Testimony of Jeffrey Michlik and Jian Liu on behalf of the  
2 Utilities Division in the above docket.

3 RESPECTFULLY SUBMITTED this 17<sup>th</sup> day of February 2012.

4

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11

12 Original and thirteen (13) copies  
13 of the foregoing filed this  
17<sup>th</sup> day of February 2012 with:

14 Docket Control  
15 Arizona Corporation Commission  
1200 West Washington Street  
16 Phoenix, Arizona 85007

17 Copies of the foregoing mailed this  
17<sup>th</sup> day of February 2012 to:

18 Joe Cordovana  
19 Post Office Box 3150  
Chino Valley, Arizona 86323

20 Ms. GayLynn Thorp  
21 Post Office Box 1035  
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23 2925 Harrison Drive  
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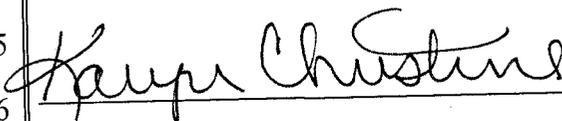
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Kimberly A. Ruht  
Attorney, Legal Division  
Arizona Corporation Commission  
1200 West Washington Street  
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BEFORE THE ARIZONA CORPORATION COMMISSION

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

IN THE MATTER OF THE APPLICATION OF )  
APPALOOSA WATER COMPANY FOR )  
APPROVAL OF A FINANCING APPLICATION. )

DOCKET NO. W-03443A-10-0143

IN THE MATTER OF THE APPLICATION OF )  
APPALOOSA WATER COMPANY FOR )  
APPROVAL OF A RATE INCREASE. )

DOCKET NO. W-03443A-11-0040

DIRECT

TESTIMONY

OF

JIAN W. LIU

UTILITIES ENGINEER

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

FEBRUARY 17, 2012

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**EXHIBIT**

Engineering Report for Appaloosa Water Company .....	JWL
--	-----

1     **INTRODUCTION**

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

3     A.     My name is Jian W. Liu. My business address is 1200 West Washington Street, Phoenix,  
4            Arizona 85007.

5  
6     **Q.     By whom and in what position are you employed?**

7     A.     I am employed by the Arizona Corporation Commission (“Commission” or “ACC”) as a  
8            Utilities Engineer - Water/Wastewater in the Utilities Division.

9  
10    **Q.     How long have you been employed by the Commission?**

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

12  
13    **Q.     What are your responsibilities as a Utilities Engineer - Water/Wastewater?**

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

20  
21    **Q.     How many companies have you analyzed for the Utilities Division?**

22    A.     I have analyzed more than 40 companies fulfilling these various responsibilities for  
23            Utilities Division Staff (“Staff”).

24

1 **Q. Have you previously testified before this Commission?**

2 A. Yes, I have testified on numerous occasions before this Commission.

3  
4 **Q. What is your educational background?**

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

9  
10 **Q. Briefly describe your pertinent work experience.**

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

17  
18 **Q. Please state your professional membership, registrations, and licenses.**

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

20  
21 **PURPOSE OF TESTIMONY**

22 **Q. What was your assignment in this rate proceeding?**

23 A. My assignment was to provide Staff’s engineering evaluation of the subject rate  
24 proceeding. I reviewed the Company’s application and responses to data requests, and I  
25 inspected the water system. This testimony and its attachments present Staff’s

1           engineering evaluation. The findings of my engineering evaluation are contained in the  
2           Engineering Report that I have prepared for this proceeding. The report is included as  
3           Exhibit JWL in this pre-filed testimony.  
4

## 5       **ENGINEERING REPORTS**

6       **Q.     Please describe the information contained in your Engineering Reports.**

7       A.     The Report is divided into three general sections: 1) *Executive Summary*;  
8           2) *Engineering Report Discussion*, and 3) *Engineering Report Exhibits*. The *Discussions*  
9           section for the Water System can be further divided into ten subsections: A) Location of  
10          Company; B) Description of the Water System; C) ADEQ Compliance; D) ACC  
11          Compliance; E) Arizona Department Of Water Resources (“ADWR”) compliance; F)  
12          Water Testing Expenses, G) Water Usage, H) Growth; I) Depreciation Rates; J) Other  
13          Issues.  
14

## 15       **RECOMMENDATIONS AND CONCLUSIONS**

16       **Q.     What are Staff’s conclusions and recommendations regarding the Company’s**  
17           **operations?**

18       A.     Staff’s conclusions and recommendations regarding the Company’s operations are listed  
19           below.  
20

## 21       **CONCLUSIONS:**

22           1. Staff concludes that Appaloosa Water Company’s (“Appaloosa” or “Company”)  
23           system well production and storage capacities are adequate to serve the present  
24           customer base and 67 additional service connections can be added to existing water  
25           system based on the amount of available storage capacity.

- 1           2. ADEQ regulates the water system under ADEQ Public Water System I.D. #13-208.  
2           ADEQ issued a Notice of Violation (“NOV”), dated June 30, 2011. NOV states that  
3           the Appaloosa water system has exceeded the maximum contaminate level (“MCL”)  
4           for arsenic for 4 quarters resulting in an average 12.95 parts per billion (“ppb”).  
5
- 6           3. Appaloosa’s service area is located within the Prescott Active Management Area  
7           (“AMA”). Appaloosa is in compliance with Prescott AMA reporting requirements  
8           and Arizona Department of Water Resources (“ADWR”) requirements governing  
9           water providers and/or community water systems.  
10
- 11          4. The Company reported 30,316,389 gallons pumped and 21,680,896 gallons sold for  
12          the test year, resulting in a water loss of 28.48 percent.  
13
- 14          5. A check of the Compliance Section database showed that the Company had no  
15          delinquent Commission compliance issues.  
16
- 17          6. The Company has an approved curtailment tariff on file with the Commission.  
18
- 19          7. The Company has an approved backflow prevention tariff on file with the  
20          Commission.  
21

## 22       **RECOMMENDATIONS**

- 23          1. Staff recommends that the Appaloosa file each January and July a report covering the  
24          previous six months that contains all work activities undertaken in accordance with  
25          Decision No. 71236 the WATER LOSS PREVENTION PLAN. The written report

- 1           should continue until Staff receives a report that the water loss for the Appaloosa  
2           water system is 10 percent or less for one full year (12 months).
- 3
- 4           2. Staff recommends that any increase in rates and charges approved in this proceeding  
5           shall not become effective until Staff receives notice that the Appaloosa water system  
6           is in total compliance with ADEQ regulations.
- 7
- 8           3. Staff recommends that Appaloosa install/update “informational” sign at the Well No.  
9           2 site. Staff recommends that the sign comply with ADEQ requirements and include  
10          the following information: system name, ADEQ PWS ID, ADWR ID No. and  
11          emergency contact phone numbers. Staff further recommends that the Company file  
12          documentation with Docket Control demonstrating compliance within 45 days after  
13          the effective date of the decision in this case.
- 14
- 15          4. Staff recommends an annual water testing expense of \$1,810 be used for purposes of  
16          this application and further recommends that the \$4,200 be classified as part of the  
17          water operator’s fee.
- 18
- 19          5. Staff has developed typical and customary depreciation rates within a range of  
20          anticipated equipment life. These rates are presented in Table B. Staff recommends  
21          that the Company use these depreciation rates by individual NARUC category in the  
22          future.
- 23
- 24          6. Staff recommends that the Current Service Line and Meter Installation Charges listed  
25          in Table C be adopted.

1           7. Staff recommends that the Company install an Emergency Generator with significant  
2           capacity to run the Company's high yield well in lieu of adding any storage tank  
3           additions. Staff further recommends that the Company file documentation with Docket  
4           Control, as a compliance item in this docket, demonstrating that the Emergency  
5           Generator has been completed within one year of the effective date of the order in this  
6           matter.

7  
8           8. Staff recommends that Appaloosa be required to file with Docket Control, as a  
9           compliance item in this docket, within 90 days of the effective date of this Decision, at  
10          least five BMPs in the form of tariffs that substantially conform to the templates  
11          created by Staff, available at the Commission's website, for the Commission's review  
12          and consideration. A maximum of two of these BMPs may come from the "Public  
13          Awareness/Public Relations" or "Education and Training" categories of the BMP's.  
14          The Company may request cost recovery of actual costs associated with the BMPs  
15          implemented in its next general rate application.

16  
17       **Q. Does this conclude your Direct Testimony?**

18       A. Yes, it does.

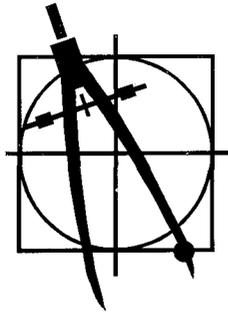
**ENGINEERING REPORT FOR**

**APPALOOSA WATER COMPANY**

**Docket Nos. W-03443A-10-0143 (Financing) & W-03443A-11-0040 (Rates)**

**JIAN W LIU**

**NOVEMBER 8, 2011**



**ENGINEERING REPORT FOR  
APPALOOSA WATER COMPANY**

**Docket Nos. W-03443A-10-0143  
(Financing) & W-03443A-11-0040 (Rates)**

**By Jian W. Liu**

**November 8, 2011**

**CONCLUSIONS**

1. Staff concludes that Appaloosa Water Company's ("Appaloosa" or "Company") system well production and storage capacities are adequate to serve the present customer base and 67 additional service connections can be added to existing water system based on the amount of available storage capacity.
2. Arizona Department of Environmental Quality ("ADEQ") regulates the water system under ADEQ Public Water System Identification ("PWS I.D.") No.13-208. ADEQ issued a Notice of Violation ("NOV"), dated June 30, 2011. The NOV states that the Appaloosa water system has exceeded the maximum contaminate level ("MCL") for arsenic for four quarters resulting in an average 12.95 parts per billion ("ppb").
3. Appaloosa's service area is located within the Prescott Active Management Area ("AMA"). Appaloosa is in compliance with Prescott AMA reporting requirements and Arizona Department of Water Resources ("ADWR") requirements governing water providers and/or community water systems.
4. The Company reported 30,316,389 gallons pumped and 21,680,896 gallons sold for the test year, resulting in a water loss of 28.48 percent.
5. A check of the Compliance Section database showed that the Company had no delinquent Commission compliance issues.
6. The Company has an approved curtailment tariff on file with the Commission.
7. The Company has an approved backflow prevention tariff on file with the Commission.

**RECOMMENDATIONS**

1. Staff recommends that the Appaloosa file each January and July a report covering the previous six months that contains all work activities undertaken in accordance with

Decision No. 71236 the WATER LOSS PREVENTION PLAN. The written report should continue until Staff receives a report that the water loss for the Appaloosa water system is 10 percent or less for one full year (12 months).

2. Staff recommends that any increase in rates and charges approved in this proceeding shall not become effective until Staff receives notice that the Appaloosa water system is in total compliance with ADEQ regulations.
3. Staff recommends that Appaloosa install/update "informational" sign at the Well No. 2 site. Staff recommends that the sign comply with ADEQ requirements and include the following information: system name, ADEQ PWS ID, ADWR ID No. and emergency contact phone numbers. Staff further recommends that the Company file documentation with Docket Control demonstrating compliance within 45 days after the effective date of the decision in this case.
4. Staff recommends an annual water testing expense of \$1,810 be used for purposes of this application and further recommends that the \$4,200 be classified as part of the water operator's fee.
5. Staff has developed typical and customary depreciation rates within a range of anticipated equipment life. These rates are presented in Table B. Staff recommends that the Company use these depreciation rates by individual NARUC category in the future.
6. Staff recommends that the Current Service Line and Meter Installation Charges listed in Table C be adopted.
7. Staff recommends that the Company install an Emergency Generator with significant capacity to run the Company's high yield well in lieu of adding any storage tank additions. Staff further recommends that the Company file documentation with Docket Control, as a compliance item in this docket, demonstrating that the Emergency Generator has been completed within one year of the effective date of the order in this matter.
8. Staff recommends that Appaloosa be required to file with Docket Control, as a compliance item in this docket, within 90 days of the effective date of this Decision, at least five BMPs in the form of tariffs that substantially conform to the templates created by Staff, available at the Commission's website, for the Commission's review and consideration. A maximum of two of these BMPs may come from the "Public Awareness/Public Relations" or "Education and Training" categories of the BMP's. The Company may request cost recovery of actual costs associated with the BMPs implemented in its next general rate application.

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## **A. INTRODUCTION AND LOCATION OF COMPANY**

On April 13, 2010, Appaloosa Water Company (“Appaloosa” or “Company”) filed an application with the Arizona Corporation Commission (“ACC” or “Commission”) requesting authorization to incur long term debt from the Water Infrastructure Finance Authority of Arizona in an amount of \$855,193 (“Financing Application”). On January 26, 2011, Appaloosa filed an application with the Commission to increase its rates (“Rate Application”). Per a Procedural Order issued August 5, 2011, the Financing Application (Docket No. W-03443A-10-0143) and the Rate Application (Docket No. W-03443A-11-0040) were consolidated. The ACC Utilities Division Staff (“Utilities Staff”) engineering review and analysis of both applications is presented in this report.

Appaloosa serves the Appaloosa Meadows subdivision within the Town of Chino Valley. Figure 1 shows the location of the Company within Yavapai County and Figure 2 shows the Certificate of Convenience and Necessity (“CC&N”) covering approximately two-thirds of a square-mile. Appaloosa also serves contiguous parcels covering roughly 60 acres (Two Parcels) north of its CC&N.

## **B. DESCRIPTION OF THE WATER SYSTEM**

The water system was field inspected on August 31, 2011 by Jian W Liu, Staff Utilities Engineer, in the accompaniment of Joseph Cordovana, the Company’s President.

The water system consists of two wells, one storage tank, a Booster Pump Station equipped with two booster pumps, a pressure tank and fire pump, and a distribution system serving 229 customers as of year end 2010. Table A includes a detailed plant facility listing.

Table A. Plant Facilities Summary

**Well Data**

	Well No 1	Well No. 2
ADWR ID No.	55-607274	55-607273
Casing Size	16 inches	12 inches
Casing Depth	665 feet	260 feet
Pump Size in Horsepower (Hp)	7.5 Hp	10 Hp
Pump Yield in Gallons Per Minute (GPM)	125 GPM	175 GPM
Meter Size	6 inch	6 inch
Year Drilled	1999	2004

**Storage, Pumping & Structures**

Structure or Equipment	Location	Quantity and Capacity
Pumps	Well Site #1 (Booster Pump Station)	1- 10 Hp (Spare for back-up) 2 -10 Hp (Booster Pumps) 1- 100 Hp (Fire Pump)
Pressure Tank	Booster Pump Station	1 – 5,500 gallon
Storage Tank (38' Diameter x 8' Height)	Booster Pump Station	1- 65,000 gallon
28'x 24' Pump House (Note 1)	Booster Pump Station	1
60' x 140 ' Slump Block Wall with iron entry gate (Note 2)	Booster Pump Station	1
Arsenic Treatment System AdEdge APU (Notes 3 )	Booster Pump Station	1 – 100 GPM

Notes:

- 1) Houses Booster Pumps, Pressure Tank and Fire Pump.
- 2) Fence surrounding the Booster Pump Station.
- 3) AdEdge Adsorption Package Unit (APU); Capacity: Up to 100 GPM

**Distribution Mains**

Diameter	Material	Length
8 inches	PVC	5,395 feet
6 inches	PVC	22,933 feet
4 inches	PVC	1,657 feet
2 inches	PVC	3,589 feet

**Meters**

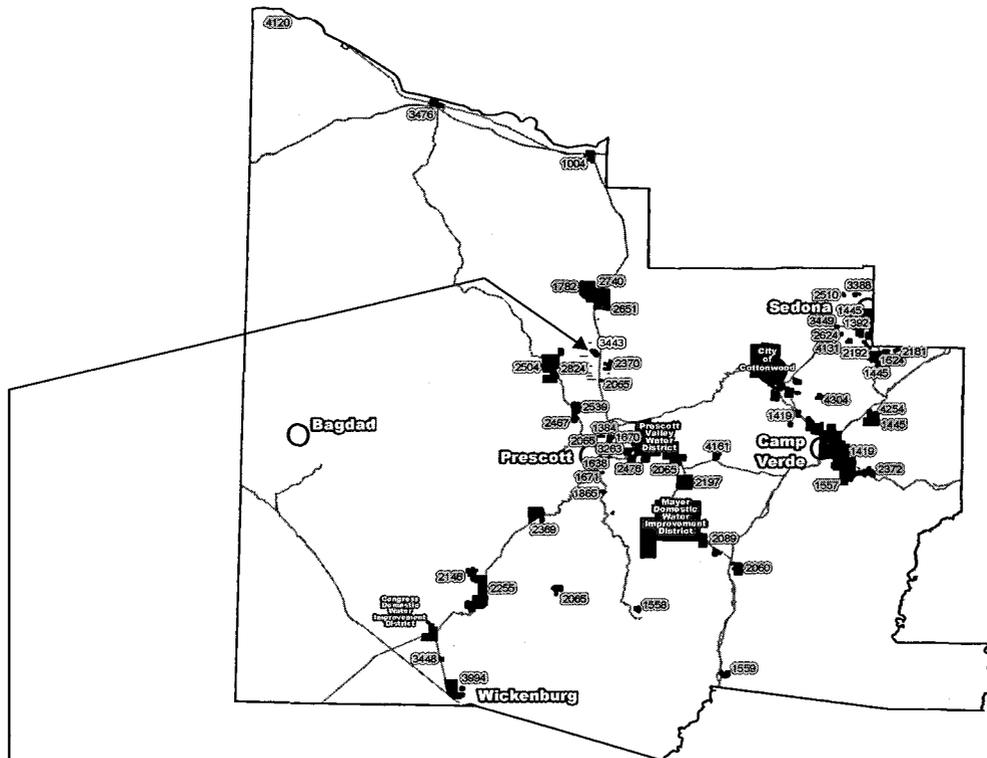
Size	Quantity
5/8 x 3/4 inch	185
1 inch	49

**Fire Hydrants**

Size/Description	Quantity
Standard	26

During its site inspection Staff noted that a sign listing the Company's identification and contact information was not visible at Well No. 2 site (ADWR Identification Well No. 55-607273). Staff recommends that Appaloosa install/update the "informational" sign at the Well No. 2 site. Staff recommends that the sign comply with ADEQ requirements and include the following information: system name, ADEQ PWS ID, ADWR ID No. and emergency contact phone numbers. Staff further recommends that the Company file documentation with Docket Control demonstrating compliance within 45 days after the effective date of the decision in this case.

# YAVAPAI COUNTY

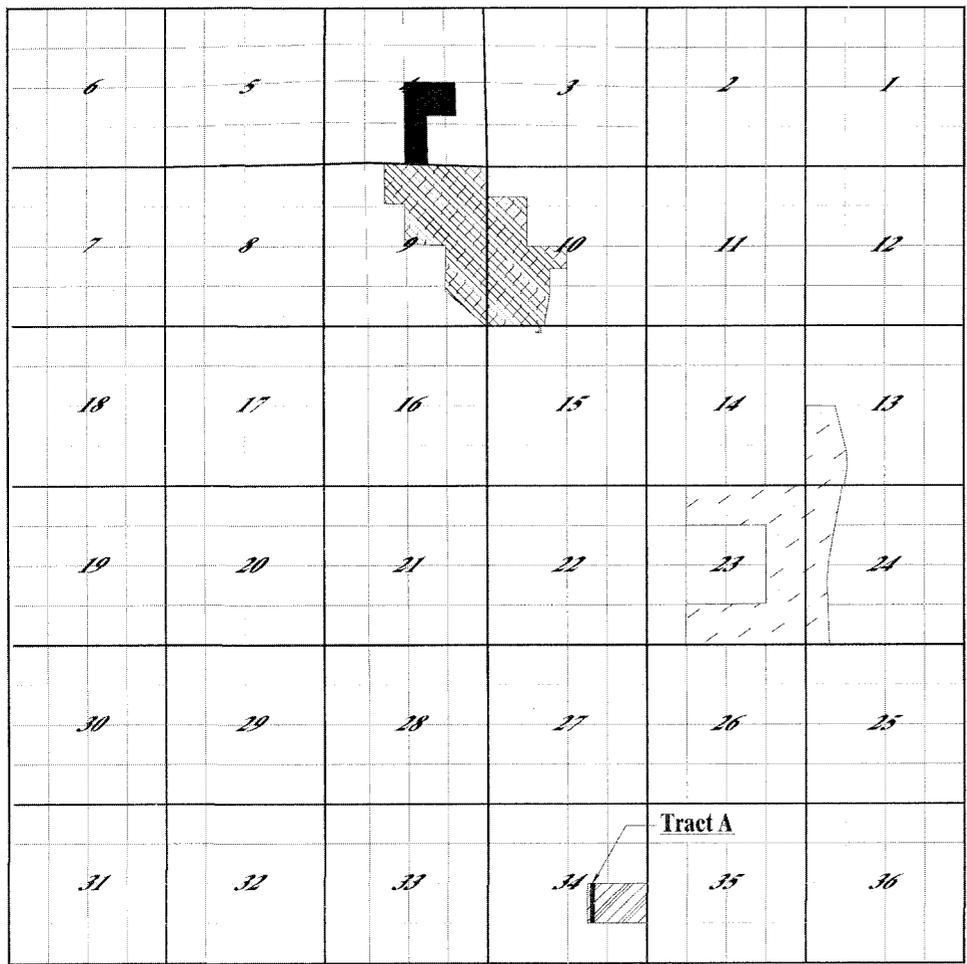


- |      |  |      |  |
|------|--|------|--|
| 1782 | ABRA WATER COMPANY, INC.                     | 1638 | HOLIDAY HILLS WATER COMPANY                    |
| 2740 | ANTELOPE LAKES WATER COMPANY                 | 2197 | HUMBOLDT WATER SYSTEM, INC.                    |
| 3443 | APPALOOSA WATER COMPANY                      | 2824 | ICR WATER USERS ASSOCIATION                    |
| 1445 | ARIZONA WATER COMPANY                        | 2624 | MICHAELS RANCH WATER USERS' ASSOCIATION        |
| 1004 | ASHFORK DEVELOPMENT ASSOCIATION, INC.        | 2651 | JUNIPER WELLS WATER COMPANY                    |
| 3476 | BN LEASING CORPORATION                       | 1557 | LAKE VERDE WATER COMPANY                       |
| 1624 | BIG PARK WATER COMPANY                       | 2192 | LITTLE PARK WATER COMPANY, INC.                |
| 2510 | BOYNTON CANYON ENCHANTMENT HOMEOWNERS ASSOC. | 2245 | LOMA ESTATES WATER COMPANY                     |
| 2089 | BRADSHAW MOUNTAIN VIEW WATER COMPANY         | 2504 | MEADOW WATER COMPANY                           |
| 2476 | BRADSHAW WATER COMPANY, INC.                 | 4254 | MONTEZUMA RIMROCK WATER COMPANY, LLC           |
| 1419 | CAMP VERDE WATER SYSTEM                      | 4304 | OAK CREEK PUBLIC SERVICE, LLC                  |
| 3994 | CDC WICKENBURG WATER, LLC                    | 1392 | OAK CREEK WATER COMPANY NO. 1                  |
| 2370 | CHINO MEADOWS II WATER COMPANY, INC.         | 2146 | PEEPLER VALLEY WATER COMPANY                   |
| 1559 | COLDWATER CANYON WATER COMPANY               | 2181 | PINE VALLEY WATER COMPANY                      |
| 2060 | CORDES LAKES WATER COMPANY                   | 3448 | RAINBOW PARKS, INC.                            |
| 4131 | CROSS CREEK RANCH WATER COMPANY              | 3449 | SEDONA VENTURE (MHC OPERATING LTD PARTNERSHIP) |
| 1558 | CROWN KING WATER COMPANY, INC.               | 3388 | SEVEN CANYONS WATER COMPANY                    |
| 1384 | DELL'S WATER COMPANY, INC.                   | 1671 | SHERMAN PINES WATER COMPANY                    |
| 3263 | DIAMOND VALLEY WATER USERS ASSOCIATION       | 2372 | VERDE LAKES WATER CORPORATION                  |
| 4120 | GRAND CANYON CAVERNS AND INN, LLC            | 2369 | WALDEN MEADOWS COMMUNITY COOPERATIVE           |
| 1670 | GRANITE DELLS WATER COMPANY                  | 4161 | WHITE HORSE RANCH OWNERS ASSOCIATION, INC.     |
| 2467 | GRANITE MOUNTAIN WATER COMPANY, INC.         | 2065 | WILHOIT WATER COMPANY, INC.                    |
| 2539 | GRANITE OAKS WATER USERS ASSOCIATION         | 2255 | YARNELL WATER IMPROVEMENT ASSOCIATION          |
| 1865 | GROOM CREEK WATER USERS ASSOCIATION          |      |  |

Figure 1. County Map

**COUNTY:** *Yavapai*

**RANGE** 2 West



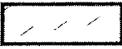
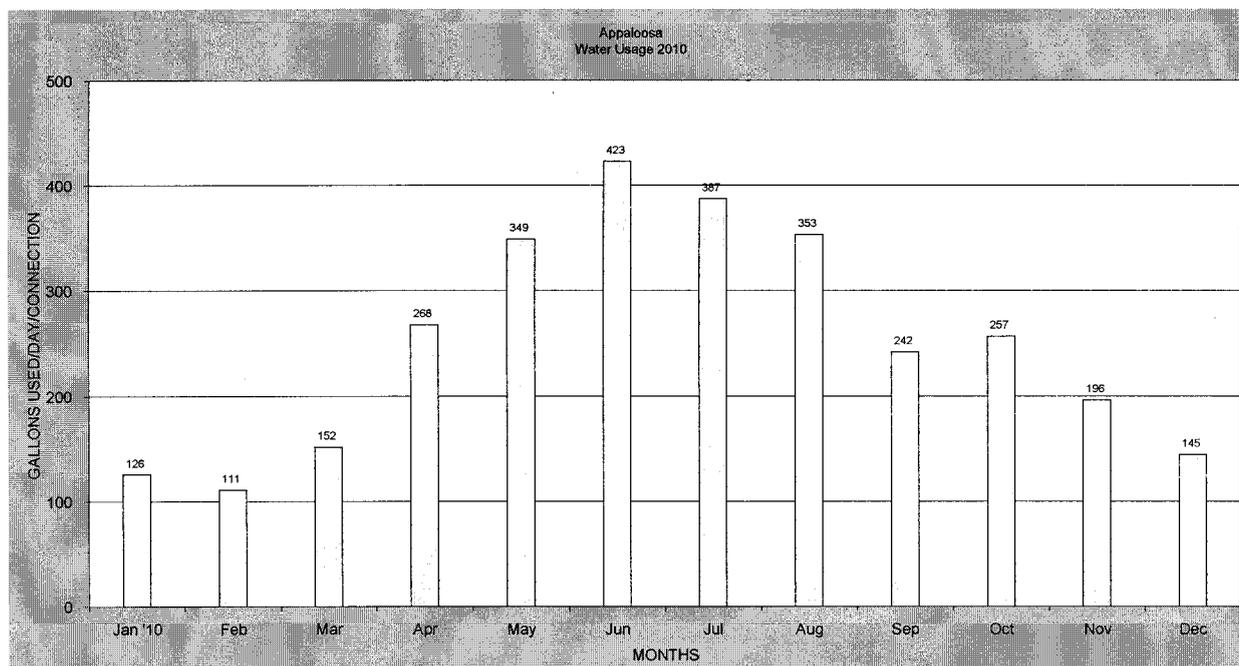
-  W-3443 (1)  
Appaloosa Water Company
-  W-2370 (1)  
Chino Meadows II Water Company, Inc.
-  W-2065 (6)  
Wilhoit Water Company, Inc.  
(Yavapai Estates System)
-  Appaloosa Water - Contiguous Area

Figure 2. Certificated Area

### C. WATER USE

#### Water Sold

Figure 3 presents the water consumption data provided by the Company for the test year ending December 31, 2010.<sup>1</sup> Customer consumption included a high monthly water use of 423 gallons per day (“GPD”) per connection in June, and a low water use of 111 GPD per connection in February. The average annual use was 251 GPD per connection.



**Figure 3. Water Use**

#### Non-Account Water

Non-account water should be 10 percent or less. It is important to be able to reconcile the difference between water sold and the water produced by the source. A water balance will allow a company to identify water and revenue losses due to leakage, theft and flushing. The Company reported 30,316,389 gallons pumped and 21,680,896 gallons sold for the test year, resulting in a water loss of 28.48 percent.

<sup>1</sup> Based on the WATER LOSS REPORT, the Company filed with Docket Control on September 13, 2011 and the Company's Annual Report filed with the Commission for 2010.

On September 30, 2011, the Company filed with Docket Control in compliance with Commission Decision No 71236 a WATER LOSS PREVENTION PLAN ("Plan"). The Plan lists 11 things the Company will do to minimize water loss. Staff recommends that Appaloosa file each January and July a report covering the previous six months that contains all work activities undertaken in accordance with Decision No. 71236 the WATER LOSS PREVENTION PLAN. The written report should continue until Staff receives a report that the water loss for the Appaloosa water system is 10 percent or less for one full year (12 months).

### System Analysis

Based on the data provided by the Company, the system's well production capacity is 300 GPM and total storage capacity is 65,000 gallons. There are fire hydrants in the distribution system. The system had 229 connections as of December 2010. Staff concludes that the system's well production and storage capacities are adequate to serve the present customer base and 67 additional service connections can be added to existing water system based on the amount of available storage capacity.

### **D. GROWTH**

The Company reported 236 customers in 2006. Appaloosa's water system had 229 customers in December 2010. Therefore, Staff expects that the Company will have little or no growth in the next 3 to 5 years assuming the current economic climate continues.

### **E. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY ("ADEQ") COMPLIANCE**

#### Compliance

ADEQ regulates the water system under ADEQ Public Water System I.D. No.13-208. ADEQ issued an NOV dated June 30, 2011. The NOV states that the Appaloosa water system has exceeded the MCL for arsenic for four quarters resulting in an average 12.95 ppb.

Staff recommends that any increase in rates and charges approved in this proceeding not become effective until Staff receives notice that the Appaloosa water system is in total compliance with ADEQ regulations.

#### Water Testing Expense

The Company is subject to mandatory participation in the Monitoring Assistance Program ("MAP"). Participation in the MAP program is mandatory for water systems, which serve less than 10,000 persons (approximately 3,300 service connections).

The Company reported its water testing expense at \$9,049 during the test year by combining water testing costs and water operator's fees. Appaloosa can only provide invoices and supporting documentations in total of \$5,193 for the test year 2010. Certified operator fees reported by the Company for the test year \$350 per month, that is \$4,200 for the test year. Staff has reviewed the Company's testing expense and has recalculated the testing costs to remove non-water testing fees, and to add the omitted monitoring requirements for lead & copper.

**Table A. Water Testing Cost**

Monitoring	Cost per test	Quantity of tests per 3 years	Annual Cost
Total coliform (2 samples monthly)	\$20	72	\$480
Arsenic Lab Fee	\$30	36	\$360
MAP – IOCs, Radiochemical, Nitrate, Nitrite, Asbestos, SOCs, & VOCs	MAP	MAP	\$857
Lead & Copper	\$34	10	\$113
<b>Total</b>			<b>\$1,810</b>

Note: ADEQ's MAP invoice for the 2010 Calendar Year was \$856.52

Staff recommends an annual water testing expense of \$1,810 be used for purposes of this application and further recommends that the \$4,200 be classified as part of the water operator's fee.

**F. ARIZONA DEPARTMENT OF WATER RESOURCES ("ADWR") COMPLIANCE**

Appaloosa's service area is located within the Prescott AMA. Appaloosa is in compliance with Prescott AMA reporting requirements and ADWR's requirements governing water providers and/or community water systems.<sup>1</sup>

**G. ARIZONA CORPORATION COMMISSION COMPLIANCE**

A check of the Utilities Staff Compliance Section database showed that the Company had no delinquent Commission compliance issues.<sup>2</sup>

<sup>1</sup> Per ADWR email dated November 4, 2011.

<sup>2</sup> Per Compliance Section email dated September 30, 2011.

## **H. DEPRECIATION RATES**

Staff has developed typical and customary depreciation rates within a range of anticipated equipment life. These rates are presented in Table B and it is recommended that the Company use these depreciation rates by individual NARUC category.

**Table B. Depreciation Rate Table for Water Companies**

NARUC Acct. No.	Depreciable Plant	Average Service Life (Years)	Annual Accrual Rate (percent)
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
320.3	Media for Arsenic Treatment	1.25	80
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

**I. OTHER ISSUES**

*1. Service Line and Meter Installation Charges*

The Company has requested to double its existing rates for every size and type of meter and service line. In support of this request Staff asked Appaloosa to submit three (3) independent quotes from local contractors for this work. The Company responded<sup>1</sup> that its “request to double the rates needs to be amended to the original rates.” Staff assumes that the Company is now requesting that its current authorized rates be retained therefore Staff recommends that the current authorized rates for a meter and service line continue to apply, these charges are listed below in Table C.

**Table C. Current Service Line and Meter Installation Charges**

Meter Size	Service Line	Meter	Total Charge
5/8 x 3/4-inch	\$445	\$155	\$600
3/4-inch	\$445	\$255	\$700
1-inch	\$495	\$315	\$810
1-1/2-inch	\$550	\$525	\$1,075
2-inch Turbine	\$830	\$1,045	\$1,875
2-inch Comp	\$830	\$1,890	\$2,720
3-inch Turbine	\$1,045	\$1,670	\$2,715
3-inch Comp	\$1,165	2,545	\$3,710
4-inch Turbine	\$1,490	\$2,670	\$4,160
4-inch Comp	\$1,670	\$3,645	\$5,315
6-inch Turbine	\$2,210	\$5,025	\$7,235
6-inch Comp	\$2,330	\$6,920	\$9,250

*2. Curtailment Tariff*

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

*3. Backflow Prevention Tariff*

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

*4. Best Management Practices*

Since Appaloosa’s water loss during the test year exceeded 28 percent Staff believes that implementation of the right set of water conservation measures i.e., Best Management Practices

<sup>1</sup> On October 4, 2011, Company responded to Staff’s data request JWL 2.3.

("BMPs") is particularly important and could provide significant benefits to the Company and its customers. Therefore, Staff recommends that Appaloosa be required to file with Docket Control, as a compliance item in this docket, within 90 days of the effective date of this Decision, at least five BMPs in the form of tariffs that substantially conform to the templates created by Staff, available at the Commission's website, for the Commission's review and consideration. A maximum of two of these BMPs may come from the "Public Awareness/Public Relations" or "Education and Training" categories of the BMP's. The Company may request cost recovery of actual costs associated with the BMPs implemented in its next general rate application.

#### 5. *Financing Application*

On April 13, 2010, Appaloosa filed an application with the Commission requesting authorization to incur long term debt from the Water Infrastructure Finance Authority of Arizona in an amount of \$855,193 ("Financing Application"). Proceeds from the loan would be used to fund the construction of 522,000 gallons of additional storage capacity provide an emergency generator and to extend a transmission main line from the existing well and storage tank site to the new to a planned development area north of Road 4 North ("new development area").

Staff believes that any plant needed to serve the new development area should be financed by the developer through a main extension agreement. Appaloosa's existing customers should not be required to fund the construction of this plant. .

Based on its review of the Financing Application and information provided by the Company, Staff concludes that Company had no growth in last five years (Company reported 236 customers in 2006. Appaloosa water system had 229 customers in December 2010), and Appaloosa water system's well production and storage capacities are adequate to serve the present customer base and 67 additional service connections can be added to existing water system based on the available storage capacity. Assuming the annual growth rate is 3% for next five years, the Company would only add 35 new connections by 2015. Staff believes that the Company's proposed storage addition of 522,000 gallons will not be needed in foreseeable future if the current economic climate continues.

Staff recommends that the Company install an Emergency Generator with significant capacity to run the Company's high yield well in lieu of adding any storage tank additions. An emergency generator would improve system reliability by ensuring that the wells would always be available to meet peak demand even during times when commercial power is lost.

Staff further recommends that the Company file documentation with Docket Control, as a compliance item in this docket, demonstrating that the Emergency Generator has been completed within one year of the effective date of the order in this matter.

The following table compares Appaloosa's proposed plant additions and costs<sup>1</sup> with those recommended by Staff.

### Additional Storage Capacity and Emergency Generator

Project Description	Company Proposed Costs to be Financed	Staff Recommended Cost to be Financed
522,100 Gallon Storage Tank w/fittings	\$294,003	\$0
Related Hardware (Pipe, Valves, Site Prep, etc.)	\$49,500	\$0
Engineering Design	\$15,000	\$0
Generator w/Propane Tank	\$50,000	\$50,000
Related Hardware (Electric Panel, etc.)	\$33,000	\$0
Taxes	\$34,360	\$0
Permits/Fees	\$30,237	\$0
Total	\$506,136 (Note 1)	\$50,000
Plus 20% Contingency	\$607,363	\$60,000

Notes:

1) Includes a \$36 adjustment to match amount in application.

### Transmission Main Additions

Project Description	Company Proposed Cost to be Financed	Staff Recommended Cost to be Financed
Phase I Water Line Extension	\$68,250	(see Note 1)
Taxes (Phase I)	\$5,060	-
Permits/Fees (Phase I)	\$4,500	-
Subtotal (Phase I)	\$77,810	-
Plus 20% Contingency (Phase I)	\$93,372	-
Phase II Water Line Extension	\$112,800	-
Taxes (Phase II)	\$8,424	-
Permits/Fees (Phase II)	\$7,491	-
Subtotal (Phase II)	\$128,715	-
Plus 20% Contingency (Phase II)	\$154,458	-
Total (Phase I & II)	\$247,830	\$0

Note:

1) Since the mains are needed to serve new development this construction should be financed by the developer through a main extension agreement.

<sup>1</sup> See Exhibit A in application.

**Grand Total to be Financed**

<b>Project Description</b>	<b>Company Proposed Cost to be Financed</b>	<b>Staff Recommended Cost to be Financed</b>
Storage Capacity & Emergency Generator with 20% Contingency	\$607,363	\$60,000
Phase I Transmission Mains with 20% Contingency	\$93,372	\$0.00
Phase II Transmission Mains with 20% Contingency	\$154,458	\$0.00
Grand Total with 20% Contingency	\$855,193	\$60,000

Staff concludes that cost estimates listed under the column heading "Staff Recommended Cost to be Financed" are reasonable and the associated plant additions are appropriate. However, no "used and useful" determination of the proposed plant was made, and no particular future treatment should be inferred for rate making or rate base purposes.

**BEFORE THE ARIZONA CORPORATION COMMISSION**

GARY PIERCE  
Chairman

BOB STUMP  
Commissioner

SANDRA D. KENNEDY  
Commissioner

PAUL NEWMAN  
Commissioner

BRENDA BURNS  
Commissioner

IN THE MATTER OF THE APPLICATION OF )  
APPALOOSA WATER COMPANY FOR )  
APPROVAL OF A FINANCING APPLICATION. )

DOCKET NO. W-03443A-10-0143

IN THE MATTER OF THE APPLICATION OF )  
APPALOOSA WATER COMPANY FOR )  
APPROVAL OF A RATE INCREASE. )

DOCKET NO. W-03443A-11-0040

DIRECT

TESTIMONY

OF

JEFFREY M. MICHLIK

PUBLIC UTILITIES ANALYST V

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

FEBRUARY 17, 2012

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**EXECUTIVE SUMMARY**  
**APPALOOSA WATER COMPANY**  
**DOCKET NOS. W-03443A-11-0040 AND W-03443A-10-0143**

Appaloosa Water Company ("Company") serves the Appaloosa Meadows subdivision within the Town of Chino Valley, Arizona. The Company is engaged in the business of providing utility water service to Arizona customers in Yavapai County. The Company provides service to approximately 234 customers. The Company's current rates were approved in Decision No. 71236, dated August 6, 2009, and arsenic surcharge rates were approved in Decision No. 71692, dated May 3, 2010. The Company has been classified as a Class C utility, based on its proposed revenue.

**Rate Application:**

The Company's rate application requested an increase in revenue of \$140,888, or 100.00 percent over test year revenue of \$140,888. The Company's proposed revenues of \$281,776 result in an operating income of \$102,910. The Company also proposes a fair value rate base ("FVRB") of negative \$52,705, which is its original cost rate base ("OCRB"). The Company did not propose a rate of return on FVRB, as a return on a negative rate base is not meaningful. The Company's request is simply to double all of its existing charges.

Staff recommends rates that would increase operating revenue by \$19,762, or 14.03 percent, over adjusted test year revenue of \$140,888 to produce operating revenue of \$160,650 resulting in operating income of \$5,000. Staff recommends an OCRB of negative \$2,542 which is its FVRB. Staff cannot calculate/recommend a rate of return on FVRB, as the amount is negative, and therefore meaningless. Accordingly, Staff's recommended revenue requirement is based on a cash flow analysis.

A typical 5/8 x 3/4-inch meter residential customer with a median usage of 5,652 gallons would experience a \$34.80, or a 100.00 percent, increase in his/her monthly bill, from \$34.80 to \$69.60, under the Company's proposed rates. A typical 5/8 x 3/4-inch meter residential customer with a median usage of 5,652 gallons would experience a \$3.40, or a 9.77 percent increase, in his/her monthly bill from \$34.80 to \$38.21 with Staff's recommended rates.

**Staff Recommendations (Not related to the Financing):**

Staff recommends that the Company maintain all invoices for both operating expenses and capital improvements on a going-forward basis.

Staff further recommends, as a compliance item in this Docket, that the Company file, within 90 days of a decision in this matter, an allocation plan with the Commission that demonstrates how Mr. Cordovana will fairly allocate common costs among all of his business ventures.

Staff further recommends that the Company inform customers through a billing insert of its office location and hours of operation.

Staff further recommends approval of its rates and charges as shown in Schedule JMM-17. In addition to collection of its regular rates and charges, the Company may collect from its customers a proportionate share of any privilege, sales, or use tax as provided for in A.A.C. R14-2-409.D.

Staff further recommends that the Company file with Docket Control, as a compliance item in this Docket, a schedule of its approved rates and charges within 30 days after the date the Decision in this matter is issued.

Staff further recommends that the Company notify its customers of the authorized rates and charges and their effective date by means of an insert in the next regularly scheduled billing.

Staff further recommends that the rates and charges approved in this proceeding not become effective until Staff receives notice that Appaloosa water system is in total compliance with ADEQ regulations. (See Direct Testimony of Jian W. Liu)

Staff further recommends that Appaloosa file a report each January and July covering the previous six-months that contains all activities regarding its "Water Loss Prevention Plan,"<sup>1</sup> until Staff receives a report showing that water loss is 10 percent or less for a 12 consecutive month period. (See Direct Testimony of Jian W. Liu)

Staff further recommends that Appaloosa install/update its "informational sign" at the site of Well No. 2 to comply with ADEQ requirements to include: system name, system PWS ID, well number and emergency contact phone numbers and file documentation with Docket Control demonstrating compliance with 45 days of an order after the date the Decision in this matter is issued. (See Direct Testimony of Jian W. Liu)

Staff further recommends adoption of the Depreciation rates by individual NARUC account presented in Table B of Staff's Engineering Report.

**Financing:**

The Company requests authorization to issue debt in the form of a Water Infrastructure Finance Authority ("WIFA") loan in the amount of \$855,193. The Company states that it will use the proceeds of the loan to fund additional storage capacity, provide an emergency generator and extend a transmission main line from the existing well and storage tank site to the new development area.

Staff concludes that issuance of debt financing not to exceed \$60,000 in the form of an amortizing loan of approximately 20 years for an emergency generator is within the Company's corporate powers, is compatible with the public interest, will not impair its ability to provide services and is consistent with sound financial practices, provided the rates authorized in this proceeding provide a 1.25 or greater DSC. The remainder of the Company's request for borrowing authorization should be denied.

---

<sup>1</sup> Filed in Docket Nos. W-03443A-08-0177 and W-03443A-08-0313.

Staff recommends authorization to incur an 18-to-22 year amortizing loan in an amount not to exceed \$60,000 at an interest rate not to exceed that which is available from WIFA for the purpose of acquiring an emergency generator with sufficient capacity to run the Company's high-yield well. Staff recommends denial of the remainder of the Company's \$855,193 request for authorization to borrow funds.

Staff further recommends that the Commission authorize Appaloosa to pledge its assets in the State of Arizona pursuant to A.R.S. § 40-285 and R18-15-104 in connection with the WIFA loan.

Staff further recommends that any authorization to incur debt granted in this proceeding terminate twenty-four months from the date of a decision in this matter.

Staff further recommends authorizing Appaloosa to engage in any transaction and to execute any documents necessary to effectuate the authorizations granted.

Staff further recommends that copies of executed loan documents be filed with Docket Control, as a compliance item in this case, within 60 days of the execution of any financing transaction authorized herein.

Staff further recommends that Appaloosa file with Docket Control, as a compliance item in this docket, documentation that an emergency generator with sufficient capacity to run the Company's high yield well has been placed in service within 12 months from the date of a decision in this matter. (See Direct Testimony of Jian W. Liu)

Staff further recommends that Appaloosa file with Docket Control, as a compliance item in this docket, within 90 days after the date of a Decision in this matter is issued, for Commission review and approval, at least five BMPs in the form of tariffs that substantially conform to the templates created by Staff that are available at the Commission's website. A maximum of two of the BMPs may come from the "Public Awareness/Public Relations" or "Education and Training" categories of the BMPs. The Company may defer and request cost recovery of the actual cost associated with the BMPs implemented in its next general rate application. (See Direct Testimony of Jian W. Liu)

1 **I. INTRODUCTION**

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

3 A. My name is Jeffrey M. Michlik. I am a Public Utilities Analyst V employed by the  
4 Arizona Corporation Commission ("ACC" or "Commission") in the Utilities Division  
5 ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.  
6

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

8 A. In my capacity as a Public Utilities Analyst V, I analyze and examine accounting,  
9 financial, statistical and other information and prepare reports and provide expert  
10 testimony based on my analyses that present Staff's recommendations to the Commission  
11 on utility revenue requirements, rate design and other financial regulatory matters.  
12

13 **Q. Please describe your educational background and professional experience.**

14 A. In 2000, I graduated from Idaho State University, receiving a Bachelor of Business  
15 Administration Degree in Accounting and Finance, and I am a Certified Public  
16 Accountant registered with the Arizona State Board of Accountancy. I have attended the  
17 National Association of Regulatory Utility Commissioners' ("NARUC") Utility Rate  
18 School, which presents general regulatory and business issues.  
19

20 I joined the Commission as a Public Utilities Analyst in May of 2006. Prior to  
21 employment with the Commission, I worked four years for the Arizona Office of the  
22 Auditor General as a Staff Auditor, and one year in public accounting as a Senior Auditor.  
23

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

25 A. I am presenting Staff's analysis and recommendations regarding the Appaloosa Water  
26 Company ("Appaloosa" or "Company") applications for a permanent rate increase and

1 authorization for issuance of debt. I am presenting testimony and schedules addressing  
2 rate base, operating revenues and expenses, revenue requirement, rate design, and  
3 financing. Mr. Jian W. Liu is presenting Staff's engineering analysis and related  
4 recommendations.

5  
6 **Q. What is the basis of your testimony in this case?**

7 A. I performed a regulatory audit of the Company's application and records. The regulatory  
8 audit consisted of examining and testing financial information, accounting records, and  
9 other supporting documentation and verifying that the accounting principles applied were  
10 in accordance with the Commission-adopted NARUC Uniform System of Accounts  
11 ("USOA").

12  
13 **Q. How is your testimony organized?**

14 A. My testimony is presented in eleven sections. Section I is this introduction. Section II  
15 provides a background of the Company. Section III is a summary of consumer service  
16 issues. Section IV presents compliance status. Section V is a summary of the Company's  
17 filing and Staff's rate base and operating income adjustments. Section VI presents Staff's  
18 rate base recommendations. Section VII presents Staff's operating income  
19 recommendations. Section VIII presents Staff's revenue requirement. Section IX presents  
20 Staff's other recommendations. Section X presents Staff's rate design, and Section XI  
21 presents Staff's financing recommendations.

22  
23 **II. BACKGROUND**

24 **Q. Please review the background of this application.**

25 A. Appaloosa serves the Appaloosa Meadows subdivision within the Town of Chino Valley,  
26 Arizona. The Company is engaged in the business of providing utility water service to

1 Arizona customers in Yavapai County. The Company provides service to approximately  
2 234 customers. The Company's current rates were approved in Decision No. 71236, dated  
3 August 6, 2009, and arsenic surcharge rates were approved in Decision No. 71692, dated  
4 May 3, 2010. The Company has been classified as a Class C utility, based on its proposed  
5 revenue.

6  
7 **III. CONSUMER SERVICES**

8 **Q. Please provide a brief history of customer complaints received by the Commission**  
9 **regarding the Company, and discuss customer responses to the Company's proposed**  
10 **rate increase.**

11 A. A review of the Commission's Consumer Services database for the Companies from  
12 January 1, 2008, to October 28, 2011, revealed the following:

13  
14 2011 – Nine complaints (billing, deposits, rate case items, arsenic); eight inquiries (billing,  
15 rate case items, arsenic, rates/tariffs, other); one hundred twenty-two opinions (all  
16 opposed to rate case, one other).

17 2010 – Zero complaints; two inquiries (quality of service, rates/tariffs).

18 2009 – Two complaints (quality of service, billing); two inquiries (rate case item, repair  
19 issues); nine opinions (all opposed to prior rate case).

20 2008 – Two complaints (quality of service, billings); two inquiries (rate case item, repair  
21 issues), fifty-nine complaints (all opposed to prior rate case, one other); one  
22 petition with 133 signatures opposing rate case.

23  
24 Not all complaints filed in 2011 have been resolved and closed. There are currently eight  
25 open complaints (three billing, one deposit refund, and four rate case). Staff is currently  
26 processing these outstanding complaints.

1 **IV. COMPLIANCE**

2 **Q. Please provide a summary of the compliance status of the Company.**

3 A. A check of the ACC's Compliance database indicates that there are currently no  
4 delinquencies for the Company.

5  
6 **Q. Was the Company ordered to establish a separate interest bearing account for the  
7 arsenic surcharge revenues?**

8 A. Yes. On page 20 of Commission Decision No. 71236, dated May 3, 2010, Appaloosa is  
9 ordered to deposit all surcharge revenues into a separate interest-bearing account and to  
10 expend funds from the account only for debt service on the Water Infrastructure Financing  
11 Authority of Arizona ("WIFA") loan.

12  
13 **Q. Did the Company establish a separate interest-bearing account as directed by the  
14 Commission?**

15 A. No.

16  
17 **Q. What is Staff's recommendation?**

18 A. Staff recommends that the Company comply with all Commission orders. In this case,  
19 Staff is recommending elimination of the arsenic surcharge because arsenic costs are  
20 being rolled into base rates; therefore, a separate account is no longer needed. However,  
21 the benefits of having a separate account have been lost. The amounts collected and the  
22 interest earned cannot be compared with the loan payments, and the desired security that  
23 can be obtained by setting dedicated funds aside for their intended purpose was  
24 overridden. The Company should be placed on notice that further violations of  
25 Commission orders may result in fines and other sanctions.

26

1 **V. SUMMARY OF FILING, RECOMMENDATIONS, AND ADJUSTMENTS**

2 **Q. Please summarize the revenue, operating income and rate base proposals in the**  
3 **Company's filing.**

4 A. The Company's rate application requested an increase in revenue of \$140,888, or 100.00  
5 percent over test year revenue of \$140,888. The Company's proposed revenues of  
6 \$281,776 result in an operating income of \$102,910. The Company also proposes a fair  
7 value rate base ("FVRB") of negative \$52,705, which is its original cost rate base  
8 ("OCRB"). The Company did not propose a rate of return on FVRB as a return on a  
9 negative rate base is not meaningful. The Company's request is simply to double all of its  
10 existing charges.

11  
12 **Q. Please summarize Staff's recommendations.**

13 A. Staff recommends rates that would increase operating revenue by \$19,762 to produce  
14 operating revenue of \$160,650 resulting in operating income of \$5,000, or a 14.03 percent,  
15 increase over adjusted test year revenue of \$140,888. Staff recommends an OCRB of  
16 negative \$2,542 which is its FVRB. Staff cannot calculate/recommend a rate of return on  
17 FVRB as the amount is negative, and therefore, meaningless. Accordingly, Staff's  
18 recommended revenue requirement is based on a cash flow analysis.

19  
20 **Q. What test year did the Company use in this filing?**

21 A. The Company's rate filing is based on the twelve months ended December 31, 2010 ("test  
22 year").

23  
24 **Q. Please summarize the rate base adjustments addressed in your testimony.**

25 A. My testimony addresses the following issues:  
26

1           Plant Pro-Forma Adjustment and Reclassification of Plant – This adjustment reclassifies  
2 arsenic treatment plant from account 339 other plant and miscellaneous equipment to  
3 account 320.1 water treatment plant and account 320.3 media for arsenic treatment. This  
4 adjustment also recognizes arsenic plant omitted from the application.

5  
6           Accumulated Depreciation – This adjustment increases accumulated depreciation by  
7 \$16,974, based upon the adjustments Staff made to Plant-in-Service and recalculation of  
8 accumulated depreciation using the half-year convention.

9  
10          Cash Working Capital – This adjustment increases cash working capital by \$12,791 via  
11 application of the formula method.

12  
13       **Q.    Please summarize the operating revenue and expense adjustments addressed in your**  
14       **testimony.**

15       A.    My testimony addresses the following issues:

16  
17          Water Testing Expense – This adjustment decreases water testing expense by \$7,239 to  
18 reflect a \$4,200 reclassification to outside services expense and a further reduction to  
19 Staff's recommended water testing expense.

20  
21          Miscellaneous Expense – This adjustment decreases miscellaneous expense by \$1,044 to  
22 adjust for Staff's disallowance of donations and meals and entertainment.

23  
24          Depreciation Expense – This adjustment increases depreciation expense by \$18,493 to  
25 reflect application of Staff's recommended depreciation rates to Staff's recommended  
26 plant amounts.

1           Property Tax Expense – This adjustment decreases test year property taxes by \$2,210 to  
2           reflect application of the modified version of the Arizona Department of Revenue’s  
3           (“ADOR”) property tax methodology which the Commission has consistently adopted.

4  
5           Income Tax Expense – This adjustment decreases test year income tax expense by \$2,760  
6           to reflect application of statutory state and federal income tax rates to Staff-adjusted  
7           taxable income.

8  
9           **VI.    RATE BASE**

10          **Fair Value Rate Base**

11          **Q.    Did the Company prepare a schedule showing the elements of Reconstruction Cost**  
12          **New Rate Base?**

13          A.    No, the Company did not. The Company’s filing treats the OCRB the same as the FVRB.

14  
15          **Rate Base Summary**

16          **Q.    Please summarize Staff’s adjustments to the Company’s rate base shown in**  
17          **Schedules JMM-3 and JMM-4.**

18          A.    Staff’s adjustments to the Company’s rate base resulted in a net increase of \$50,163, from  
19          negative \$52,705 to negative \$2,542.

20  
21                The net increase is primarily due to: (1) the pro-forma increase to plant and (2) an  
22                adjustment to include a provision for cash working capital.

1 **Rate Base Adjustment No. 1 – Plant Pro-Forma and Reclassification of Plant.**

2 **Q. What amount of plant did the Company include in its application for its arsenic**  
3 **treatment facility?**

4 A. The application included \$128,025 in plant for the arsenic treatment facility.

5  
6 **Q. Did the Company include all of the costs it incurred for an arsenic treatment facility**  
7 **in its application?**

8 A. No. On December 6, 2011, the Company provided Staff with additional invoices for the  
9 arsenic treatment plant.

10  
11 **Q. What invoices did the Company provide to Staff to support the cost of the arsenic**  
12 **treatment facilities?**

13 A. The Company provided the following break-out for the arsenic treatment facility with  
14 supporting documentation:

15  
16

Dual APU-100 system for arsenic treatment	\$168,000.00
Subcontractor services	\$ 5,000.00
City engineer fees and review	\$ 1,450.00
Additional shipping	\$ 925.00
Engineer plan review	\$ 6,996.25
Finance Charges	<u>\$ 18,150.37</u>
Total Arsenic Plant Costs	\$200,521.62

22  
23

24 **Q. Is the arsenic treatment facility cost consistent with the amount of the WIFA loan**  
25 **authorized in Commission Decision No. 71236 and obtained by Appaloosa?**

26 A. Yes. The Company obtained a \$200,000 loan as authorized by Decision No. 71236.

1 **Q. Was the initial arsenic media included with the plant?**

2 A. Yes, based on the Company's response to Staff data request 3.2.

3  
4 **Q. Does Staff recommend including all of the costs incurred for the arsenic treatment**  
5 **facility in rate base?**

6 A. No. Staff recommends excluding the \$18,150 incurred for finance charges (late fees).  
7 Accordingly, Staff recommends including \$182,371 (i.e., \$200,521 - \$18,150) in rate  
8 base: \$155,246 in Water Treatment Plant (Account 320.1) and \$27,125 in Media for  
9 Arsenic Treatment (Account 320.3).

10

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

12 A. Staff recommends reclassification of arsenic treatment facilities classified under Other  
13 Plant and Miscellaneous Equipment (Account 339) to Water Treatment Plant (Account  
14 320.1) and Media for Arsenic Treatment (Account 320.3) and recognition of costs  
15 prudently incurred but not included in the application as discussed above and as shown in  
16 Schedule JMM-5.

17

18 Staff also recommends that the Company maintain all invoices for both operating  
19 expenses and capital improvements on a going-forward basis.

20

21 **Rate Base Adjustment No. 2 – Accumulated Depreciation Expense.**

22 **Q. Did Staff make an adjustment to accumulated depreciation expense as a result of its**  
23 **adjustment to arsenic treatment facilities?**

24 A. Yes. Staff recalculated depreciation for the intervening years since the prior rate case  
25 using the half-year convention and reflecting inclusion of Staff's adjustment for the  
26 arsenic treatment facility. This resulted in a \$16,974 increase to accumulated depreciation.

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

2 A. Staff recommends increasing accumulated depreciation expense, as shown in Schedules  
3 JMM-6.

4  
5 **Rate Base Adjustment No. 3 – Cash Working Capital.**

6 **Q. Does the Company's application include a provision for cash working capital?**

7 A. No. The Company did not claim an allowance for cash working capital.

8  
9 **Q. Did Staff include a provision in rate base for cash working capital?**

10 A. Yes. Staff included a provision for cash working capital calculated using the formula  
11 method (one-twenty-fourth of purchased power plus one-eighth of other operating and  
12 maintenance expenses). Although Appaloosa is a Class C utility and Staff normally  
13 reserves use of the formula method for Class D and E utilities, Appaloosa's test year and  
14 Staff's recommended revenues fall into the range for a Class D utility; accordingly, Staff  
15 concluded that inclusion of a formula-based cash working capital provision is  
16 appropriate.<sup>2</sup>

17  
18 **Q. What adjustment did Staff make?**

19 A. Staff increased cash working capital by \$12,791.

20  
21 **Q. What is Staff's recommendation?**

22 A. Staff recommends including a provision in rate base for cash working capital using the  
23 formula method, as shown in Schedules JMM-7.

24

---

<sup>2</sup> Since Staff's rate base is negative, inclusion of a cash working capital provision in rate base has no effect on Staff's recommended revenue requirement.

1 **VII. OPERATING INCOME**

2 **Operating Income Summary**

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

5 A. As shown on Schedules JMM-9 and JMM-10, Staff's analysis resulted in test year  
6 revenues of \$140,888, expenses of \$151,320 and operating income of negative \$10,432.

7  
8 **Operating Income Adjustment No. 1 – Water Testing Expense.**

9 **Q. What did the Company propose for water testing expense?**

10 A. The Company proposed the recorded test year amount of \$9,049 for water testing expense.

11  
12 **Q. What is the composition of the Company's proposed water testing expense?**

13 A. The Company's water testing expense includes \$4,200 in fees for the water operator, \$993  
14 in water testing expenses supported by documentation and \$3,856 in unsupported charges.

15  
16 **Q. Did Staff perform an analysis to determine an appropriate amount for on-going**  
17 **water testing expense?**

18 A. Yes. Staff engineer Jian Liu calculated a \$1,810 annual water testing cost

19  
20 **Q. What is Staff's recommendation?**

21 A. Staff recommends reclassifying \$4,200 to outside services expense and removing an  
22 additional \$3,039 to reflect Staff's annual expense calculation of \$1,810, resulting in a  
23 total reduction of \$7,239 from water testing expense, as shown on Schedule JMM-10.

24

1 **Operating Income Adjustment No. 2 – Miscellaneous Expense.**

2 **Q. Does the Company's proposed miscellaneous expense include costs that are**  
3 **unnecessary for the provision of utility service and, therefore, should not be included**  
4 **in rates?**

5 A. Yes. Miscellaneous expense includes \$544 for meals and entertainment. Miscellaneous  
6 expense also includes \$500 in charitable contributions. According to the USOA,  
7 charitable contributions should be recorded in Miscellaneous Nonutility Expenses (Acct.  
8 No. 426) which, as a non-utility expense, should not be included in rates.

9  
10 **Q. What is Staff's recommendation?**

11 A. Staff recommends decreasing miscellaneous expense by \$1,044, as shown in Schedule  
12 JMM-11.

13  
14 **Operating Income Adjustment No. 3 – Depreciation Expense.**

15 **Q. What did the Company propose for depreciation expense in its application?**

16 A. The Company proposed its recorded test year depreciation expense of \$53,318.

17  
18 **Q. How did Staff calculate depreciation expense?**

19 A. As shown on schedule JMM-12, Staff recalculated depreciation expense on a going  
20 forward basis by applying Staff's recommended depreciation rates to Staff's  
21 recommended plant amounts and offsetting the result by the amortization of contributions  
22 in aid of construction as prescribed by the USOA.

23  
24 **Q. What is Staff's recommendation?**

25 A. Staff recommends decreasing depreciation expense by \$18,493, as shown in Staff  
26 Schedule JMM-12.

1 **Operating Income Adjustment No. 4 – Property Tax Expense.**

2 **Q. What method has the Commission typically adopted to determine property tax**  
3 **expense for ratemaking purposes for Class C and above water utilities?**

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

6  
7 **Q. Did the Company use the modified ADOR methodology to calculate its proposed**  
8 **property taxes?**

9 A. No.

10  
11 **Q. Did Staff calculate property taxes using the modified ADOR method?**

12 A. Yes. As shown in Schedule JMM-13, Staff calculated property tax expense using the  
13 modified ADOR method for both test year and Staff-recommended revenues. Since the  
14 modified ADOR method is revenue dependent, the property tax is different for test year  
15 and recommended revenues. Staff has included a factor for property taxes in the gross  
16 revenue conversion factor that automatically adjusts the revenue requirement for changes  
17 in revenue in the same way that income taxes are adjusted for changes in operating  
18 income.

19  
20 **Q. What does Staff recommend for test year property tax expense?**

21 A. Staff recommends a decreasing test year property tax expense by \$2,210, as shown in  
22 Schedule JMM-13.

23  
24 **Operating Income Adjustment No. 5 – Income Tax Expense.**

25 **Q. What did the Company propose for test year income tax expense?**

26 A. The Company did not propose any income tax expense.

1 **Q. How did Staff calculate test year income tax expense for the Company?**

2 A. Staff applied the statutory state and federal income tax rates to Staff's taxable income.  
3 Since Staff calculated a negative taxable income for the test year, the test year income tax  
4 is negative. Using this negative test year income tax facilitates use of a gross revenue  
5 conversion factor for calculating recommended revenues and the corresponding income  
6 tax expense. Income tax expenses for the test year and recommended revenues are shown  
7 in Schedule JMM-2.

8  
9 **Q. What is Staff's recommendation for test year income tax expense for the Company?**

10 A. Staff recommends decreasing test year income tax expense by \$2,760, as shown in  
11 Schedule JMM-14.

12  
13 **VIII. REVENUE REQUIREMENT**

14 **Q. Did the Company utilize a rate of return on rate base, operating margin or cash flow  
15 methodology to determine its revenue requirement?**

16 A. No. The Company simply proposed to double all of its existing rates.

17  
18 **Q. What is the traditional method for determining a utility revenue requirement?**

19 A. Under the traditional regulatory framework, the required operating income for an investor-  
20 owned utility is determined by multiplying rate base by rate of return. Typically, a utility  
21 is afforded the opportunity to earn a reasonable return on the value of its property and no  
22 more. Since a utility incurs expenses in the provision of service, these expenses, when  
23 added to the operating income, provide the revenue requirement. Thus, the revenue  
24 requirement can be expressed mathematically as: Revenue Requirement = Operating and  
25 Maintenance expenses + Depreciation expense + Taxes + Operating Income.

1 **Q. Did Staff use the rate base/rate of return method for determining the revenue**  
2 **requirement for Appaloosa in this case?**

3 A. No. Since Staff calculated a negative rate base for the Company, the rate base/rate of  
4 return method would produce a negative operating income that is neither useful nor  
5 meaningful for calculating the revenue requirement.

6  
7 **Q. What is Staff's recommended revenue requirement?**

8 A. Staff recommends a revenue requirement of \$160,650, a \$19,762 (14.03 percent) increase  
9 over adjusted test year revenue of \$140,888.<sup>3</sup> Staff's recommended revenue would result  
10 in operating income of \$5,000 and positive cash flow of \$22,862 with existing loans and  
11 positive cash flow of \$17,924 with the proposed \$60,000, 20-year amortizing loan at 3.675  
12 percent as discussed below (see Schedule JMM-16).

13  
14 **IX. OTHER RECOMMENDATIONS**

15 **Common Cost Allocation**

16 **Q. Does Staff have any other comments/recommendations?**

17 A. Yes. During the course of its audit, Staff noted that Appaloosa's owner, Mr. Joe  
18 Cordovana, owns several other businesses, including JC Ranch, Windmill Farms Nursery,  
19 and The Windmill House. Staff noted that all of these businesses are run out of the  
20 Windmill Farms office facility.

21  
22 In response to Staff data request JMM 2-6, the Company indicated that (1) the office  
23 phone/fax and the field phone are all direct-charged to Appaloosa; (2) no logs are  
24 maintained to track the purpose of phone calls to other states and countries; (3) the nature  
25 of routine calls includes customer past due contact, customer return calls, ordering

---

<sup>3</sup> The existing arsenic surcharge should terminate with the effective date of rates authorized in this case.

1 chemicals for water, contact with operator, contact with the person in charge of billing,  
2 contact with the Commission, contact with the Arizona Department of Environmental  
3 Quality, contact with the WIFA and any other water company business. Staff also noted  
4 that JC Ranch, The Windmill House and the La Vacara trust all share the same phone  
5 number.

6  
7 The Company also stated that it uses the internet for e-mail access, software support,  
8 research for education for conservation and loss of water, research for treatment solutions  
9 for water plant, and access to download forms, etc. Staff noted that the Company's  
10 internet expenses are billed to Tony Cordovana, and are addressed to 1460 W. Road 4 N,  
11 Chino Valley, AZ 86323, the Windmills Farms facility.

12  
13 Staff has not removed any of these common costs in this case. However, Staff takes this  
14 opportunity to note that the USOA specifies the accounting and reporting for common  
15 utility plant and expenses. Those specifications include showing to the Commission the  
16 basis of the allocation used. The Company should adopt and consistently utilize allocation  
17 bases that clearly and properly allocate common costs (e.g., phone, internet, office  
18 expenses, and other) among the multiple business ventures of Joe Cordovana.

19  
20 Therefore, Staff recommends, as a compliance item in this Docket, that the Company file,  
21 within 90 days of a decision in this matter, an allocation plan with the Commission that  
22 demonstrates how Mr. Cordovana will fairly allocate common costs among all of his  
23 business ventures.

1 **Office Location Notice**

2 **Q. Does Staff have any comments about the building rental expense?**

3 A. Yes. The Company pays the affiliated Windmill Farms facility \$500 per month for rent,  
4 the amount approved in the prior rate case. During the Engineering site visit, Staff noted  
5 that the building has no signs to identify the location of the Appaloosa office. Further,  
6 Staff notes that the Company uses a P.O. Box as its mailing address. Staff concludes that  
7 customers wanting to conduct business with Appaloosa should have clear direction to the  
8 Company's office. Therefore, Staff recommends that the Company inform customers with  
9 a billing insert of the location of its office and the hours of operation.

10  
11 **X. RATE DESIGN**

12 **Q. Did Staff prepare a summary of the Company's present rates, proposed rates, and**  
13 **Staff's recommended rates?**

14 A. Yes. See Schedule JMM-17.

15  
16 **Q. Did Staff prepare a typical bill analysis for a 5/8" x 3/4" residential customer?**

17 A. Yes. See Schedule JMM-18.

18  
19 **Q. What does Staff recommend for other service charges?**

20 A. Staff's recommended other service charges are presented in Schedule JMM-17, and reflect  
21 Staff's experience of what are reasonable and customary charges.

22  
23 **Q. Is there anything else that Staff would like to recommend for other service charges?**

24 A. Yes. Staff recommends an after-hours service charge when it is made at the customer's  
25 request/convenience. Such a tariff compensates the utility for additional expenses  
26 incurred from providing after-hours service. Staff concludes that establishing a separate

1 after-hours tariff that is applicable for any utility service provided outside of regular  
2 business hours at the customer's request or for the customer's convenience is preferable to  
3 having after-hours tariffs for each specific activity. The after-hours fee would apply in  
4 addition to the applicable regular-hours charge for the specific service if the customer  
5 requests that the service be performed outside of normal working hours.

6  
7 **Q. What is Staff's recommendation?**

8 A. Staff recommends approval of its rates and charges as shown in Schedule JMM-17. In  
9 addition to collection of its regular rates and charges, the Company may collect from its  
10 customers a proportionate share of any privilege, sales, or use tax, as provided for in  
11 A.A.C. R14-2-409(D).

12  
13 Staff also recommends that the Company file with Docket Control, as a compliance item  
14 in this Docket, within 30 days after the Decision in this matter is issued, a schedule of its  
15 approved rates and charges.

16  
17 **XI. FINANCING**

18 **Introduction**

19 **Q. Please give a brief introduction to the Company's proposed financing plan.**

20 A. On April 13, 2010, the Company filed a financing application with the Commission,  
21 requesting Commission approval to borrow \$855,193 from WIFA.

22  
23 **Q. What is the purpose of the loan?**

24 A. The Company stated that it will use the proceeds of the loan to fund additional storage  
25 capacity, provide an emergency generator and extend a transmission main line from the  
26 existing well and storage tank site to a new development area.

1 **Q. Did Staff conduct an engineering analysis of the proposed financing?**

2 A. Yes. Please refer to the testimony of Jian Liu and the associated engineering report for  
3 details of Staff's engineering analysis. In brief, the engineering analysis concludes that  
4 the Company's water system has adequate well and storage capacity, and that the  
5 proposed additional storage capacity will not be needed for the foreseeable future. That  
6 analysis also pronounces Staff's position that any plant needed to serve the new  
7 development area should be financed by the developer through a main extension  
8 agreement.<sup>4</sup> Accordingly, Staff finds that, of the Company's three proposed capital  
9 improvement projects, only the emergency generator is appropriate.

10  
11 **Q. What amount of financing does Staff recommend for the emergency generator?**

12 A. Staff recommends \$60,000 of financing for the emergency generator.  
13

14 **Q. Did Staff conduct a financial analysis of the proposed financing?**

15 A. Yes. Staff's financial analysis is shown in Schedules JMM-15 and JMM-16. Schedule  
16 JMM-15, Column [A], presents pro forma financial information reflecting Staff's audit  
17 results and recommended rates with existing loans. Schedule JMM-15, Column [B],  
18 presents pro forma financial information that modifies Column [A] to reflect issuance of a  
19 \$60,000, 20-year amortizing loan at 3.675 percent per annum. Schedule JMM-15 also  
20 shows the debt service coverage ratio ("DSC").  
21

22 DSC represents the number of times internally generated cash (i.e., earnings before  
23 interest, income tax, depreciation and amortization expenses) covers required principle  
24 and interest payments on short-term and long-term debt. A DSC greater than 1.0 means  
25 operating cash flow is sufficient to cover debt obligations.

---

<sup>4</sup> Thus, the risk of successful development remains with the developer as it should, and it is not passed on to the Company and its ratepayers.

1           Schedule JMM-15, Column [B] shows that a pro forma 2.24 DSC results from Staff's  
2           recommended revenue requirement and a fully drawn \$60,000 20-year amortizing loan at  
3           3.675 percent annual interest. The pro forma DSC shows that the Company will have  
4           adequate cash flows to meet all obligations including the anticipated new debt.

5  
6           Schedule JMM-16 presents cash flow analyses with and without the \$60,000 loan. The  
7           cash flow analysis reflecting issuance of a \$60,000 loan shows that Staff's recommended  
8           revenues would provide positive, uncommitted cash flow available for contingencies of  
9           \$17,924.

10  
11           Accordingly, Staff concludes that issuance of debt financing not to exceed \$60,000 in the  
12           form of an amortizing loan of approximately 20 years for an emergency generator is  
13           within the Company's corporate powers, is compatible with the public interest, will not  
14           impair its ability to provide services and is consistent with sound financial practices  
15           provided the rates authorized in this proceeding provide a 1.25 or greater DSC.<sup>5</sup> The  
16           remainder of the Company's request for borrowing authorization should be denied.

17  
18       **Q.     What does Staff recommend?**

19       A.     Staff recommends authorization to incur an 18-to-22 year amortizing loan in an amount  
20           not to exceed \$60,000 at an interest rate not to exceed that which is available from WIFA  
21           for the purpose of acquiring an emergency generator with sufficient capacity to run the  
22           Company's high-yield well. Staff recommends denial of the remainder of the Company's  
23           \$855,193 request for authorization to borrow funds.

---

<sup>5</sup> Staff generally considers 1.25 as the minimum DSC for a WIFA loan due to debt service reserve funding requirements. In this instance, a \$12,924 operating loss without the \$60,000 loan provides a pro forma breakeven cash flow and 1.01 DSC with the loan, and zero operating income without the loan provides pro forma cash flow of \$12,924 and a 1.90 DSC with the loan. Thus, any revenue requirement resulting in positive operating income would provide adequate debt service. Staff's recommended revenue requirement would provide operating income of \$5,000 without the loan and \$5,151 with the loan, and it is based on an assessment of adequate cash flow for contingencies.

1 Staff further recommends that the Commission authorize Appaloosa to pledge its assets in  
2 the State of Arizona pursuant to A.R.S. § 40-285 and R18-15-104 in connection with the  
3 WIFA loan.

4  
5 Staff further recommends that any authorization to incur debt granted in this proceeding  
6 terminate twenty-four months from the date of a decision in this matter.

7  
8 Staff further recommends authorizing Appaloosa to engage in any transaction and to  
9 execute any documents necessary to effectuate the authorizations granted.

10 Staff further recommends that copies of executed loan documents be filed with Docket  
11 Control, as a compliance item in this case, within 60 days of the execution of any  
12 financing transaction authorized herein.

13

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

15 A. Yes, it does

**Appaloosa Water Company**  
**Docket Nos. W-03443A-11-0040 and W-03443A-10-0143**  
**Test Year ended December 31, 2010**

DIRECT TESTIMONY OF JEFFREY M. MICHLIK

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REVENUE REQUIREMENT

<u>LINE NO.</u>	<u>DESCRIPTION</u>	(A) COMPANY FAIR VALUE	(B) STAFF FAIR VALUE
1	Adjusted Rate Base	\$ (52,705)	\$ (2,542)
2	Adjusted Operating Income (Loss)	\$ (37,979)	\$ (10,432)
3	Current Rate of Return (L2 / L1)	N/M	N/M
4	Required Rate of Return	N/M	N/M
5	Proposed/Recommended Operating Income	N/M	\$ 5,000
6	Operating Income Deficiency (L5 - L2)	N/M	\$ 15,432
7	Gross Revenue Conversion Factor	1.0000	1.2806
8	Required Revenue Increase (L7 * L6)	\$ 140,888	\$ 19,762
9	Adjusted Test Year Revenue	\$ 140,888	\$ 140,888
10	Proposed Annual Revenue (L8 + L9)	\$ 281,776	\$ 160,650
11	Required Increase in Revenue (%)	100.00%	14.03%

N/M = Not Meaningful

References:

Column (A): Company Schedule A-1

Column (B): Staff Schedules JMM-3 and JMM-8

**GROSS REVENUE CONVERSION FACTOR**

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<i>Calculation of Gross Revenue Conversion Factor:</i>					
1	Revenue	100.0000%			
2	Uncollectible Factor (Line 11)	0.0000%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	21.9099%			
5	Subtotal (L3 - L4)	78.0901%			
6	<b>Revenue Conversion Factor (L1 / L5)</b>	<b>1.280572</b>			
<i>Calculation of Uncollectible Factor:</i>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 23)	20.9228%			
9	One Minus Combined Income Tax Rate (L7 - L8)	79.0772%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 * L10)	0.0000%			
<i>Calculation of Effective Tax Rate:</i>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.9680%			
14	Federal Taxable Income (L12 - L13)	93.0320%			
15	Applicable Federal Income Tax Rate (Line 55)	15.0000%			
16	Effective Federal Income Tax Rate (L14 x L15)	13.9548%			
17	Combined Federal and State Income Tax Rate (L13 +L16)		20.9228%		
<i>Calculation of Effective Property Tax Factor</i>					
18	Unity	100.0000%			
19	Combined Federal and State Income Tax Rate (L17)	20.9228%			
20	One Minus Combined Income Tax Rate (L18-L19)	79.0772%			
21	Property Tax Factor (JMM-13, L27)	1.2483%			
22	Effective Property Tax Factor (L20*L21)		0.9871%		
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			21.9099%	
24	Required Operating Income (Schedule JMM-1, Line 5)	\$ 5,000			
25	Adjusted Test Year Operating Income (Loss)	(10,432)			
26	Required Increase in Operating Income (L24 - L25)		\$ 15,432		
27	Income Taxes on Recommended Revenue (Col. [E], L52)	\$ 1,323			
28	Income Taxes on Test Year Revenue (Col. [B], L52)	(2,760)			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		4,083		
30	Recommended Revenue Requirement (Schedule JMM-1, Line 10)	\$ 160,650			
31	Uncollectible Rate (Line 10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L30*L31)	\$ -			
33	Adjusted Test Year Uncollectible Expense	\$ -			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32-L33)		-		
35	Property Tax with Recommended Revenue (JMM-13, Col B, L31)	\$ 3,761			
36	Property Tax on Test Year Revenue (JMM-13, Col A, L17)	3,514			
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		247		
38	<b>Total Required Increase in Revenue (L26 + L29 + L34 + L37)</b>		<b>\$ 19,762</b>		

	Test Year		Staff Recommended	Pro Forma W/Proposed Loans
<i>Calculation of Income Tax:</i>				
39	Revenue (Schedule JMM-8, Col. [C], Line 6 & Sch. JMM-1, Col. [D] Line 10)	\$ 140,888	\$ 160,650	\$ 160,650
40	Operating Expenses Excluding Income Taxes	\$ 154,080	\$ 154,327	\$ 154,327
41	Interest(L56)	\$ -	\$ -	\$ 2,170
42	Arizona Taxable Income (L39 - L40 - L41)	\$ (13,192)	\$ 6,323	\$ 4,153
43	Arizona State Income Tax Rate	6.9680%	6.9680%	6.9680%
44	Arizona Income Tax (L42 x L43)	\$ (919)	\$ 441	\$ 289
45	Federal Taxable Income (L42 - L44)	\$ (12,273)	\$ 5,882	\$ 3,863
46	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ (1,841)	\$ 882	\$ 882
47	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ -	\$ -	\$ -
48	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ -	\$ -	\$ -
49	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ -	\$ -	\$ -
50	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ -	\$ -	\$ -
51	Total Federal Income Tax	\$ (1,841)	\$ 882	\$ 882
52	Combined Federal and State Income Tax (L44 + L51)	\$ (2,760)	\$ 1,323	\$ 1,172

53 Applicable Federal Income Tax Rate [Col. [E], L51 - Col. [B], L51] / [Col. [E], L45 - Col. [B], L45]

15.0000%

Appaloosa Water Company  
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Schedule JMM-3

RATE BASE - ORIGINAL COST

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	Adj. No.	(C) STAFF AS ADJUSTED
1	Plant in Service	\$ 1,459,170	1	\$ 1,513,516
2	Less: Accumulated Depreciation	231,234	2	248,208
3	Net Plant in Service	<u>\$ 1,227,936</u>		<u>\$ 1,265,308</u>
<u>LESS:</u>				
4	Contributions in Aid of Construction (CIAC)	\$ 759,327		\$ 759,327
5	Less: Accumulated Amortization	49,004		\$ 49,004
6	Net CIAC	<u>710,323</u>		<u>\$ 710,323</u>
7	Advances in Aid of Construction (AIAC)	570,318		570,318
8	Customer Deposits	-		-
9	Deferred Income Tax Credits	-		-
<u>ADD:</u>				
9	Working Capital Allowance	-	3	12,791
10	Deferred Regulatory Assets	-		-
11	<b>Original Cost Rate Base</b>	<u>\$ (52,705)</u>		<u>\$ (2,542)</u>

References:

Column [A]: Company as Filed  
Column [B]: Schedule JMM-4  
Column (C): Column (A) + Column (B)

**SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS**

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJ #1 Plant Pro-Forma Adjustment And Reclassification of Plant Ref: Sch JMM-5	[C] ADJ #2 Accumulated Depreciation Expense Ref: Sch JMM-6	[D] ADJ #3 Cash Working Capital Ref: Sch JMM-7	[E] STAFF ADJUSTED
1	301.0	Organization Cost	264	-	-	-	264
2	302.0	Franchise Cost	2,309	-	-	-	2,309
3	303.0	Land and Land Rights	3,161	-	-	-	3,161
4	304.0	Structures and Improvements	67,051	-	-	-	67,051
5	305.0	Collecting and Impounding Res.	-	-	-	-	-
6	306.0	Lake River and Other Intakes	-	-	-	-	-
7	307.0	Wells and Springs	238,519	-	-	-	238,519
8	308.0	Infiltration Galleries and Tunnels	-	-	-	-	-
9	309.0	Supply Mains	-	-	-	-	-
10	310.0	Power Generation Equipment	-	-	-	-	-
11	311.0	Electric Pumping Equipment	94,131	-	-	-	94,131
12	320.0	Water Treatment Equipment	-	-	-	-	-
13	320.1	Water Treatment Plant	-	155,246	-	-	155,246
14	320.2	Solution Chemical Feeders	-	-	-	-	-
15	320.3	Media for Arsenic Treatment	-	27,125	-	-	27,125
16	330.0	Distribution Reservoirs & Standpipe	100,438	-	-	-	100,438
17	331.0	Transmission and Distribution Mains	745,102	-	-	-	745,102
18	333.0	Services	-	-	-	-	-
19	334.0	Meters	15,055	-	-	-	15,055
20	335.0	Hydrants	48,876	-	-	-	48,876
21	336.0	Backflow Prevention Devices	-	-	-	-	-
22	339.0	Other Plant and Miscellaneous Equipment	128,025	(128,025)	-	-	-
23	340.0	Office Furniture and Fixtures	1,850	-	-	-	1,850
24	340.1	Computer Equipment	1,500	-	-	-	1,500
25	341.0	Transportation Equipment	-	-	-	-	-
26	342.0	Stores Equipment	-	-	-	-	-
27	343.0	Tools and Work Equipment	-	-	-	-	-
28	344.0	Laboratory Equipment	-	-	-	-	-
29	345.0	Power Operated Equipment	-	-	-	-	-
30	346.0	Communications Equipment	-	-	-	-	-
31	347.0	Miscellaneous Equipment	-	-	-	-	-
32	348.0	Other Tangible Plant	12,889	-	-	-	12,889
33		Total Plant in Service - Actual	1,459,170	54,346	-	-	1,513,516
34		Post Test-Year Plant	-	-	-	-	-
35		Total Plant in Service	1,459,170	54,346	-	-	1,513,516
36		Less: Accumulated Depreciation	231,234	-	16,974	-	248,208
37		Net Plant in Service	1,227,936	54,346	(16,974)	-	1,265,308
38		Net Plant in Service					
39							
40		LESS:					
41		Contributions in Aid of Construction (CIAC)	759,327	-	-	-	759,327
42		Less: Accumulated Amortization	49,004	-	-	-	49,004
43		Net CIAC (L25 - L26)	710,323	-	-	-	710,323
44		Advances in Aid of Construction (AIAC)	570,318	-	-	-	570,318
45		Customer Deposits	-	-	-	-	-
46		Deferred Income Taxes	-	-	-	-	-
47			-	-	-	-	-
48			-	-	-	-	-
49		ADD:					
50		Working Capital Allowance	-	-	-	12,791	12,791
51		Deferred Regulatory Assets	-	-	-	-	-
52			-	-	-	-	-
53		Original Cost Rate Base	(52,706)	54,346	(16,974)	12,791	(2,542)

RATE BASE ADJUSTMENT NO. 1 - PLANT PRO-FORMA AND RECLASSIFICATION OF PLANT

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	339	Other Plant and Miscellaneous Equipment	\$ 128,025	\$ (128,025)	\$ -
2	320.1	Water Treatment Plant	-	155,246	155,246
3	320.3	Water Treatment Equipment	-	27,125	27,125
4			<u>\$ 128,025</u>	<u>\$ 54,346</u>	<u>182,371</u>

REFERENCES:

Column [A]: Company Filing  
 Column [B]: Direct Testimony JMM  
 Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 2 - ACCUMULATED DEPRECIATION

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Accumulated Deprecation	\$ 231,234	\$ 16,974	\$ 248,208

References:

- Column [A]: Company Application
- Column [B]: Testimony JMM
- Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 3 - CASH WORKING CAPITAL

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Cash Working Capital	\$ -	\$ 12,791	\$ 12,791

Staff's Calculation of Cash Working Capital

1/24th Purchased Power	\$ 491
1/8th Operation & Maintenance Expense	12,299
Total Cash Working Capital	<u>\$ 12,791</u>

References:

Column [A]: Company Application

Column [B]: Testimony JMM

Column [C]: Column [A] + Column [B]

OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] COMPANY ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED	[F] PROPOSED LOAN EFFECT	[G] PRO FORMA WITH PROPOSED LOANS
1	<u>REVENUES:</u>							
2	Metered Water Sales	\$ 133,060	\$ -	\$ 133,060	\$ 19,762	\$ 152,822		\$ 152,822
3	Forfeited Discounts	-	-	-	-	-		-
4	Other Water Revenues	7,828	-	7,828	-	7,828		7,828
5	Intentionally Left Blank	-	-	-	-	-		-
6	Total Operating Revenues	\$ 140,888	\$ -	\$ 140,888	\$ 19,762	\$ 160,650	\$ -	\$ 160,650
7								
8	<u>OPERATING EXPENSES:</u>							
9	Salaries and Wages	\$ 50,769	\$ -	\$ 50,769	\$ -	\$ 50,769		\$ 50,769
10	Salaries and Wages - Officers and Stockhold	-	-	-	-	-		-
11	Employee Pensions and Benefits	-	-	-	-	-		-
12	Purchased Power	11,788	-	11,788	-	11,788		11,788
13	Chemicals	-	-	-	-	-		-
14	Repairs and Maintenance	8,139	-	8,139	-	8,139		8,139
15	Office Supplies and Expenses	2,956	-	2,956	-	2,956		2,956
16	Outside Services	7,363	4,200	11,563	-	11,563		11,563
17	Water Testing	9,049	(7,239)	1,810	-	1,810		1,810
18	Outside Services - Other	-	-	-	-	-		-
19	Rental of Building/Real Property	6,000	-	6,000	-	6,000		6,000
20	Transportation Expenses	-	-	-	-	-		-
21	Insurance	7,374	-	7,374	-	7,374		7,374
22	Rate Case Expense	-	-	-	-	-		-
23	Bad Debt Expense	-	-	-	-	-		-
24	Miscellaneous Expense	10,828	(1,044)	9,784	-	9,784		9,784
25	Depreciation Expense	53,318	(18,493)	34,825	-	34,825		34,825
26	Amortization of CIAC	-	-	-	-	-		-
27	Taxes Other than Income	5,558	-	5,558	-	5,558		5,558
28	Property Taxes	5,724	(2,210)	3,514	247	3,761	-	3,761
29	Income Taxes	-	(2,760)	(2,760)	4,083	1,323	(151)	1,172
30	Deferred Income Taxes	-	-	-	-	-		-
31	Intentionally Left Blank	-	-	-	-	-		-
32	Intentionally Left Blank	-	-	-	-	-		-
33	Intentionally Left Blank	-	-	-	-	-		-
34	Total Operating Expenses	\$ 178,866	\$ (27,546)	\$ 151,320	\$ 4,330	\$ 155,650	\$ (151)	\$ 155,499
35	Operating Income (Loss)	\$ (37,979)	\$ 27,546	\$ (10,432)	\$ 15,432	\$ 5,000	\$ 151	\$ 5,151

References:

Column (A): Company Schedule C-1  
Column (B): Schedule JMM-9  
Column (C): Column (A) + Column (B)  
Column (D): Schedules JMM-13 and JMM-14  
Column (E): Column (C) + Column (D)  
Column (F): Schedule JMM-13, JMM-14, AND JMM-16

Appaloosa Water Company  
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**SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR**

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] Water Testing Expense ADJ #1 Ref. Sch JMM-10	[C] Miscellaneous Expense ADJ #2 Ref. Sch JMM-11	[D] Depreciation Expense ADJ #3 Ref. Sch JMM-12	[E] Property Tax Expense ADJ #4 Ref. Sch JMM-13	[F] Income Tax Expense ADJ #5 Ref. Sch JMM-14	[G] STAFF ADJUSTED
1		<b>REVENUES:</b>							
2	461	Metered Water Sales	\$ 133,060	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 133,060
3	470	Forfeited Discounts	-	-	-	-	-	-	-
4	474	Other Water Revenues	7,828	-	-	-	-	-	7,828
5		Intentionally Left Blank	-	-	-	-	-	-	-
6		<b>Total Operating Revenues</b>	\$ 140,888	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 140,888
7									
8		<b>OPERATING EXPENSES:</b>							
9	601	Salaries and Wages	\$ 50,769	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,769
10	603	Salaries and Wages - Officers and Stockholders	-	-	-	-	-	-	-
11	604	Employee Pensions and Benefits	-	-	-	-	-	-	-
12	615	Purchased Power	11,788	-	-	-	-	-	11,788
13	618	Chemicals	-	-	-	-	-	-	-
14	620	Repairs and Maintenance	8,139	-	-	-	-	-	8,139
15	621	Office Supplies and Expenses	2,956	-	-	-	-	-	2,956
16	630	Outside Services	7,363	4,200	-	-	-	-	11,563
17	635	Water Testing	9,049	(7,239)	-	-	-	-	1,810
18	636	Outside Services - Other	-	-	-	-	-	-	-
19	641	Rental of Building/Real Property	6,000	-	-	-	-	-	6,000
20	650	Transportation Expenses	-	-	-	-	-	-	-
21	657	Insurance	7,374	-	-	-	-	-	7,374
22	666	Rate Case Expense	-	-	-	-	-	-	-
23	670	Bad Debt Expense	-	-	-	-	-	-	-
24	675	Miscellaneous Expense	10,828	(1,044)	-	-	-	-	9,784
25	403	Depreciation Expense	53,318	-	(18,493)	-	-	-	34,825
26	407	Amortization of CIAC	-	-	-	-	-	-	-
27	408	Taxes Other than Income	5,558	-	-	-	-	-	5,558
28	408.11	Property Taxes	5,724	-	-	-	(2,210)	-	3,514
29	409	Income Taxes	-	-	-	-	-	(2,760)	(2,760)
30	410	Deferred Income Taxes	-	-	-	-	-	-	-
31		Intentionally Left Blank	-	-	-	-	-	-	-
32		Intentionally Left Blank	-	-	-	-	-	-	-
33		Intentionally Left Blank	-	-	-	-	-	-	-
34		<b>Total Operating Expenses</b>	\$ 178,866	\$ (3,039)	\$ (1,044)	\$ (18,493)	\$ (2,210)	\$ (2,760)	\$ 151,320
35		<b>Operating Income (Loss)</b>	\$ (37,979)	\$ 3,039	\$ 1,044	\$ 18,493	\$ 2,210	\$ 2,760	\$ (10,432)

Appaloosa Water Company  
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Schedule JMM-10

OPERATING INCOME ADJUSTMENT NO. 1 - WATER TESTING EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	Water Testing Expense	\$ 9,049	\$ (7,239)	\$ 1,810
2	Outside Service	7,363	4,200	11,563
3	Total	\$ 16,412	\$ (3,039)	\$ 13,373

References:

Column (A), Company Schedule C-1

Column (B): Testimony JMM

Column (C): Column (A) + Column (B)

Appaloosa Water Company  
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 Test Year ended December 31, 2010

Schedule JMM-11

OPERATING INCOME ADJUSTMENT NO. 2 - MISCELLANEOUS EXPENSE

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]
			COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1		Miscellaneous Expense	\$ 10,828	\$ (1,044)	\$ 9,784

Staff's disallowed items

Homeward Bound Donation	\$	500
Meals and Entertainment		544
	\$	<u>1,044</u>

References:

- Column (A), Company Schedule C-1
- Column (B): Testimony JMM
- Column (C): Column (A) + Column (B)

OPERATING INCOME ADJUSTMENT NO. 3 - DEPRECIATION EXPENSE ON TEST YEAR PLANT

LINE NO.	ACCT NO.	DESCRIPTION	[A]	[B]	[C]	[D]	[E]
			PLANT In SERVICE Per Staff	NonDepreciable or Fully Depreciated PLANT	DEPRECIABLE PLANT (Col A - Col B)	DEPRECIATION RATE	DEPRECIATION EXPENSE (Col C x Col D)
1	301	Organization Cost	\$ 264	\$ -	\$ 264	0.00%	\$ -
2	302	Franchise Cost	\$ 2,309	\$ -	\$ 2,309	0.00%	\$ -
3	303	Land and Land Rights	\$ 3,161	\$ -	\$ 3,161	0.00%	\$ -
4	304	Structures and Improvements	\$ 67,051	\$ -	\$ 67,051	3.33%	\$ 2,233
5	305	Collecting and Impounding Res.	\$ -	\$ -	\$ -	2.50%	\$ -
6	306	Lake River and Other Intakes	\$ -	\$ -	\$ -	2.50%	\$ -
7	307	Wells and Springs	\$ 238,519	\$ -	\$ 238,519	3.33%	\$ 7,943
8	308	Infiltration Galleries and Tunnels	\$ -	\$ -	\$ -	6.67%	\$ -
9	309	Supply Mains	\$ -	\$ -	\$ -	2.00%	\$ -
10	310	Power Generation Equipment	\$ -	\$ -	\$ -	5.00%	\$ -
11	311	Electric Pumping Equipment	\$ 94,131	\$ -	\$ 94,131	12.50%	\$ 11,766
12	320	Water Treatment Equipment	\$ -	\$ -	\$ -	3.33%	\$ -
13	320.1	Water Treatment Plant	\$ 155,246	\$ -	\$ 155,246	3.33%	\$ 5,170
14	320.2	Solution Chemical Feeder	\$ -	\$ -	\$ -	20.00%	\$ -
15	320.3	Media for Arsenic Treatment	\$ 27,125	\$ -	\$ 27,125	80.00%	\$ 21,700
16	330	Distribution Reservoirs & Standpipe	\$ 100,438	\$ -	\$ 100,438	2.22%	\$ 2,230
17	331	Transmission and Distribution Mains	\$ 745,102	\$ -	\$ 745,102	2.00%	\$ 14,902
18	333	Services	\$ -	\$ -	\$ -	3.33%	\$ -
19	334	Meters	\$ 15,055	\$ -	\$ 15,055	8.33%	\$ 1,254
20	335	Hydrants	\$ 48,876	\$ -	\$ 48,876	2.00%	\$ 978
21	336	Backflow Prevention Devices	\$ -	\$ -	\$ -	6.67%	\$ -
22	339	Other Plant and Miscellaneous Equipment	\$ -	\$ -	\$ -	6.67%	\$ -
23	340	Office Furniture and Fixtures	\$ 1,850	\$ -	\$ 1,850	6.67%	\$ 123
24	340.1	Computer Equipment	\$ 1,500	\$ -	\$ 1,500	20.00%	\$ 300
25	341	Transportation Equipment	\$ -	\$ -	\$ -	20.00%	\$ -
26	342	Stores Equipment	\$ -	\$ -	\$ -	4.00%	\$ -
27	343	Tools and Work Equipment	\$ -	\$ -	\$ -	5.00%	\$ -
28	344	Laboratory Equipment	\$ -	\$ -	\$ -	10.00%	\$ -
29	345	Power Operated Equipment	\$ -	\$ -	\$ -	5.00%	\$ -
30	346	Communications Equipment	\$ -	\$ -	\$ -	10.00%	\$ -
31	347	Miscellaneous Equipment	\$ -	\$ -	\$ -	10.00%	\$ -
32	348	Other Tangible Plant	\$ 12,889	\$ -	\$ 12,889	10.00%	\$ 1,289
33		Total Plant	\$ 1,513,516	\$ -	\$ 1,513,516		\$ 69,887
34							
35		Composite Depreciation Rate (Depr Exp / Depreciable Plant):	4.62%				
36		CIAC: \$	759,327				
37		Amortization of CIAC (Line 32 x Line 33): \$	35,062				
38							
39		Depreciation Expense Before Amortization of CIAC: \$	69,887				
40		Less Amortization of CIAC: \$	35,062				
41		<b>Test Year Depreciation Expense - Staff: \$</b>	<b>34,825</b>				
42		Depreciation Expense - Company: \$	53,318				
43		<b>Staff's Total Adjustment: \$</b>	<b>(18,493)</b>				

References:

- Column [A]: Schedule JMM-4
- Column [B]: From Column [A]
- Column [C]: Column [A] - Column [B]
- Column [D]: Engineering Staff Report
- Column [E]: Column [C] x Column [D]

OPERATING INCOME ADJUSTMENT NO. 4 - PROPERTY TAX EXPENSE

LINE NO.	Property Tax Calculation	[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	\$ 140,888	\$ 140,888
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	281,776	\$ 281,776
4	Staff Recommended Revenue, Per Schedule JMM-1	140,888	\$ 160,650
5	Subtotal (Line 4 + Line 5)	422,664	442,426
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	140,888	\$ 147,475
8	Department of Revenue Mutilplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	281,776	\$ 294,950
10	Plus: 10% of CWIP -	-	-
11	Less: Net Book Value of Licensed Vehicles	94,101	\$ 94,101
12	Full Cash Value (Line 9 + Line 10 - Line 11)	187,675	\$ 200,849
13	Assessment Ratio	20.5%	20.5%
14	Assessment Value (Line 12 * Line 13)	38,473	\$ 41,174
15	Composite Property Tax Rate (Per Company Schedule)	9.1336%	9.1336%
16			\$ -
17	Staff Test Year Adjusted Property Tax (Line 14 * Line 15)	\$ 3,514	
18	Company Proposed Property Tax	5,724	
19			
20	Staff Test Year Adjustment (Line 17-Line 18)	\$ (2,210)	
21	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 3,761
22	Staff Test Year Adjusted Property Tax Expense (Line 17)		\$ 3,514
23	Increase in Property Tax Expense Due to Increase in Revenue Requirement		\$ 247
24			
25	Increase to Property Tax Expense		\$ 247
26	Increase in Revenue Requirement		19,762
27	Increase to Property Tax per Dollar Increase in Revenue (Line19/Line 20)		1.2483%

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Schedule JMM-14

OPERATING INCOME ADJUSTMENT NO. 5 - TEST YEAR INCOME TAXES

LINE NO.	DESCRIPTION	COMPANY PROPOSED	STAFF ADJUSTMENTS	STAFF RECOMMENDED
1	Income Tax Expense	\$ -	\$ (2,760)	\$ (2,760)

References:

Column (A), Company Schedule C-1  
Column (B): Column [C] - Column [A]  
Column (C): Schedule JMM-2

**FINANCIAL ANALYSIS**

	[A]	[B]
	Staff Recommended W/O Proposed Loans	Pro Forma With Proposed Loans
1 Operating Income	\$ 5,000	\$ 5,151
2 Depreciation & Amort.	\$ 34,825	\$ 34,825
3 Income Tax Expense	\$ 1,323	\$ 1,172
4		
5 Interest Expense	\$ 7,235	\$ 9,405
6 Repayment of Principal	\$ 6,901	\$ 8,972
7		
8		
9 <b>DSC</b>		
10 [1+2+3] ÷ [5+6]	2.91	2.23

**CASH FLOW ANALYSIS**

Line No.		Staff Recommended W/O Proposed Loans	Pro Forma With Proposed Loans
1	<b>Cash Inflows</b>		
2	Revene - Base Rates	\$ 160,650	\$ 160,650
3	Revenue - Surcharge for Principle, Interest and Taxes	\$ -	\$ -
4	Total Revenue	<u>\$ 160,650</u>	<u>\$ 160,650</u>
	<b>Cash Outflows</b>		
5	Salaries and Wages	\$ 50,769	\$ 50,769
6	Salaries and Wages - Officers and Stockholders	\$ -	\$ -
7	Employee Pensions and Benefits	\$ -	\$ -
8	Purchased Power	\$ 11,788	\$ 11,788
9	Chemicals	\$ -	\$ -
10	Repairs and Maintenance	\$ 8,139	\$ 8,139
11	Office Supplies and Expenses	\$ 2,956	\$ 2,956
12	Outside Services	\$ 11,563	\$ 11,563
13	Water Testing	\$ 1,810	\$ 1,810
14	Outside Services - Other	\$ -	\$ -
15	Rental of Building/Real Property	\$ 6,000	\$ 6,000
16	Transportation Expenses	\$ -	\$ -
17	Insurance	\$ 7,374	\$ 7,374
18	Rate Case Expense	\$ -	\$ -
19	Bad Debt Expense	\$ -	\$ -
20	Miscellaneous Expense	\$ 9,784	\$ 9,784
21	Depreciation Expense	\$ 34,825	\$ 34,825
22	Amortization of CIAC	\$ -	\$ -
23	Taxes Other than Income	\$ 5,558	\$ 5,558
24	Property Taxes	\$ 3,761	\$ 3,761
25	Income Taxes	\$ 1,323	\$ 1,172
26	Deferred Income Taxes	\$ -	\$ -
27	Total Expenses	<u>\$ 155,650</u>	<u>\$ 155,499</u>
28	<b>Operating Income</b>	\$ 5,000	\$ 5,151
29	Plus Depreciation Expense	\$ 34,825	\$ 34,825
30	Less: WIFA Loan Payment Interest	\$ 7,235	\$ 9,405
31	Less: WIFA Loan Payment Principle	\$ 6,901	\$ 8,972
32	<b>Cash Flow from Operations before WIFA Reserve</b>	<u>\$ 25,689</u>	<u>\$ 21,600</u>
33	WIFA Reserve (20% of Principal and Interest)	\$ 2,827	\$ 3,675
34	<b>Cash Flow from Operations after WIFA Reserve</b>	<u><u>\$ 22,862</u></u>	<u><u>\$ 17,924</u></u>

Monthly Usage Charge	Present	Company Proposed	Staff Recommended
5/8" x 3/4" Meter	\$ 25.00	\$ 50.00	\$ 25.00
3/4" Meter	25.00	50.00	25.00
1" Meter	41.67	83.34	41.67
1 1/2" Meter	83.33	166.66	83.33
2" Meter	133.33	266.66	133.33
3" Meter	266.67	533.40	266.67
4" Meter	416.67	833.34	416.67
6" Meter	833.33	1,666.66	833.33
Gallons included in Minimum	0.00	0.00	0.00
<b>Commodity Charge (Per 1,000 Gallons)</b>			
<u>5/8" x 3/4" Meter and 3/4" Meter (Residential, Industrial &amp; Commercial)</u>			
1 - 3,000 gallons	\$ 1.50	\$ 3.00	N/A
3,001 - 7,000 gallons	2.00	4.00	N/A
Over 7,000 gallons	2.90	5.80	N/A
First 3,000 gallons	N/A	N/A	1.7500
3,001 to 7,000 gallons	N/A	N/A	3.0000
Over 7,000 gallons	N/A	N/A	4.1000
<u>1" Meter (Residential, Industrial &amp; Commercial)</u>			
1 - 7,000 gallons	2.00	4.00	N/A
Over 7,000 gallons	2.90	5.80	N/A
First 7,000 gallons	N/A	N/A	3.0000
Over 7,000 gallons	N/A	N/A	4.1000
<u>1 1/2" Meter (Residential, Industrial &amp; Commercial)</u>			
1 - 15,000 gallons	2.00	4.00	N/A
Over 15,000 gallons	2.90	5.80	N/A
First 15,000 gallons	N/A	N/A	3.0000
Over 15,000 gallons	N/A	N/A	4.1000
<u>2" Meter (Residential, Industrial &amp; Commercial)</u>			
1 - 24,000 gallons	2.00	4.00	N/A
Over 24,000 gallons	2.90	5.80	N/A
First 24,000 gallons	N/A	N/A	3.0000
Over 24,000 gallons	N/A	N/A	4.1000
<u>3" Meter (Residential, Industrial &amp; Commercial)</u>			
1 - 48,000 gallons	2.00	4.00	N/A
Over 48,000 gallons	2.90	5.80	N/A
First 48,000 gallons	N/A	N/A	3.0000
Over 48,000 gallons	N/A	N/A	4.1000

<b>4" Meter (Residential, Industrial &amp; Commercial)</b>			
1 - 75,000 gallons	2.00	4.00	N/A
Over 75,000 gallons	2.90	5.80	N/A
First 75,000 gallons	N/A	N/A	3.0000
Over 75,000 gallons	N/A	N/A	4.1000
<b>6" Meter (Residential, Industrial &amp; Commercial)</b>			
1 - 150,000 gallons	2.00	4.00	N/A
Over 150,000 gallons	2.90	5.80	N/A
First 150,000 gallons	N/A	N/A	3.0000
Over 150,000 gallons	N/A	N/A	4.1000

**Service Charges**

Establishment	\$ 25.00	\$ 50.00	\$ 25.00
Establishment (After Hours)	50.00	100.00	N/A
Reconnection (Delinquent)	30.00	60.00	30.00
Reconnection (Delinquent) after hours	50.00	100.00	N/A
Meter Test (If Correct)	15.00	30.00	15.00
Deposit	*	*	*
Deposit Interest	N/A	*	*
Re-Establishment (Within 12 Months)	**	**	**
NSF Check	20.00	40.00	20.00
Deferred Payment (Per Annum)	1.5%	1.5%	1.5%
Meter Re-Read (If Correct)	15.00	30.00	15.00
Late Fee (Per Month)	1.5%	1.5%	1.5%
Monthly Service Charge for Fire Sprinkler	***	***	***
After hours service charge	N/A	N/A	50.00

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

\*\* Months off system times the monthly minimum (R14-2-403.D)

\*\*\* 2.00 percent of monthly minimum charge for a comparable sized meter connection, but no less than \$10.00 per month. The service charge for fire sprinklers is only applicable for service lines separate and distinct from the primary water service line.

Service Line Charges			Service Line Charge	Meter Installation	Total Recommend
5/8 x 3/4-inch Meter	\$ 600.00	\$ 1,200.00	\$ 445.00	\$ 155.00	\$ 600.00
3/4-inch Meter	700.00	1,400.00	445.00	255.00	700.00
1-inch Meter	810.00	1,620.00	495.00	315.00	810.00
1 1/2-inch Meter	1,075.00	2,150.00	550.00	525.00	1,075.00
2-inch Turbine Meter	1,875.00	3,750.00	830.00	1,045.00	1,875.00
2-inch Compound Meter	2,720.00	5,440.00	830.00	1,890.00	2,720.00
3-inch Turbine Meter	2,715.00	5,430.00	1,045.00	1,670.00	2,715.00
3-inch Compound Meter	3,710.00	7,420.00	1,165.00	2,545.00	3,710.00
4-inch Turbine Meter	4,160.00	8,320.00	1,490.00	2,670.00	4,160.00
4-inch Compound Meter	5,315.00	10,630.00	1,670.00	3,645.00	5,315.00
6-inch Turbine Meter	7,235.00	14,470.00	2,210.00	5,025.00	7,235.00
6-inch Compound Meter	9,250.00	18,500.00	2,330.00	6,920.00	9,250.00

**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	8,353	\$ 41.42	\$ 82.85	\$ 41.42	100.00%
Median Usage	5,652	34.80	69.61	\$ 34.80	100.00%
<b>Staff Recommended</b>					
Average Usage	8,353	\$ 41.42	\$ 47.80	\$ 6.37	15.39%
Median Usage	5,652	34.80	38.21	\$ 3.40	9.77%

**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
-	\$ 25.00	\$ 50.00	100.00%	\$ 25.00	0.00%
1,000	26.50	53.00	100.00%	26.75	0.94%
2,000	28.00	56.00	100.00%	28.50	1.79%
3,000	29.50	59.00	100.00%	30.25	2.54%
4,000	31.50	63.00	100.00%	33.25	5.56%
5,000	33.50	67.00	100.00%	36.25	8.21%
6,000	35.50	71.00	100.00%	39.25	10.56%
7,000	37.50	75.00	100.00%	42.25	12.67%
8,000	40.40	80.80	100.00%	46.35	14.73%
9,000	43.30	86.60	100.00%	50.45	16.51%
10,000	46.20	92.40	100.00%	54.55	18.07%
11,000	49.10	98.20	100.00%	58.65	19.45%
12,000	52.00	104.00	100.00%	62.75	20.67%
13,000	54.90	109.80	100.00%	66.85	21.77%
14,000	57.80	115.60	100.00%	70.95	22.75%
15,000	60.70	121.40	100.00%	75.05	23.64%
16,000	63.60	127.20	100.00%	79.15	24.45%
17,000	66.50	133.00	100.00%	83.25	25.19%
18,000	69.40	138.80	100.00%	87.35	25.86%
19,000	72.30	144.60	100.00%	91.45	26.49%
20,000	75.20	150.40	100.00%	95.55	27.06%
25,000	89.70	179.40	100.00%	116.05	29.38%
30,000	104.20	208.40	100.00%	136.55	31.05%
35,000	118.70	237.40	100.00%	157.05	32.31%
40,000	133.20	266.40	100.00%	177.55	33.30%
45,000	147.70	295.40	100.00%	198.05	34.09%
50,000	162.20	324.40	100.00%	218.55	34.74%
75,000	234.70	469.40	100.00%	321.05	36.79%
100,000	307.20	614.40	100.00%	423.55	37.87%