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MEMORANDUM

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2015 NOV 17 A 8:40

FROM: Thomas M. Broderick  
Director  
Utilities Division

AZ CORP COMMISSION  
DOCKET CONTROL

*for*

DATE: November 17, 2015

RE: STAFF REPORT FOR PINE VALLEY WATER COMPANY, INC.'S  
APPLICATION FOR AN INCREASE IN ITS RATES (DOCKET NO. W-  
02181A-15-0216)

Attached is the Staff Report for Pine Valley Water Company, Inc.'s application for an increase in its rates. Staff recommends approval of the rate application using Staff's recommended rates and charges.

Any party who wishes may file comments to the Staff Report with the Commission's Docket Control by 4:00 p.m. on or before November 27, 2015.

TMB:BCA:red\ML

Originator: Brendan Aladi

Arizona Corporation Commission  
**DOCKETED**  
NOV 17 2015

DOCKETED BY

Service List for: Pine Valley Water Company, Inc.  
Docket No. W-02181A-15-0216

Mr. Lance Wischmeier  
Pine Valley Water Company  
480 Raintree Road  
Sedona, Arizona 86351

Mr. Thomas M. Broderick  
Director, Utilities Division  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

Ms. Janice M. Alward  
Chief, Legal Division  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

Mr. Dwight Nodes  
Chief Administrative Law Judge, Hearing Division  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, Arizona 85007

**STAFF REPORT  
UTILITIES DIVISION  
ARIZONA CORPORATION COMMISSION**

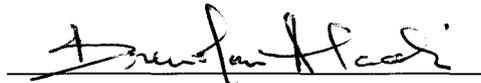
**PINE VALLEY WATER COMPANY, INC.  
DOCKET NO. W-02181A-15-0216**

**APPLICATION FOR A PERMANENT RATE INCREASE**

**NOVEMBER 17, 2015**

## STAFF ACKNOWLEDGMENT

The Staff Report for Pine Valley Water Company, Inc. ("Pine Valley" or "Company") Docket No. W-02181A-15-0216, was the responsibility of the Staff members listed below. Brendan Aladi was responsible for the review and analysis of the Company's application for a permanent rate increase. Frank Smaila was responsible for the engineering and technical analysis. Carmen Madrid was responsible for reviewing the Arizona Corporation Commission's records on the Company and reviewing customer complaints filed with the Commission.



Brendan Aladi  
Public Utilities Analyst



Frank Smaila  
Utilities Engineer



Carmen Madrid  
Consumer Analyst I

**EXECUTIVE SUMMARY**  
**PINE VALLEY WATER COMPANY, INC.**  
**DOCKET NO. W-02181A-15-0216**

On June 26, 2015, Pine Valley Water Company, Inc. ("Pine Valley" or "Company") filed an application with the Arizona Corporation Commission ("Commission") for a permanent rate increase. On August 13, 2015, Pine Valley filed an updated application.

Pine Valley is a class E for-profit Arizona public service corporation that provides potable water service to approximately 170 customers. The Company's service area is located approximately ten miles southeast of Sedona, Arizona in Yavapai County.

Pine Valley proposed a \$33,599 or a 35.0 percent revenue increase from test year revenue of \$95,996 to \$129,595. The proposed revenue increase would produce an operating income of \$30,315 for a 23.39 percent operating margin. The Company's proposed original cost rate base ("OCRB") is \$85,253. The Company's proposed fair value rate base ("FVRB") is also \$85,253. The Company's proposed rates would increase the typical residential bill with a median usage of 4,162 gallons from \$32.74 to \$49.94, for an increase of \$17.20, or 52.5 percent.

Staff recommends a \$5,333 or 5.51 percent increase over the Staff adjusted test year revenue of \$96,811 to \$102,144. Staff's recommended revenue would produce an operating income of \$10,956 for a 10.73 percent operating margin. Staff recommends an original OCRB of \$64,925, which is also Staff's recommended FVRB. Staff's recommended rates would increase the typical residential 5/8 x 3/4-inch meter bill with a median usage of 4,162 gallons from \$32.74 to \$35.13, for an increase of \$2.39, or 7.3 percent as shown on Schedule BCA-5.

## **RECOMMENDATIONS**

Staff recommends:

1. The Commission approve the Staff-recommended rates and charges as shown on Schedule BCA-4.
2. That the Company be put on notice that it should appropriately record all plant transactions, including retirements, in accordance with NARUC guidelines. If the Company fails to do so, Staff could recommend sanctions in the next rate case.
3. That the storage tanks be transferred to the water company at net book value, it is not appropriate for backbone plant to be leased by a utility, in case of a law suit or other interference may interrupt the operation of the water system.
4. 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 Decision in this matter is issued.
5. Staff recommends that any increase in rates approved by the Commission not become effective until the first day of the month after the Company files with

Docket Control, as a compliance item in this docket, documentation from Arizona Department of Environmental Quality ("ADEQ") indicating that Pine Valley's water system is compliant with ADEQ requirements (See Section E, ADEQ Compliance, for further discussion).

6. Staff recommends that any increase in rates approved by the Commission not become effective until the first day of the month after the Company files with Docket Control, as a compliance item in this docket, documentation from Arizona Department of Water Resources ("ADWR") indicating that Pine Valley's water system is compliant with ADWR requirements governing water providers and/or community water systems (See Section F, ADWR Compliance, for further discussion).
7. Staff recommends that the Company utilize the depreciation rates as delineated in Table 9 of the attached Engineering Report on a going-forward basis.
8. Staff recommends that the Company file with Docket Control, as a compliance item in this docket and within 90 days of the effective date of a decision in this proceeding, documentation demonstrating that the Company provided well security in the form of a lockable well enclosure or lockable six foot fence.
9. Staff recommends that the Company file with Docket Control, as a compliance item in this docket and within 90 days of the effective date of a decision in this proceeding, at least three Best Management Practices ("BMPs") in the form of tariffs that substantially conform to the templates created by Staff. These BMP templates are available on the Commission's website, [www.azcc.gov/divisions/utilities/water/forms.asp](http://www.azcc.gov/divisions/utilities/water/forms.asp).

Staff further recommends that a maximum of two (2) BMPs come from the "Public Awareness/Public Relations" or "Education and Training" categories. The Company may request cost recovery of the actual costs associated with the BMPs implemented in its next general rate application.

10. Staff recommends that the Company complete all necessary generator electrical tie-ins so that it can be utilized during power interruptions.
11. Staff recommends that within 90 days of the effective date of the order in this matter Pine Valley correct substandard electrical installations at the Well Pump area and Booster Building and file, as a compliance item with the Commission's Docket Control, documentation demonstrating that the substandard electrical installations have been corrected (See Section I-7, Plant Deficiencies Identified During Site Inspection, for further discussion).

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**SCHEDULES**

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**Attachment**

Engineering Report.....	Attachment A
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**FACT SHEET**

**Current Rates:** Decision No. 63681 dated May 24, 2001.

**Type of Ownership:** C-Corporation

**Location:** The Company's service area is located approximately ten miles southeast of Sedona, Arizona in Yavapai County.

**Rate Application Docketed:** June 26, 2015

**Current Test year Ended:** December 31, 2014

Rates

	<u>Current Rates</u>	<u>Company Proposed Rates</u>	<u>Staff Recommended Rates</u>
<b>Monthly Minimum Charges:</b>			
5/8 x 3/4-inch meter	\$18.65	\$37.50	\$20.50
<b>Gallons In Minimum</b>	0	0	0
<b>5/8 x 3/4 -inch Residential Customer Commodity Rate:</b>			
Per 1,000 gallons:			
From 1 to 4,000 Gallons	\$3.32		\$3.45
From 4,001 to 14,000 Gallons	\$4.98		\$5.15
Over 14,000 Gallons	\$5.98		\$6.20
From 1 to 5,000 Gallons		\$2.99	
From 5,001 to 10,000 Gallons		\$3.49	
Over 10,000 Gallons		\$3.99	
<u>Typical Residential Bill Analysis</u>	Present	Company Proposed	Staff Recommended
Based on median usage of 4,162 gallons	\$32.74	\$49.94	\$35.13

Customers:

Number of customers in prior rate case (12/31/99): 127

Average number of customers in the current test year (12/31/14): 170

Pine Valley Water Company, Inc.

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Page 2

Current Test Year customers by meter size:

5/8 X 3/4-inch	147
3/4-inch	1
1-inch	21
2-Inch	1

Seasonal customers: 0

Customer notification: For rate application was filed on June 26, 2015.

Customer Complaints Concerning Rate Application: 7

Opinions – Rate Case Items - Opposed 51/170 = 30 Percent

## SUMMARY OF RATE FILING

Pine Valley Water Company, Inc. ("Pine Valley" or "Company") proposed a \$33,599 or a 35.0 percent revenue increase from test year revenue of \$95,996 to \$129,595. The proposed revenue increase would produce an operating income of \$30,315 for a 23.39 percent operating margin. The Company's proposed original cost rate base ("OCRB") is \$85,253. The Company's proposed fair value rate base ("FVRB") is also \$85,253. The Company's proposed rates would increase the typical residential bill with a median usage of 4,162 gallons from \$32.74 to \$49.94, for an increase of \$17.20, or 52.5 percent.

The test year results as adjusted by Utilities Division Staff ("Staff"), for Pine Valley show total operating revenue of \$96,811, operating income of \$6,728, for a 6.95 percent operating margin. Staff's recommended OCRB is \$64,925 as shown on Schedule BCA-1, page 1 of 3. This also represents Staff's proposed FVRB.

Staff recommends a \$5,333 or 5.51 percent increase over the Staff adjusted test year revenue of \$96,811 to \$102,144. Staff's recommended revenue would produce an operating income of \$10,956 for a 10.73 percent operating margin and a cash flow of \$14,867 as shown on Schedule BCA-1, page 1 of 3. Staff recommends an original OCRB of \$64,925, which is also Staff's recommended FVRB. Staff's recommended rates would increase the typical residential 5/8 x 3/4-inch meter bill with a median usage of 4,162 gallons from \$32.74 to \$35.13, for an increase of \$2.39, or 7.3 percent as shown on Schedule BCA-5.

According to the application, the Company requests a rate increase due to increases in the cost of operations, installation of arsenic treatment system and investment in other plant.

## BACKGROUND

On June 26, 2015, Pine Valley filed an application with the Arizona Corporation Commission ("Commission") for a permanent rate increase. On August 13, 2015, Pine Valley filed an updated application. During the test year ended December 31, 2014, Pine Valley provided water service to 170 metered customers.

Pine Valley is a class E for-profit Arizona public service corporation that provides potable water service. The Company's service area is located approximately ten miles southeast of Sedona, Arizona in Yavapai County. On July 15, 2015, Staff filed a Letter of Deficiency for Pine Valley rate application. On September 8, 2015, the rate application was deemed sufficient.

The Company was granted its Certificate of Convenience and Necessity ("CC&N") in Decision No. 42256, dated July 28, 1972. The Company's current rates and charges were authorized in Decision No. 63681, dated May 24, 2001.

Pine Valley is a wholly-owned subsidiary of Lance Enterprises, Inc.; which is in the business of selling and constructing water storage tanks. Lance Enterprises operates the water company

through a management contract, and directly pays many of the operating expenses that are incurred on behalf of Pine Valley.

## CONSUMER SERVICES

Staff reviewed the Commission's records for the period beginning January 1, 2012 to October 26, 2015 and found seven complaints, all resolved and closed; and 51 opinions opposing the rate increase. A notarized affidavit of mailing for the Customer Notice was filed on June 26, 2015.

## COMPLIANCE

A check of the Utilities Division Compliance Section Database indicates that there are currently no delinquencies for Pine Valley as of July 9, 2015.

## ENGINEERING ANALYSIS AND RECOMMENDATIONS

An inspection of the Company's water system was conducted by Frank Smaila and Jeff Francis, Staff Engineers, accompanied by Company Representative, Mr. Lance Wischmeier (Owner and Operator) on July 24, 2015. A complete discussion of Staff's technical findings and recommendations and a complete description of the water system are provided in the attached Engineering Report.

## RECORD KEEPING - PLANT RETIREMENTS

Staff reviewed Pine Valley records and found that they were in substantial compliance with the 1996 publication of the National Association of Regulatory Utility Commissioners ("NARUC") Uniform System of Accounts ("USOA"). However, Staff is concerned that the Company may not always record its plant retirements as required by the NARUC USOA. Accounting Instruction No. 5, Paragraph D, states in part:

**When an item of plant is retired, account 108 – Accumulated Depreciation and Amortization of Utility Plant in Service, shall be charged and the appropriate plant accounts shall be credited with the entire recorded original cost of plant** retired regardless of the amounts of depreciation which has been accumulated for this particular item of plant . . . (Emphasis added)

Staff notes that the Company recorded retirements in its original filing as fully depreciated plant, did not charge accumulated depreciation of utility plant in service and did not credit the appropriate plant account for the original cost of plant.

Staff recommends that the Company be put on notice, that it should appropriately record all plant transactions, including retirements, following NARUC guidelines. If the Company fails to do so, Staff could recommend sanctions in the next rate case.

## GUIDELINES FOR COST ALLOCATIONS AND AFFILIATE TRANSACTIONS

Staff reviewed Pine Valley records and found that they were in substantial compliance with the 1996 publication of the NARUC USOA. However, Staff notes that Pine valley is leasing storage tanks from its Parent Company (Lance Enterprises). A water utility should own all of its plant assets.

**Generally, transfer of a capital asset from the utility to its non-regulated affiliate should be at the greater of prevailing market price or net book value, except as otherwise required by law or regulation. Generally, transfer of assets from an affiliate to the utility should be at the lower of prevailing market price or net book value, except as otherwise required by law or regulation. To determine prevailing market value, an appraisal should be required at certain value thresholds as determined by regulators. (Emphasis Added).**

Staff recommends that the storage tanks be transferred to the water company at net book value, it is not appropriate for backbone plant to be leased by a utility, in case of a law suit or other interferences this may interrupt the operation of the water system.

### RATE BASE

The Company did not propose a fair value rate base that differs from its original cost rate base. Staff's adjustments decreased the Company's proposed rate base by \$20,328, from \$85,253 to \$64,925 as shown on Schedule BCA-2, page 1 of 4.

#### *Plant-in-Service*

Adjustment A decreases plant-in-service by \$4,684, from \$248,374 to \$243,690 as shown on Schedule BCA-1, page 1 of 4. This reflects the reclassification of \$7,225 from Acct. No. 320.1, water treatment plant to Acct. No. 620.1 arsenic media expense and recognition of \$2,541 in supported water treatment plant.

#### *Accumulated Depreciation*

Adjustment B increases accumulated Depreciation by \$5,493, from \$163,121 to \$168,614, as shown on Schedule BCA-2, page 1 of 4. This reflects the impact of Staff's recalculation of accumulated depreciation based on Staff adjusted Plant-in-Service and Commission approved rates.

#### *Customer Deposit*

Adjustment C increases customer deposit by \$629, from \$0 to \$629, as shown on Schedule BCA-1, page 1 of 4.

*Advances in Aid of Construction ("AIAC")*

Adjustment D increased net AIAC by \$18,790, from \$0 to \$18,790, as shown on Schedule BCA-2, page 1 of 4. In 2013, 31 Pine Valley customers loaned \$32,000 to the Company to assist in the purchase and installation of an arsenic removal system. The Company and the customers agreed that the Company would provide the customers with free water in lieu of the Company making cash payments on the \$32,000 loan until it is paid off. For rate making purposes, Staff treated the \$32,000 as AIAC because the Company used customer provided funds. Since the loan refunds are going to be paid off before the Order in this proceeding goes into effect next year the Company's cash flow will improve.

*Working Capital*

Pine Valley did not claim any working capital allowance. Staff's adjustments F and G resulted in a net increase to working capital of \$9,268, from \$0 to \$9,268, as shown on Schedule BCA-2, pages 1 and 4.

Cash working capital was calculated by using the formula method which equals one-eighth of the operating expenses less depreciation, taxes, purchased power and purchased water expenses plus one twenty-fourth of purchased power and purchased water expenses.

**OPERATING INCOME STATEMENT**

*Operating Revenue*

Other Water Revenue – Adjustment A increases other water revenue by \$815, from \$0 to \$815, as shown on Schedule BCA-3, pages 1 and 2 to reflect recognition of other water revenue.

*Operating Expenses*

Staff's adjustments to operating expenses resulted in a net decrease of \$9,197, from \$99,280 to \$90,083, as shown on Schedule BCA-3, page 1 and 2. Details of Staff's adjustments are presented below.

Arsenic Media Expense – Adjustment B increases arsenic media expense by \$7,225, from \$0 to \$7,225, as shown on Schedule BCA-3, pages 1 and 2 to reflect the reclassification of \$7,225 from Acct. No. 320.1, water treatment plant to Acct. No. 620.1, arsenic media expense.

Outside Services Expense – Adjustment C decreases outside services expense by \$19,200 from \$60,000 to \$40,800, as shown on Schedule BCA-3, pages 1 and 2. Staff calculated and recognized \$20 per customer, per month in management fee for all services allowed for a utility this size ( $\$20 \times 170 \times 12 = \$40,800$ ).

Water Testing – Adjustment D increases water testing expense by \$620, from \$669 to \$1,289, as shown on Schedule BCA-3, pages 1 and 2 to reflect Staff Engineer’s calculation of water testing expense.

Depreciation Expense – Adjustment E increases depreciation expense by \$383 from \$3,528 to \$3,911, as shown on Schedule BCA-3, pages 1 and 2. Staff’s depreciation expense reflects application of Staff’s recommended depreciation rates to Staff’s recommended plant balances.

Property Taxes – Adjustment F increases property tax by \$177 from \$3,610 to \$3,787, to reflect Staff’s recalculation of property tax expense, based on the Arizona Department of Revenue (“ADOR”) methodology as shown on Schedule BCA-3, page 5 of 5.

Income Tax Expense – Adjustment H increases test year income tax expense by \$1,598, from \$50 to \$1,648, to reflect Staff’s calculation of the income tax obligation on Staff’s adjusted test year taxable income, as shown on Schedule BCA-3, page 1. Staff’s calculation is shown on Schedule BCA-1 page 3.

## **REVENUE REQUIREMENT**

Staff recommends total annual operating revenue of \$102,144 as shown on Schedule BCA-3, page 1 of 5. Staff recommended revenue is an increase of \$5,333 or 5.51 percent over the Staff adjusted test year revenue of \$96,811. Staff’s recommended revenue would produce an operating income of \$10,956 for a 10.73 percent operating margin and a cash flow of \$14,867 as shown on Schedule BCA-1, page 1 of 3. Staff recommends an OCRB of \$64,925.

Staff’s total revenue requirement of \$102,144, provides the Company with sufficient cash flow to pay operating expenses and contingencies. Cash flow needs determined the revenue requirement.

## **RATE DESIGN**

Schedule BCA-4 presents a complete list of the Company’s present, proposed, and Staff’s recommended rates and charges.

The Company’s current rate structure is comprised of three tiers, with a first-tier break-over of 4,000; 14,000-gallons for the second-tier; and over 14,000-gallons for the third-tier. Its monthly minimum charges do not include any gallons. In this proceeding, the Company proposes to retain a three tiered rate structure, with a first-tier break-over of 5,000-gallon; 10,000-gallons for the second tier; and over 10,000-gallons for the third-tier.

The Company’s proposed rates would increase the typical residential bill, for customers with a 5/8 x 3/4 - inch meter and a median usage of 4,162 gallons, from \$32.74 to \$49.94 for an increase of \$17.20, or 52.50 percent as shown on Schedule BCA-5.

Staff's recommended rates would increase the typical residential 5/8 x 3/4-inch meter bill with a median usage of 4,162 gallons from \$32.74 to \$35.13, for an increase of \$2.39, or 7.3 percent as shown on Schedule BCA-5.

## MISCELLANEOUS SERVICE CHARGES

Establishment Charge – The Company proposes to increase the establishment service charge from \$35 to \$45. Staff recommends a charge of \$40.00.

Establishment Charge (After Hours) – The Company proposes to increase the establishment service charge (after hours) from \$45 to \$50. Staff recommends elimination of the Company's current Establishment (After Hours) charge. Instead of this charge, Staff recommends the creation of a separate \$50 after-hours service charge to be applied to any service performed after hours at the customer's request and/or for the customer's convenience.

Reconnection (Delinquent) Charge – The Company proposes to increase the reconnection (delinquent) service charge from \$40 to \$50. Staff recommends the Reconnection (Delinquent) Charge of \$40.

Reconnection (Delinquent and After Hours) Charge – The Company is proposing to add a new reconnection (delinquent and after hours) service charge of \$50. Staff recommends the Company's request be denied. Instead of this charge, Staff recommends the creation of a separate \$50 after-hours service charge to be applied to any service performed after hours at the customer's request and/or for the customer's convenience.

Meter Test Charge – The Company proposes no change to meter test service charge of \$50. Staff recommends the Meter Test Charge of \$30 since the Commission provides meter testing at no charge.

NSF Check Charge – The Company proposes to increase the NSF check charge from \$25 to \$40 + Bank Fees. Staff recommends \$25 and no bank fees. Staff requested support for the increase from the Company but no response was received.

Meter Re-read – The Company proposes to increase the meter re-read charge from \$15 to \$30. Staff recommends a charge of \$25.00 so as not to exceed the charges for similar work requiring a field visit.

Late Payment Penalty Charge – The Company is proposing to increase late fee penalty from \$5 to \$10. The Company was asked to support its proposed late payment penalty charge. Staff requested information regarding how many customers pay late to support the late fee. The Company did not respond to multiple requests. Staff continues to recommend \$5.

Deposit – The Company proposes to change the current deposit from 2.5 times average bill to \$75 for Renters and 2 times monthly minimum to \$75 for Owners. Staff recommends R14-2-403B.

Deferred Payment – The Company proposes to change the deferred payment from 8 percent per month to 10 percent per month. Staff typically recommends 1 1/2 percent per month. The Company did not provide any information to warrant departure from this rule.

After Hours Service Charge – Staff recommends adding a new \$50 after hours charge. An additional fee for service provided after normal business hours is appropriate when such service is at the customer's request or for the customer's convenience. Such a tariff compensates the utility for additional expenses incurred from providing after-hours service.

Moreover, it is appropriate to apply an after-hours service charge in addition to the charge for any utility service provided after hours at the customer's request or for the customer's convenience. For example, under Staff's proposal, a customer would be subject to a \$40 Establishment fee if it is done during normal business hours, but would pay an additional \$50 after-hours fee if the customer requested that the establishment be done after normal business hours.

## **SERVICE LINE AND METER INSTALLATION CHARGES**

The Company has requested changes to its service line and meter installation charges as shown on Schedule BCA-4.

Staff has recommended service line and meter installation charges based upon an analysis of costs as discussed in the attached Engineering Report. Further, since the Company may at times install meters on existing service lines, it would be appropriate for some customers to only be charged for the meter installation. Therefore, Staff recommends separate service line and meter installation charges. Staff recommends approval of Staff's service line and meter installation charges are shown on Schedule BCA-4.

## **STAFF'S RECOMMENDATIONS**

Staff recommends:

1. The Commission approve the Staff-recommended rates and charges as shown on Schedule BCA-4.
2. That the Company be put on notice that it should appropriately record all plant transactions, including retirements, following NARUC guidelines. If the Company fails to do so, Staff could recommend sanctions in the next rate case.
3. Staff recommends that the storage tanks be transferred to the water company at net book value, it is not appropriate for backbone plant to be leased by a utility, in case of a law suit or other interference may interrupt the operation of the water system.
4. 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 Decision in this matter is issued.

5. Staff recommends that any increase in rates approved by the Commission not become effective until the first day of the month after the Company files with Docket Control, as a compliance item in this docket, documentation from Arizona Department of Environmental Quality ("ADEQ") indicating that Pine Valley's water system is compliant with ADEQ requirements (See Section E, ADEQ Compliance, for further discussion).
6. Staff recommends that any increase in rates approved by the Commission not become effective until the first day of the month after the Company files with Docket Control, as a compliance item in this docket, documentation from Arizona Department of Water Resources ("ADWR") indicating that Pine Valley's water system is compliant with ADWR requirements governing water providers and/or community water systems (See Section F, ADWR Compliance, for further discussion).
7. Staff recommends that the Company utilize the depreciation rates as delineated in Table 9 of the attached Engineering Report on a going-forward basis.
8. Staff recommends that the Company file with Docket Control, as a compliance item in this docket and within 90 days of the effective date of a decision in this proceeding, documentation demonstrating that the Company provided well security in the form of a lockable well enclosure or lockable six foot fence.
9. Staff recommends that the Company file with Docket Control, as a compliance item in this docket and within 90 days of the effective date of a decision in this proceeding, at least three Best Management Practices ("BMPs") in the form of tariffs that substantially conform to the templates created by Staff. These BMP templates are available on the Commission's website, [www.azcc.gov/divisions/utilities/water/forms.asp](http://www.azcc.gov/divisions/utilities/water/forms.asp).  
  
Staff further recommends that a maximum of two (2) BMPs come from the "Public Awareness/Public Relations" or "Education and Training" categories. The Company may request cost recovery of the actual costs associated with the BMPs implemented in its next general rate application.
10. Staff recommends that the Company complete all necessary generator electrical ties so that it can be utilized during power interruptions.
11. Staff recommends that within 90 days of the effective date of the order in this matter Pine Valley correct substandard electrical installations at the Well Pump area and Booster Building and file, as a compliance item with the Commission's Docket Control, documentation demonstrating that the substandard electrical installations have been corrected (See Section I-7, Plant Deficiencies Identified During Site Inspection, for further discussion).

**SUMMARY OF FILING**

Line No.		-- Present Rates --		Proposed	
		Company as Filed	Staff as Adjusted	Company as Filed	Staff Recommended as Adjusted
1	Revenues:				
2	Metered Water Revenue	\$ 95,996	\$ 95,996	\$ 129,595	\$ 101,329
3	Unmetered Water Revenue	-	-	-	-
4	Other Water Revenues	-	815	-	815
5					
6	Total Operating Revenue	<u>\$ 95,996</u>	<u>\$ 96,811</u>	<u>\$ 129,595</u>	<u>\$ 102,144</u>
7					
8	Operating Expenses:				
9	Operation and Maintenance	\$ 92,092	\$ 80,737	\$ 92,092	\$ 80,737
10	Depreciation	3,528	3,911	3,528	3,911
11	Property & Other Taxes	3,610	3,787	3,610	3,857
12	Income Tax	50	1,648	50	2,684
13					
14	Total Operating Expense	<u>\$ 99,280</u>	<u>\$ 90,083</u>	<u>\$ 99,280</u>	<u>\$ 91,188</u>
15					
16	Operating Income/(Loss)	<u>\$ (3,284)</u>	<u>\$ 6,728</u>	<u>\$ 30,315</u>	<u>\$ 10,956</u>
17					
18					
19	Rate Base O.C.L.D.	\$ 85,253	\$ 64,925	\$ 85,253	\$ 64,925
20					
21	Rate of Return - O.C.L.D.	-3.85%	10.36%	35.56%	16.88%
22					
25	Operating Margin	N/M	6.95%	23.39%	10.73%
26					
27	Cash Flow (L10+ L16 - L23)	\$ 244	\$ 10,639	\$ 33,843	\$ 14,867

NOTE: Operating Margin represents the proportion of funds available to pay interest and other below the line or non-ratemaking expenses.

REVENUE REQUIREMENT CALCULATION

LINE NO.	DESCRIPTION	[A]	[B]	[A]	[B]
		COMPANY ORIGINAL COST	COMPANY FAIR VALUE	STAFF ORIGINAL COST	STAFF FAIR VALUE
1	Adjusted Rate Base	\$ 85,253	\$ 85,253	\$ 64,925	\$ 64,925
2	Adjusted Operating Income (Loss)	\$ (3,284)	\$ (3,284)	\$6,728	\$ 6,728
3	Current Rate of Return (L2 / L1)	-3.85%	-3.85%	10.36%	10.36%
4	Required Rate of Return	35.56%	35.56%	16.88%	16.88%
5	Required Operating Income (L4 * L1)	\$ 30,315	\$ 30,315	\$ 10,956	\$ 10,956
6	Operating Income Deficiency (L5 - L2)	\$ 33,599	\$ 33,599	\$ 4,228	\$ 4,228
7	Gross Revenue Conversion Factor	1.0000	1.0000	1.2614	1.2614
8	Required Revenue Increase (L7 * L6)	\$ 33,599	\$ 33,599	\$ 5,333	\$ 5,333
9	Adjusted Test Year Revenue	\$ 95,996	\$ 95,996	\$ 96,811	\$ 96,811
10	Proposed Annual Revenue (L8 + L9)	\$ 129,595	\$ 129,595	\$ 102,144	\$ 102,144
11	Required Increase in Revenue (%)	35.00%	35.00%	5.51%	5.51%
12	Operating Margin			10.73%	10.73%

References:

- Column (A): Company's Application
- Column (B): Company's Application
- Column (C): Staff Schedules OCRB, GRCF, TYOI
- Column (D): Staff Schedules OCRB, GRCF, TYOI

**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 Tax Rate (Line 17) + Property Tax Factor (Line 22)	20.7224%			
5	Subtotal (L3 - L4)	79.2776%			
6	<b>Revenue Conversion Factor (L1 / L5)</b>	<b>1.261391</b>			
<i>Calculation of Uncollectible Factor:</i>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 17)	19.6750%			
9	One Minus Combined Income Tax Rate (L7 - L8 )	80.3250%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 * L10 )	0			
<i>Calculation of Effective Tax Rate:</i>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	5.5000%			
14	Federal Taxable Income (L12 - L13)	94.5000%			
15	Applicable Federal Income Tax Rate (Line 44)	15.0000%			
16	Effective Federal Income Tax Rate (L14 x L15)	14.1750%			
17	Combined Federal and State Income Tax Rate (L13 +L16)	19.6750%			
<i>Calculation of Effective Property Tax Factor</i>					
18	Unity	100.0000%			
19	Combined Federal and State Tax Rate (Line 17)	19.6750%			
20	One Minus Combined Income Tax Rate (L18 - L19)	80.3250%			
21	Property Tax Factor	1.3040%			
22	Effective Property Tax Factor (L 21 * L 22)	1.0474%			
23	Combined Federal and State Tax and Property Tax Rate (L17+L22)		20.7224%		
24	Required Operating Income	\$ 10,956			
25	Adjusted Test Year Operating Income (Loss)	\$ 6,728			
26	Required Increase in Operating Income (L24 - L25)		\$ 4,228		
27	Income Taxes on Recommended Revenue (Col. (D), L52)	\$ 2,684			
28	Income Taxes on Test Year Revenue (Col. (B), L52)	\$ 1,648			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		\$ 1,036		
30	Recommended Revenue Requirement	\$ 102,144			
31	Uncollectible Rate (Line 10)	0.0000%			
32	Uncollectible Expense on Recommended Revenue (L24 * L25)	\$ -			
33	Adjusted Test Year Uncollectible Expense	\$ -			
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32 - L33)		\$ -		
35	Property Tax with Recommended Revenue	\$ 3,857			
36	Property Tax on Test Year Revenue	\$ 3,787			
37	Increase in Property Tax Due to Increase in Revenue		\$ 70		
38	<b>Total Required Increase in Revenue (L26 + L30 + L34+L37)</b>		<b>\$ 5,333</b>		
<i>Calculation of Income Tax:</i>					
		<u>Test Year</u>		<u>STAFF Recommended</u>	
39	Revenue	\$96,811	\$ 5,333	\$ 102,144	
40	Operating Expenses Excluding Income Taxes	\$88,435		\$88,505	
41	Synchronized Interest (L47)	\$ -		\$ -	
42	Arizona Taxable Income (L36 - L37- L38)	\$ 8,376		\$ 13,640	
43	Arizona State Income Tax Rate	5.5000%		5.5000%	
44	Arizona Income Tax (L39 x L40)		\$ 461		\$ 750
45	Federal Taxable Income (L33 - L35)	\$ 7,915		\$ 12,890	
46	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ 1,187		\$ 1,933	
47	Federal Tax on Second Income Bracket (\$50,001 - \$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	\$ 1,187		\$ 1,933	
52	Combined Federal and State Income Tax (L35 + L42)	\$ 1,648		\$ 2,684	
53	Applicable Federal Income Tax Rate [Col. (D), L42 - Col. (B), L42] / [Col. (C), L36 - Col. (A), L36]				15.00%
<i>Calculation of Interest Synchronization:</i>					
54	Rate Base	\$ 64,925			
55	Weighted Average Cost of Debt	0.00%			
56	Synchronized Interest (L45 X L46)	\$ -			

**ORIGINAL COST RATE BASE/FAIR VALUE**

	----- Original Cost -----		Staff
	Company	Adjustment	
Plant in Service	\$ 248,374	\$ (4,684) A	\$ 243,690
Less:			
Accum. Depreciation	163,121	5,493 B	168,614
<b>Net Plant</b>	<b>\$ 85,253</b>	<b>\$ (10,177)</b>	<b>\$ 75,076</b>
Less:			
Customer Security Deposit	-	629 C	629
Plant Advances (AIAC)	-	32,000	32,000
Less: AIAC Refunds	-	13,210	13,210
Net AIAC	-	18,790 D	18,790
Total Advances	-	18,790	18,790
Contributions Gross	-	-	-
Less:			
Amortization of CIAC	-	-	-
Net CIAC	-	-	-
<b>Total Deductions</b>	<b>\$ -</b>	<b>\$ 19,419</b>	<b>\$ 19,419</b>
Plus:			
1/24 Power	-	412 F	412
1/8 Operation & Maint.	-	8,857 G	8,857
Inventory	-	-	-
Prepayments	-	-	-
<b>Total Additions</b>	<b>\$ -</b>	<b>\$ 9,268</b>	<b>\$ 9,268</b>
<b>Rate Base</b>	<b>\$ 85,253</b>	<b>\$ (20,328)</b>	<b>\$ 64,925</b>

*Explanation of Adjustment:*

**PLANT ADJUSTMENT**

	Company Exhibit	Adjustment	Staff Adjusted
301 Organization Costs	\$ 4,298	\$ -	\$ 4,298
302 Franchise Costs	75	-	75
303 Land & Land Rights	11,994	-	11,994
304 Structures & Improvements	10,007	-	10,007
307 Wells & Springs	9,872	-	9,872
311 Electric Pumping Equipment	51,394	-	51,394
320 Water Treatment Equipment	-	-	-
320.1 Water Treatment Plants	57,233	(4,684) a	52,549
320.2 Solutions & Feeders	-	-	-
320.3 Arsenic Remediation Plant	-	-	-
330 Distribution Reservoirs & Standpipes	-	-	-
330.1 Storage Tank	-	-	-
330.2 Pressure Tanks	14,857	-	14,857
331 Transmission & Distribution Mains	54,957	-	54,957
333 Services	20,669	-	20,669
334 Meters & Meter Installations	7,615	-	7,615
335 Hydrants	4,759	-	4,759
336 Backflow Prevention Devices	-	-	-
339 Other Plant & Misc. Equip.	-	-	-
340 Office Furniture & Fixtures	644	-	644
340.1 Computer & Software	-	-	-
341 Transportation Equipment	-	-	-
342 Store Equipment	-	-	-
343 Tools & Work Equipment	-	-	-
344 Laboratory Equipment	-	-	-
345 Power Operated Equipment	-	-	-
345 Communications Equipment	-	-	-
347 Miscellaneous Equipment	-	-	-
348 Other Intangibles	-	-	-
105 C.W.I.P.	-	-	-
<b>TOTALS</b>	<b>\$ 248,374</b>	<b>\$ (4,684) A</b>	<b>\$ 243,690</b>

*Explanation of Adjustment:*

- a To reclassify \$7,225 from Acct. No. 320.1, water treatment plant to Acct. No. 620.1, arsenic media expense and recognize \$2,541 in water treatment plant.

Per Company	\$ 57,233
Additional Invoices Provided by Company	<u>2,541</u>
	59,774
Arsenic Media Cost Transferred to Repairs & Maint. Expense	<u>(7,225)</u>
Per Staff	52,549
Per Staff	\$ 52,549
Per Company	<u>57,233</u>
Staff's Adjustment	\$ (4,684)

### ACCUMULATED DEPRECIATION ADJUSTMENT

	<u>Amount</u>
Accumulated Depreciation - Per Company	\$ 163,121
Accumulated Depreciation - Per Staff	168,614
<b>Total Adjustment</b>	<b>\$ 5,493 B</b>

*Explanation of Adjustment:*

- B - To reflect Staff's calculation of accumulated depreciation expense based on Staff's adjustment to plant.

ACCT	ACCUMULATED DEPRECIATION		
	Company	Staff	Staff
<u>No.</u> <u>Description</u>	<u>Application</u>	<u>Adjustment</u>	<u>Calculated</u>
301 Organization	\$ 4,298	\$ (4,298)	\$ -
302 Franchise	-	-	-
303 Land and Land Rights	-	-	-
304 Structures and Improvements	6,516	3,491	10,007
307 Wells and Srings	9,872	-	9,872
311 Electrical Pumping Equipment	51,394	-	51,394
320.1 Water Treatment Plant	572	303	875
320.2 Solution Chemical Feeders	-	-	-
330 Distribution Reservoirs & Stand	-	-	-
330.1 Storage Tank	-	-	-
330.2 Pressure Tank	14,857	-	14,857
331 Transmission and Distribution A	48,255	407	48,662
333 Services	15,086	5,583	20,669
334 Meters and Meter Installation	7,615	(196)	7,419
335 Hydrants	4,012	202	4,214
339 Other Plant and Miscellaneous	-	-	-
340 Office Furniture and Fixtures	644	-	644
340.1 Computers and Software	-	-	-
341 Transportation Equipment	-	-	-
343 Tools and Work Equipment	-	-	-
345 Power Operated Equipment	-	-	-
346 Communications Equipment	-	-	-
348 Other Tangible Plant	-	-	-
Total	\$ 163,121	\$ 5,493	\$ 168,614

**STAFF RATE BASE ADJUSTMENTS**

C -	CUSTOMER DEPOSIT - Per Company	-	
	Per Staff	629	<u>\$ 629</u>

To reflect Staff's calculation of customer deposits.

D -	ADVANCE IN AID OF CONSTRUCTION (AIAC) - Per Company	-	
	Per Staff	18,790	<u>\$ 18,790</u>

To reflect Staff's calculation of net AIAC balance based on the Company's response to data request BCA 1.18.

	AIAC	\$	32,000
Less:	2014 Refunds	\$	<u>13,210</u>
	Net AIAC Balance	\$	18,790

E -	WORKING CAPITAL (1/24 Purchased Pwr & Wtr) Per Company	\$ -	
	Per Staff	412	<u>\$ 412</u>

To reflect Staff's calculation of cash working capital based on Staff's recommendations for purchased power and purchased water.

F -	WORKING CAPITAL (1/8 operation & Maint exp.) Per Company	\$ -	
	Per Staff	8,857	<u>\$ 8,857</u>

To reflect Staff's calculation of cash working capital based on Staff's recommendations for operation and maintenance expenses. (excluding purchased power and purchased water expenses).

**STATEMENT OF PERATING INCOME**

	Company Exhibit	Staff Adjustments	Staff Adjusted	Staff Adjusted	Staff Recommended
<b>Revenues:</b>					
461 Metered Water Revenue	\$ 95,996	\$ -	\$ 95,996	\$ 5,333	\$ 101,329
460 Unmetered Water Revenue	\$ -	\$ -	\$ -	\$ -	\$ -
474 Other Water Revenues	\$ -	\$ 815 A	\$ 815	\$ -	\$ 815
<b>Total Operating Revenue</b>	<b>\$ 95,996</b>	<b>\$ 815</b>	<b>\$ 96,811</b>	<b>\$ -</b>	<b>\$ 102,144</b>
<b>Operating Expenses:</b>					
601 Salaries and Wages	\$ -	\$ -	\$ -	\$ -	\$ -
610 Purchased Water	\$ -	\$ -	\$ -	\$ -	\$ -
615 Purchased Power	\$ 9,884	\$ -	\$ 9,884	\$ -	\$ 9,884
618 Chemicals (Media)	\$ -	\$ -	\$ -	\$ -	\$ -
620 Repairs and Maintenance	\$ 7,383	\$ -	\$ 7,383	\$ -	\$ 7,383
620.1 Arsenic Media Expense	\$ -	\$ 7,225 B	\$ 7,225	\$ -	\$ 7,225
621 Office Supplies & Expense	\$ -	\$ -	\$ -	\$ -	\$ -
630 Outside Services	\$ 60,000	\$ (19,200) C	\$ 40,800	\$ -	\$ 40,800
635 Water Testing	\$ 669	\$ 620 D	\$ 1,289	\$ -	\$ 1,289
641 Rents	\$ 12,000	\$ -	\$ 12,000	\$ -	\$ 12,000
650 Transportation Expenses	\$ -	\$ -	\$ -	\$ -	\$ -
657 Insurance - General Liability	\$ 1,252	\$ -	\$ 1,252	\$ -	\$ 1,252
659 Insurance - Health and Life	\$ -	\$ -	\$ -	\$ -	\$ -
666 Regulatory Commission Expense - Rate Case	\$ -	\$ -	\$ -	\$ -	\$ -
675 Miscellaneous Expense	\$ 904	\$ -	\$ 904	\$ -	\$ 904
403 Depreciation Expense	\$ 3,528	\$ 383 E	\$ 3,911	\$ -	\$ 3,911
408 Taxes Other Than Income	\$ -	\$ -	\$ -	\$ -	\$ -
408.11 Property Taxes	\$ 3,610	\$ 177 F	\$ 3,787	\$ 70	\$ 3,857
409 Income Tax	\$ 50	\$ 1,598 G	\$ 1,648	\$ 1,036	\$ 2,684
<b>Total Operating Expenses</b>	<b>\$ 99,280</b>	<b>\$ (9,197)</b>	<b>\$ 90,083</b>	<b>\$ 1,105</b>	<b>\$ 91,188</b>
<b>OPERATING INCOME/(LOSS)</b>	<b>\$ (3,284)</b>	<b>\$ 10,012</b>	<b>\$ 6,728</b>	<b>\$ 4,228</b>	<b>\$ 10,956</b>

### OPERATING EXPENSE ADJUSTMENTS

A -	OTHER WATER REVENUES - Per Company Per Staff	\$ - 815	\$ 815
	To recognize other water revenue.		
B -	ARSENIC MEDIA EXPENSE- Per Company Per Staff	\$ - 7,225	\$ 7,225
	To reflect the reclassification of arsenic media to repairs and maintenance expense.		
C -	OUTSIDE SERVICES - Per Company Per Staff	\$ 60,000 40,800	\$ (19,200)
	To reflect a typical mamagement fee rate of \$20 per customer recommended by Staff for Company this size.		
D -	WATER TESTING - Per Company Per Staff	\$ 669 1,289	\$ 620
	To reflect annual water testing expense, per Staff Engineering report.		

**OPERATING INCOME ADJUSTMENT E - DEPRECIATION EXPENSE**

**OPERATING EXPENSE ADJUSTMENTS (Cont.)**

E - DEPRECIATION - Per Company \$ 3,528  
Per Staff \$ 3,911 \$ 383

To reflect application of Staff's recommended depreciation rates  
to Staff's recommended plant, by account.

**Pro Forma Annual Depreciation Expense:**

NO.	NO.	DESCRIPTION	UTILITY PLANT IN SERVICE BALANCES	FULLY/NON-DEPRECIABLE PLANT BALANCES	DEPRECIABLE PLANT IN SERVICE	RATE	EXPENSE
<b>Plant In Service</b>							
1	301	Organization Costs	\$ 4,298	\$ 4,298	\$ -	0.00%	\$ -
2	302	Franchise Costs	75	75	-	0.00%	-
3	303	Land & Land Rights	11,994	11,994	-	0.00%	-
4	304	Structures & Improvements	10,007	10,007	-	3.33%	-
5	307	Wells & Springs	9,872	9,872	-	3.33%	-
6	311	Electric Pumping Equipment	51,394	51,394	-	12.50%	-
7	320	Water Treatment Equipment	-	-	-	-	-
8	320.1	Water Treatment Plants	52,549	-	52,549	3.33%	1,750
9	320.2	Solutions & Feeders	-	-	-	20.00%	-
10	320.3	Arsenic Remediation Plant	-	-	-	-	-
11	330	Distribution Reservoirs & Standpipes	-	-	-	2.22%	-
12	330.1	Storage Tank	-	-	-	5.00%	-
13	330.2	Pressure Tanks	14,857	14,857	-	2.00%	-
14	331	Transmission & Distribution Mains	54,957	-	54,957	3.33%	1,830
15	333	Services	20,669	20,669	-	8.33%	-
16	334	Meters & Meter Installations	7,615	6,945	670	2.00%	13
17	335	Hydrants	4,759	-	4,759	6.67%	317
18	336	Backflow Prevention Devices	-	-	-	6.67%	-
19	339	Other Plant & Misc. Equip.	-	-	-	6.67%	-
20	340	Office Furniture & Fixtures	644	644	-	20.00%	-
21	340.1	Computer & Software	-	-	-	20.00%	-
22	341	Transportation Equipment	-	-	-	4.00%	-
23	342	Store Equipment	-	-	-	5.00%	-
24	343	Tools & Work Equipment	-	-	-	10.00%	-
25	344	Laboratory Equipment	-	-	-	5.00%	-
26	345	Power Operated Equipment	-	-	-	10.00%	-
27	345	Communications Equipment	-	-	-	10.00%	-
28	347	Miscellaneous Equipment	-	-	-	0.00%	-
29	348	Other Intangibles	-	-	-	0.00%	-
30							
31		Subtotal General	<u>\$ 243,690</u>	<u>\$ 130,755</u>	<u>\$ 112,935</u>		<u>\$ 3,911</u>
32							
33		Composite Depreciation Rate(Depreciation Expense / Depreciable Plant)					3.46%
34							
35		Contribution in aid of Construction (CIAC)					-
36		Amortization of Contributions					-
37							
38		Depreciation Expense Before Amortization of CIAC					3,911
39		Less: Amortization of CIAC					-
40		Test Year Depreciation Expense - Staff					<u>3,528</u>
41		Depreciation Expense - Company					<u>\$ 383</u>
42		<b>Staff's Total Adjustment</b>					<u><u>\$ 383</u></u>

<b>OPERATING EXPENSE ADJUSTMENTS</b>
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F -	PROPERTY TAXES - Per Company	\$	3,610	
	Per Staff		<u>3,787</u>	\$ <u>177</u>

To reflect Staff's calculation of property tax expense using the Arizona Department of Revenue property tax method.

G -	INCOME TAX - Per Company	\$	50	
	Per Staff		<u>1,648</u>	\$ <u>1,598</u>

To reflect Staff's calculation of income tax expense.

**OPERATING INCOME ADJUSTMENT F - PROPERTY TAXES**

LINE NO.	DESCRIPTION	[A]	[B]
		STAFF AS ADJUSTED	STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	\$ 96,811	\$ 96,811
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	\$ 193,622	\$ 193,622
4	Staff Recommended Revenue	\$ 96,811	\$102,144
5	Subtotal (Line 4 + Line 5)	\$ 290,433	\$ 295,766
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	\$ 96,811	\$ 98,589
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	\$ 193,622	\$ 197,178
10	Plus: 10% of CWIP		
11	Less: Net Book Value of Licensed Vehicles		
12	Full Cash Value (Line 9 + Line 10 - Line 11)	\$ 193,622	\$ 197,178
13	Assessment Ratio	18.00%	18.00%
14	Assessment Value (Line 12 * Line 13)	\$ 34,852	\$ 35,492
15	Composite Property Tax Rate - Obtained from ADOR	10.86670%	10.86670%
16	Staff Test Year Adjusted Property Tax Expense (Line 14 * Line 15)	\$ 3,787	
17	Company Proposed Property Tax	3,610	
18	Staff Test Year Adjustment (Line 16 - Line 17)	\$ 177	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 3,857
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		\$ 3,787
21	Increase in Property Tax Due to Increase in Revenue Requirement		\$ 70
22	Increase in Property Tax Due to Increase in Revenue Requirement (Line 21)		\$ 70
23	Increase in Revenue Requirement		\$ 5,333
24	Increase in Property Tax Per Dollar Increase in Revenue (Line 22 / Line 23)		<b>1.304004%</b>

**REFERENCES:**

- Line 15: Composite Tax Rate obtained from Arizona Department of Revenue
- Line 17: Company Application
- Line 21: Line 19 - Line 20
- Line 23: Schedule BCA-1

**RATE DESIGN**

Monthly Usage Charge	Present Rates	Company	
		Proposed Rates	Staff Recommended Rates
5/8" x 3/4" Meter	\$ 18.65	\$ 37.50	\$ 20.50
3/4" Meter	\$ 21.26	\$ 45.00	\$ 22.50
1" Meter	\$ 24.80	\$ 75.00	\$ 26.80
1 1/2" Meter	\$ -	\$ -	\$ -
2" Meter	\$ 43.64	\$ 95.00	\$ 50.00
3" Meter	\$ -	\$ -	\$ -
4" Meter	\$ -	\$ -	\$ -
6" Meter	\$ -	\$ -	\$ -
8" Meter	\$ -	\$ -	\$ -
10" Meter	\$ -	\$ -	\$ -
<b>Commodity Rates</b>			
<b>5/8 x 3/4" &amp; 3/4" Meter - Residential</b>			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
First 4,000 Gallons	\$ 3.32		\$ 3.45
From 4,001 to 14,000 Gallons	\$ 4.98		\$ 5.15
Over 14,000 Gallons	\$ 5.98		\$ 6.20
First 5,000 Gallons		\$ 2.99	
From 5,001 to 10,000 Gallons		\$ 3.49	
Over 10,000 Gallons		\$ 3.99	
<b>3/4" Meter - Residential &amp; Commercial</b>			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
First 4,000 Gallons	\$ 3.32		\$ 3.45
From 4,001 to 14,000 Gallons	\$ 4.98		\$ 5.15
Over 14,000 Gallons	\$ 5.98		\$ 6.20
First 5,000 Gallons		\$ 2.99	
From 5,001 to 10,000 Gallons		\$ 3.49	
Over 10,000 Gallons		\$ 3.99	
<b>1" - Residential &amp; Commercial</b>			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
First 4,000 Gallons	\$ 3.32		\$ 3.45
From 4,001 to 14,000 Gallons	\$ 4.98		\$ 5.15
Over 14,000 Gallons	\$ 5.98		\$ 6.20
First 5,000 Gallons		\$ 2.99	
From 5,001 to 10,000 Gallons		\$ 3.49	
Over 10,000 Gallons		\$ 3.99	
<b>2" - Residential, Commercial &amp; Industrial</b>			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
First 4,000 Gallons	\$ 3.32		\$ 3.45
From 4,001 to 14,000 Gallons	\$ 4.98		\$ 5.15
Over 14,000 Gallons	\$ 5.98		\$ 6.20
First 5,000 Gallons		\$ 2.99	
From 5,001 to 10,000 Gallons		\$ 3.49	
Over 10,000 Gallons		\$ 3.99	

**RATE DESIGN**

Service Line and Meter Installation Charges	Present Rates	Company		Staff Recommended	
		Proposed Rates	Service Line	Meter Chrg.	Total
5/8" x 3/4" Meter	\$ -	\$ -	\$ -	\$ -	\$ -
3/4" Meter	\$ -	\$ -	\$ -	\$ -	\$ -
1" Meter	\$ -	\$ -	\$ -	\$ -	\$ -
1 1/2" Meter	\$ 570	\$ 570	\$ 315	\$ 255	\$ 570
2" Turbine Meter	\$ -	\$ -	\$ -	\$ -	\$ -
2" Compound Meter	\$ 970	\$ 970	\$ 455	\$ 515	\$ 970
3" Turbine Meter	\$ -	\$ -	\$ -	\$ -	\$ -
3" Compound Meter	\$ 1,900	\$ 1,900	\$ 780	\$ 1,120	\$ 1,900
4" Turbine Meter	\$ -	\$ -	\$ -	\$ -	\$ -
4" Compound Meter	\$ 2,155	\$ 2,155	\$ 840	\$ 1,315	\$ 2,155
6" Turbine Meter	\$ -	\$ -	\$ -	\$ -	\$ -
6" Compound Meter	\$ 4,165	\$ 4,165	\$ 1,375	\$ 2,790	\$ 4,165
<b>Service Charges</b>					
Establishment	\$ 35	\$ 45			\$ 40
After Hours Service Charge	\$ 45	\$ 50			\$ 50
Reconnection (Delinquent)	\$ 40	\$ 50			\$ 40
Meter Test (If Correct)	\$ 50	\$ 50			\$ 30
Deposit	2 x AVG. BILL		0%		-
Deposit Interest	**	**			**
Re-Establishment (Within 12 Months)		\$40 + Bank Fees			\$ 25.00
NSF Check	\$ 25		10%		R14-2-409.G
Deferred Payment	8%				\$ 25.00
Meter Re-Read (If Correct)	\$ 25	\$ 25			\$ 5.00
Late Fee	\$ 5	\$ 10			
<b>Monthly Service Charge for Fire Sprinkler</b>					
4" or Smaller	-	-	-	-	***
6"	-	-	-	-	***
8"	-	-	-	-	***
10"	-	-	-	-	***
Larger than 10"	-	-	-	-	***
* Per Commission Rules (R14-2-403.B) ** Months off system times the minimum (R14-2-403.D) *** 2.00% of Monthly Minimum 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.					

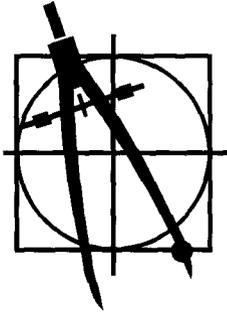
**TYPICAL BILL ANALYSIS**  
General Service 5/8 X 3/4 - Inch Meter

Average Number of Customers: 148

<u>Company Proposed</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	6,250	\$ 43.14	\$ 56.81	\$ 13.67	31.7%
Median Usage	4,162	\$ 32.74	\$ 49.94	\$ 17.20	52.5%
<b>Staff Recommend</b>					
Average Usage	6,250	\$ 43.14	\$ 45.89	\$ 2.75	6.4%
Median Usage	4,162	\$ 32.74	\$ 35.13	\$ 2.39	7.3%

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

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$ 18.65	\$ 37.50	101.1%	\$ 20.50	9.9%
1,000	21.97	40.49	84.3%	23.95	9.0%
2,000	25.29	43.48	71.9%	27.40	8.3%
3,000	28.61	46.47	62.4%	30.85	7.8%
4,000	31.93	49.46	54.9%	34.30	7.4%
5,000	36.91	52.45	42.1%	39.45	6.9%
6,000	41.89	55.94	33.5%	44.60	6.5%
7,000	46.87	59.43	26.8%	49.75	6.1%
8,000	51.85	62.92	21.4%	54.90	5.9%
9,000	56.83	66.41	16.9%	60.05	5.7%
10,000	61.81	69.90	13.1%	65.20	5.5%
15,000	87.71	89.85	2.4%	92.00	4.9%
20,000	117.61	109.80	-6.6%	123.00	4.6%
25,000	147.51	129.75	-12.0%	154.00	4.4%
50,000	297.01	229.50	-22.7%	309.00	4.0%
75,000	446.51	329.25	-26.3%	464.00	3.9%
100,000	596.01	429.00	-28.0%	619.00	3.9%
125,000	745.51	528.75	-29.1%	774.00	3.8%
150,000	895.01	628.50	-29.8%	929.00	3.8%
175,000	1,044.51	728.25	-30.3%	1,084.00	3.8%
200,000	1,194.01	828.00	-30.7%	1,239.00	3.8%



**Engineering Report  
for Pine Valley Water Company**

**Docket No. W-02181A-15-0216 (Rates)**

**By Frank M. Smaila  
Utilities Engineer**

**September 16, 2015**

**CONCLUSIONS**

- A. Pine Valley Water Company ("Pine Valley" or "Company") is a Class E water utility company consisting of one well, one pre-treatment filter, one arsenic treatment system, two storage tanks, two booster pumps, one pressure tank, seven fire hydrants and a distribution system serving approximately 170 customers during the test year ending December 2014.
- B. The Company had a water loss of 8.1 percent during the test year 2014 which is within the acceptable limit of 10% recommended by Arizona Corporation Commission ("ACC" or "Commission") Utilities Division Staff ("Utilities Staff" or "Staff").
- C. The Company's current system has adequate well production and storage capacity to serve the present customer base and full subdivision buildout.
- D. The Company anticipates continued slow growth to its customer base.
- E. The Arizona Department of Environmental Quality ("ADEQ") has reported that the Company's system, Public Water System No. 13-103, has major deficiencies and is currently not in compliance as required by 40 CFR 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4.
- F. The Company is not located in any Arizona Department of Water Resources ("ADWR") Active Management Area ("AMA"). According to the ADWR, the Company is currently non-compliant with ADWR's requirements governing water providers and/or community water systems.
- G. According to the ACC Utilities Division compliance database, the Company has no delinquent Commission compliance items.
- H. Staff suggests that the Company consider retaining the services of a professional engineer to study the pumping dynamics and recommend more efficient booster pumps to save the water system energy and maintenance costs.
- I. The Company has approved curtailment and cross-connection tariffs on file.

- J. Staff suggests that the Company consider retaining the services of a professional engineer to study the possibility of implementing a blending plan that could increase the life of the Arsenic Removal System (“ARS”) media and estimation of possible decrease in maintenance costs.
- K. Staff identified several safety and substandard installation items that require attention during its site inspection on July 24, 2015.

## RECOMMENDATIONS

1. Staff recommends that any increase in rates approved by the Commission not become effective until the first day of the month after the Company files with Docket Control, as a compliance item in this docket, documentation from ADEQ indicating that Pine Valley’s water system is compliant with ADEQ requirements (See Section E, ADEQ Compliance, for further discussion).
2. Staff recommends an annual water testing expense of \$1,289 be used for purposes of this application.
3. Staff recommends that any increase in rates approved by the Commission not become effective until the first day of the month after the Company files with Docket Control, as a compliance item in this docket, documentation from ADWR indicating that Pine Valley’s water system is compliant with ADWR requirements governing water providers and/or community water systems (See Section F, ADWR Compliance, for further discussion).
4. Staff recommends that the Company utilize the depreciation rates as delineated in Table 9 on a going-forward basis.
5. Staff recommends that the Company continue to utilize the service line and meter installation charges as delineated in Table 10.
6. Staff recommends that the Company file with Docket Control, as a compliance item in this docket and within 90 days of the effective date of a decision in this proceeding, documentation demonstrating that the Company provided well security in the form of a lockable well enclosure or lockable six foot fence.
7. Staff recommends that the Company file with Docket Control, as a compliance item in this docket and within 90 days of the effective date of a decision in this proceeding, at least three Best Management Practices (“BMPs”) in the form of tariffs that substantially conform to the templates created by Staff. These BMP templates are available on the Commission’s website, [www.azcc.gov/divisions/utilities/water/forms.asp](http://www.azcc.gov/divisions/utilities/water/forms.asp).

Staff further recommends that a maximum of two (2) BMPs come from the “Public Awareness/Public Relations” or “Education and Training” categories. The Company may request cost recovery of the actual costs associated with the BMPs implemented in its next general rate application.

8. Staff recommends that the Company complete all necessary generator electrical tie-ins so that it can be utilized during power interruptions.
9. Staff recommends that within 90 days of the effective date of the order in this matter Pine Valley correct substandard electrical installations at the Well Pump area and Booster Building and file, as a compliance item with the Commission's Docket Control, documentation demonstrating that the substandard electrical installations have been corrected (See Section I-7, Plant Deficiencies Identified During Site Inspection, for further discussion).

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## **A. INTRODUCTION**

On June 26, 2015, Pine Valley Water Company ("Pine Valley" or "Company") filed a rate application. The Company's Certificate of Convenience and Necessity ("CC&N") was granted by the Arizona Corporation Commission ("ACC" or "Commission") in Decision No. 42253 on July 28, 1972. Pine Valley is a wholly-owned subsidiary of Lance Enterprises, Inc. ("LEI") and operates the water system through a management contract. The CC&N area is comprised of roughly 147 acres and is located approximately ten miles southeast of Sedona, Arizona in Yavapai County. Pine Valley is a Class E water utility company that serves the Pine Valley Subdivision which at full buildout will have approximately 205 residential lots. Figure 1 shows the location of the Company within Yavapai County and Figure 2 shows the location of the Company in relation to other Commission regulated companies in Yavapai County. The Commission in Decision No. 63681, dated May 24, 2001, granted the Company a revised rate schedule. This Engineering Report constitutes Staff's engineering evaluation relative to the rate application.

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

The plant facilities were field inspected on July 24, 2015, by ACC Utilities Division Staff ("Utilities Staff" or "Staff") Jeff Francis and Frank Smaila in the accompaniment of Mr. Lance Wischmeier, water system owner and operator. According to Arizona Department of Environmental Quality ("ADEQ") Mr. Wischmeier water operator certification elapsed on June 1, 2015 and is currently scheduled for recertification testing in September 2015. However, the Company has acquired the services of another local operator until Mr. Wischmeier certification has been reinstated.

The operation of the water system consists of one well, one arsenic treatment facility, two storage tanks, two booster pumps, one pressure tank, seven fire hydrants and a distribution system serving approximately 170 customers during the test year ending December 2014. This system is self-sustaining and does not purchase water from another water system. A system schematic is shown as Figure 3 and a detailed plant facility listing is as follows:

Table 1. Well Site Data

Well Site <sup>1</sup>	Well No. 1
ADWR No. <sup>2</sup>	55-627209
Year Constructed	1972
Casing Size	8 inch
Casing Depth	800 ft.
Pump Type	submersible
Pump Size	20 hp
Pump Yield*	80 gpm
Meter Size**	3-3 inch

Note: feet ("ft."), horsepower ("hp"), gallon ("gal."), gallon per minute ("gpm").

\*ADWR Pump Installation Completion Report (PICR) states "Rated Pump Capacity" 42 gpm.

\*\* Three well/production meters - One Electronic type well water meter and two Turbine type water meters (See Figure 3 for locations).<sup>3</sup>

Well pump motor last replaced in 2004 with same horsepower and capacity.

Table 2. Storage and Pressure Tanks and Booster Station Data

	Design Capacity	Construction	Installed	Horsepower	Location**
Storage Tank No. 1*	66,000 gal.	Steel	1980	-	Within partially fenced Area
Storage Tank No. 2*	125,000 gal.	Steel	1983	-	Within partially fenced Area
Booster Pumps	190 gpm	-	2007	Two 7.5 hp booster pumps	Booster Building
Pressure Tank	5,000 gal.	Steel	1995	-	Booster Building

Note: \* Storage Tanks are leased by Lance Enterprises, Inc. to Pine Valley.

\*\* Pine Valley Water Company located in Lot 42 of Pine Valley Subdivision.

<sup>1</sup> Well pump located within protective wooden enclosure.

<sup>2</sup> Arizona Department of Water Resources ("ADWR") Well Identification Number.

<sup>3</sup> Turbine flowmeters use mechanical energy of the fluid to rotate a rotor in the flow stream. Shaft rotation can be sensed mechanically or by detecting the movement of the blades generating a pulse. Sensors are typically located externally and a transmitter processes the pulse signal to determine the flow of the fluid into a user-readable rate of flow (gpm).

Table 3. Water Mains

Diameter	Material	Approximate Length
4 inch	PVC*	8,400 ft.
6 inch	PVC	10,000 ft.
Total:		18,400 ft.

Note: \*Polyvinyl Chloride ("PVC").

Table 4. Arsenic Removal System Data

	Pre-Treatment Filtration	Arsenic Removal System
Design Capacity	200 gpm (max)	80 gpm
Construction	Stainless Steel Housing	Fiberglass Tank*
Filtration	25 $\mu$ Felt Filter Bag	-
Arsenic Removal Media	-	Titanium Oxide**
Operational Life	Greater than 17,000,000 gal. <sup>4</sup>	40,000 Bed Volumes, or 7,480,000 gal of Raw Water, Calculated <sup>5</sup>
Location	Treatment Building	Treatment Building
Raw Water Bypass	No	No

Note: \*Capacity is 345 gallon or 46.1 cubic feet ("ft<sup>3</sup>"). Tank filled with 25 ft<sup>3</sup> of media.  
 \*\*ARS utilizes MetSorb HMRG media (patented) from Graver Technologies.

<sup>4</sup> According to the Owner/Operator, a new Felt Filter Bag was installed when the ARS media was replaced even though the pre-treatment filtration differential pressure, which indicates bag is near capacity, did not warrant replacement.

<sup>5</sup> Bed Volume ("BV")-A term used as a measurement of a volume of incoming (feed water) in gallons or liters, equal to (in cubic feet or liters) the volume of ion exchange or filter media in a tank-including voids. Example: one bed volume per cubic foot of media bed would be equal to 7.48 US gallons or 28.3 liters. In this case, 40,000 BV x 25 ft<sup>3</sup>/BV x 7.48 gal/ft<sup>3</sup> = 7,480,000 gal.

Table 5. Customer Meters

Size	Quantity
5/8 x 3/4 inch	147
3/4 inch	1
1 inch	21
1-1/2 inch	0
2 inch	1

Table 6. Fire Hydrants

Size	Quantity
Standard	6
Non-Standard*	1

Note: \*4 inch hydrant, gravity fed from 166,000 gallon storage tank

Table 7. Water Company Buildings<sup>6</sup>

Structure	Size (W x L x H)*	Construction
Well Enclosure	2 x 5 x 4	Wood Frame w/Wood Siding
Treatment Building	10 x 10 x 10	Wood Frame w/Wood Siding
Booster Building	12 x 30 x 11	Wood Frame w/Wood Siding
Generator Building	10 x 10 x 10	Wood Frame w/Wood Siding
Parts Building	6 x 8 x 8	Wood Frame w/Corrugated Steel Siding
Parts Building	6 x 8 x 6	Wood Frame w/corrugated Steel Siding
Office**	15 x 24 x 8	Wood Frame w/Wood Siding

Note: \*Dimensions to nearest foot. Width ("W"), Length ("L"), and Height ("H").  
 \*\*Building shared with Lance Enterprises, Inc.

<sup>6</sup> The Parts Buildings and Office are owned by Lance Enterprises, Inc. All other buildings and well enclosure are owned by the Company.



# YAVAPAI COUNTY

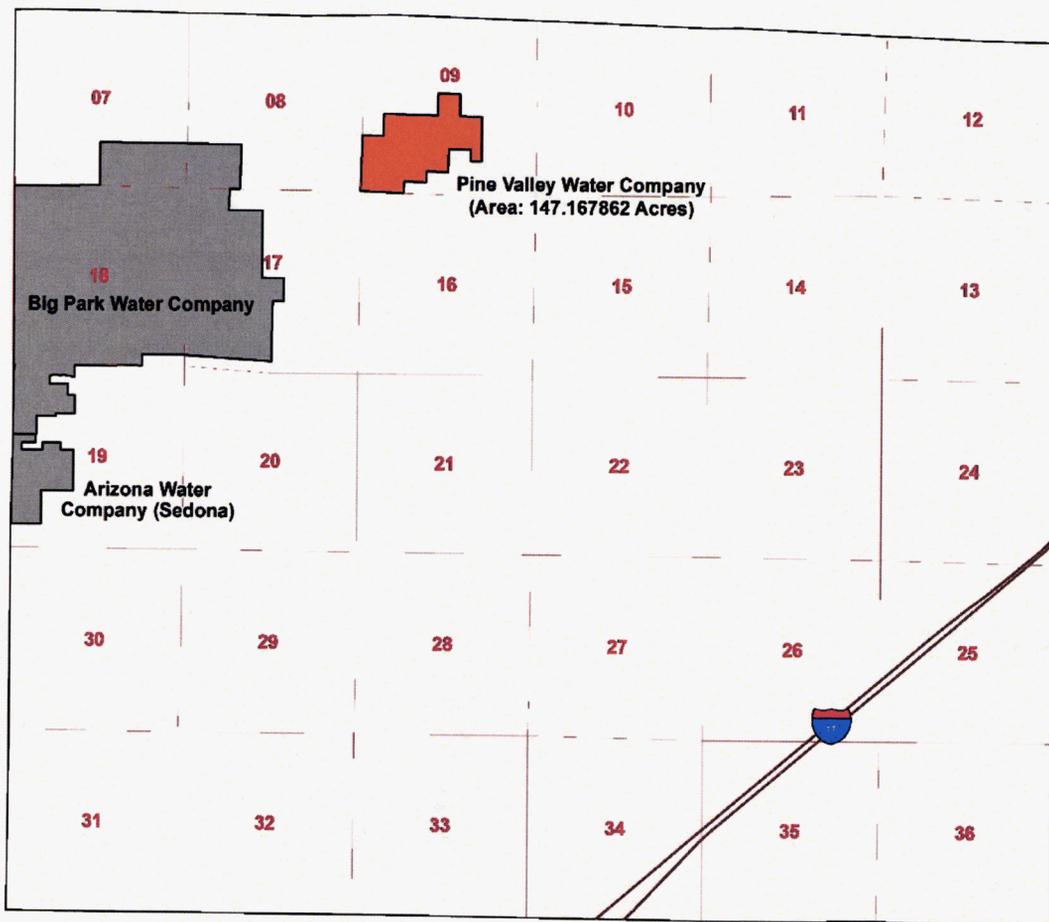


Figure 2. Certificated Area

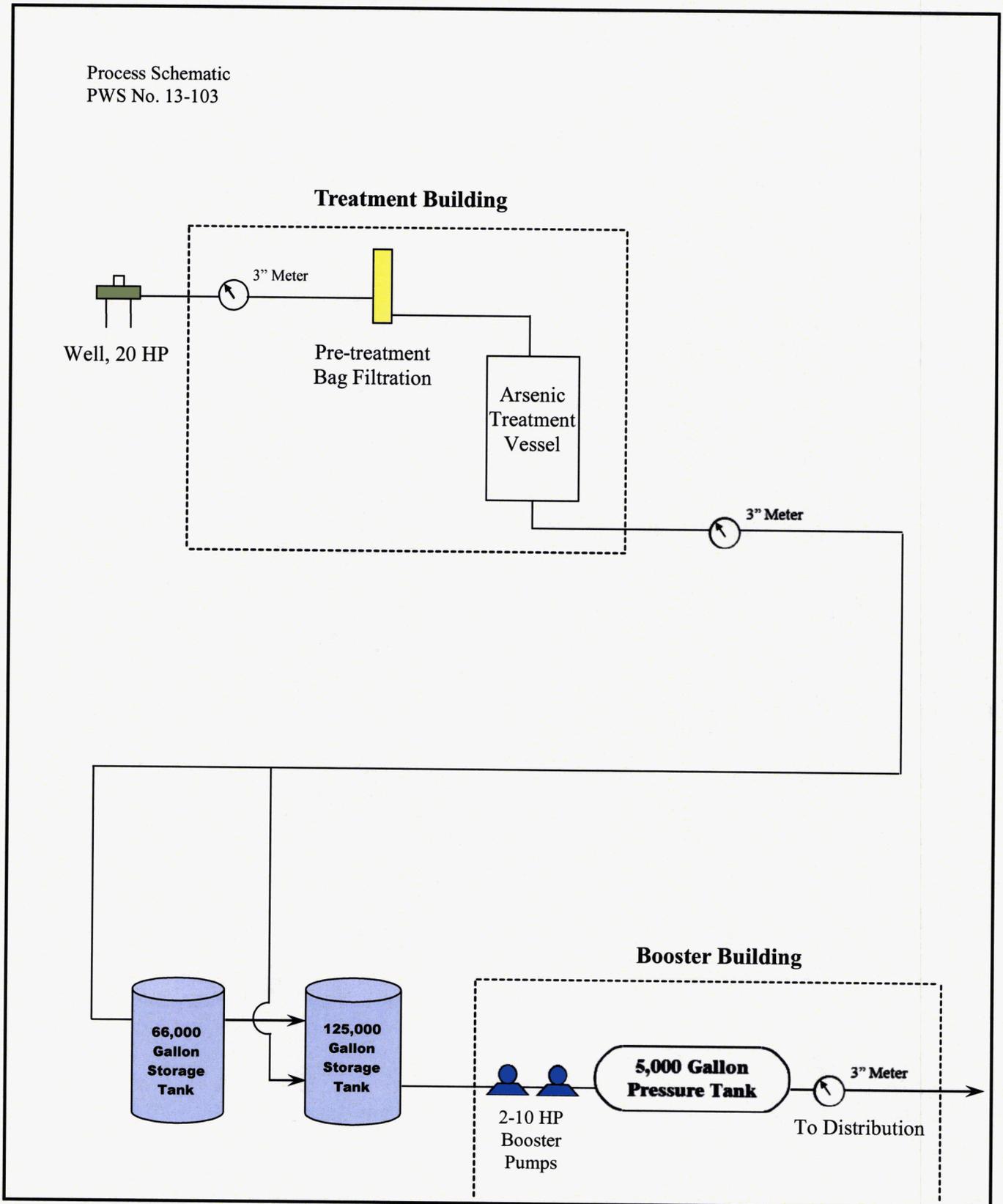


Figure 3. System Schematic

### C. WATER USE

#### *Water Sold*

Figure 4 presents the water consumption data provided by the Company for the test year ending December 2014. This figure shows the customer consumption experienced a high monthly water use of 322 gallons per day (“gpd”) per connection in August and low monthly water use of 120 gpd per connection in January for an average annual use of 192 gpd per connection.

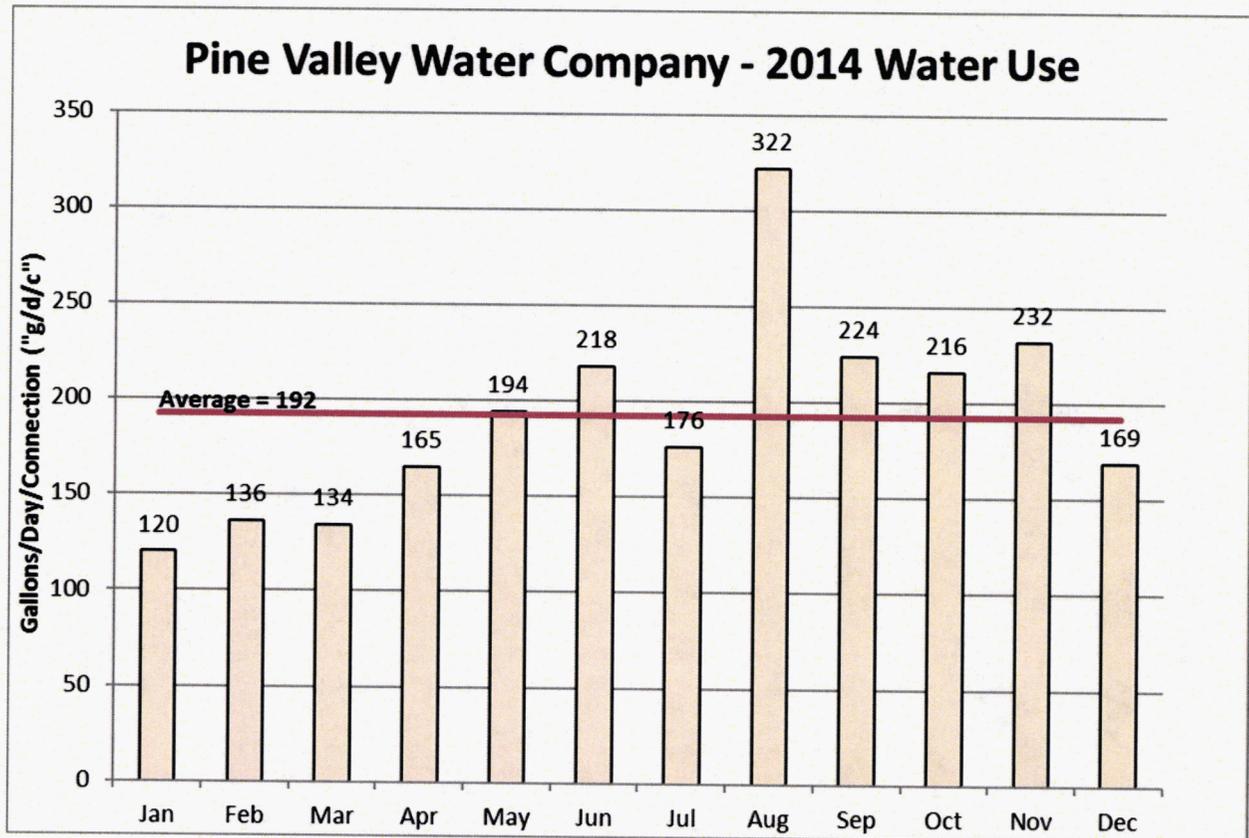


Figure 4. Water Use

#### *Non-Account Water*

Non-account water should be 10 percent or less. During the 2014 test year, the Company reported 14,134,000 gallons pumped and 12,993,330 gallons sold, which includes four non-billed meters, resulting in a water loss of 8.1 percent. The test year water loss is within the acceptable level of 10 percent recommended by Staff.

According to the water system owner/operator the only known reason for water loss is Sedona Fire Department (“SFD”) fire hydrants flushing. SFD flush the fire hydrants twice yearly resulting in total estimated utilization of 60,000 gallons for this purpose. Figure 5 depicts the 10 year water loss using linear regression analysis.

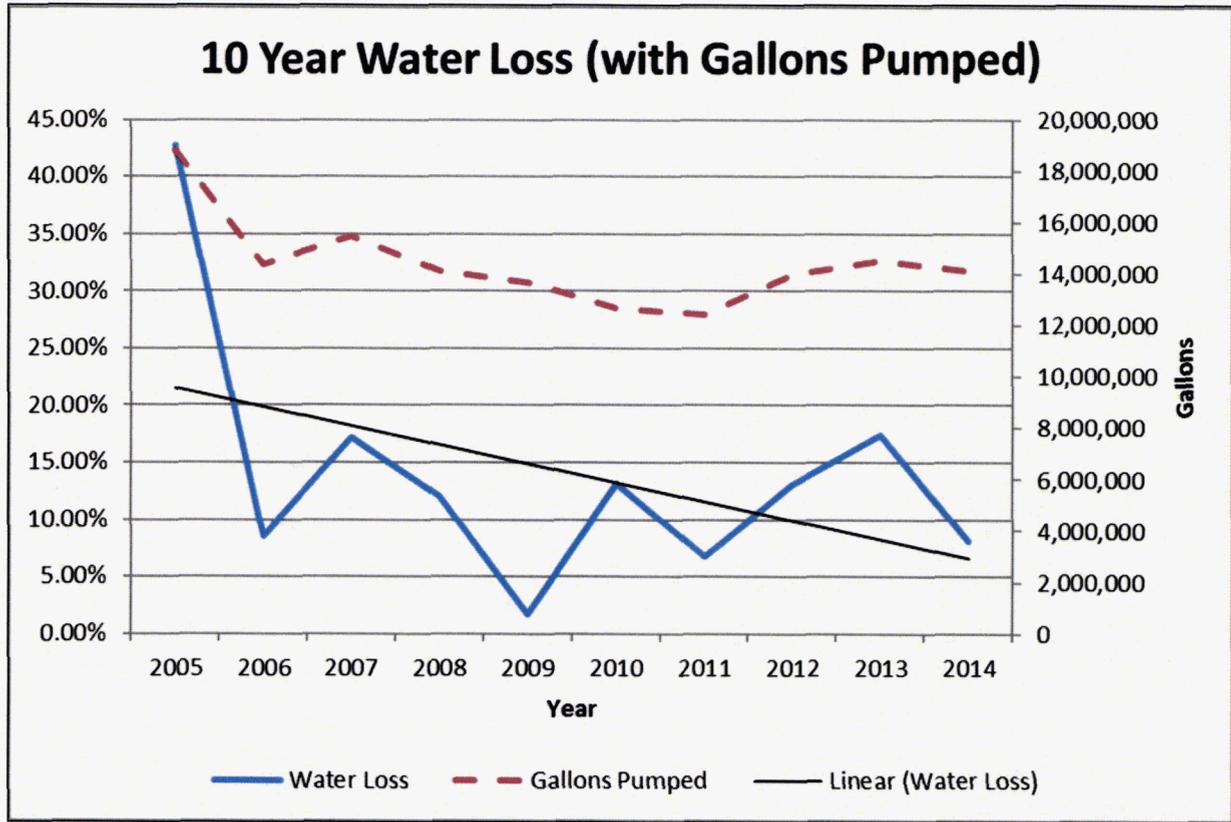


Figure 5. Water Loss

*System Analysis*

The current well capacity of 80 gpm and storage tank capacity of 191,000 gallons is adequate to serve the present customer base and growth to full subdivision build-out. The raw water contains approximately 27 parts per billion (“ppb”) arsenic. The arsenic maximum contaminant level (“MCL”) is 10 ppb. MCLs are standards that are set by the United States Environmental Protection Agency (“EPA”) for drinking water quality. An MCL is the legal threshold limit on the amount of a substance that is allowed in public water systems under the Safe Drinking Water Act. The current arsenic MCL took effect in 2006.

The Company utilizes two storage tanks to feed treated water to two 7.5 hp booster pumps. The booster pumps supply the pressure tank to pressurize the distribution system. According to the gallons pumped during the 2014 test year the water system distributes, on average, approximately 27 gpm and 61 gpm during the peak day to its customers. The booster pumps are rated at 190 gpm each. It is Staff’s opinion that the booster pumps are not sized for efficient performance and thus are using greater energy than necessary while increasing maintenance costs. Staff suggests that the Company consider retaining the services of a professional engineer to study the pumping dynamics and recommend more efficient booster pumps to save the water system energy and maintenance costs.

#### D. GROWTH

In its application the Company provides water service to approximately 170 residential customers during the test year 2014. Growth has been steady over the past 15 years. The Company reported serving only 22 customers in 1979, historic low, and 170 customers in 2014, historic high. The Company anticipates, and Staff agrees, continued slow growth to its customer base and will not require additional water production or storage capacity.<sup>7</sup> The CC&N is surrounded by the Tonto National Forest and water system growth is limited by the approximately 205 existing lots in the pine valley subdivision. Staff calculations confirm that additional water production or storage capacity will not be required to service full buildout. Figure 6 depicts the customer growth using linear regression analysis. The number of service connections was obtained from annual reports submitted to the Commission.

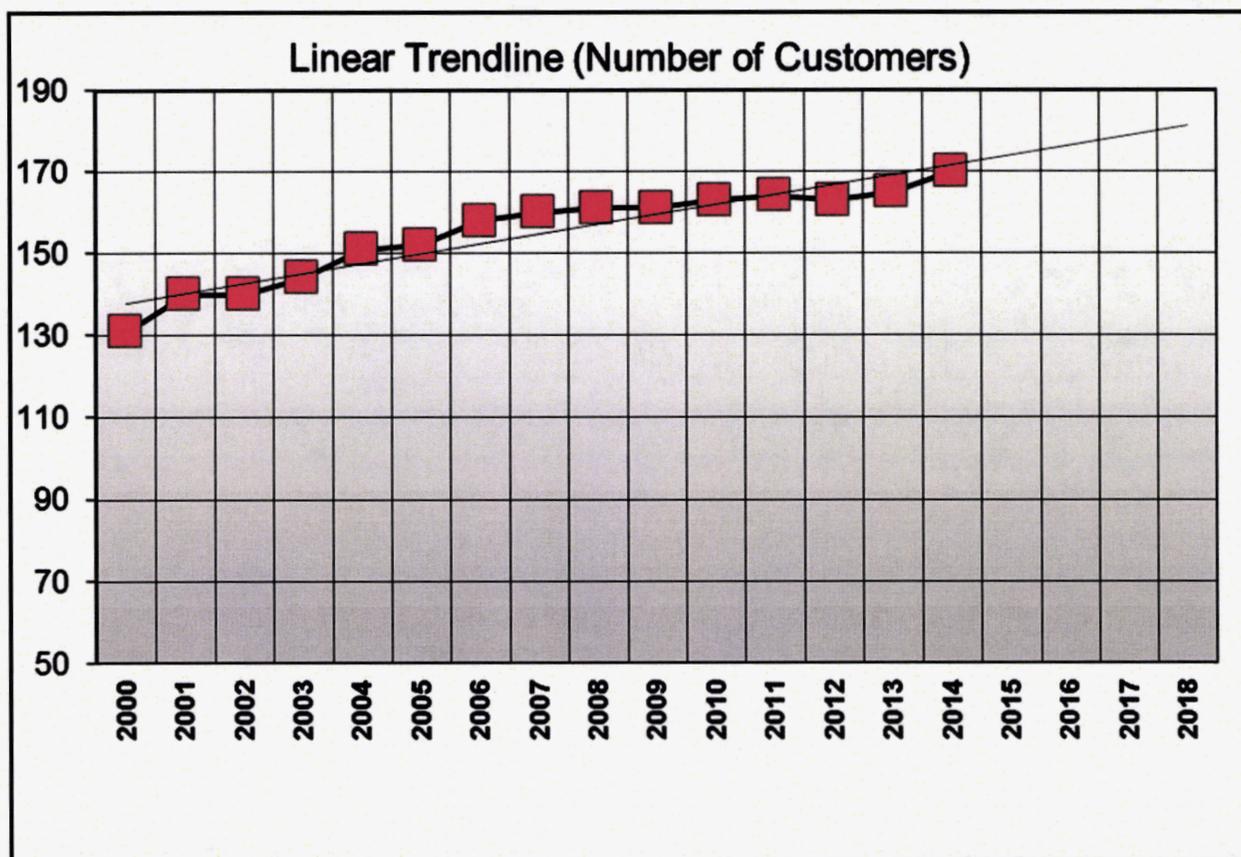


Figure 6. Growth Projection

<sup>7</sup> See Narrative Description of Application for Rate Adjustment "Anticipated growth/decline in customers expected in the next two years," discussion on page 4 of the Application.

## **E. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (“ADEQ”)**

### *Compliance*

According to ADEQ personnel and ADEQ Compliance Status Report, dated January 19, 2015, ADEQ has reported major deficiencies in monitoring and reporting status and has determined that the Company’s system, PWS No. 13-103, is currently not in compliance as required by 40 CFR 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4. The Company installed arsenic treatment system produces drinking water arsenic level below the MCL however the Company missed reporting arsenic results for the 2<sup>nd</sup> quarter of 2014 and 1<sup>st</sup> quarter of 2015. In order for the Company to become compliant with ADEQ the Company must demonstrate that the treatment device has lowered the arsenic running annual average (“RAA”) to below the arsenic MCL.

Staff recommends that any increase in rates approved by the Commission not become effective until the first day of the month after the Company files with Docket Control, as a compliance item in this docket, documentation from ADEQ indicating that Pine Valley’s water system is compliant with departmental requirements.

### *Water Testing Expense*

The Company is subject to mandatory participation in the Monitoring Assistance Program (“MAP”).<sup>8</sup> The Company reported its total water testing expense at \$668.91 during the test year. This expense only included MAP as the Total Coliform, Arsenic and Lead and Copper testing expenses were paid by Lance Enterprises, Inc. Staff has reviewed this expense and has recalculated the annual testing expense as shown in Table 8 below:

---

<sup>8</sup> Participation in the MAP program is mandatory for water systems, which serve less than 10,000 persons (approximately 3,300 service connections).

*Table 6. Water Testing Expense*

Monitoring	Cost per test	No. of tests per 3 years	Total 3 year cost	Annual cost
Total coliform – monthly *	\$20	36	\$720	\$240
MAP – IOCs, Radiochemical, Nitrate, Nitrite, Asbestos, SOCs & VOCs **	\$669	3	\$2,007	\$669
Arsenic – Quarterly*	\$20	12	\$720	\$240
Lead & Copper – per 3 years (With metals prep)*	\$40 \$10	10 2	\$400 \$20	\$133 \$7
Total:				\$1,289

Note: \*Testing expense paid by Lance Enterprises, Inc. & provided cost/test information.  
 \*\*The ADEQ MAP invoice for 2014 Calendar Year was \$668.91.

Staff recommends an annual water testing expense of \$1,289 be used for purposes of this application.

#### **F. ARIZONA DEPARTMENT OF WATER RESOURCES (“ADWR”)**

##### *Compliance*

The Company is not located in an ADWR Active Management Area (“AMA”). According to an ADWR Water Provider Compliance Report, dated July 9, 2015, the Company is currently non-compliance with ADWR requirements governing water providers and/or community water systems. The Company did not submit the 5-year system water plan due in 2012.

Staff recommends that any increase in rates approved by the Commission not become effective until the first day of the month after the Company files with Docket Control, as a compliance item in this docket, documentation from ADWR indicating that Pine Valley’s water system is compliant with departmental requirements governing water providers and/or community water systems.

#### **G. ACC COMPLIANCE**

On July 9, 2015, the Utilities Division compliance database showed that the Company had no delinquent ACC compliance items.

#### **H. DEPRECIATION RATES**

The Company has been using Staff’s typical and customary depreciation rates except for National Association of Regulatory Utility Commissioners (“NARUC”) account number 320.1,

water treatment plants, where the company used 2.0%. Staff recommends that the Company utilize the depreciation rates as delineated in Table 9 below on a going-forward basis.

*Table 7. Depreciation Rates*

NARUC Acct. No.	Depreciable Plant	Average Service Life (Years)	Annual Accrual Rate (%)
304	Structures & Improvements	30	3.33
305	Collecting & Impounding Reservoirs	40	2.5
306	Lake, River, Canal Intakes	40	2.5
307	Wells & Springs	30	3.33
308	Infiltration Galleries	15	6.67
309	Raw Water Supply Mains	50	2
310	Power Generation Equipment	20	5
311	Pumping Equipment	8	12.50
320	Water Treatment Equipment		
320.1	Water Treatment Plants	30	3.33
320.2	Solution Chemical Feeders	5	20
320.3	Point-of-Use Treatment Devices	10	10
330	Distribution Reservoirs & Standpipes		
330.1	Storage Tanks	45	2.22
330.2	Pressure Tanks	20	5
331	Transmission & Distribution Mains	50	2
333	Services	30	3.33
334	Meters	12	8.33
335	Hydrants	50	2
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
341	Transportation Equipment	5	20
342	Stores Equipment	25	4
343	Tools, Shop & Garage Equipment	20	5
344	Laboratory Equipment	10	10
345	Power Operated Equipment	20	5
346	Communication Equipment	10	10
347	Miscellaneous Equipment	10	10

**I. OTHER ISSUES**

*1. Service Line and Meter Installation Charges*

Service line and meter installation charges are refundable advances. In its filing the Company did not request changes to its current Commission approved service line and meter installation charges.<sup>9</sup> Staff recommends that the Company continue to utilize the service line and meter installation charges as shown in Table 10.

*Table 8. Service Line and Meter Installation Charges*

	Staff's Recommended and Current Commission Approved Charges		
Meter Size	Service Line Charge	Meter Charge	Total Charges
5/8" x 3/4"	\$0	\$0	\$0
3/4"	\$0	\$0	\$0
1"	\$0	\$0	\$0
1-1/2"	\$315	\$255	\$570
2"	\$455	\$515	\$970
3"	\$780	\$1,120	\$1,900
4"	\$840	\$1,315	\$2,155
6"	\$1,375	\$2,790	\$4,165

*2. Curtailment Tariff*

The Company has an approved curtailment tariff on file with an effective date of September 12, 2015.

*3. Backflow Prevention Tariff*

The Company has an approved backflow prevention tariff on file with an effective date of September 27, 2015.

*4. Blending Plan*

Presently, the Company treats all raw water distributed to customers. Staff calculations indicate that if the Company were to implement a blending plan, nearly a quarter of the raw water could initially bypass the ARS and blend with treated water and provide drinking water that meets MCLs. As the media becomes saturated with arsenic the treated water arsenic level will increase and the blended water will approach the arsenic MCL. As the blended water arsenic level increases the

<sup>9</sup> The Company's current charges were approved in ACC Decision No. 63681, dated May 24, 2001.

amount of raw water bypassing the ARS will be required to decrease to insure that the blended water supplied to distribution meets water quality standards. Blending will increase the life of the media and reduced maintenance costs. Staff suggests that the Company consider retaining the services of a professional engineer to study the possibility of implementing a blending plan that could increase the life of the ARS media and estimation of possible decrease in maintenance costs.

#### 5. *Security*

The well pump is located within the plant area and inside a wood framed enclosure, is easily accessed by the public. The well enclosure is not secured by a locked fence nor does the enclosure have the ability to be locked. Bulletin 10, Chapter 2.E.18<sup>10</sup> states..."If the well head is not enclosed by a building, security fencing at least 6 feet high shall be constructed. Other approved means of preventing potential contamination may be approved by the Department."

Staff recommends that the Company file with Docket Control, as a compliance item in this docket and within 90 days of the effective date of a decision in this proceeding, documentation demonstrating that the Company provided well security in the form of a lockable well enclosure or lockable six foot fence.

#### 6. *Best Management Practice Tariffs*

Staff recommends that the Company file with Docket Control, as a compliance item in this docket and within 90 days of the effective date of a decision in this proceeding, at least three BMPs in the form of tariffs that substantially conform to the templates created by Staff. These BMP templates are available on the Commission's website, [www.azcc.gov/divisions/utilities/water/forms.asp](http://www.azcc.gov/divisions/utilities/water/forms.asp).

Staff further recommends that a maximum of two (2) BMPs come from the "Public Awareness/Public Relations" or "Education and Training" categories. The Company may request cost recovery of the actual costs associated with the BMPs implemented in its next general rate application.

#### 7. *Generator*

The Company recently purchased a used propane powered 70kW generator to supply reliable, independent, emergency source of power of sufficient capacity for the essential water system electrical services. At sea level the 70kW generator will produce approximately 93 electrical hp. The elevation of the water system is approximately 4435 feet above sea level which de-rates the available total electrical horsepower to approximately 77 hp. This is sufficient power to operate the well pump, booster pumps and essential lighting. The generator incorporates an automatic start mechanism which will start the generator when it senses that the electrical power has been interrupted. According to the owner/operator and Staff observations, the generator building is complete and generator installed within building. The water system must yet complete the electrical

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<sup>10</sup> Arizona Department of Environmental Quality Engineering Bulletin No. 10, "Guidelines for the Construction of Water Systems", May 1978 ("Bulletin 10").

tie-ins before the generator can be made used and useful. The installation is scheduled to be complete in October 2015. Staff recommends that the Company complete all necessary generator electrical tie-ins so that it can be utilized during power interruptions.

8. *Plant Deficiencies Identified During Site Inspection*

Staff identified several items that needed attention during its site inspection on July 24, 2015. Staff recommends that within 90 days of the effective date of the order in this matter Pine Valley complete the needed improvements listed below and file, as a compliance item with the Commission's Docket Control, documentation demonstrating that the improvements have been completed.

Table 11. List of items identified and recommended course of action.

Location	Issue Type	Description of Issue	Possible Consequence	Recommend Company	Regulation - Guideline
<b>Well Pump</b>	Substandard Installation/Safety	Exposed electrical wiring to well pump.	Bodily Harm	Rewire well pump utilizing conduit installed in professional manner	OSHA 29 CFR <sup>11</sup> 1910.305 & 1910.307 & Bulletin No. 10, Chapter 3.G.3
	Substandard Installation/Safety	Exposed electrical Romex cables near well pump area leading to booster building	Bodily Harm & Tripping	Install wiring in conduit in professional manner or if wiring has no purpose remove at source	OSHA 29 CFR 1910.305, 1910.307 & 1910.22
<b>Booster Building</b>	Substandard Installation/Safety	Exposed electrical wiring in 2 junction boxes & exposed conduit holes in another junction box	Bodily Harm	Close junction boxes with approved covers & cap exposed holes or replace junction box & insure circuit protected by Ground Fault Interrupter breaker	OSHA 29 CFR 1910.305 & 1910.307

<sup>11</sup> United States Department of Labor, Occupational Health and Safety Administration ("OSHA"), Title 29 – Labor, Code of Federal Regulations ("CFR"), Part 1910.