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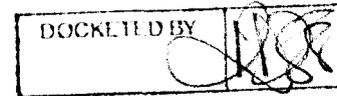
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MEMORANDUM

TO: Docket Control  
FROM: Steven M. Olea  
Director  
Utilities Division  
DATE: August 9, 2011

Arizona Corporation Commission  
**DOCKETED**

AUG 9 2011



RE: STAFF REPORT FOR ORANGE GROVE WATER COMPANY, INC.'S APPLICATIONS FOR A PERMANENT RATE INCREASE AND A FINANCING APPROVAL. (DOCKET NOS. W-02237A-11-0180 AND W-02237A-11-0084)

Attached is the Staff Report for Orange Grove Water Company, Inc.'s applications for a permanent rate increase and financing approval. Staff recommends approval of a rate increase in accordance with Staff's recommendations. Staff recommends approval of the requested financing and the associated surcharge mechanism with conditions.

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 August 19, 2011.

SMO:CSB:red

Originator: Crystal Brown

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ARIZONA CORPORATION COMMISSION  
DOCKET CONTROL

Service List for: Orange Grove Water Company, Inc.  
Docket Nos. W-02237A-11-0180 and W-02237A-11-0084

Ms. Kathleen Day, President  
Orange Grove Water Company, Inc  
PO Box 889  
Yuma, Arizona 85366

**STAFF REPORT  
UTILITIES DIVISION  
ARIZONA CORPORATION COMMISSION**

**ORANGE GROVE WATER COMPANY, INC.**

**DOCKET NOS.  
W-02237A-11-0180 AND W-02237A-11-0084**

**APPLICATION  
FOR A  
PERMANENT RATE INCREASE  
AND  
FINANCING APPROVAL**

**AUGUST 9, 2011**

## STAFF ACKNOWLEDGMENT

The Staff Report for Orange Grove Water Company, Inc., Docket Nos. W-02237A-11-0180 and W-02237A-11-0084, was the responsibility of the Staff members listed below. Crystal Brown was responsible for the financial review and analysis of the Company's applications. Jian Liu was responsible for the engineering and technical analysis. Trish Meeter was responsible for reviewing the Commission's records on customer complaints filed with the Commission.



Crystal Brown  
Public Utilities Analyst IV



Jian Liu  
Utilities Engineer



Trish Meeter  
Public Utilities Consumer Analyst

**EXECUTIVE SUMMARY**  
**ORANGE GROVE WATER CO., INC.**  
**DOCKET NOS.**  
**W-02237A-11-0180 AND W-02237A-11-0084**

On February 22, 2011, the Orange Grove Water Company, Inc. ("Orange Grove" or "Company") filed an application for approval of a financing for a Water Infrastructure Finance Authority of Arizona ("WIFA") loan. On April 27, 2011, Orange Grove filed an application for a permanent rate increase with the Arizona Corporation Commission ("Commission"). A Procedural Order, dated June 15, 2011, granted Staff's request to consolidate the permanent rate increase and financing applications.

Orange Grove proposed total operating revenue of \$131,365, an increase of \$23,125 or 21.36 percent above the Company's adjusted test year revenue of \$108,240 as shown on Schedule CSB-1. The Company's proposed rates would increase the typical 5/8 x 3/4-inch meter residential bill, with a median usage of 6,611 gallons, from \$25.62 to \$31.55, an increase of \$5.93, or 23.1 percent, as shown on Schedule CSB-5.

Staff recommends total base rates revenue of \$115,193, as shown on Schedule CSB-1. In addition, Staff is recommending a WIFA loan surcharge that would generate estimated revenue of \$2,426, for total revenue of approximately \$117,619, as shown on Schedule CSB-7. The base rates revenue is intended to support all operations except the debt service of the loan. The debt service (i.e., principal and interest payments) will be made with revenues generated from the WIFA loan surcharge.

The base rates revenue of \$115,193 represents a \$6,953 or 6.42 percent increase above the Company's adjusted test year revenue of \$108,240. The WIFA loan surcharge revenue represents a \$2,426, or 2.24 percent increase above adjusted test year revenues of \$108,240. The sum of the two components represents a total increase of \$9,379, or 8.66 percent, over test year revenue of \$108,240.

Staff's recommended rates (excluding the WIFA loan surcharge) would increase the typical 5/8 x 3/4-inch meter residential bill with a median usage of 6,611 gallons from \$25.62 to \$27.07 for an increase of \$1.44, or 5.6 percent. Once the WIFA loan surcharge is implemented, the typical 5/8 x 3/4-inch meter residential bill of \$27.07 would increase by the amount of the surcharge, \$0.67, to \$27.74. The combined base rate and surcharge revenue components would increase the typical 5/8 x 3/4-inch meter residential bill by \$2.11, or 8.3 percent, from \$25.62 to \$27.74.

Staff's recommended rates and surcharge yield a cash flow of \$12,025, as shown on Schedule CSB-7. This cash flow amount results in an operating margin on base rates revenue of 8.25 percent and a rate of return of 36.40. When the WIFA loan surcharge revenue is added, the operating margin is 10.14 percent as shown on Schedule CSB-7. Staff has recommended an original cost rate base of \$32,772. Staff's revenue generated from base rates is sufficient to

cover all operations and maintenance. The WIFA loan surcharge will provide for debt service on the proposed WIFA loan.

## **STAFF'S RECOMMENDATIONS**

Staff recommends:

1. Approval of the Staff recommended rates and charges as shown on Schedule CSB-4.
2. That the Company file with the Commission a written plant retirement policy which at a minimum requires documentation to be maintained that reflects (1) the plant item retired, (2) the cost of the plant item, (3) documentation to support the actual cost of the plant item, (4) whether the cost was actual or estimated, and (5) the year the plant item was retired.
3. That, on a going-forward basis, if an estimate of the actual cost of a plant asset exceeds the accumulated depreciation balance for that plant account, the estimated cost be adjusted so that it does not exceed the balance of the accumulated depreciation for that plant account.
4. Approval of the Staff-recommended \$30,000 financing and approval of a surcharge mechanism that may result in a surcharge of \$0.67 per month per customer.
5. That the actual amount of the WIFA loan surcharge be calculated based upon the actual amount of the WIFA loan and actual number of customers.
6. That the Company file with the Commission a WIFA loan surcharge tariff application that would enable the Company to meet its principal and interest obligations on the proposed WIFA loan.
7. That the Company follow the same methodology presented on Schedule CSB-6 to calculate the additional revenue needed to meet its interest and principal payments on the WIFA loan using actual loan amounts.
8. That the Company make a WIFA loan surcharge filing within 60 days of the loan closing.
9. Approval of the loan and surcharge be rescinded if the Company has not drawn funds from the loan within one year of the date of the Decision resulting from this proceeding.
10. 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 Decision in this matter is issued.

11. That the Company be given the option of installing an on-site Emergency Generator with significant capacity to run the Company's high yield backup well in lieu of adding the proposed storage tank and booster pump system additions.
12. That, if the Company decides to implement the Generator alternative, it file, as a compliance item in this docket, within 120 days of the effective date of the order in this matter, documentation demonstrating that the on-site Emergency Generator and other minor improvements have been completed.
13. That Orange Grove 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 three Best Management Practices ("BMP") 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.
14. That the Company continue to use the depreciation rates as presented in Table B of the attached Engineering Report.

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**SCHEDULES**

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WIFA Loan Surcharge Calculation - Example..... Schedule CSB-6

Financial Analysis..... Schedule CSB-7

**ATTACHMENTS**

Engineering Report for Rate Case and Financing.....A

**FACT SHEET**

**Type of Ownership:** Arizona “C” Corporation

**Location:** In Yuma County about 7 miles south of Yuma, Arizona.

**Filing Dates for Rate and Financing Applications:** Permanent rate increase application filed April 27, 2011. Procedural Order on June 15, 2011, consolidated this rate application with the financing application filed on February 22, 2011.

**Current Rates:** Decision No. 71110, dated June 5, 2009.

**Prior test year ended:** December 31, 2007.

**Metered Rates:**

	Company Current <u>Rates</u>	Company Proposed <u>Rates</u>	Staff Recommended Rates (With WIFA <u>Loan Surcharge</u> )
<b>Based on 5/8 x 3/4-inch meter</b>			
<b>Monthly Minimum Charge</b>	\$11.50	\$14.17	\$11.50
Monthly Surcharge (For Illustrative Purposes Only)	N/A	N/A	\$0.67
<b>Gallons in minimum</b>	0	0	0
<b>Commodity Charge (per 1,000 gallons)</b>			
0 to 3,000 gallons	\$2.00	\$2.46	\$2.00
3,001 to 8,000 gallons	\$2.25	\$2.77	\$2.65
Over 8,000 gallons	\$2.75	\$3.39	\$3.30
<b>Typical residential bill (With Surcharge)</b> (based on median usage of 6,611 gallons)	\$25.62	\$31.55	\$27.74

**Customers:** The Company served an average of 303 metered customers<sup>1</sup> during the test year, broken-out by meter size as follows:

5/8 x 3/4 – inch meter 303

There are no other meter sizes in use.

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<sup>1</sup> Per the bill count data provided by the Company.

**Complaints:**

There were no complaints filed from January 1, 2008, to July 8, 2011.

**Notifications:**

On May 4, 2011, a notarized affidavit of mailing "Customer Notification" was filed for the rate application. On July 25, 2011, a notarized affidavit of mailing "Customer Notification" was filed for the financing application.

## SUMMARY OF FILING

Orange Grove Water Company, Inc. ("Orange Grove" or "Company") proposed total operating revenue of \$131,365, an increase of \$23,125, or 21.36 percent, above the Company's adjusted test year revenue of \$108,240 as shown on CSB-1. The Company's proposed rates would increase the typical 5/8 x 3/4-inch meter residential bill, with a median usage of 6,611, from \$25.62 to \$31.55; an increase of \$5.93, or 23.1 percent, as shown on CSB-5.

Utilities Division Staff ("Staff") recommends total base rates revenue of \$115,193, as shown on Schedule CSB-1. In addition, Staff is recommending a Water Infrastructure Finance Authority of Arizona ("WIFA") loan surcharge that would generate estimated revenue of \$2,426, for total revenue of approximately \$117,619, as shown on Schedule CSB-7. The base rates revenue is intended to support all operations. The debt service of the loan (i.e., principal and interest payments) will be made with revenues generated from the WIFA loan surcharge.

The base rates revenue of \$115,193 represents a \$6,953 or 6.42 percent increase above the Company's adjusted test year revenue of \$108,240 as shown on CSB-1. The WIFA loan surcharge revenue represents a \$2,426, or 2.24 percent, increase above adjusted test year revenues of \$108,240. The sum of the two components represents a total increase of \$9,379, or 8.66 percent, over test year revenue of \$108,240 as shown on CSB-7.

Staff's recommended rates (excluding the WIFA loan surcharge) would increase the typical 5/8 x 3/4-inch meter residential bill with a median usage of 6,611 gallons from \$25.62 to \$27.07 for an increase of \$1.44, or 5.6 percent, as shown on CSB-5. Once the WIFA loan surcharge is implemented, the typical 5/8 x 3/4-inch meter residential bill of \$27.07 would increase by the amount of the surcharge, \$0.67, to \$27.74. The combined base rate and surcharge revenue components would increase the typical 5/8 x 3/4-inch meter residential bill by \$2.11, or 8.3 percent, from \$25.62 to \$27.74 as shown on CSB-5.

Staff's recommended rates and surcharge yield a cash flow of \$12,025, as shown on Schedule CSB-7. This cash flow amount results in an operating margin on base rates revenue of 8.25 percent and, when the WIFA loan surcharge revenue is added, the operating margin is 19.55 percent, as shown on Schedule CSB-7. Staff has recommended an original cost rate base of \$32,772. Staff was unable to derive the revenue requirement by applying a rate of return on rate base because the Company's low rate base did not produce sufficient revenues for the Company's operating needs. Staff's revenue generated from base rates is sufficient to cover all operations and maintenance expenses. The WIFA loan surcharge will provide for debt service on the proposed WIFA loan.

According to the application, the Arizona Corporation Commission ("Commission") ordered the Company to install a new storage tank in Decision No. 71110. After meeting with Staff, it was determined that a backup generator should be installed instead of the storage tank as discussed in greater detail in the attached Engineering Report.

The Company utilized a test year ending December 31, 2010.

## **BACKGROUND**

On February 22, 2011, Orange Grove filed a request for a financing approval. On April 27, 2011, Orange Grove filed a request for a permanent rate increase with the Commission. On May 26, 2011, the application was deemed sufficient by Staff.

Orange Grove is an Arizona class D utility engaged in the business of providing potable water service. Orange Grove was granted a Certificate of Convenience and Necessity ("CC&N") to provide water service per Decision No. 39886, effective January 29, 1969.

## **CONSUMER SERVICES**

A review of the Consumer Services Section database for the Company from January 1, 2008, to July 8, 2011, revealed that there were no complaints.

## **COMPLIANCE**

The Utilities Division Compliance Section shows one outstanding compliance issue. The Company has filed the required item. Once Staff has reviewed the documentation and determined that it is sufficient, the Company will have no outstanding compliance issues.

Orange Grove is current on its property and sales tax payments.

Orange Grove is in good standing with the Corporations Division of the Commission.

## **ENGINEERING ANALYSIS**

A complete discussion of Staff's technical findings and recommendations, along with a complete description of the Company's water system is provided in the attached Engineering Report.

### Plant Additions and Retirement Documentation

During the course of its audit in this proceeding, Staff found that the Company has not consistently maintained adequate supporting documentation for plant additions. Staff further noted that the Company did not have a written retirement policy that required the Company to keep records of the actual cost of its plant retirements. As a result of not keeping records supporting the actual cost for all plant retirements, the Company has had to estimate the cost for some of its retirements by using trend analysis.

A situation developed in the last rate case wherein the *estimated* cost of a plant retirement removed from the accumulated depreciation in Account No. 311, electric pumping equipment,

was more than the total accumulated depreciation balance for the account. This has led to a negative accumulated depreciation balance of \$4,100, as shown on CSB-2, page 3.1. A negative accumulated depreciation balance increases rate base. For example, \$100 in plant minus a negative \$50 in accumulated depreciation is a positive \$150 in net plant ( $\$100 - (-50) = \$150$ ).

Staff recommends that the Company file with the Commission a written retirement policy which at a minimum requires documentation to be maintained that reflects (1) the plant item retired, (2) the cost of the plant item, (3) documentation to support the actual cost of the plant item, (4) whether the cost was actual or estimated, and (5) the year the plant item was retired.

Further, Staff recommends that, on a going forward basis, if an estimate of the actual cost of a plant asset exceeds the accumulated depreciation balance for that plant account, the estimated cost be adjusted so that it does not exceed the balance of the accumulated depreciation for that plant account.

## **RATE BASE**

The Company did not propose a fair value rate base that differs from its original cost rate base. Staff's adjustments increased the Company's proposed rate base by \$20,787, from \$11,985 to \$32,772, as shown on Schedule CSB-2, page 1. Details of Staff's adjustments are discussed below.

### *Plant-in-Service*

Adjustment A increases Plant-in-Service by \$397, from \$220,794 to \$221,191. Staff increased the Meters and Meter Installation account by \$397, from \$15,757 to \$16,154, as shown on Schedule CSB-2, page 2. Staff calculated the ending balance of this account by starting with the correct ending balance in the last rate case and reflecting \$395 in costs incurred for meters that the Company had inappropriately expensed.

Further, Staff increased the meters account by two dollars. The Company's beginning balance of \$15,757 for the meters account was the same as its ending balance because there were no additions or retirements according to the Company. However, the meters ending balance at the end of the test year (i.e., 12/31/2007) as approved in the last rate case was \$15,759, a difference of two dollars.

Staff's adjustment is shown on Schedule CSB-2, pages 1 and 2.

### *Accumulated Depreciation*

Adjustment B increases this account by \$17, from \$184,294 to \$184,311, to reflect depreciation expense from the end of test year of the last rate case to the end of the test year of the instant case. Staff's calculation is shown on Schedule CSB-2 pages 1 and 3.

*Accumulated Amortization of Contributions in Aid of Construction ("CIAC")*

Adjustment C increases this account by \$8,569, from \$19,435 to \$28,004, to reflect amortization expense from the end of test year of the last rate case to the end of the test year of the instant case. Staff's calculation is shown on Schedule CSB-2, pages 2 and 4.

*Working Capital*

Orange Grove did not claim any working capital allowance. Staff's adjustments D and E resulted in a net increase to working capital of \$11,838, from \$0 to \$11,838, as shown on Schedule CSB-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 REVENUES**

The Company's test year operating revenues were \$108,240. Staff concurs with the Company's revenue and used the same billing determinants for Staff's revenue determination and rate design process.

**OPERATING EXPENSES**

Staff's adjustments to operating expenses resulted in a decrease of \$5,166, from \$109,320 to \$104,154, as shown on Schedule CSB-3, page 1. The adjustments are explained below.

Repairs and Maintenance Expense – Adjustment A decreases this account by \$2,590, from \$11,121 to \$8,531, as shown on Schedule CSB-3, pages 1 and 2. Staff began with the \$18,881 amount per the Company's trial balance and reflected the Company's \$8,671 pro forma adjustment to remove and capitalize costs incurred for plant. Further, Staff removed and capitalized \$395 incurred for meters that the Company inappropriately expensed. Staff also removed \$293 to normalize computer and maintenance costs related to a hard drive crash and removed \$990 to normalize the cost of refurbishing one of the Company's hydrants.

Office Supplies and Expense – Adjustment B decreases this account by \$250 from \$9,670 to \$9,420, as shown on Schedule CSB-3, pages 1 and 3. Staff's adjustment removes a non-recurring cost for relocating a computer in the owner's residence from one location to another location. The owner had an area of her residence remodeled into an office and relocated the computer to the new office. The computer is used for Orange Grove business operations.

Contractual Service – Adjustment C decreases this account by \$308 from \$4,512 to \$4,204, as shown on Schedule CSB-3, pages 1 and 3. Staff's adjustment removes late fees on the Gaffin, CPA invoices.

Water Testing – Adjustment D increases water testing expense by \$100 from \$3,634 to \$3,734, as shown on Schedule CSB-3, pages 1 and 3. Staff's adjustment reflects Staff Engineer's recommendation.

Rate Case Expense – Adjustment E decreases rate case expense by \$542 from \$1,875 to \$1,333, to reflect Staff's normalization of rate case expense based upon an analysis of rate case expense for Class D water companies as shown on Schedule CSB-3, pages 1 and 4.

Staff has reviewed the Commission-approved annual rate case expense for 21 Class D water companies in which the Staff Reports were filed in the years 2009 and 2010. Staff found that 42 percent of the 21 companies (or 9 of 21) received no rate case expense. Seventy-one percent (or 15 of 21) had annual rate case expense of \$1,000 or less. Because the consultant who did the instant case also did the Company's last rate case, the Company has only been out for three years, and there are few, if any, contested issues, Staff recommends rate case expense of \$4,000, normalized using three years.

Miscellaneous Expense – Adjustment F decreased this account by \$300, from \$1,387 to \$1,087, as shown on Schedule CSB-3, pages 1 and 4. Staff's adjustment removes costs incurred for a funeral.

Depreciation Expense – Adjustment G decreased this account by \$2,465, from \$4,986 to \$2,521, to reflect test year depreciation expense, as calculated on Schedule CSB-3, page 5 of 8.

Income Taxes – Adjustment H increased income taxes by \$1,189, from negative \$108 to \$1,081, to reflect Staff's calculation of income tax expense as shown on Schedule CSB-3, page 7 of 8.

## **REVENUE REQUIREMENT**

Small water utilities will often have a rate base that is too small to earn a meaningful rate of return. Consequently, the revenues needed in order to make the companies financially viable will result in abnormally high rates of return. Orange Grove is among those water companies whose large debt service requirement and small rate base results in abnormally high rates of return when compared to other, more financially capable, companies.

Once the surcharge is implemented, Staff recommends total operating revenue of \$117,619, an increase of \$9,379, or 8.66 percent, over test year revenue of \$108,240. Staff's recommended rates and surcharge yield a cash flow of \$12,025, as shown on Schedule CSB-7. This cash flow amount results in an operating margin on base rates revenue of 8.25 percent and a rate of return of 36.40. When the WIFA loan surcharge revenue is added, the operating margin is 10.14 percent, as shown on Schedule CSB-7.

Staff's total revenue requirement of \$117,619 provides the Company with sufficient cash flow to pay operating expenses, contingencies, principal and interest on the requested loan, and

to meet the minimum 1.2 debt service coverage ("DSC") ratio required by WIFA on the loan. Staff's higher than normal operating margin was driven by the Company's cash flow needs.

## **RATE DESIGN**

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

The Company's proposed rates would increase the typical 5/8 x 3/4-inch meter residential bill, with a median usage of 6,611, from \$25.62 to \$31.55; an increase of \$5.93, or 23.1 percent as shown on Schedule CSB-5.

Staff's recommended rates (excluding the WIFA loan surcharge) would increase the typical 5/8 x 3/4-inch meter residential bill with a median usage of 6,611 gallons from \$25.62 to \$27.07, for an increase of \$1.44, or 5.6 percent. Once the WIFA loan surcharge is implemented, the typical 5/8 x 3/4-inch meter residential bill of \$25.62 would increase by the amount of the surcharge, \$0.67, to \$27.74. The combined base rate and surcharge revenue components would increase the typical 5/8 x 3/4-inch meter residential bill by \$2.11, or 8.3 percent, from \$25.62 to \$27.74, as shown on Schedule CSB-5.

The Company has proposed a standpipe rate per 1,000 gallons of \$3.39, which reflects the third tier of the Company's proposed inverted tiered rate design. Staff recommends \$3.30, which reflects the third tier of Staff's recommended inverted tiered rate design.

## **MISCELLANEOUS SERVICE CHARGES**

Establishment (After Hours), Re-establishment (After Hours), and After Hours Service Charges – The Company has proposed to continue its current Establishment (After Hours), Re-establishment (After Hours), and After Hours Service Charges as shown on Schedule CSB-4. Staff agrees that 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, Staff concludes that 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. Therefore, Staff recommends elimination of the Company's current Establishment (After Hours), Re-establishment (After Hours), and After Hours Service Charges Reconnection (Delinquent) After Hours charges. Instead of these charges, Staff recommends the creation of a separate \$30 after-hours service charge. For example, under Staff's proposal, a customer would be subject to a \$25 Establishment fee if it is done during normal business hours, but would pay an additional \$30 after-hours fee if the customer requested that the establishment be done after normal business hours.

The Company proposes to add a late payment penalty charge of 1.50 percent. The amount is typical for the late payment fee recommended by Staff. Staff recommends approval with the language “per month” added to clarify that the charge is monthly.

Meter Re-read Charge – The Company is proposing to continue the Meter Re-read charge of \$30.00. Staff recommends a \$20.00 Meter Re-read charge as it is within the range of the amounts that other utilities charge for this service as shown on Schedule CSB-4.

Fire Sprinkler Charges – The Company currently does not have tariffed rates for fire sprinklers. In the event that a customer requests service for a fire sprinkler, Staff recommends charges for fire sprinklers for various meter sizes as shown on Schedule CSB-4.

## **FINANCING APPLICATION AND SURCHARGE MECHANISM**

### Purpose and Terms of the Proposed Financing and Surcharge Mechanism

According to the application, the purpose of the loan was to install a storage tank for approximately \$200,000. After meeting with Staff, it was determined that the Company should install a \$30,000 backup generator instead of the storage tank, as discussed in greater detail in the attached Engineering Report. Staff examined the construction plans and estimated costs for Orange Grove’s project and found it to be reasonable and appropriate. A complete discussion of Staff’s findings and recommendations concerning the financing application can be found in the attached Engineering Report.

The proposed \$30,000 financing is a 20-year amortizing loan at a 5.25 percent interest rate. The payments are estimated to be \$202 per month, or \$2,426 annually, as shown on Schedule CSB-6, page 3.

Based upon Staff’s review of the application and the Company’s unaudited 2010 financial statements, the Company lacks sufficient earnings and operating cash flow to meet its proposed long-term debt obligation. Therefore, a surcharge that provides funds for the debt service on the WIFA loan is appropriate. Because the final details of the WIFA loan will not be known until after the Company has closed on the loan; Staff is recommending a surcharge mechanism.

The surcharge mechanism establishes the methodology for calculating the surcharge amount to be applied to the rates established in this emergency rate application. To collect the surcharge, the Company would submit a surcharge application to the Commission under this Docket, using the methodology Staff has defined in this Report, once Orange Grove has closed on the loan and has drawn funds to begin construction of the plant.

## **CALCULATION OF SURCHARGE**

The following is the methodology that Staff recommends to calculate the surcharge needed to provide funds for the debt service on the loan. Also provided, as an illustration, is a sample calculation applying Staff's proposed methodology to a 20-year loan at 5.25 percent using the Staff-recommended loan amount of \$30,000. Staff's calculation is also shown on Schedule 6, pages 1 and 2.

Staff recommends the following steps to calculate the surcharge once the Company has closed on the loan.

## **INSTRUCTIONS TO CALCULATE THE ANNUAL SURCHARGE REVENUE REQUIREMENT ON THE LOAN**

### *Instruction for Step 1*

#### Step 1. Find the Annual Payment on the Loan

Refer to Table A, the Conversion Factor Table (included at the end of this section on page 9). Reading the table from top to bottom, find the interest rate in column A that is equal to the stated annual interest rate of the loan. Reading across the table, find the Annual Payment Conversion Factor in Column B that corresponds with the loan interest rate (in the event that the loan interest rate is different from the interest rates in Table A, use the next higher interest rate that can be found in Table A). Multiply that annual payment conversion factor by the total amount of the loan to calculate the annual debt service on the loan.

### *Result*

Total amount of the loan  
(\* ) Times annual payment conversion factor  
(=) Equals annual debt service on the loan

### *Instruction for Step 2*

#### Step 2. Find the equivalent bills.

Multiply the NARUC meter capacity multiplier by the number of current customers and by the number of months per year. The sum of the products equals the equivalent bills.

*Result*

Col A	Col B	Col C	Col D	Col E
Meter Size	NARUC Meter Capacity Multiplier	Number of Customers	Number of Months In Year	Equivalent Bills Col B x C x D
5/8"x 3/4" Meter	1	0	12	0
3/4" Meter	1.5	0	12	0
1" Meter	2.5	0	12	0
1 1/2" Meter	5	0	12	0
2" Meter	8	0	12	0
3" Meter	15	0	12	0
4" Meter	25	0	12	0
6" Meter	50	0	12	0
			<b>Total</b>	<b>0</b>

*Instruction for Step 3*

Step 3. Find the monthly surcharge for 5/8" x 3/4" customers.

Divide the result obtained in step 1 by the number of equivalent bills calculated in step 2 to obtain the monthly surcharge for 5/8" x 3/4" customers.

*Result*

Total annual payment on loan (Step 1)  
(÷) Divided by number of equivalent bills (Step 2)  
(=) Total monthly surcharge for 5/8" x 3/4" customers

*Instruction for Step 4*

Step 4. Find the monthly surcharge for remaining meter size customers.

Multiply the Result obtained in step 3 by the NARUC meter capacity multipliers to obtain the monthly surcharges for all other meter sizes.

*Result*

<b>Col A</b>	<b>Col B</b>	<b>Col C</b>	<b>Col D</b>
<b>Meter Size</b>	<b>NARUC Meter Capacity Multiplier</b>	<b>5/8" x 3/4" Customers' Surcharge</b>	<b>Surcharge by Meter Size Col B x C</b>
5/8"x 3/4" Meter	1	\$0.00	\$0.00
3/4" Meter	1.5	\$0.00	\$0.00
1" Meter	2.5	\$0.00	\$0.00
1½" Meter	5	\$0.00	\$0.00
2" Meter	8	\$0.00	\$0.00
3" Meter	15	\$0.00	\$0.00
4" Meter	25	\$0.00	\$0.00
6" Meter	50	\$0.00	\$0.00

**Example - For Illustrative Purposes Only**

Loan amount: \$30,000  
Term: 20 years  
Stated Annual Interest Rate: 5.25%

*Instruction for Step 1*

**Step 1. Find the Annual Payment on the Loan**

Refer to Table A, the Conversion Factor Table. Reading the table from top to bottom, find the interest rate in column A that is equal to the stated annual interest rate of the loan. Reading across the table, find the Annual Payment Conversion Factor in Column B that corresponds with the loan interest rate (in the event that the loan interest rate is different from the interest rates in Table A, use the next higher interest rate that can be found in Table A). Multiply that annual payment conversion factor by the total amount of the loan to calculate the annual debt service on the loan.

*Result*

\$ 30,000	Total loan amount
x .0809	Annual Payment Conversion Factor (Table A, Line 8, Column B)
\$ 2,427	Annual loan payment

*Instruction for Step 2*

Step 2. Find the equivalent bills.

Multiply the NARUC meter capacity multiplier by the number of current customers and by the number of months per year. The sum of the products equals the equivalent bills.

*Result*

Col A	Col B	Col C	Col D	Col E
Meter Size	NARUC Meter Capacity Multiplier	Number of Customers	Number of Months In Year	Equivalent Bills Col B x C x D
5/8"x 3/4" Meter	1	303	12	3,636
3/4" Meter	1.5	0	12	0
1" Meter	2.5	0	12	0
1½" Meter	5	0	12	0
2" Meter	8	0	12	0
3" Meter	15	0	12	0
4" Meter	25	0	12	0
6" Meter	50	0	12	0
			<b>Total</b>	<b>3,636</b>

*Instruction for Step 3*

Step 3. Find the monthly surcharge for 5/8" x 3/4" customers.

Divide the result obtained in step 1 by the number of equivalent bills calculated in step 2 to obtain the monthly surcharge for 3/4" customers.

*Result*

\$ 2,427	Total annual loan amount (Step 1)
÷ 3,636	Number of equivalent bills (Step 2)
\$ 0.67	Total monthly surcharge for 5/8" x 3/4" customers

*Instruction for Step 4*

Step 4. Find the monthly surcharge for remaining meter size customers.

Multiply the Result obtained in step 3 by the NARUC meter capacity multipliers to obtain the monthly surcharges for all other meter sizes.

*Result*

Col A	Col B	Col C	Col D
Meter Size	NARUC Meter Capacity Multiplier	5/8" x 3/4" Customers' Surcharge	Surcharge by Meter Size Col B x C
5/8"x 3/4" Meter	1	\$0.67	\$0.67
3/4" Meter	1.5	\$0.67	\$1.00
1" Meter	2.5	\$0.67	\$1.67
1½" Meter	5	\$0.67	\$3.34
2" Meter	8	\$0.67	\$5.34
3" Meter	15	\$0.67	\$10.01
4" Meter	25	\$0.67	\$10.01
6" Meter	50	\$0.67	\$33.36

**TABLE A**  
Conversion Factor Table (Based on a 20-year Loan)

Column A	Column B	Column C	Column D
Annual Interest	Annual Payment Conversion Factor	Annual Interest Payment Conversion Factor	Annual Principal Payment Conversion Factor
3.50%	0.0696	0.0344	0.0352
3.75%	0.0711	0.0369	0.0342
4.00%	0.0727	0.0394	0.0333
4.25%	0.0743	0.0419	0.0324
4.50%	0.0759	0.0444	0.0316
4.75%	0.0775	0.0468	0.0307
5.00%	0.0792	0.0493	0.0299
5.25%	0.0809	0.0518	0.0291
5.50%	0.0825	0.0543	0.0283
5.75%	0.0843	0.0568	0.0275
6.00%	0.0860	0.0593	0.0267
6.25%	0.0877	0.0618	0.0259
6.50%	0.0895	0.0643	0.0252
6.75%	0.0912	0.0668	0.0245
7.00%	0.0930	0.0692	0.0238
7.25%	0.0948	0.0717	0.0231
7.50%	0.0967	0.0742	0.0224
7.75%	0.0985	0.0767	0.0218
8.00%	0.1004	0.0792	0.0211

## STAFF'S RECOMMENDATIONS

Staff recommends:

1. Approval of the Staff recommended rates and charges as shown on Schedule CSB-4.
2. That the Company file with the Commission a written plant retirement policy which at a minimum requires documentation to be maintained that reflects (1) the plant item retired, (2) the cost of the plant item, (3) documentation to support the actual cost of the plant item, (4) whether the cost was actual or estimated, and (5) the year the plant item was retired.
3. That, on a going forward basis, if an estimate of the actual cost of a plant asset exceeds the accumulated depreciation balance for that plant account, the estimated cost be adjusted so that it does not exceed the balance of the accumulated depreciation for that plant account.
4. Approval of the Staff-recommended \$30,000 financing and approval of a surcharge mechanism that may result in a surcharge of \$0.67 per month per customer.
5. That the actual amount of the WIFA loan surcharge be calculated based upon the actual amount of the WIFA loan and actual number of customers.
6. That the Company file with the Commission a WIFA loan surcharge tariff application that would enable the Company to meet its principal and interest obligations on the proposed WIFA loan.
7. That the Company follow the same methodology presented on Schedule CSB-6 to calculate the additional revenue needed to meet its interest and principal payments on the WIFA loan using actual loan amounts.
8. That the Company make a WIFA loan surcharge filing within 60 days of the loan closing.
9. Approval of the loan and surcharge be rescinded if the Company has not drawn funds from the loan within one year of the date of the Decision resulting from this proceeding.
10. 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 Decision in this matter is issued.

11. That the Company be given the option of installing an on-site Emergency Generator with significant capacity to run the Company's high yield backup well in lieu of adding the proposed storage tank and booster pump system additions.
12. That, if the Company decides to implement the Generator alternative, it file, as a compliance item in this docket, within 120 days of the effective date of the order in this matter, documentation demonstrating that the on-site Emergency Generator and other minor improvements have been completed.
13. That Orange Grove 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 three Best Management Practices ("BMP") 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.
14. That the Company continue to use the depreciation rates as presented in Table B of the attached Engineering Report.

**Orange Grove Water Company**

Schedule CSB-1

Docket No. Docket Nos. W-02237A-11-0084 & W-02237A-11-0180

Test Year Ended December 31, 2010

**SUMMARY OF FILING**

	-- Present Rates --		Proposed	Recommended
	Company as Filed	Staff as Adjusted	Company as Filed	Staff as Adjusted* (Does Not Include Surcharge Rev.)
<b>Revenues:</b>				
Metered Water Revenue	\$107,211	\$107,211	\$130,336	\$114,164
Unmetered Water Revenue	0	0	0	0
Other Water Revenues	1,029	1,029	1,029	1,029
<b>Total Operating Revenue</b>	<b>\$108,240</b>	<b>\$108,240</b>	<b>\$131,365</b>	<b>\$115,193</b>
<b>Operating Expenses:</b>				
Operation and Maintenance	\$95,830	\$91,940	\$95,830	\$91,940
Depreciation	4,986	2,521	4,986	2,521
Property & Other Taxes	8,612	8,612	8,612	8,713
Income Tax	(108)	1,081	4,590	2,515
<b>Total Operating Expense</b>	<b>\$109,320</b>	<b>\$104,154</b>	<b>\$114,018</b>	<b>\$105,688</b>
<b>Operating Income/(Loss)</b>	<b>(\$1,080)</b>	<b>\$4,086</b>	<b>\$17,347</b>	<b>\$9,505</b>
Rate Base O.C.L.D.	\$11,985	\$32,772	\$11,985	\$32,772
Rate of Return - O.C.L.D.**	-9.01%	12.47%	144.74%	29.00%
Operating Margin**	-1.00%	3.78%	13.21%	8.25%

\* Amount included in base rates only. See Schedule CSB-7, page 1, column C for the combined Staff recommended base rate and surcharge revenue.

\*\*Amounts result from Staff's cash flow recommendation.

<b>RATE BASE</b>				
	----- Original Cost -----			
	Company	Adjustment	Reference	Staff
Plant in Service	\$220,794	\$397	A	\$221,191
Less:				
Accum. Depreciation	184,294	17	B	184,311
<b>Net Plant</b>	<b>\$36,500</b>	<b>\$380</b>		<b>\$36,880</b>
Less:				
Line Extension Advances	\$0	\$0		\$0
Service Line and Meter Advances	0	0		0
<b>Total Advances</b>	<b>\$0</b>	<b>\$0</b>		<b>\$0</b>
Contributions Gross	\$43,950	\$0		\$43,950
Less:				
Accumulated Amortization of CIAC	19,435	8,569	C	28,004
<b>Net CIAC</b>	<b>\$24,515</b>	<b>(\$8,569)</b>		<b>\$15,946</b>
<b>Total Deductions</b>	<b>\$24,515</b>	<b>(\$8,569)</b>		<b>\$15,946</b>
Plus:				
1/24 Purchased Power & Water	\$0	\$346	D	\$346
1/8 Operation & Maint.	0	11,493	E	11,493
Inventory	0	0		0
Prepayments	0	0		0
<b>Total Additions</b>	<b>\$0</b>	<b>\$11,838</b>		<b>\$11,838</b>
<b>Rate Base</b>	<b>\$11,985</b>	<b>\$20,787</b>		<b>\$32,772</b>

A - For Rate Base adjustment A, see Schedule 2, page 2  
B - For Rate Base adjustment B, see Schedule 2, page 3  
C - For Rate Base adjustment C, see Schedule 2, page 4  
D - For Rate Base adjustment D, see Schedule 2, page 4  
E - For Rate Base adjustment E, see Schedule 2, page 4

**PLANT ADJUSTMENT**

	Company Exhibit	Adjustment	Staff Adjusted
301 Organization	\$0	\$0	\$0
302 Franchises	0	0	0
303 Land & Land Rights	900	0	900
304 Structures & Improvements	0	0	0
307 Wells & Springs	11,699	0	11,699
311 Pumping Equipment	13,810	0	13,810
320 Water Treatment Equipment	0	0	0
330 Distribution Reservoirs & Standpipes	17,509	0	17,509
331 Transmission & Distribution Mains	128,931	0	128,931
333 Services	7,958	0	7,958
334 Meters & Meter Installations	15,757	397 a	16,154
335 Hydrants	9,966	0	9,966
336 Backflow Prevention Devices	0	0	0
339 Other Plant and Misc. Equipment	0	0	0
340.1 Computer Equipment	4,306	0	4,306
341 Transportation Equipment	9,958	0	9,958
343 Tools Shop & Garage Equipment	0	0	0
344 Laboratory Equipment	0	0	0
345 Power Operated Equipment	0	0	0
346 Communication Equipment	0	0	0
347 Miscellaneous Equipment	0	0	0
348 Other Tangible Plant	0	0	0
105 C.W.I.P.	0	0	0
<b>TOTAL</b>		<b>Adjustment A</b>	
	<b>\$220,794</b>	<b>\$397 A</b>	<b>\$221,191</b>

A- Staff capitalized \$395 in costs incurred for meters that were inappropriately expensed.

The Company shows an ending balance for the meters account of \$15,757. However the ending balance at the end of the test year (i.e., 12/31/2007) for the last rate case for the meters account was \$15,759. Therefore, Staff increased this account by \$2.

\$395	Costs incurred for meters
<u>2</u>	To reconcile to last rate case
\$397	Staff's adjustment

<b>ACCUMULATED DEPRECIATION ADJUSTMENT</b>
--

	<u>Amount</u>
Accumulated Depreciation - Per Company	\$ 184,294
Accumulated Depreciation - Per Staff	<u>184,311</u>
<b>Total Adjustment</b>	<b>B</b> <u><u>\$ 17</u></u>

To reflect Staff's calculation of accumulated depreciation expense based upon Staff's adjustments to plant.

See pages 3.1 to 3.3 for Staff's calculation.

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

	Plant 31-Dec-07 Original Cost	31-Dec-07 Accumulated Depreciation	Prior Depreciation Rates (Dec. No. 53723)	Depr. Rates Effective on 5-Jun-09 (Dec. No. 71110)	2008		2008		2008		2008 Total Cost	2008 Accumulated Depreciation
					Additions	Adjustments	Cost Removal	Retirements	2008 Depr. Expense			
301 Organization Cost	\$0	\$0	0.00%	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
302 Franchise Cost	0	0	0.00%	0.00%	0	0	0	0	0	0	0	0
303 Land & Land Rights	900	0	0.00%	0.00%	0	0	0	0	0	0	900	0
304 Structures & Improv	0	0	5.00%	3.33%	0	0	0	0	0	0	0	0
305 Collecting & Impounding Res.	0	0	5.00%	0.00%	0	0	0	0	0	0	0	0
307 Wells & Springs	11,699	11,699	5.00%	3.33%	0	0	0	0	0	0	11,699	11,699
310 Power Generation Equip	0	0	5.00%	0.00%	0	0	0	0	0	0	0	0
311 Electric Pumping Equip	11,711	(4,100)	5.00%	12.50%	0	0	0	0	0	\$586	11,711	(3,514)
320 Water Treatment Plants	0	0	5.00%	3.33%	0	0	0	0	0	0	0	0
320.1 Chemical Solution Feeders	0	0	5.00%	5.00%	0	0	0	0	0	0	0	0
330 Dist. Resrvr & Stndpipe	17,509	15,513	5.00%	2.22%	0	0	0	0	0	\$875	17,509	16,388
331 Trans. & Distr. Mains	128,931	128,931	5.00%	2.00%	0	0	0	0	0	\$0	128,931	128,931
333 Services	7,958	7,958	5.00%	3.33%	0	0	0	0	0	\$0	7,958	7,958
334 Meters	15,759	10,473	5.00%	8.33%	0	0	0	0	0	\$788	15,759	11,261
335 Hydrants	9,966	8,553	5.00%	2.00%	0	0	0	0	0	\$498	9,966	9,051
336 Backflow Prevention Devices	0	0	5.00%	6.67%	0	0	0	0	0	\$0	0	0
339 Other Plant and Misc Equip	0	0	5.00%	6.67%	0	0	0	0	0	\$0	0	0
340 Office Furniture & Fixt	0	0	5.00%	6.67%	0	0	0	0	0	\$0	0	0
340.1 Computers and Software	4,305	(2,390)	5.00%	20.00%	0	1	0	0	0	\$215	4,306	(2,175)
341 Transportation Equip	9,158	1,672	5.00%	20.00%	0	0	0	0	0	\$458	9,158	2,130
343 Tools & Work Equip	0	0	5.00%	5.00%	0	0	0	0	0	\$0	0	0
345 Power Operated Equip	0	0	5.00%	5.00%	0	0	0	0	0	\$0	0	0
346 Communications Equip	0	0	5.00%	10.00%	0	0	0	0	0	\$0	0	0
347 Miscellaneous Equipment	0	0	5.00%	10.00%	0	0	0	0	0	\$0	0	0
348 Other Tangible Equipment	0	0	5.00%	10.00%	0	0	0	0	0	\$0	0	0
Rounding					0	(1)	0	0	0	\$0	(1)	0
2007/2008 Totals	\$217,896	\$178,309			\$0	\$0	\$0	\$0	\$0	\$3,420	\$217,896	\$181,729

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

	2009 Additions		2009 Retirements		Fully Depreciated	2009		2009 Total Cost	2009 Accumulated Depreciation	2009 Net Book Value
	Cost		Cost Removal	Depreciation		Depr. Expense	Expense			
301 Organization Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
302 Franchise Cost	0	0	0	0	0	0	0	0	0	0
303 Land & Land Rights	0	0	0	0	0	900	0	900	0	900
304 Structures & Improv	0	0	0	0	0	0	0	0	0	0
305 Collecting & Impounding Res.	0	0	0	0	0	0	0	0	0	0
307 Wells & Springs	0	0	0	11,699	11,699	0	11,699	11,699	0	0
310 Power Generation Equip	0	0	0	0	0	0	0	0	0	0
311 Electric Pumping Equip	0	0	0	0	0	\$1,098	11,711	(2,417)	14,128	0
320 Water Treatment Equip	0	0	0	0	0	\$0	0	0	0	0
320.1 Water Treatment Equip	0	0	0	0	0	\$0	0	0	0	0
330 Dist. Resrvr & Sndpipe	0	0	0	0	0	\$592	17,509	16,980	529	0
331 Trans. & Distr. Mains	0	0	0	128,931	128,931	\$0	128,931	128,931	0	0
333 Services	0	0	0	7,958	7,958	\$0	7,958	7,958	0	0
334 Meters	0	0	0	0	0	\$1,094	15,759	12,355	3,404	0
335 Hydrants	0	0	0	0	0	\$324	9,966	9,375	591	0
336 Backflow Prevention Devices	0	0	0	0	0	\$0	0	0	0	0
339 Other Plant and Misc Equip	0	0	0	0	0	\$0	0	0	0	0
340 Office Furniture & Fixt	0	0	0	0	0	\$0	0	0	0	0
340.1 Computers and Software	0	0	0	0	0	\$592	4,306	(1,583)	5,889	0
341 Transportation Equip	0	0	0	0	0	\$1,259	9,158	3,389	5,769	0
343 Tools & Work Equip	0	0	0	0	0	\$0	0	0	0	0
345 Power Operated Equip	0	0	0	0	0	\$0	0	0	0	0
346 Communications Equip	0	0	0	0	0	\$0	0	0	0	0
347 Miscellaneous Equipment	0	0	0	0	0	\$0	0	0	0	0
348 Other Tangible Equipment	0	0	0	0	0	\$0	0	0	0	0
Rounding				(1)						
2009 Totals	\$0	\$0	\$0	\$148,588	\$4,959	\$217,896	\$186,688	\$31,209		

PLANT AND ACCUMULATED DEPRECIATION SCHEDULE

	2010		2010 Refirements		Fully Depreciated	2010		2010 Accumulated Depreciation	2010 Net Book Value
	Additions Cost	Adjustments	Cost Removal	Depreciation		Depr. Expense	Total Cost		
301 Organization Cost	\$0	\$0	\$0	\$0	\$0	0	\$0	\$0	\$0
302 Franchise Cost	0	0	0	0	0	0	0	0	0
303 Land & Land Rights	0	0	0	0	0	0	900	0	900
304 Structures & Improv	0	0	0	0	0	0	0	0	0
305 Collecting & Impounding Res.	0	0	0	0	0	0	0	0	0
307 Wells & Springs	0	0	0	0	11,699	0	11,699	11,699	0
310 Power Generation Equip	0	0	0	0	0	0	0	0	0
311 Electric Pumping Equip	0	10,761	8,662	8,662	0	1,595	13,810	(9,483)	23,293
320 Water Treatment Equip	0	0	0	0	0	0	0	0	0
320.1 Water Treatment Equip	0	0	0	0	0	0	0	0	0
330 Dist. Resrvr & Stndpipe	3,450	(3,450)	0	0	0	389	17,509	17,369	140
331 Trans. & Distr. Mains	0	0	0	0	128,931	0	128,931	128,931	0
333 Services	0	0	0	0	7,958	0	7,958	7,958	0
334 Meters	395	0	0	0	0	1,329	16,154	13,684	2,470
335 Hydrants	0	0	0	0	0	199	9,966	9,575	391
336 Backflow Prevention Devices	0	0	0	0	0	0	0	0	0
339 Other Plant and Misc Equip	0	0	0	0	0	0	0	0	0
340 Office Furniture & Fixt	0	0	0	0	0	0	0	0	0
340.1 Computers and Software	0	0	0	0	0	861	4,306	(721)	5,027
341 Transportation Equip	800	0	0	0	0	1,912	9,958	5,301	4,657
343 Tools & Work Equip	0	0	0	0	0	0	0	0	0
345 Power Operated Equip	0	0	0	0	0	0	0	0	0
346 Communications Equip	0	0	0	0	0	0	0	0	0
347 Miscellaneous Equipment	0	0	0	0	0	0	0	0	0
348 Other Tangible Equipment	0	0	0	0	0	0	0	0	0
Rounding							(1)		
2010 Totals	\$4,645	\$7,311	\$8,662	\$8,662	\$148,568	\$6,285	\$221,190	\$184,311	\$36,880

**STAFF RATE BASE ADJUSTMENTS**

C - ACCUMULATED AMORTIZATION OF CIAC - Per Company \$ 19,435  
Per Staff 28,004 \$8,569

Staff calculated the ending balance of the accumulated amortization of CIAC by calculating the amortization on the CIAC from the end of the last test year to the end of the current test year.

	(A)	(B)	(C)	(D)
	CIAC	Amortization Rate <sup>1</sup>	Amortization Expense Col A x Col B	Accumulated Amortization of CIAC
2008 Beg Accum Amortization of CIAC Balance				\$ 19,435
2008 Beginning CIAC Balance	\$ 43,950	5.00%	\$ 2,198	\$ 2,198
2008 CIAC Addition	\$ -		\$ -	
	<u>43,950</u>		<u>2,198</u>	<u>21,633</u>
2009 Beg Accum Amortization of CIAC Balance				21,633
2009 Beginning CIAC Balance	\$ 43,950	7.25%	\$ 3,186	\$ 3,186
2009 CIAC Addition	\$ -		\$ -	
	<u>43,950</u>		<u>3,186</u>	<u>24,818</u>
2010 Beg Accum Amortization of CIAC Balance				24,818
2010 Beginning CIAC Balance	\$ 43,950	7.25%	\$ 3,186	\$ 3,186
2010 CIAC Addition	\$ -		\$ -	
	<u>43,950</u>		<u>3,186</u>	<u>28,004</u>

<sup>1</sup>Composite Amortization Rate = Depreciation Expense / Depreciable Plant as shown on Schedule.  
Staff calculated the amortization rate by using the depreciation rates and plant balances authorized in Dec. No. 71110:  
 $\$4,959 / (\$217,986 - \$900 - \$11,699 - \$128,931 - \$7,958) = 7.25\%$

D - WORKING CAPITAL (1/24 PURCHASED PWR & WTR) - Per Company \$0  
Per Staff 346 \$346

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

E - WORKING CAPITAL (1/8 OPERATION & MAINT EXP) - Per Company \$ -  
Per Staff 11,493 \$11,493

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

**STATEMENT OF OPERATING INCOME**

	Company Exhibit	Staff Adjustments	Staff Adjusted	Staff Recommended
<b>Revenues:</b>				
461 Metered Water Revenue	\$ 107,211	\$ -	\$ 107,211	\$ 6,953 \$ 114,164
460 Unmetered Water Revenue	\$ -	\$ -	\$ -	\$ - \$ -
474 Other Water Revenues	\$ 1,029	\$ -	\$ 1,029	\$ - \$ 1,029
<b>Total Operating Revenue</b>	<b>\$ 108,240</b>	<b>\$ -</b>	<b>\$ 108,240</b>	<b>\$ - \$ 115,193</b>
<b>Operating Expenses:</b>				
601 Salaries and Wages	\$ 45,800	\$ -	\$ 45,800	\$ - \$ 45,800
610 Purchased Water	\$ -	\$ -	\$ -	\$ - \$ -
615 Purchased Power	\$ 8,297	\$ -	\$ 8,297	\$ - \$ 8,297
618 Chemicals	\$ -	\$ -	\$ -	\$ - \$ -
620 Repairs and Maintenance	\$ 11,121	\$ (2,590) A	\$ 8,531	\$ - \$ 8,531
621 Office Supplies & Expense	\$ 9,670	\$ (250) B	\$ 9,420	\$ - \$ 9,420
630 Contractual Services	\$ 4,512	\$ (308) C	\$ 4,204	\$ - \$ 4,204
635 Water Testing	\$ 3,634	\$ 100 D	\$ 3,734	\$ - \$ 3,734
641 Rents	\$ -	\$ -	\$ -	\$ - \$ -
650 Transportation Expenses	\$ 1,344	\$ -	\$ 1,344	\$ - \$ 1,344
657 Insurance - General Liability	\$ 8,189	\$ -	\$ 8,189	\$ - \$ 8,189
659 Insurance - Health and Life	\$ -	\$ -	\$ -	\$ - \$ -
666 Regulatory Commission Expense - Rate Case	\$ 1,875	\$ (542) E	\$ 1,333	\$ - \$ 1,333
675 Miscellaneous Expense	\$ 1,387	\$ (300) F	\$ 1,087	\$ - \$ 1,087
403 Depreciation Expense	\$ 4,986	\$ (2,465) G	\$ 2,521	\$ - \$ 2,521
408 Taxes Other Than Income	\$ 3,906	\$ -	\$ 3,906	\$ - \$ 3,906
408.11 Property Taxes	\$ 4,706	\$ -	\$ 4,706	\$ 101 \$ 4,807
409 Income Tax	\$ (108)	\$ 1,189 H	\$ 1,081	\$ 1,434 \$ 2,515
<b>Total Operating Expenses</b>	<b>\$ 109,320</b>	<b>\$ (5,166)</b>	<b>\$ 104,154</b>	<b>\$ 1,534 \$ 105,688</b>
<b>OPERATING INCOME/(LOSS)</b>	<b>\$ (1,080)</b>	<b>\$ 5,166</b>	<b>\$ 4,086</b>	<b>\$ (1,534) \$ 9,505</b>

**STAFF ADJUSTMENTS**

A - REPAIRS & MAINTENANCE - Per Company	\$11,121	
Per Staff	8,531	(\$2,590)

To remove costs that the Company inappropriately included in test year expenses:

\$	18,881.00	Per Company's trial balance
\$	(8,671.35)	Removed and capitalized by Company in pro-forma adj. no. 4.
\$	(395.00)	Remove and capitalize cost of meters
\$	(293.33)	Adjustment to normalize computer repair & maintenance costs
\$	(990.10)	Normalized hydrant repair and maintenance costs
\$	8,531.22	Repair and Maintenance Costs per Staff

Normalized Computer Repair & Maintenance Costs
--

\$	240	Hard drive crash
\$	40	Computer repair
\$	160	Reinstall programs
\$	440	Total computer repair expenses to be normalized
	3	years
\$	146.67	Normalized computer repair expenses
\$	440.00	Total computer repair expenses to be normalized
\$	(146.67)	Normalized computer repair expenses
\$	293.33	Staff's Adjustment

Normalized Hydrant Repair & Maintenance Costs
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\$	410	Empire West Invoice
\$	1,075	Fire hydrant
\$	1,485	Total costs to be normalized
	3	years
\$	495.05	Normalized hydrant repair expenses
\$	1,485.15	Total costs to be normalized
\$	(495.05)	Normalized hydrant repair expenses
\$	990.10	Staff's Adjustment

**STAFF ADJUSTMENTS (Cont.)**

B	- OFFICE SUPPLIES AND EXPENSE - Per Company	\$ 9,670	
	Per Staff	9,420	(\$250)
	To remove a non-recurring cost for relocating a computer used for Orange Grove to a different location within the owner's residence.		
C	- CONTRACTUAL SERVICES - Per Company	\$4,512	
	Per Staff	4,204	(\$308)
	To remove late fees on from contractual services account:		
	\$ 32.00 Late fee on Gaffin, CPA - 6/30/2010 invoice		
	\$ 32.00 Late fee on Gaffin, CPA - 6/30/2010 invoice		
	\$ 24.00 Late fee on Gaffin, CPA - 6/30/2010 invoice		
	\$ 32.00 Late fee on Gaffin, CPA - 7/16/2010 invoice		
	\$ 32.00 Late fee on Gaffin, CPA - 7/16/2010 invoice		
	\$ 24.00 Late fee on Gaffin, CPA - 7/16/2010 invoice		
	\$ 20.00 Late fee on Gaffin, CPA - 7/16/2010 invoice		
	\$ 32.00 Late fee on Gaffin, CPA - 8/3/2010 invoice		
	\$ 32.00 Late fee on Gaffin, CPA - 8/3/2010 invoice		
	\$ 24.00 Late fee on Gaffin, CPA - 8/3/2010 invoice		
	\$ 20.00 Late fee on Gaffin, CPA - 8/3/2010 invoice		
	\$ 4.00 Late fee on Gaffin, CPA - 8/3/2010 invoice		
	\$ 308.00		
D	- WATER TESTING EXPENSE - Per Company	\$ 3,634	
	Per Staff	3,734	\$100
	To reflect Staff's calculation of water testing expense.		

**STAFF ADJUSTMENTS (Cont.)**

E - RATE CASE EXPENSE - Per Company \$ 1,875  
 Per Staff 1,333 (\$542)

To reflect a reasonable normalized amount of rate case expense based on three years between rate cases.

\$ 4,000.00 Rate Case Expense - Per Staff's analysis of class D water companies  
                   3 Divided by 3 years  
 \$ 1,333.33 Annual Rate Case Expense

	Total Rate Case Expense	No. of Years Amortized	Annual Rate Case Expense	Company Name	Docket No.
1	\$0	0	\$0	Appaloosa Water	W-03443A-08-0313
2	\$0	0	\$0	Fisher's Landing	WS-04047A-07-0708
3	\$0	0	\$0	Groom Creek Water	W-01865A-07-0385 & 07-0384
4	\$0	0	\$0	Orange Grove Water	W-02237A-08-0455
5	\$0	0	\$0	Walnut Creek Water	W-02466A-08-0486
6	\$0	0	\$0	Northern Scottsdale	W-03270A-08-0225
7	\$0	0	\$0	D.S. Water	W-04049A-08-0339
8	\$0	0	\$0	Lagoon Estates	W-01825A-09-0345
9	\$0	0	\$0	Q Mtn Mobile Home	W-02518A-10-0227
10	Not specified	Not specified	\$54	Bellemont Water	W-02526A-09-0421
11	Not specified	Not specified	\$288	Granite Mountain	W-02467A-09-0333
12	Not specified	Not specified	\$500	Christopher Creek	W-20459A-08-0168
13	Not specified	Not specified	\$500	Ehrenberg Improvmen	W-02273A-08-0251
14	\$3,000	5	\$600	Sonoita Valley Wtr	W-20435A-09-0296 & 09-0298
15	Not specified	Not specified	\$1,000	Baca Float Water	WS-01678A-09-0376
16	Not specified	Not specified	\$1,545	Montezuma Rimrck	W-04254A-08-0361
17	\$7,500	4	\$1,875	Virgin Mountain	W-03551 A-09-0205
18	\$6,000	3	2,000	Mountain Glenn	W-03875A-08-0421
19	\$7,500	3	2,500	Little Park Water	W-02192-09-0531
20	\$10,000	3	3,333	Whitehorse Ranch	W-0416A-09-0471
21	Not specified	Not specified	\$5,000	Beaver Dam Water	W-03067A-08-0266
<b>Arithmetic Average (Mean)</b>			<b>\$914</b>		
<b>Median</b>			<b>\$288</b>		
<b>Mode</b>			<b>\$0</b>		

F - MISCELLANEOUS EXPENSE - Per Company \$1,387  
 Per Staff 1,087 (\$300)

To remove costs incurred for a funeral.

**STAFF ADJUSTMENTS (Cont.)**

G - DEPRECIATION - Per Company \$4,986  
Per Staff 2,521 (\$2,465)

To reflect Staff's calculation of depreciation expense.

Acct No.	DESCRIPTION	[A]	[B]	[C]	[D]	[E]
		PLANT In SERVICE Per Staff	NonDepreciable or Fully Depreciated PLANT	DEPRECIABLE PLANT (Col A - Col B)	PRECIATION RATE	DEPRECIATION EXPENSE (Col C x Col D)
301	Organization	\$ -	\$ -	\$ -	0.00%	\$ -
302	Franchises	\$ -	\$ -	\$ -	0.00%	\$ -
303	Land & Land Rights	\$ 900	\$ 900	\$ -	0.00%	\$ -
304	Structures & Improvements	\$ -	\$ -	\$ -	3.33%	\$ -
307	Wells & Springs	\$ 11,699	\$ 11,699	\$ -	3.33%	\$ -
311	Pumping Equipment	\$ 13,810	\$ -	\$ 13,810	12.50%	\$ 1,726
320	Water Treatment Equipment	\$ -	\$ -	\$ -	0.00%	\$ -
330.1	Distribution Reservoirs - Storage	\$ 17,509	\$ -	\$ 17,509	2.22%	\$ 389
330.2	Distribution Reservoirs - Pressure	\$ -	\$ -	\$ -	5.00%	\$ -
331	Transmission & Distribution Mains	\$ 128,931	\$ 128,931	\$ -	2.00%	\$ -
333	Services	\$ 7,958	\$ 7,958	\$ -	3.33%	\$ -
334	Meters & Meter Installations	\$ 16,154	\$ -	\$ 16,154	8.33%	\$ 1,346
335	Hydrants	\$ 9,966	\$ -	\$ 9,966	2.00%	\$ 199
336	Backflow Prevention Devices	\$ -	\$ -	\$ -	0.00%	\$ -
339	Other Plant and Misc. Equipment	\$ -	\$ -	\$ -	0.00%	\$ -
340.1	Computer Equipment	\$ 4,306	\$ -	\$ 4,306	20.00%	\$ 861
341	Transportation Equipment	\$ 9,958	\$ -	\$ 9,958	20.00%	\$ 1,992
343	Tools Shop & Garage Equipment	\$ -	\$ -	\$ -	0.00%	\$ -
	<b>Total Plant</b>	<b>\$ 221,191</b>	<b>\$ 149,488</b>	<b>\$ 71,703</b>		<b>\$ 6,513</b>

Depreciation Expense Before Amortization of CIAC: \$ 6,513  
Less Amortization of CIAC\*: \$ 3,992  
**Test Year Depreciation Expense - Staff: \$ 2,521**  
Depreciation Expense - Company: \$ 4,986  
**Staff's Total Adjustment: \$ (2,465)**

**\* Amortization of CIAC Calculation:**  
Contribution(s) in Aid of Construction (Gross) \$43,950  
Less: Non Amortizable Contribution(s) 0  
Less: Fully Amortized Contribution(s) 0  
Amortizable Contribution(s) \$ 43,950  
Composite Depreciation Rate (Depr Exp / Depreciable Plant): 9.08%  
**Amortization of CIAC \$ 3,992**

**STAFF ADJUSTMENTS (Cont.)**

LINE NO.	Property Tax Calculation	[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	\$ 108,240	\$ 108,240
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	216,480	\$ 216,480
4	Staff Recommended Revenue, Per Schedule CSB-1	108,240	\$ 115,193
5	Subtotal (Line 4 + Line 5)	324,720	331,673
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	108,240	\$ 110,558
8	Department of Revenue Mutilplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	216,480	\$ 221,116
10	Plus: 10% of CWIP -	-	-
11	Less: Net Book Value of Licensed Vehicles	-	\$ -
12	Full Cash Value (Line 9 + Line 10 - Line 11)	216,480	\$ 221,116
13	Assessment Ratio	20.0%	20.0%
14	Assessment Value (Line 12 * Line 13)	43,296	\$ 44,223
15	Composite Property Tax Rate	10.8692%	10.8692%
			\$ -
16	Staff Test Year Adjusted Property Tax (Line 14 * Line 15)	\$ 4,706	
17	Company Proposed Property Tax	4,706	
18	Staff Test Year Adjustment (Line 16-Line 17)	<u>\$ (0)</u>	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 4,807
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		\$ 4,706
21	Increase in Property Tax Expense Due to Increase in Revenue Requirement		<u>\$ 101</u>
22	Increase to Property Tax Expense		\$ 101
23	Increase in Revenue Requirement		6,953
24	Increase to Property Tax per Dollar Increase in Revenue (Line19/Line 20)		1.449227%

**OPERATING INCOME ADJUSTMENT "H" - TEST YEAR INCOME TAXES**

LINE NO.	DESCRIPTION	(A)	(B)
	<u>Calculation of Income Tax:</u>		
		<u>Test Year</u>	
1	Revenue	\$ 108,240	
2	Less: Operating Expenses - Excluding Income Taxes	\$ 103,073	
3	Less: Synchronized Interest (L17)	\$ -	
4	Arizona Taxable Income (L1- L2 - L3)	\$ 5,167	
5	Arizona State Income Tax Rate	6.968%	
6	Arizona Income Tax (L4 x L5)		\$ 360
7	Federal Taxable Income (L4 - L6)	\$ 4,807	
8	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ 721	
9	Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25%	\$ -	
10	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%	\$ -	
11	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%	\$ -	
12	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%	\$ -	
13	Total Federal Income Tax		\$ 721
14	Combined Federal and State Income Tax (L6 + L13)		<u>\$ 1,081</u>
	<u>Calculation of Interest Synchronization:</u>		
15	Rate Base	\$ 32,772	
16	Weighted Average Cost of Debt	0.00%	
17	Synchronized Interest (L16 x L17)	<u>\$ -</u>	
18		Income Tax - Per Staff \$ 1,081	
19		Income Tax - Per Company \$ (108)	
20		<b>Staff Adjustment \$ 1,189</b>	

**GROSS REVENUE CONVERSION FACTOR AND INCOME TAX CALCULATION FOR RECOMMENDED REVENUE**

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
<u>Calculation of Gross Revenue Conversion Factor:</u>					
1	Revenue	100.0000%			
2	Uncollectible Factor (Line 11)	0.0000%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	22.0688%			
5	Subtotal (L3 - L4)	77.9312%			
6	<b>Revenue Conversion Factor (L1 / L5)</b>	<b>1.283183</b>			
<u>Calculation of Uncollectible Factor:</u>					
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 17)	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%			
<u>Calculation of Effective Tax Rate:</u>					
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.9680%			
14	Federal Taxable Income (L12 - L13)	93.0320%			
15	Applicable Federal Income Tax Rate (Line 53)	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%		
<u>Calculation of Effective Property Tax Factor</u>					
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	1.4492%			
22	Effective Property Tax Factor (L20*L21)		1.1460%		
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)			22.0688%	
24	Required Operating Income	\$ 9,505			
25	Adjusted Test Year Operating Income (Loss)	4,086			
26	Required Increase in Operating Income (L24 - L25)		\$ 5,419		
27	Income Taxes on Recommended Revenue (Col. [C], L52)	\$ 2,515			
28	Income Taxes on Test Year Revenue (Col. [A], L52)	1,081			
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)		1,434		
30	Recommended Revenue Requirement	\$ 115,193			
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	\$ 4,807			
36	Property Tax on Test Year Revenue	4,706			
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)		101		
38	<b>Total Required Increase in Revenue (L26 + L29 + L34 + L37)</b>		<b>\$ 6,953</b>		
<u>Calculation of Income Tax:</u>					
39	Revenue	\$ 108,240	\$ 6,953	\$ 115,193	
40	Operating Expenses Excluding Income Taxes	\$ 103,073	\$ 101	\$ 103,174	
41	Synchronized Interest (L56)	\$ -		\$ -	
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 5,167		\$ 12,019	
43	Arizona State Income Tax Rate	6.9680%		6.9680%	
44	Arizona Income Tax (L42 x L43)	\$ 360		\$ 838	
45	Federal Taxable Income (L42 - L44)	\$ 4,807		\$ 11,182	
46	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%	\$ 721		\$ 1,677	
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	\$ 721		\$ 1,677	
52	Combined Federal and State Income Tax (L44 + L51)	\$ 1,081		\$ 2,515	
53	Applicable Federal Income Tax Rate [Col. [C], L51 - Col. [A], L51] / [Col. [C], L45 - Col. [A], L45]			15.0000%	
<u>Calculation of Interest Synchronization:</u>					
54	Rate Base (Schedule CSB-3, Col. (C), Line 14)	\$ 32,772			
55	Weighted Average Cost of Debt	0.0000%			
56	Synchronized Interest (L45 X L46)	\$ -			

**RATE DESIGN**

	Present Rates	Company Proposed	Staff Recommended
<b>Monthly Customer Charge:</b>			
5/8" x 3/4" Meter	\$11.50	\$14.17	\$11.50
3/4" Meter	17.25	17.25	17.25
1" Meter	28.75	28.75	28.75
1 1/2" Meter	57.50	57.50	57.50
2" Meter	92.00	92.00	92.00
3" Meter	184.00	184.00	184.00
4" Meter	287.50	287.50	287.50
6" Meter	575.00	575.00	575.00
<b>Gallons Included in Monthly Customer Charge:</b>	0	0	0
Per 1,000 Gallons for 0 to 3,000 Gallons	\$2.00	\$2.46	\$2.00
Per 1,000 Gallons for 3,001 to 8,000 Gallons	\$2.25	\$2.77	\$2.65
Per 1,000 Gallons for Gallons in Excess of 8,000	\$2.75	\$3.39	\$3.30
<b>Standpipe, Bulk Water</b>	N/A	\$3.39	\$3.30

Service Line and Meter Installation Charges	Present Rates			Company Proposed			Staff Recommended		
	Services	Meters	Total	Services	Meters	Total	Services	Meters	Total
5/8" x 3/4" Meter	\$415	\$105	\$520	\$415	\$105	\$520	\$415	\$105	\$520
3/4" Meter	\$415	\$205	\$620	\$415	\$205	\$620	\$415	\$205	\$620
1" Meter	\$465	\$265	\$730	\$465	\$265	\$730	\$465	\$265	\$730
1 1/2" Meter	\$520	\$475	\$995	\$520	\$475	\$995	\$520	\$475	\$995
2" Turbine Meter	\$800	\$995	\$1,795	\$800	\$995	\$1,795	\$800	\$995	\$1,795
2" Compound Meter	\$800	\$1,840	\$2,640	\$800	\$1,840	\$2,640	\$800	\$1,840	\$2,640
3" Turbine Meter	\$1,015	\$1,620	\$2,635	\$1,015	\$1,620	\$2,635	\$1,015	\$1,620	\$2,635
3" Compound Meter	\$1,135	\$2,495	\$3,630	\$1,135	\$2,495	\$3,630	\$1,135	\$2,495	\$3,630
4" Turbine Meter	\$1,430	\$2,570	\$4,000	\$1,430	\$2,570	\$4,000	\$1,430	\$2,570	\$4,000
4" Compound Meter	\$1,610	\$3,545	\$5,155	\$1,610	\$3,545	\$5,155	\$1,610	\$3,545	\$5,155
6" Turbine Meter	\$2,150	\$4,925	\$7,075	\$2,150	\$4,925	\$7,075	\$2,150	\$4,925	\$7,075
6" Compound Meter	\$2,270	\$2,820	\$5,090	\$2,270	\$2,820	\$5,090	\$2,270	\$2,820	\$5,090

<b>Service Charges</b>			
Establishment	\$25.00	\$25.00	\$25.00
Establishment (After Hours)	40.00	40.00	(b)
Reconnection (Delinquent)	40.00	40.00	40.00
After Hours Charge (Flat Rate)	N/A	N/A	30.00
Meter Test	25.00	25.00	25.00
Deposit	*	*	*
Deposit Interest	*	*	*
Re-establishment (Within 12 Months)	**	**	**
Re-establishment (Within 12 Months After Hrs)	**	**	(b)
NSF Check	25.00	25.00	25.00
Deferred Payment - per month	1.50%	1.50%	1.50%
Meter Re-read	30.00	30.00	20.00
Late Payment Penalty	NT	1.50%	1.50%
Moving Customer Meter (Customer Request)	***	***	(a)
After Hours Service Charge (Rule R14-2-403.D)	Cost	Cost	(b)

<b>Monthly Service Charge for Fire Sprinkler</b>			
4" or Smaller	N/A	N/A	****
6"	N/A	N/A	****
8"	N/A	N/A	****
10"	N/A	N/A	****
Larger than 10"	N/A	N/A	****

- (a) - Cost to include parts, labor, overhead, and all applicable taxes, including income tax if applicable
- (b) - Staff recommends discontinuance.
  - \* Per Commission rule AAC R14-2-403.B
  - \*\* Number of months off system times the monthly minimum per Commission rule AAC R14-2-403(D).
  - \*\*\* Per Commission rule R14-2-405
  - \*\*\*\* 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

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

Average Number of Customers: 303

<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	7,727	\$28.13	\$34.64	\$6.51	23.1%
Median Usage	6,611	\$25.62	\$31.55	\$5.93	23.1%
<b>Staff Recommended</b>					
<b><u>Without \$0.67 WIFA Loan Surcharge</u></b>					
Average Usage	7,727	\$28.13	\$30.03	\$1.89	6.7%
Median Usage	6,611	\$25.62	\$27.07	\$1.44	5.6%
<b>Staff Recommended</b>					
<b><u>With \$0.67 WIFA Loan Surcharge</u></b>					
Average Usage	7,727	\$28.13	\$30.70	\$2.56	9.1%
Median Usage	6,611	\$25.62	\$27.74	\$2.11	8.3%

**Present & Proposed Rates (Without WIFA Loan Surcharge)**  
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	\$11.50	\$14.17	23.2%	\$11.50	0.0%
1,000	13.50	16.63	23.2%	13.50	0.0%
2,000	15.50	19.09	23.2%	15.50	0.0%
3,000	17.50	21.55	23.1%	17.50	0.0%
4,000	19.75	24.32	23.1%	20.15	2.0%
5,000	22.00	27.09	23.1%	22.80	3.6%
6,000	24.25	29.86	23.1%	25.45	4.9%
7,000	26.50	32.63	23.1%	28.10	6.0%
8,000	28.75	35.40	23.1%	30.75	7.0%
9,000	31.50	38.79	23.1%	34.05	8.1%
10,000	34.25	42.18	23.2%	37.35	9.1%
15,000	48.00	59.13	23.2%	53.85	12.2%
20,000	61.75	76.08	23.2%	70.35	13.9%
25,000	75.50	93.03	23.2%	86.85	15.0%
50,000	144.25	177.78	23.2%	169.35	17.4%
75,000	213.00	262.53	23.3%	251.85	18.2%
100,000	281.75	347.28	23.3%	334.35	18.7%
125,000	350.50	432.03	23.3%	416.85	18.9%
150,000	419.25	516.78	23.3%	499.35	19.1%
175,000	488.00	601.53	23.3%	581.85	19.2%
200,000	556.75	686.28	23.3%	664.35	19.3%

**WIFA LOAN SURCHARGE CALCULATION - EXAMPLE**

Loan Amount: **\$30,000**  
Term: **20 Years**  
Interest Rate Before Subsidy **5.25%**  
WIFA Subsidy Rate: **100%**  
WIFA Interest rate (9.25% x 70%): **5.250%** If interest rate is not found on TABLE A, use the next highest percentage

**Step 1 - Find the Annual Payment on Loan**

\$30,000 Total Amount of Loan  
0.0809 TABLE A, Conversion Factor Table, Column B  
\$2,425.84 Annual Principle and Interest Payment

**Step 2 - Find the Annual Interest Payment on Loan**

\$30,000 Total Amount of Loan  
0.0518 TABLE A, Conversion Factor Table, Column C  
\$1,554.23 Annual Interest Payment on Debt

**Step 3 - Find the Annual Principal Payment on Loan**

\$30,000 Total Amount of Loan  
0.0291 TABLE A, Conversion Factor Table, Column D  
\$871.61 Annual Principal and Interest Payment

**Step 4 - Find the Annual Surcharge Revenue Requirement Needed for Loan**

\$1,554.23 Annual Interest Payment on Debt (from Step 2)  
\$871.61 Plus: Annual Principal Payment (from Step 3)  
\$2,425.84 Debt Service Component of the Annual Surcharge Revenue

**Step 5 - Find the Equivalent Bills**

Equivalent Bills

Col A	Col B	Col C	Col D	Col E
Meter Size	NARUC Multiplier	Number of Customers	Number of Months in Year	Equivalent Bills Col B x C X D
5/8"x 3/4" Meter	1	303	12	3,636
3/4" Meter	1.5	0	12	-
1" Meter	2.5	0	12	-
1½" Meter	5	0	12	-
2" Meter	8	0	12	-
3" Meter	15	0	12	-
4" Meter	25	0	12	-
6" Meter	50	0	12	-
		<u>303</u>		<u>3,636</u>

**Step 6 - Find the Monthly Surcharge**

\$2,425.84 Total Annual Surcharge Revenue Requirement for the Loan (from Step 8)  
3,636 Divided by: Total Number of Equivalent Bills  
\$ 0.67 Monthly Surcharge for 3/4" Customers

**Step 11 - Find the Monthly Surcharge for the Remaining Meter Size Customers**

Equivalent Bills

Col A	Col B	Col C	Col D
Meter Size	NARUC Multiplier	5/8" x 3/4" Customers' Surcharge	Surcharge by Meter Size Col B x C
5/8"x 3/4" Meter	1	\$ 0.67	\$ 0.67
3/4" Meter	1.5	\$ 0.67	\$ 1.00
1" Meter	2.5	\$ 0.67	\$ 1.67
1½" Meter	5	\$ 0.67	\$ 3.34
2" Meter	8	\$ 0.67	\$ 5.34
3" Meter	15	\$ 0.67	\$ 10.01
4" Meter	25	\$ 0.67	\$ 16.68
6" Meter	50	\$ 0.67	\$ 33.36

**TABLE A**  
**Conversion Factor Table (Based on a 20-year Loan)**

Line No.	Column A Annual Interest	Column B Annual Payment Conversion Factor	Column C Annual Interest Payment Conversion Factor	Column D Annual Principal Payment Conversion Factor
1	3.50%	0.0696	0.0344	0.0352
2	3.75%	0.0711	0.0369	0.0342
3	4.00%	0.0727	0.0394	0.0333
4	4.25%	0.0743	0.0419	0.0324
5	4.50%	0.0759	0.0444	0.0316
6	4.75%	0.0775	0.0468	0.0307
7	5.00%	0.0792	0.0493	0.0299
8	<b>5.25%</b>	<b>0.0809</b>	<b>0.0518</b>	<b>0.0291</b>
9	5.50%	0.0825	0.0543	0.0283
10	5.75%	0.0843	0.0568	0.0275
11	6.00%	0.0860	0.0593	0.0267
12	6.25%	0.0877	0.0618	0.0259
13	6.50%	0.0895	0.0643	0.0252
14	6.75%	0.0912	0.0668	0.0245
15	7.00%	0.0930	0.0692	0.0238
16	7.25%	0.0948	0.0717	0.0231
17	7.50%	0.0967	0.0742	0.0224
18	7.75%	0.0985	0.0767	0.0218
19	8.00%	0.1004	0.0792	0.0211

WIFA Loan Amount Requested	\$30,000		
Down Payment:	\$0		
Amount Financed:	\$30,000		
Number of years:	20	Compounding Periods:	12
Interest rate Before Subsidy	5.25%		
WIFA Subsidy Rate:	1.00		
WIFA Interest rate (r) (Line 5 x Line 6):	5.25%	APR:	5.38%

LOAN AMORTIZATION SCHEDULE

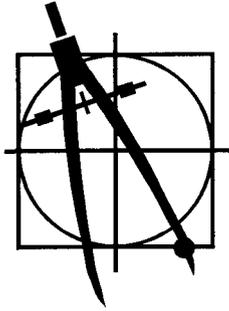
Period	Loan payment (1)	Beginning- of-month principal (2)	Payments		End-of-month principal [(2) - (4)] (5)	Annual Interest (6)	Annual Principal (7)	Annual Debt Payment (8)
			Interest [ r * (2) ] (3)	Principal [(1) - (3)] (4)				
1	\$202.15	\$30,000.00	\$131.25	\$70.90	\$29,929.10			
2	202.15	29,929.10	130.94	71.21	29,857.88			
3	202.15	29,857.88	130.63	71.53	29,786.36			
4	202.15	29,786.36	130.32	71.84	29,714.52			
5	202.15	29,714.52	130.00	72.15	29,642.37			
6	202.15	29,642.37	129.69	72.47	29,569.90			
7	202.15	29,569.90	129.37	72.78	29,497.12			
8	202.15	29,497.12	129.05	73.10	29,424.01			
9	202.15	29,424.01	128.73	73.42	29,350.59			
10	202.15	29,350.59	128.41	73.74	29,276.84			
11	202.15	29,276.84	128.09	74.07	29,202.78			
12	202.15	29,202.78	127.76	74.39	29,128.39	1,554.23	871.61	2,425.84

**FINANCIAL ANALYSIS**

Selected Financial Data  
Including Immediate Effects of the Proposed Debt & WIFA Loan Surcharge

Line No.	[A] Staff Recommended Rates without Surcharge, Loan Principal & Interest	[B] Adjustments	REF	[C] Staff Recommended Rates with Surcharge, Loan Principal & Interest	
<b>1</b>	<b>INCOME STATEMENT</b>				
<b>2</b>	<b>Operating Revenue</b>				
3	Metered Water Revenue	\$ 114,164	\$ -	\$	114,164
4	WIFA Loan Surcharge	\$ -	\$ 2,426	A	2,426
5	Other Water Revenues	\$ 1,029	\$ -	\$	1,029
6	<b>Total Operating Rev:</b>	<b>\$ 115,193</b>	<b>\$ 2,426</b>	<b>\$</b>	<b>117,619</b>
<b>7</b>	<b>Operating Expenses</b>				
8	601 Salaries and Wages	\$ 45,800	\$ -	\$	45,800
9	615 Purchased Power	\$ 8,297	\$ -	\$	8,297
10	620 Repairs and Maintenance	\$ 8,531	\$ -	\$	8,531
11	621 Office Supplies & Expense	\$ 9,420	\$ -	\$	9,420
12	630 Contractual Services	\$ 4,204	\$ -	\$	4,204
13	635 Water Testing	\$ 3,734	\$ -	\$	3,734
14	650 Transportation Expenses	\$ 1,344	\$ -	\$	1,344
15	657 Insurance - General Liability	\$ 8,189	\$ -	\$	8,189
16	666 Regulatory Comm Exp - Rate Case	\$ 1,333	\$ -	\$	1,333
17	675 Miscellaneous Expense	\$ 1,087	\$ -	\$	1,087
18	403 Depreciation Expense	\$ 2,521	\$ -	\$	2,521
19	408 Taxes Other Than Income	\$ 3,906	\$ -	\$	3,906
20	408.11 Property Taxes	\$ 4,807	\$ -	\$	4,807
21	409 Income Tax	\$ 2,515	\$ -	\$	2,515
22	<b>Total Operating Expense</b>	<b>\$ 105,688</b>	<b>\$ -</b>	<b>\$</b>	<b>105,688</b>
23	<b>Operating Income</b>	<b>\$ 9,505</b>	<b>\$ 2,426</b>	<b>\$</b>	<b>11,930</b>
24	Interest Income	\$ -	\$ -	\$	-
25	Interest Expense on Long-term debt	\$ -	\$ 1,554	B	1,554
26	<b>Total Other Interest Expense</b>	<b>\$ -</b>	<b>\$ (1,554)</b>	<b>\$</b>	<b>(1,554)</b>
27	<b>Net Income</b>	<b>\$ 9,505</b>	<b>\$ 872</b>	<b>\$</b>	<b>10,376</b>
28	<b>Rate Base</b>	<b>\$ 32,772</b>		<b>\$</b>	<b>32,772</b>
29	<b>Rate of Return (Line 23 / Line 28)</b>	<b>29.00%</b>			<b>36.40%</b>
30	<b>Operating Margin (Line 23 / Line 6)</b>	<b>8.25%</b>			<b>10.14%</b>
31	<b>Principal Repayment</b>	<b>\$ -</b>	<b>\$ 872</b>	<b>C</b>	<b>872</b>
32	<b>Cash Flow (L 27 + L18 - L31)</b>	<b>\$ 12,025</b>	<b>\$ -</b>	<b>\$</b>	<b>12,025</b>
33	<b>TIER</b>				
34	[L 21 + L 23] ÷ L 25	Not Meaningful			9.29
35	<b>DSC</b>				
36	[L 18 + L 21 + L 23] ÷ [L 25 + L 31]	Not Meaningful			6.99
37	Short-term Debt	\$ -	0%	\$	872 2.5%
38	Long-term Debt	\$ -	0%	\$	29,128 82.0%
39	Common Equity	\$ 1,132	100%	\$	5,514 15.5%
40	<b>Total Capital</b>	<b>\$ 1,132</b>	<b>100%</b>	<b>\$</b>	<b>35,514 100.0%</b>

41 A - See Sch CSB-6, page 1, Step 1  
42 B - See Sch CSB-6, page 1, Step 2  
43 C - See Sch CSB-6, page 1, Step 3



**ENGINEERING REPORT FOR  
ORANGE GROVE WATER COMPANY**

**Docket Nos. W-02237A-11-0180 (Rates),  
and  
W-02237A-11-0084 (Financing)**

**By Jian W Liu**

A handwritten signature in black ink, appearing to be 'Jian W Liu', written in a cursive style.

**July 25, 2011**

**CONCLUSIONS**

1. Arizona Department of Environmental Quality (“ADEQ”) regulates the Orange Grove Water Company (“Orange Grove” or “Company”) water system under ADEQ Public Water System I.D. #14-366. Based on a Compliance Status Report, dated April 12, 2011, the system has no major deficiencies and is delivering water that meets water quality standards required by 40 CFR 141/Arizona Administrative Code, Title 18, Chapter 4.
2. Orange Grove’s service area is not located within any Active Management Area (“AMA”). Arizona Department of Water Resources (“ADWR”) has determined that Orange Grove is currently in compliance with departmental requirements governing water providers and/or community water systems.
3. A check of the Commission’s Utilities Division Compliance Section database showed that there were no delinquent compliance items for Orange Grove as of July 27, 2011.
4. Staff concludes that proposed new storage tank is not necessary, if a back-up generator is installed.

**RECOMMENDATIONS**

1. Staff recommends that the Company be given the option of installing an on-site Emergency Generator with significant capacity to run the Company’s high yield backup well in lieu of adding the proposed storage tank and booster pump system additions.
2. Staff further recommends that if the Company decides to implement the alternative option that it file documentation with Docket Control, as a compliance item in this docket, demonstrating that the on-site Emergency Generator and other minor improvements have been completed within 120 days of the effective date of the order in this matter.
3. 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 for Commission's review and consideration. The templates created by Staff are available on the Commission's website at <http://www.azcc.gov/Divisions/Utilities/forms.asp>.

4. Staff further recommends that a maximum of two BMPs may come from the "Public Awareness/Public Relations" or "Education and Training" categories.
5. Staff recommends the annual water testing expense of \$3,734 be used for purposes of this application.
6. Staff recommends that the Company continue to use the depreciation rates in Table B.
7. Staff recommends continued use of the current charges listed in Table C.

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**A. INTRODUCTION AND LOCATION OF COMPANY**

On April 27, 2011, Orange Grove Water Company (“Orange Grove” or “Company”) filed an application with the Arizona Corporation Commission (“ACC” or “Commission”) to increase its rates. Per the application the Company has experienced limited growth and revenues have not kept pace with increases in operating expenses. The Company’s current rates were approved in Commission Decision No. 71110, dated June 5, 2009. The ACC Utilities Division Staff (“Utilities Staff”) engineering review and analysis of the application are presented in this report.

Orange Grove serves the Orange Grove Mobile Manor and the Rancho Mesa Verde Mobile Manor subdivisions near the Community of Somerton in Yuma County, Arizona. Figure 1 shows the location of the Company within Yuma County and Figure 2 shows the Certificate of Convenience and Necessity (“CC&N”) covering approximately 90 acres (less than two-tenths of a square mile).

**B. DESCRIPTION OF THE WATER SYSTEM**

The Orange Grove water system was visited on July 22, 2011, by Jian Liu, Staff Utilities Engineer, in the accompaniment of Kathleen Day, the Company’s President, and Sam Day, the Company’s certified operator.

The water system consists of two wells (with total yield of 355 Gallons Per Minute (“GPM”)), a pressure tank (5,000 gallon capacity), and a distribution system serving 301 metered connections as of year end 2010. Table A includes a detailed plant facility listing.

Table A. Plant Facilities Summary

<b>Well Data</b>		
	Well No 1	Well No. 2
ADWR ID No.	55-84965	55-809347
Casing Size	8 inches	6 inches
Casing Depth	270 feet	260 feet
Pump Size in Horsepower (Hp)	20 Hp	7.5 Hp
Pump Yield in Gallons Per Minute (GPM)	300 GPM	55 GPM
Meter Size	4 inch	2.5 inch
Year Drilled	1980	1977

Notes: Both wells are located at the same site on Valencia Avenue in Orange Grove Mobile Manor.

**Storage & Structures**

Structure or Equipment	Location	Quantity and Capacity
Pressure Tank	Well Site (Note 1)	1 – 5,000 gallon
8.5' x 9' Storage Shed	Well Site	1
50' x 50' (5' high) Chain Link Fence (Note 3)	Well Site	1

Notes:

- 1) Located on Valencia Avenue in Orange Grove Mobile Manor.
- 2) Fence surrounding the Well Site on Valencia Avenue.

**Distribution Mains**

Diameter	Material	Length
8 inches	PVC	570 feet
6 inches	PVC	10,984 feet
4 inches	PVC	4,754 feet
2 ½ inches	PVC	3,664 feet

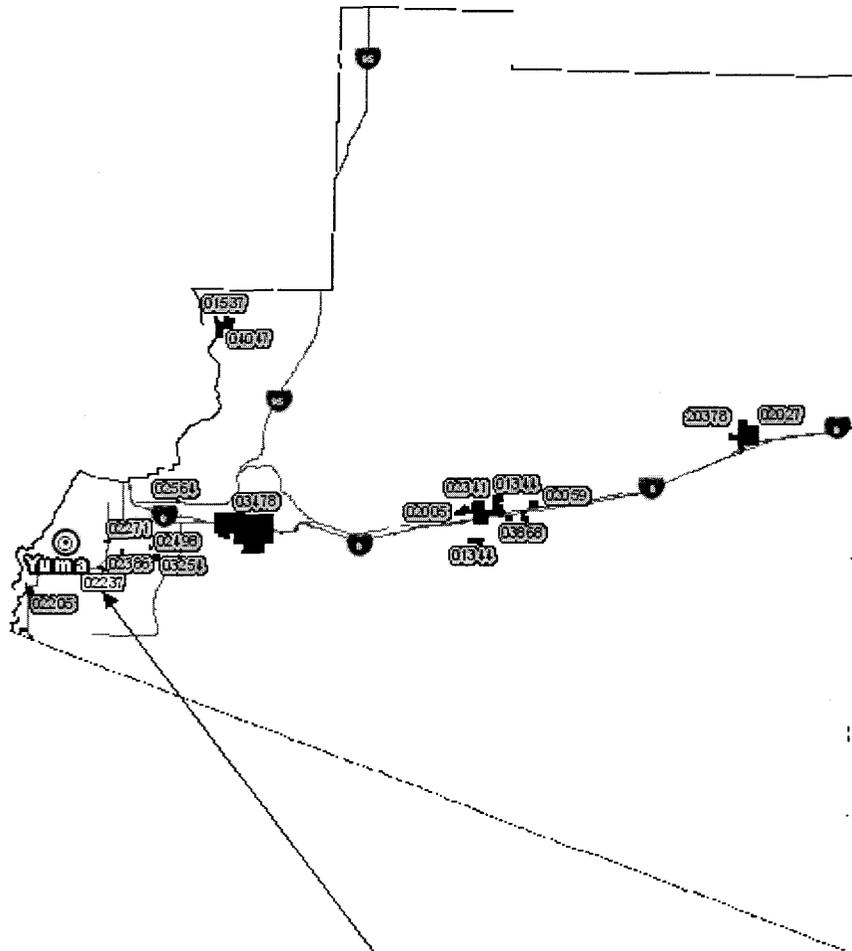
**Meters**

Size	Quantity
5/8 x 3/4 inch	312

**Fire Hydrants**

Size/Description	Quantity
Standard	10

# YUMA COUNTY

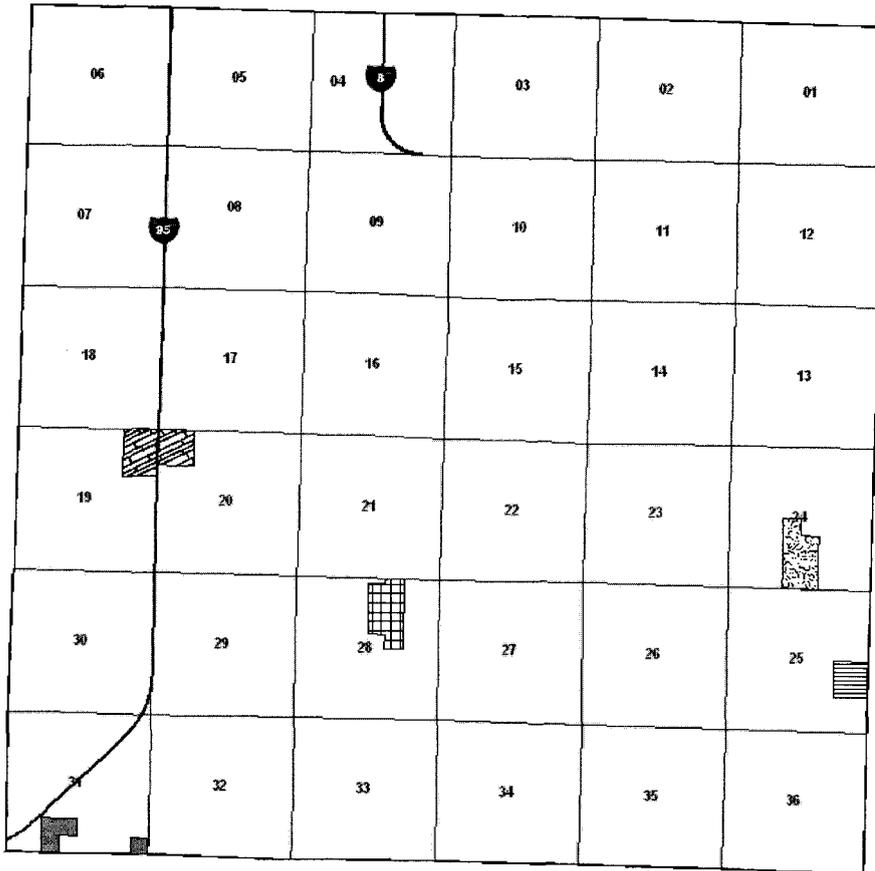


- |       |   |       |   |
|-------|---|-------|---|
| 02005 | ANTELOPE WATER COMPANY                    | 02271 | GREEN ACRES WATER COMPANY                   |
| 03868 | CITRUS PARK WATER COMPANY                 | 02341 | MOHAWK UTILITY COMPANY                      |
| 02027 | DATLAND PUBLIC SERVICE COMPANY, INC.      | 02237 | ORANGE GROVE WATER COMPANY                  |
| 20378 | DATLAND UTILITIES                         | 03254 | RANCHEROS BONITAS WATER COMPANY, LLC        |
| 02059 | DESERT VALENCIA WATER SYSTEM              | 01537 | SHEPARD WATER COMPANY, INC.                 |
| 02564 | EL PRADO WATER COMPANY, INC.              | 02386 | SUN LEISURE ESTATES UTILITIES COMPANY, INC. |
| 03478 | FAR WEST WATER & SEWER, INC.              | 01344 | TACNA WATER MANAGEMENT                      |
| 04047 | FISHER'S LANDING WATER & SEWER WORKS, LLC | 02498 | TIERRAMESA ESTATES WATER COMPANY, INC.      |
| 02205 | GADSDEN WATER COMPANY, INC.               |       |   |

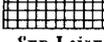
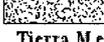
Figure 1. County Map

# YUMA COUNTY

## RANGE 23 West



TOWNSHIP 9 South

-  W-2271 (1)  
Green Acres Water Company
-  W-2237 (2)  
Orange Grove Water Company
-  W-3254 (2)  
Rancheros Bonitos Water Company, LLC
-  W-2386 (1)  
Sun Leisure Estates Utilities Company, Inc.
-  W-2498 (1)  
Tierra Mesa Estates Water Company, Inc.

Pursuant to ARS § 39-121.03 this map is 'Not for Commercial Use'

TR95235V 20 FEB 1997

Figure 2. Certificated Area

### C. WATER USE

#### Water Sold

Figure 3 presents the water consumption data provided by the Company from June 2010 to May 2011. Customer consumption included a high monthly water use of 326 gallons per day (“GPD”) per connection in June, and the low water use was 216 GPD per connection in December. The average annual use was 258 GPD per connection.

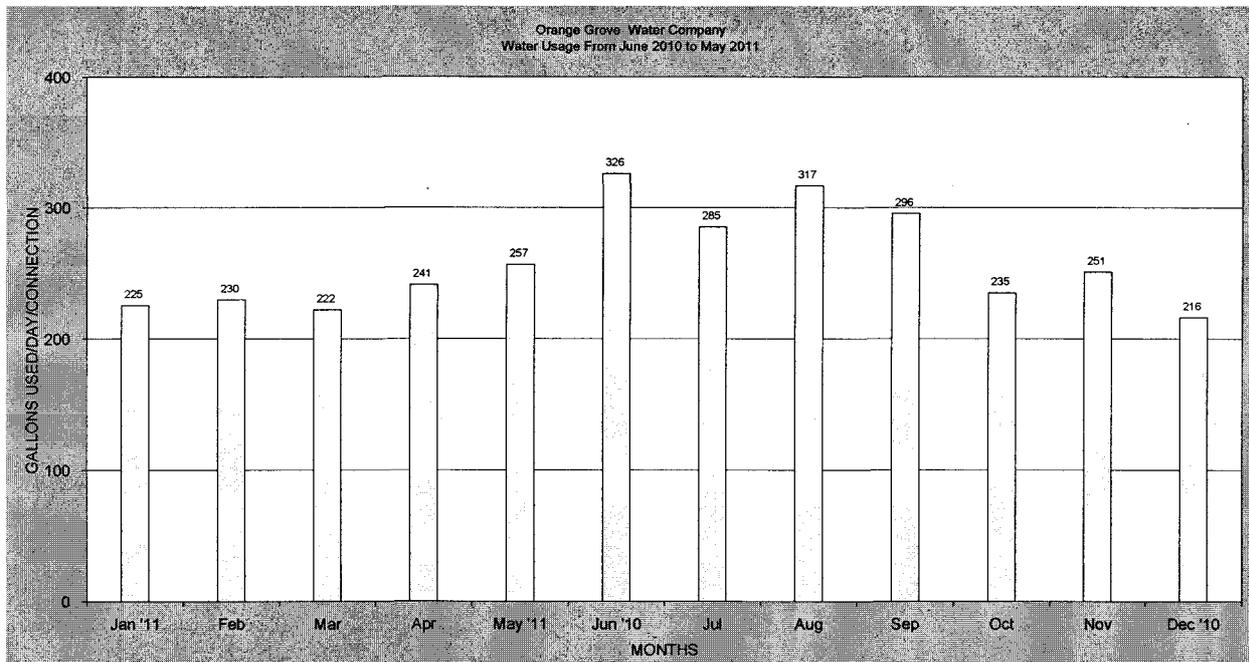


Figure 3. Water Use

#### 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. Orange Grove reported 28,951,230 gallons pumped and 28,527,800 gallons sold, resulting in a water loss of 1.46% for the 12-month period beginning June 1, 2010. Non-account water is within acceptable limits.

#### System Analysis

Based on the data provided by the Company, the system’s well production capacity is 355 GPM. The system currently does not have any storage capacity. There are fire hydrants in the distribution system. The system had 306 connections during the peak month of use in June 2010.

Staff concludes that the system's well production has adequate capacity to serve the present customer base and growth.

During Orange Grove's last rate proceeding, which resulted in Commission Decision No. 71110, effective June 5, 2009, Staff concluded that the water system's well production was adequate to serve present customers. However, since the system was not equipped with a storage tank, Staff recommended that the Company install a minimum of 60,000 gallons of storage. This Staff recommendation was based primarily on Staff's conclusion that the Company would in the not to distant future be obligated to provide sufficient and reliable fire flow within its service area.

Decision No. 71110 ordered the following with respect to the storage addition.

*IT IS FURTHER ORDERED that Orange Grove Water Company, Inc. shall install a minimum of 60,000 gallons of water storage capacity.*

*IT IS FURTHER ORDERED that Orange Grove Water Company, Inc. shall file with Docket Control, as a compliance item in this docket, no later than June 30, 2010, a Certificate of Approval to construct the 60,000 gallons of water storage capacity and shall file no later than December 31, 2010, Certificate of Approval of Construction of the 60,000 gallons of water storage capacity.*

Subsequent to the issuance of Decision No. 71110, the Company requested and was granted multiple extensions of time to comply with filing the Approval of Construction ("AOC") for the storage addition. In Decision No. 72437 the Company requested and was granted its latest extension and currently has until December 30, 2011 to file the AOC.

On February 22, 2011, in Docket No. W-02237A-11-0084, Orange Grove 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 \$200,000 ("Financing Application"). Proceeds from the loan would be used to fund the construction of a new 100,000-gallon storage tank, chlorine disinfection system and a booster pump station on-site at the Company's water supply facility where the production wells are located. In addition, a new site security fence would be installed around the entire water supply facility.

The Company's President informed Staff that she is concerned about the impact this large expenditure could have on customer rates. The Company is concerned about keeping its rates affordable, customer income levels in the Company's service area are typically very low. The Company believes that its existing high yield (300 GPM) backup well has plenty of capacity to cover customer demand if the primary well fails and that based on her twenty years of operating this Company she doesn't feel the proposed storage capacity is needed. In addition, the proposed storage tank and booster pump system additions will not be effective at improving fire flow within the system because the aged distribution system which was installed 30 to 40 years ago

can not support the high pressure needed for adequate fire flow. Replacement of the distribution system cannot be justified at the present time because of the huge expense involved and the negative impact this would have on rates. The project would not be cost effective especially since a formal fire flow requirement has not been established as anticipated.

Staff recommends that the Company be given the option of installing an on-site Emergency Generator with significant capacity to run the Company's high yield backup well in lieu of adding the proposed storage tank and booster pump system additions. An emergency generator would improve system reliability by ensuring that the backup well would always be available to meet peak demand even during times when commercial power is lost. The addition of an emergency generator could prove to be more effective at improving fire flow than adding the proposed storage when commercial power is lost. Staff believes this alternative should be considered in lieu of adding storage since the Company has a high yield backup well with plenty of capacity to cover peak demand if the primary well fails. Initial cost estimates indicate that an emergency generator can be added at a fraction of the cost of the storage tank and booster pump system. Staff further recommends that if the Company decides to implement the alternative option that it file documentation with Docket Control, as a compliance item in this docket, demonstrating that the on-site Emergency Generator and other minor improvements have been completed within 120 days of the effective date of the order in this matter.

Cost Analysis

Option One: proposed storage tank:

**Storage Tank, Pump Station and Site Improvements**

<b>Project Description</b>	<b>Company Proposed Costs to be Financed</b>	<b>Staff Recommended Cost to be Financed</b>
<b>1.0 SITE CONSTRUCTION</b>	\$50,000	\$50,000
1.1 Demo Existing Piping		
1.2 Grading, Drainage and Gravel		
1.3 Site Security Fence		
1.4 Concrete Pads		
1.5 Storage Tank Foundation		
1.6 Electrical Equipment & Booster Station Canopy		
1.7 Belowground Site Piping and Connection to Main		
<b>2.0 MECHANICAL</b>	\$90,000	\$90,000
2.1 Storage Tank Installation (100,000 gallons)		
2.2 Well Discharge Piping		
2.3 Booster Pump Station		
2.4 Site Service Water		
2.5 Disinfection System		
<b>3.0 ELECTRICAL SITE WORK</b>	\$30,000	\$30,000
Subtotal	\$170,000	\$170,000
Design and Engineering	\$15,000	\$15,000
Legal/Debt Authorization	\$5,000	\$5,000
Inspection/Construction Management	\$10,000	\$10,000
<b>Total</b>	<b>\$200,000</b>	<b>\$200,000</b>

Option Two: Emergency Generator

The Company's estimated cost for the proposed backup emergency generator is as follows:

Backup emergency generator (include installation) \$30,000

**Total: \$30,000**

Staff has reviewed the Company's estimates and concludes that they are reasonable. 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.

The Company supports Staff's recommendation of backup emergency generator, which will save \$170,000 for the Company comparing to install a new 100,000-gallon storage tank.

#### Best Management Practices ("BMP") Tariff

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 for Commission's review and consideration. The templates created by Staff are available on the Commission's website at <http://www.azcc.gov/Divisions/Utilities/forms.asp>.

Staff further recommends that a maximum of two BMPs may 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.

#### **D. GROWTH**

The Company reached its current level of customers in the mid-1990s. Little if any growth has been experienced since then. Orange Grove had 301 metered connections as of year end 2010. The Company has estimated that the annual mean service connections will be 305 in 2015. Based on the fact that the historical growth has been flat, Staff concludes that the Company's estimate is reasonable.

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

##### Compliance

ADEQ regulates the Orange Grove water system under ADEQ Public Water System I.D. #14-366. Based on a Compliance Status Report, dated April 12, 2011, the system has no major deficiencies and is delivering water that meets water quality standards required by 40 CFR 141/Arizona Administrative Code, Title 18, Chapter 4.

##### Water Testing Expense

The Company reported a total water testing expense of \$3,634 during the test year. Staff reviewed the reported amount and supporting documentation provided by the Company. Staff recommends the annual water testing expense of \$3,734 be used for purposes of this application.

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

Orange Grove’s service area is not located within any ADWR Active Management Area. As of March 3, 2011, Orange Grove was compliant with departmental requirements governing water providers and/or community water systems.

**G. ACC COMPLIANCE**

A check of the Commission’s Utilities Division Compliance Section database showed that there were no delinquent compliance items for Orange Grove as of July 27, 2011.

**H. DEPRECIATION RATES**

For purposes of this rate application the Company used depreciation rates per National Association of Regulatory Utility Commissioners (“NARUC”) plant category that are the same as the rates typically recommended by Staff. These rates are presented in Table B and it is recommended that the Company continue to use the depreciation rates below in Table B.

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

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

**I. OTHER ISSUES**

1. Service Line and Meter Installation Charges

The Company has not requested any changes in its service line and meter installation charges in this rate application. The current charges are within the range of charges typically recommended by Staff. Staff recommends continued use of the current charges listed below in Table C.

Table C. Service Line and Meter Installation Charges

Meter Size	Company Current and Staff's Recommendation		
	Service Line Charge	Meter Charge	Total Charge
5/8 x 3/4-inch	\$415	\$105	\$520
3/4-inch	\$415	\$205	\$620
1-inch	\$465	\$265	\$730
1-1/2-inch	\$520	\$475	\$995
2-inch Turbine	\$800	\$995	\$1,795
2-inch Comp	\$800	\$1,840	\$2,640
3-inch Turbine	\$1,015	\$1,620	\$2,635
3-inch Comp	\$1,135	\$2,495	\$3,630
4-inch Turbine	\$1,430	\$2,570	\$4,000
4-inch Comp	\$1,610	\$3,545	\$5,155
6-inch Turbine	\$2,150	\$4,925	\$7,075
6-inch Comp	\$2,270	\$6,820	\$9,090

2. CURTAILMENT PLAN AND BACKFLOW PREVENTION TARIFFS

Orange Grove has approved Curtailment Plan and Backflow Prevention Tariffs on file with the Commission.