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BEFORE THE ARIZONA CORPORATION COMMISSION
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2006 SEP -1 P 1:58

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IN THE MATTER OF THE APPLICATION OF
NACO WATER COMPANY, L.L.C. FOR A
RATE INCREASE.

DOCKET NO. W-02860A-06-0002

IN THE MATTER OF THE APPLICATION OF
NACO WATER COMPANY, L.L.C. FOR
APPROVAL OF FINANCING.

DOCKET NO. W-02860A-05-0727

NOTICE OF FILING

Staff of the Arizona Corporation Commission hereby files the Direct Testimony of Jeffery M. Michlik and Dorothy Hains, of the Utilities Division, in the above-referenced matter.

RESPECTFULLY SUBMITTED this 1ST day of September, 2006.

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Original and fifteen (15) copies
of the foregoing were filed this
1st day of September, 2006 with:

Docket Control
Arizona Corporation Commission
1200 West Washington Street
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Copy of the foregoing mailed this
1st day of September, 2006 to:

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Arizona Corporation Commission
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AK *NR*

Sheryl Begg

**ARIZONA CORPORATION COMMISSION
UTILITIES DIVISION**

**DIRECT
TESTIMONY
OF
JEFFERY M. MICHLIK
DOROTHY HAINS**

**DOCKET NOS. W-02860A-06-0002
&
W-02860A-05-0727**

**IN THE MATTER OF THE APPLICATION OF
NACO WATER COMPANY, L.L.C.
AN ARIZONA LIMITED LIABILITY
COMPANY, FOR PERMANENT
INCREASES IN ITS WATER RATES AND
CHARGES FOR UTILITY SERVICE WITHIN
COCHISE COUNTY, ARIZONA**

&

**IN THE MATTER OF THE APPLICATION OF
NACO WATER COMPANY, L.L.C.,
AN ARIZONA LIMITED LIABILITY
COMPANY, FOR APPROVAL OF
FINANCING**

September 1, 2006

MICHLIK

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner
BARRY WONG
Commissioner

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. W-02860A-06-0002
NACO WATER COMPANY, L.L.C.,)
AN ARIZONA LIMITED LIABILITY)
COMPANY, FOR PERMANENT)
INCREASES IN ITS WATER RATES AND)
CHARGES FOR UTILITY SERVICE WITHIN)
COCHISE COUNTY, ARIZONA)
_____)

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. W-02860A-05-0727
NACO WATER COMPANY, L.L.C.,)
AN ARIZONA LIMITED LIABILITY)
COMPANY, FOR APPROVAL OF)
FINANCING)
_____)

DIRECT

TESTIMONY

OF

JEFFREY M. MICHLIK

PUBLIC UTILITIES ANALYST IV

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

SEPTEMBER 1, 2006

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EXECUTIVE SUMMARY
NACO WATER COMPANY, LLC
DOCKET NOS. W-02860A-06-0002 AND W-02860A-05-0727

Naco Water Company, LLC (“Company”) is an Arizona limited liability company. The water utility is located in Cochise County. The Company’s water systems are located in two areas. One area consists of the Town of Naco, and contains the Naco Town site system. The other area is located approximately three (3) miles east of Naco. This area consists of two systems: the Bisbee Junction and Bisbee Highway system. The systems are not interconnected. The Company served approximately 366 customers during the test year ended December 31, 2005. The Company’s current rates were approved in Decision No. 60500, dated November 25, 1997, and the Company’s emergency rates were approved in Decision No. 67984, dated May 10, 2005.

Rate Application:

The Company proposes rates that would increase operating revenue by \$213,899 to produce operating revenue of \$389,572 resulting in operating income of \$201,142, or a 121.76 percent increase over test year revenue of \$175,673. The Company also proposes a fair value rate base (“FVRB”) of \$658,312 which is its original cost rate base, and a 30.55 percent rate of return on the FVRB.

Staff recommends rates that would increase operating revenue by \$116,431 to produce operating revenue of \$275,860 resulting in operating income of \$95,691, or a 73.03 percent increase over adjusted test year revenue of \$159,429. Staff recommends a FVRB of \$637,938, and a 15 percent rate of return on the FVRB.

Finance Application:

The Company is requesting authorization to incur \$2.5 million in debt from the Water Infrastructure Finance Authority (“WIFA”) over a 20-year period at an estimated 5.6 percent interest rate. The debt will be used to fund construction projects needed to address the Company’s water safety, quality, and system reliability. Using Staff’s recommended increase in operating revenues of \$116,431, would produce a times interest earned ratio (“TIER”) of 0.62 and a debt service coverage (“DSC”) ratio of 0.51.

Staff recommends authorization of a \$450,000 loan from WIFA over a 20-year period at an estimated 5.6 percent interest rate. Using Staff’s recommended increase in operating revenues of \$116,431, would produce a TIER of 2.32 and a DSC ratio of 1.53.

Staff’s revenue requirement was determined by the need for a sufficient debt service coverage ratio, while attempting to ameliorate rate shock.

Rate Design:

Staff recommends an inverted three-tier commodity rate structure for its 5/8-inch meters and an inverted two-tier rate structure for larger meters. The recommended rate structure conforms with those regularly adopted by the Commission in recent years. The typical 5/8-inch meter residential bill with median use of 5,272 gallons would increase by \$21.89, or 69.83 percent, from \$31.35 to \$53.24. However, the increase is substantially less if we take into account the effect of the emergency rate increase and interim rate increase. For instance, after these factors are considered the typical 5/8-inch meter residential bill with median use of 5,272 gallons would increase by \$14.23, or 36.48 percent from \$39.01 to \$53.24.

1 **INTRODUCTION**

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

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

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

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

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

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

19
20 I joined the Commission as a public utilities analyst in May of 2006. Prior to employment
21 with the Commission, I worked four years for the Arizona Office of the Auditor General
22 as a Staff Auditor, and one year in public accounting as a Senior Auditor.

23
24 **Q. What is the scope of your testimony in this case?**

25 A. I am presenting Staff’s analysis and recommendations regarding Naco Water Company,
26 LLC’s (“Company”) application for a permanent increase in its rates and charges for
27 utility service within Cochise County, Arizona. I am presenting testimony and schedules

1 addressing rate base, operating revenues and expenses, revenue requirement, financing,
2 and rate design. Ms. Dorothy Hains is presenting Staff's engineering analysis and related
3 recommendations.

4
5 **Q. What is the basis of your testimony in this case?**

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

11
12 **BACKGROUND**

13 **Q. Please explain why the Company did not file the necessary forms for a class C utility**
14 **and why Staff accepted the class D application.**

15 A. The Company meets the definition of a class C water company as it is proposing to
16 increase operating revenues to \$389,572. The range for a class C water company is based
17 on operating revenues that are between \$250,000 and \$999,999. The previous rate case
18 which was decided in Decision No. 60500 dated November 25, 1997, was filed as a class
19 D case. Staff accepted the class D application in this case to facilitate the Company's
20 obligation to file a permanent rate increase application as a follow-up to its emergency
21 rate increase. It was decided that the Company would be treated as a class C utility even
22 though a class D application was submitted.

23
24 **Q. Please review the background of this application.**

25 A. Naco is a limited liability company. The water utility is located in Cochise County. The
26 Company's water systems are located in two areas. One area consists of the Town of
27 Naco, and contains the Naco Town site system. The other area is located approximately

1 three (3) miles east of Naco. This area consists of two systems: the Bisbee Junction and
2 Bisbee Highway system. The systems are not interconnected. The Company served
3 approximately 366 customers during the test year ended December 31, 2005. The
4 Company's current rates were approved in Decision No. 60500, dated November 25,
5 1997, and the Company's emergency rates were approved in Decision No. 67984, dated
6 May 10, 2005.

7
8 On January 3, 2006, the Company filed an application requesting a permanent rate
9 increase. On March 2, 2006, Staff filed a letter declaring the application sufficient.

10
11 **CONSUMER SERVICES**

12 **Q. Please provide a brief history of customer complaints received by the Commission**
13 **regarding the Company. Additionally, please discuss customer responses to the**
14 **Company's proposed rate increase.**

15 A. Staff reviewed the Commission's records and found six complaints during the past three
16 and a half years. The nature of the complaints involved water outages, low-pressure,
17 billing problems and meter placement. Three opinions were filed opposing the rate
18 increase.

19
20 **SUMMARY OF FILING, RECOMMENDATIONS, AND ADJUSTMENTS**

21 **Q. Please summarize the Company's filing.**

22 A. The Company proposes increasing total annual operating revenues to \$389,572, a
23 \$213,899, or a 121.76 percent increase, over test year revenues of \$175,673. This will
24 produce operating income of \$201,142. The Company proposes operating expenses of
25 \$188,430, an original cost rate base "OCRB" of \$658,312, and a 30.55 percent rate of
26 return on OCRB. The OCRB is the same as the fair value rate base ("FVRB") in this case.

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

2 A. Staff recommends increasing total annual operating revenue to \$275,860, an \$116,431, or
3 a 73.03 percent increase, over adjusted test year revenues of \$159,429. This will produce
4 operating income of \$95,691. Staff recommends operating expenses of \$180,170, a
5 FVRB of \$637,938, and a 15 percent rate of return on OCRB.

6
7 **Q. Please summarize the rate base adjustments addressed in your testimony.**

8 A. My testimony addresses the following issues:

9
10 Cash Working Capital - This adjustment decreases rate base by \$18,496.

11
12 Removal of Plant in Service Surcharge – This adjustment decreases plant in service by
13 the amount by which the management company charged a 15 percent surcharge on
14 invoices if the Company did not have an open account with the vendor, \$1,878.

15
16 Removal of Plant in Service and Accumulated Depreciation – This adjustment decreases
17 plant in service by \$12,991 due to well abandonment and also decreases the corresponding
18 accumulated depreciation by \$12,991.

19
20 **Q. Please summarize the operating income adjustments addressed in your testimony.**

21 A. My testimony addresses the following issues:

22
23 Removal of all Revenue Surcharges – This adjustment decreases metered revenues by
24 \$16,244 to eliminate all interim surcharges.

25
26 Reclassification of Outside Services to Rate Case Expense – This adjustment decreases
27 expense by \$1,870, and reclassifies this amount as rate case expense.

1 Water Testing Expense – This adjustment increases expense by \$6,230 to reflect Staff’s
2 estimate of water testing costs.

3
4 Rate Case Expense – This adjustment decreases expense by \$2,196 to reflect the
5 amortization of the rate case expense over a three-year period.

6
7 Depreciation Expense – This adjustment increases expense by \$1,255 to reflect the
8 application of Staff’s recommended depreciation rates on a going-forward basis, to Staff
9 adjusted plant by account number.

10
11 Property Tax Expense – This adjustment increases expense by \$2,293 to reflect the
12 application of Staff’s recalculation of property tax expense, based on Staff’s
13 recommended revenue requirement.

14
15 Reclassification of Miscellaneous Expense to Interest Expense – This adjustment
16 decreases miscellaneous expense by \$13,973 and increases interest expense by \$13,973
17 due to Staff’s reclassification.

18

19 **RATE BASE**

20 **Q. Please review the Company’s proposed rate base.**

21 A. The Company is proposing a FVRB of \$658,312 as shown on Schedule JMM-1.

22

23 **Q. Is Staff recommending any changes to the Company’s proposed rate base?**

24 A. Yes. Staff recommends a FVRB of \$637,938 as shown on Schedule JMM-1, a reduction
25 of \$20,374 from the Company’s proposed FVRB.

26

1 **Q. How many rate base adjustments is Staff recommending?**

2 A. Staff recommends three adjustments to rate base as shown on Schedules JMM-2 and
3 JMM-3. Each adjustment described below is made to the FVRB.

4

5 **Rate Base Adjustment No. 1 – Cash Capital**

6 **Q. What is the Company proposing for the Allowance of Cash Working Capital?**

7 A. The Company is proposing an \$18,496 allowance for cash working capital based on a
8 simple income statement approach which takes 1/8 of the amount presented on the income
9 statement for operations and maintenance expense and 1/24 of the amount for power. This
10 methodology is known as the formula method.

11

12 **Q. What recommendation is Staff making?**

13 A. Staff is recommending that the \$18,496 allowance for cash working capital be disallowed,
14 as a utility of this size should have presented a lead-lag study to establish an estimate of
15 cash working capital.

16

17 **Q. Why is Staff recommending disallowance of this amount?**

18 A Staff typically only allows cash working capital allowances calculated by the formula
19 method for small class D and E utilities. The formula method always produces a positive
20 cash working capital need. Utilities classified as A, B, or C are much larger and Staff
21 believes that the formula method does not accurately reflect the related cash working
22 capital needs. Typically Staff finds that proper lead/lag studies usually produce a negative
23 cash working capital need. Staff recommends disallowance of any cash working capital
24 allowance, as depicted on schedule JMM-4.

1 **Rate Base Adjustment No. 2 – Removal of Plant in Service Surcharge**

2 **Q. Why is Staff removing this surcharge?**

3 A. Staff is removing \$1,878 of surcharges related to plant in service. In response to Staff
4 data request JMM 5-1, which asked the question of why there was a 15 percent surcharge
5 added to some of the invoices and how the 15 percent was derived. The Company
6 responded by stating “15 percent surcharge amounts are added to the company invoices
7 only if the Company itself does not have an open account with the vendor themselves; if
8 Southwestern Utility Management which is the Company’s Management, has to have
9 items billed to its account and is carried as an accounts payable on its books then
10 Southwestern Utility Management adds a 15 percent surcharge to the invoice.” Staff
11 believes this amount is unauthorized and inappropriate and should not be capitalized in
12 plant additions, which then overstates plant in service. This adjustment is reflected on
13 schedule JMM-5.

14
15 **Rate Base Adjustment No. 3 – Removal of Plant in Service and Accumulated Depreciation.**

16 **Q. Please explain Staff’s rate base adjustment No. 3.**

17 A. Staff decreased plant in service by \$12,991 due to abandonment of wells, and is discussed
18 in Staff’s Engineering Report. Likewise a \$12,991 adjustment must also be made to
19 accumulated depreciation. More detail of the calculation is shown on Schedule JMM-6.

20
21 **OPERATING INCOME**

22 **Operating Income Summary**

23 **Q. What are the results of Staff’s analysis of test year revenues, expenses, and operating**
24 **income?**

25 A. Staff’s analysis resulted in adjusted test year revenues of \$159,429, operating expenses of
26 \$180,170 and operating loss of \$20,741 as shown on Schedules JMM-7 and JMM-8. Staff
27 made seven adjustments to operating income.

1 **Operating Income Adjustment No. 1 – Removal of all Revenue Surcharges**

2 **Q. Please explain Staff's operating income adjustment no. 1.**

3 A. Staff's adjustment reduces metered revenue by \$16,244, from \$173,620 to \$157,376 as
4 shown on Schedule JMM-9. This adjustment was necessary to first remove the surcharge
5 of \$1.16 which came into effect when additional funding of \$51,619 was approved in
6 Decision No. 61070. This surcharge was to stay in effect until the next rate case
7 application. As the Company has filed for new financing and new rates this \$1.16
8 surcharge should be eliminated. In addition, emergency rate surcharges were approved in
9 Decision No. 67984. Further, the Order stated that the Company apply for a permanent
10 rate increase as soon as possible. Likewise these surcharges should also be eliminated
11 when new, permanent rates are ordered in this filing.

12
13 **Operating Income Adjustment No. 2 – Reclassification of Outside Services to Rate Case**
14 **Expense**

15 **Q. Please explain Staff's operating income adjustment no. 2.**

16 A. Staff's adjustment reduces outside services by \$1,870, from \$56,429 to \$54,559 as shown
17 on Schedule JMM-10. This adjustment was made because some outside services are more
18 appropriately classified as rate case expense. See operating income adjustment no. 5,
19 Schedule JMM-12 for the corresponding inclusion of this amount.

20
21 **Operating Income Adjustment No. 3 – Water Testing Expense**

22 **Q. Please explain Staff's operating income adjustment no. 3.**

23 A. Staff's adjustment increased water testing by \$6,230, from \$3,600 to \$9,830, as shown on
24 Schedule JMM-11. An explanation of this adjustment can be obtained from the Staff
25 Engineering Report.

1 **Operating Income Adjustment No. 4 – Rate Case Expense**

2 **Q. Please explain Staff's operating income adjustment no. 4.**

3 A. Staff's adjustment decreases rate case expense by \$2,196, from \$5,319 to \$3,123.

4

5 **Q. Why does this amount differ from what the Company proposed?**

6 A. Staff first had to make two adjustments to the test year expense amount. One was to
7 reclassify outside services to rate case expense, and the second was to add amounts spent
8 and estimated after the test year. Second, Staff amortized the rate case expense over three
9 years. Staff's calculation is shown on Schedule JMM-12.

10

11 **Operating Income Adjustment No. 5 – Depreciation Expense**

12 **Q. Please explain Staff's operating income adjustment no. 5.**

13 A. Staff's adjustment increased depreciation expense by \$1,255, from \$33,368 to \$34,623, as
14 reflected on Schedule JMM-13.

15

16 **Q. Why does Staff recommend a new depreciation rate for each utility plant account
17 going forward?**

18 A. In recent Decisions, the Commission has been moving away from the use of composite
19 rates in favor of individual depreciation rates for each water utility plant account. Staff
20 has developed typical and customary depreciation rates within a range of anticipated
21 equipment life. For instance, using a composite rate of 5 percent would not be appropriate
22 for all plant assets, e.g. transmission and distribution lines may have an average service
23 life of 50 years while transportation equipment may only have an average service life of 5
24 years. Thus, Staff recommends individual depreciation rates be used going-forward for
25 each water utility plant account.

26

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

2 **Q. Please explain Staff's operating income adjustment no. 6.**

3 A. Staff's adjustment increases property tax \$2,293, from \$10,323 to \$12,616. Staff's
4 calculation is based upon Staff's adjusted test year and recommended revenues. Please
5 see Schedule JMM-14 for Staff's calculation.

6
7 **Operating Income Adjustment No. 7 – Reclassification of Miscellaneous Expense to Interest**
8 **Expense**

9 **Q. Please explain Staff's operating income adjustment no. 7.**

10 A. Staff's adjustment decreases miscellaneous expense \$13,973, from \$13,973 to \$0, and
11 increases interest expense \$13,973, from \$3,516 to \$17,489. Per examination of the Water
12 Infrastructure Finance Authority ("WIFA") loan agreement, Staff determined that this
13 amount was misclassified as miscellaneous expense and should be reclassified as interest
14 expense per the WIFA loan agreement. This adjustment is reflected on Schedule JMM-
15 15.

16
17 **REVENUE REQUIREMENT**

18 **Q. What does the Company propose for an increase in operating revenue?**

19 A. The Company proposes increasing operating revenue by \$213,899 from \$175,673 to
20 \$389,572.

21
22 **Q. What does Staff recommend for an increase in operating revenue?**

23 A. Staff recommends increasing operating revenue by \$116,431 from \$159,429 to \$275,860.

1 **Q. How did Staff determine its recommended operating revenue?**

2 A. Staff determined its recommended revenue requirement by the need for a sufficient debt
3 service coverage ("DSC") ratio, while attempting to ameliorate rate shock. See Schedule
4 JMM-16.

5
6 **FINANCING APPLICATION**

7 **Q. Please provide a brief background for the financing application.**

8 A. The Company filed a financing application (Docket No. W-02860A-05-0727) on October
9 19, 2005, requesting authorization to incur \$700,000 of long-term debt. In an amendment
10 to its application, the Company increased the amount of the loan from \$700,000 to
11 approximately \$2.5 million. Staff requested consolidation of the financing application and
12 the current rate application as the Company would not have sufficient revenue to pay the
13 debt service on the requested loan without increased rates.

14
15 **Q. What is the purpose of the \$2.5 million loan?**

16 A. According to the Company's witness, Bonnie O'Connor, the debt will be used to fund
17 construction projects needed to address the Company's water loss, water quality, and
18 system reliability. A more detailed analysis of Staff Engineering's findings is discussed in
19 the testimony of Staff witness, Ms. Dorothy Hains.

20
21 **Q. What are the proposed terms of the loan?**

22 A. The proposed \$2.5 million loan from WIFA is a 20-year amortizing loan at an estimated
23 5.6 percent interest rate.¹

24
25 **Q. Does Staff recommend a different loan amount than that proposed by the Company?**

26 A. Yes, Staff recommends \$450,000.

¹ The actual interest will be determined at the time the WIFA loan documents are signed.

1 **Q. What is the primary basis of Staff's recommendation?**

2 A. Staff reviewed the construction plans and agreed with the Company that the water loss
3 reduction projects should be given first priority (see Engineering Report).

4
5 **Q. What other factors did Staff consider in determining its recommended loan amount?**

6 A. The Company is in discussions with Phelps Dodge Corporation ("Phelps Dodge"). These
7 discussions may lead to Phelps Dodge providing financial assistance to the Company,
8 which, in turn, would lower the amount of money the Company would need to borrow
9 from WIFA. Additionally, the Staff recommended loan amount mitigates the amount of
10 rate increase customers will experience because the amount of revenue needed to pay the
11 principal and interest payments on the \$450,000 loan is much lower than the amount
12 needed for the \$2.5 million loan.

13

14 **TIER and DSC Analysis**

15 **Q. What DSC ratio and times interest earned ratio ("TIER") does WIFA require for the**
16 **Company?**

17 A. The WIFA DSC ratio requirement is 1.2. This requirement is contained in the mortgage
18 agreement between WIFA and the Company. There is no stated TIER requirement.

19

20 **Q. What was the amount of the Company's outstanding long-term debt at the end of the**
21 **test year, and what was the test year interest expense incurred?**

22 A. At the end of the 2005 test year, the Company had \$450,613² in long-term debt, and it
23 incurred \$16,360 in interest expense as shown on Schedule JMM-16.

² The \$450,613 is presented as \$419,296 in long-term debt and \$31,317 in current maturities, i.e., short-term debt (\$419,296 + \$31,317 = \$450,613).

1 **Q. Would you briefly define the DSC ratio and the TIER?**

2 A. DSC measures an entity's ability to generate cash flow to pay its debt service obligations
3 (interest and principal) from operating activities. It is calculated by dividing (1) earnings
4 before interest, income taxes, and depreciation expense by (2) the principal and interest
5 payments. When DSC is greater than 1.0, operating cash flow is sufficient to cover debt
6 obligations.

7
8 TIER measures the number of times operating income will cover interest on long-term
9 debt. It is calculated by dividing operating income plus income taxes by interest on long-
10 term debt. When TIER is greater than 1.0, operating income is sufficient to cover interest
11 expense.

12
13 **Q. What was the Company's test year TIER and DSC ratios?**

14 A. The Company's test year DSC ratio was 0.29 and its TIER was below zero, and, therefore
15 not meaningful as shown on Column A, lines 8 and 9 of Schedule JMM-16.

16
17 **Q. What are the TIER and DSC ratios under Staff's recommended operating income?**

18 A. Staff's recommended operating income of \$116,431 provides a 2.32 TIER and a 1.53 DSC
19 as shown on Column C of Schedule JMM-16. Staff's proposed operating income would
20 generate enough cash flow to service the Staff recommended level of debt, comply with
21 WIFA debt service coverage requirements and allow for reasonable contingencies.

22
23 **Q. If WIFA were able to authorize a zero percent interest loan, would this change
24 Staff's recommendation regarding the loan amount?**

25 A. Yes, Staff would recommend increasing the WIFA loan amount by \$300,000 from
26 \$450,000 to \$750,000 as shown on Schedule JMM-17. This would not change the

1 revenue requirement and would keep the DSC ratio at 1.53, and thus enable the Company
2 to work on more water loss reduction projects.

3
4 **RATE DESIGN**

5 **Q. Have you prepared a schedule summarizing the present, Company proposed, and**
6 **Staff recommended rates and service charges?**

7 A. Yes. A summary of the present, Company proposed, and Staff recommended rates and
8 service charges are provided on Schedule JMM-18.

9
10 **Q. Would you please summarize the present rate design?**

11 A. The present monthly minimum charges by meter size are as follows: 5/8-inch \$16.43; 3/4-
12 inch \$16.43; 1-inch \$31.80; 1 1/2-inch \$41.43; 2-inch \$48.30; 3-inch \$160.00; 4-inch
13 \$260.00; 6-inch \$510.00. The present commodity rate is \$2.83 per thousand gallons from
14 1 gallon up to 10,000 gallons, and \$4.18 for any usage over 10,000 gallons. These rates
15 apply to residential and commercial customers.

16
17 **Q. Would you please summarize the Company's proposed rate design?**

18 A. The Company's proposed monthly minimum charges by meter size are as follows: 5/8-
19 inch \$56.00; 3/4-inch \$56.00; 1-inch \$63.00; 1 1/2-inch \$69.00; 2-inch \$74.00; 3-inch
20 \$180.00; 4-inch \$285.00; 6-inch \$640.00. Zero gallons are included in the monthly
21 minimum charge. The Company proposes a three tier commodity rate with break-over
22 points that increase by meter size. The proposed commodity rate is \$4.80 for the first
23 3000 gallons, \$5.80 for usage over 3,000 but less than 10,000 gallons, and \$6.75 for any
24 usage over 10,000 gallons. These rates apply to residential and commercial customers.

1 **Q. Would you please summarize Staff's recommended rate design?**

2 A. Staff's recommended monthly minimum charges by meter size are as follows: 5/8-inch
3 \$28.00; 3/4-inch \$28.00; 1-inch \$54.00; 1 1/2-inch \$71.00; 2-inch \$83.00; 3-inch \$180.00;
4 4-inch \$285.00; 6-inch \$600.00. Zero gallons are included in the monthly minimum
5 charge. Staff recommends an inverted tier rate design that consists of three tiers for the
6 residential 5/8-inch and 3/4-inch meter customers and two tiers for all others. The
7 additional tier for the residential 5/8-inch and 3/4-inch meters is for the first 3,000 gallons.
8 Staff's rate design recognizes the growing importance of managing water as a finite
9 resource and its increasing cost. Efficiency in water use is encouraged by producing a
10 higher customer bill with increased consumption or use of a larger meter. A comparison
11 of the current rates, the Company's proposed rates, and Staff's recommended rates are
12 presented on Schedule JMM-18.

13

14 **Q. What is the rate impact on a 5/8-inch meter residential customer using a median**
15 **consumption of 5,272 gallons?**

16 A. A typical bill analysis is provided on Schedule JMM-18. The median usage of residential
17 5/8-inch meter customers is 5,272 gallons per month. The 5/8-inch meter residential
18 customer would experience a \$52.23 or 166.60 percent increase in their monthly bill from
19 \$31.35 to \$83.58 under the Company's proposed rates and a \$21.89 or 69.83 percent
20 increase in their monthly bill from \$31.35 to \$53.24 under Staff's recommended rates.
21 However, the increase is substantially less if we take into account the effect of the
22 emergency rate increase and interim rate increase. For instance, after these factors are
23 considered the typical 5/8-inch meter residential bill with median use of 5,272 gallons
24 would increase by \$14.23, or 36.48 percent from \$39.01 to \$53.24. A typical bill analysis
25 is provided on Schedule JMM-19.

1 **Q. What is the basis for Staff's recommendation for the respective commodity break-**
2 **over points?**

3 A. The use of the recommended break-over points by Staff serves two purposes. First, it
4 supports the state-wide effort to improve water-use efficiency. Customers are rewarded
5 monetarily by restricting their use to these levels which reflects efficient water use.
6 Second, a desirable characteristic of Staff's rate design is that it effectively serves to
7 provide affordable water to customers willing to limit consumption to their basic needs.

8
9 **Q. What water system service line, meter installation charges, and service charges does**
10 **Staff recommend?**

11 A. As discussed in Staff's Engineering Report, Staff concurs with the Company's proposed
12 increase in system service lines and meter installation charges, as these charges are within
13 Staff's experience of what are reasonable and customary charges. For service charges
14 Staff recommends charges that are consistent with other water company's tariffs. A
15 comparison of the current charges, the Company's proposed charges, and Staff's
16 recommended charges are presented on Schedules JMM-18.

17
18 **Q. Does this conclude your direct testimony?**

19 A. Yes, it does.

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Schedule JMM-1

REVENUE REQUIREMENT

<u>LINE NO.</u>	<u>DESCRIPTION</u>	(A) COMPANY <u>ORIGINAL COST</u>	(B) STAFF <u>ORIGINAL COST</u>
1	Adjusted Rate Base	\$ 658,312	\$ 637,938
2	Adjusted Operating Income (Loss)	\$ (12,757)	\$ (20,741)
3	Current Rate of Return (L2 / L1)	-1.94%	-3.25%
4	Required Rate of Return	30.55%	15.00%
5	Required Operating Income (L4 * L1)	\$ 201,142	\$ 95,691
6	Operating Income Deficiency (L5 - L2)	\$ 213,899	\$ 116,431
7	Gross Revenue Conversion Factor	1.0000	1.0000
8	Required Revenue Increase (L7 * L6)	\$ 213,899	\$ 116,431
9	Adjusted Test Year Revenue	\$ 175,673	\$ 159,429
10	Proposed Annual Revenue (L8 + L9)	\$ 389,572	\$ 275,860
11	Required Increase in Revenue (%)	121.76%	73.03%
12	Rate of Return	30.55%	15.00%

References:

Column (A): Company Schedules from the Rate Application
 Column (B): Staff Schedules JMM-2, JMM-7

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Schedule JMM-2

RATE BASE - ORIGINAL COST

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	REF	(C) STAFF AS ADJUSTED
1	\$ 985,549	\$ (14,869)	Adj no. 2 & 3	\$ 970,680
2	315,377	(12,991)	Adj no. 3	302,386
3	<u>\$ 670,172</u>	<u>\$ (1,878)</u>		<u>\$ 668,294</u>
<u>LESS:</u>				
4	\$ 21,719	\$ -		\$ 21,719
8	8,638	-		8,638
9	-	-		-
<u>ADD:</u>				
10	443	(443)	Adj no. 1	-
11	<u>18,053</u>	<u>(18,053)</u>	Adj no. 1	<u>-</u>
17	<u>\$ 658,312</u>	<u>\$ (20,374)</u>		<u>\$ 637,938</u>

References:

Column (A), Company Schedule from the Rate Application
Column (B): Schedule JMM-3
Column (C): Column (A) + Column (B)

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJ #1	[C] ADJ #2	[D] ADJ #3	[E] STAFF ADJUSTED
<u>PLANT IN SERVICE:</u>							
1							
2	301	Organization	\$ 198	\$ -	\$ -	\$ -	\$ 198
3	302	Franchises	-	-	-	-	-
4	303	Land and Land Rights	4,345	-	-	-	4,345
5	304	Structures & Improvements	5,918	-	-	-	5,918
6	305	Collecting & Impounding Reservoirs	-	-	-	-	-
7	306	Lakes, Rivers, Other Intakes	-	-	-	-	-
8	307	Wells and Springs	77,391	-	(38)	(12,991)	64,362
9	308	Infiltration Galleries and Tunnels	-	-	-	-	-
10	309	Supply Mains	-	-	-	-	-
11	310	Power Generation Equipment	-	-	-	-	-
12	311	Pumping Equipment	132,579	-	(20)	-	132,559
13	320	Water Treatment Plant	1,971	-	(147)	-	1,824
14	330	Distribution Reservoirs & Standpipes	136,659	-	(1,245)	-	135,414
15	331	Transmission & Distribution Mains	513,601	-	(416)	-	513,185
16	333	Services	37,950	-	-	-	37,950
17	334	Meters	28,060	-	-	-	28,060
18	335	Hydrants	34,717	-	-	-	34,717
19	336	Backflow Prevention Devices	-	-	-	-	-
20	339	Other Plant & Misc. Equipment	-	-	-	-	-
21	340	Office Furniture & Equipment	9,202	-	-	-	9,202
22	341	Transportation Equipment	-	-	-	-	-
23	342	Stores Equipment	-	-	-	-	-
24	343	Tools, Ship & Garage Equipment	140	-	(12)	-	128
25	344	Laboratory Equipment	-	-	-	-	-
26	345	Power Operated Equipment	2,818	-	-	-	2,818
27	346	Communication Equipment	-	-	-	-	-
28	347	Miscellaneous Equipment	-	-	-	-	-
29	348	Other Tangible Plant	-	-	-	-	-
30			985,549	-	(1,878)	(12,991)	970,680
31							
32	Add:						
33		Post Test Year Plant	-	-	-	-	-
34		General Office Plant Allocation	-	-	-	-	-
35	Less:						
36			-	-	-	-	-
37			-	-	-	-	-
38							
39		Total Plant in Service	\$ 985,549	\$ -	\$ (1,878)	\$ (12,991)	970,680
40		Less: Accumulated Depreciation	315,377	-	-	(12,991)	302,386
41		Accumulated Depreciation - General Office Plant Allocation	-	-	-	-	-
42		Net Plant in Service	\$ 670,172	\$ -	\$ (1,878)	\$ -	\$ 668,294
43							
44		<u>LESS:</u>					
45		Contributions in Aid of Construction (CIAC) (Less Amortization of CIAC)	\$ 21,719	\$ -	\$ -	\$ -	\$ 21,719
46		Customer Meter Deposits	8,638	-	-	-	8,638
47		Deferred Income Tax Credits	-	-	-	-	-
48							
49		<u>ADD:</u>					
50		1/24 Power	443	(443)	-	-	-
51		1/8 Operations & Maintenance	18,053	(18,053)	-	-	-
52							
53		Original Cost Rate Base	\$ 658,312	\$ (18,496)	\$ (1,878)	\$ -	\$ 637,938

ADJ #	References
1	Removal of Allowance for Cash Working Capital Schedule JMM-4
2	Removal of Plant in Service Surcharge Schedule JMM-5
3	Removal of Plant in Service and Accumulated Depreciation Schedule JMM-6

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Schedule JMM-4

RATE BASE ADJUSTMENT NO. 1 - REMOVAL OF ALLOWANCE FOR CASH WORKING CAPITAL

Line No.	Description	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Cash Working Capital (1/8 of allowance operation and maintenance expense)	\$ 443	\$ (443)	\$ -
2	Cash Working Capital (1/24 of Power)	\$ 18,053	\$ (18,053)	\$ -

References:

Column A: Company Schedule from the Rate Application
 Column B: Testimony, Schedule JMM-3
 Column C: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 2 - REMOVAL OF PLANT IN SERVICE SURCHARGE

Line No.	Description	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Removal of Surcharge related to Wells and Springs (Account 307)	\$ 77,391	\$ (38)	\$ 77,353
2	Removal of Surcharge related to Water Treatment Plant (Account 320)	\$ 1,971	\$ (147)	\$ 1,824
3	Removal of Surcharge related to Distribution Reservoirs and Standpipes (Account 330)	\$ 136,659	\$ (1,245)	\$ 135,414
4	Removal of Surcharge related to Transmission and Distribution Mains (Account 331)	\$ 513,601	\$ (416)	\$ 513,185
5	Removal of Surcharge related to Tools, Shop and Garage Equipment (Account 343)	\$ 140	\$ (12)	\$ 128
6	Removal of Surcharge related to Pumps (Account 311)	\$ 132,579	\$ (20)	\$ 132,559

References:

Column A: Company Schedule from the Rate Application
Column B: Testimony, Schedule JMM-3
Column C: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 3 - REMOVAL OF PLANT IN SERVICE AND ACCUMULATED DEPRECIATION

Line No.	Description	[A]	[B]	[C]	[D]
		COMPANY AS FILED	STAFF ADJUSTMENTS	LESS: STAFF ADJUSTMENT NO. 2	STAFF AS ADJUSTED
1	Removal of Plant in Service	\$ 77,391	\$ (12,991)	\$ (38)	\$ 64,362
2	Removal of Accumulated Depreciation	\$ 315,377	\$ (12,991)	\$ -	\$ 302,386
<u>Staff's calculation from the Engineering Report</u>					
3	Removal of plant in service for Well # 1 due to abandonment	\$ 1,124			
4	Removal of plant in service for Well # 2 due to abandonment	1,565			
5	Removal of plant in service for Well # 3 due to abandonment	746			
6	Removal of plant in service for Well # 4 due to abandonment	7,927			
7	Removal of plant in service for Well # 5 due to abandonment	1,629			
8	Total amount removed from plant in service	\$ 12,991			

References:

Column A: Company Schedule from the Rate Application

Column B: Testimony, Schedule JMM-3

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

OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] COMPANY ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	REF	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
1	REVENUES:						
2	Metered Water Sales	\$ 173,620	\$ (16,244)	Adj. no. 1	\$ 157,376	\$ 116,431	\$ 273,807
3	Water Sales - Unmetered	-	-		-	-	-
4	Other Operating Revenue	2,053	-		2,053	-	2,053
5	Total Operating Revenues	<u>\$ 175,673</u>	<u>\$ (16,244)</u>		<u>\$ 159,429</u>	<u>\$ 116,431</u>	<u>\$ 275,860</u>
6	OPERATING EXPENSES:						
7	Salaries and Wages	\$ 15,758	\$ -		\$ 15,758	\$ -	\$ 15,758
10	Purchased Water	-	-		-	-	-
11	Purchased Power	10,638	-		10,638	-	10,638
13	Chemicals	1,780	-		1,780	-	1,780
14	Repairs and Maintenance	18,691	-		18,691	-	18,691
15	Office Supplies and Expense	4,497	-		4,497	-	4,497
16	Outside Services	56,429	(1,870)	Adj. no. 2	54,559	-	54,559
17	Water Testing	3,600	6,230	Adj. no. 3	9,830	-	9,830
18	Rents	2,400	-		2,400	-	2,400
19	Transportation Expenses	5,969	-		5,969	-	5,969
20	Insurance - General Liability	3,312	-		3,312	-	3,312
21	Insurance - Health and Life	2,373	-		2,373	-	2,373
22	Regulatory Commission Expense - Rate Case	5,319	(2,196)	Adj. no. 4	3,123	-	3,123
23	Miscellaneous Expense	13,973	(13,973)	Adj. no. 7	-	-	-
24	Depreciation Expense	33,368	1,255	Adj. no. 5	34,623	-	34,623
25	Taxes Other Than Income	-	-		-	-	-
26	Property Taxes	10,323	2,293	Adj. no. 6	12,616	-	12,616
27	Income Tax	-	-		-	-	-
40							
41	Total Operating Expenses	<u>\$ 188,430</u>	<u>\$ (8,260)</u>		<u>\$ 180,170</u>	<u>\$ -</u>	<u>\$ 180,170</u>
42	Operating Income (Loss)	<u>\$ (12,757)</u>	<u>\$ (7,984)</u>		<u>\$ (20,741)</u>	<u>\$ 116,431</u>	<u>\$ 95,691</u>
43							
44	Other Income (Expense)						
45	Interest Income	\$ 374	\$ -		\$ 374	\$ -	\$ 374
46	Non-Utility Income	175	-		175	-	175
47	Non-Utility Expense	-	-		-	-	-
48	Interest Expense	(3,516)	(13,973)	Adj. no. 7	(17,489)	-	(17,489)
49	Total Other Income (Expense)	<u>\$ (2,967)</u>	<u>(13,973)</u>		<u>\$ (16,940)</u>	<u>\$ -</u>	<u>\$ (16,940)</u>
50							
51	Net Income (Loss)	<u>\$ (15,724)</u>	<u>\$ (21,957)</u>		<u>\$ (37,681)</u>	<u>\$ 116,431</u>	<u>\$ 78,751</u>

References:

Column (A): Company Schedule from the Rate Application
Column (B): Schedule JMM-8
Column (C): Column (A) + Column (B)
Column (D): Schedule JMM-1
Column (E): Column (C) + Column (D)

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SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	(A) COMPANY AS FILED	(B) Removal of all Revenue Surcharges ADJ.#1	(C) Reclassification of Outside Services ADJ.#2	(D) Water Testing ADJ.#3	(E) Rate Case ADJ.#4	(F) Deprec. Exp ADJ.#5	(G) Property Tax ADJ.#6	(H) Reclassification of Misc. Exp ADJ.#7	(I) STAFF ADJUSTED
1	REVENUES:									
2	Metered Water Sales	\$ 173,620	\$ (16,244)							\$ 157,376
3	Water Sales - Unmetered	2,053								2,053
4	Other Operating Revenue									
5	Total Operating Revenues	\$ 175,673	\$ (16,244)							\$ 159,429
6	OPERATING EXPENSES:									
7	Salaries and Wages	\$ 15,758								\$ 15,758
8	Purchased Water	10,638								10,638
9	Purchased Power	1,780								1,780
10	Chemicals	18,691								18,691
11	Repairs and Maintenance	4,497								4,497
12	Office Supplies and Expense	56,429		(1,870)						54,559
13	Outside Services	3,600			6,230					9,830
14	Water Testing	2,400								2,400
15	Rents	5,969								5,969
16	Transportation Expenses	3,312								3,312
17	Insurance - General Liability	2,373								2,373
18	Insurance - Health and Life	5,319				(2,196)				3,123
19	Regulatory Commission Expense - Rate Case	13,973							(13,973)	34,623
20	Depreciation Expense	33,368					1,255			34,623
21	Miscellaneous Expense									
22	Taxes Other Than Income	10,323						2,293		12,616
23	Property Taxes									
24	Income Tax									
25	Total Operating Expenses	\$ 188,430		\$ (1,870)	\$ 6,230	\$ (2,196)	\$ 1,255	\$ 2,293	\$ (13,973)	\$ 180,170
26	Operating Income (Loss)	\$ (12,757)	\$ (16,244)	\$ 1,870	\$ (6,230)	\$ 2,196	\$ (1,255)	\$ (2,293)	\$ 13,973	\$ (20,741)
27	OTHER INCOME/(EXPENSE)									
28	Interest and Dividend Income	\$ 374								\$ 374
29	Non-Utility Income	175								175
30	Non-Utility Expense									
31	Interest Expense	(3,516)								(17,489)
32	Total Other Income/(Expense)	\$ (2,967)							\$ (13,973)	\$ (16,940)
33	Net Income/(Loss)	\$ (15,724)	\$ (16,244)	\$ 1,870	\$ (6,230)	\$ 2,196	\$ (1,255)	\$ (2,293)	\$ 13,973	\$ (37,681)

ADJ.#	Reference:
1	Removal of all Revenue Surcharges
2	Reclassification of Outside Services
3	Schedule JMM-9
4	Schedule JMM-10
5	Water Testing Expense
6	Schedule JMM-11
7	Rate Case Expense
8	Schedule JMM-12
9	Depreciation Expense
10	Schedule JMM-13
11	Property Taxes
12	Schedule JMM-14
13	Reclassification of Miscellaneous Expense
14	Schedule JMM-15

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Schedule JMM-9

OPERATING INCOME ADJUSTMENT NO. 1 - REMOVAL OF ALL REVENUE SURCHARGES

Line No.	Description	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Metered Water Sales	\$ 173,620	\$ (16,244)	\$ 157,376
	Staff's Calculation			
2	Removal of \$ 1.16 Surcharge from ACC Decision # 61070 related to the current Wifa Loan	\$ 4,427		
3	Removal of all Surcharge Amounts for the Month of August from ACC Decision # 67984	\$ 1,774		
4	Removal of all Surcharge Amounts for the Month of September through December from ACC Decision # 67984	\$ 10,043		
5	Total of all Surcharges	\$ 16,244		

References:

Column A: Company Schedule from the Rate Application
 Column B: Testimony, Schedule JMM-9
 Column C: Column [A] + Column [B]

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Schedule JMM-10

OPERATING INCOME ADJUSTMENT NO. 2 - RECLASSIFICATION OF OUTSIDE SERVICES TO RATE CASE EXPENSE

Line No.	Description	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Outside Services	\$ 56,429	\$ (1,870)	\$ 54,559
2	Reclassification of expenses included in outside services that should be included in rate case expense.	\$ 1,870		

References:

Column A: Company Schedule from the Rate Application
 Column B: Testimony, Schedule JMM-9
 Column C: Column [A] + Column [B]

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Schedule JMM-11

OPERATING INCOME ADJUSTMENT NO. 3 - WATER TESTING EXPENSE

Line No.	Description	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Water testing expense	\$ 3,600	\$ 6,230	\$ 9,830
2	Staff's recommended water testing expense from the Engineering Report.	\$ 9,830		

References:

Column A: Company Schedule from the Rate Application
 Column B: Testimony, Schedule JMM-9
 Column C: Column [A] + Column [B]

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Schedule JMM-12

OPERATING INCOME ADJUSTMENT NO. 4 - RATE CASE EXPENSE

Line No.	Description	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Rate case expense	\$ 5,319	\$ (2,196)	\$ 3,123
<u>Staff's calculation</u>				
2	Rate Case Expense	\$ 5,319		
3	Plus: Reclassification of Outside Services (See Adj no. 2)	\$ 1,870		
4	Plus: Amounts spent after 12/31/05	\$ 2,180		
5	Total Rate Case Expense	\$ 9,369		
5	Divided by the estimated amortization period in years		3	
6	Annual Rate Case Expense	\$ 3,123		
7	Company proposed rate case expense	\$ 5,319		
8	Adjustment to rate case expense	\$ (2,196)		

References:

Column A: Company Schedule from the Rate Application
 Column B: Testimony, Schedule JMM-9
 Column C: Column [A] + Column [B]

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Schedule JMM-13

OPERATING INCOME ADJUSTMENT NO. 5 - DEPRECIATION EXPENSE

Line No.	ACCT NO.	DESCRIPTION	AMOUNT	Projected RATE	EXPENSE
Plant In Service					
1	301	Organization	\$ 198	0.00%	\$ -
2	302	Franchises	-	0.00%	-
3	303	Land and Land Rights	4,345	0.00%	-
4	304	Structures & Improvements	5,918	3.33%	197
5	305	Collecting & Impounding Reservoirs	-	2.50%	-
6	306	Lakes, Rivers, Other Intakes	-	2.50%	-
7	307	Wells and Springs	64,362	3.33%	2,143
8	308	Infiltration Galleries and Tunnels	-	6.67%	-
9	309	Supply Mains	-	2.00%	-
10	310	Power Generation Equipment	-	5.00%	-
11	311	Pumping Equipment	132,559	12.50%	16,570
12	320	Water Treatment Plant	1,824	3.33%	61
13	330	Distribution Reservoirs & Standpipes	135,414	2.22%	3,006
14	331	Transmission & Distribution Mains	513,185	2.00%	10,264
15	333	Services	37,950	3.33%	1,264
16	334	Meters	28,060	8.33%	2,337
17	335	Hydrants	34,717	2.00%	694
18	336	Backflow Prevention Devices	-	6.67%	-
19	339	Other Plant & Misc. Equipment	-	6.67%	-
20	340	Office Furniture & Equipment	9,202	6.67%	614
21	341	Transportation Equipment	-	20.00%	-
22	342	Stores Equipment	-	4.00%	-
23	343	Tools, Ship & Garage Equipment	128	5.00%	6
24	344	Laboratory Equipment	-	10.00%	-
25	345	Power Operated Equipment	2,818	5.00%	141
26	346	Communication Equipment	-	10.00%	-
27	347	Miscellaneous Equipment	-	10.00%	-
28	348	Other Tangible Plant	-	-	-
29		Subtotal General	<u>\$ 970,680</u>		<u>\$ 37,297</u>
30		Less: Amortization of Contributions	\$ 36,833	7.26%	<u>(2,674)</u>
31		Total Depreciation Expense			<u>\$ 34,623</u>
32		Company Proposed Test Year Depreciation Expense			<u>\$ 33,368</u>
33		Staff Recommended Adjustment to increase Depreciation Expense			<u>\$ 1,255</u>

OPERATING INCOME ADJUSTMENT NO. 6 - PROPERTY TAXES

Line No.	Description	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Property taxes	\$ 10,323	\$ 2,293	\$ 12,616

2 Staff's Calculation of Property Taxes to Reflect Proposed Revenues:

3 Adjusted test year revenues	\$ 159,429
4 Adjusted test year revenues	159,429
5 Proposed revenues	<u>275,860</u>
6 Average of three year's of revenue	\$ 198,239
7 Average of three year's of revenue, times 2	\$ 396,479
8 Full cash value	\$ 396,479
9 Assessment ratio (reflects 2006 and 2007 1/2% reductions in assessment ratio)	<u>24%</u>
10 Assessed value	\$ 95,155
11 Property tax rate	<u>0.1326</u>
12 Property tax	\$ 12,616
13 Tax on parcels	-
14 Staff recommended property tax	<u>\$ 12,616</u>
15 Company proposed property tax expense	\$ 10,323
16 Staff recommended adjustment to property taxes	<u>\$ 2,293</u>

References:

Column A: Company Schedule from the Rate Application
 Column B: Testimony, Schedule JMM-9
 Column C: Column [A] + Column [B]

Naco Water Company, LLC.
 Docket Nos. W-02860A-06-0002 and
 W-02860A-05-0727
 Test Year Ended December 31, 2005

Schedule JMM-15

OPERATING INCOME ADJUSTMENT NO. 7 - RECLASSIFICATION OF MISCELLANEOUS EXPENSE TO INTEREST EXPENSE

Line No.	Description	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Miscellaneous expense	\$ 13,973	\$ (13,973)	\$ -
2	Interest expense	\$ 3,516	\$ 13,973	\$ 17,489

Staff reclassified miscellaneous expense in the amount of \$13,973 from WIFA as interest expense

References:

- Column A: Company Schedule from the Rate Application
- Column B: Testimony, Schedule JMM-9
- Column C: Column [A] + Column [B]

FINANCIAL ANALYSIS

Selected Financial Information
Pro forma Includes Immediate Effects of the Proposed Long-term Debt

	[A]		[B]		[C]
	12/31/2005 Test Year Operating Revenue <u>Without Loan</u>		12/31/2005 With Staff Recommended Revenue and Full Amount of Company Proposed Loan <u>\$2,500,000</u>		12/31/2005 With Staff Recommended Revenue and Staff's Recommended Loan <u>\$450,000</u>
1	Operating Income	\$ (20,741)	\$ 95,691	\$ 95,691	\$ 95,691
2	Depreciation & Amortization Expense	\$ 34,623	\$ 34,623	\$ 34,623	\$ 34,623
3	Income Tax Expense	\$ -	\$ -	\$ -	\$ -
4	Interest Expense	\$ 16,360 (a)	\$ 154,585 (b)	\$ 41,240 (c)	\$ 41,240 (c)
5	Principal Repayment	\$ 31,317	\$ 101,155	\$ 43,888	\$ 43,888
TIER & DSC Calculation					
TIER					
6	[1+3] + [4]	N/M	0.62		2.32
DSC					
7	[1+2+3] + [4+5]	0.29	0.51		1.53
Capital Structure					
8	Short-term Debt	\$ 31,317 (d) 5.42%	\$ 101,156 (e) 3.29%	\$ 43,888 (f) 4.27%	
9	Long-term Debt	\$ 419,296 (g) 72.59%	\$ 2,849,457 (h) 92.59%	\$ 856,725 (i) 83.37%	
10	Equity	\$ 127,026 (j) 21.99%	\$ 127,026 4.13%	\$ 127,026 12.36%	
11	Total Capital	\$ 577,639 100.00%	\$ 3,077,639 100.00%	\$ 1,027,639 100.00%	

(a) WIFA Debt Service Invoice, dated April 17, 2006, for the existing loan shows \$268.28 for interest and \$1,095.04 for the WIFA Management Fee for a total monthly fee of \$1,363.32 or \$16,360 annually.

(b) The pro forma interest expense includes the first year of interest on the Company proposed debt and also includes the interest on the existing loan.

(c) The pro forma interest expense includes the first year of interest on the Staff recommended debt and also includes the interest on the existing loan.

(d) Staff recognized \$17,000 of funds provided by the owner as equity. The Company treats it as a short-term debt. The Company has no reasonable expectation that it will repay the loan. The \$31,317 is the Staff calculated current maturities on the \$450,613 ending loan balance.

(e) Includes \$31,317 in short-term debt and \$69,839 in projected current maturities on \$2.5 million long-term debt.

(f) Includes \$31,317 in short-term debt and \$12,571 in projected current maturities on \$450,000 long-term debt.

(g) The \$419,296 amount reflects the \$450,613 ending balance less projected current maturities on the debt (i.e., \$450,613 - \$31,317).

(h) Includes existing debt of \$419,296 and the balance at the end of the first year (i.e., \$2,430,161) for the 2.5 million in Company proposed debt.

(i) Includes existing debt of \$419,296 and the balance at the end of the first year (i.e., \$437,429) for the \$450,000 in Staff recommended debt.

(j) Includes \$110,026 in equity and \$17,000 that Staff removed from short-term debt.

N/M: Not Meaningful

FINANCIAL ANALYSIS

Selected Financial Information
Pro forma Includes Immediate Effects of the Proposed Long-term Debt

	[A] 12/31/2005 Test Year Operating Revenue Without Loan	[B] 12/31/2005 With Staff Recommended Revenue and Full Amount of Company Proposed Loan \$2,500,000 at zero percent interest	[C] 12/31/2005 With Staff Recommended Revenue and Staff's Recommended Loan \$750,000 at zero percent interest
1 Operating Income	\$ (20,741)	\$ 95,691	\$ 95,691
2 Depreciation & Amortization Expense	\$ 34,623	\$ 34,623	\$ 34,623
3 Income Tax Expense	\$ -	\$ -	\$ -
4 Interest Expense	\$ 16,360 (a)	\$ 16,360 (b)	\$ 16,360 (c)
5 Principal Repayment	\$ 31,317	\$ 156,317	\$ 68,817

TIER & DSC Calculation

TIER			
6 [1+3] + [4]	N/M	5.85	5.85
DSC			
7 [1+2+3] + [4+5]	0.29	0.75	1.53

Capital Structure

8 Short-term Debt	\$ 31,317 (d)	5.42%	\$ 156,317 (e)	5.08%	\$ 68,817 (f)	5.18%
9 Long-term Debt	\$ 419,296 (g)	72.59%	\$ 2,794,296 (h)	90.79%	\$ 1,131,796 (i)	85.25%
10 Equity	\$ 127,026 (j)	21.99%	\$ 127,026	4.13%	\$ 127,026	9.57%
11 Total Capital	\$ 577,639	100.00%	\$ 3,077,639	100.00%	\$ 1,327,639	100.00%

(a) WIFA Debt Service Invoice, dated April 17, 2006, for the existing loan shows \$268.28 for interest and \$1,095.04 for the WIFA Management Fee for a total monthly fee of \$1,363.32 or \$16,360 annually.

(b) The pro forma interest expense includes zero interest on the Company proposed debt and also includes interest on the existing loan.

(c) The pro forma interest expense includes zero interest on the Staff recommended debt and also includes interest on the existing loan.

(d) Staff recognized \$17,000 of funds provided by the owner as equity. The Company treats it as a short-term debt. The Company has no reasonable expectation that it will repay the loan. The \$31,317 is the Staff calculated current maturities on the \$450,613 ending loan balance.

(e) Includes \$31,317 in short-term debt and \$125,000 in projected current maturities on \$2.5 million long-term debt.

(f) Includes \$31,317 in short-term debt and \$37,500 in projected current maturities on \$800,000 long-term debt.

(g) The \$419,296 amount reflects the \$450,613 ending balance less projected current maturities on the debt (i.e., \$450,613 - \$31,317).

(h) Includes existing debt of \$419,296 and the balance at the end of the first year (i.e., \$2,375,000) for the 2.5 million in Company proposed debt.

(i) Includes existing debt of \$419,296 and the balance at the end of the first year (i.e., \$712,500) for the \$800,000 in Staff recommended debt.

(j) Includes \$110,026 in equity and \$17,000 that Staff removed from short-term debt.

N/M: Not Meaningful

RATE DESIGN

	Present Rates	Company Proposed Rates	Staff Recommended Rates
Monthly Usage Charge			
5/8" Meter - All Classes	\$ 16.43	\$ 56.00	\$ 28.00
3/4" Meter - All Classes	16.43	56.00	28.00
1" Meter - All Classes	31.48	63.00	54.00
1½" Meter - All Classes	41.43	69.00	71.00
2" Meter - All Classes	48.30	74.00	83.00
3" Meter - All Classes	160.00	180.00	180.00
4" Meter - All Classes	260.00	285.00	285.00
6" Meter - All Classes	510.00	640.00	600.00
Commodity Rates			
5/8" Meter (Residential)			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
From 1 to 10,000 Gallons	\$ 2.83	N/A	N/A
Over 10,000 Gallons	4.18	N/A	N/A
From 1 to 3,000 Gallons	N/A	\$ 4.80	N/A
From 3,001 to 10,000 Gallons	N/A	5.80	N/A
Over 10,000 Gallons	N/A	6.75	N/A
From 1 to 3,000 Gallons	N/A	N/A	\$ 3.90
From 3,000 to 9,000 Gallons	N/A	N/A	5.96
Over 9,000 Gallons	N/A	N/A	7.15
5/8" Meter (Commercial)			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
From 1 to 10,000 Gallons	\$ 2.83	N/A	N/A
Over 10,000 Gallons	4.18	N/A	N/A
From 1 to 3,000 Gallons	N/A	4.80	N/A
From 3,001 to 10,000 Gallons	N/A	\$ 5.80	N/A
Over 10,000 Gallons	N/A	6.75	N/A
From 1 to 9,000 Gallons	N/A	N/A	\$ 5.96
Over 9,000 Gallons	N/A	N/A	7.15
3/4" Meter (Residential)			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
From 1 to 10,000 Gallons	\$ 2.83	N/A	N/A
Over 10,000 Gallons	4.18	N/A	N/A
From 1 to 3,000 Gallons	N/A	\$ 4.80	N/A
From 3,001 to 10,000 Gallons	N/A	5.80	N/A
Over 10,000 Gallons	N/A	6.75	N/A
From 1 to 3,000 Gallons	N/A	N/A	\$ 3.90
From 3,000 to 9,000 Gallons	N/A	N/A	5.96
Over 9,000 Gallons	N/A	N/A	7.15
3/4" Meter (Commercial)			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
From 1 to 10,000 Gallons	\$ 2.83	N/A	N/A
Over 10,000 Gallons	4.18	N/A	N/A
From 1 to 3,000 Gallons	N/A	4.80	N/A
From 3,001 to 10,000 Gallons	N/A	\$ 5.80	N/A
Over 10,000 Gallons	N/A	6.75	N/A
From 1 to 9,000 Gallons	N/A	N/A	\$ 5.96
Over 9,000 Gallons	N/A	N/A	7.15
1" Meter (Residential & Commercial)			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
From 1 to 10,000 Gallons	\$ 2.83	N/A	N/A
Over 10,000 Gallons	4.18	N/A	N/A
From 1 to 3,000 Gallons	N/A	\$ 4.80	N/A

	Present Rates	Company Proposed Rates	Staff Recommended Rates
From 3,001 to 10,000 Gallons	N/A	5.80	N/A
Over 10,000 Gallons	N/A	6.75	N/A
From 1 to 18,000 Gallons	N/A	N/A	\$ 5.96
Over 18,000 Gallons	N/A	N/A	7.15
1½" Meter (Residential & Commercial)			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
From 1 to 10,000 Gallons	\$ 2.83	N/A	N/A
Over 10,000 Gallons	4.18	N/A	N/A
From 1 to 3,000 Gallons	N/A	\$ 4.80	N/A
From 3,001 to 10,000 Gallons	N/A	5.80	N/A
Over 10,000 Gallons	N/A	6.75	N/A
From 1 to 30,000 Gallons	N/A	N/A	\$ 5.96
Over 30,000 Gallons	N/A	N/A	7.15
2" Meter (Residential & Commercial)			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
From 1 to 10,000 Gallons	\$ 2.83	N/A	N/A
Over 10,000 Gallons	4.18	N/A	N/A
From 1 to 3,000 Gallons	N/A	\$ 4.80	N/A
From 3,001 to 10,000 Gallons	N/A	5.80	N/A
Over 10,000 Gallons	N/A	6.75	N/A
From 1 to 35,000 Gallons	N/A	N/A	\$ 5.96
Over 35,000 Gallons	N/A	N/A	7.15
3" Meter (Residential & Commercial)			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
From 1 to 10,000 Gallons	\$ 2.83	N/A	N/A
Over 10,000 Gallons	4.18	N/A	N/A
From 1 to 3,000 Gallons	N/A	\$ 4.80	N/A
From 3,001 to 10,000 Gallons	N/A	5.80	N/A
Over 10,000 Gallons	N/A	6.75	N/A
From 1 to 100,000 Gallons	N/A	N/A	\$ 5.96
Over 100,000 Gallons	N/A	N/A	7.15
4" Meter (Residential & Commercial)			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
From 1 to 133,000 Gallons	\$ 2.83	N/A	N/A
Over 133,000 Gallons	4.18	N/A	N/A
From 1 to 3,000 Gallons	N/A	\$ 4.80	N/A
From 3,001 to 10,000 Gallons	N/A	5.80	N/A
Over 10,000 Gallons	N/A	6.75	N/A
From 1 to 150,000 Gallons	N/A	N/A	\$ 5.96
Over 150,000 Gallons	N/A	N/A	7.15
6" Meter (Residential & Commercial)			
Gallons Included in Minimum	-	-	-
Excess of Minimum - per 1,000 Gallons			
From 1 to 267,000 Gallons	\$ 2.83	N/A	N/A
Over 267,000 Gallons	4.18	N/A	N/A
From 1 to 3,000 Gallons	N/A	\$ 4.80	N/A
From 3,001 to 10,000 Gallons	N/A	5.80	N/A
Over 10,000 Gallons	N/A	6.75	N/A
From 1 to 300,000 Gallons	N/A	N/A	\$ 5.96
Over 300,000 Gallons	N/A	N/A	7.15
Service Line and Meter Installation Charges			
5/8" Meter	\$ 400	\$ 450	\$ 450
3/4" Meter	400	475	475
1" Meter	500	550	550
1½" Meter	715	775	775
2" Meter	1,305	1,375	1,375
3" Meter	1,815	1,975	1,975
4" Meter	2,860	3,040	3,040
6" Meter	5,275	5,635	5,635

	Present Rates	Company Proposed Rates	Staff Recommended Rates
Service Charges			
Establishment	\$ 25.00	\$ 35.00	\$ 30.00
Establishment (After Hours)	30.00	45.00	40.00
Reconnection (Delinquent)	25.00	35.00	30.00
Reconnection (After Hours)	-	45.00	40.00
Meter Test	30.00	45.00	30.00
Deposit Requirement (Residential)	*	*	*
Deposit Requirement (None Residential Meter)	*	*	*
Deposit Interest	*	*	*
Re-Establishment (With-in 12 Months)	**	**	**
Re-Establishment (After Hours)	**	**	**
NSF Check	15.00	20.00	20.00
Deferred Payment, Per Month	1.5 % of Outstanding balance	1.5 % of Outstanding balance	1.5 % of Outstanding balance
Meter Re-Read	10.00	15.00	15.00
Charge of Moving Customer Meter - Customer Requested per Rule R14-2-405B	Cost	Cost	Cost

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

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

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

Typical Bill Analysis
General Service 5/8-Inch Meter

Company Proposed	Gallons	Present Rates	Present Rates with Surcharges	Proposed or Recommended Rates	Dollar Increase without Surcharge	Dollar Increase with Surcharge	Percent Increase without Surcharge	Present Rate Increase with Surcharge
Average Usage	6,585	\$35.07	\$42.73	\$91.19	\$56.13	\$48.47	160.06%	113.44%
Median Usage	5,272	31.35	39.01	83.58	52.23	44.57	166.60%	114.25%
Staff Recommended								
Average Usage	6,585	\$35.07	\$42.73	\$61.07	\$26.00	\$18.34	74.15%	42.93%
Median Usage	5,272	31.35	39.01	53.24	21.89	14.23	69.83%	36.48%

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

Gallons Consumption	Present Rates	Company Proposed Rates	% Increase	Staff Recommended Rates	% Increase	% Staff increase with Surcharges
-	\$16.43	\$56.00	240.84%	\$28.00	70.42%	16.23%
1,000	19.26	60.80	215.68%	31.90	65.63%	18.50%
2,000	22.09	65.60	196.97%	35.80	62.06%	20.34%
3,000	24.92	70.40	182.50%	39.70	59.31%	21.85%
4,000	27.75	76.20	174.59%	45.66	64.54%	28.95%
5,000	30.58	82.00	168.15%	51.62	68.80%	34.99%
6,000	33.41	87.80	162.80%	57.58	72.34%	40.20%
7,000	36.24	93.60	158.28%	63.54	75.33%	44.74%
8,000	39.07	99.40	154.42%	69.50	77.89%	48.73%
9,000	41.90	105.20	151.07%	75.46	80.10%	52.26%
10,000	44.73	111.00	148.16%	82.61	84.69%	57.68%
11,000	48.91	117.75	140.75%	89.76	83.52%	58.67%
12,000	53.09	124.50	134.51%	96.91	82.54%	59.52%
13,000	57.27	131.25	129.18%	104.06	81.70%	60.26%
14,000	61.45	138.00	124.57%	111.21	80.98%	60.92%
15,000	65.63	144.75	120.55%	118.36	80.34%	61.50%
16,000	69.81	151.50	117.02%	125.51	79.79%	62.01%
17,000	73.99	158.25	113.88%	132.66	79.29%	62.47%
18,000	78.17	165.00	111.08%	139.81	78.85%	62.89%
19,000	82.35	171.75	108.56%	146.96	78.46%	63.27%
20,000	86.53	178.50	106.29%	154.11	78.10%	63.62%
25,000	107.43	212.25	97.57%	189.86	76.73%	64.97%
30,000	128.33	246.00	91.69%	225.61	75.80%	65.90%
35,000	149.23	279.75	87.46%	261.36	75.14%	66.59%
40,000	170.13	313.50	84.27%	297.11	74.64%	67.11%
45,000	191.03	347.25	81.78%	332.86	74.24%	67.53%
50,000	211.93	381.00	79.78%	368.61	73.93%	67.86%
75,000	316.43	549.75	73.74%	547.36	72.98%	68.89%
100,000	420.93	718.50	70.69%	726.11	72.50%	69.42%

HAINS

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
BARRY WONG
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF)	DOCKET NO. W-02860A-06-0002
NACO WATER COMPANY,)	DOCKET NO. W-02860A-05-0727
AN ARIZONA CORPORATION, FOR A RATE)	
<u>INCREASE & FINANCING</u>)	

DIRECT TESTIMONY

OF

DOROTHY HAINS

UTILITIES ENGINEER

UTILITIES DIVISION

September 1, 2006

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ENGINEERING REPORT	3
CONCLUSIONS AND RECOMMENDATIONS	3

EXHIBITS

Engineering Report for Naco Water Company.....	Exhibit-1
--	-----------

1 **INTRODUCTION**

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

3 A. My name is Dorothy Hains. My business address is 1200 West Washington Street,
4 Phoenix, Arizona 85007.

5

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

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

9

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

11 A. I have been employed by the Commission since January 1998.

12

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

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

20

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

22 A. I have analyzed more than 90 companies covering these various responsibilities for
23 Utilities Division Staff (“Staff”).

24

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

26 A. Yes, I have testified before this Commission.

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

2 A. I graduated from Alabama University in Birmingham in 1987 with a Bachelor of Science
3 degree in Civil Engineering.

4

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

6 A. Before my employment with the Commission, I was an Environmental Engineer for the
7 Arizona Department of Environmental Quality, for ten years. Prior to that time, I was an
8 Engineering Technician with C. F. Hains, Hydrology in Northport, Alabama for
9 approximately five years.

10

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

12 A. I am a member of the American Society of Civil Engineering ("ASCE") and American
13 Water Works Association ("AWWA"). I am a registered Civil Engineer in Arizona.

14

15 **PURPOSE OF TESTIMONY**

16 **Q. What was your assignment in this rate and financing proceeding?**

17 A. My assignment was to provide Staff's engineering evaluation of the Naco Water Company
18 ("Naco" or "Company").

19

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

21 A. To present the findings of Staff's engineering evaluation of Naco's operation. Those
22 findings are contained in the Engineering Report that I have prepared for this proceeding.
23 This report is included as Exhibit-1, in this pre-filed testimony.

24

1 **ENGINEERING REPORT**

2 **Q. Would you briefly describe what was involved in preparing the Engineering Report**
3 **for the Naco water operation in this proceeding?**

4 A. After reviewing Naco's rate and financing applications, I physically inspected the water
5 system to evaluate its operations and to determine which plant items were or were not
6 used and useful. I contacted the Arizona Department of Environmental Quality
7 ("ADEQ") to determine if the system was in compliance with ADEQ requirements. I
8 obtained information from Naco regarding water testing and water usage and analyzed
9 that information. Based on this data, I made my evaluations and prepared the Engineering
10 Report attached as Exhibit 1.

11
12 **Q. Please describe the information contained in Exhibit 1.**

13 A. Exhibit 1 is the Engineering Report for Naco's operation. This Report is divided into three
14 general sections: 1) *Executive Summary*; 2) *Engineering Report Discussion*, and 3)
15 *Engineering Report Exhibits*. The *Discussions* section can be further divided into twelve
16 subsections: A) Purpose of Report; B) Location of System; C) Description of System; D)
17 Arsenic; E) Water Usage; F) Growth Projection; G) ADEQ Compliance; H) Arizona
18 Department of Water Resources ("ADWR") Compliance; I) Arizona Corporation
19 Commission ("ACC") Compliance; J) Water Testing Expenses; K) Depreciation Rates; L)
20 Financing and M) Other Issues. These subsections provide information about the Naco
21 water systems.

22
23 **CONCLUSIONS AND RECOMMENDATIONS**

24 **Q. What are Staff's conclusions and recommendations regarding Naco's operation?**

25 A. Based upon Staff's engineering evaluation of Naco's operation, Staff concludes the
26 following about the Company:

- 1 1) According to the Utilities Division Compliance Section, the Company has no
2 outstanding ACC compliance issues;
3
- 4 2) The Company is not in any ADWR Active Management Area and is in compliance
5 with ADWR monitoring and reporting requirements.
6
- 7 3) ADEQ has determined that Naco is currently delivering water that meets water
8 quality standards required by Arizona Administrative Code, Title 18, Chapter 4.
9
- 10 4) The latest lab analysis provided by the Company indicates that the arsenic levels in
11 the wells used by the Company are below 5µg/l, which is below the new arsenic standards.
12
- 13 5) Staff concludes that the proposed financing projects and the cost estimates as
14 amended by Staff are appropriate and reasonable for purposes of this financing request.
15 However, no “used and useful” determination of the proposed project items were made
16 and no particular treatment should be inferred for rate making or rate base purpose in the
17 future.
- 18
- 19 Staff’s recommends the following eight provisions be part of any Commission order on
20 this application:
- 21 1) That the Company use depreciation rates approved by the National Association of
22 Regulatory Utility Commissioners (“NARUC”) category, as delineated in Exhibit 6 of the
23 attached report in the future.
24
- 25 2) Staff recommends that the Company take action to resolve the storage deficiencies
26 of Systems PWS # 02-112 and PWS # 02-133 prior to filing its next rate application.

1 3) That the Company's proposed service line and meter installation charges be
2 accepted.

3
4 4) Annual water testing expenses should be adjusted to \$9,830.

5
6 5) Staff recommends that the Company reduce its water loss in PWS #02-024 and
7 PWS #02-112 to 15% or less before filing its next rate application. In addition, concurrent
8 with the Company filing its next rate application, it must file a plan to reduce its water loss
9 to 10% or less. If the Company finds that the reduction in water loss to less than 10% is
10 not cost-effective, the Company shall submit, before filing its next rate application, a
11 detailed cost analysis and explanation demonstrating why water loss reduction to 10% or
12 less is not cost effective.

13
14 6) The ultimate financing amount recommended by Staff will be dependant upon
15 Staff's financial analysis. In the event the amount recommended in Staff's financial
16 analysis is not sufficient to complete all the water loss related projects, Staff recommends
17 that the Naco Town System – Service Line Connection and Bisbee Junction System –
18 Replace Main on Bisbee Junction Road projects be given first priority. Any remaining
19 funds should be applied to addressing the most serious water loss issues in the Bisbee
20 Junction System – Distribution Piping project.

21
22 Staff further recommends that the Company file for Staff's review and certification within
23 30 days of the effective date of the order, as a compliance items in this docket, a list of
24 projects that it proposes to undertake using the debt authorization amount ultimately
25 approved in this matter. Staff further recommends that when preparing the above list the

1 Company shall give priority to projects that are the most effective and cost efficient in
2 addressing the water loss issue.

3

4 7) Staff recommends a rate base adjustment totaling \$12,991 to account for the plant
5 removed from service.

6

7 **Q. Does this conclude your pre-filed testimony?**

8 A. Yes, it does.

EXHIBIT 1

ENGINEERING REPORT FOR NACO WATER COMPANY

BY DOROTHY HAINS

SEPTEMBER 1, 2006

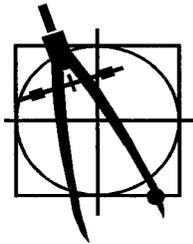


Exhibit 1

**ENGINEERING REPORT
FOR NACO UTILITY COMPANY
By Dorothy Hains, P. E.
Docket No. W-02860A-06-0002 (Rates)
Docket No. W-02860A-05-0727
(Financing)
July 26, 2006**

EXECUTIVE SUMMARY

Recommendations:

1. Staff recommends that the Company take action to resolve the storage deficiencies of Systems PWS # 02-112 and PWS # 02-133 prior to filing its next rate application. (See §C of the report for discussion and details.)
2. Staff recommends that the Company use depreciation rates by individual National Association of Regulatory Utility Commissioners ("NARUC") category, as delineated in Exhibit 6, in the future. These rates should be used to calculate the annual depreciation expense for the Company in this application. (See §K and Exhibit 6 for a discussion and a tabulation of the recommended rates.)
3. Staff recommends approval of meter and service line installation charges as shown in Table 8. (See §M of report for discussion and details.)
4. Water testing expenses are based upon participation in the ADEQ Monitoring Assistance Program ("MAP"). Annual testing expenses should be adjusted to \$9,830. (See §J and Tables 7 and 7A for discussion and details.)
5. Staff recommends that the Company reduce its water loss in PWS #02-024 and PWS #02-112 to 15% or less before filing its next rate application. In addition, concurrent with the Company filing its next rate application, it must file a plan to reduce its water loss to 10% or less. If the Company finds that the reduction in water loss to less than 10% is not cost-effective, the Company shall submit, before filing its next rate application, a detailed cost analysis and explanation demonstrating why water loss

reduction to 10% or less is not cost effective. (See §E of report for discussion and details.)

6. The ultimate financing amount recommended by Staff will be dependant upon Staff's financial analysis. In the event the amount recommended in Staff's financial analysis is not sufficient to complete the water loss related projects, Staff recommends that the Naco Town System – Service Line Connection and Bisbee Junction System – Replace Main on Bisbee Junction Road projects be given first priority. Any remaining funds should be applied to addressing the most serious water loss issues in the Bisbee Junction System – Distribution Piping project.

Staff further recommends that the Company file for Staff's review and certification within 30 days of the effective date of the order, as a compliance item in this docket, a list of projects that it proposes to undertake using the debt authorization amount ultimately approved in this matter. Staff further recommends that when preparing the above list the Company shall give priority to projects that are the most effective and cost efficient in addressing the water loss issue. (See §L of report for discussion and details.)

7. Staff recommends a rate base adjustment totaling \$12,991 to account for the plant removed from service. (See §M of report for discussion and details.)

Conclusions:

1. The most recent lab analysis provided by the Company indicates that the arsenic levels in the wells used by the Company are below 5µg/l, which is below the new arsenic MCL.
2. The Company is not in any Arizona Department of Water Resources ("ADWR") Active Management Area and is not in subject to ADWR monitoring and reporting requirements.
3. According to the Utilities Division Compliance Section, the Company has no outstanding ACC compliance issues.
4. The Company is in compliance with ADEQ water quality standards and delivering water that meets water quality standards required by Arizona Administrative Code, Title 18, Chapter 4. (See §G of report for discussion and details.)
5. Staff concludes that the proposed financing projects and the cost estimates as amended by Staff are appropriate and reasonable for purposes of this financing request. However, no

Naco Water Co.

Docket Nos. W-02860A-06-0002 ET AL

Page 3

“used and useful” determination of the proposed project items were made and no particular treatment should be inferred for rate making or rate base purpose in the future.

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**ENGINEERING REPORT
FOR
NACO UTILITY COMPANY, INC.
DOCKET NO. W-02860A-06-0002 (RATES) &
DOCKET NO. W-02860A-05-0727 (FINANCING)**

A. PURPOSE OF REPORT

This report was prepared in response to the application of Naco Water Company. (“Naco” or “Company”) for a rate increase and authorization to incur debt. An inspection and evaluation of the Company’s water systems was conducted by Dorothy Hains, Utilities Engineer, in the accompaniment of Steve Siegfried, the Company’s Field Manger and Jose Martinez, an on-site field operator, on March 21, 2006.

B. LOCATION OF SYSTEM

The Company is located approximately 5 miles west of the Town of Bisbee Junction, in Cochise County. Attached Exhibits 1 and 2 detail the location of the service area in relation to other Commission regulated companies in Cochise County and in the immediate area. The Company serves an area approximately three square miles in size that includes all or a portion of Sections 10, 11, 14, 15 and 18 of Township 24 South, Range 24 East.

C. DESCRIPTION OF SYSTEM

I. System Description

The Company owns and operates three individual water systems (Naco Town System, Naco Highway System and Bisbee Junction System) that consist of seven well sites. The Company serves approximately 580 metered customers; the majority of which are residential. PWS numbers for each system are PWS #02-024 for Naco Town System, PWS #02-133 for Naco Highway System and PWS #02-112 for Bisbee Junction System. Exhibits 3A, 3B and 3C are schematic drawings of the water systems. A detailed listing of the Company’s water system facilities are as follows:

Table 1 Well Data

PWS #	Well Name	ADWR ID No. (55-xxxxxx)	Pump (HP)	Yield (GPM)	Casing Size (in inches) & Depth (in ft)	(Meter Size inches)	Year drilled
02-024	Well #6	575700	15	182	10"x410'	4	1999

024	Well #2 ¹	627683	10	80	8"x312'	3	1997
133	Well #3 ²	203321	7½	35	8"x252'	2	2004
112	Well #4 ³	627685	15	85	8"x160'	4	1995
			TOTAL:	382			

Notes:

- 1 In 1999, Well No. 2 (DWR No. 55-627683) went dry and the Company drilled a new well to replace the old well in the same year at the same well site. .
2. In 2003, Well No. 3 went dry and the Company drilled a new well to replace the old well in the same year at the same well site.
3. In 1999, Well No. 4 went dry and the Company drilled a new well to replace the old well in the same year at the same well site.

Table 1A Plant Not Used and Useful

PWS # 02-	Well Name	ADWR ID No. (55-xxxxxx)	Pump (HP)	Yield (GPM)	Casing Size (in inches) & Depth (in ft)	(Meter Size inches)	Year Abandoned	Year drilled
024	Old Well #2	627683	10	175	8"x210'	3	1999	1959
133	Old Well #3	627684	15	35	8"x160'	N/A	2003	N/A
112	Old Well #4	627685	15	180	8"x379'	N/A	1999	1926
	Well #1 ¹	627682	5	60	8"x215'	1½	1999	1951
	Well #5 ²	627696	N/A	35	10"x175'	N/A	1999	1960
			TOTAL:	485				

Notes:

1. Well #1 site was sold in 1999.
2. All equipment associated with Well #5 has been either discarded or reused in another well system.

Table 2 Storage Tank

Capacity (Gallons)	Quantity	Location
50,000	1	Well Site #6
20,000	1	Well Site #2
20,000	1	Well Site #4
7,500	1	Well Site #3
Total: 97,500 gallons		

Table 3 Distribution Mains

Diameter (inches)	Material	Length (feet)
1	polyvinyl chloride ("PVC")/Steel	6,180
1½	PVC	3,000
2	PVC/ Steel	11,470
2½	PVC	1,100
3	Acrylonitrile-Butadiene Styrene ("ABS")	1,160
4	PVC/ ABS	9,825
6	PVC	13,240

Table 4 Meters

Size (inches)	Quantity
5/8 x 3/4	351
3/4	N/A
1	5
1½	6
2	5
3 (Comp)	N/A
Total	N/A

II. System Analysis

Two systems (PWS #s 02-133 and 02-112) do not have adequate production or storage capacity to support their existing base of customers. However, the remaining system (PWS #s 02-024), which is the largest system, does have adequate storage capacity. The Company has several options available to it to address this deficiency, e.g. the Company may obtain additional production or storage or it may wish to consider interconnecting the deficient systems with each other or adjacent systems. System # 02-133 serves less than 15 connections and is not expected to experience any growth and to the best of Staff's knowledge the identified deficiency has not resulted in any disruption of service. Therefore, Staff recommends that the Company take action

to resolve the storage deficiencies of System PWS # 02-133 and PWS #02-112 prior to filing its next rate application.

D. ARSENIC

The U.S. Environmental Protection Agency (“EPA”) has reduced the arsenic maximum contaminant level (“MCL”) in drinking water from 50 micrograms per liter (“µg/l”) or parts per billion (“ppb”) to 10 µg/l. The most recent lab analysis provided by the Company indicates that the arsenic levels in the wells used by the Company are below 5 µg/l, which is below the new arsenic MCL.

E. WATER USAGE

Tables 5A through 5D summarize water usage in the Company’s CC&N area. Exhibits 4A through 4D are graphs that show water consumption data in gallons per day per connection for the combined systems and each individual system for the period of January 2004 through December 2004.

Table 5A Water Usage in Combined Systems

Month	Number of Customers	Water Sold (gallons)	Water pumped (gallons)	Water purchased (gallons)	Daily Average (gal/day/customer)
Jan 05	364	1,973,000	2,605,000	0	175
Feb 05	364	1,701,000	2,194,000	0	167
Mar 05	365	1,822,000	2,152,000	0	161
Apr 05	366	3,004,000	3,424,000	0	274
May 05	366	3,027,000	3,463,000	0	267
Jun 05	366	3,283,000	3,982,000	0	299
Jul 05	366	3,264,000	4,256,000	0	288
Aug 05	366	2,099,000	3,256,000	0	185
Sep 05	366	2,029,000	3,436,000	0	185
Oct 05	366	2,036,000	3,629,000	0	179
Nov 05	366	2,079,000	2,616,000	0	189
Dec 05	366	1,801,000	2,279,000	0	159
Total		28,118,000	37,292,000	0	
Average					211

The calculated overall water loss for the combined systems was **24.6%** during the test year.

Table 5B Water Usage in PWS #02-024

Month	Number of Customers	Water Sold (gallons)	Water pumped (gallons)	Water purchased (gallons)	Daily Average (gal/day/customer)
Jan 05	283	1,629,000	1,931,000	0	186
Feb 05	283	1,407,000	1,763,000	0	178
Mar 05	284	1,554,000	1,772,000	0	177
Apr 05	285	2,563,000	2,847,000	0	300
May 05	285	2,493,000	2,751,000	0	282
Jun 05	285	2,615,000	3,147,000	0	306
Jul 05	285	2,553,000	3,310,000	0	289
Aug 05	285	1,727,000	2,690,000	0	195
Sep 05	285	1,649,000	2,729,000	0	193
Oct 05	285	1,682,000	3,078,000	0	190
Nov 05	285	1,625,000	2,117,000	0	190
Dec 05	285	1,408,000	1,810,000	0	159
Total		22,905,000	29,945,000	0	
Average					220

The calculated water loss in PWS #02-024 (Naco Town System) was **23.51%** during the test year.

Table 5C Water Usage in PWS #02-112

Month	Number of Customers	Water Sold (gallons)	Water pumped (gallons)	Water purchased (gallons)	Daily Average (gal/day/customer)
Jan 05	71	298,000	628,000	0	135
Feb 05	71	258,000	395,000	0	130
Mar 05	71	235,000	347,000	0	107
Apr 05	71	396,000	531,000	0	186
May 05	71	463,000	641,000	0	210
Jun 05	71	589,000	752,000	0	277
Jul 05	71	631,000	863,000	0	287
Aug 05	71	330,000	523,000	0	150
Sep 05	71	338,000	663,000	0	159
Oct 05	71	317,000	507,000	0	144
Nov 05	71	411,000	455,000	0	193
Dec 05	71	341,000	410,000	0	155
Total		4,607,000	6,715,000	0	
Average					178

The calculated water loss in PWS #02-112 (Bisbee Junction System) was **31.39%** during the test year.

Table 5D Water Usage in PWS #02-133

Month	Number of Customers	Water Sold (gallons)	Water pumped (gallons)	Water purchased (gallons)	Daily Average (gal/day/customer)
Jan 05	10	46,000	46,000	0	148
Feb 05	10	36,000	36,000	0	129
Mar 05	10	33,000	33,000	0	106
Apr 05	10	45,000	46,000	0	150
May 05	10	71,000	71,000	0	229
Jun 05	10	79,000	83,000	0	263
Jul 05	10	80,000	83,000	0	258
Aug 05	10	42,000	43,000	0	135
Sep 05	10	42,000	44,000	0	140
Oct 05	10	37,000	44,000	0	119
Nov 05	10	43,000	44,000	0	143
Dec 05	10	52,000	59,000	0	168
Total		606,000	606,000	0	
Average					166

The calculated water loss in PWS #02-133 (Naco Highway System) was 4.11 % during the test year.

I. Water Sold

Based on information provided by the Company, during the test year the Company experienced an overall daily average use of 209 gallons per day (“gpd”) per customer, a high use of 299 gpd per customer and a low use of less than 151 gpd per customer. Individually, the calculated highest use is 306 gpd per customer in PWS # 02-024 and the lowest is 106 gpd per customer in PWS #02-133. The highest total monthly use occurred in June, when total of 3,283,000 gallons were sold to 366 customers. The lowest total monthly use occurred in February, when 1,701,000 gallons were sold to 364 customers.

II. Non-account Water

Non-account water should be 10% or less and never more than 15%. 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 water company to identify water and revenue losses due to leakage, theft, and flushing. Overall non-account water for the Company was calculated to be 24.6 percent during the test year, which exceeds acceptable limits. It appears that all systems except PWS #02-133 have water loss exceeding the acceptable limits. Therefore, Staff recommends that the Company reduce its water loss in PWS #02-024 and PWS #02-112 to 15% or less before filing its next rate application. In addition, concurrent with the Company filing its next rate application, it must file a plan to reduce its water loss to 10% or less. If the Company finds that

the reduction in water loss to less than 10% is not cost-effective, the Company shall submit, before filing its next rate application, a detailed cost analysis and explanation demonstrating why water loss reduction to 10% or less is not cost effective.

F. GROWTH PROJECTION

Based on the service meter data contained in the Company's annual reports, the number of customers increased from 310 at the end of 1994 to 366 by the end of 2005, with an average growth rate of 5 customers per year. Based on the linear regression analysis, the Company could have approximately 413 customers by the end of 2011. The following table summarizes actual and projected growth in the Company's existing certificated service area.

Table 6 Actual and Projected Growth

Year	Nos. of Customers	
1994	310	Reported
1995	303	Reported
1996	316	Reported
1997	337	Reported
1998	344	Reported
1999	349	Reported
2000	349	Reported
2001	356	Reported
2002	359	Reported
2003	362	Reported
2004	364	Reported
2005	366	Reported
2006	368	Estimated
2007	374	Estimated
2008	380	Estimated
2009	385	Estimated
2010	391	Estimated
2011	413	Estimated

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

Staff received compliance status reports from ADEQ dated November 8, 2005, in which ADEQ stated that the systems (PWS #02-024 and 02-112) have no major deficiencies. ADEQ has determined that these systems are currently delivering water that meets the water quality standards required by Arizona Administrative Code, Title 18, Chapter 4. System PWS #02-133, which is classified as a semi-public system because of its small number of connections, is not yet regulated by ADEQ.

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

Naco Water Company is not in any ADWR Active Management Area. Therefore, the Company is not required to comply with ADWR’s monitoring and reporting requirements.

I. ARIZONA CORPORATION COMMISSION (“ACC”) COMPLIANCE

According to the Utilities Division Compliance Section, the Company has no outstanding ACC compliance issues.

J. WATER TESTING EXPENSES

Naco is subject to mandatory participation in the ADEQ Monitoring Assistance Program (“MAP”). Staff calculated the testing costs based on the following assumptions:

1. MAP will do baseline testing on everything except copper, lead, nitrates, and bacteria.
2. ADEQ testing is performed in 3-year compliance cycles. Therefore, monitoring costs are estimated for a 3-year compliance period and then presented as a pro forma expense on an annualized basis.
3. MAP fees were calculated from the ADEQ MAP rules.
4. All monitoring expenses are based on Staff’s best knowledge of lab costs and methodology and two points of entry.
5. The estimated water testing expenses represent a minimum cost based on no “hits” other than lead and copper, and assume compositing of well samples. If any constituents were found, then the testing costs would dramatically increase.

Tables 7 and 7A show the estimated annual monitoring expense, assuming participation in the MAP program. Water testing expenses should be adjusted to the annual expense amount shown in Tables 7 and 7A, which totals **\$ 9,830**.

Table 7 Water Testing Cost

Monitoring (Tests per 3 years, unless noted.)	Cost per test	No. of tests per 3 years		Total 3 year cost (\$)		Annual ¹ Cost (\$)
PWS # 02-		024	112	024	112	

Bacteriological – monthly	\$25	72	36	1,800	900	900
Inorganics (& secondary)	\$300	1	1	300	300	200
Radiochemical – (1/ 4 yr)	\$60					MAP
IOC's, SOC's, VOC's						MAP
Nitrites	\$20					MAP
Nitrates – annual	\$40	72	36	2,880	1,440	1,440
Asbestos – per 9 years	\$180					MAP
Lead & Copper – annual	\$45	30	15	1,350	675	675
TTHM	\$150	3	³	450	450	300
HAAS	\$250	3	³	750	750	500
MAP fees (annual)						1,414.92
Total						5,430

Note

- #1: The Costs are combination of expenses for System (PWS #02-112) and System (PWS #02-024).
#2: The 2005 MAP invoice for System (PWS #02-112) was \$432.47 and invoice for System (PWS #02-024) was \$982.45.

Table 7A Water Testing Cost for System #02-133

Monitoring – 3 wells (Tests per 3 years, unless noted.)	Cost per test	No. of tests per three year period	Total cost per three year period	Annual Cost
PWS #02-133				
Bacteriological – monthly	\$25	36	\$900	\$300
Inorganics (& secondary)	\$300	3	\$900	\$300
Radiochemical – (1/ 4 yr)	\$60	$\frac{3}{4}$	\$45	\$15
IOC's, SOC's, VOC's	\$2,805	3	\$8,415	\$2,805
Nitrites	\$20	3	\$60	\$20
Nitrates – annual	\$40	3	\$120	\$40
Asbestos – per 9 years	\$180	$\frac{1}{3}$	\$60	\$20
Lead & Copper – annual	\$45	15	\$675	\$225
TTHM	\$150	3	\$450	\$150
HAAS	\$250	3	\$750	\$250
MAP fees (annual)				\$275.70 ¹
Total				\$4,400

Note

- #1 MAP Annual Sampling Fee formula is: \$250 + # of connections x \$2.57.

The total estimated annual water testing cost is \$9,830 (the sum of \$5,430 plus \$4,400).

K. DEPRECIATION RATES

Staff has developed typical and customary depreciation rates within the range of anticipated equipment life. These rates are presented in Exhibit 6, and should be used to calculate the annual depreciation expense for the Company in this application. It is also recommended that the Company use depreciation rates by individual National Association of Regulatory Utility Commissioners (“NARUC”) category, as delineated in Exhibit 6, in the future.

L. FINANCING

The Company is requesting approval to incur debt in the amount of \$2,457,119 which would be used to pay for well renovations, new well installations, well abandonment, main extensions, distribution extensions and service line installation. As previously discussed, the Company has a serious water loss problem which the Company plans to address with this financing. Also, a sulfate pollutant plume is threatening groundwater supplies in the area of the Company’s well located near Bisbee Junction. The Company included funding to address this issue as well. Finally, the Company included funds to cover well site improvements and well abandonment at several of its well sites. Because it is unlikely that the Company will be able to afford to undertake all of the projects included in its request, Staff has separated and listed the projects in three separate tables. Each table is labeled to correspond to one of the general need categories described above. Staff’s recommendation is listed in the right-hand column. Staff agrees with the Company that water loss reduction projects should be the first priority. Since negotiations with Phelps Dodge are currently underway which may result in the mining company paying for a significant portion of the required groundwater remediation related projects, Staff is recommending that these projects not be funded at this time. While some level of funding could be needed in the future, Staff believes that it is likely that Phelps Dodge will ultimately agree to pay for at least some of the related expense. The well site improvements are a low priority at this time with a couple of minor exceptions.

The ultimate financing amount recommended by Staff will be dependant upon Staff’s financial analysis. In the event the amount recommended in Staff’s financial analysis is not sufficient to complete the water loss related projects, Staff recommends that the Naco Town System – Service Line Connection and Bisbee Junction System – Replace Main on Bisbee Junction Road projects be given first priority. Any remaining funds should be applied to addressing the most serious water loss issues in the Bisbee Junction System – Distribution Piping project.

Staff further recommends that the Company file for Staff’s review and certification within 30 days of the effective date of the order, as a compliance items in this docket, a list of projects that it proposes to undertake using the debt authorization amount ultimately approved in this matter.

Staff further recommends that when preparing the above list the Company shall give priority to projects that are the most effective and cost efficient in addressing its water loss issue.

Need Category: Water Loss Reduction

Company Priority Ranking	Project Description	Company's Estimated Cost (\$)	Staff Recommendation (\$)
1	Naco Town System – Service Line Connections ^{1, 2}	401,792.98	401,792.98
1	Bisbee Junction System – Replace Main on Bisbee Junction Road ²	26,072.10	26,072.10
3	Bisbee Junction System – Distribution Piping	644,744.10	644,744.10
	Sub-total	1,072,609.18	1,072,609.18

Need Category: Develop New Water Sources (related to groundwater remediation due to contamination from sulfate plume)

1	Southern Upper San Pedro River Hydrogeologic Assessment ³	74,960.00	0
2	Bisbee Junction System – Well Site #7 Well installation and Source Approval	55,419.70	0
2	Bisbee Junction System - Well Site #7 Plant Construction	104,057.20	0
2	Water Main Extension To Naco Highway System and Bisbee Junction System	1,008,635.80	0
	Sub-total	1,243,072.70	0

Need Category: Well Site Improvements and Compliance Upgrades

3	Naco Town System - Well Site #2 Renovations & Well Abandonment	36,947.60	10,000.00 ⁴
3	Naco Town System – Well Site #6 Renovation	27,055.50	0
3	Naco Highway System – Well Site #3 Renovations & Well Abandonment	35,389.40	5,000.00 ⁵
3	Bisbee Junction System – Well Site #5 Well Abandonment	9,900.60	0
3	Bisbee Junction System – Well Site #4 Renovations and Well Abandonment	32,144.50	0
	Sub-total	141,437.60	15,000.00

	Total	2,457,119.48	1,087,609.18
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- Note:
1. Project continues a WIFA funded project which the Commission approved in a previous financing application (Docket # W-02860A-98-0259). Additional funding is needed so that this project can be completed.
 2. In the event the amount recommended in Staff’s financial analysis is not sufficient to complete the water loss related projects, Staff further recommends that the Naco Town System – Service Line Connection and Bisbee Junction System – Replace Main on Bisbee Junction Road projects be given first priority.
 3. Funding requested for a hydrogeologic data review and evaluation of the regional aquifer which has been impacted by a sulfate plume caused by mining in the area.
 4. Assuming sufficient funding is available Staff recommends that only the pressure tank and chlorinator installation be completed at this time. Staff’s adjusted amount for this work is \$10,000 which includes \$9,000 for a 2,000 gallon pressure tank and \$1,000 for a 50 gallon chlorinator.
 5. Assuming sufficient funding is available Staff recommends that only the pressure tank installation be completed at this time. Staff’s adjusted amount for this work is \$5,000.

Staff concludes that the proposed projects and the cost estimates presented in the right-hand column of the tables above as amended by Staff are appropriate and reasonable for purposes of this financing request. However, no “used and useful” determination of the proposed project items were made and no particular treatment should be inferred for rate making or rate base purpose in the future.

M. OTHER ISSUES

I. Service Line and Meter Installation Charges

The Company is proposing to revise its meter and service line installation charges. These charges are refundable advances and the Company’s proposed charges are within Staff’s

experience of what are reasonable and customary charges. Therefore, Staff recommends approval of meter and service line installation charges proposed by the Company as shown in the table below.

Table 8 Service Line and Meter Installation Charges

Meter Size	Current Charges	Proposed Charges	Staff Recommendation
5/8 x3/4-inch	\$400	\$450	\$450
3/4-inch	\$400	\$475	\$475
1-inch	\$500	\$550	\$550
1-1/2-inch	\$715	\$775	\$775
2-inch	\$1,305	\$1,375	\$1,375
3-inch	\$1,815	\$1,975	\$1,975
4-inch	\$2,860	\$3,040	\$3,040
6-inch	\$5,275	\$5,635	\$5,635

II. Curtailment Tariff

The Company has had an approved curtailment tariff on file with the Commission since August 6, 2001.

III. Retired Plant

Staff learned during its inspection that several plant items have been dismantled and are no longer in-service. Staff used reconstruction cost new study techniques and trend factors to estimate a retirement value for the subject plant items. Staff recommends a rate base adjustment totaling \$12,991¹ to account for the plant removed from service. Details of the adjustment are discussed below:

1. Old Well #2 which was installed in 1959 and dismantled in 1999 should be removed from rate base. The estimated original cost ("OC") is \$1,565 using the 2005 Handy-Whitman Index to calculate the cost of drilling a well in 1959 to a depth of 210 feet equipped with 8-inch casing.
2. Old Well #3 which was estimated to have been installed in 1950 was dismantled in 2003 should be removed from rate base. The estimated OC is \$746 using the Handy-Whitman Index to calculate the cost of drilling a well in 1950 to a depth of 160 feet equipped with

¹ The sum of \$1,565, \$746, \$7,927, \$1,124, and 1,629 is \$12,991.

8-inch casing.

3. Old Well #4 which was installed in 1926 and dismantled in 1999 should be removed from rate base. The estimated OC is \$7,927 using the Handy-Whitman Index to calculate the cost of drilling a well in 1926 to a depth of 379 feet equipped with 16-inch casing.
4. Old Well #1 which was installed in 1951 and dismantled in 1999 should be removed from rate base. The estimated OC is \$1,124 using the Handy-Whitman Index to calculate the cost of drilling a well in 1951 to a depth of 215 feet equipped with 8-inch casing.
5. Old Well #5 which was installed in 1960 and dismantled in 1999 should be removed from rate base. The estimated OC is \$1,629 using the Handy-Whitman Index to calculate the cost of drilling a well in 1960 to a depth of 175 feet equipped with 10-inch casing.

EXHIBIT 1

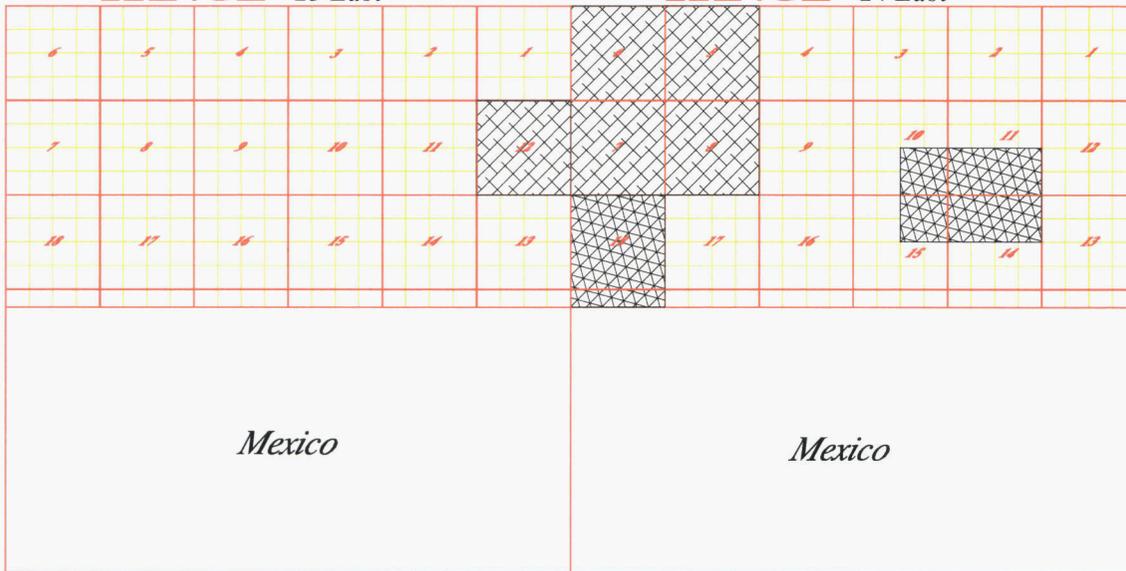
Naco' Certificate Service Area

COUNTY: Cochise

COUNTY: Cochise

RANGE 23 East

RANGE 24 East



TOWNSHIP
24 South

-  W-1445 (3)
Arizona Water Company (Bisbee)
-  W-2860 (1)
Naco Water Company, L.L.C.

Mexico

Mexico

EXHIBIT 2

LOCATION OF NACO WATER COMPANY SERVICE AREA

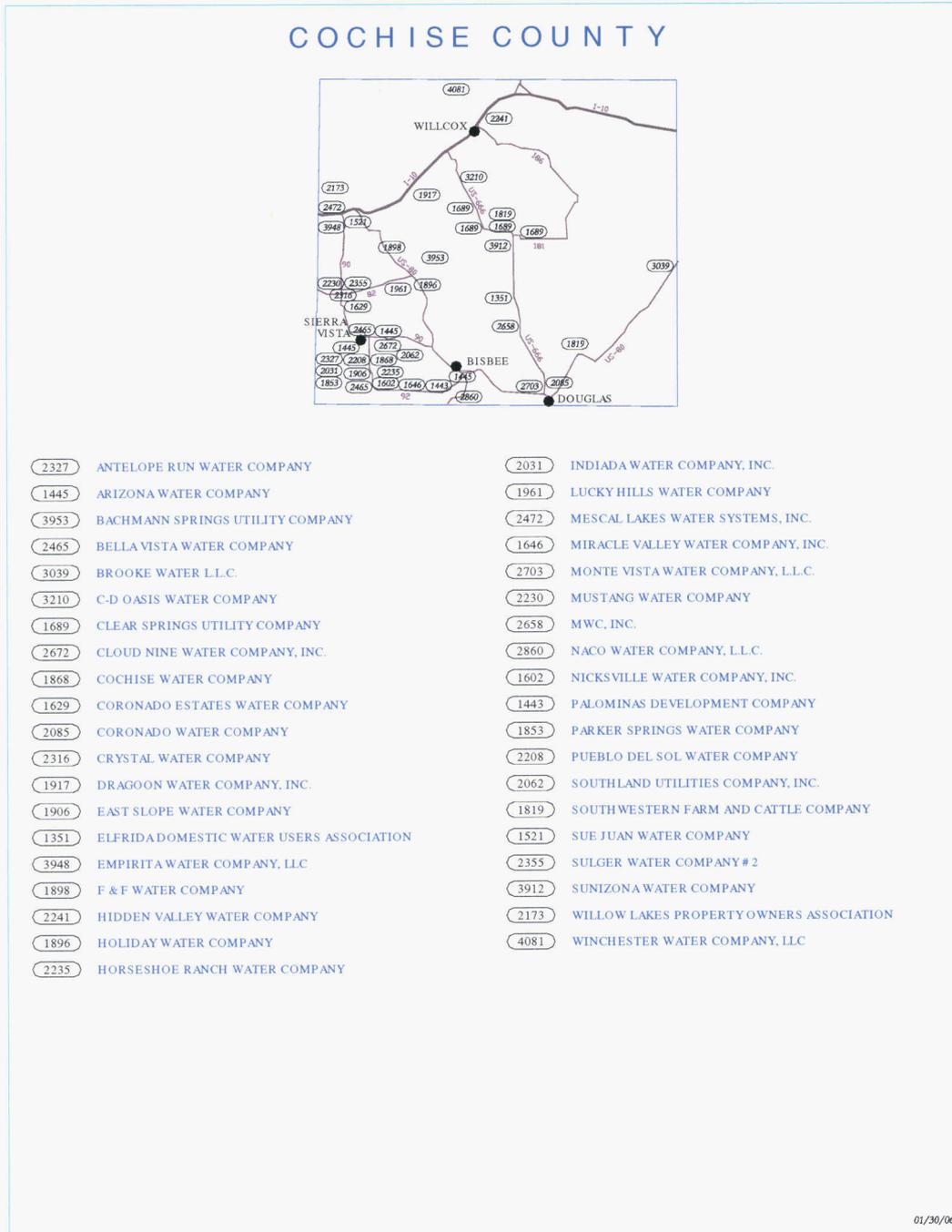


EXHIBIT 3A
SYSTEMATIC DRAWING

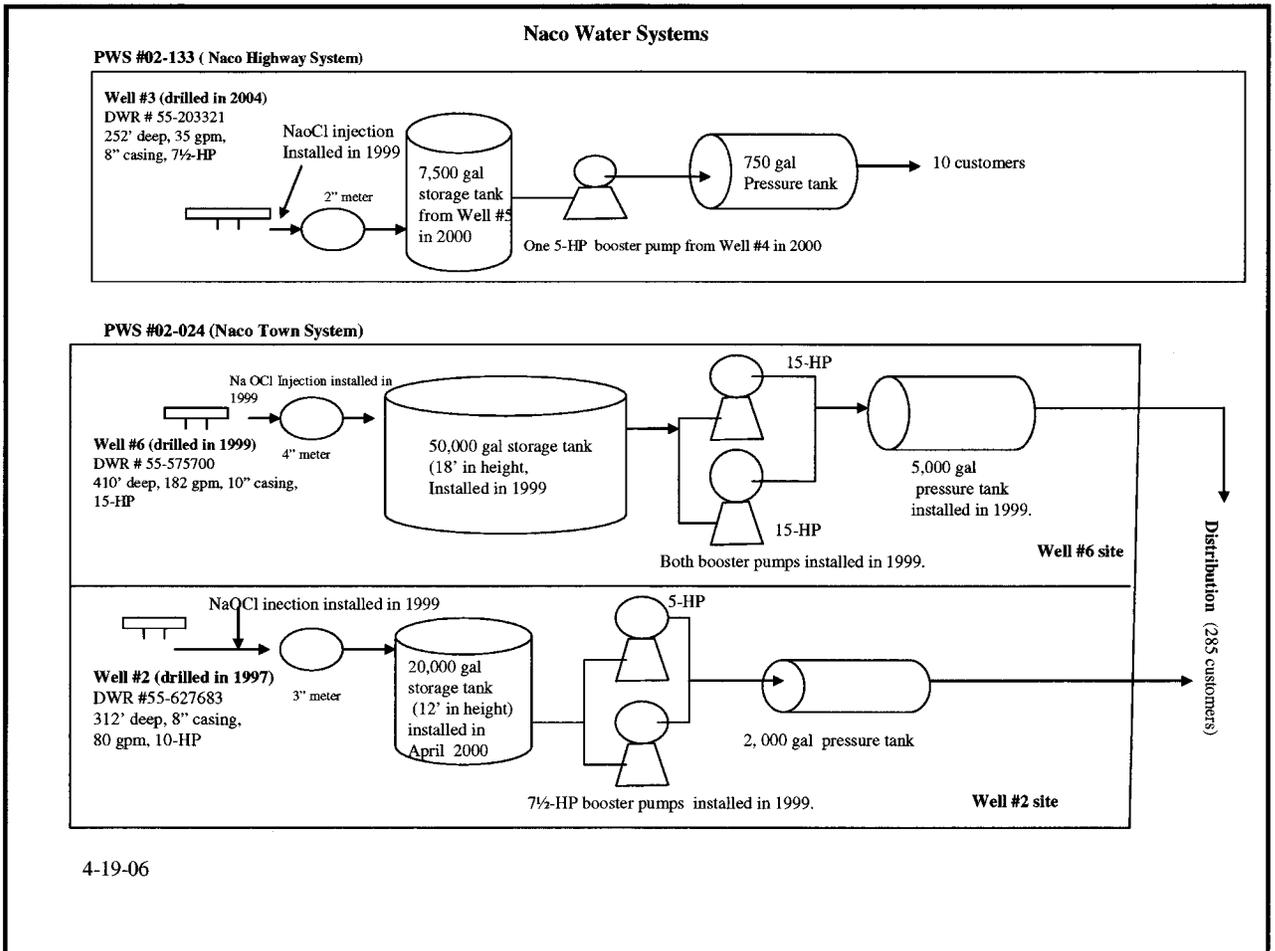


EXHIBIT 3B
SYSTEMATIC DRAWING

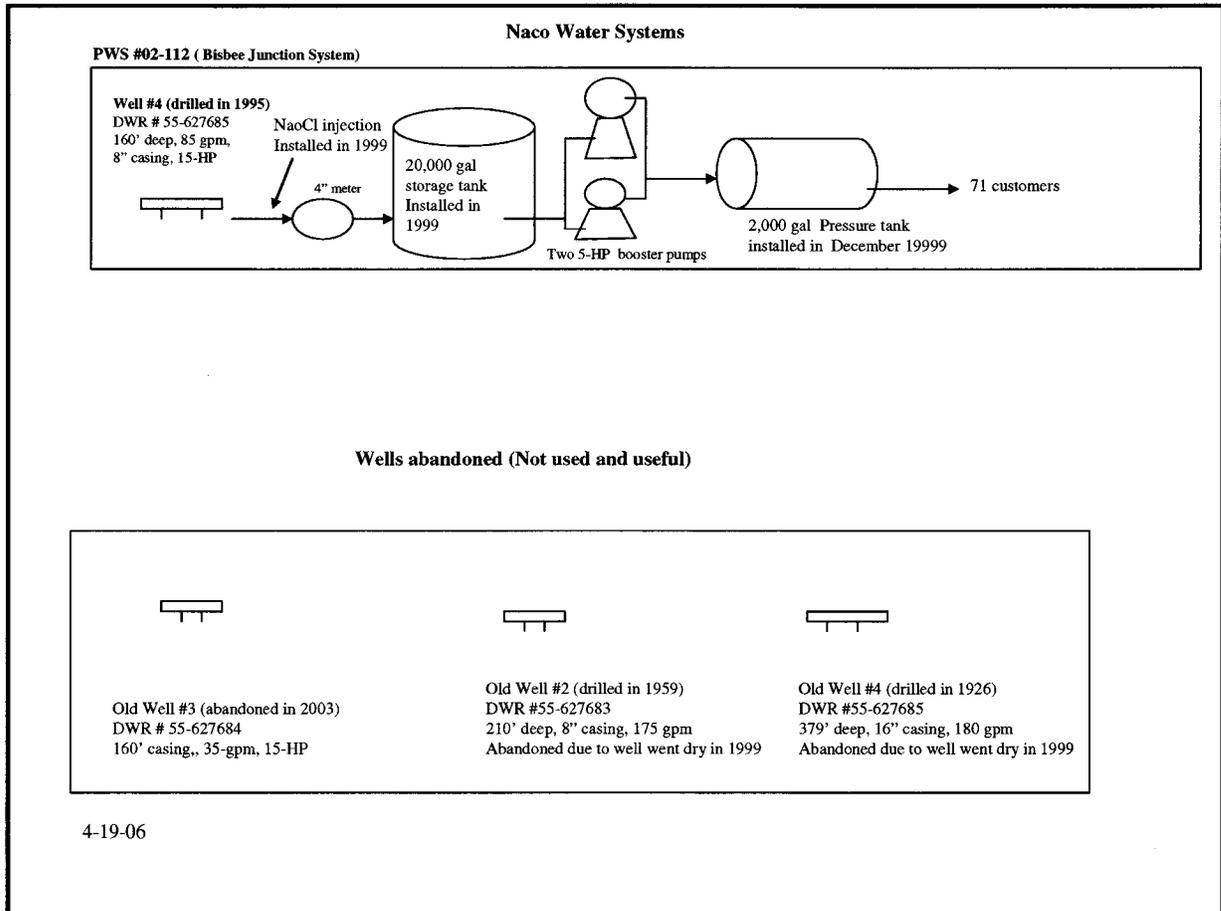


EXHIBIT 3C

SYSTEMATIC DRAWING

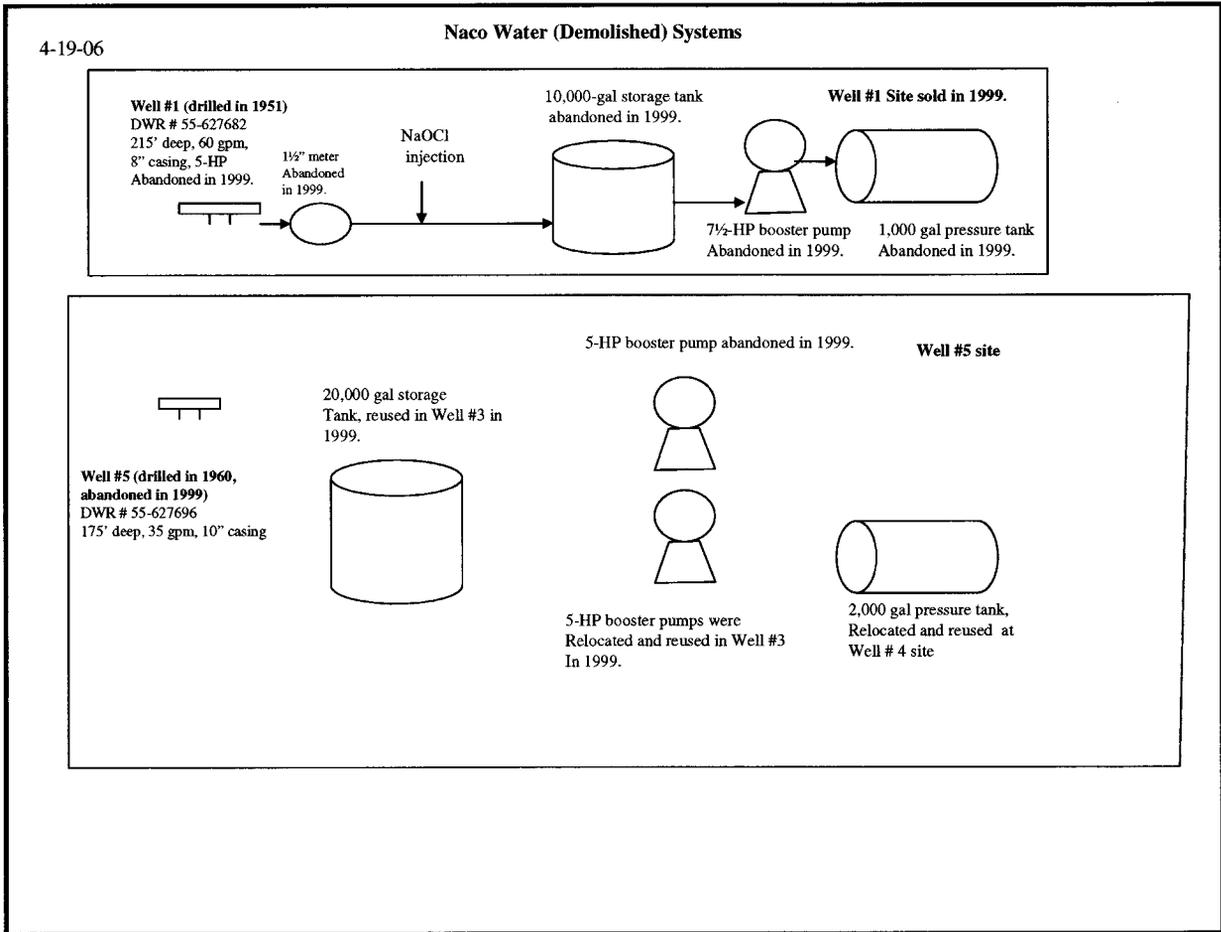


EXHIBIT 4A

WATER USAGE ON THE NACO WATER COMPANY SERVICE AREA

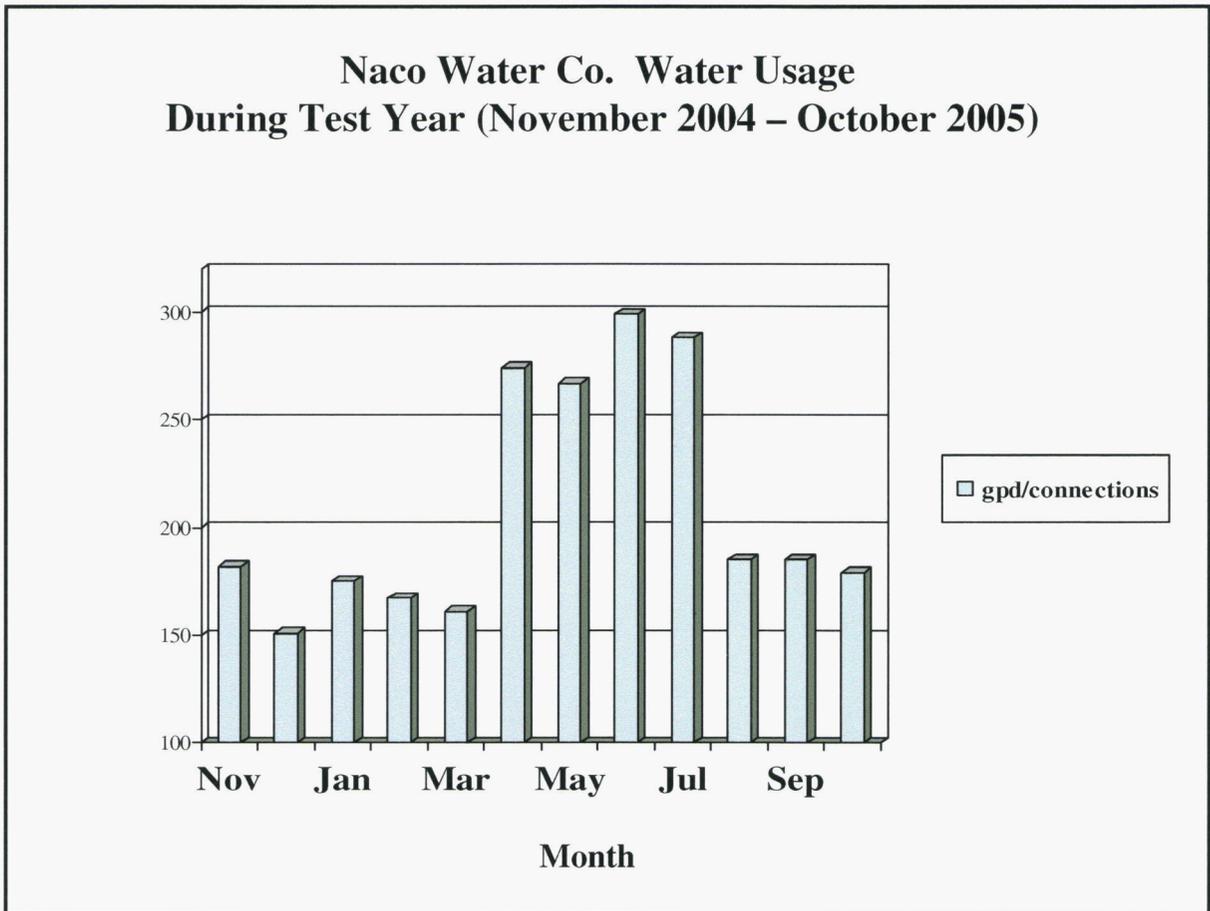


EXHIBIT 4B

WATER USAGE ON THE NACO WATER COMPANY SERVICE AREA

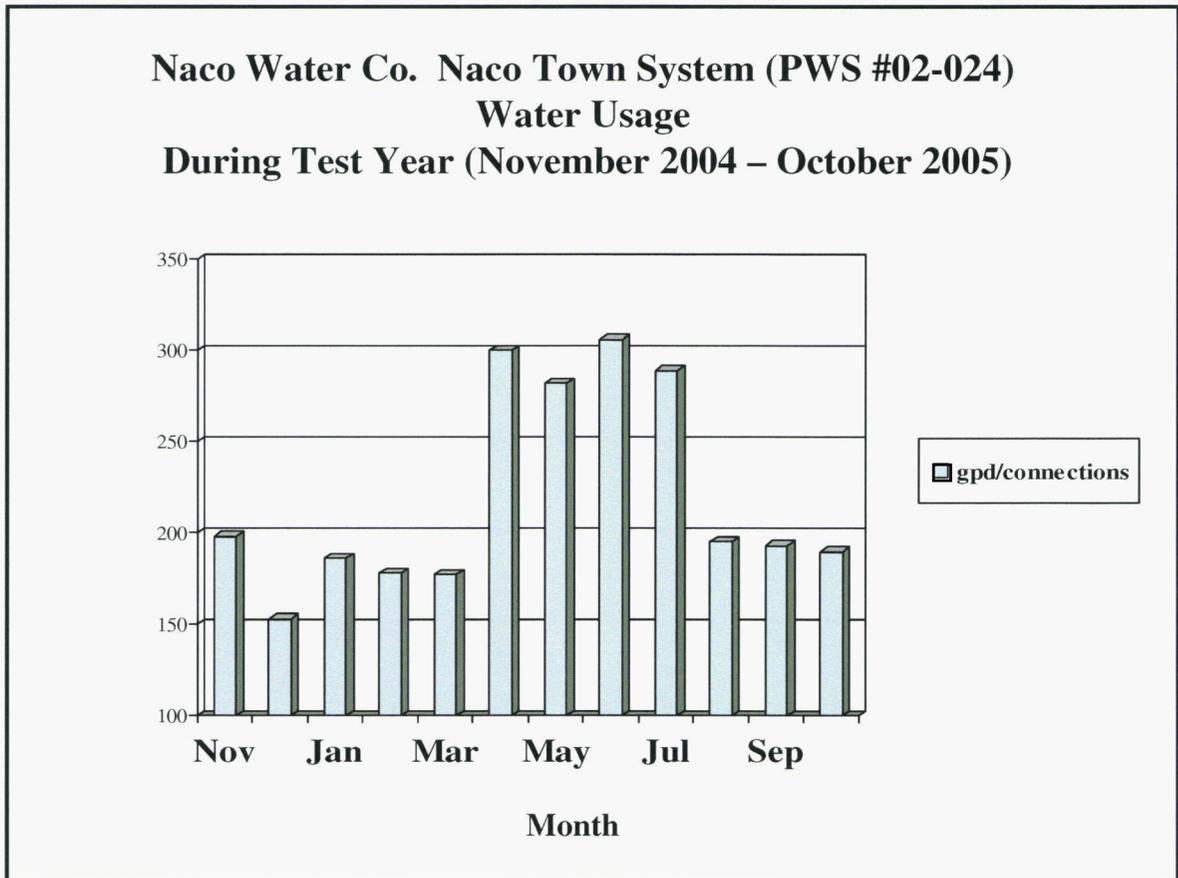


EXHIBIT 4C

WATER USAGE ON THE NACO WATER COMPANY SERVICE AREA

**Naco Water Co. Bisbee Junction System (PWS #02-122) Water Usage
During Test Year (November 2004 – October 2005)**

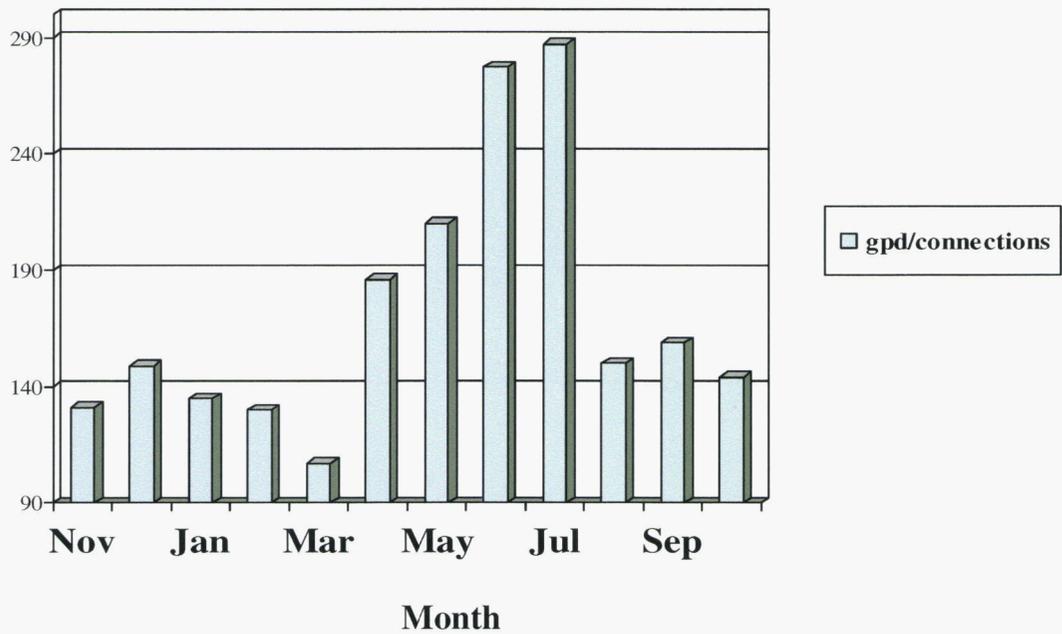


EXHIBIT 4D

WATER USAGE ON THE NACO WATER COMPANY SERVICE AREA

**Naco Water Co. Naco Highway System (PWS #02-133)
Water Usage
During Test Year (November 2004 – October 2005)**

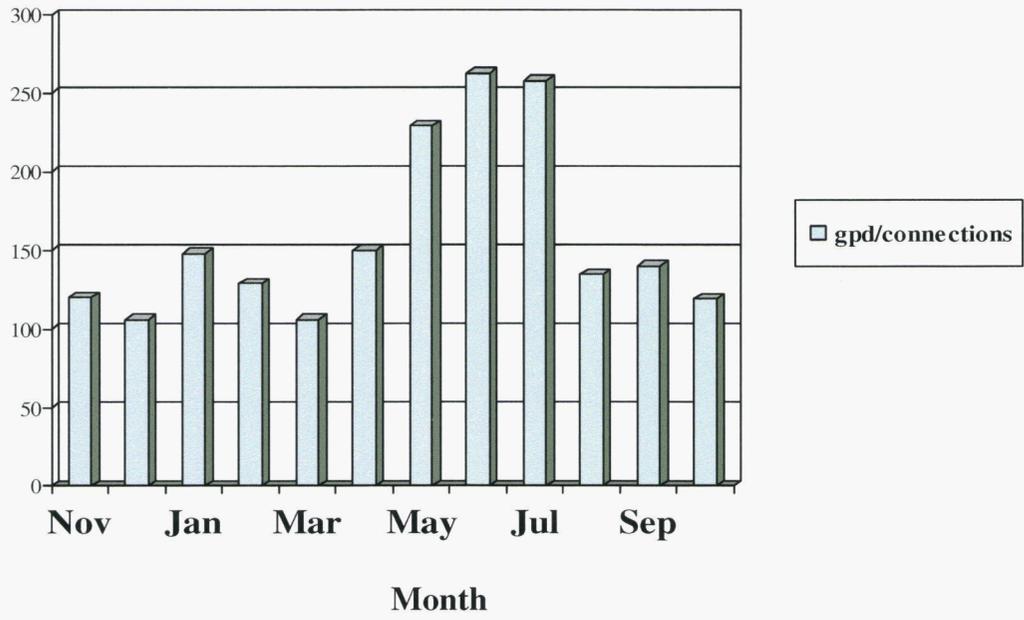


EXHIBIT 5

ACTUAL AND PROJECTED GROWTH IN NACO WATER COMPANY SERVICE AREA

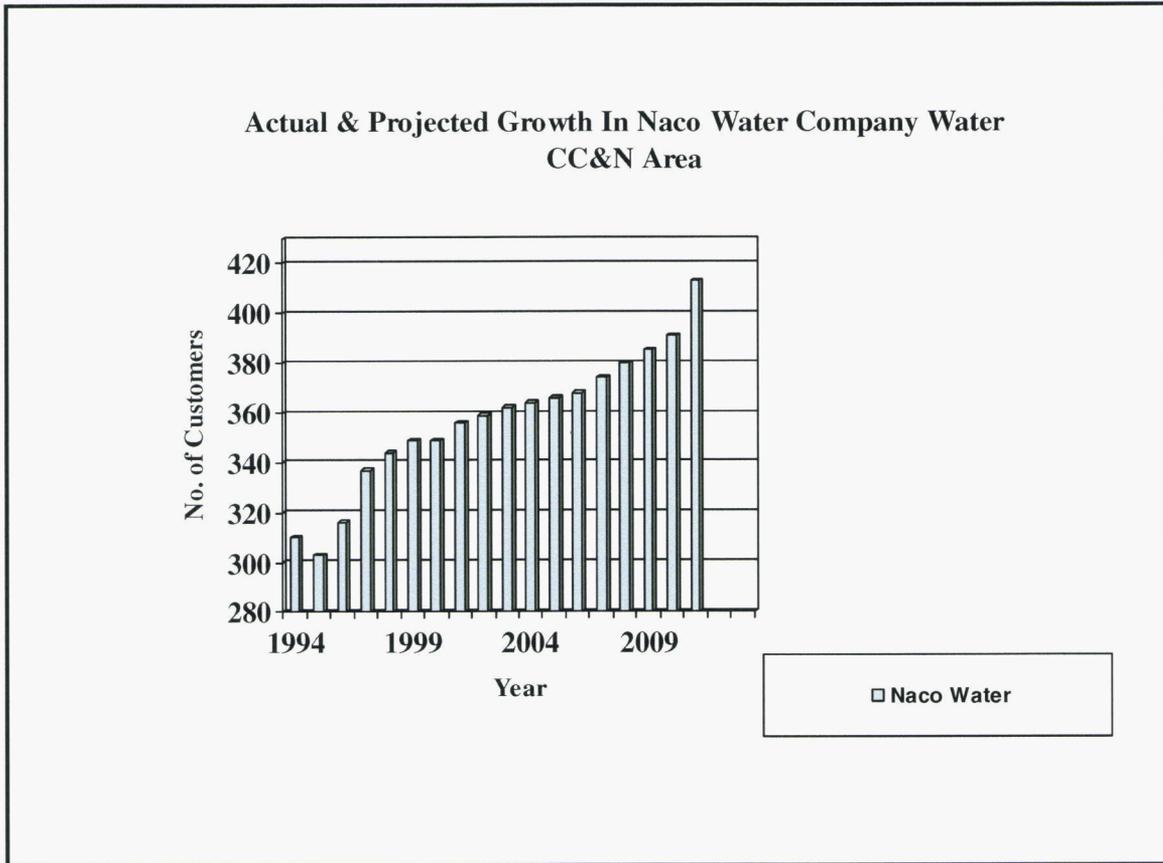


Exhibit 6

Water Depreciation Rates

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