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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

- BOB STUMP - Chairman
- GARY PIERCE
- BRENDA BURNS
- BOB BURNS
- SUSAN BITTER SMITH

ORIGINAL

IN THE MATTER OF THE APPLICATION OF NACO WATER COMPANY, LLC FOR A PERMANENT INCREASE TO ITS WATER RATES.

DOCKET NO. W-02860A-13-0399

STAFF'S NOTICE OF FILING DIRECT TESTIMONY

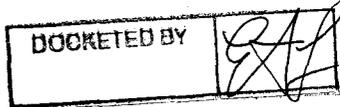
Staff of the Arizona Corporation Commission ("Staff") hereby files the Direct Testimony of Phan Tsan and Dorothy Hains in the above docket.

RESPECTFULLY SUBMITTED this 11th day of July 2014.

Arizona Corporation Commission

DOCKETED

JUL 11 2014



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BEFORE THE ARIZONA CORPORATION COMMISSION

BOB STUMP

Chairman

GARY PIERCE

Commissioner

BRENDA BURNS

Commissioner

BOB BURNS

Commissioner

SUSAN BITTER SMITH

Commissioner

IN THE MATTER OF THE APPLICATION OF)
NACO WATER COMPANY, LLC FOR A)
PERMANENT INCREASE TO ITS WATER)
RATES.)

DOCKET NO W-02860A-13-0399

DIRECT

TESTIMONY

OF

PHAN TSAN

PUBLIC UTILITIES ANALYST I

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

JULY 11, 2014

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**EXECUTIVE SUMMARY
NACO WATER COMPANY, LLC
DOCKET NO. W-02860A-13-0399**

Naco Water Company, LLC ("Naco" or "Company") is an Arizona limited liability company. Naco is located in Cochise County. The Company owns and operates three water systems: Arizona Department of Environmental Quality ("ADEQ") Public Water System ("PWS") Identification No. 02-024 (referred to as the Main or Township System), PWS No. 02-112 (referred to as the Well No. 4 or Bisbee System) and PWS No. 02-133 (referred to as the Site No. 3 or Bisbee Highway system). The Company served approximately 375 customers during the test year ended December 31, 2012. The Company's current rates were approved in Decision No. 69393, dated March 22, 2007.

Naco is a Class C Utility as defined by Arizona Administrative Code ("A.A.C.") R14-2-103 and is certificated to provide water service as a public service company in the State of Arizona. On November 20, 2013, the Company filed a rate increase application. On December 11, 2013, the Company docketed an amendment to the Application. On February 10, 2014, Staff filed a letter declaring the Company's rate application sufficient.

RATE APPLICATION:

The Company's proposed rates, as filed, would increase operating revenue by \$50,083 to produce operating revenue of \$305,172 resulting in operating income of \$67,363, or a 19.63 percent increase over test year revenue of \$255,089. The Company also proposed a fair value rate base ("FVRB") of \$1,508,251 which is its original cost rate base ("OCRB"). The Company proposed a \$49,528 free cash flow with an after tax Debt Cover Ratio ("DSC") of 1.68. The Company's proposed rates would increase the typical 5/8-inch meter residential bill with a median usage of 3,990 gallons from \$52.53 to \$62.48, for an increase of \$9.94 or 18.93 percent.

Staff recommends increasing operating revenue by \$32,142 to produce operating revenue of \$287,231 resulting in operating income of \$85,876 or a 12.60 percent increase over test year revenue of \$255,089. Staff also recommends an adjusted FVRB of \$1,394,639 which is its adjusted OCRB. Staff recommends a \$40,000 free cash flow with an after tax DSC of 1.40. Staff's recommended rates would increase the typical 5/8-inch meter residential bill with a median usage of 3,990 gallons from \$52.53 to \$58.53, for an increase of \$6.00 or 11.42 percent.

Staff further recommends:

The Commission order Naco's accounting books and records be brought into compliance with National Association of Regulatory Utility Commissioners Uniform System of Accounts ("NARUC USoA"), by December 31, 2014. The Company shall file an affidavit with the Commission confirming compliance with this condition by January 30, 2015.

1 **INTRODUCTION**

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

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

6

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

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

12

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

14 A. I graduated from Grand Canyon University with a Bachelor of Science in Finance and
15 Economics, and a Master of Science in Accounting. I began employment with the Arizona
16 Corporation Commission in October of 2013. I have participated in rate, financing and other
17 regulatory proceedings since joining the Commission. I attended the National Association of
18 Regulatory Utility Commissioners (“NARUC”) Utilities Rate School.

19

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

21 A. I am presenting Staff’s analysis and recommendations regarding Naco Water Company,
22 LLC’s (“Naco” or “Company”) application for a rate increase. I am presenting testimony and
23 schedules addressing rate base, operating revenues and expenses, revenue requirements and
24 rate design. Ms. Dorothy Hains is presenting Staff’s engineering analysis and related
25 recommendations.

26

1 **Q. What is the basis of your recommendations?**

2 A. I performed a regulatory audit of the Company's application to determine whether sufficient,
3 relevant, and reliable evidence exists to support the Company's requested rate increase. The
4 regulatory audit consisted of examining and testing the financial information, accounting
5 records, and other supporting documentation and verifying that the accounting principles
6 applied were in accordance with the Commission-adopted NARUC USoA.
7

8 **BACKGROUND**

9 **Q. Please provide a brief description of Naco and the service it provides.**

10 A. Naco is an Arizona Class C utility engaged in the business of providing water service in
11 portions of Cochise County, Arizona. Naco serves approximately 375 customers. The
12 Company's current rates were approved in Decision No. 69393, dated March 22, 2007.
13

14 **Q. What are the primary reasons for Naco's requested permanent rate increase?**

15 A. According to the Company, the primary reasons for the requested increase is that its DSC
16 had fallen to 0.91 but Naco's loan agreement with the Water Infrastructure Finance Authority
17 ("WIFA"), previously approved by the Commission, requires Naco to maintain a DSC of 1.2.
18

19 **CONSUMER SERVICE**

20 **Q. Please provide a brief history of customer complaints received by the Commission**
21 **regarding Naco.**

22 A. Staff reviewed the Commission's Consumer Service records for the period of January 1, 2011
23 through present date, and found the following:

24 2011 – Two complaints: One Quality of Service, One Disconnect/Terminations

25 2012 – No complaints

1 2013 – Four complaints: One Billing High/Low, One Billing Disputed, two
2 Disconnect/Terminations-Non Pay.

3 2014 – Four Complaints: Two Quality of Service-Outage/Interruptions, One Service not
4 Working, One Rate Case Item.

5 All complaints are resolved and closed.

6 Six Opinions – All opposed to the proposed rate increase.

7
8 **COMPLAINCE**

9 **Q. Please provide a summary of the compliance status of Naco.**

10 A. A check of the Utilities Division Compliance Section’s database as of May, 2013, showed no
11 delinquent compliance items for Naco.

12
13 **SUMMARY OF PROPOSED REVENUES**

14 **Q. Please summarize the Company’s filing.**

15 A. The Company-proposed rates, as filed, produce total operating revenue of \$305,172, a \$50,083
16 (19.63 percent) increase, over the test year revenue of \$255,089, to provide a \$67,363
17 operating income and a 4.47 percent rate of return on a proposed \$1,508,251 fair value rate
18 base (“FVRB”) which is also the proposed original cost rate base (“OCRB”). The rate
19 application indicates that Naco incurred a \$25,965 operating income for the test year ending
20 December 31, 2012. The Company proposed a \$49,528 free cash flow with an after tax Debt
21 Service Coverage (“DSC”) ratio of 1.68. The Company’s proposed rates would increase the
22 typical 5/8-inch meter residential bill with a median usage of 3,990 gallons from \$52.53 to
23 \$62.48, for an increase of \$9.94 or 18.93 percent.

24
25
26

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

2 A. Staff recommends increasing operating revenue by \$32,142 to produce operating revenue of
3 \$287,231 resulting in operating income of \$85,876 or a 12.60 percent increase over test year
4 revenue of \$255,089. Staff also recommends a 6.16 percent rate of return on an adjusted
5 FVRB of \$1,394,639 which is its adjusted OCRB. Staff recommends a \$40,000 free cash flow
6 with an after tax DSC of 1.40. Staff's recommended rates would increase the typical 5/8-
7 inch meter residential bill with a median usage of 3,990 gallons from \$52.53 to \$58.53, for an
8 increase of \$6.00 or 11.42 percent.

9

10 **Q. What test year did Naco utilize in this filing?**

11 A. Naco's test year is based on the twelve months ended December 31, 2012.

12

13 **Q. Please summarize Staff's rate base and operating income adjustments for Naco.**

14 A. My testimony addresses the following issues:

15 *Rate Base Adjustments*

16 Reclassification of Distribution Reservoirs and Standpipes – This adjustment removes the
17 amount of \$2,357 from Distribution Reservoirs and Standpipes, adds the amount of \$1,648 to
18 Pumping Equipment and \$709 to Pressure Tanks.

19

20 Transmission and Distribution Main – This adjustment removes the amount of \$285,898
21 from Transmission and Distribution Main, adds the amount of \$225,051 to Services, \$37,100
22 to Meters & Meters Installation, and \$5,279 to Wells & Springs.

23

24 Post-Test Year Plant Additions – This adjustment reflects plant additions that were placed in
25 service after the end of test year. The adjustment increases Total Plant in Service by
26 \$1,182,522.

1 Plant Retirements – This adjustment reflects the removal of plant items that are no longer in
2 service. The adjustment decreases Total Plant in Service by \$49,711.

3
4 Accumulated Depreciation – This adjustment reflects Staff's calculation of accumulated
5 depreciation based on Staff's adjustments to plant. The adjustment increases Accumulated
6 Depreciation by \$69,678.

7
8 Contributions In Aid of Construction ("CIAC") – This Adjustment reflects Contributions
9 from Freeport MacMoran ("Freeport") included in Post-test Year Plant. The adjustment
10 increases Net CIAC by \$1,158,276.

11
12 *Operating Income Adjustments*

13 Materials and Supplies – This adjustment decreases Materials and Supplies by \$5,756. It
14 reclassifies \$ 3,871 to Contractual Service-Other account to reflect the proper classification of
15 costs incurred for the services not performed by utility employees and removes \$1,885 out-of-
16 test year expenses.

17
18 Reclassification of Office Supplies and Expenses – This adjustment removes the entire
19 amount of \$33,446 from Office Supplies and Expenses. It reclassifies \$27,270 to Interest
20 Expense, \$2,250 to Contractual Services-Billing, and \$3,926 to Miscellaneous Expense to be
21 in compliance with NARUC USoA.

22
23 Reclassification of Outside Service – This adjustment reclassifies the entire amount of
24 \$58,374 from Outside Service to Contractual Services-Professional to be in compliance with
25 NARUC USoA.
26

1 Contract Services- Water Testing Expense – This adjustment increases water testing expense
2 by \$486 to reflect Staff's recommended annual water testing costs, per the Staff Engineering
3 Report.

4
5 Rate Case Expense – This adjustment decreases rate case expense by \$3,692 to reflect the
6 normalization of the rate case expense over a five-year period.

7
8 Depreciation Expense - This adjustment decreases depreciation expense by \$765 to reflect
9 Staff's adjustments in plant and CIAC balances.

10
11 Property Taxes - This adjustment decreases property taxes by \$930 to reflect application of
12 the modified version of the Arizona Department of Revenue's property tax methodology
13 which the Commission has consistently adopted. This adjustment is based on the calendar
14 year 2015, 18.5 percent assessment ratio.

15
16 **RATE BASE**

17 *Fair Value Rate Base*

18 **Q. Did the Company prepare schedules showing the elements of Reconstruction Cost**
19 **New Rate Base?**

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

21
22 *Rate Base Summary*

23 **Q. Please summarize Staff's recommendation for Naco's rate base shown on Schedules**
24 **PNT-3 and PNT-4.**

25 A. Staff recommends \$1,394,639 for rate base, a decrease of \$113,612 from the Company's
26 proposed \$1,508,251 rate base.

1 *Rate Base Adjustment No. 1 – Reclassification of Distribution Reservoir and Standpipes to Pumping Equipment and*
2 *Pressure Tank*

3 **Q. What amount did the Company propose for Distribution Reservoir and Standpipes?**

4 A. The Company proposed \$137,771.

5
6 **Q. During the course of the audit, did Staff determine that some amounts should be**
7 **reclassified?**

8 A. Yes, Staff reviewed the invoices provided by the Company and determined that some plant
9 should be reclassified.

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

12 A. Staff recommends decreasing this account by \$2,357. It reclassifies \$1,648 to the Pumping
13 Equipment account and \$709 to the Pressure Tank account as shown on Schedules PNT-4
14 and PNT-5.

15
16 *Rate Base Adjustment No. 2 – Reclassification of Transmission & Distribution Mains and removal of non-relevant*
17 *costs.*

18 **Q. What amount did the Company propose for Transmission and Distribution Mains?**

19 A. The Company proposed \$1,498,997.

20
21 **Q. During the course of the audit, did Staff determine that some amounts should be**
22 **reclassified and some costs should be removed?**

23 A. Yes, Staff reviewed invoices provided by the Company and determined that some plant
24 should be reclassified to Services account, Meters account, and Wells and Spring account; and
25 the cost of 2006 rate case, 2006 WIFA Grant application expense and the cost of a water
26 trailer should be removed from this account.

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

2 A. Staff recommends decreasing this account by \$285,898. It reclassifies \$225,051 to Services
3 account, \$37,100 to Meters account, and \$5,279 to Wells and Spring account. It removes
4 \$11,748 cost of 2006 rate case and WIFA Grant application expenses. It also removes \$6,720
5 cost of a water trailer which has been already included in Transportation account, as shown
6 on Schedules PNT-4 and PNT-6.

7

8 *Rate Base Adjustment No. 3 – Post-Test Year Plant*

9 **Q. What amount of plant did Naco propose?**

10 B. Naco proposed \$2,222,903 of plant-in-service.

11

12 **Q. Did Staff identify any post-test year plant that was not included in rate base by the**
13 **Company?**

14 A. Yes, Staff identified post-test year plant additions in the Structures and Improvement
15 (account number 304), Wells and Springs (account number 307) Electrical Pumping
16 Equipment (account number 311), Storage Tank (account number 330.1), Pressure Tank
17 (account number 330.2), and Transmission and Distribution Mains (account number 331),
18 with total cost of \$1,182,522 that was placed in service after the test year and deemed to be
19 used and useful.

20

21 **Q. What was the basis of Staff's determination?**

22 A. Staff's Engineer inspected the entire system and identified new plant items at Site No. 3 and
23 Well No. 6 were completed in March 2013, after the test year. Staff observed that they are in
24 service and used and useful to the Company's provision of service at the time of Staff's
25 inspection.

26

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

2 A. Staff recommends increasing total plant in service by \$1,182,522 as shown on Schedules
3 PNT-4 and PNT-7.

4

5 *Rate Base Adjustment No. 4 – Plant Retirements*

6 **Q. Did Staff identify any Plant Retirements?**

7 A. Yes, Staff identified plant retirements in the Wells & Springs (account number 307), Electrical
8 Pumping Equipment (account number 311) and Distribution Reservoirs & Standpipes
9 (account number 330), with a total cost of \$49,711 that were retired when the post-test year
10 plant additions were brought into service and not removed from plant in service by the
11 Company.

12

13 **Q. What was the basis of Staff's determination?**

14 A. Staff's Engineer inspected the entire system and identified plant items in the Wells & Springs
15 (account number 307), Electrical Pumping Equipment (account number 311) and
16 Distribution Reservoirs & Standpipes (account number 330), that were not in service.
17 Therefore, these plant items are no longer used and useful to the Company's provision of
18 service.

19

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

21 A. Staff recommends decreasing total plant in service by \$49,711, as shown on Schedules PNT-4
22 and PNT-8.

23 *Rate Base Adjustment No. 5 – Accumulated depreciation for fully depreciated plant.*

24 **Q. What did the Company propose for accumulated depreciation?**

25 A. The Company's application proposes \$670,808 for Accumulated Depreciation.

26

1 **Q. Did Staff adjust the amounts proposed for accumulated depreciation?**

2 A. Yes.

3

4 **Q. How did Staff calculate the adjustment?**

5 A. Staff recalculated the accumulated depreciation balance using Staff-adjusted plant in service
6 balances. Staff also starts depreciating \$32,885 Wells and Springs and \$591,253 Transmission
7 & Distribution Mains in 2009, instead of 2011 as Company proposed¹, since they were
8 deemed used and useful in 2009.

9

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

11 A. Staff recommends increasing accumulated depreciation by \$69,678 as shown on Schedules
12 PNT-4 and PNT-9

13

14 *Rate Base Adjustment No. 6 – CIAC and amortization of CIAC*

15 **Q. Did the Company provide a schedule of CIAC since the last rate case?**

16 A. Yes. The Company provided a schedule showing CIAC added since the last rate case and
17 amortization of CIAC since the last rate case.

18

19 **Q. Did Staff recalculate an amount for CIAC and CIAC amortization?**

20 A. Yes, Staff calculated the CIAC balance for the end of the test year and post-test year using
21 schedules provided by the Company including the balance of accumulated amortization of
22 CIAC.

23

24

25

¹ The Company proposed \$629,211 for 2011 Transmission and Distribution Mains. Staff's adjustments decrease this account by \$37,958, from \$629,211 to \$591,253.

1 **Q. Did Staff's calculations match the Company's proposed net CIAC?**

2 A. No, Company's calculation does not include contributions funded by Freeport for post-test
3 year plant additions which are deemed used and useful.

4
5 **Q. What is Staff's recommendation?**

6 A. Staff recommends increasing gross CIAC by \$1,182,522 and increasing CIAC amortization by
7 \$24,246, a net increase of \$1,158,276 as shown on PNT-4 and PNT-10

8
9 **OPERATING INCOME**

10 *Operating Income Summary*

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

13 A. As shown in Schedules PNT-11 and PNT-12, Staff's analysis resulted in Staff-adjusted test
14 year revenues of \$255,089, expenses of \$195,068 and operating income of \$60,021. The
15 Company's application shows test year revenues of \$255,089, expenses of \$229,124 and an
16 operating income of \$25,965.

17
18 *Operating Income Adjustment No. 1 -Materials and Supplies*

19 **Q. What did the Company propose for Materials and Supplies?**

20 A. The Company proposed \$8,127 for Materials and Supplies.

21
22 **Q. What adjustment did Staff make?**

23 A. Staff reclassified \$3,871 from this account to the Contractual Service-Other account to reflect
24 the proper classification of costs incurred for the services not performed by utility employees.
25 Staff also removed \$1,885 in out-of test year expenses.

26

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

2 A. Staff recommends decreasing Materials and Supplies expense by \$5,756 as shown on
3 Schedules PNT-12 and PNT-13.
4

5 *Operating Income Adjustment No. 2 – Reclassification of Office Supplies and Expense*

6 **Q. What is the Company proposing for Office Supplies and Expense?**

7 A. The Company is proposing Office Supplies and Expense of \$33,446.
8

9 **Q. What adjustment did Staff make?**

10 A. There is no Office Supplies and Expense account under the NARUC USoA. Therefore, Staff
11 reclassified this account to appropriate accounts to be in compliance with NARUC USoA.
12 Staff reclassifies \$27,270 from this account to Interest Expense account. Per examination of
13 the WIFA loan agreements and discussion with WIFA's loan officer, Ms. Patricia Incognito,
14 the amount of \$27,270 which Naco claimed as "WIFA fee expense" should be classified as
15 Interest Expense. Staff also reclassifies \$3,926 to Miscellaneous Expense, and \$2,250 to
16 Contractual Services-Billing account to reflect proper classification of costs.
17

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

19 A. Staff recommends decreasing Office Supplies and Expenses by \$33,466, from \$33,466 to \$0,
20 as shown on Schedules PNT-12 and PNT-14.
21

22 *Operating Income Adjustment No. 3 – Reclassification of Outside Services*

23 **Q. What is the Company proposing for Outside Services?**

24 A. The Company is proposing Outside Services of \$58,374.
25
26

1 **Q. What adjustment did Staff make?**

2 A. Staff reclassifies the entire amount from this account to Contractual Services-Professional to
3 be in compliance with NARUC USoA.

4

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

6 A. Staff recommends decreasing Outside Services by \$58,374 from \$58,374 to \$0, and increasing
7 Contractual Services-Professional by \$58,374 as shown on Schedules PNT-12 and PNT-15.

8

9 *Operating Income Adjustment No. 4 – Water Testing*

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

11 A. The Company proposed \$3,596 for water testing expense.

12

13 **Q. What adjustment did Staff make?**

14 A. Staff adjusted annual water testing costs to reflect Staff's recommended \$4,082 water testing
15 expense as discussed in greater detail by Staff witness Dorothy Hains.

16

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

18 A. Staff recommends increasing water testing expense by \$486 as shown on Schedules PNT-12
19 and PNT-16.

20

21 *Operating Income Adjustment No. 5 – Rate Case Expense*

22 **Q. What did the Company propose for Rate Case expense?**

23 A. The Company proposed \$27,690 for rate case expense, and amortized it over 3 years.

24

25

26

1 **Q. What adjustment did Staff make?**

2 A. Staff normalized the rate case expense of \$27,690 over a five-year period. Staff's calculation is
3 shown on schedule PNT-17.

4

5 **Q. Why did Staff make this adjustment?**

6 A. Staff usually normalizes rate case expense over a 3- to 5-year period. In this case, Naco has
7 not been in for a rate case in approximately seven years; therefore, Staff concludes that
8 normalizing the rate case expense over a five-year period is more appropriate.

9

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

11 A. Staff recommends decreasing rate case expense by \$3,692 as shown on Schedules PNT-12
12 and PNT-17.

13

14 *Operating Income Adjustment No. 6 – Depreciation Expense*

15 **Q. What did the Company propose for Depreciation Expense?**

16 A. The Company proposed \$54,654 for depreciation expense.

17

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

19 A. Staff adjusted depreciation expense to reflect Staff's calculation of depreciation expense using
20 Staff's adjusted plant and CIAC balances. Staff's calculation is shown on schedule PNT-18.

21

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

23 A. Staff recommends decreasing depreciation expense by \$765 as shown on Schedules PNT-12
24 and PNT-18.

25

26

1 *Operating Income Adjustment No. 7 – Property Taxes*

2 **Q. Did Staff review the Company’s property tax calculation?**

3 A. Yes.

4
5 **Q. Did the Company use the modified ADOR calculation for property tax expense?**

6 A. For the most part Staff and the Company used the same methodology to calculate the
7 property taxes with two exceptions. The Company proposes an assessment ratio of 20
8 percent; Staff is recommending an 18.5 percent assessment ratio in keeping with Arizona
9 Revised Statutes (“ARS”) § 42-15001. The assessment ratio is 18.5 percent beginning from
10 and after December 31, 2014 through December 31, 2015. Staff does not include 10% of
11 CWIP and net Book value of Licensed Vehicles as Company proposed. Since Post-test year
12 plant was deemed used and useful, there is no CWIP and the net book value of the vehicles is
13 \$0 at the end of 2013.

14
15 **Q. What is Staff’s recommendation?**

16 A. Staff recommends \$11,556 for test year property tax expense, a \$930 decrease to the
17 Company’s proposed amount, as shown in Schedule PNT-19.

18
19 **REVENUE REQUIREMENT**

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

21 A. The Company proposes increasing operating revenue by \$50,083 from \$255,089 to \$305,172.
22 This is an increasing of 19.63 percent over test year revenue.

23
24 **Q. What does Staff recommend for an increase in operating revenue?**

25 A. Staff recommends increasing operating revenue by \$32,142 from \$255,089 to \$287,231. This
26 is an increase of 12.60 percent over test year revenue.

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

2 **A.** Staff determined its recommended revenue requirement by cash flow and the need for
3 sufficient DSC ratio.

4

5 **Q. Why did Staff not use the rate base/rate of return methodology to determine the**
6 **Company's revenue requirement?**

7 **A.** The Company failed to file Cost of Capital Analysis. However, Staff estimated the potential
8 Cost of Capital would be under 5 percent. Therefore, Staff used Cash Flow/DSC analysis to
9 determine revenue requirement. Staff believes that its recommended cash flow provides the
10 Company sufficient funds to meet debt service requirements and operating expenses, and to
11 manage contingencies.

12

13 **CASH FLOW ANALYSIS**

14 **Q. What does the Company propose for cash flow?**

15 **A.** The Company proposes increasing cash flow by \$41,398 from \$8,130 to \$49,528. The
16 proposed cash flow will allow an after-tax DSC ratio of 1.68, as showed on schedule PNT-21.

17

18 **Q. What does Staff recommend for an increase in cash flow?**

19 **A.** Staff recommends increasing cash flow by \$25,528 from \$14,146 to \$40,000. The
20 recommended cash flow will allow an after-tax DSC ratio of 1.40, as showed on schedule
21 PNT-21.

22

23 **Q. Would you briefly define the DSC ratio?**

24 **A.** DSC measures an entity's ability to generate cash flow to pay its debt service obligations
25 (interest and principal) from operating activities. It is calculated by dividing (1) earnings
26 before interest, income taxes, and depreciation expense by (2) the principal and interest

1 payments. When DSC is greater than 1.0, operating cash flow is sufficient to cover debt
2 obligations.

3
4 **RATE DESIGN**

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

7 A. Yes. Schedule PNT-22 provides a summary of the Company's present, Company's proposed,
8 and Staff's recommended rates.

9
10 **Q. Please summarize the present rate design.**

11 A. Customer class is distinguished by meter size. The monthly minimum charges vary by meter
12 size (except 5/8 x 3/4-inch and 3/4-inch meter size) and include no gallons. The commodity
13 rates are based on an inverted three-tier rate design for residential 5/8 x 3/4-inch and 3/4-
14 inch meters, an inverted two-tier rate design for Commercial 5/8 x 3/4-inch and 3/4-inch
15 meters, and all 1-inch and larger meters.

16
17 **Q. Please summarize the Company's proposed rate design.**

18 A. Customer class is distinguished by meter size. The monthly minimum charges vary by meter
19 size (except 5/8 x 3/4-inch and 3/4-inch meter size) and include no gallons. The commodity
20 rates are based on an inverted three-tier rate design for all 5/8 x 3/4-inch and 3/4-inch
21 meters, an inverted two-tier rate design for all 1-inch and larger meters. The Company's
22 proposed rates would increase the typical residential 5/8 x 3/4-inch meter bill with a median
23 usage of 3,990 gallons from \$52.53 to \$62.48, for an increase of \$9.94 or 18.93 percent, as
24 shown on Schedule PNT-23.

25
26

1 **Q. Please summarize Staff's recommended rate design.**

2 A. Customer class is distinguished by meter size. The monthly minimum charges vary by meter
3 size and include no gallons. The commodity rates are based on an inverted three-tier rate
4 design for Residential 5/8 x 3/4-inch and 3/4-inch meters, an inverted two-tier rate design
5 for Commercial 5/8 x 3/4-inch and 3/4-inch meters, and all 1 inch and larger meters. Staff's
6 recommended rates would increase the typical residential 5/8 x 3/4-inch meter bill with a
7 median usage of 3,990 gallons from \$52.53 to \$58.53, for an increase of \$6.00 or 11.42
8 percent, as shown on Schedule PNT-23.

9
10 **Q. Did the Company propose any changes to its Meter and Service Line Charges?**

11 A. Yes. Staff recommends approval of its recommended service charges which are the same as
12 the Company's. Both the Company-proposed and the Staff-recommended changes are
13 shown on Schedule PNT-22 and are discussed in the testimony of Staff witness, Ms. Dorothy
14 Hains.

15

16 **SERVICE CHARGES**

17 **Q. Did the Company propose any changes to the service charges?**

18 A. Yes. The Company proposes to discontinue the Establishment (After Hours), Re-
19 establishment (within 12 Months after Hours) charge and the Reconnection (Delinquent -
20 After Hours) and to add an After Hours Charge of \$35.

21

22 **Q. Does Staff agree with the Company's proposal to discontinue the \$30 Establishment**
23 **(After Hours), Re-establishment (After Hours) Charge and the \$30 Reconnection**
24 **(Delinquent - After Hours) and to add a \$35 After Hours Charge?**

25 A. Yes.

26

1 **OTHER RECOMMENDATION**

2 **Q. Are the Company's accounting books and records currently in compliance with**
3 **NARUC USoA?**

4 A. No.

5
6 **Q. What is Staff's other recommendation?**

7 A. Staff recommends the Commission order Naco Water Company, LLC's accounting books
8 and records be brought into compliance with NARUC USoA by December 31, 2014. The
9 Company shall file an affidavit with the Commission confirming compliance with this
10 condition by January 30, 2015.

11
12 **Q. Does this conclude Staff's direct testimony?**

13 A. Yes, it does.

Naco Water Company, LLC.
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Test Year Ended December 31, 2012

Schedule PNT-1

REVENUE REQUIREMENT

<u>LINE NO.</u>	<u>DESCRIPTION</u>	<u>[A] COMPANY ORIGINAL COST</u>	<u>[B] STAFF ORIGINAL COST</u>
1	Adjusted Rate Base	\$ 1,508,251	\$ 1,394,639
2	Adjusted Operating Income (Loss)	25,965	60,021
3	Current Rate of Return (L2 / L1)	1.72%	4.30%
4	Required Rate of Return	4.47%	6.16%
5	Required Operating Income (L4 * L1)	67,363	85,876
6	Operating Income Deficiency (L5 - L2)	41,398	25,854
7	Gross Revenue Conversion Factor	1.20980	1.23277
8	Increase (Decrease) In Gross Revenue (L7 * L6)	50,083	32,142
9	Adjusted Test Year Revenue	255,089	255,089
10	Proposed Annual Revenue (L8 + L9)	305,172	287,231
11	Required Increase/(Decrease in Revenue) (%) (L8/L9)	19.63%	12.60%
12	Proposed Cash Flow	49,528	40,000
13	Operating Margin	22.07%	29.90%

References:

Column [A]: Company Schedules A-1

Column [B]: Staff Schedules PNT-2, PNT-3, & PNT-11

GROSS REVENUE CONVERSION FACTOR

LINE NO.	DESCRIPTION	(A)	(B)	(C)
<i>Calculation of Gross Revenue Conversion Factor:</i>				
1	Revenue	100.0000%		
2	Uncollectible Factor (Line 11)	0.0000%		
3	Revenues (L1 - L2)	100.0000%		
4	Combined Federal and State Income Tax and Property Tax Rate (Line 23)	18.8816%		
5	Subtotal (L3 - L4)	81.1184%		
6	Revenue Conversion Factor (L1 / L5)	1.232766		
<i>Calculation of Uncollectible Factor:</i>				
7	Unity	100.0000%		
8	Combined Federal and State Tax Rate (Line 17)	17.6378%		
9	One Minus Combined Income Tax Rate (L7 - L8)	82.3622%		
10	Uncollectible Rate	0.0000%		
11	Uncollectible Factor (L9 * L10)	0.0000%		
<i>Calculation of Effective Tax Rate:</i>				
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%		
13	Arizona State Income Tax Rate	3.1033%		
14	Federal Taxable Income (L12 - L13)	96.8967%		
15	Applicable Federal Income Tax Rate	15.0000%		
16	Effective Federal Income Tax Rate (L14 x L15)	14.5345%		
17	Combined Federal and State Income Tax Rate (L13 + L16)	17.6378%		
<i>Calculation of Effective Property Tax Factor</i>				
18	Unity	100.0000%		
19	Combined Federal and State Income Tax Rate (L17)	17.6378%		
20	One Minus Combined Income Tax Rate (L18-L19)	82.3622%		
21	Property Tax Factor	1.5101%		
22	Effective Property Tax Factor (L20*L21)	1.2437%		
23	Combined Federal and State Income Tax and Property Tax Rate (L17+L22)	18.8816%		
24	Required Operating Income	\$ 85,876		
25	Adjusted Test Year Operating Income (Loss)	60,021		
26	Required Increase in Operating Income (L24 - L25)	\$ 25,854		
27	Income Taxes on Recommended Revenue	\$ 10,412		
28	Income Taxes on Test Year Revenue	4,829		
29	Required Increase in Revenue to Provide for Income Taxes (L27 - L28)	5,584		
30	Recommended Revenue Requirement	\$ 287,231		
31	Uncollectible Rate (Line 10)	0.0000%		
32	Uncollectible Expense on Recommended Revenue (L30*L31)	\$ -		
33	Adjusted Test Year Uncollectible Expense	\$ -		
34	Required Increase in Revenue to Provide for Uncollectible Exp. (L32-L33)	-		
35	Property Tax with Recommended Revenue	\$ 12,042		
36	Property Tax on Test Year Revenue	11,556		
37	Increase in Property Tax Due to Increase in Revenue (L35-L36)	485		
38	Total Required Increase in Revenue (L26 + L29 + L34 + L37)	\$ 31,923		
<i>Calculation of Income Tax:</i>				
39	Revenue	\$ 255,089	\$ 32,142	\$ 287,231
40	Operating Expenses Excluding Income Taxes	190,458	485	190,943
41	Synchronized Interest (L56)	\$ 31,558		\$ 31,558
42	Arizona Taxable Income (L39 - L40 - L41)	\$ 33,073		\$ 64,730
43	Arizona State Income Tax Rate	2.7046%		2.8996%
44	Arizona Income Tax (L42 x L43)	\$ 895		\$ 1,877
45	Commission Tax Allowance Policy - Federal Taxable Income (L37- L39)	\$ 32,179		\$ 62,853
46	Commission Tax Allowance Policy - Federal Effective Tax	12.2264%		13.5800%
47	Commission Tax Allowance Policy - Federal Tax	3,934		8,535
48	Combined Federal and State Income Tax (L44 + L51)	\$ 4,829		\$ 10,412
<i>Calculation of Interest Synchronization:</i>				
49	Rate Base	\$ 1,394,639		
50	Weighted Average Cost of Debt	2.26%		
51	Synchronized Interest (L50x L51)	\$ 31,558		

Line No.	Description	Test Year	Staff Recommended
1	<i>Calculation of Income Tax:</i>		
2	Revenue	\$ 255,089	\$ 287,231
3	Less: Operating Expenses (Excluding Income Taxes)	190,458	190,943
4	Less: Synchronized Interest	31,558	31,558
5	Arizona Taxable Income (Married Filing Jointly)	\$ 33,073	\$ 64,730
6	<u>Over</u> <u>But not Over</u> <u>Amount plus</u> %		
7	- 20,000 - 2.59%	\$ -	\$ -
8	20,000 50,000 (58) 2.88%	895	-
9	50,000 100,000 (298) 3.36%	-	1,877
10	100,000 300,000 (1,178) 4.24%	-	-
11	300,000 999,999,999 (2,078) 4.54%	-	-
12	Arizona Income Tax	\$ 895	\$ 1,877
13	Federal Taxable Income (Married Filing Jointly)	\$ 32,179	\$ 62,853
14	<u>Over</u> <u>But not Over</u> <u>Amount plus</u> %		
15	- 17,850 - 10.00%	\$ -	\$ -
16	17,850 72,500 1,785 15.00%	3,934	8,535
17	72,500 146,400 9,983 25.00%	-	-
18	146,400 223,050 28,458 28.00%	-	-
19	223,050 398,350 49,920 33.00%	-	-
20	398,350 450,000 107,769 35.00%	-	-
21	Total Federal Income Tax	\$ 3,934	\$ 8,535
22	Combined Federal and State Income Tax	\$ 4,829	\$ 10,412
23	Applicable Arizona State Tax	2.7046%	2.8996%
24	Applicable Federal Income Tax	12.2264%	13.5800%
25	Combined Federal and State Tax Rate	14.9310%	16.4796%
26	Applicable Arizona State Income Tax Rate (Rate Applicable to Revenue Increase)		3.1033%
27	Applicable Federal Income Tax Rate (Rate Applicable to Revenue Increase)		15.0000%

Naco Water Company, LLC.
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Schedule PNT-3

RATE BASE - ORIGINAL COST

LINE NO.	(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	ADJ NO.	(C) STAFF AS ADJUSTED
	1	\$ 2,222,903	\$ 1,114,342	1, 2, 3, 4
2	670,808	69,678	5	740,486
3	<u>\$ 1,552,095</u>	<u>\$ 1,044,665</u>		<u>\$ 2,596,760</u>
<u>LESS:</u>				
4	\$ 20,753	\$ -		\$ 20,753
6	40,133	1,182,522	6	1,222,655
7	25,992	24,246	6	50,238
8	<u>\$ 14,141</u>	<u>\$ 1,158,276</u>		<u>\$ 1,172,417</u>
9	\$ 34,894	\$ 1,158,276		\$ 1,193,170
10	8,950	-		8,950
11	-	-		-
12	<u>\$ 1,508,251</u>	<u>\$ (113,612)</u>		<u>\$ 1,394,639</u>

References:

Column [A], Company Schedule B-1
Column [B]: Schedule PNT-4
Column [C]: Column [A] + Column [B]

Naco Water Company, LLC.
Docket No. W-02860A-13-0399
Test Year Ended December 31, 2012

Schedule PNT-5

RATE BASE ADJUSTMENT NO. 1 - RECLASSIFICATION OF DISTRIBUTION RESERVOIRS AND STANDPIPES TO PUMPING EQUIPMENT AND PRESSURE TANK

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Distribution Reservoirs and Standpipes	\$ 137,771	\$ (2,357)	\$ 135,414
2	Pumping Equipment	\$ 194,487	\$ 1,648	\$ 196,135
3	Pressure Tank	\$ -	\$ 709	\$ 709
4	Staff's Adjustment			
5	Reclassification of Distribution Reservoirs and Standpipes to Pumping Equipment			\$ (1,648)
6	Reclassification of Distribution Reservoirs and Standpipes to Pressure Tank			(709)
7	Total adjustment			\$ (2,357)

References:

- Column [A]: Company Schedule B-2
- Column [B]: Testimony, schedule PNT 4
- Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 2 - TRANSMISSION AND DISTRIBUTION MAINS

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Transmission and Distribution Main	\$ 1,498,997	\$ (285,898)	\$ 1,213,099
2	Services	136,839	225,051	361,890
3	Meters and Meters Installation	46,800	37,100	83,900
4	Wells and Springs	\$ 128,561	\$ 5,279	\$ 133,840
5	Staff's Adjustments			
6	Reclassification of Transmission and Distribution Main to Services			\$ (225,051)
7	Reclassification of Transmission and Distribution Main to Meters and Meters Installation			(37,100)
8	Reclassification of Transmission and Distribution Main to Wells and Spring			(5,279)
9	Removal of cost of water trailer that has been already included in Transportation account			(6,721)
10	Removal of 2006 rate expense and Wifa grant application			(11,748)
11	Total adjustment			\$ (285,898)

LINE NO.	<u>Invoice no</u>	<u>Year</u>	<u>Description</u>	<u>Cost</u>
13	32307A	2006	2006 AZ Corporation Commission Rate Expense	\$ (7,908)
14	32307A	2006	Wifa 2008 TA Grant Application expense	(284)
15	32700	2006	2006 AZ Corporation Commission Rate Expense	(925)
16	32922	2007	2006 AZ Corporation Commission Rate Expense	(1,508)
17	32922	2007	Wifa 2008 TA Grant Application expense	(1,124)
18	33086	2007	Service Line installation	(6,310)
19	33327	2008	Water Trailer	(6,721)
20	33496	2008	Well rehab, permit	(447)
21	33386	2008	Well rehab	(725)
22	33386	2008	Service Line installation	(629)
23	33538	2008	Service Line installation	(7,273)
24	33538	2008	Well permit	(4,107)
25	W02501	2009	Services	(2,320)
26	10657	2009	Services	(81,731)
27	10657	2009	Meters	(3,000)
28	10672	2009	Services	(46,100)
29	10672	2009	Meters	(3,000)
30	10711	2009	Services	(17,577)
31	10711	2009	Meters	(2,700)
32	10763	2009	Services	(31,812)
33	10763	2009	Meters	(1,000)
34	10702	2009	Services	(31,300)
35	10702	2009	Meters	(27,400)
36	Total			\$ (285,898)

References:

- Column [A]: Company Schedule B-2
- Column [B]: Testimony, schedule PNT 4
- Column [C]: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 3 - POST-TEST YEAR PLANT ADDITIONS

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Structures and Improvement	\$ 5,918	\$ 4,183	\$ 10,101
2	Wells and Springs	128,561	342,269	470,830
3	Pumping Equipment	194,487	49,405	243,892
4	Storage Tanks	-	303,227	303,227
5	Pressure Tanks	-	10,448	10,448
6	Transmission and Distribution Mains	\$ 1,498,997	\$ 472,990	\$ 1,971,987

References:

Column A: Company Schedule B-2

Column B: Testimony, schedule PNT 4, Data Request PT10.1 and Staff's Engineering Report

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

RATE BASE ADJUSTMENT NO. 4 - PLANT RETIRMENTS

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Wells and Springs	\$ 128,561	\$ (20,110)	\$ 108,451
2	Pumping Equipment	194,487	(21,508)	172,979
3	Distribution Reservoirs and Standpipes	\$ 137,771	\$ (8,093)	\$ 129,678

References:

Column A: Company Schedule B-2

Column B: Testimony, schedule PNT 4, Data request DH9.1

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

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Schedule PNT-9

RATE BASE ADJUSTMENT NO. 5- ACCUMULATED DEPRECIATION

		[A]	[B]	[C]
LINE NO.	DESCRIPTION	COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Accumulated Depreciation	\$ 670,808	\$ 69,678	\$ 740,486
2	Staff's calculation			
3	Account No.	Description	Staff as Adjusted	
4	301	Organization Cost	\$ -	
5	302	Franchise Cost	-	
6	303	Land and Land Rights	-	
7	304	Structures & Improvements	3,458	
8	307	Wells & Springs	41,940	
9	330	Distribution Reservoirs & Standpipes	64,381	
10	330.1	Storage Tanks	3,366	
11	330.2	Pressure Tanks	456	
12	331	Transmission & Distribution Mains	300,305	
13	333	Services	72,983	
14	334	Meters	48,783	
15	335	Hydrants	16,054	
16	340	Office Furniture & Equipment	9,202	
17	341	Transportation Equipment	20,298	
18	343	Tools, Shop & Garage Equipment	103	
19	345	Power Operated Equipment	2,818	
			\$ 740,486	

References:

Column A: Company Schedule B-2
 Column B: Testimony, schedule PNT 4
 Column C: Column [A] + Column [B]

RATE BASE ADJUSTMENT NO. 6- CIAC AND AMORTIZATION OF CIAC

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	CIAC	\$ 40,133	1,182,522	\$ 1,222,655
2	Accumulated Amortization of CIAC	\$ 25,992	24,246	\$ 50,238
3	<u>Staff's adjustments</u>			
4	Contributions from Freeport MacMoran		\$ 1,182,522	
5	2013 CIAC Amortization		24,246	
	Net CIAC		\$ 1,158,276	

References:

- Column A: Company Schedule B-2
- Column B: Testimony, schedule PNT 4
- Column C: Column [A] + Column [B]

OPERATING INCOME - TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] COMPANY TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
REVENUES:						
1	Metered Water Sales	\$ 248,165	\$ -	\$ 248,165	\$ 32,142	\$ 280,307
2	Water Sales - Unmetered	-	-	-	-	-
3	Other Operating Revenues	6,924	-	6,924	-	6,924
4	Total Revenues	\$ 255,089	\$ -	\$ 255,089	\$ 32,142	\$ 287,231
OPERATING EXPENSES:						
5	Salaries and Wages	\$ 16,712	\$ -	\$ 16,712	\$ -	\$ 16,712
6	Purchased Power	8,999	-	8,999	-	8,999
7	Chemicals	684	-	684	-	684
8	Materials & Supplies	8,127	(5,756) 1	2,371	-	2,371
9	Office Supplies & Expense	33,446	(33,446) 2	-	-	-
10	Outside Service	58,374	(58,374) 3	-	-	-
11	Contractual Services-Billing	-	2,250 2	2,250	-	2,250
12	Contractual Services-Professional	-	58,374 3	58,374	-	58,374
13	Contractual Services - Testing	3,596	486 4	4,082	-	4,082
14	Contractual Services-Other	-	3,871 1	3,871	-	3,871
15	Rents	2,200	-	2,200	-	2,200
16	Transportation Expenses	6,073	-	6,073	-	6,073
17	Insurance - General Liability	5,165	-	5,165	-	5,165
18	Insurance - Health and Life	3,170	-	3,170	-	3,170
19	Reg. Comm. Exp.	63	-	63	-	63
20	Reg. Comm. Exp. - Rate Case	9,230	(3,692) 5	5,538	-	5,538
21	Miscellaneous Expense	-	3,926 2	3,926	-	3,926
22	Bad Debt Expense	-	-	-	-	-
23	Depreciation Expense	54,654	(765) 6	53,889	-	53,889
24	Taxes Other Than Income	1,229	-	1,229	-	1,229
25	Property Taxes	12,486	(930) 7	11,556	485	12,042
26	Income Taxes	4,610	-	4,610	5,802	10,412
27	Interest Expense - Customer Deposits	306	-	306	-	306
28	Total Operating Expenses	\$ 229,124	\$ (34,056)	\$ 195,068	\$ 6,288	\$ 201,355
29	Operating Income (Loss)	\$ 25,965		\$ 60,021		\$ 85,876
OTHER INCOME(EXPENSE)						
30	Interest Income	\$ 6	\$ -	\$ 6	\$ -	\$ 6
31	Non-Utility Income	-	-	-	-	-
32	Non-Utility Expense	-	-	-	-	-
33	Interest Expense	(1,717)	(27,270) 3	(28,987)	-	(28,987)
34	Total Other Income(Expense)	\$ (1,711)	\$ (27,270)	\$ (28,981)	\$ -	\$ (28,981)
35	Net Income(Loss)	\$ 24,254		\$ 31,040		\$ 56,894

References:

- Column (A): Company Schedule C-1
- Column (B): Schedule PNT-12
- Column (C): Column (A) + Column (B)
- Column (D): Schedules PNT-1 and PNT-2
- Column (E): Column (C) + Column (D)

OPERATING INCOME ADJUSTMENT NO. 1 - MATERIALS AND SUPPLIES

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Materials and supplies	\$ 8,127	(5,756)	\$ 2,371
2	Contractual Service - Other	\$ -	3,871	\$ 3,871
3	Staff's Adjustments			
4	Removal of out-of test year expenses		\$ (1,885)	
5	Reclassification \$3,871 to Contractual Service - Other		(3,871)	
6	Adjustment to Materials and supplies		\$ (5,756)	
7	Out-Of Test Year Expenses			
8	Invoice No.	Cost		
9	1915018	\$ 207		
10	1916673	78		
11	20111225	50		
12	8117501-00	532		
13	1151	580		
14	Rodriguez- 675	24		
15	8117519-00	414		
16	Total	\$ 1,885		

References:

- Column A: Company Schedule C-2
- Column B: Testimony, schedule PNT 12
- Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 2 - RECLASSIFICATION OF OFFICE SUPPLIES & EXPENSES

LINE NO	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Office Supplies and Expenses	\$ 33,446	\$ (33,446)	\$ -
2	Interest Expense	\$ 1,717	\$ 27,270	\$ 28,987
3	Miscellaneous Expense	\$ -	\$ 3,926	\$ 3,926
4	Contractual Services- Billing	\$ -	\$ 2,250	\$ 2,250
5	Staff's Adjustments			
6	Reclassification of \$27,270 Office Supplies & Expenses to Interest Expense		\$ (27,270)	
7	Reclassification of \$2,598 Office Supplies & Expenses to Contractual Service-Billing		(2,250)	
8	Reclassification of \$3,926 Office Supplies & Expenses to Miscellaneous Expense		(3,926)	
			\$ (33,446)	

References:

- Column A: Company Schedule C-2
- Column B: Testimony, schedule PNT 12
- Column C: Column [A] + Column [B]

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Schedule PNT-15

OPERATING INCOME ADJUSTMENT NO. 3 - RECLASSIFICATION OF OUTSIDE SERVICES

LINE NO	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Outside Service	\$ 58,374	\$ (58,374)	\$ -
2	Contractual Services-Professional	\$ -	\$ 58,374	\$ 58,374
3	Staff's Adjustments			
4	Reclassification of \$58,374 Outside Services to Contractual Services- Professional to be in compliance with NARUC Uniform System of Accounts.			\$ (58,374)

References:

Column A: Company Schedule C-2
Column B: Testimony, schedule PNT 12
Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 4 - WATER TESTING

		[A]	[B]	[C]
LINE NO.	DESCRIPTION	COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Water testing	\$ 3,596	486	\$ 4,082
2	Staff's Adjustments			
3	Staff's recommended water testing expense from Engineering Report			\$ 4,082

References:

- Column A: Company Schedule C-2
- Column B: Testimony, schedule PNT 12
- Column C: Column [A] + Column [B]

Naco Water Company, LLC.
 Docket No. W-02860A-13-0399
 Test Year Ended December 31, 2012

Schedule PNT-17

OPERATING INCOME ADJUSTMENT NO. 5- RATE CASE EXPENSE

LINE NO.	DESCRIPTION	[A]	[B]	[C]
		COMPANY AS FILED	STAFF ADJUSTMENTS	STAFF AS ADJUSTED
1	Rate Case Expense	\$ 9,230	\$ (3,692)	\$ 5,538
2	Staff's calculation			
3	Rate case expense	\$ 27,690		
4	Normalization period in years	5		
5	Annual expense	\$ 5,538		

References:

- Column A: Company Schedule C-1 & E-2
- Column B: Testimony, schedule PNT 12
- Column C: Column [A] + Column [B]

OPERATING INCOME ADJUSTMENT NO. 6 - DEPRECIATION EXPENSE ON TEST YEAR PLANT

LINE NO.	Description	[A]	[B]	[C]	[D]	[E]
		Plant in Services Per Staff	NonDepreciable or Fully Depreciated Plant	Depreciable Plant (Col A - Col B)	Depreciation Rate	Depreciation Expense (Col C x Col D)
1	302 Intangibles	\$ 198	\$ 198	\$ -	0.00%	\$ -
2	303 Land and Land Rights	4,345	4,345	-	0.00%	-
3	304 Structures and Improvements	10,101	-	10,101	3.33%	336
4	306 Lake, River, and Other Intakes	-	-	-	2.50%	-
5	307 Wells and Springs	455,999	-	455,999	3.33%	15,185
6	309 Supply Mains	-	-	-	2.00%	-
7	310 Power Generation Equipment	-	-	-	5.00%	-
8	311 Pumping Equipment	224,032	132,559	91,473	12.50%	11,434
9	320 Water Treatment Equipment	1,824	-	1,824	3.33%	61
10	330 Distribution Reservoirs and Standpipes	127,321	-	127,321	2.22%	2,827
	330.1 Storage Tanks	303,227	-	303,227	2.22%	6,732
11	330.2 Pressure Tanks	11,157	-	11,157	5.00%	558
12	331 Transmission and Distribution Mains	1,686,089	-	1,686,089	2.00%	33,722
13	333 Services	361,890	-	361,890	3.33%	12,051
14	334 Meters and Meter Installations	83,900	28,060	55,840	8.33%	4,651
15	335 Hydrants	34,717	-	34,717	2.00%	694
16	336 Backflow Prevention Devices	-	-	-	6.67%	-
17	339 Other Plant and Miscellaneous Equipment	-	-	-	6.67%	-
18	340 Office Furniture and Equipment	9,202	9,202	-	6.67%	-
19	341 Transportation Equipment	20,298	20,298	-	20.00%	-
20	340.1 Computers and Software	-	-	-	20.00%	-
21	343 Tools, Shop, and Garage Equipment	128	-	128	5.00%	6
22	344 Laboratory Equipment	-	-	-	10.00%	-
23	345 Power Operated Equipment	2,818	2,818	-	5.00%	-
24	346 Communication Equipment	-	-	-	10.00%	-
25	347 Miscellaneous Equipment	-	-	-	10.00%	-
26	348 Other Tangible Equipment	-	-	-	10.00%	-
27	Total Plant	\$ 3,337,245	\$ 197,480	\$ 3,139,765		\$ 88,257
28	Composite Depreciation Rate (Depr Exp / Depreciable Plant):		2.81%			
29	CIAC:		1,222,655			
30	Amortization of CIAC (Line 28 x Line 29):	\$	34,368			
31	Depreciation Expense Before Amortization of CIAC:	\$	88,257			
32	Less Amortization of CIAC:		34,368			
33	Test Year Depreciation Expense - Staff:		53,889			
34	Depreciation Expense - Company:		54,654			
35	Staff's Total Adjustment:	\$	(765)			

Column [A]: Schedule PNT-4
Column [C]: Column [A] - Column [B]
Column [E]: Column [C] x Column [D]

OPERATING INCOME ADJUSTMENT NO. 7- PROPERTY TAX EXPENSE

LINE NO.	Property Tax Calculation	[A] STAFF AS ADJUSTED	[B] STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues	\$ 255,089	\$ 255,089
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	510,178	510,178
4	Staff Recommended Revenue, Per Schedule PNT-1	255,089	287,231
5	Subtotal (Line 4 + Line 5)	765,267	797,409
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	255,089	265,803
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	510,178	531,606
10	Plus: 10% of CWIP -	-	-
11	Less: Net Book Value of Licensed Vehicles	-	-
12	Full Cash Value (Line 9 + Line 10 - Line 11)	510,178	531,606
13	Assessment Ratio	18.5%	18.5%
14	Assessment Value (Line 12 * Line 13)	94,383	98,347
15	Composite Property Tax Rate	12.2439%	12.2439%
16	Staff Test Year Adjusted Property Tax (Line 14 * Line 15)	\$ 11,556	
17	Company Proposed Property Tax	12,486	
18	Staff Test Year Adjustment (Line 16-Line 17)	\$ (930)	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 12,042
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		11,556
21	Increase in Property Tax Expense Due to Increase in Revenue Requirement		485
22	Increase to Property Tax Expense		\$ 485
23	Increase in Revenue Requirement		\$ 32,142
24	Increase to Property Tax per Dollar Increase in Revenue (Line 19/Line 20)		1.510081%

OPERATING INCOME ADJUSTMENT NO. 8- INCOME TAXES

LINE NO.	DESCRIPTION	Test Year		Staff's Recommendation	
		Corporate Tax Calculation	Married Filing Jointly Personal Tax Calculation	Corporate Tax Calculation	Married Filing Jointly Personal Tax Calculation
<i>Calculation of Income Tax:</i>					
1	Revenue	\$ 255,089	\$ 255,089	\$ 287,231	\$ 287,231
2	Operating Expenses Excluding Income Taxes	190,458	190,458	190,943	190,943
3	Synchronized Interest (L16)	31,558	31,558	31,558	31,558
4	Arizona Taxable Income (L1 - L2 - L3)	\$ 33,073	\$ 33,073	\$ 64,730	\$ 64,730
5	Arizona State Income Tax Rate	6.50%	2.880%	6.50%	3.36%
6	Arizona Income Tax	2,150	895	4,207	1,877
7	Federal Taxable Income (L4 - L6)	\$ 30,923	\$ 32,179	\$ 60,522	\$ 62,853
8	Federal Tax	4,638	3,934	9,078	8,535
9	Combined Federal and State Income Tax (L6 + L8)	\$ 6,788	\$ 4,829	\$ 13,286	\$ 10,412
10	Income Taxes- Company	\$ 4,610			
11	Income Taxes-Staff	4,829			
12	Difference	\$ 219			
13	Staff does not make any adjustments to income tax expenses because there is no significant				
14	difference between Company and Staff's calculation.				
15	<i>Calculation of Interest Synchronization:</i>				
16	Rate Base	\$ 1,394,639			
17	Weighted Average Cost of Debt	2.26%			
18	Synchronized Interest (L14 x L15)	\$ 31,558			

Cash Flow Analysis

Line No.		TEST YEAR COMPANY AS FILED	TEST YEAR AS <u>ADJUSTED</u>	COMPANY <u>PROPOSED</u>	STAFF <u>RECOMMENDED</u>
1	Operating Revenue:	\$ 255,089	\$ 255,089	\$ 305,172	\$ 287,231
2	Operating Expenses:				
3	Operation and Maintenance	156,145	123,784	156,145	123,784
4	Depreciation	54,654	53,889	54,654	53,889
5	Property & Other Taxes	13,715	12,785	14,533	13,271
6	Income Tax	4,610	4,610	12,477	10,412
7	Total Operating Expense	<u>\$ 229,124</u>	<u>\$ 195,068</u>	<u>\$ 237,809</u>	<u>\$ 201,355</u>
8	Operating Income	\$ 25,965	\$ 60,021	\$ 67,363	\$ 85,876
9	Interest Expense	\$ 1,711	\$ 28,986	\$ 1,711	\$ 28,986
10	Principal Repayment	\$ 70,778	\$ 70,778	\$ 70,778	\$ 70,778
11	Free Cash Flow	\$ 8,130	\$ 14,146	\$ 49,528	\$ 40,000
12	DSC				
13	Before Tax :	1.18	1.19	1.86	1.51
14	After Tax :	1.11	1.14	1.68	1.40

Monthly Usage Charge	Present Rates	Company Proposed Rates	Staff Recommended Rates
<u>Meter Size (All Classes):</u>			
5/8 x 3/4 Inch	\$ 32.16	\$ 36.81	\$ 34.00
3/4 Inch	32.16	36.81	46.00
1 Inch	62.50	71.54	66.00
1 1/2 Inch	82.50	94.43	86.00
2 Inch	96.20	110.11	110.00
3 Inch	180.00	206.03	200.00
4 Inch	285.00	326.21	320.00
6 Inch	600.00	686.75	650.00
<u>Commodity Charge - Per 1,000 Gallons</u>			
<u>5/8" x 3/4" Meter (Residential)</u>			
First 3,000 gallons	4.54	5.72	N/A
3,001 to 9,000 gallons	6.82	8.59	N/A
Over 9,000 gallons	8.19	10.32	N/A
First 3,000 gallons	N/A	N/A	5.54
3,001 to 10,000 gallons	N/A	N/A	7.99
Over 10,000 gallons	N/A	N/A	10.11
<u>5/8" x 3/4" Meter (Commercial)</u>			
First 9,000 gallons	6.82	N/A	N/A
Over 9,000 gallons	8.19	N/A	N/A
First 3,000 gallons	N/A	5.72	N/A
3,001 to 9,000 gallons	N/A	8.59	N/A
Over 9,000 gallons	N/A	10.32	N/A
First 10,000 gallons	N/A	N/A	7.99
Over 10,000 gallons	N/A	N/A	10.11
<u>3/4" Meter (Residential)</u>			
First 3,000 gallons	4.54	5.72	N/A
3,001 to 9,000 gallons	6.82	8.59	N/A
Over 9,000 gallons	8.19	10.32	N/A
First 3,000 gallons	N/A	N/A	5.54
3,001 to 10,000 gallons	N/A	N/A	7.99
Over 10,000 gallons	N/A	N/A	10.11
<u>3/4" Meter (Commercial)</u>			
First 9,000 gallons	6.82	N/A	N/A
Over 9,000 gallons	8.19	N/A	N/A
First 3,000 gallons	N/A	5.72	N/A
3,001 to 9,000 gallons	N/A	8.59	N/A
Over 9,000 gallons	N/A	10.32	N/A
First 10,000 gallons	N/A	N/A	7.99
Over 10,000 gallons	N/A	N/A	10.11
<u>1" Meter (All Classes)</u>			
First 18,000 gallons	6.82	N/A	7.99
Over 18,000 gallons	8.19	N/A	10.11
First 30,000 gallons	N/A	8.59	N/A
Over 30,000 gallons	N/A	10.32	N/A
<u>1 1/2" Meter (All Classes)</u>			
First 25,000 gallons	N/A	N/A	7.99
Over 25,000 gallons	N/A	N/A	10.11
First 30,000 gallons	6.82	8.59	N/A
Over 30,000 gallons	8.19	10.32	N/A

RATES DESIGN

2" Meter (All Classes)			
First 30,000 gallons	N/A	8.59	N/A
Over 30,000 gallons	N/A	10.32	N/A
First 35,000 gallons	6.82	N/A	7.99
Over 35,000 gallons	8.19	N/A	10.11
3" Meter (All Classes)			
First 30,000 gallons	N/A	8.59	N/A
Over 30,000 gallons	N/A	10.32	N/A
First 75,000 gallons	N/A	N/A	7.99
Over 75,000 gallons	N/A	N/A	10.11
First 93,000 gallons	6.82	N/A	N/A
Over 93,000 gallons	8.19	N/A	N/A
4" Meter (All Classes)			
First 30,000 gallons	N/A	8.59	N/A
Over 30,000 gallons	N/A	10.32	N/A
First 130,000 gallons	N/A	N/A	7.99
Over 130,000 gallons	N/A	N/A	10.11
First 150,000 gallons	6.82	N/A	N/A
Over 150,000 gallons	8.19	N/A	N/A
6" Meter (All Classes)			
First 30,000 gallons	N/A	8.59	N/A
Over 30,000 gallons	N/A	10.32	N/A
First 270,000 gallons	N/A	N/A	7.99
Over 270,000 gallons	N/A	N/A	10.11
First 300,000 gallons	6.82	N/A	N/A
Over 300,000 gallons	8.19	N/A	N/A

Other Service Charges

Establishment	\$ 30.00	\$ 30.00	\$ 30.00
Establishment (After Hours)	\$ 40.00	N/A	N/A
Reestablishment (within 12 months)	(a)	(a)	(a)
Reestablishment (within 12 months after hours)	(b)	N/A	N/A
Reconnection (Delinquent)	\$ 30.00	\$ 30.00	\$ 30.00
Reconnection (Delinquent) - After Hours	\$ 30.00	N/A	N/A
Meter Test (If Correct)	\$ 30.00	\$ 30.00	\$ 30.00
Deposit	(c)	(c)	(c)
Deposit Interest	(c)	(c)	(c)
NSF Check	\$ 20.00	20.00	\$ 20.00
Deferred Payment (per month)	1.5% per month	1.5% per month	1.5% per month
Late Payment Fee (per month)	1.5% per month	1.5% per month	1.5% per month
Moving Customer Meter (Customer Request)	At Cost	At Cost	At Cost
After Hour Service Charge (at customers request)	N/A	\$ 35.00	\$ 35.00

(a) Number of months off the system times the monthly minimum per A.A.C. R14-2-403(D).

(b) Number of months off the system times the monthly minimum per A.A.C.

(c) Per Rule R14-2-403(B).

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

Service and Meter Installation Charges

Service Size	Total Present Charge	Proposed Service Line Charge	Proposed Meter Insallation Charge	Total Proposed Charge	Recommended Service Line Charge	Recommended Meter Insallation Charge	Total Recommended Charge
5/8 x 3/4 Inch	\$ 450.00	\$ 490.00	\$ 131.50	\$ 621.50	\$ 490.00	\$ 131.00	\$ 621.00
3/4 Inch	475.00	490.00	232.50	722.50	490.00	232.50	722.50
1 Inch	550.00	547.00	293.00	840.00	547.00	293.00	840.00
1 1/2 Inch	775.00	609.00	505.50	1,114.50	609.50	505.50	1,115.00
2 Inch	1,375.00	927.00	1,030.50	1,957.50	927.00	1,030.50	1,957.50
3 Inch	1,975.00	1,171.00	1,661.50	2,832.50	1,171.00	1,661.50	2,832.50
4 Inch	3,040.00	1,661.00	2,646.50	4,307.50	1,661.00	2,646.50	4,307.50
6 Inch	\$ 5,635.00	\$ 2,478.50	\$ 5,025.50	\$ 7,504.00	\$ 2,478.50	\$ 5,025.50	\$ 7,504.00

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

Average Number of Customers: 288

<u>Company Proposed</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	4,808	\$58.11	\$69.50	\$11.39	19.60%
Median Usage	3,990	\$52.53	\$62.48	\$9.94	18.93%
<u>Staff Proposed</u>					
Average Usage	4,808	\$58.11	\$65.07	\$6.96	11.97%
Median Usage	3,990	\$52.53	\$58.53	\$6.00	11.42%

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

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$32.16	\$36.81	14.46%	\$34.00	5.72%
1,000	36.70	42.53	15.89%	39.54	7.74%
2,000	41.24	48.25	17.00%	45.08	9.31%
3,000	45.78	53.97	17.89%	50.62	10.57%
4,000	52.60	62.56	18.94%	58.61	11.43%
5,000	59.42	71.15	19.74%	66.60	12.08%
6,000	66.24	79.74	20.38%	74.59	12.61%
7,000	73.06	88.33	20.90%	82.58	13.03%
8,000	79.88	96.92	21.33%	90.57	13.38%
9,000	86.70	105.51	21.70%	98.56	13.68%
10,000	94.89	115.83	22.07%	106.55	12.29%
15,000	135.84	167.43	23.26%	157.00	15.58%
20,000	176.79	219.03	23.89%	207.45	17.34%
25,000	217.74	270.63	24.29%	257.90	18.44%
50,000	422.49	528.63	25.12%	510.15	20.75%
75,000	627.24	786.63	25.41%	762.40	21.55%
100,000	831.99	1,044.63	25.56%	1,014.65	21.95%
125,000	1,036.74	1,302.63	25.65%	1,266.90	22.20%
150,000	1,241.49	1,560.63	25.71%	1,519.15	22.37%
175,000	1,446.24	1,818.63	25.75%	1,771.40	22.48%
200,000	1,650.99	2,076.63	25.78%	2,023.65	22.57%

BEFORE THE ARIZONA CORPORATION COMMISSION

BOB STUMP

Chairman

GARY PIERCE

Commissioner

BRENDA BURNS

Commissioner

BOB BURNS

Commissioner

SUSAN BITTER SMITH

Commissioner

IN THE MATTER OF THE APPLICATION)
OF APPLICATION OF NACO WATER)
COMPANY, LLC FOR A PERMANENT)
INCREASE TO ITS WATER RATES)
_____)

DOCKET NO. W-02860A-13-0399

DIRECT

TESTIMONY

OF

DOROTHY HAINS, P. E.

UTILITIES ENGINEER

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

JULY 11, 2014

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RECOMMENDATIONS AND CONCLUSIONS	4

EXHIBITS

Engineering Report for Naco Water Company, LLC	DMH-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, Phoenix,
4 Arizona 85007.

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

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

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

11 A. I have been employed by the Commission since 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 cost
16 studies, investigative reports, interpreting rules and regulations, and to suggest corrective
17 action and provide technical recommendations on water and wastewater system deficiencies.
18 I also provide written and oral testimony in rate cases and other cases before the
19 Commission.

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

22 A. I have analyzed more than 90 companies fulfilling these various responsibilities for
23 Commission Utilities Division Staff ("Staff").

24
25 **Q. Have you previously testified before this Commission?**

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

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

2 A. I graduated from the University of Alabama in Birmingham in 1987 with a Bachelor of
3 Science 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 ("ADEQ") for ten years. Prior to that time, I
8 was an 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 have been a registered Civil Engineer in Arizona since 1990. I am a member of the
13 American Society of Civil Engineering, American Water Works Association and Arizona
14 Water Association.

15
16 **PURPOSE OF TESTIMONY**

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

18 A. My assignment was to provide Staff's engineering evaluations for the subject Naco Water
19 Company, LLC ("Naco" or "Company") rate proceeding.

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

22 A. To present the findings of Staff's engineering evaluation of the operations for Naco. The
23 findings are contained in the Engineering Report that I have prepared for this proceeding.
24 The report is included as Exhibit DMH-1 to this pre-filed testimony.

25

1 **ENGINEERING REPORT**

2 **Q. Would you briefly describe what was involved in preparing your Engineering Report**
3 **for this rate proceeding?**

4 A. After reviewing the application for Naco, I physically inspected the water systems to evaluate
5 the operation and determine if any plant items were not used and useful. I contacted ADEQ
6 to determine if the water systems were in compliance with the Safe Drinking Water Act water
7 quality requirements. I also contacted the Arizona Department of Water Resources
8 ("ADWR") to determine if the Company was in compliance with ADWR's requirements
9 governing water providers and/or community water systems. After I obtained information
10 from Naco regarding plant improvements, permits, chemical testing expenses and water
11 usage data, I analyzed that information. Based on all the above, I prepared the attached
12 Engineering Report for Naco.

13
14 **Q. Please describe the information contained in your Engineering Report for Naco.**

15 A. The Report is divided into three general sections: 1) *Executive Summary*, 2) *Engineering Report*
16 *Discussion*, and 3) *Engineering Report Exhibits*. *The Engineering Report Discussion* is further divided
17 into eleven subsections: A) Purpose of Report; B) Location of the Company; C) Description
18 of System; D) Water Usage; E) Non-Account Water; F) Growth Projection; G) ADEQ
19 Compliance; H) ADWR Compliance; I) ACC compliance; J) Water Testing Expenses; K)
20 Depreciation Rates; and L) Other Issues. These subsections provide information about the
21 water systems serving Naco.

22
23 **RECOMMENDATIONS AND CONCLUSIONS**

24 **Q. What are Staff's conclusions and recommendations regarding the operations of Naco?**

25 A. Staff's conclusions and recommendations regarding the Naco's operations are listed below.
26

1 **Conclusions:**

2 I. A check of the Commission's Compliance Section database dated January 27, 2014,
3 indicates there are no delinquent compliance items for Naco.

4
5 II. Staff received a compliance status report from ADEQ dated December 20, 2013, in
6 which ADEQ stated that the Company's Systems (PWS No. 02-024 and PWS No. 02-
7 112) have no major deficiencies and are delivering water that meets water quality
8 standards required by 40 CFR 141 (National Primary Drinking Water Regulations)
9 and Arizona Administrative Code, Title 18, Chapter 4. ADEQ also reported that
10 PWS No. 02-133 is "inactive" because it serves less than 15 connections. This system
11 has since been interconnected with and made part of PWS No. 02-024.

12
13 III. The Company is not located in an ADWR Active Management Area. According to
14 an ADWR compliance status report dated November 29, 2013, the Company is
15 currently compliant with ADWR requirements governing water providers and/or
16 community water systems.

17
18 IV. Naco has approved Cross Connection and Curtailment tariffs on file with the
19 Commission.

20
21 V. Naco water systems have adequate production and storage capacities to support the
22 existing customer base and reasonable growth.

23
24 VI. The following plant items were permanently removed from service in March 2013:
25 Well No. 3, one 7,500 gallon storage tank, one 750 gallon pressure tank and one 5-HP
26 booster pump. During its inspection, Staff observed that the plant items listed were

1 not in service and, therefore, no longer used and useful to the Company's provision
2 of service.

3
4 VII. New plant items at Site No. 3 and Well No. 6 were completed in March 2013, after
5 the test year. Staff observed that the plant items listed in Table 5 in Report DMH-1
6 were in service and were used and useful to the Company's provision of service at the
7 time of Staff's inspection.

8
9 **Recommendations:**

10 I. Staff recommends annual water testing costs of \$4,082 for Naco.

11
12 II. Staff recommends the depreciation rates by individual National Association of
13 Regulatory Utility Commissioners ("NARUC") category, as delineated in Figure 5 in
14 Report DMH-1.

15
16 III. Staff recommends meter and service line installation charges listed under the columns
17 labeled "Staff Recommended" in Table 4 in Report DMH-1.

18
19 IV. The calculated water loss in PWS No. 02-024 was 12.33 percent during the test year
20 which exceeds Staff's recommended 10 percent threshold. On December 12, 2013
21 the Company docketed its water loss report. The Company combined PWS No. 02-
22 024 and PWS No. 02-133 in March 2013, the calculated water loss in 2013 was 14.96
23 percent, which exceeds Staff's recommended 10 percent threshold. Staff
24 recommends that the Company implement its water loss plan immediately. Staff
25 further recommends that the Company be required to file water loss reduction
26 progress reports each January and July with Docket Control, as a compliance item in

1 this docket. The progress reports should cover the previous six months. Staff further
2 recommends that the first water loss progress report be filed in July, 2015.

3
4 V. The calculated water loss in PWS No. 02-112 was negative 15.08 percent during the
5 test year. A negative water loss is impossible. However, based on the 2013 Annual
6 Report, PWS No. 02-112 system pumped a total of 3,626,000 gallons of water and
7 sold a total of 3,506,000 gallons of water which equates to a water loss of 3.31 percent
8 in 2013 which is within acceptable limits. Staff recommends that the Company
9 monitor the PWS No. 02-112 system closely and take action to ensure the water loss
10 remains below 10 percent. Staff further recommends that the Company be required to
11 coordinate the reading of its well meters and individual customer meters on a monthly
12 basis and report this data in its future Annual Reports beginning with 2014 Annual
13 Report filed in 2015. If the reported water loss is greater than 10 percent, the
14 Company shall prepare a report containing a detailed analysis and plan to reduce
15 water loss to 10 percent or less. If the Company believes it is not cost effective to
16 reduce the water loss to less than 10 percent, it should submit a detailed cost benefit
17 analysis to support its opinion. In no case shall the Company allow water loss to be
18 greater than 15 percent. The water loss reduction report or the detailed analysis,
19 whichever is submitted, shall be docketed as a compliance item before the Company
20 files its next rate increase application. Any future rate case filed by the Company may
21 be found insufficient if these items are not properly submitted.

22 VI. Staff recommends that Naco file with Docket Control, as a compliance item in this
23 docket and within 90 days of the effective date of a decision in this proceeding, at
24 least five BMPs in the form of tariffs that substantially conform to the templates
25 created by Staff for the Commission's review and consideration. Staff further
26 recommends that Naco use the templates created by Staff that are available on the

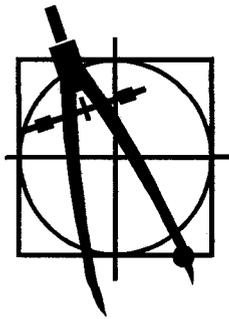
1 Commission's website at <http://www.azcc.gov/Divisions/Utilities/forms.asp>. A
2 maximum of two BMPs may come from the "Public Awareness/Public Relations" or
3 "Education and Training" categories. The Company may request cost recovery of the
4 actual costs associated with the BMPs implemented in its next general rate
5 application.

6

7 **Q. Does this conclude your Direct Testimony?**

8 A. Yes, it does.

9



Engineering Report
Naco Water Company, LLC
Prepared By
Dorothy Hains, P. E.
Docket No. W-02860A-13-0399
(Rates)

July 11, 2014

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**ENGINEERING REPORT
NACO WATER COMPANY, LLC
DOCKET NO. W-02860A-13-0399 (RATES)**

A. PURPOSE OF REPORT

This report was prepared in response to the application filed by Naco Water Company, LLC (“Naco” or “Company”) with the Arizona Corporation Commission (“ACC” or “the Commission”) to increase its water rates. The ACC Utilities Division Staff (“Staff”) engineering review and analysis of the subject application is presented in this report.

An inspection of the Company’s water systems was conducted by Dorothy Hains, Staff Engineer, accompanied by representatives from the Company, Keith Dojanquez (Southwest Utility Management Inc.’s Manager & Operator), Gary Newman (Southwest Utility Management Inc.’s On-site Manager) and Jose Martinez (on-site Field Staff for Southwest Utility Management, Inc.) on March 25, 2014.

B. LOCATION OF THE COMPANY

The Company is located approximately 5 miles west of the Town of Bisbee Junction in southern Cochise County, adjacent to the Mexican border. Figure 1 describes the Certificate of Convenience and Necessity (“CC&N”) area of Naco, and Figure 2 describes the location of Naco. The Company serves an area approximately two and one-half square miles in size that includes all or portions of Sections 10, 11, 13, 14 and 18 of Township 24 North, Range 24 West.

C. DESCRIPTION OF SYSTEM

I. System Description

The Company owns and operates three water systems: Arizona Department of Environmental Quality (“ADEQ”) Public Water System (“PWS”) Identification No. 02-024 (referred to as the “Main” or “Township System”), PWS No. 02-112 (referred to as “Well No. 4” or “Bisbee System”) and PWS No. 02-133 (referred to as “Site No. 3” or “Bisbee Highway System”).

PWS No. 02-024 System

This system consists of two wells that have a combined 302 gallons per minute (“GPM”) production capacity, a combined 170,000 gallon storage capacity, two pressure tanks, two booster pump stations and a distribution system serving approximately 250 customers.

Table 1A Plant Data in Main System (PWS No. 02-024)

Active Drinking Water Wells

ADWR No.	Year Drilled	Casing Size (inches)	Well Depth (ft)	Well Meter Size (inches)	Pump (HP)	Pump Yield (GPM)	Location
55-575700 (Well No.6)	1999	10	410	4	15	182	2045 W Newell Rd, Naco
55-562944 (Well No.2)	1997	8	312	3	10	120	3769 Giesler Ave, Naco

Active Storage, Pumping

Location	Structure or equipment	Capacity
2045 W Newell Rd, Naco	Pressure tank	One 5,000 gallon tank
	Storage tanks	One 50,000 gallon One 100,000 gallon
	Booster pump station	Two 25-HP booster pumps
3769 Giesler Ave, Naco	Storage Tank	One 20,000 gallon tank
	Pressure Tank	One 2,000 gallon tank
	Booster pump station	one 5-HP & one 7.5-HP booster pumps

Distribution Mains

Diameter (inches)	Material	Length (feet)
2	polyvinyl chloride ("PVC")/Galvanized Steel	1,470
3		
4	PVC	8,700
5		
6	PVC	13,240
8	PVC	330
10		
12		

Meters

Size (inches)	Quantity
$\frac{5}{8} \times \frac{3}{4}$	276
$\frac{3}{4}$	1
1	4
1½	1
2	9

PWS No. 02-112 System

This system consists of one well that has a 20 GPM production capacity, a 20,000 gallon storage tank, one pressure tank, one booster pump station and a distribution system serving approximately 60 customers.

Table 1B Plant Data in Bisbee System (PWS No. 02-112)

Active Drinking Water Well

ADWR No.	Year Drilled	Casing Size (inches)	Well Depth (ft)	Well Meter Size (inches)	Pump (HP)	Pump Yield (GPM)	Location
55-51849 (Well No. 4)	1995	8	800	4	5	20	In Bisbee Junction near Purdy Lane

Active Storage, Pumping

Location	Structure or equipment	Capacity
In Bisbee Junction near Purdy Lane	Pressure tank	One 2,000 gallon tank
	Booster pump station	Two 5-HP booster pumps
	Storage Tank	One 20,000 gallon tank

Distribution Mains

Diameter (inches)	Material	Length (feet)
2	polyvinyl chloride ("PVC")	5,500
3		
4	PVC-900	5,985
6		
8		
12		
2	PVC - 80	1,755
1	PVC/Galvanized Steel	6,180

Meters

Size (inches)	Quantity
$\frac{5}{8} \times \frac{3}{4}$	72
$\frac{3}{4}$	
1	1
1½	
2	

PWS No. 02-133 System

This system, which has been interconnected with PWS No. 02-024 since March 2013, consists of one 20,000 gallon storage tank, one pressure tank, one booster pump station and a distribution system to serve approximately 12 customers.

Table 1C Plant Data in Site No. 3 (PWS No. 02-133)

Active Storage, Pumping

Location	Structure or equipment	Capacity
S Naco Highway between W Fairway View Rd & W Mule Deer St.	Pressure tank	One 2,000 gallon tank
	Booster pump station	Two 5-HP booster pumps
	Storage Tank	One 20,000 gallon tank

Distribution Mains

Diameter (inches)	Material	Length (feet)
2	polyvinyl chloride ("PVC")/Galvanized steel	790
3	Acrylonitrile Butadiene Styrene ("ABC")	1,170
4		
6		
8		
10		
12		
2	PVC	110

Meters

Size (inches)	Quantity
$\frac{5}{8} \times \frac{3}{4}$	12 ¹
$\frac{3}{4}$	
1	
1½	
2	

Notes: 1. In the Application Naco reported that PWS No. 02-133 owned 11 meters. However, based on the test year water usage data, 12 metered customers were in the system. Therefore, Staff corrected the number of meters based on the water usage data.

Abandoned Well

ADWR No.	Year Drilled	Year abandoned	Casing Size (inches)	Well Depth (ft)	Well Meter Size (inches)	Pump (HP)	Pump Yield (GPM)	Location
55-203321 (Well No. 3)	2004	2013	8	252	2	7.5	35	S Naco Highway between W Fairway View Ave & W Mule Deer St.

Additional Plant Items Removed From Service

Location	Structure or equipment	Capacity
S Naco Highway between W Fairway View Rd & W Mule Deer St.	Pressure Tank	One 750 gal
	Storage Tank	One 7,500 gallon
	Booster pump station	One 5-HP pump
	Chlorine injection device	One unit
	fence	unknown
	Control panel	one

Exhibits 3A and 3B are schematic drawings of the water system.

II. System Analysis

PWS No. 02-024 and PWS No. 02-133 Systems

Well No. 3 which served the 02-133 system was abandoned in March 2013.¹ The 02-024 system has been providing water to the 02-133 system since Well No. 3 was abandoned. The 02-024 system has adequate production capacity to serve the customers of both systems. Both systems have adequate storage capacity to serve their respective customer bases and reasonable growth.

PWS No. 02-112 System

The 02-112 system has adequate production and storage capacities to serve its present customer base and reasonable growth. However, the Company has reported that the system's only production well, Well No. 4, has been affected by nearby copper mine activities and Well No. 4 production has declined by more than 50 percent since the Company's last rate case in 2006. The Company may want to conduct a hydrological/engineering evaluation of Well No. 4. If this is done, the Company should file this hydrological/engineering evaluation with Docket Control.

¹ Staff understands this well was abandoned through an agreement with Freeport McMoRan.

D. WATER USAGE

PWS No. 02-024 System

Tables 2A – 2C summarize water usage in the Company’s service area. Figures 4A – 4E are graphs that show the Company’s water consumption data in gallons per day (“GPD”) per connection in the test year.

Table 2A Water Usage in Main System (PWS No. 02-024)

Month	Number of Customers	Water Sold (in gallons)	Water pumped (in gallons)	Water purchased (in gallons)	Daily Average (in gpd/customer)
Jan 12	244	1,091,000	1,162,000	0	144
Feb 12	248	1,337,000	1,348,000	0	193
Mar 12	246	1,075,000	1,349,000	0	141
Apr 12	248	1,253,000	1,427,000	0	168
May 12	245	1,321,000	1,512,000	0	174
Jun 12	246	1,652,000	1,887,000	0	224
Jul 12	244	1,340,000	1,639,000	0	177
Aug 12	240	1,065,000	1,135,000	0	143
Sep 12	244	1,134,000	1,285,000	0	155
Oct 12	244	1,307,000	1,563,000	0	173
Nov 12	245	1,168,000	1,336,000	0	159
Dec 12	244	1,273,000	1,519,000	0	168
total		15,016,000	17,162,000	0	
Average					168

Based on information provided by the Company, during the test year the Company experienced an overall daily average use of 168 GPD per customer, a high use of 224 GPD per customer, and a low use of 141 GPD per customer. The highest total monthly use occurred in June when a total of 1,652,000 gallons were sold to 246 customers. The lowest total monthly use occurred in March when 1,075,000 gallons were sold to 246 customers.

PWS No. 02-112 System

Table 2B Water Usage in Bisbee System (PWS No. 02-112)

Month	Number of Customers	Water Sold (in gallons)	Water pumped (in gallons)	Water purchased (in gallons)	Daily Average (in gpd/customer)
Jan 12	57	245,000	240,000	0	139
Feb 12	59	235,000	177,000	0	142
Mar 12	60	241,000	249,000	0	130
Apr 12	60	310,000	283,000	0	172

May 12	60	426,000	336,000	0	229
Jun 12	60	455,000	412,000	0	253
Jul 12	60	433,000	322,000	0	233
Aug 12	58	339,000	183,000	0	189
Sep 12	59	310,000	220,000	0	175
Oct 12	60	328,000	322,000	0	176
Nov 12	60	254,000	255,000	0	141
Dec 12	60	262,000	336,000	0	141
total		3,838,000	3,335,000	0	
Average					177

Based on information provided by the Company, during the test year the Company experienced an overall daily average use of 177 GPD per customer, a high use of 253 GPD per customer, and a low use of 130 GPD per customer. The highest total monthly use occurred in June when a total of 455,000 gallons were sold to 60 customers. The lowest total monthly use occurred in February when 235,000 gallons were sold to 59 customers.

PWS No. 02-133 System

Table 2C Water Usage in Site No. 3 (PWS No. 02-133)

Month	Number of Customers	Water Sold (in gallons)	Water pumped (in gallons)	Water purchased (in gallons)	Daily Average (in gpd/customer)
Jan 12	11	30,000	39,000	0	88
Feb 12	12	39,000	16,000	0	116
Mar 12	12	38,000	33,000	0	102
Apr 12	12	46,000	46,000	0	128
May 12	12	51,000	50,000	0	137
Jun 12	12	70,000	68,000	0	194
Jul 12	12	68,000	67,000	0	183
Aug 12	12	36,000	37,000	0	97
Sep 12	12	39,000	40,000	0	108
Oct 12	12	48,000	51,000	0	129
Nov 12	12	49,000	167,000	0	136
Dec 12	12	47,000	50,000	0	126
total		561,000	664,000	0	
Average					129

Based on information provided by the Company, during the test year the Company experienced an overall daily average use of 129 GPD per customer, a high use of 194 GPD per customer, and a low use of 88 GPD per customer. The highest total monthly use occurred in June when a total of 70,000 gallons were sold to 12 customers. The lowest total monthly use occurred in January when 30,000 gallons were sold to 11 customers.

E. NON-ACCOUNT WATER

Non-account water should be 10 percent or less and never more than 15 percent. It is important to be able to reconcile the difference between the 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, etc. In Decision No. 69393 the Commission ordered the Company to reduce the water loss to no more than 10 percent before the Company files its next rate case or submits a detailed cost analysis and explanation demonstrating why water loss reduction of 10 percent or less is not cost effective.

PWS No. 02-024 System

The calculated water loss during the test year was 12.33 percent, which exceeds Staff's recommended 10 percent threshold. On December 12, 2013, the Company docketed its water loss report per Commission Decision No. 69393, dated March 22, 2007. In the report, the Company determined that the water loss comes from aging pipes and service meters. The Company proposes (1) meter replacement program that will cost \$1,400 per year, and (2) a leak detection program that will cost approximately \$9,550². However, the Company has not requested any financing to accomplish the water loss reduction plan. Staff recommends that the Company implement its water loss plan immediately. Staff further recommends that the Company be required to file water loss reduction progress reports each January and July with Docket Control, as a compliance item in this docket. The progress reports should cover the previous six months. Staff further recommends that the first water loss progress report be filed in July, 2015.

PWS No. 02-112 System

The calculated water loss during the test year was negative 15.08 percent. A negative water loss is impossible. However, based on the 2013 Annual Report, the PWS No. 02-112 system pumped a total of 3,626,000 gallons of water and sold a total of 3,506,000 gallons of water; this equates to a water loss of 3.31 percent in 2013 which is within acceptable limits.

Staff recommends that the Company monitor the PWS No. 02-112 system closely and take action to ensure the water loss remains below 10 percent. Staff further recommends that the Company be required to coordinate the reading of its well meters and individual customer meters on a monthly basis and report this data in its future Annual Reports beginning with the 2014 Annual Report filed in 2015. If the reported water loss is greater than 10 percent, the Company shall prepare a report containing a detailed analysis and plan to reduce water loss to 10 percent or less. If the Company believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall the Company allow water loss to be greater than 15 percent. The water loss reduction report or the detailed analysis, whichever is submitted, shall be docketed as a compliance item before the Company files its next rate increase application. Any future rate case filed by the Company may be found insufficient if these items are not properly submitted.

² The Company estimates that it will need 5-7 days labor work to investigate a 2.5 mile area; to do so the Company will need a fund of \$1,250 per day cost for labor and equipment rental, etc. and additional \$800 for a mobilization charge fee.

PWS No. 02-133 System

The calculated water loss during the test year for PWS No. 02-133 was negative 1.81 percent. A negative water loss is impossible. PWS No. 02-133 was interconnected to PWS No. 02-024 in March 2013. (See the discussion below.)

PWS No. 02-024 / PWS No. 02-133 Combined

The Company combined PWS No. 02-024 and PWS No. 02-133 in March 2013, the calculated water loss in 2013 was 14.96 percent, which exceeds Staff's recommended 10 percent threshold.³

Table 2D Water Usage in Main System (PWS No. 02-024 and PWS No. 02-133 combined)

Month	Number of Customers	Water Sold (in gallons)	Water pumped (in gallons)	Water purchased (in gallons)	Authorized Non-billable water (in gal)	Daily Average (in gpd/customer)
Jan 13						
Feb 13						
Mar 13						
Apr 13	257	1,255,000	1,417,000	0		163
May 13	258	1,488,000	1,677,000	0		186
Jun 13	256	1,843,000	2,254,000	0	35,000	240
Jul 13	257	1,607,000	1,951,000	0	36,000	202
Aug 13	260	1,358,000	1,643,000	0	32,000	168
Sep 13	257	1,264,000	1,555,000	0	38,000	164
Oct 13	253	1,144,000	1,477,000	0	42,000	146
Nov 13	256	1,138,000	1,326,000	0		148
Dec 13	254	1,078,000	1,232,000	0		137
total		12,175,000	14,532,000	0	183,000	
Average						173

Staff's recommendation is the same as in PWS No. 02-024 System above⁴.

F. GROWTH PROJECTION

For the past five years, this Company has experienced a flat growth rate in all three systems. Prior to the economic downturn the Company had an average growth rate of only two customers per year in PWS No. 02-024 and a flat growth rate in PWS No. 02-112 and PWS No. 02-133. Future growth is hard to predict since it will depend on what happens with the economy but it is expected to be minimal.

³ The 2013 water use data for the combined systems was reported under PWS No. 02-024 no water usage data was reported for PWS No. 02-133.

⁴ Staff recommends that the Company implement its water loss plan immediately. Staff further recommends that the Company be required to file water loss reduction progress reports each January and July with Docket Control, as a compliance item in this docket. The progress reports should cover the previous six months. Staff further recommends that the first water loss progress report be filed in July, 2015.

G. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (“ADEQ”) COMPLIANCE

Staff received a compliance status report from ADEQ dated December 20, 2013, in which ADEQ stated that the Company’s water systems (PWS No. 02-024 and PWS No. 02-112) have no major deficiencies and are delivering water that meets water quality standards required by 40 CFR 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4.

ADEQ also reported that PWS No. 02-133 is “inactive” because it serves less than 15 connections. This system has since been interconnected with and made part of PWS No. 02-024.

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

The Company is not located in an ADWR Active Management Area. According to an ADWR compliance status report dated November 29, 2013, the Company is currently compliant with ADWR requirements governing water providers and/or community water systems.

I. ACC COMPLIANCE

A check of the Commission’s Compliance Section database dated January 27, 2014, indicated there were no delinquent compliance items for the Company.

J. WATER TESTING EXPENSES

The Company reported its water testing expense at \$3,596 for the test year. Staff has reviewed the Company’s reported expense amount and has recalculated these expenses. Staff recommends that Staff’s water testing expense of \$4,082 be used for this proceeding.

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, bacteria, and disinfection by-products.
2. 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. ADEQ testing is performed in 3-year compliance cycles. Therefore, monitoring costs are estimated for a 3-year compliance period and then presented on an annualized basis.
3. MAP fees were based on the ADEQ MAP invoice for calendar year 2013.

Tables 3A, 3B and 3C show Staff's estimated annual monitoring expense, based on participation in the MAP program.

Table 3A Water Testing Cost (PWS No. 02-024, Main System)

Monitoring – 2 wells (2 POEs) (Tests per 3 years, unless noted.)	Cost per test	No. of tests per three year period	Total cost per three year period	Annual Cost
Bacteriological – monthly	\$25 ¹	72	\$1,800	\$600
Inorganics – Priority Pollutants	\$300	MAP	MAP	MAP
Radiochemical – (1/ 4 yr)	\$60	MAP	MAP	MAP
Phase II and V:				
IOC's, SOC's, VOC's	\$2,805	MAP	MAP	MAP
Nitrites	\$25	MAP	MAP	MAP
Nitrates – annual	\$25	MAP	MAP	MAP
Asbestos – per 9 years	\$180	2½	MAP	MAP
Lead & Copper – annual*	\$45	10	\$450	\$150
TTHM/HHA5	\$265 ²	6	\$1,590	\$530
Maximum chlorine residual levels	\$0	72	\$0	\$0
MAP Fee				\$1,049.27 ³
Total				\$2,329.27

Notes: 1. Charge based on invoices from Turner Laboratories.

2. Testing cost of TTHM is \$110/sample and testing cost of HHA5 is \$155/sample.

3. According to the December 21, 2012 invoice for PWS No. 02-024, MAP was \$1,018.43. Because PWS No. 02-024 and PWS No. 02-133 is interconnected, total numbers of connections increase, Staff calculated the MAP fee and determined that the estimated MAP fee would be \$1,049.27.

Table 3B Water Testing Cost (PWS No. 02-112, Bisbee System)

Monitoring – 1 well (1 POE) (Tests per 3 years, unless noted.)	Cost per test	No. of tests per three year period	Total cost per three year period	Annual Cost
Bacteriological – monthly	\$25 ¹	36	\$900	\$450
Inorganics – Priority Pollutants	\$300	MAP	MAP	MAP
Radiochemical – (1/ 4 yr)	\$60	MAP	MAP	MAP
Phase II and V:				
IOC's, SOC's, VOC's	\$2,805	MAP	MAP	MAP

Nitrites – (1/9 yr)	\$25	MAP	MAP	MAP
Nitrates – annual	\$25	MAP	MAP	MAP
Asbestos –(1/ 9 yr)	\$180	2 $\frac{1}{3}$	MAP	MAP
Lead & Copper – annual*	\$45	5	\$225	\$75
TTHM/HHA5	\$265 ²	3	\$795	\$265
Maximum chlorine residual levels	\$0	72	\$0	\$0
MAP Fee				\$437.61
Total				\$1,227.61

- Notes: 1. Charge based on invoices from Turner Laboratories.
2. Testing cost of TTHM is \$110/sample and testing cost of HHA5 is \$155/sample.

Table 3C Water Testing Cost (PWS No. 02-133, Site No. 3 System)

Monitoring – 0 well (Tests per 3 years, unless noted.)	Cost per test	No. of tests per three year period	Total cost per three year period	Annual Cost
Bacteriological – monthly	\$25 ¹	36	\$900	\$450
Lead & Copper – annual*	\$45	5	\$225	\$75
TTHM/HHA5	\$265 ²	0	\$1,080	\$0
Maximum chlorine residual levels	\$0	72	\$0	\$0
Total				\$525

- Notes: 1. Charge based on invoices from Turner Laboratories.
2. According to Turner Laboratories, testing cost of TTHM is \$110/sample and testing cost of HHA5 is \$155/sample.

Staff's total recommended annual water testing cost for Naco is \$4,082⁵.

K. DEPRECIATION RATES

Staff has developed typical and customary depreciation rates within the range of anticipated equipment life. These rates are presented in Figure 5 and should be used to calculate the annual depreciation expense for the Company. Staff recommends the depreciation rates by individual National Association of Regulatory Utility Commissioners (“NARUC”) category, as delineated in Figure 5.

⁵Total of \$3,329.27, \$1,227.61 and \$525 is \$4,082.

L. OTHER ISSUES

I. Service Line and Meter Installation Charges

The Company has proposed to increase its Service Line and Meter Installation charges; the Company also proposes separate service line and meter installation charges via this rate application. The Company's proposed charges are within Staff's typical range for service line and meter installation charges. Therefore, Staff recommends approval of the Company's proposed charges. The charges listed in Table 4 under the columns labeled "Staff recommended" should be adopted.

Table 4 Service Line and Meter Installation Charges (Naco)

Meter Size	Current Total Meter & Service Line Installation Charges (Decision #69393)	Proposed Service Line Charges	Proposed Meter Charges	Proposed Total installation Charge	Staff Recommended (Service Line installation charge)	Staff Recommended (Meter charges)	Staff Recommended total charges
5/8 x 3/4-inch	\$450	\$490	\$131.5	\$621.5	\$490	\$131	\$621.5
3/4-inch	\$475	\$490	\$232.5	\$722.5	\$490	\$232.5	\$722.5
1-inch	\$550	\$547	\$293	\$840	\$547	\$293	\$840
1½-inch	\$775	\$609.5	\$505.5	\$1,115	\$609.5	\$505.5	\$1,115
2-inch	\$1,375	\$927	\$1,030.5	\$1,957.5	\$927	\$1,030.5	\$1,957.5
3-inch	\$1,975	\$1,171	\$1,661.5	\$2,832.5	\$1,171	\$1,661.5	\$2,832.5
4-inch	\$3,040	\$1,661	\$2,646.5	\$4,307.5	\$1,661	\$2,646.5	\$4,307.5
6-inch	\$5,635	\$2,478.5	\$5,025.5	\$7,504	\$2,478.5	\$5,025.5	\$7,504

II. Post-test Year Plant Additions

New plant items at Site No. 3 and Well No. 6 were completed in March 2013, after the test year. Staff observed that the plant items listed in Table 5 below were in service and were used and useful to the Company's provision of service at the time of Staff's inspection.

Table 5 Post-test year Pro forma

year	NARUC Account (LPSC's)	Plant items	Location of Plant Additions	Amount (\$, Company reported) ₁	Amount (\$, Staff Adjusted)	Total Costs (\$)
2013	304 (Structures and Improvement)	Concrete pads and fencing with gate Chlorinator shed Concrete pad under the shed	Well No. 6 Site and Site No. 3 Site No. 3 Site No. 3	8,183	2,750 ² 1,250 ²	
			total	8,183	4,000 ²	4,183
2013	307 (Wells and Springs)	Well No. 3 abandonment/Survey/s oil tests Chlorination device Safety shower/eye washer	Site No. 3.	345,069	1,800 ² 1,000 ³	
			total	345,069	2,800	342,269
2013	311 (Pump Equipment)	Two 25-HP booster pumps/ electric upgrade Two 5-HP booster pumps/ electric	Booster pumps in Well No. 6 Site Booster pumps in Site No.3	49,405	0	
			total	49,405	0	49,405
2013	330.1 (Storage Tanks)	One 110,000 gallon storage tank/ foundation/ survey/electric One 20,000 gallon storage tank / foundation, survey Control panel/electric	In Well No. 6 Site In Site No. 3	303,227	0	
			total	303,227	0	303,227
2013	330.2 (Pressure Tank)	One 2,000 gallon pressure tank/footing	In Site No. 3	10,448	0	
			total	10,448	0	10,448
2013	331 (Transmissi	2,011' (4" PVC)/ survey/ paving/ traffic	Replace the distribution	472,990	0	

	on & Distribution Mains)	control 3,980' (6" PVC)/ paving/ traffic control /survey	system in Site No. 3. Interconnection between Well No. 6 and Site No. 3 Site.			
			total	472,990	0	472,990
2013	334 (meters)	N/A	N/A	1,580	1,580	
			total	1,580	1,580	0
			Total	1,190,902	8,380	1,182,522

- Notes: 1. Based on the Company's Response to Staff Data Request No. PT 10.1.
2. Based on the June 9, 2011 letter from Carlson Engineering to Mr. Steve Wene. Those plant items are not in service; therefore, they are not used and useful.
3. Staff assumed that the expense of safety shower and eye washer ("SS & EW") equipment was included in the cost of well abandonment. This equipment is not required at these locations, because no corrosive chemicals are used, such as disinfection agents, acids, soda ash, etc. The water delivered to the storage tank in the Site No. 3 is coming from Well No. 6 which has been treated and met the Safe Drinking Water Act water quality standards; no additional disinfection is required at Site No. 3. Therefore, Staff adjusted the Company's reported amount to exclude the SS & EW equipment. Because the Company did not provide a separate cost for the SS & EW equipment, Staff estimated the cost to be \$1,000.

III. Plant Items No Longer In Service

The following plant items were permanently removed from service in March 2013: Well No. 3, one 7,500 gallon storage tank, one 750 gallon pressure tank and one 5-HP booster pump. During its inspection, Staff observed that the plant items listed were not in service and therefore are no longer used and useful to the Company's provision of service.

IV. Curtailment Tariff

The Company has an approved Curtailment Tariff on file with the Commission.

V. Cross Connection or Backflow Prevention Tariff

The Company has an approved Cross Connection & Backflow Tariff on file with the Commission.

VI. Best Management Practices ("BMPs") Tariff

Staff recommends that Naco file with Docket Control, as a compliance item in this docket and within 90 days of the effective date of a decision in this proceeding, at least five BMPs in the form of tariffs that substantially conform to the templates created by Staff for the Commission's review and consideration. Staff further recommends that the templates created by Staff are available on the Commission's website at <http://www.azcc.gov/Divisions/Utilities/forms.asp>. A maximum of two BMPs may come from the "Public Awareness/Public Relations" or "Education and Training" categories. The Company may request cost recovery of the actual costs associated with the BMPs implemented in its next general rate application.

FIGURE 1

Naco Certificate Service Area

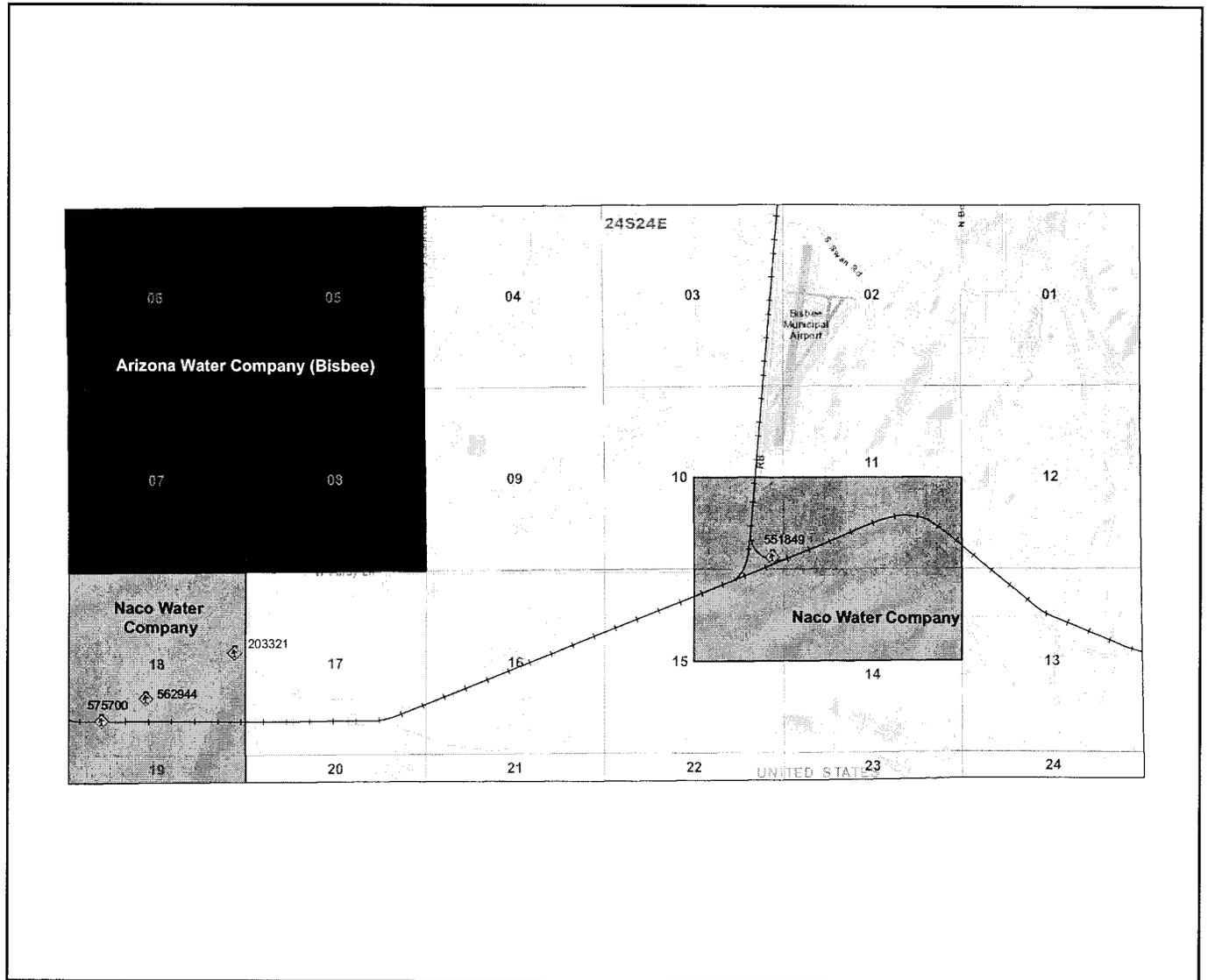


FIGURE 2
LOCATION OF NACO SERVICE AREA

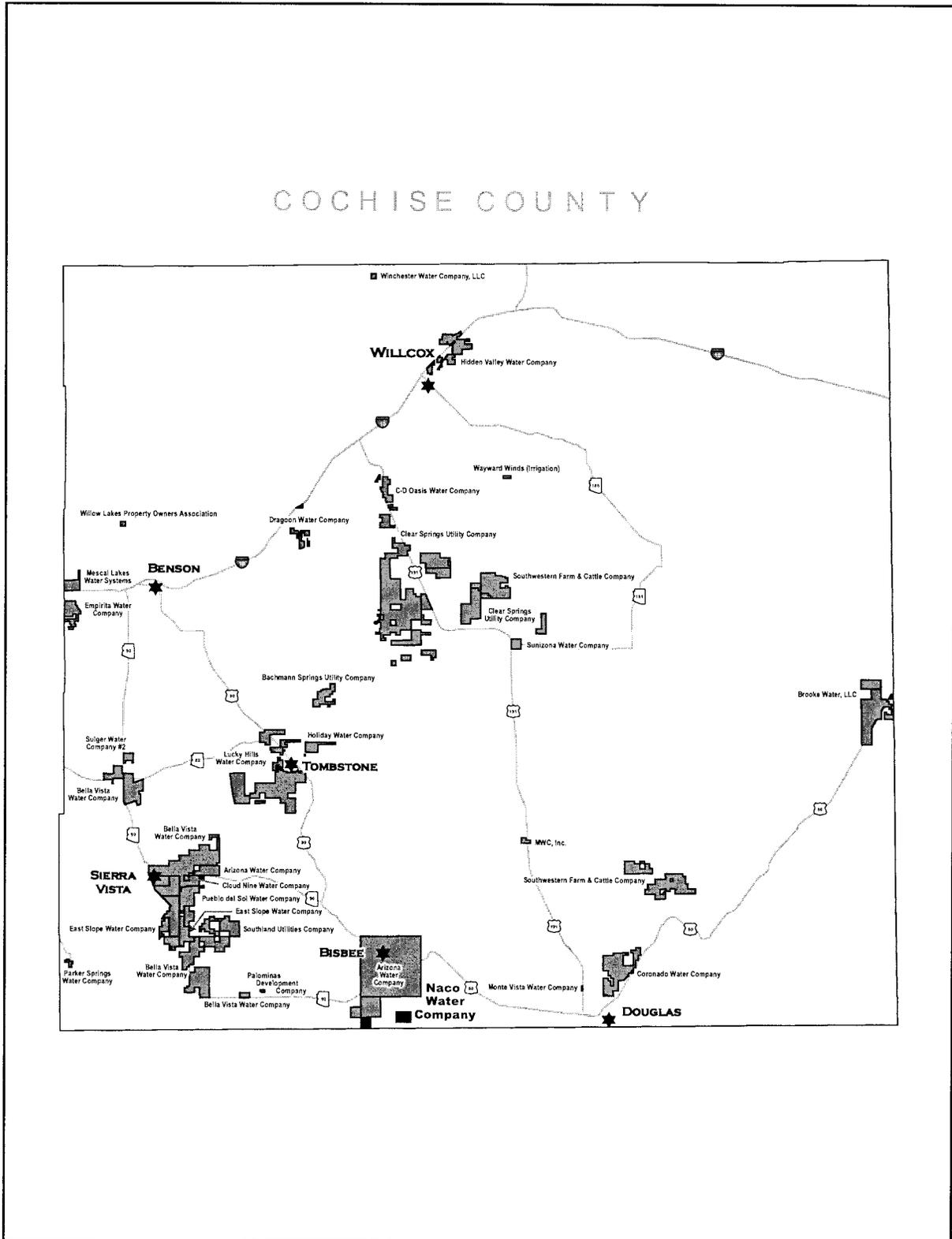


FIGURE 3A SYSTEMATIC DRAWING

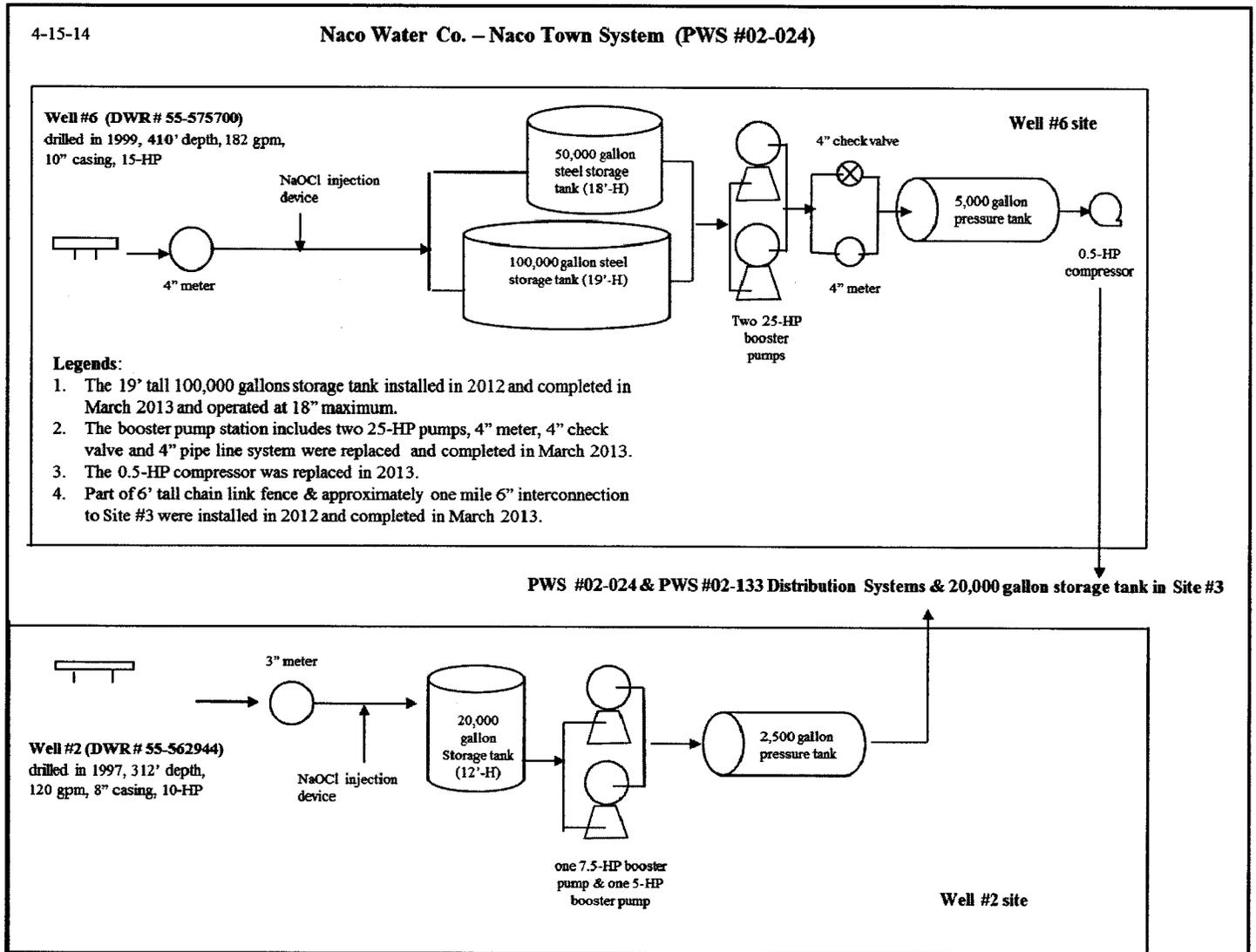


FIGURE 3B SYSTEMATIC DRAWING

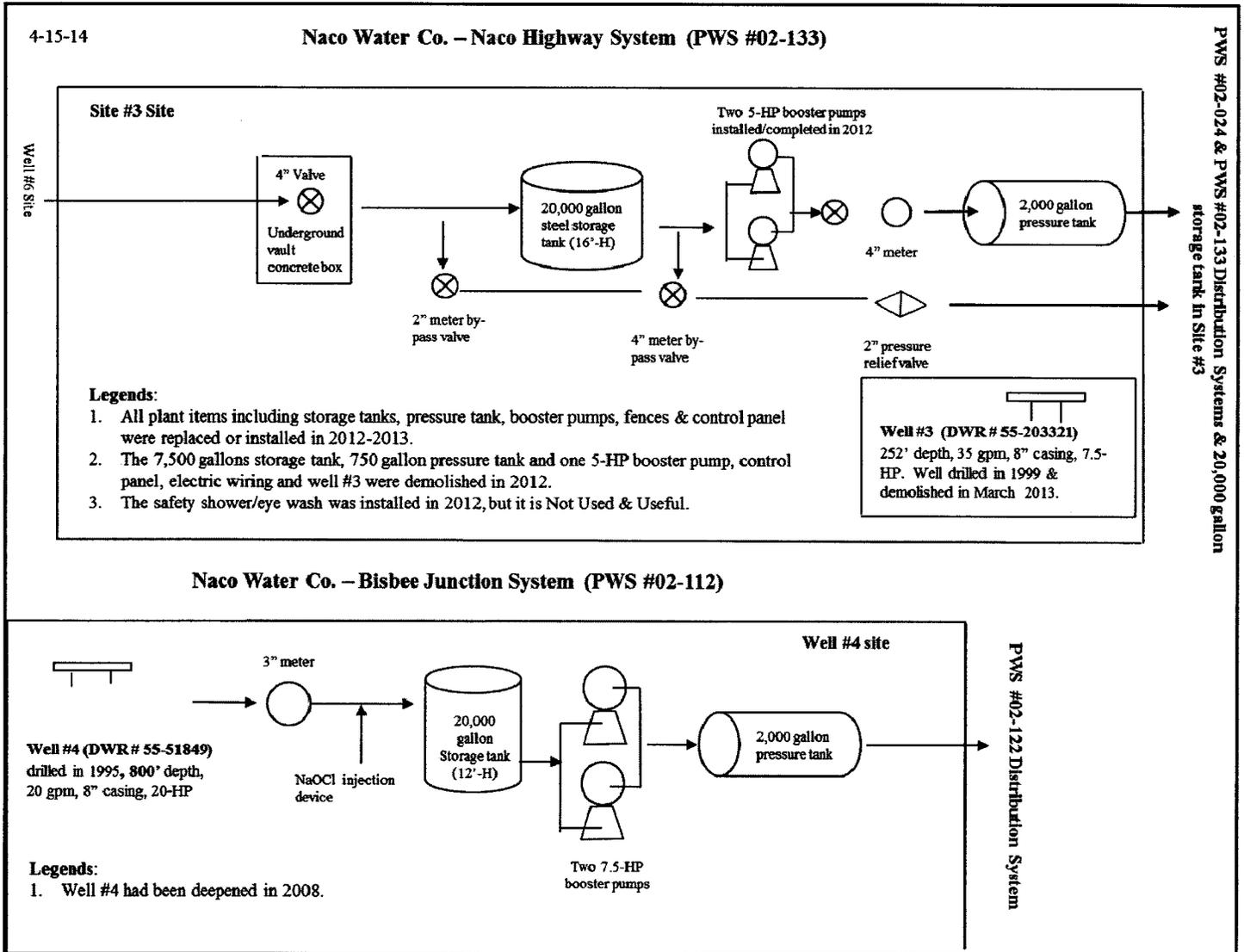


FIGURE 4A WATER USAGE IN NACO SERVICE AREA

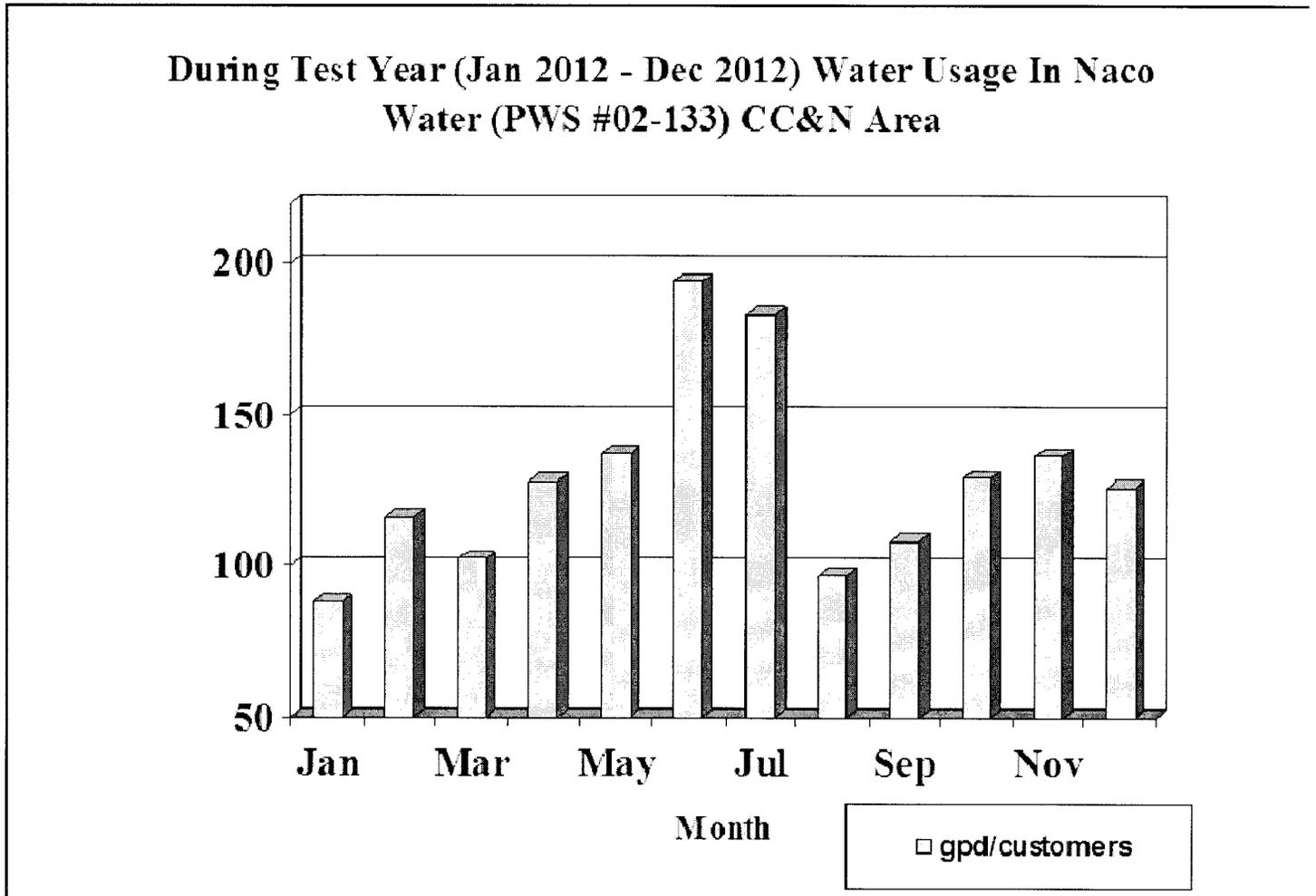


FIGURE 4B WATER USAGE IN NACO SERVICE AREA

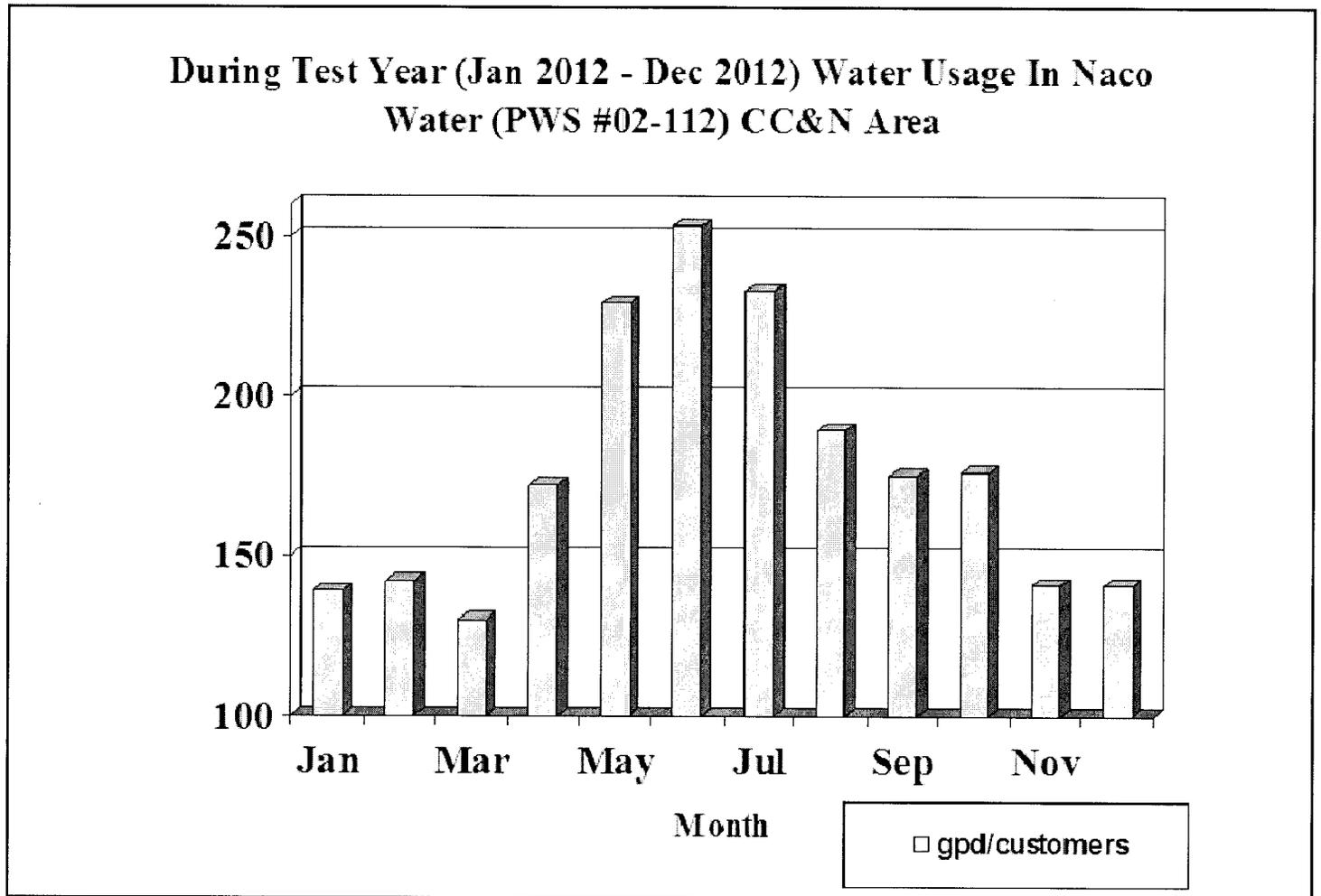


FIGURE 4C WATER USAGE IN NACO SERVICE AREA

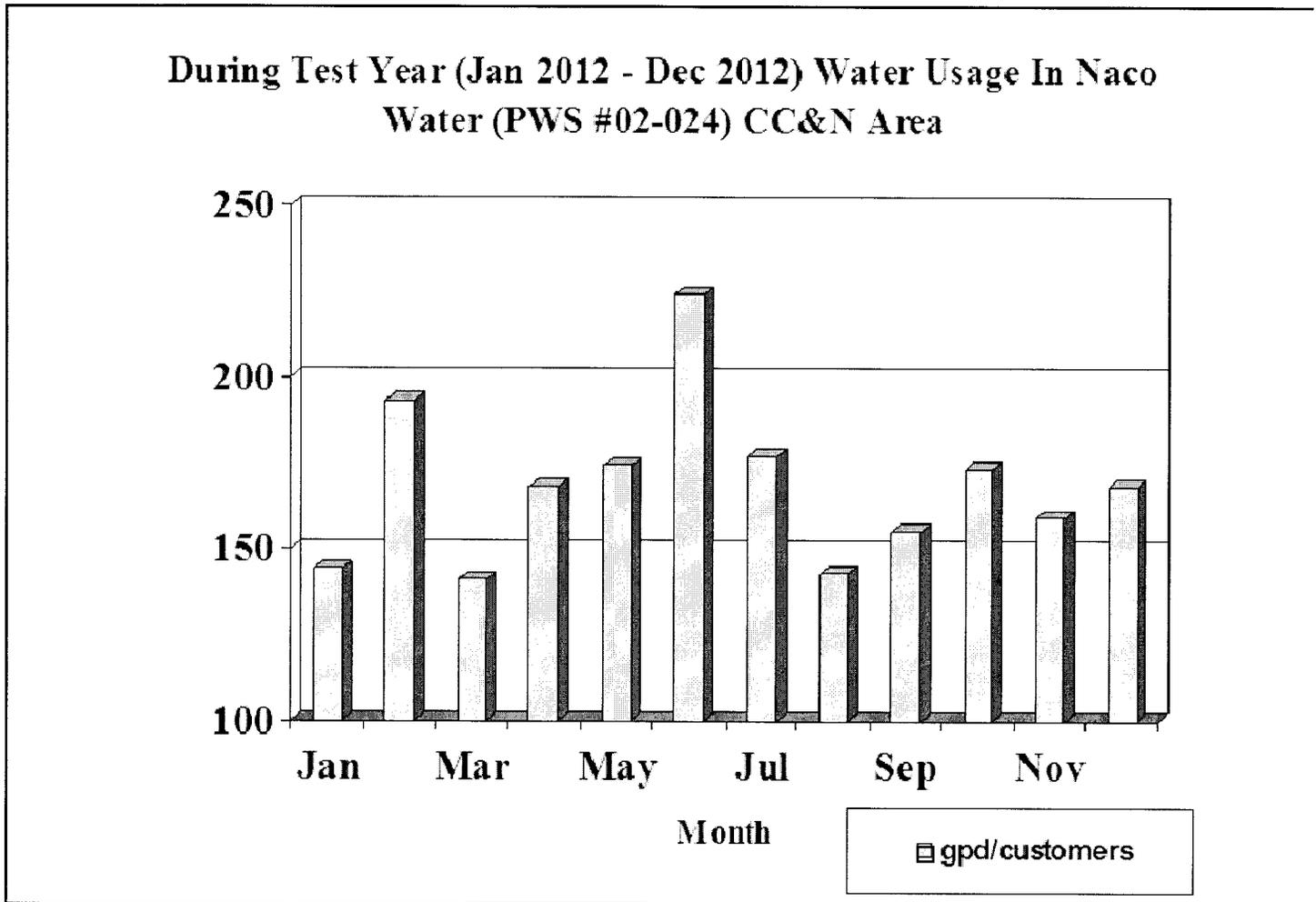


FIGURE 4D WATER USAGES IN NACO SERVICE AREA

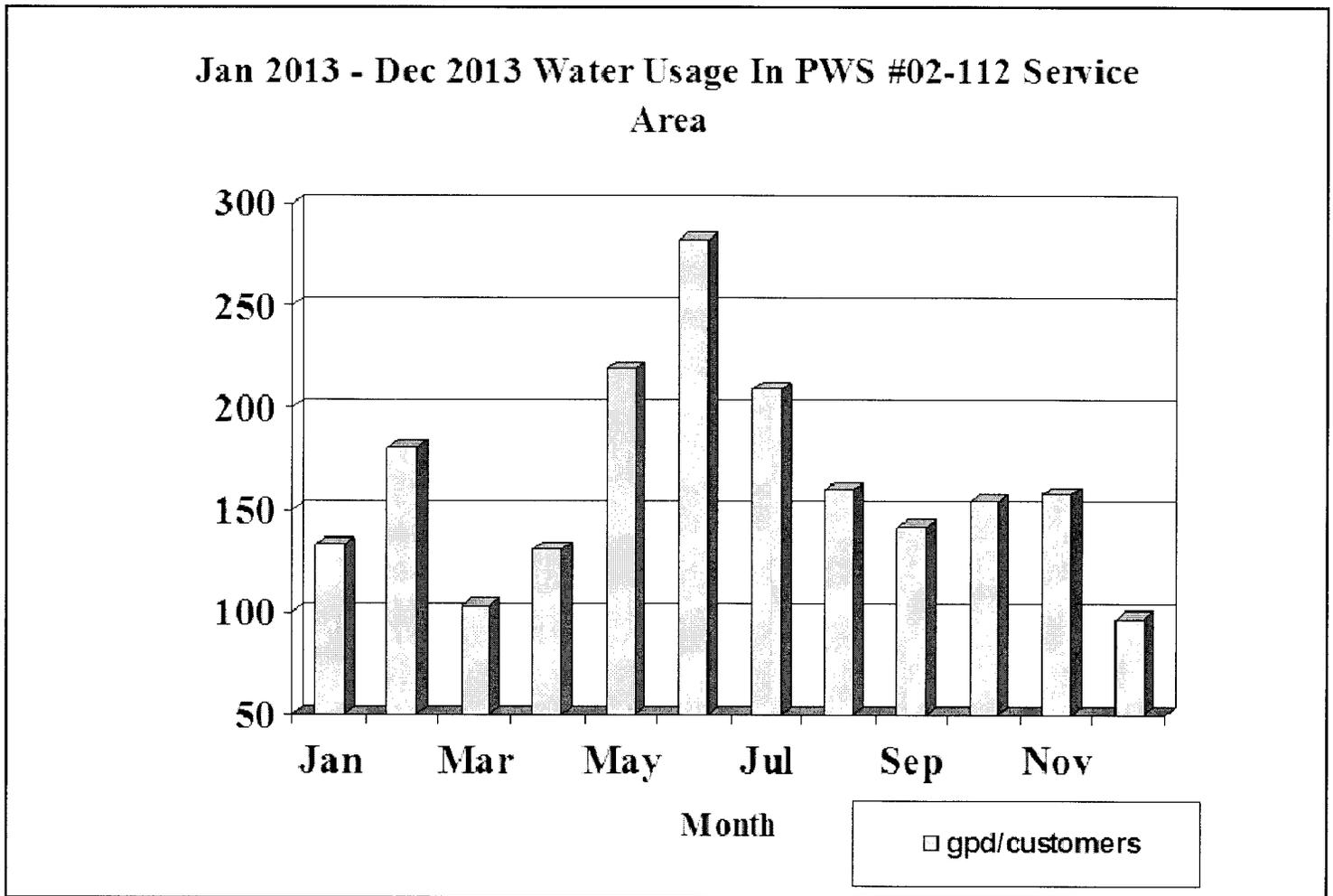
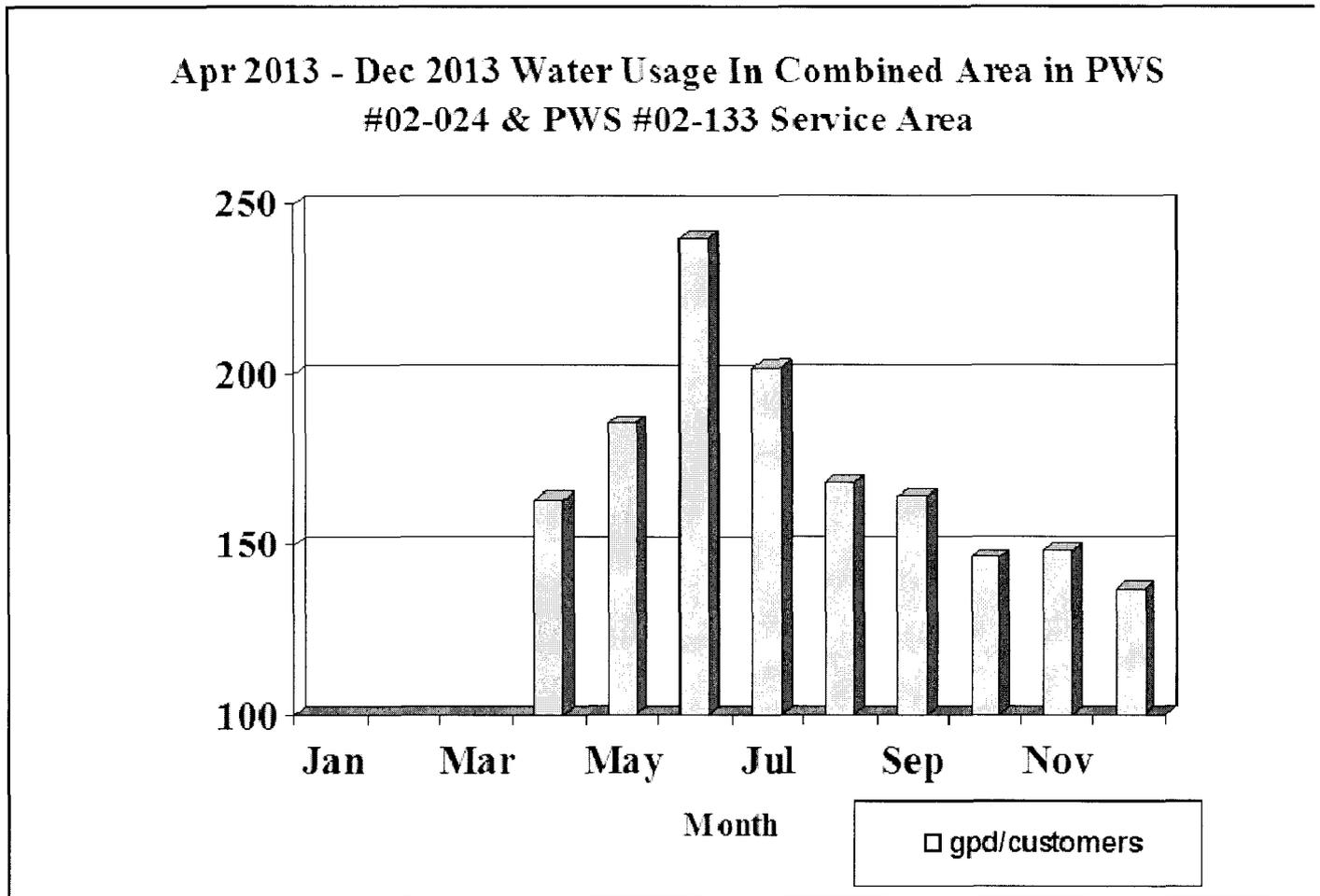


FIGURE 4E WATER USAGE IN NACO SERVICE AREA



**FIGURE 5
DEPRECIATION RATES FOR NACO WATER COMPANY**

Acct. No.	Depreciable Plant	Decision # 69393 (approved rate %)	Company proposed	Staff Recommended Rate (%)
301	Organization	0.00	0.00	0.00
302	Franchises	0.00	N/A	0.00
303	Land and Land Rights	0.00	0.00	0.00
304	Structures & Improvements	3.33	3.33	3.33
305	Collecting & Impounding Reservoirs	2.50	N/A	2.50
306	Lake, River, Canal Intakes	2.50	N/A	2.50
307	Wells & Springs	3.33	3.33	3.33
308	Infiltration Galleries	6.67	N/A	6.67
309	Raw Water Supply Mains	2.00	N/A	2.00
310	Power Generation Equipment	5.00	N/A	5.00
311	Pumping Equipment	12.5	12.5	12.5
320	Water Treatment Equipment	3.33	3.33	3.33
320.1	Water Treatment Plants	N/A	N/A	3.33
320.2	Solution Chemical Feeders	N/A	N/A	20.0
330	Distribution Reservoirs & Standpipes	2.22	2.22	2.22
330.1	Storage Tanks	N/A	N/A	2.22
330.2	Pressure Tanks	N/A	N/A	5.00
331	Transmission & Distribution Mains	2.00	2.00	2.00
333	Services	3.33	3.33	3.33
334	Meters	8.33	8.33	8.33
335	Hydrants	2.00	2.00	2.00
336	Backflow Prevention Devices	6.67	N/A	6.67
339	Other Plant & Misc Equipment	6.67	6.67	6.67
340	Office Furniture & Equipment	6.67	6.67	6.67
340.1	Computers & Software	N/A	33.33	20.00
341	Transportation Equipment	20.00	20.00	20.00
342	Stores Equipment	4.00	N/A	4.00
343	Tools, Shop & Garage Equipment	5.00	5.00	5.00
344	Laboratory Equipment	10.00	N/A	10.00
345	Power Operated Equipment	5.00	5.00	5.00
346	Communication Equipment	10.00	10.00	10.00
347	Miscellaneous Equipment	10.00	10.00	10.00
348	Other Tangible Plant	----	10.00	10.00