

ORIGINAL

1 BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2 DOCKET NO. 960545-WS

3 WATER QUALITY INVESTIGATION OF ALOHA UTILITIES, INC

4 PRE-FILED DIRECT TESTIMONY OF ROBERT C. NIXON, C.P.A.

5 Q. Please state your name and professional address.

6 A. R.C. Nixon, 2560 Gulf-To-Bay Boulevard, Suite 200, Clearwater, Florida.

7 Q. By whom are you currently employed?

8 A. Cronin, Jackson, Nixon & Wilson, C.P.A.'s, P.A.

9 Q. In what capacity?

10 A. I am a shareholder and V.P. and Secretary of the firm. I am in charge of our regulated utility
11 services practice.

12 Q. And what type of business is Cronin, Jackson, Nixon & Wilson?

13 A. A full service CPA practice, including accounting and auditing, tax, management advisory,
14 and litigation services. Also, we specialize in utility accounting for regulated water and
15 wastewater utilities.

16 Q. Beginning with college, could you give us a description of your educational experience?

17 A. B.S.B.A. University of Florida, 1967, Marketing major, minors in Management &
18 Economics; B.A. University of South Florida, 1977, Accounting Major; I became a CPA in
19 1980 and have held an active license since that time. A resumé of my experience is attached
20 hereto as **Exhibit RCN-1**.

21 Q. What is the purpose of your testimony?

22 A. In June of 1997 I prepared what was then Volume II to the Water Facilities Upgrade Study
23 Report for Aloha's Seven Springs System that is attached hereto as **Exhibit RCN-2**. My
24 study consisted of calculating the overall affect on rate base, revenues and rates of the
25 alternatives available to Aloha for upgrading its water treatment system. The purpose of my

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FPSC-RECORDS/REPORTING

1 testimony is to sponsor that Water Facilities Upgrade Study Report Volume II - Economic
2 Analysis, dated June 3, 1997 as prepared by me and answer any questions that the
3 Commission may have regarding the rate impact of the proposed changes to the Aloha Seven
4 Springs Water System.

5 Q. Which of the alternatives listed in your Report is the one which Aloha has suggested is more
6 appropriate and offered to install by the letter from the Utility's attorneys dated _____ of
7 1998?

8 A. What is listed in my exhibit as Alternative No. 2 was the one that made the most economic
9 sense and which would help the Utility to conform to future regulatory requirements. It was
10 also the cheaper overall alternative for the Utility and therefore its customers.

11 Q. Would any updates need to be made to this June 1997 Report?

12 A. Yes. There would be some minor updates necessitated by the general change in prices and
13 possibly minor modifications related to cost of capital. However, the affect would not be
14 substantial in the final analysis of rate base impact and revenue requirement impact. Since
15 the cost of capital has gone down slightly since the time of this Report (utilized in the
16 leverage formula and possible borrowing rates), and the cost of facilities has likely gone up
17 slightly. These would tend to offset and minimize any change. There may be other changes,
18 however, none that I know of off hand that would be substantial.

19 Q. Do you have any further testimony to provide in this regard?

20 A. Not at this time.

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22
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ALOHA UTILITIES, INC.
Resumé of Experience

Exhibit RCN-1

Cronin, Jackson, Nixon & Wilson
 Certified Public Accountants, P.A.
 Regulated Utility Services
 Examples of Client Services Rendered Since 1990

| <u>Name of Company</u> | <u>Order No.</u> | <u>Date</u> |
|---|------------------|-------------|
| Martin Downs Utilities, Inc. (Service availability) | 22869 | 04/27/90 |
| Request by Florida Waterworks Association for investigation of proposed repeal of Section 118(b) IRC (CIAC) (Rule making) | 23541 | 10/01/90 |
| Southern States Utilities, Inc. (Rate case) | 24715 | 06/26/91 |
| FFEC-Six, Ltd. (Rate case) | 24733 | 07/01/91 |
| East Central Florida Services, Inc. (Certificate) | 92-0104-WS | 03/27/92 |
| Aloha Utilities, Inc. (Rate case) | 92-0578-SU | 06/29/92 |
| Mad Hatter Utility, Inc. (Rate case) | 93-0295-WS | 02/24/93 |
| Lehigh Utilities, Inc. (Rate case) | 93-0301-WS | 02/25/93 |
| Jasmine Lakes Utilities Corp. (Rate case) | 93-1675-WS | 02/18/93 |
| Gulf Utility Company (Gross-up refund) | 93-1207-WS | 08/18/93 |
| Key Haven Utility Company (Rate case) | 94-1557-SU | 12/13/94 |
| JJ's Mobile Homes, Inc. (Territory expansion/investigation) | 95-1319-WS | 10/30/95 |
| Little Sumter Utility Company (Certificate) | 96-1132-WS | 09/11/96 |
| Aloha Utilities, Inc. (Reuse rate case) | 97-0280-WS | 03/12/97 |
| Lindrick Service Corporation (Rate investigation) | 97-1501-WS | 11/25/97 |
| Gulf Utility Company (Rate case) | 97-1544-WS | 12/09/97 |

ALOHA UTILITIES, INC.
Volume II to the Water Facilities Upgrade Study Report

Exhibit RCN-2

**Water Facilities Upgrade
Study Report**

Volume II - Economic Analysis

for

**Seven Springs Water System
Pasco County, Florida**

Prepared for:

**Aloha Utilities, Inc.
2514 Aloha Place
Holiday, FL 34691
(813) 937-4275**

Prepared by:

**Cronin, Jackson, Nixon & Wilson, CPA's, P.A.
2560 Gulf-To-Bay Boulevard, Suite 200
Clearwater, FL 34625
(813) 791-4020**

June 3, 1997

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| | 3(B) | 16 | Increased Operations & Maintenance Expense |
| | 4(B) | 17 | Additional Depreciation |
| | 5(B) | 18 | Total Estimated Capital Costs and Allocation of Contingencies, Engineering, and Permitting Costs |
| | 6(B) | 19 | Estimated Additional Taxes Other than Income |
| | 7(B) | 20 | Required Rate of Return |
| | 9(B) | 21 | Additional Income Taxes |
| 4 | | | Total Costs Incurred for Corrosion Control Program |
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Section 1

**Aloha Utilities, Inc.
Volume II - Economic Analysis
Water Facilities Upgrade Study Report
Seven Springs Water System**

Introduction

The analysis in this volume estimates the impact of the engineering cost estimates for the alternative Seven Springs Water System improvements on future revenues and rates.

This economic analysis is based on the cost data contained in Volume I and is presented in accordance with the requirements of Commission Order No. PSC-97-0280-FOF-WS.

The analysis covers Alternatives One (A) and (B) (Tray Aeration or Packed Tower Aeration on each well) and Alternative Two, the reconfiguration of the water treatment process into three centralized water treatment plants. Each alternative is more fully described in Volume I. All alternatives include the addition of two new wells to serve the Company's projected customers at the estimated completion date for each project alternative, September, 2000.

Finally, this volume contains a summary of the costs expended by Aloha through May, 1997, on its existing Corrosion Control Program for the Seven Springs Water System.

Aloha Utilities, Inc.
Volume II - Economic Analysis
Water Facilities Upgrade Study Report
Seven Springs Water System

Executive Summary

Presented below is a comparison of the results of the economic analysis for each alternative, extracted from the various sections of this report.

| | Alternative One | | Alternative Two |
|---|-----------------|---------------|--------------------|
| | (A) | (B) | |
| Estimated capital costs (1) | \$ 10,961,205 | \$ 13,858,483 | \$ 10,214,214 |
| Total additional operating expenses | 3,974,960 | 4,531,702 | 3,549,581 |
| Required rate of return on capital costs | 1,099,552 | 1,389,170 | 1,023,691 |
| Total additional revenue required | 5,313,625 | 6,199,866 | 4,788,766 |
| Percentage increase to existing rates required | 331% | 387% | 299% |
| Existing base rate, 3,000 gallons minimum | 7.12 | 7.12 | 7.12 |
| Required base rate, 3,000 gallons minimum | 30.72 | 34.66 | 28.39 |
| Existing gallonage charge per 1,000 gallons in excess of minimum | 1.27 | 1.27 | 1.27 |
| Required gallonage charge per 1,000 gallons in excess of minimum | \$ 5.48 | \$ 6.18 | \$ 5.06 |

(1) Estimated capital costs do not include any provision for AFUDC or interest during construction, which would be required if the Commission orders Aloha to proceed with one of the alternatives presented.

Section 2

Aloha Utilities, Inc.
 Additional Revenue Required to Modify Existing Facilities
 Seven Springs Water System

| Line No. | | Reference Schedule No. | Estimated Cost |
|-------------|---|---------------------------|---------------------|
| 1 | (A) <u>Alternative One (A) - Tray Aeration on each well</u> | | |
| 2 | Increased operation & maintenance expense | 3(A) | \$ 3,041,826 |
| 3 | Depreciation | 4(A) | 439,178 |
| 4 | Taxes other than income taxes | 6(A) | 239,404 |
| 5 | Income taxes | 9(A) | <u>254,552</u> |
| 6 | Total estimated additional operating expenses | | 3,974,960 |
| 7 | Additional required rate of return | 7(A) | <u>1,099,552</u> |
| 8 | Total additional costs and rate of return | | 5,074,512 |
| 9 | Divide by Regulatory Assessment Fees (RAF) Expansion Factor | | <u>0.955</u> |
| 10 | Total additional revenue required | | <u>\$ 5,313,625</u> |
| 11 | Divide by annualized revenue | 10(A) | <u>\$ 1,603,086</u> |
| 12 | Percentage increase in revenue and rates required | | <u>331.46%</u> |
| 13 | (B) <u>Alternative One (B) - Packed Tower Aeration on each well</u> | | |
| 14 | Increased operation & maintenance expense | 3(A) | \$ 3,342,426 |
| 15 | Depreciation | 4(A) | 564,992 |
| 16 | Taxes other than income taxes | 6(A) | 302,683 |
| 17 | Income taxes | 9(A) | <u>321,601</u> |
| 18 | Total estimated additional operating expenses | | 4,531,702 |
| 19 | Additional required rate of return | 7(A) | <u>1,389,170</u> |
| 20 | Total additional costs and rate of return | | 5,920,872 |
| 21 | Divide by Regulatory Assessment Fees (RAF) Expansion Factor | | <u>0.955</u> |
| 22 | Total additional revenue required | | <u>\$ 6,199,866</u> |
| 23 | Divide by annualized revenue | 10(A) | <u>\$ 1,603,086</u> |
| 24 | Percentage increase in revenue and rates required | | <u>386.75%</u> |

Aloha Utilities, Inc.
 Schedule of Present and Required Rates to Modify Existing Facilities
 Seven Springs Water System

| Line No. | | Present Rates | Required Rates |
|----------|---|---------------|----------------|
| 1 | (A) <u>Alternative One (A) - Tray Aeration on each well</u> | | |
| 2 | (331.46% increase) | | |
| 3 | <u>Residential & General Service</u> | | |
| 4 | 5/8" x 3/4" minimum 3,000 gallons | \$ 7.12 | \$ 30.72 |
| 5 | 1" minimum 8,000 gallons | 18.94 | 81.72 |
| 6 | 1 1/2" minimum 15,000 gallons | 35.52 | 153.25 |
| 7 | 2" minimum 24,000 gallons | 57.24 | 246.97 |
| 8 | 3" minimum 48,000 gallons | 113.73 | 490.70 |
| 9 | 6" minimum 150,000 gallons | 275.27 | 1,187.68 |
| 10 | 8" minimum 240,000 gallons | 562.36 | 2,426.36 |
| 11 | Gallage charge per 1,000 gallons in | | |
| 12 | excess of minimum | 1.27 | 5.48 |
| 13 | (B) <u>Alternative One (B) - Packed Tower Aeration on each well</u> | | |
| 14 | (386.75% increase) | | |
| 15 | 5/8" x 3/4" minimum 3,000 gallons | \$ 7.12 | 34.66 |
| 16 | 1" minimum 8,000 gallons | 18.94 | 92.19 |
| 17 | 1 1/2" minimum 15,000 gallons | 35.52 | 172.89 |
| 18 | 2" minimum 24,000 gallons | 57.24 | 278.62 |
| 19 | 3" minimum 48,000 gallons | 113.73 | 553.58 |
| 20 | 6" minimum 150,000 gallons | 275.27 | 1,339.88 |
| 21 | 8" minimum 240,000 gallons | 562.36 | 2,737.29 |
| 22 | Gallage charge per 1,000 gallons in | | |
| 23 | excess of minimum | 1.27 | 6.18 |
| 24 | Rates per Authority No. WS-96-0134, effective August 30, 1996. | | |

Aloha Utilities, Inc.
 Increased Operation & Maintenance Expenses with
 Modification of Existing Facilities
 Seven Springs Water System

| Line No. | | Estimated Engineering Estimate | Existing Expense | Estimated Additional Expense |
|----------|---|--------------------------------|---------------------|------------------------------|
| 1 | (A) <u>Alternative One (A) - Tray Aeration on each well</u> | | | |
| 2 | (Per Volume I, Section 8) | | | |
| 3 | Purchased power & chemicals - 10 wells total (1) | \$ 1,064,200 | \$ (144,922) | \$ 919,278 |
| 4 | Purchased power - transfer & high service pumps | 128,333 | | 128,333 |
| 5 | Field O&M labor (2) | 2,141,333 | (220,118) | 1,921,215 |
| 6 | Field supervisor/operator | 73,000 | | 73,000 |
| 7 | Total | <u>\$ 3,406,866</u> | <u>\$ (365,040)</u> | <u>\$ 3,041,826</u> |
| 8 | (B) <u>Alternative One (B) - Packed Tower Aeration on each well</u> | | | |
| 9 | (Per Volume I, Section 8) | | | |
| 10 | Purchased power & chemicals - 10 wells total (1) | \$ 1,364,800 | \$ (144,922) | \$ 1,219,878 |
| 11 | Purchased power - transfer & high service pumps | 128,333 | | 128,333 |
| 12 | Field O&M labor (2) | 2,141,333 | (220,118) | 1,921,215 |
| 13 | Field supervisor/operator | 73,000 | | 73,000 |
| 14 | Total | <u>\$ 3,707,466</u> | <u>\$ (365,040)</u> | <u>\$ 3,342,426</u> |

- 15 (1) Eight existing wells, plus two new wells.
 16 (2) Includes payroll taxes, insurance, and employee benefits.

Aloha Utilities, Inc.
 Additional Depreciation on Modifications to Existing Facilities
 Seven Springs Water System

| Line No. | | Schedule/ Volume Reference | Engineering Cost Estimate | Guideline Depreciation Rate | Estimated Annual Depreciation |
|----------|---|----------------------------------|---------------------------------|-----------------------------------|-------------------------------------|
| 1 | (A) <u>Alternative One (A) - Tray Aeration on each well</u> | | | | |
| 2 | Chemical storage & feed equipment | Volume I, | \$ 1,711,443 | 4.5% | \$ 77,015 |
| 3 | Unit process equipment | Section 8, | 1,573,503 | 4.5 | 70,808 |
| 4 | Pump stations | Schedule | 1,522,652 | 5.0 | 76,133 |
| 5 | Ground storage tanks | No. 5(A) | 1,770,508 | 2.7 | 47,804 |
| 6 | Chlorination systems | | 294,360 | 10.0 | 29,436 |
| 7 | High service pumping | | 1,147,123 | 5.0 | 57,356 |
| 8 | Wells & pumps | | 459,308 | 3.3 | 15,157 |
| 9 | Structures & Improvements - sitework, | | | | |
| 10 | concrete, electrical | | 2,182,308 | 3.0 | 65,469 |
| 11 | Land | | 300,000 | | |
| 12 | Total | | <u>\$ 10,961,205</u> | | <u>\$ 439,178</u> |
| 13 | (B) <u>Alternative One (B) - Packed Tower Aeration on each well</u> | | | | |
| 14 | Chemical storage & feed equipment | Volume I, | \$ 1,697,442 | 4.5% | \$ 76,385 |
| 15 | Unit process equipment | Section 8, | 4,219,387 | 4.5 | 189,872 |
| 16 | Pump stations | Schedule | 1,510,215 | 5.0 | 75,510 |
| 17 | Ground storage tanks | No. 5(A) | 1,755,814 | 2.7 | 47,407 |
| 18 | Chlorination systems | | 291,863 | 10.0 | 29,186 |
| 19 | High service pumping | | 1,137,632 | 5.0 | 56,882 |
| 20 | Wells & pumps | | 455,486 | 3.3 | 15,031 |
| 21 | Structures & Improvements - sitework, | | | | |
| 22 | concrete, electrical | | 2,490,644 | 3.0 | 74,719 |
| 23 | Land | | 300,000 | | |
| 24 | Total | | <u>\$ 13,858,483</u> | | <u>\$ 564,992</u> |

Aloha Utilities, Inc.
Allocation of Contingencies and Engineering Costs to
Estimated Costs of Modification to Existing Facilities
Seven Springs Water System

| Line No. | | Engineering Cost Estimate | Prorata Percent | Allocated Construction Contingencies | Allocated Engineering & Permitting | Total Estimated Cost |
|----------|---|---------------------------|-----------------|--------------------------------------|------------------------------------|----------------------|
| 1 | (A) <u>Alternative One (A) - Tray Aeration on each well</u> | | | | | |
| 2 | (Estimated costs per Volume I, Section 8) | | | | | |
| 3 | Chemical storage & feed equipment | \$ 1,323,510 | 16.05% | \$ 198,479 | \$ 189,454 | \$ 1,711,443 |
| 4 | Unit process equipment | 1,216,750 | 14.76 | 182,526 | 174,227 | 1,573,503 |
| 5 | Pump stations | 1,177,500 | 14.28 | 176,591 | 168,561 | 1,522,652 |
| 6 | Ground storage tanks | 1,369,040 | 16.61 | 205,404 | 196,064 | 1,770,508 |
| 7 | Chlorination systems | 227,650 | 2.76 | 34,131 | 32,579 | 294,360 |
| 8 | High service pumping | 887,050 | 10.76 | 133,061 | 127,012 | 1,147,123 |
| 9 | Two new wells & pumps | 355,134 | 4.31 | 53,299 | 50,875 | 459,308 |
| 10 | Structures & Improvements - sitework, | | | | | |
| 11 | concrete, electrical | 1,687,542 | 20.47 | 253,138 | 241,628 | 2,182,308 |
| 12 | Land | 300,000 | - | | | 300,000 |
| 13 | Total | <u>\$ 8,544,176</u> | <u>100.00%</u> | <u>\$ 1,236,629</u> | <u>\$ 1,180,400</u> | <u>\$ 10,961,205</u> |
| 14 | (B) <u>Alternative One (B) - Packed Tower Aeration on each well</u> | | | | | |
| 15 | (Estimated costs per Volume I, Section 8) | | | | | |
| 16 | Chemical storage & feed equipment | \$ 1,323,510 | 12.52% | \$ 198,539 | \$ 175,393 | \$ 1,697,442 |
| 17 | Unit process equipment | 3,289,935 | 31.12 | 493,492 | 435,960 | 4,219,387 |
| 18 | Pump stations | 1,177,500 | 11.14 | 176,655 | 156,060 | 1,510,215 |
| 19 | Ground storage tanks | 1,369,040 | 12.95 | 205,357 | 181,417 | 1,755,814 |
| 20 | Chlorination systems | 227,650 | 2.15 | 34,094 | 30,119 | 291,863 |
| 21 | High service pumping | 887,050 | 8.39 | 133,046 | 117,536 | 1,137,632 |
| 22 | Two new wells & pumps | 355,134 | 3.36 | 53,282 | 47,070 | 455,486 |
| 23 | Structures & Improvements - sitework, | | | | | |
| 24 | concrete, electrical | 1,941,993 | 18.37 | 291,306 | 257,345 | 2,490,644 |
| 25 | Land | 300,000 | - | | | 300,000 |
| 26 | Total | <u>\$ 10,871,812</u> | <u>100.00%</u> | <u>\$ 1,585,771</u> | <u>\$ 1,400,900</u> | <u>\$ 13,858,483</u> |

Aloha Utilities, Inc.
Estimated Taxes Other than Income
Associated with Modification of Existing Facilities
Seven Springs Water System

Line
No.

| | | | |
|---|---|-----------|-----------------|
| 1 | (A) <u>Alternative One (A) - Tray Aeration on each well</u> | | |
| 2 | Estimated cost of facilities (Schedule No. 5(A)) | \$ | 10,961,205 |
| 3 | Current Pasco County millage rate | | <u>0.021841</u> |
| 4 | Total increase in property taxes | <u>\$</u> | <u>239,404</u> |
| 5 | (B) <u>Alternative One (B) - Packed Tower Aeration on each well</u> | | |
| 6 | Estimated cost of facilities (Schedule No. 5(A)) | \$ | 13,858,483 |
| 7 | Current Pasco County millage rate | | <u>0.021841</u> |
| 8 | Total increase in property taxes | <u>\$</u> | <u>302,683</u> |

Aloha Utilities, Inc.
Additional Required Rate of Return on Modified Existing Facilities
Seven Springs Water System

| <u>Line No.</u> | | <u>Reference Schedule No.</u> | <u>Alternative One (A)</u> | <u>Alternative One (B)</u> |
|---------------------|---|-----------------------------------|--------------------------------|--------------------------------|
| 1 | Estimated cost to modify existing facilities | 5(A) | \$ 10,961,205 | \$ 13,858,483 |
| 2 | Less: Accumulated depreciation (1 year) | 4(A) | <u>(439,178)</u> | <u>(564,992)</u> |
| 3 | Net additional investment to serve existing customers | | 10,522,027 | 13,293,491 |
| 4 | Average cost of capital | 8(A) | <u>10.45%</u> | <u>10.45%</u> |
| 5 | Additional rate of return required | | <u>\$ 1,099,552</u> | <u>\$ 1,389,170</u> |

Aloha Utilities, Inc.
Modifications to Existing and Upgraded Water Facilities
Average Cost of Capital - December 31, 1996
Seven Springs Water System

| <u>Line No.</u> | | <u>Total Capital</u> | <u>Percent Ratio</u> | <u>Cost of Each Percent</u> | <u>Weighted Cost</u> |
|---------------------|-----------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 1 | Long-term debt | \$ 2,522,880 | 55.98% | 11.00% | 6.16% |
| 2 | Preferred stock | 600,000 | 13.31 | 11.88 | 1.58% |
| 3 | Customer deposits | 208,610 | 4.63 | 6.00 | 0.28% |
| 4 | Common equity | 923,619 | 20.49 | 11.88 | 2.43% |
| 5 | Deferred income taxes | 252,068 | 5.59 | - | - |
| 6 | Total | <u>\$ 4,507,177</u> | <u>100.00%</u> | | <u>10.45%</u> |

Aloha Utilities, Inc.
**Additional Income Taxes on Investment Required to Modify Existing Facilities
Seven Springs Water System**

| Line No. | | Reference Schedule No. | Alternative One (A) | Alternative One (B) |
|----------|---|------------------------|---------------------|---------------------|
| 1 | Net additional investment to serve existing customers | 7(A) | \$ 10,522,027 | \$ 13,293,491 |
| 2 | Weighted cost of equity (1) | 8(A) | 4.01% | 4.01% |
| 3 | Net income generated by additional investment | | 421,933 | 533,069 |
| 4 | Divide by income tax expansion factor | | 1.6033 | 1.6033 |
| 5 | Pre-tax income | | 676,485 | 854,670 |
| 6 | Less: Net income per above | | (421,933) | (533,069) |
| 7 | Additional income tax provision required | | <u>\$ 254,552</u> | <u>\$ 321,601</u> |
| 8 | (1) Per Schedule No. 8(A): | | | |
| 9 | Weighted cost of preferred stock | 1.58% | | |
| 10 | Weighted cost of common equity | <u>2.43</u> | | |
| 11 | Total weighted cost of equity | | <u><u>4.01%</u></u> | |

Aloha Utilities, Inc.
 Annualized Revenue when Modified Existing Facilities are Placed in Service
 Seven Springs Water System

| <u>Line No.</u> | | | |
|-----------------|---|--------------|---------------------|
| 1 | Annualized revenue, year ended February 28, 1997 (page 2) | | \$ 1,366,305 |
| 2 | Growth factor for completion date | | <u>1.1733</u> |
| 3 | Projected annualized revenue 9/2000 | | <u>\$ 1,603,086</u> |
| 4 | (1) Number of ERC's 12/31/95 | 8,083 | |
| 5 | Number of ERC's 12/31/96 | <u>8,474</u> | |
| 6 | Average annual increase | <u>391</u> | |
| 7 | Increase percent | 4.84% | |
| 8 | Factor for completion date (A) | <u>3.58</u> | |
| 9 | Completion date growth factor | <u>.1733</u> | |
| 10 | (A) Number of months from 02/97 to estimated completion 09/2000 | | |
| 11 | Divided by 12 months (43/12 = 3.58) | | |

Aloha Utilities, Inc.
 Schedule of Annualized Revenue
 Seven Springs Water System
 For the Year Ended February 28, 1997

| Line No. | | Number of Bills | Gallons Sold (000) | Existing Rates (1) | Annualized Revenue |
|-------------|----------------------------------|--------------------|--------------------------|-----------------------|-----------------------|
| 1 | <u>Residential - 5/8" x 3/4"</u> | | | | |
| 2 | Base facility charges | 94,402 | | \$ 7.12 | \$ 672,142 |
| 3 | Excess gallonage charges | | 477,018 | 1.27 | 605,813 |
| 4 | | | | | <u>1,277,955</u> |
| 5 | <u>General Service</u> | | | | |
| 6 | <u>5/8" x 3/4"</u> | | | | |
| 7 | Minimum charges (3M) | 1,097 | | 7.12 | 7,811 |
| 8 | Excess gallonage charges | | 8,774 | 1.27 | 11,143 |
| 9 | | | | | <u>18,954</u> |
| 10 | <u>1"</u> | | | | |
| 11 | Minimum charges (8M) | 386 | | 18.94 | 7,311 |
| 12 | Excess gallonage charges | | 6,106 | 1.27 | 7,755 |
| 13 | | | | | <u>15,066</u> |
| 14 | <u>1 1/2"</u> | | | | |
| 15 | Minimum charges (15M) | 144 | | 35.52 | 5,115 |
| 16 | Excess gallonage charges | | 1,957 | 1.27 | 2,485 |
| 17 | | | | | <u>7,600</u> |
| 18 | <u>2"</u> | | | | |
| 19 | Minimum charges (24M) | 244 | | 57.24 | 13,967 |
| 20 | Excess gallonage charges | | 16,104 | 1.27 | 20,452 |
| 21 | | | | | <u>34,419</u> |
| 22 | <u>3"</u> | | | | |
| 23 | Minimum charges (48M) | 8 | | 113.73 | 910 |
| 24 | Excess gallonage charges | | 296 | 1.27 | 376 |
| 25 | | | | | <u>1,286</u> |
| 26 | <u>6"</u> | | | | |
| 27 | Minimum charges (150M) | 32 | | 275.27 | 8,809 |
| 28 | Excess gallonage charges | | 1,745 | 1.27 | 2,216 |
| 29 | | | | | <u>11,025</u> |
| 30 | Total | <u>96,313</u> | <u>512,000</u> | | <u>\$ 1,366,305</u> |

Section 3

Aloha Utilities, Inc.
 Additional Revenue Required to Upgrade Facilities
 Seven Springs Water System

| Line No. | | Reference Schedule No. | Estimated Cost |
|-------------|--|---------------------------|---------------------|
| 1 | <u>Alternative Two - Upgrade Facilities (1)</u> | | |
| 2 | Increased operation & maintenance expense | 3(B) | \$ 2,671,372 |
| 3 | Depreciation | 4(B) | 418,130 |
| 4 | Taxes other than income taxes | 6(B) | 223,089 |
| 5 | Income taxes | 9(B) | <u>236,990</u> |
| 6 | Total estimated additional operating expenses | | 3,549,581 |
| 7 | Additional required rate of return | 7(B) | <u>1,023,691</u> |
| 8 | Total additional costs and rate of return | | 4,573,272 |
| 9 | Divide by Regulatory Assessment Fees (RAF) Expansion Factor | | <u>0.955</u> |
| 10 | Total additional revenue required | | <u>\$ 4,788,766</u> |
| 11 | Divide by annualized revenue | 10(A) | <u>\$ 1,603,086</u> |
| 12 | Percentage increase in revenue and rates required | | <u>298.72%</u> |
| 13 | (1) Alternative Two consists of an upgrade to the existing Mitchell Road water treatment plant; construction of two new treatment plants, storage facilities, and upgrades of the existing eight wells and the addition of two new wells and improvements to the transmission system. See Volume I, Sections 7 and 9, for a complete analysis and description of this Alternative. | | |

Aloha Utilities, Inc.
 Schedule of Present and Proposed Rates to Upgrade Facilities
 Seven Springs Water System

| Line No. | | Present Rates | Required Rates |
|-------------|--|------------------|-------------------|
| 1 | Alternative Two - Upgrade Facilities (298.72% increase) | | |
| 2 | Residential & General Service | | |
| 3 | 5/8" x 3/4" minimum 3,000 gallons | \$ 7.12 | \$ 28.39 |
| 4 | 1" minimum 8,000 gallons | 18.94 | 75.52 |
| 5 | 1 1/2" minimum 15,000 gallons | 35.52 | 141.63 |
| 6 | 2" minimum 24,000 gallons | 57.24 | 228.23 |
| 7 | 3" minimum 48,000 gallons | 113.73 | 453.46 |
| 8 | 6" minimum 150,000 gallons | 275.27 | 1,097.56 |
| 9 | 8" minimum 240,000 gallons | 562.36 | 2,242.24 |
| 10 | Gallonge charge per 1,000 gallons in | | |
| 11 | excess of minimum | 1.27 | 5.06 |

Aloha Utilities, Inc.
 Increased Operation & Maintenance Expenses with
 Upgrade of Facilities
 Seven Springs Water System

| Line No. | | <u>Estimated Engineering Estimate</u> | <u>Existing Expense</u> | <u>Estimated Additional Expense</u> |
|----------|---|---------------------------------------|-------------------------|-------------------------------------|
| 1 | <u>Alternative Two - Facilities Upgrade</u> | | | |
| 2 | (Per Volume I, Section 9) | | | |
| 3 | Purchased power & chemicals | \$ 2,092,990 | Note (1) | \$ 2,092,990 |
| 4 | Purchased power - transfer & high service pumps | 105,000 | - | 105,000 |
| 5 | Field O&M labor | 657,000 | \$ (220,118) | 436,882 |
| 6 | Field supervisor/operator | 36,500 | | 36,500 |
| 7 | Total | <u>\$ 2,891,490</u> | <u>\$ (220,118)</u> | <u>\$ 2,671,372</u> |

8 (1) No savings of existing purchased power costs for pumping equipment at existing wells is anticipated.

Aloha Utilities, Inc.
 Additional Depreciation to Upgrade Facilities
 Seven Springs Water System

| Line No. | | Schedule/ Volume Reference | Engineering Cost Estimate | Guideline Depreciation Rate | Estimated Annual Depreciation |
|----------|---|---|---------------------------------|-----------------------------------|-------------------------------------|
| 1 | Alternative Two - Upgrade Facilities | | | | |
| 2 | Chemical storage & feed equipment | Volume I, Section 9, Schedule No. 5(B) | \$ 1,077,923 | 4.5% | \$ 48,507 |
| 3 | Unit process equipment | | 2,489,662 | 4.5 | 112,035 |
| 4 | Pump stations | | 444,387 | 5.0 | 22,219 |
| 5 | Storage tanks | | 748,017 | 2.7 | 20,196 |
| 6 | Chlorination systems & scrubber | | 252,429 | 10.0 | 25,243 |
| 7 | High service pumping equipment | | 802,654 | 5.0 | 40,133 |
| 8 | Electric generators | | 220,632 | 5.0 | 11,032 |
| 9 | Flow meters & recorders | | 68,740 | 5.0 | 3,437 |
| 10 | Pressure relief valve assemblers | | 54,796 | 4.0 | 2,192 |
| 11 | SCADA system (1) | | 148,043 | 16.7 | 24,723 |
| 12 | Structures & Improvements | | 1,597,081 | 3.0 | 47,912 |
| 13 | 1998 well improvements | | 944,451 | 3.3 | 31,167 |
| 14 | 1998 transmission & distribution mains | | 1,275,399 | 2.3 | 29,334 |
| 15 | Land | | 90,000 | - | - |
| 16 | Total | | | <u>\$ 10,214,214</u> | |

17 (1) Supervisory Control & Data Acquisition Systems (SCADA) are computerized control systems which track each
 18 element of the treatment plant process.

Aloha Utilities, Inc.
Allocation of Contingencies and Engineering Costs to
Estimated Cost to Upgrade Facilities - Alternative Two
Seven Springs Water System

| Line No. | | Engineering Cost Estimate | Prorata Percent | Allocated Construction Contingencies | Allocated Engineering & Permitting | Total Estimated Cost |
|----------|--|---------------------------|-----------------|--------------------------------------|------------------------------------|----------------------|
| 1 | (A) <u>Alternative Two - 1998 Facilities Upgrade (1)</u> | | | | | |
| 2 | (Estimated costs per Volume I, Section 9) | | | | | |
| 3 | Chemical storage & feed equipment | \$ 805,410 | 10.65% | \$ 120,857 | \$ 151,656 | \$ 1,077,923 |
| 4 | Unit process equipment | 1,860,450 | 24.59 | 279,050 | 350,162 | 2,489,662 |
| 5 | Pump stations | 332,055 | 4.39 | 49,818 | 62,514 | 444,387 |
| 6 | Storage tanks | 558,920 | 7.39 | 83,863 | 105,234 | 748,017 |
| 7 | Chlorination systems & scrubber | 188,714 | 2.49 | 28,257 | 35,458 | 252,429 |
| 8 | High service pumping equipment | 599,740 | 7.93 | 89,991 | 112,923 | 802,654 |
| 9 | Electric generator | 164,850 | 2.18 | 24,739 | 31,043 | 220,632 |
| 10 | Flow meters & recorders | 51,339 | .68 | 7,718 | 9,683 | 68,740 |
| 11 | Pressure relief valve assemblies | 40,977 | .54 | 6,129 | 7,690 | 54,796 |
| 12 | SCADA system | 110,685 | 1.46 | 16,568 | 20,790 | 148,043 |
| 13 | Structures & Improvements - concrete, | | | | | |
| 14 | buildings, yard piping, sitework, electrical | 1,193,557 | 15.77 | 178,959 | 224,565 | 1,597,081 |
| 15 | 1998 well improvements | 705,715 | 9.33 | 105,877 | 132,859 | 944,451 |
| 16 | 1998 transmission & distribution mains | 952,990 | 12.60 | 142,986 | 179,423 | 1,275,399 |
| 17 | Land | 90,000 | - | | | 90,000 |
| 18 | Total | <u>\$ 7,655,402</u> | <u>100.00%</u> | <u>\$ 1,134,812</u> | <u>\$ 1,424,000</u> | <u>\$ 10,214,214</u> |

19 (1) The estimated costs for 2015, Water Main Improvements, shown in Volume I, Section 9, are not included, since the source of additional water has
20 not yet been defined. Such 2015 costs were presented in Volume I, Section 9, to show that even if such costs are considered, the total costs of
21 Alternative Two are less than those of either Alternatives One (A) or One (B).

Aloha Utilities, Inc.
Estimated Taxes Other than Income Taxes
Associated with Upgrade to Facilities
Seven Springs Water System

| <u>Line No.</u> | | |
|---------------------|--|-------------------|
| 1 | <u>Alternative Two - Facilities Upgrade</u> | |
| 2 | Estimated cost of facilities (Schedule No. 5(B)) | \$ 10,214,214 |
| 3 | Current Pasco County millage rate | <u>0.021841</u> |
| 4 | Total increase in property taxes | <u>\$ 223,089</u> |

Aloha Utilities, Inc.
**Additional Required Rate of Return on Upgraded Facilities
 Seven Springs Water System**

| <u>Line No.</u> | | <u>Reference Schedule No.</u> | <u>Alternative Two Estimated Amount</u> |
|---------------------|---|-----------------------------------|---|
| 1 | Estimated cost to upgrade facilities | 5(B) | \$ 10,214,214 |
| 2 | Less: Accumulated depreciation (1 year) | 4(B) | <u>(418,130)</u> |
| 3 | Net additional investment to serve existing customers | | 9,796,084 |
| 4 | Average cost of capital | | <u>10.45%</u> |
| 5 | Additional rate of return required | | <u>\$ 1,023,691</u> |

Aloha Utilities, Inc.
Additional Income Taxes on Investment Required to Upgrade Facilities
Alternative Two
Seven Springs Water System

| <u>Line No.</u> | | <u>Reference Schedule No.</u> | <u>Alternative Two Estimated Expense</u> |
|---------------------|---|-----------------------------------|--|
| 1 | Net additional investment to serve existing customers | 7(B) | \$ 9,796,084 |
| 2 | Weighted cost of equity | 8(A), 9(A) | <u>4.01%</u> |
| 3 | Net income generated by additional investment | | 392,823 |
| 4 | Divide by income tax expansion factor | | <u>1.6033</u> |
| 5 | Pre-tax income | | 629,813 |
| 6 | Less: Net income per above | | <u>(392,823)</u> |
| 7 | Additional income tax provision required | | <u>\$ 236,990</u> |

Schedule 9(B)

Section 4

Aloha Utilities, Inc.
 Summary of Engineering, Testing, Chemicals, and Internal Costs Incurred
 Seven Springs Corrosion Control Program
 Inception through May, 1997

| Line No. | Invoice Date | Invoice Number | Vendor | Amount |
|----------|--------------------------|----------------|---------------------------|---------------|
| 1 | Engineering | | | |
| 2 | 03/20/95 | 0012 | David Porter, P.E. | \$ 675 |
| 3 | 07/25/95 | 0037 | David Porter, P.E. | 113 |
| 4 | 08/28/95 | 0045 | David Porter, P.E. | 1,126 |
| 5 | 09/25/95 | 0054 | David Porter, P.E. | 1,200 |
| 6 | 10/28/95 | 0061 | David Porter, P.E. | 3,150 |
| 7 | 11/27/95 | 0066 | David Porter, P.E. | 2,905 |
| 8 | 12/26/95 | 0070 | David Porter, P.E. | 525 |
| 9 | 01/29/96 | 0078 | David Porter, P.E. | 1,983 |
| 10 | 02/26/96 | 0083 | David Porter, P.E. | 638 |
| 11 | 03/31/96 | 0092 | David Porter, P.E. | 150 |
| 12 | 05/01/96 | 0097 | David Porter, P.E. | 770 |
| 13 | 05/29/96 | 0106 | David Porter, P.E. | 1,136 |
| 14 | 06/28/96 | 0115 | David Porter, P.E. | 188 |
| 15 | 08/05/96 | 0123 | David Porter, P.E. | 150 |
| 16 | 08/30/96 | 0132 | David Porter, P.E. | 525 |
| 17 | 11/01/96 | 0142 | David Porter, P.E. | 1,251 |
| 18 | 12/03/96 | 0148 | David Porter, P.E. | 600 |
| 19 | 12/29/96 | 0153 | David Porter, P.E. | 1,398 |
| 20 | 02/02/97 | 0160 | David Porter, P.E. | 1,590 |
| 21 | 03/01/97 | 0165 | David Porter, P.E. | 1,585 |
| 22 | 03/29/97 | 0174 | David Porter, P.E. | 263 |
| 23 | 05/01/97 | 0183 | David Porter, P.E. | 712 |
| 24 | Total Engineering | | | 22,633 |
| 25 | Testing | | | |
| 26 | 08/18/93 | 86719 | Haines Testing Lab., Inc. | 90 |
| 27 | 08/18/93 | 86655 | Haines Testing Lab., Inc. | 630 |
| 28 | 09/03/93 | 86757 | Haines Testing Lab., Inc. | 146 |
| 29 | 09/08/93 | 86906 | Haines Testing Lab., Inc. | 20 |
| 30 | 09/21/93 | 86995 | Haines Testing Lab., Inc. | 20 |
| 31 | 09/23/93 | 87017 | Haines Testing Lab., Inc. | 20 |
| 32 | 10/06/93 | 87115 | Haines Testing Lab., Inc. | 20 |
| 33 | 10/22/93 | 87348 | Haines Testing Lab., Inc. | 147 |
| 34 | 06/01/93 | 920234 | Genesis Group, Inc. SE | 3,002 |
| 35 | 06/25/93 | 930295 | Genesis Group, Inc. SE | 668 |
| 36 | 08/06/93 | 930351 | Genesis Group, Inc. SE | 473 |
| 37 | 08/20/93 | 930365 | Genesis Group, Inc. SE | 2,268 |
| 38 | Total Testing | | | 7,504 |

Aloha Utilities, Inc.
 Summary of Engineering, Testing, Chemicals, and Internal Costs Incurred
 Seven Springs Corrosion Control Program
 Inception through May, 1997

| Line No. | Invoice Date | Invoice Number | Vendor | Amount |
|----------|-----------------------|----------------|--------------------------|------------------|
| 1 | <u>Chemicals</u> | | | |
| 2 | 03/13/96 | 248 | Met Pro Corporation | \$ 5,454 |
| 3 | 06/26/96 | 288 | Met Pro Corporation | 1,515 |
| 4 | 07/11/96 | 102941 | Met Pro Corporation | 91 |
| 5 | 08/07/96 | 3062 | Met Pro Corporation | 3,212 |
| 6 | 08/29/96 | 3176 | Met Pro Corporation | 3,212 |
| 7 | 10/01/96 | 3324 | Met Pro Corporation | 3,212 |
| 8 | 10/28/96 | 345 | Met Pro Corporation | 3,212 |
| 9 | 11/22/96 | 355 | Met Pro Corporation | 3,030 |
| 10 | 12/20/96 | 366 | Met Pro Corporation | 3,030 |
| 11 | 01/16/97 | 3735 | Met Pro Corporation | 3,030 |
| 12 | 02/19/97 | 3859 | Met Pro Corporation | 3,030 |
| 13 | 03/12/97 | 3905 | Met Pro Corporation | 3,030 |
| 14 | 04/08/97 | 4021 | Met Pro Corporation | 3,030 |
| 15 | Total Chemicals | | | <u>38,088</u> |
| 16 | <u>Internal Costs</u> | | | |
| 17 | | | Postage - DEP | 8 |
| 18 | | | Postage - Homeowners | 7 |
| 19 | 05/31/96 | 1205205 | St. Petersburg Times | 103 |
| 20 | 06/02/96 | | Tampa Tribune | 192 |
| 21 | 04/24/97 | 4205 | Great American Emp. Svc. | 188 |
| 22 | 04/17/97 | 4158 | Great American Emp. Svc. | 73 |
| 23 | Total Internal Costs | | | <u>571</u> |
| 24 | Total Costs Incurred | | | <u>\$ 68,796</u> |