

**PRE-FILED TESTIMONY  
OF  
CHRISTOPHER PN WOODCOCK**

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**RHODE ISLAND PUBLIC UTILITIES COMMISSION**

**DOCKET NO. \_\_\_\_**

**KENT COUNTY WATER AUTHORITY**

**PREFILED TESTIMONY OF**

**CHRISTOPHER P.N. WOODCOCK**

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CHRISTOPHER P.N. WOODCOCK**

4 **Q: Please state your name and business address?**

5 A: My name is Christopher P.N. Woodcock and my business address is 18 Increase  
6 Ward Drive, Northborough, Massachusetts 01532.

7  
8 **Q: By whom are you employed and in what capacity?**

9 A: I am the President of Woodcock & Associates, Inc. a consulting firm specializing in  
10 water and wastewater rate and financial studies.

11  
12 **Prior Experience**

13 **Q: Please describe your qualifications and experience.**

14 A: I have undergraduate degrees in Economics and in Civil Engineering from Tufts  
15 University in Medford, Massachusetts. After graduating in 1974, I was employed by  
16 the environmental consulting firm of Camp, Dresser, and McKee Inc. (CDM). For  
17 approximately 18 months I worked in the firm's environmental engineering group  
18 performing such tasks as designing water distribution and transmission pipes, sew-  
19 er collection and interception systems, pumping facilities and portions of a wastewa-  
20 ter treatment facility. From approximately January 1976, I worked in the firm's  
21 management and financial consulting services group, gaining increasing responsi-  
22 bility. At the time of my resignation, I was a corporate Vice President and appointed  
23 the leader of the group overseeing all rate and financial studies. In my career, I  
24 have worked on close to 400 water and wastewater rate and financial studies, pri-  
25 marily in the United States, but also for government agencies overseas. I have also  
26 worked on a number of engineering and financial feasibility studies in support of  
27 revenue bond issues, I have helped draft and review revenue bond indentures, and  
28 I worked on several valuation studies, capital improvement financing analyses, and  
29 management audits of public works agencies. In addition to my professional expe-

1 rience I have also held elected and appointed positions on municipal boards over-  
2 seeing public works functions.

3

4 **Q: Have you previously testified before state regulatory commissions or courts**  
5 **on rate related matters?**

6 A: Yes, I have provided testimony on rate related matters before utility commissions in  
7 Rhode Island, Maine, Connecticut, New York, New Hampshire, Texas, and Alberta,  
8 Canada. I have also been retained as an expert witness on utility rate related mat-  
9 ters in proceedings in state courts in Arkansas, Florida, Massachusetts, Michigan,  
10 New Jersey, Maryland, Ohio, and Pennsylvania, as well as the Federal Court in  
11 Michigan. I have been selected to several arbitration panels related to disputes  
12 over water rates and charges, I have provided testimony on rate related matters to  
13 the Michigan and Massachusetts legislatures, and I have provided testimony at ad-  
14 ministrative hearings on a number of occasions.

15

16 **Q: Do you belong to any professional organizations or committees?**

17 A: Yes, I am a member of the Water Environment Federation, the Rhode Island Water  
18 Works Association, the Massachusetts Water Works Association, the New England  
19 Water Works Association, and the American Water Works Association. For the Wa-  
20 ter Environment Federation, I was a member of the committee that prepared their  
21 manual on Wastewater Rates and Financing. For the New England Water Associa-  
22 tion, I am past chairman and a current member of the Financial Management Com-  
23 mittee. In my capacity as Vice President for the New England Water Works Associ-  
24 ation I also sit on the Executive Committee and the Board of Directors as well as  
25 chairing and sitting on a number of other administrative committees. For the Ameri-  
26 can Water Works Association, I am past chairman of the Financial Management  
27 Committee and the Rates and Charges Committee that has prepared the manuals  
28 on Revenue Requirements, Water Rates, Alternative Rate Structures, and Water  
29 Rates and Related Charges. I have been reappointed to and am currently a mem-  
30 ber of the Rates & Charges Committee.

1

2 **Q: What is your role in this proceeding?**

3 A: Working with the Kent County Water Authority (KCWA) staff, I have prepared a  
4 summary of the requested rate year revenue requirements. I have also updated the  
5 previously approved cost allocation study to reflect the new revenue requirements.  
6 The cost allocations I have presented follow those that have been used by the Au-  
7 thority and accepted by the Commission over the past dozen years. I believe the  
8 cost allocation study fully complies with the Commission's findings in KCWA's prior  
9 dockets as well as the requirements found under Commission Docket 2049 – the  
10 1993 Water Task Force Report on Cost of Service Study Methodology.

11 **Summary**

12 **Q: What are the proposed test year and rate year?**

13 A: The test year is the twelve months ending June 30, 2007, or the Authority's fiscal  
14 year 2007. Based on the typical regulatory schedule, we expect that new rates will  
15 not be effective until the fall of 2008. Because the Authority bills most customers  
16 quarterly, the full impact of the rate increase will not be felt until January 2009. We  
17 propose the twelve month period from November 1, 2008 – October 31, 2009 as the  
18 rate year.

19

20 **Q: Will you summarize your findings and conclusions?**

21 A: KCWA Water's rate year revenue requirement is \$21,657,097. Revenues at current  
22 rates will provide rate revenues of \$16,192,541. As a result, the KCWA needs to  
23 increase its revenues by \$5,464,556, or 34%. Based on the cost allocation study  
24 included in this filing, the proposed rates and charges change by varying amounts.  
25 These variations are due to several factors:

- 26 • The metered rates that result from the cost allocation study all increase by rough-  
27 ly the overall percentage increase of some 35%.
- 28 • The service charges for larger size meters have increased significantly more than  
29 the overall average increase. This is due to a larger percentage (when com-

1       pared to the last docket) of the customer service expenses being associated with  
2       meters and services rather than billing and collection costs that do not vary by  
3       meter size. The overall percentage allocation to customer service is quite similar  
4       to the prior docket.

- 5       • Both public and private fire service charges have not increased as much as the  
6       overall rate increase we have requested. This is primarily due to the proposed  
7       increase in infrastructure replacement costs that can only be recovered through  
8       use based charges under Rhode Island state law.

9

10 **Q: You have submitted a number of cost allocation studies on behalf of the Au-**  
11 **thority over the past few decades. Have you used the same basic procedures**  
12 **and rate designs that have been approved by this Commission in those prior**  
13 **Dockets?**

14 A: Yes I have. I looked back as far as the 1990 rate filing I prepared (I haven't  
15 searched back farther), and the same basic procedures have been used since then.  
16 I have not proposed any major changes to the cost allocation procedures, as best I  
17 can tell. For example, the same meter equivalents that have been approved by the  
18 Commission since the 1990 case are still used in this filing. I believe it was the  
19 1995 rate filing where KCWA was the first regulated Rhode Island water utility to  
20 adopt different rates for different size meters. This has been retained and, in fact,  
21 adopted by several other Rhode Island water utilities since then.  
22 One notable difference in this filing is the alternative we have presented for a sea-  
23 sonal rate structure. I will discuss this in greater detail later.

24

25 **Q: What are the major changes in revenue requirements?**

26 A: The single largest adjustment is to the amount allowed for infrastructure replace-  
27 ment (IFR). As we have indicated in prior filings, the Authority's IFR report pre-  
28 sented an annual expense of \$6 million. In prior dockets we have been provided  
29 less than the full amount included in the IFR report approved by the Department of

1 Health. In this case we are asking for the full funding provided in state law (46-15.6-  
2 6(e)).

3 The Authority is requesting an increase in its operating revenue allowance to 5% of  
4 *total revenues*. This is slightly more than \$1 million of the proposed increase. As  
5 will be discussed later, it is an integral and essential part of the Authority's seasonal  
6 rate proposal.

7 The Authority has been unable to fund various reserves required under its bond in-  
8 dentures, bringing these back to the full funding levels required will cost nearly \$1  
9 million.

10 KCWA was granted a pass through to its rates to reflect the recent increase in the  
11 wholesale water rates charged by Providence Water. However, the increase in the  
12 expense for wholesale water purchases is estimated at over \$500,000 when com-  
13 pared to the FY 2007 *actual* expense and the rate year.

14 Because the Authority had minimal activity before the PUC in the rate year (FY  
15 2007), the increase in rate case expenses and regulatory assessments is slightly  
16 over \$80,000.

17 The Authority has asked for one additional employee in this docket. That additional  
18 employee along with increases in salary costs and associated employee benefits  
19 add some \$325,000 to the test year costs for the rate year.

20 While it is not a change in expense, the Authority has continued to see a drop in wa-  
21 ter sales. The rate year sales are more than 7.5% less than those allowed in the  
22 prior docket (3660).

23

24 **Content of Schedules**

25 **Q: Please describe your prefiled schedules.**

26 A: There are thirteen main schedules, several of which include supporting schedules. I  
27 have tried to use the same schedules and numbering as used in our previous filings  
28 to make comparisons easier. The schedules included in this filing are:

- 29 • **Schedule 1:** This schedule presents the test year (FY 2007) along with  
30 the adjustments that were used to derive the rate year revenue re-

1           quirements. Attached are several supporting tables that demonstrate  
2           the needed increase:

- 3           • **Schedule 1A.** This schedule presents the detail of the test year  
4           miscellaneous revenues as well as the annual revenues from cur-  
5           rent rates and charges at the rate year usage levels.
- 6           • **Schedule 1B.** This presents the test year labor costs and the ad-  
7           justments to the rate year.
- 8           • **Schedule 1C.** This presents the derivation of the rate year pur-  
9           chased water costs. It also shows the production from the Au-  
10          thority's own sources. This schedule also includes a graphic re-  
11          presentation of the drop in water purchases and production over  
12          the past few years that are reflected in reduced water sales as  
13          well.
- 14          • **Schedule 1D** This schedule presents the details of other adjust-  
15          ments to the rate year expenses we are proposing in this docket.
- 16          • **Schedule 1E** This schedule presents the historic regulatory ex-  
17          penses of the Authority. As the Commission is aware, the Au-  
18          thority incurs regulatory expenses for its own rate filings as well  
19          as for intervention in dockets filed by Providence Water and sub-  
20          sequent pass through dockets. Accordingly, the cost of any par-  
21          ticular rate filing is not particularly relevant to the Authority's  
22          overall annual regulatory expense, and the overall cost of *all*  
23          dockets the Authority participates in should to be considered. As  
24          Mr. Brown's testimony discusses, we are anticipating two more  
25          rate filings in the next few years. For this docket we are propos-  
26          ing to amortize the estimated cost of this filing plus the estimated  
27          cost of other rate cases we participate in over a two year period.  
28          The annual cost of this is \$62,500. In addition we have included  
29          the cost of the Commission's annual assessment.



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- **Schedule 2** This schedule presents the units of service including the number of meters by size and billing frequency, the number of billings, the number of private and public fire services by size of connection, and water sales. We have made adjustments to the test year due to the known loss of business. As discussed later we are proposing to use the adjusted test year sales as the basis for the rate year sales.
- **Schedule 3** presents the allocation of the rate year costs to various cost of service components. These are the same components and format used in past full rate filings. Schedule 3 also has several supporting schedules.
  - **Schedule 3A** This schedule presents the allocation of the rate year labor costs. These are a part of the overall operating costs, but have been allocated separately in order to better assign labor related costs such as pensions and benefits.
  - **Schedule 3B** contains an explanation for each of the symbols or allocators that were used in the prior schedules.
- **Schedule 4** summarizes the proposed fire protection charges. The supporting schedules are as follows:
  - **Schedule 4A** presents the allocation of total fire service expenses (from Schedule 3) to Public Fire Service and to Private Fire Service.
  - **Schedule 4B** shows the calculation of the proposed public and private fire protection charges.
- **Schedule 5** summarizes the proposed service charges. There are also five supporting schedules,
  - **Schedule 5A** shows the allocation of the total customer service expenses between costs related to meters and services and costs related to billing, meter reading, and collection.
  - **Schedule 5B** shows the allocation of the customer service labor costs between meters and services and billing.

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- **Schedule 5C** presents the basis for the allocation symbols used in schedules 5A and 5B.
- **Schedule 5D** shows the derivation of the meter equivalents that are used to derive the meters and services portion of the service charge. These are the same meter equivalents that we have presented to the Commission a number of years ago and have since been used by most water utilities in RI.
- **Schedule 5E** shows the calculation of the two components of the proposed service charge and the calculation of the overall charges presented in Schedule 5.
- **Schedule 6.0** presents the allocation of general water costs (metered rates). Following AWWA's base-extra capacity method and procedures from prior KCWA dockets, the costs are first allocated to base (average use), maximum day and peak hour cost components. This schedule is supported by two additional schedules
  - **Schedule 6A** presents the allocation of general water labor costs to base (average use), maximum day and peak hour cost components.
  - **Schedule 6B** presents the basis for the allocation symbols used in schedules 6 and 6A.
- **Schedule 7** presents the allocation of the base, maximum day and peak hour costs from Schedule 6 to the Authority's three customer classes. As the Commission may recall, the Authority was the first regulated water utility in Rhode Island to establish rates for different customer classes based on different demand patterns of the classes. Rather than using the more traditional residential, commercial, industrial, and municipal classes, the Kent County Water Authority developed classes based on meter size. We believe this is a far better distinction of the different demands and patterns than the traditional. It was de-

1            developed after intervention by a large water user and has since been  
2            adopted by other water utilities in Rhode Island.

- 3            • **Schedule 8** presents the calculation of the metered water rates for the  
4            various classes (meter sizes).
- 5            • **Schedule 9** presents a summary of the current rates and the rates de-  
6            rived from the cost of service study, including the percentage change  
7            to each.
- 8            • **Schedule 10** presents the impact of the proposed rates and charges  
9            on various types of customers.
- 10           • **Schedule 11** contains the proof of revenues, showing the annual rev-  
11           enues under the existing and proposed rates at the rate year usage le-  
12           vels. Because the rates are rounded to the nearest penny, the pro-  
13           posed rates provide slightly different total revenues from those re-  
14           quired.
- 15           • **Schedule 12** is a summary of the test year and rate year revenues and  
16           expenses. The test year revenues are those derived from Schedule  
17           11; that is the revenues at the current rates with the rate year usages.
- 18           • **Schedule 13** presents the alternative seasonal rates. As discussed  
19           later, this is an alternative that the KCWA offers for consideration by  
20           the Commission to help achieve wiser use of water by the Authority's  
21           rate payers. There are two alternatives that will also be explained later  
22           in my testimony.

23  
24 **Revenue Requirements**

25 **Q: Have you prepared a schedule that presents the proposed rate year revenue**  
26 **requirements?**

27 **A:** Yes I have. Sch 1 presents a summary of the test year expenses, our proposed ad-  
28 justments, and the proposed rate year revenue requirements. There are five ad-  
29 justment columns under the label of Adjustments Detail. The first column includes

1 all labor adjustments; the detail for this is shown in Schedule 1B. The second col-  
2 umn was included for any one time adjustments of which there are none. The next  
3 column presents the proposed line item adjustments to the test year expenses. In  
4 each case a reference is made to the supporting schedule that contains the expla-  
5 nation or basis for the adjustment. The final column is an adjustment for non-labor  
6 inflation – this was used to account for inflationary increases between the rate year  
7 and the test year.

8

9 **Q: Can you discuss the adjustments presented in your schedule 1C – wholesale**  
10 **water costs?**

11 A: Yes. This schedule shows the derivation of the Authority's purchased water costs;  
12 one of its biggest expenses. As explained by Mr. Brown, KCWA produces some of  
13 its own water, but the bulk comes from purchases from Providence Water. The Au-  
14 thority also purchases some water from Warwick (Providence Water) and sells  
15 some water back to Warwick. By agreement, water is bought from and sold to  
16 Warwick at the approved Providence Water wholesale rate. The total cost of pur-  
17 chased water for KCWA is thus based on what is purchased directly from Provi-  
18 dence, plus purchases from Warwick, less sales to Warwick. As shown on Sche-  
19 dule 1C, the net purchases have been dropping in recent years along with water  
20 sales. In the past the Commission has used a multi-year average for the determina-  
21 tion of purchased water costs. While I have shown this calculation, we do *not* pro-  
22 pose to use it. Certainly the four year average results in more water purchased and  
23 a higher purchased water cost; however, the Authority believes that water sales will  
24 continue to drop or remain the same, and we propose to use the (adjusted) test  
25 year sales as the basis for the rates. To be consistent with this, we have used the  
26 test year purchases to derive the cost of wholesale water purchases.

27

28 **Q: Please explain the adjustments presented in Schedule 1D.**

29 A: I'll review these one at a time.

- 1 • The first item I have presented is the cost of chemicals. Here I have shown the  
2 pounds or gallons of each chemical used in the test year. Because we have pro-  
3 posed to use the test year water sales, I have made no adjustment to the quanti-  
4 ties used in the test year. I have multiplied the amount of each chemical by the  
5 most recent (end of test year) cost to derive annual costs at test year prices and  
6 uses. To this cost I have added an amount to reflect expected increases in  
7 chemical prices. As I have testified before, chemical costs are quite dependant  
8 on energy costs, so I have increased the chemical costs at twice the normal infla-  
9 tion rate to reflect the higher expected increases in energy and chemicals.
- 10 • The next item has to do with fixed charges associated with debt. The O&M and  
11 R&R reserve funds are funds that were established under KCWA's trust inden-  
12 ture. The O&M reserve fund must be funded at an amount so that 25% of the  
13 operating budget (including payroll taxes and payments in lieu of taxes) is in-  
14 cluded in the reserve fund by the end of each fiscal year. As we have done in  
15 prior rate cases, the funding for this has been set to equal 25% of the allowable  
16 O&M expenses for the rate year. As shown on this schedule, the O&M reserve is  
17 significantly behind and will need some \$500,000 in the rate year. The R&R re-  
18 serve is to be funded at an amount that is equal to 1% of the Authority's net plant  
19 value. As of 6/30/07 the Net Utility Plant value was \$78,515,214. Based on the  
20 Authority's capital plans we expect an additional \$20 million will be added  
21 through the rate year, bringing a net utility plant value of more than \$98 million.  
22 This fund is projected to have a requirement of \$985,152 by the end of the rate  
23 year, necessitating over \$463,000 in additional revenue in the rate year.
- 24 • Debt service is addressed in the next category. For each of the existing bond is-  
25 sues I have presented the payments for the test year (FY 2007) and the amount  
26 for FY 2008 and CY 2009. As can be seen on this schedule, there is very little  
27 change from year to year and the rate year adjustment is minimal. Because the  
28 rate year is so close to CY 2009, we propose to use the CY 2009 debt for the  
29 rate year.

- 1 • The next item is funding for the Infrastructure Replacement fund. As discussed  
2 in Mr. Brown's testimony, this has been funded in past dockets at less than the  
3 full amount in the Authority's approved IFR plan. The Commission approved IFR  
4 funding of \$4,805,374 in Docket 3660; however KCWA had insufficient revenues  
5 and was only able to fund \$4,004,478 in the test year. While Schedule 1D shows  
6 an increase in IFR funding of \$1,995,522, that is the amount over the actual fund-  
7 ing in the rate year. The requested full funding of \$6 million for IFR is a  
8 \$1,194,626 increase over the amount allowed in Docket 3660.
- 9 • The next item involves funding for various studies the Authority is required to un-  
10 dertake. As in past dockets, it is estimated that the cost of the required engineer-  
11 ing studies and plans is a combined \$125,000. As discussed in Mr. Brown's pre-  
12 filed testimony, the latest cost for these studies is closer to \$140,000, combined.  
13 A number of these plans must each be updated every five years, so we have  
14 spread the total cost over five years.
- 15 • Payroll taxes for the rate year are based on 7.65% of the rate year salary costs  
16 from Schedule 1B.
- 17 • Property and Liability insurance is typically included with Worker's Compensation  
18 insurance in the Authority's reporting. For this case we have broken them out as  
19 separate line items. Worker's Compensation insurance varies year to year  
20 based on payroll and an annual analysis by the underwriter. I have listed the  
21 amounts for FY 2005 through FY 2008. As shown, there is some variability, typi-  
22 cally as a result of refunds and the timing of those payments. For this case we  
23 have increased the FY 08 amount by 4% (the annual increase in labor costs) for  
24 1 - 1/3 years to cover the rate year.
- 25 • For Property and Liability insurance we have presented the payments for FY  
26 2006 – FY 2008. On average the premiums have increased 4.9% over that pe-  
27 riod. As a result I have increased the FY 2008 amount by 4.9% for 1 – 1/3 years  
28 to the rate year.
- 29 • The next adjustment item is benefits and pensions. I have listed the test year  
30 and FY 2008 amount for each item. I also calculated the test year amount of

1 each item as a percentage of the total test year salaries. In most cases I have  
2 applied that percentage to the rate year salaries to derive the rate year benefit  
3 cost. In the case of the RIEAP and Education/Bonus items no change is ex-  
4 pected. For Pensions, I have presented an analysis of past expenses. As  
5 shown on Schedule 1D, pension contributions vary considerably from year to  
6 year. Because at least two employees are expected to retire by the end of the  
7 rate year, I have projected a rate year amount that is slightly higher than the CY  
8 2008 amount. We hope to have a better estimate on this matter in the next few  
9 months and will update the claimed amount then.

- 10 • The payments in lieu of taxes (PILOT) are amounts the Authority pays to com-  
11 munities for property it owns. The amount is based on the tax bill at the time of  
12 property acquisition, so there is little change from year to year. The rate year  
13 amounts are equal to those in the test year (and the amounts in the last docket).
- 14 • As noted earlier, labor costs have been increased 4% per year from the test year.  
15 This increase is in line with the overall increases provided by the Authority in  
16 prior years.
- 17 • Non-labor items or items that were not otherwise adjusted elsewhere were in-  
18 creased for inflation. I have analyzed the Consumer Price Index for the North-  
19 east as published by the Bureau of Labor Statistics. From 2003 through 2007 the  
20 annual CPI increased an average 3.32% per year. I have used that increase for  
21 this docket. Because the rate year is 2-1/3 years from the test year, I increased  
22 items 7.91% over that 2-1/3 year period. Because power and energy costs have  
23 been increasing at a faster pace than overall inflation I have increased those  
24 items by twice the normal rate or 16.16% for the 2-1/3 year period.
- 25 • For the operating reserve we are requesting an allowance of 5% of the total rate  
26 revenues.
- 27 • The final page of Schedule 1D shows the activity on KCWA's restricted accounts.

28

1 **Q: Is the funding level of the O&M Reserve requirement based on the O&M costs**  
2 **allowed by the Commission?**

3 A: The O&M Reserve must be equal to 25% of KCWA's O&M budget by the end of  
4 each fiscal year. Because the KCWA's fiscal year does not coincide with the rate  
5 year, the actual requirement will be different and KCWA must fund the reserve at  
6 the levels required in its bond indenture. Recognizing the Commission's role in pro-  
7 viding an allowed revenue requirement, we have asked for an allowance that is  
8 equal to 25% of the requested (rate year) operating costs. If KCWA's FY 2010  
9 (starts part way through the proposed rate year) O&M budget exceeds the amount  
10 provided in this docket, they must none-the-less fund the O&M Reserve at that  
11 higher level.

12

13 **Q: You indicated that you have increased chemical prices at twice the rate of in-**  
14 **flation because you believe chemical prices are more closely related to ener-**  
15 **gy costs rather than overall inflation. In prior dockets the Division's expert**  
16 **has claimed that there is no basis for that. What do you base your claim on?**

17 A: In part my claim is based on discussions I have had over the years with chemical  
18 suppliers I have met through the American Water Works Association. I understand  
19 that these are anecdotal. I have looked for evidence to support this contention and  
20 found the following:

- 21
- 22 • A September 27, 2007 Report in Chemistry World notes that Dow spends  
23 about 7% of its costs on energy but "when spending on hydrocarbon feeds-  
24 tocks was added in, Dow's expenditure rose to 49% of its running costs." A  
25 Dow spokesman said "the firm's energy costs are high not because it is less  
26 efficient, but because it requires more energy than companies further down  
27 the supply chain." He went on to say that "The chemical industry recognize  
28 that it is a huge user of energy."
  - 29 • In an address to the Detroit Economic Club in October 2006, Andrew Liveris,  
Chairman and CEO of Dow Chemical said due to high energy costs Dow



1 Chemical may have to move jobs overseas. He noted that “Clearly, energy  
2 has overwhelmed all of our issues.”

- 3 • In an August 2004 article in Chemical & Engineering News, William Storck  
4 raised the issue of high energy costs and the impact on the chemical indus-  
5 try. He notes a report from Standard & Poors (debt rating service) that “from  
6 a creditworthiness perspective, the industries that would be most negatively  
7 affected by a prolonged period of high oil prices would be the airline, automo-  
8 tive and chemical sectors.”

9

### 10 **Operating Revenue Allowance**

11 **Q: You indicated that KCWA is requesting for an Operating Revenue Allowance  
12 of 5%. Will you discuss this change from past practice?**

13 A: We are asking for a 5% allowance on total rate revenues (excludes miscellaneous  
14 revenues). We are asking that this be bifurcated with 1.5% as unrestricted and the  
15 remaining 3.5% restricted for use in cases where revenues have fallen short of ex-  
16 pectations. In this later situation, we propose that KCWA make a filing with the  
17 Commission to use the funds when circumstances so dictate, and that the Commis-  
18 sion rule on such requests within 60 days.

19

20 We recognize that this was disallowed in prior dockets before this Commission, but  
21 believe there are different circumstances.

- 22 • In the recent Newport Water rate filing (Docket No. 3818) the Commission indi-  
23 cated that a generic docket to review this issue would be opened. In the recent  
24 Providence Water Docket (Docket No. 3832) I had urged the Commission to use  
25 that docket in lieu of the generic docket. In the Report and Order in Docket No.  
26 3832 the Commission provided the 3% Operating Revenue allowance that was  
27 requested by Providence Water with 1% unrestricted and 2% restricted to cover  
28 revenue shortfalls.

- 1       • In its decision in the recent Providence Water Docket, the Commission noted that  
2 water conservation is a priority in the state and with this comes reduced reve-  
3 nues while many costs remain fixed. The Commission went on to note how  
4 some water utilities in RI were experiencing “clear downward trends in water  
5 sales” while Providence was experiencing fluctuations from year to year. In light  
6 of this decision I believe that KCWA is entitled to a 5% operating revenue allow-  
7 ance. I recognize that this is more than what was allowed in the Providence  
8 case; however KCWA is one of those utilities that is experiencing “clear down-  
9 ward trends in water sales”. Sch. 1C shows that over the last four years that wa-  
10 ter production dropped 3.5% from FY 2005 to FY 2006 and dropped over 10%  
11 from FY 2006 to FY 2007.
- 12       • In looking over historic records I can find no basis for the 1.5% allowance that  
13 has traditionally been provided by the Commission. I do know that it was calcu-  
14 lated based on the total revenue allowance until fairly recently however, and was  
15 still allowed on total revenues (not just operating costs) as recently as Newport  
16 Water’s last rate filing.
- 17       • The variability of an expense is not the only issue the Commission should ex-  
18 amine. While it is true that debt service costs are indeed known with some de-  
19 gree of certainty, other costs are as well. Many operating costs are fairly well  
20 fixed; there is not a huge degree of uncertainty. If a 1.5% operating revenue al-  
21 lowance were only allowed to reflect the variability in expenses, it would be mi-  
22 nimal.
- 23       • KCWA has offered a seasonal water rate in this docket. The intent of this rate  
24 structure is to encourage water use reductions during peak summer months. We  
25 have made no allowance or drop in sales to account for any such reduction. If  
26 there is a further downward drop in sales, KCWA will once again be short of rev-  
27 enues. I believe that a provision for a reduction in sales and revenues is a quite  
28 reasonable expectation considering the Authority’s willingness to present and  
29 adopt a seasonal rate structure.

1 **Water Use**

2 **Q: Over the past few years there has been considerable disagreement between**  
3 **water utilities and the Division over the best way to estimate water sales in**  
4 **the rate year. Often, utilities have presented cases of declining use while the**  
5 **Division has typically taken the position that an average of several years**  
6 **should be used. What does KCWA propose to use for the rate year water**  
7 **sales in this docket?**

8 A: We propose to use the test year sales, as adjusted for known reductions from large  
9 customers that are closing facilities. As described in Mr. Brown’s prefiled testimony,  
10 water sales have been dropping each year since FY 2003. Based on what I have  
11 seen with other Rhode Island water utilities, this is not unique to the Kent County  
12 Water Authority.

13 The Division’s past proposals to use running averages ignores the clear downward  
14 trend in sales. Simply averaging past water sales does not take into account trends.  
15 If water use is increasing at 4% per year the four year average will be exactly the  
16 same as consumption that started at the four year amount but drops 4% per year.  
17 This is illustrated in an example below.

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Average</u>
18					
19	100	104	108	112	106
20	112	108	104	100	106

21 Clearly the trend in the first example shows annual increases in sales while de-  
22 creasing sales are shown in the second example; yet simple averaging the con-  
23 sumption over four years gives the same result. This makes little practical sense. It  
24 is fairly evident that the “Year 5” sales will probably be higher than 112 in the first  
25 example and lower than 100 in the second example. The use of a multiyear aver-  
26 age ignores these differences.

27 In the last Kent County Water Authority Order the Commission noted that if a utility  
28 could demonstrate a clear downward trend in sales, then the Commission may de-  
29 part from the typical multiyear averaging approach. I believe the historic data  
30 shows this clear downward trend (see Schedule 1C).

1

2 **Q: Won't the 5% operating allowance you have requested deal with the uncer-**  
3 **tainty of future water sales?**

4 A: In part, it can; however, it is not a substitute for realistic projections. The Authority  
5 has had declining sales in recent years. While this may be expected to continue,  
6 aside from the known change for large users, we have NOT projected a reduction in  
7 sales beyond the test year. The Authority has also presented the Commission with  
8 an alternative seasonal rate proposal. The intent of this proposal is to encourage  
9 water reductions in peak summer months. We have NOT accounted for any reduc-  
10 tion in sales as a result of a seasonal rate being approved by the Commission. If a  
11 seasonal rate is approved it is reasonable to assume further reductions in sales for  
12 the rate year. We have not made any such projections; instead we ask that the  
13 Commission provide the Authority with a reasonable level of operating revenue that  
14 can be used if there are such reductions.

15

16 **Q: Please explain the adjustments to water sales for the large customers you**  
17 **mentioned.**

18 A: Clariant Corporation has announced that it is shutting its pigment manufacturing fa-  
19 cility in Coventry by the end of calendar year 2008. As one of the Authority's larger  
20 customers, this will have an impact on water use after the shut down. As presented  
21 on Schedule 2 (page 2), we have reduced the use by this customer to reflect the fa-  
22 cility closing. Clariant has six metered connections. We have adjusted the sales  
23 down by the use of five of these. Since Clariant has indicated that it will keep the  
24 facility open for some administrative functions (but no manufacturing), we have re-  
25 tained the use of one of the small meters through the rate year.  
26 The second adjustment is for Amgen. Amgen has cut back on water use substan-  
27 tially in the past year. Schedule 2 shows the drop from July – December, 2006 (rate  
28 year) to the same period in 2007 (after the rate year). In this six month period there  
29 was a drop in water sales of nearly 25%. I have taken the six month reduction from

1 the end of the rate year, annualized it for 12 months and included this as an adjust-  
2 ment to the rate year water sales.

3

4 **Cost Allocations and Rate Design**

5 **Q: You indicated earlier that your cost allocation study and rate design follows**  
6 **the procedures you have used and have been accepted in the past? Are there**  
7 **any revisions you believe should be considered?**

8 A: There are several. Perhaps the most significant revision would be to accept the  
9 seasonal rate alternative we have presented. I'll address this more later. There is  
10 one other change that I believe could be considered. As I indicated I have used the  
11 meter equivalent factors that have been in place since at least the early 1990s. I  
12 think these may be outdated and they are certainly inconsistent with those used by  
13 some of the other RI water utilities.

14 I have looked at recent meter equivalency factors used by water utilities in recent fil-  
15 ings before the PUC. The table below shows the results.

<u>Meter Size</u>	<u>KCWA</u>	<u>Providence</u>	<u>Pawtucket</u>	<u>Woonsocket</u>
5/8	1.00	1.00	1.00	1.00
3/4	1.00	1.10	1.39	1.40
1	1.80	1.40	2.00	1.80
1 1/2	3.30	1.80	4.07	3.30
2	4.60	2.90	5.29	4.60
3	6.30	11.00	6.00	6.30
4	9.60	14.00	14.00	9.60
6	16.90	21.00	21.00	16.90
8	29.60	29.00	30.00	29.60
10		36.30		42.40
12		43.50		

16 The Kent County Water Authority has the same charge for both 5/8" and 3/4" meters  
17 as the larger 3/4" meters may be used for customers with low pressure. I believe the  
18 values used by both KCWA and Woonsocket are based on a general analysis of  
19 meter and service connection costs developed by my former employer in the  
20 1980's. I believe the Pawtucket meter equivalents are based on actual costs of in-  
21 stallations that were developed several years ago. I am not sure of the derivation of

1 the Providence Water equivalency values; however, they match those in the AWWA  
2 M1 manual; and, while somewhat based on values derived in the Midwest several  
3 years ago, are for illustration only.

4 I have not proposed a change for the Authority at this time, but raise it as an issue  
5 that the Division may wish to comment on. I am certainly willing to consider alterna-  
6 tives for the Authority as I believe that values and methods should be updated if bet-  
7 ter information is available. I do believe that the Kent County Water Authority  
8 should be allowed to continue the combination of 5/8" and 3/4" meters as the same  
9 charge.

10

11 **Q: Are you proposing a change in rate design?**

12 A: While I am not proposing any major change to the general rate design, the rates  
13 that result from the study have changed by different percentages.

14

15 **Q: Are you proposing a seasonal rate structure?**

16 A: The Kent County Water Authority Board has discussed the adoption of a seasonal  
17 rate for a number of years. They are certainly mindful of legislation that has been  
18 proposed that addresses this matter. In my correspondence with Mr. Brown and  
19 the Board I have told them that I believe a seasonal rate is an appropriate consid-  
20 eration, but I also expressed concern. The volatility in revenues that would result  
21 from a seasonal rate would not be covered by the 1.5% operating revenue provided  
22 on operating costs only. I was and remain concerned that the Authority must have  
23 a greater allowance for revenue variations if it adopts a seasonal rate.

24 That being said, the Authority believes that a seasonal rate for the Kent County Wa-  
25 ter Authority is appropriate. While we do wish that the Commission accepts a sea-  
26 sonal rate, we can only recommend or propose this alternative *if* the Commission  
27 provides meaningful revenue protection in the form of an operating revenue allow-  
28 ance as we have requested. In effect, the operating revenue proposal is an integral  
29 part of our proposal for a seasonal rate. We do not propose a seasonal rate if the  
30 Commission only provides a 1.5% operating revenue allowance.

1

2 **Q: Can you describe the seasonal rate alternatives you have prepared?**

3 A: Schedule 13 presents the seasonal rate alternatives we have developed. This al-  
4 ternative is not what I would consider a “strong” seasonal rate; rather, it is a first  
5 step. There are numerous questions and issues associated with the adoption of  
6 seasonal rates. Ideally, the Authority would be billing customers monthly so a sea-  
7 sonal surcharge or rate could be assessed to all customers for the same billing pe-  
8 riods. Monthly billing will require more advanced metering, which we hope to have  
9 in place in several years. In this case I have looked at the quarterly billings and de-  
10 termined that the July, August and September billings are the highest use periods.  
11 While these billings don’t cover the same months for all customers, they do appear  
12 to cover the highest use periods. I have prepared two seasonal rate alternatives  
13 that charge higher rates for all use during these billing periods and somewhat lower  
14 rates for the other billing periods.

15 The next consideration is the differential between peak and off-peak rates. In this  
16 instance I have prepared seasonal rate alternatives that provide a relatively small  
17 differential. While a higher rate differential would tend to encourage greater water  
18 savings, we remain concerned about the reaction of customers and the impact on  
19 revenues. As a result, our suggestion is to consider a minimal rate differential as a  
20 first step. This will provide notice to the Authority’s customers and allow them to ad-  
21 just water use habits, it will allow us more time to implement radio read metering  
22 that will allow for monthly billing, and it will provide us real data on how customer’s  
23 water use patterns may change as a result of a seasonal rate structure.

24

25 **Q: What are the two alternatives you have prepared?**

26 A: I have developed two alternatives. The first alternative (A) is a variable seasonal  
27 surcharge. This alternative provides for a similar percentage differential between  
28 the peak and non-peak rates. As shown under the A Alternative on Schedule 13,  
29 the small meter customer class will have a higher \$/ccf differential than the larger  
30 meter sizes.

1 The second alternative (B) provides for an equal rate differential for all classes, but  
2 because the larger meter class rates are slightly lower than those of the smaller me-  
3 ter class, the percentage impact on larger customers is greater.

4

5 **Q: Which of the two alternatives do you recommend?**

6 A: As I have stated, I would not recommend either without the operating revenue we  
7 have requested. If that allowance is provided, I believe alternative A – the variable  
8 differential – is preferable. This alternative provides a slightly greater incentive to  
9 smaller volume (smaller meter) customers. Typically it is the smaller residential  
10 customers that have the larger non-essential water demands that can be most im-  
11 pacted by a seasonal water rate.

12

13 **Q: Do either of these seasonal rate alternatives provide different revenues than**  
14 **the cost of service rates you have proposed?**

15 A: No, both these alternatives are intended to be revenue neutral. That is, the pro-  
16 posed cost of service and either seasonal rate alternative will provide the same an-  
17 nual revenues. This of course assumes the same metered water sales, yet the  
18 seasonal rate alternatives are hoped to result in lower summer sales and thus less  
19 overall revenues. I have not tried to quantify the impact of that.

20

21 **Q: Have you prepared a comparison of the current rates and those derived from**  
22 **your cost of service study?**

23 A: Yes I have. Schedule 10.0 presents this comparison. As I noted earlier in my tes-  
24 timony, there are various percentage changes to the various rates and charges.  
25 However, aside for the fire protection charges, most customers will see percentage  
26 increases of about the same amount. As noted on this schedule, the proposed fire  
27 charges will result in lower percentage increases.

28 The Authority's average residential customer uses 2,730 cu ft per quarter. I have  
29 highlighted the impact on the average customer. The proposed (cost of service)



1 rate would increase the average customer's bill by about \$13 per month. The total  
2 cost of water under the proposed (cost of service) rate is \$1.66 per day.

3

4 **Q: Have you prepared a similar schedule for the seasonal rate alternatives?**

5 A: I have not. The impacts will not only vary by the amount of use in a year, but also  
6 by how that use is spread between billing periods. Customers with much higher use  
7 in the summer than average annual use will see larger bill increases. Customers  
8 with fairly equal use or lower summer use could see increases that are lower than  
9 average.

10

11 **Q: Have you prepared a summary of revenues under the current and cost of ser-**  
12 **vice based rates?**

13 A: Yes I have. Schedule 11.0 presents this calculation. Because the rates have been  
14 rounded off, the revenues do not match the requirements exactly. However, Sche-  
15 dule 11.0 does demonstrate that the difference is within limits that are normally ac-  
16 cepted by the Commission.

17 Because the seasonal rate alternatives are revenue neutral, the revenues would be  
18 essentially the same as those presented on Schedule 11 for either alternative.

19

20 **Summary**

21 **Q: Does this conclude your testimony?**

22 A: Aside from new information that may be brought to my attention and without review-  
23 ing testimony from the Division or other witnesses, yes it does.

24

25

**PRO FORMA EXPENSES**

Expense Item	Test Year FY 2007	Summary of Adjustments	Rate Year 11/1/08 - 10/31/08	Labor Increase (CPNW Sch 1B)	Adjustments Detail				Non-Labor Inflation
					Time Costs	Other Adjustments	Supporting Schedule	One	
<b>SOURCE OF SUPPLY</b>									
operations & labor	\$14,597	\$10,403	\$25,000	0					0
purchased water	3,643,939	\$528,605	4,172,544	0					0
<b>Subtotal</b>	<b>3,658,536</b>	<b>539,008</b>	<b>4,197,544</b>	<b>0</b>	<b>0</b>	<b>10,403</b>	<b>528,605</b>	<b>539,008</b>	<b>0</b>
<b>PUMPING OPERATIONS</b>									
fuel for pumping	8,450	\$1,365	9,815	0					1,365
power-pumping	521,284	\$84,236	605,520	0					84,236
labor-pumping	64,875	\$6,208	71,083	6,208					0
pumping expense	2,187	\$173	2,360	0					173
maint. - structures & improv	34,808	\$3,255	38,062	2,892					363
diesel oil	0	\$0	0	0					0
maint. - equip	36,264	\$3,280	39,544	2,377					903
<b>Subtotal</b>	<b>667,868</b>	<b>98,517</b>	<b>766,385</b>	<b>11,477</b>	<b>0</b>	<b>0</b>	<b>22,504</b>	<b>539,008</b>	<b>87,040</b>
<b>WATER TREATMENT</b>									
chemicals	102,910	\$22,504	125,414	0					0
labor	74,507	\$7,130	81,636	7,130					0
operating	28,804	\$2,278	31,081	0					2,278
maint. - water treat equip	1,608	\$127	1,736	0					127
maint. - structure	0	\$0	0	0					0
<b>Subtotal</b>	<b>207,829</b>	<b>32,038</b>	<b>239,867</b>	<b>7,130</b>	<b>0</b>	<b>22,504</b>	<b>22,504</b>	<b>22,504</b>	<b>2,405</b>
<b>TRANS &amp; DISTR. EXPENSE</b>									
storage facilities exp.	520	\$41	561	0					41
labor	29,163	\$2,791	31,954	2,791					0
supplies	39,804	\$3,147	42,951	0					3,147
labor-meter	30,775	\$3,289	34,064	3,289					0
material-meter	5,963	\$472	6,435	0					472
cust. install.	0	\$0	0	0					0
misc.	15,389	\$1,217	16,606	0					1,217
maint - struct. & improv.	223	\$18	241	0					18
maint.- res & stdp	50,799	\$4,214	55,012	1,134					3,079
maint. - mains	912,017	\$78,289	990,306	35,557					42,732
maint. - service	168,421	\$14,824	183,245	8,675					6,149
maint. - meters	80,044	\$7,248	87,292	5,292					1,956
maint. - hydrants	84,307	\$7,370	91,677	4,051					3,319
construction labor	-7,567	-\$598	-8,165	0					-598
<b>Subtotal</b>	<b>1,409,859</b>	<b>122,320</b>	<b>1,532,179</b>	<b>60,789</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>61,532</b>

**PRO FORMA EXPENSES**

Expense Item	Test Year FY 2007	Summary of Adjustments	Adjustments Detail					Non-Labor Inflation
			Rate Year 11/1/08 - 10/31/08	Labor Increase (CPNW Sch 1B)	Time Costs	One Adjustments	Other Supporting Schedule	
<b>CUSTOMER ACCOUNT</b>								
labor- meter read	74,300	\$7,110	81,410	7,110				0
cust record labor	155,527	\$14,882	170,409	14,882				0
cust records exp	56,775	\$4,489	61,264	0				4,489
meter read supplies	0	\$0	0	0				0
uncollectible	0	\$0	0	0				0
<b>Subtotal</b>	<b>286,602</b>	<b>26,481</b>	<b>313,083</b>	<b>21,992</b>	<b>0</b>	<b>0</b>		<b>4,489</b>
<b>ADMIN. &amp; GENERAL</b>								
salaries	322,654	\$70,857	393,511	70,773				84
office supplies & expenses	119,366	\$9,438	128,804	0				9,438
insurance (property/liability)	128,228	\$0	128,228	0		0	Sch. 1D	0
Insurance (worker's comp)	30,456	\$11,660	42,116	0		11,660	Sch. 1D	0
injuries & damages	283	\$22	305	0				22
employee benefits	683,739	\$69,618	753,357	488		69,130	Sch. 1D	0
fees	25,000	\$7,500	32,500	0		7,500	Sch. 1D	0
maint. - plant	198,157	\$17,761	215,918	12,052				5,710
maint. - vehicles	105,368	\$8,654	114,021	1,854				6,799
miscellaneous	25,083	\$2,233	27,315	1,435				797
vacation, holiday, sick	244,044	\$23,353	267,397	23,353				0
regul. exp.	45,694	\$82,460	128,155	0		82,460	Sch. 1E	0
other	0	\$0	0	0				0
outside service	126,625	\$10,012	136,637	0				10,012
<b>Subtotal</b>	<b>2,054,697</b>	<b>313,567</b>	<b>2,368,264</b>	<b>109,955</b>	<b>0</b>	<b>170,749</b>		<b>32,863</b>
<b>TOTAL O&amp;M</b>	<b>\$8,285,390</b>	<b>\$1,131,932</b>	<b>\$9,417,322</b>	<b>\$211,342</b>	<b>\$0</b>	<b>\$732,261</b>		<b>\$188,328</b>

**PRO FORMA EXPENSES**

Expense Item	Test Year FY 2007	Summary of Adjustments	Rate Year 11/1/08 - 10/31/08 (CPNW Sch 1B)	Adjustments Detail			Non-Labor Inflation
				Labor Increase (CPNW Sch 1B)	One Time Costs	Other Adjustments	
FIXED CHARGES							
Debt Service	\$3,901,944	\$30,375	\$3,932,319		30,375	Sch. 1D	
	0	\$0	\$0		0		
Reserves and Coverage							
O&M Reserve	0	\$500,668	\$500,668		500,668	Sch. 1D	
R&R Reserve	0	\$463,332	\$463,332		463,332	Sch. 1D	
Renewal & Replacement - Equip	100,000	\$0	100,000				
Infrastructure Replacement	4,004,478	1,995,522	6,000,000		1,995,522	Sch. 1D	
Payroll Taxes	138,876	16,350	155,226		16,350	Sch. 1D	
PILOT	<u>23,123</u>	<u>0</u>	<u>23,123</u>		<u>0</u>		
SUBTOTAL FIXED	\$8,168,421	\$3,006,247	\$11,174,668	\$0	\$3,006,247		\$0
OPERATING REVENUE	\$0	\$1,065,107	1,065,107		1,065,107		
TOTAL EXPENSES	\$16,453,811	\$5,203,286	\$21,657,097	\$211,342	\$4,803,615		\$188,328
Less:							
Available Restrict Debt	0	0	0		\$0	Sch. 1A	
Miscellaneous Income	(179,384)	0	(179,384)		\$0	Sch. 1A	
Interest Income	(112,596)	0	(112,596)		\$0	Sch. 1A	
Merchand & Jobbing	(2,384)	0	(2,384)		\$0	Sch. 1A	
6.9% of Water Prot Fee	(56,722)	<u>-3,878</u>	(60,600)		(3,878)	Sch. 1A	
NET REQUIRED FROM RATES	\$16,102,726	\$5,199,408	\$21,302,134				\$188,328

**TEST YEAR & PRO FORMA REVENUES**

	<u>Test Year</u> <u>Revenues</u>	<u>Adjustments</u>	<u>Normalized</u> <u>Test Year</u>	
<b>Revenues</b>				
Miscellaneous				
Available Restrict Debt	\$0	\$0	\$0	
Miscellaneous Income	\$179,384	\$0	\$179,384	
Interest Income	\$112,596	\$0	\$112,596	
Merchand & Jobbing	\$2,384	\$0	\$2,384	
6.9% of Water Prot Fee	<u>\$56,722</u>	<u>(\$3,878)</u>	<u>\$52,844</u>	(2)
Total Misc.	\$351,086		\$347,207	
Metered Rates	\$14,572,977	(\$4,183)	\$14,568,794	(1)
Public Fire	\$1,089,366	\$8,192	\$1,097,558	(1)
Private Fire	\$179,137	(\$156)	\$178,981	(1)
Total Revenue	\$16,192,566	\$3,854	\$16,192,541	
	\$16,079,965			
<b><u>Required Revenue</u></b>			\$21,657,097	
<b><u>Required Revenue from Rates</u></b>			\$21,309,890	
<b><u>Rate Increase Needed</u></b>			\$5,464,556	34.49%

NOTES:

(1) Normalized Test Year Revenues at Current Rates based on Sch. 11 - current rates for full year.

(2) WP revenue based on rate of \$0.01511 with 95% non-exempt customers.

Non-exempt Use RY = 3,497,270 ccf

Rate (\$/ccf) \$0.01511

RY Revenue \$52,844

**TEST YEAR & RATE YEAR LABOR COSTS**

EXPENSE ITEM	Test Year FY 2007	Adjustments (1)	Rate Year 11/1/08 - 10/31/08
<b>PUMPING OPERATIONS</b>			
labor-pumping	\$64,875	6,208	\$71,083
maint. - structures & improv	\$30,223	2,892	\$33,115
maint. - equip	\$24,840	2,377	\$27,217
<b>WATER TREATMENT</b>			
labor	\$74,507	7,130	\$81,636
<b>TRANS &amp; DISTR. EXPENSE</b>			
labor-meter	\$29,163	2,791	\$31,954
labor-meter	\$34,375	3,289	\$37,664
maint.- res & stdp	\$11,856	1,134	\$12,990
maint. - mains	\$371,581	35,557	\$407,138
maint. - service	\$90,660	8,675	\$99,336
maint. - meters	\$55,302	5,292	\$60,594
maint. - hydrants	\$42,331	4,051	\$46,382
<b>CUSTOMER ACCOUNT</b>			
labor- meter read	\$74,300	7,110	\$81,410
cust record labor	\$155,527	14,882	\$170,409
<b>ADMIN. &amp; GENERAL</b>			
salaries	\$321,593	70,773	\$392,366
employee benefits	\$5,100	488	\$5,588
maint. - plant	\$125,943	12,052	\$137,995
maint. - vehicles	\$19,378	1,854	\$21,232
miscellaneous	\$15,000	1,435	\$16,435
vacation, holiday, sick	\$244,044	23,353	\$267,397
<b>SUBTOTAL LABOR</b>	<b>\$1,790,600</b>	<b>\$211,342</b>	<b>\$2,001,942</b>
Capitalized Labor	\$24,788	2,372	\$27,160
<b>TOTAL LABOR COSTS</b>	<b>\$1,815,388</b>	<b>\$213,714</b>	<b>\$2,029,102</b>

Includes New GIS Operator

(1) See Schedule 1D

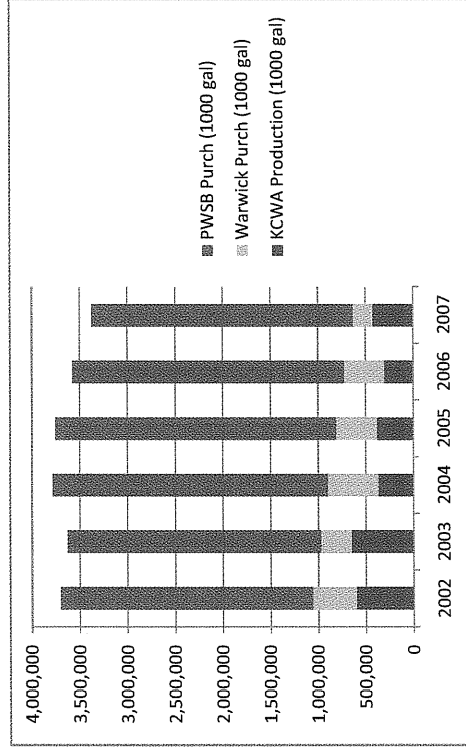
**WHOLESALE WATER COSTS**

Wholesale Water Purchases

PWSB Rate (/mg)	<u>Rate (\$/mg)</u>	<u>Purchases (mg)</u>	<u>Cost</u>
Net Wholesale Purchases (gallons) - Rate Year	\$1,455.77	2,866.21	\$4,172,544
Warwick Purchases		202,629,680	
PWSB Purchases		2,745,719,110	
Total Purchases		2,948,348,790	
Sales To Warwick		<u>-82,137,880</u>	
Net Purchases		2,866,210,910	

Fiscal Yr -- >	2004*	2005	2006	2007	4 Year Avg	Pro Forma
KCWA Production (1000 gal)	370,545	382,069	307,398	427,900	371,978	427,900
Warwick Purch (1000 gal)	528,561	424,640	418,184	202,630	393,504	202,630
PWSB Purch (1000 gal)	<u>2,719,906</u>	<u>2,947,455</u>	<u>2,849,405</u>	<u>2,745,719</u>	<u>2,815,621</u>	<u>2,745,719</u>
Total	3,619,012	3,754,164	3,574,987	3,376,249	3,581,103	3,376,249
Total Purchased	3,248,467	3,372,094	3,267,589	2,948,349	3,209,125	2,948,349
Sales To Warwick (1000 gal)	67,277	69,138	78,660	82,138	74,303	82,138
Net Purchases	3,181,189	3,302,957	3,188,929	2,866,211	3,134,822	2,866,211
		3.8%	-3.5%	-10.1%		

\* PWSB FY2004 Purchases reduced for loss of On Semiconductor



**EXPLANATION OF ADJUSTMENTS TO TEST YEAR COSTS**

<u>Adjustment to:</u>	<u>Explanation</u>	<u>lbs or gal/yr</u>	<u>cur. \$/lb or gal</u>	<u>Annual Cost</u>
<b>Treatment: Chemicals</b>				
	Pot. Hydrox. (lbs)	546,366	\$0.1806	\$98,674
	Tetra Potassium Pyrophosphate (gals)	480	\$9.2400	\$4,435
	Chlorine (gal)	1,085	\$1.6000	\$1,736
	Fuel Charge			\$3,123
			Annual Amount	\$107,967
			Plus Inflation*	\$17,447
			Rate Year Amount	\$125,414

\* Cost of chemicals is dependant on energy prices more than general inflation index; chemical costs were increased at an annual rate that is twice that of the general inflation rate or 6.64%/year for 2 1/3 years = an overall increase of 16.16%

**Fixed Charges Associated with Debt Service:**

O&M Reserve	Set to achieve reserve level equal to 25% of operating costs.	
	"O&M" Costs (Sch. 1) =	\$9,417,322
	Payroll Taxes	\$155,226
	PILOT	<u>\$23,123</u>
	Total Operating	\$9,595,672
	Required O&M Reserve	\$2,398,918
	Balance 7/1/07	\$1,898,250
	Estimated Additions to 10/31/08	0
	Estim. Balance 11/1/08	1,898,250
	Required deposit =	\$500,668
R&R Reserve	Set to equal 1% of Net Utility Plant (NUP)	
	NUP Value (6/30/07)	\$78,515,214
	Estimated Additions	<u>\$20,000,000</u>
	Pro Forma NUP	\$98,515,214
	Required Balance (1%)	\$985,152
	Balance 7/1/07	\$521,820
	Estimated Additions to 10/31/08	0
	Estim. Balance 11/1/08	521,820
	Addition to Reserve Required	\$463,332

**Admin - Fees**

Based on March 2008 notice from Dept. of Health, license fees are proposed to increase effective July 1, 2009. KCWA will see fee increase from \$25,000 to \$32,500/yr



**EXPLANATION OF ADJUSTMENTS TO TEST YEAR COSTS**

**Debt Service**

2004 Series A (Refunded 1994 bc

	FY 2007	FY 2008	CY 2009 *
Principal	\$950,000	980,000	1,030,000
Interest	\$303,500	274,700	234,900
Total	\$1,253,500	\$1,254,700	\$1,264,900

2001 Bonds (\$10 million)

Principal	\$380,000	\$395,000	\$430,000
Interest	\$398,861	\$383,836	\$359,536
Total	\$778,861	\$778,836	\$789,536

2002 Bonds (\$24.39 million)

Principal	\$870,000	\$895,000	\$955,000
Interest	\$999,583	\$973,108	\$922,883
Total	\$1,869,583	\$1,868,108	\$1,877,883
Total Existing	\$3,901,944	\$3,901,644	\$3,932,319

\* CY 2009 used for Rate Year

**Infrastructure Replacement**

Based on the June 2003 IFR Report for KCWA the annual IFR requirement is approximately \$6 million. In this case we are requesting the full annual funding of \$6,000,000  
Increase over test year = \$1,995,522

**Source of Supply Operations (studies)**

Cost of Water Supply, Engin, & IFR Plans = \$125,000  
Amortize over 5 yrs \$25,000  
Change over Test Year \$10,403

**Payroll Taxes**

FICA set at 7.65% of salary 155,226

**Worker's Comp**

Based on  
FY 05 30,983  
FY 06 31,662  
FY 07 30,456  
FY 08 39,975  
Estim RY 42,116  
estimated based 4% increase for 1 1/3 years

**Insurance - Liability/Property**

	FY 06	FY 07	FY 08	Rate Year	Avg Increase
Liability/Property	\$122,514	128,228	134,814	144,843	4.90%

**EXPLANATION OF ADJUSTMENTS TO TEST YEAR COSTS**

<b>Benefits/Pension</b>	<b>Test Year</b>	<b>FY 2008</b>	<b>Rate Year</b>	<b>% of TY Salary</b>
Medical - Blue Cross	413,300	\$422,500	\$472,753	23.2986%
Dental - Delta Dental	39,877	\$46,600	\$52,143	2.5697%
Group P-65 Retirees	61,451	\$51,100	\$57,178	2.8179%
Life/Disability insurance	10,634	\$11,400	\$12,756	0.6286%
Pension	143,927	\$209,100	\$215,000	see below
RIEAP	1,200	\$1,300	\$1,300	no change
Education/Bonus	13,350	\$10,100	\$10,100	no change
Totals	683,739	\$752,100	\$821,230	
Increase over Test Year			69,130	

Past pension funding based on actuarially determined rates. Past amounts paid in Feb - June time frame:

CY 06	215,654
CY 07	143,927
CY 08	209,100
RY Estimate	215,000

**PILOT**

based on following payments in lieu of taxes:

<b>City &amp; Towns</b>	<b>Totals</b>
W. Warwick	\$8,264.82
Warwick	\$58.00
Coventry	\$12,813.37
Scituate	\$260.05
W. Greenwich	\$364.43
Fire Districts	
Coventry	\$302.50
Harris	\$50.00
Tiogue	\$121.00
Cent Coventry	\$349.00
Hopkins Hills	\$540.00
	\$23,123.17

**Labor Adjustments - Based on Test Year Labor costs**

A. All items labor increased by 4.0% per year for 2 1/3 years. Includes longevity and certification upgrades.  
 B. Added cost of New GIS Operator position to Admin. Salaries at \$40,000 plus benefits.

**Non-Labor Inflation**

Non-labor items were increased from the test year by 3.32%  
 per year or 7.91% over 2 1/3 years to account for inflation.  
 Power and Energy Costs increased at twice this rate = 16.16%

**EXPLANATION OF ADJUSTMENTS TO TEST YEAR COSTS**

**Operating Revenue**

See testimony-operating revenue based on total rate revenues (total less misc. revenues) at 5.00%

**Restricted Funds Activity FY 2007**

	<u>R&amp;R Reserve</u>	<u>O&amp;M Reserve</u>	<u>Debt ***</u>	<u>IFR **</u>	<u>R&amp;R Equip</u>
Beginning Balance (7/1/06)	\$521,820	\$1,898,250	\$2,973,005	\$6,883,741	\$83,808
Funding	\$0	\$0	\$4,052,999	\$4,004,478	\$100,000
Interest	\$24,250	\$88,214	\$76,258	\$367,673	\$4,317
Expenditures (actual) *	\$24,250	\$88,214	\$3,901,944	\$2,917,541	\$85,563
Ending Balance (6/30/07)	<u>\$521,820</u>	<u>\$1,898,250</u>	<u>\$3,200,319</u>	<u>\$8,338,352</u>	<u>\$102,563</u>

	<u>2001 Series A</u>	<u>2002 Series A</u>	<u>2004 Series A</u>	<u>Total Debt</u>
Beginning Balance (7/1/06)	\$589,759	\$1,255,753	\$1,127,494	\$2,973,005
Funding (TY)	\$783,761	\$1,998,083	\$1,271,154	\$4,052,999
Interest	\$14,775	\$33,532	\$27,951	\$76,258
Expenditures (actual)	<u>\$778,861</u>	<u>\$1,869,583</u>	<u>\$1,253,500</u>	<u>\$3,901,944</u>
Ending Balance (6/30/07)	<u>\$609,434</u>	<u>\$1,417,786</u>	<u>\$1,173,099</u>	<u>\$3,200,319</u>

\* For O&M Reserves and R&R Accounts the expenditures = transfers of interest earnings to revenue fund

\*\* In FY 2004 an additional \$64,600 was deposited due to trustee making incorrect transfers.

\*\*\* Debt Service is maintained in separate accounts for each bond issue as follows:

SUPPLEMENTAL DATA

<u>Regulatory Expenses</u>	<u>Fiscal Year</u>	<u>PUC</u>	<u>Legal</u>	<u>Consultants</u>	<u>Other</u>	<u>Total</u>
	1996	1,471	21,492	32,013	2,095	57,071
	1997	1,579	14,654	60,776	7,378	84,387
	1998	20,769	19,524	18,719	324	59,336
	1999	17,345	25,745	29,135	5,909	78,134
	2000	31,761	16,442	22,538	198	70,939
	2001	23,224	24,077	57,935	5,601	110,837
	2002	28,422	26,717	43,348	1,289	99,776
	2003	25,732	10,143	18,707	99	54,681
	2004	38,555	1,760	9,455	47	49,817
	2005	43,544	9,680	28,635	10,553	92,412
	2006	53,500	12,310	15,264	557	81,631
Estimated Rate Case Expense - this docket			20,000	40,000	15,000	75,000
				Other Rate Case (Prov Water, Pass Through)		50,000
				Amortized over 2 yrs		62,500
				PUC Assessment (Estim RY) *		65,655
				Rate Year (CY 09) Regulatory Expense =		128,155

Note: Estimated costs for current docket do NOT include KCWA regulatory costs for intervention in filings by Providence Water nor do they include costs for pass through rate filings to pass on wholesale rate increases.

\* PUC Assessment for past three years =

FY 2006	\$39,948
FY 2007	\$40,856
FY 2008	\$52,680
Average increase =	15.61%
Estim. FY 09	\$60,902
Estim. FY 10	\$70,407
Estim CY 2009 =	\$65,655

2.27%  
28.94%

**UNITS OF SERVICE**

	Test Year <u>Actual</u>	<u>Adjustments</u>	Rate <u>Year</u>	<u>Explanation</u>
<b><u>Metered Water Sales (100 cubic feet)</u></b>				
Small (5/8-2" meters)	3,329,093	-32,222	3,296,872	see page 2
Medium (3&4" meters)	167,058	-15,450	151,608	see page 2
Large (6" & up meters)	<u>406,422</u>	-173,565	<u>232,857</u>	see page 2
	3,902,574		3,681,337	
<b><u>Meters By Size</u></b>				
<u>Quarterly</u>	<u>6/30/07</u>			
5/8 & 3/4	22,126	0	22,126	
1	3,560	0	3,560	
1 1/2	310	0	310	
2	514	0	514	
3	17	0	17	
4	63	0	63	
6	68	0	68	
8 & up	55	0	55	
<u>Monthly</u>				
5/8 & 3/4	4	-2	2	see page 2
1	1	0	1	
1 1/2	8	0	8	
2	12	0	12	
3	1	-1	0	see page 2
4	6	0	6	
6	7	-1	6	see page 2
8 & up	4	0	4	
<b><u>Public Fire Service</u></b>				
	<u>6/30/07</u>			
Public Fire Hydrants	2,317	0	2,317	
Bills	52	0	52	
<b><u>Private Fire Service</u></b>				
<u>Size (in)</u>				
4	15	0	15	
6	106	0	106	
8	28	0	28	
10	1	0	1	
12	1	0	1	
Hydrants	150	0	150	

**UNITS OF SERVICE**

**\* Changes in Water Use (ccf/yr)**

<u>Clariant Corp.</u>	<u>TY Use</u>	<u>RY Use**</u>	<u>Adjustment</u>	<u>Small (5/8)</u>	<u>Medium (3")</u>	<u>Large (6")</u>
Acct 115502 - small	4,046	4,046	0			
Acct 114730-medium	15,450	0	-15,450		-15,450	
Acct 11403 -large	47,915	0	-47,915			-47,915
Acct 115436-small	12,915	0	-12,915	-12,915		
Acct 115435-small	19,307	0	-19,307	-19,307		
Acct 11402-large	<u>65,980</u>	<u>0</u>	<u>-65,980</u>			<u>-65,980</u>
Total	165,613	4,046	-161,567	-32,222	-15,450	-113,895

\*\* Note: First account assumed to remain for staff

Amgen

Amgen has been reducing water use at its facility over the past year.

July 06 - Dec 06	124,500	
July 07- Dec 07	94,665	
Reduction (1/2 yr)	29,835	
Reduction (full year)	59,670	(assumed in large meter class)

**ALLOCATION OF RATE YEAR EXPENSES TO  
GENERAL WATER, FIRE, AND CUSTOMER SERVICE**

EXPENSE ITEM SOURCE OF SUPPLY	PRO FORMA	ALLOC.	GENERAL WATER		FIRE SERVICE		CUST. SERVICE	
	EXPENSE	SYMBOL (1)	%	AMOUNT	%	AMOUNT	%	AMOUNT
operations & labor	\$25,000	A	99.5%	\$24,875	0.5%	\$125	0.0%	0.00
purchased water	\$4,172,544	A	99.5%	\$4,151,681	0.5%	\$20,863	0.0%	0.00
<b>PUMPING OPERATIONS</b>								
fuel for pumping	\$9,815	A	99.5%	\$9,766	0.5%	\$49	0.0%	0.00
power-pumping	\$605,520	A	99.5%	\$602,492	0.5%	\$3,028	0.0%	0.00
labor-pumping	\$71,083	P	84.4%	\$59,980	15.6%	\$11,103	0.0%	0.00
pumping expense	\$2,360	P	84.4%	\$1,992	15.6%	\$369	0.0%	0.00
maint. - structures & improv	\$38,062	P	84.4%	\$32,117	15.6%	\$5,945	0.0%	0.00
diesel oil	\$0	P	84.4%	\$0	15.6%	\$0	0.0%	0.00
maint. - equip	\$39,544	P	84.4%	\$33,368	15.6%	\$6,177	0.0%	0.00
<b>WATER TREATMENT</b>								
chemicals	\$125,414	A	99.5%	\$124,787	0.5%	\$627	0.0%	0.00
labor	\$81,636	A	99.5%	\$81,228	0.5%	\$408	0.0%	0.00
operating	\$31,081	A	99.5%	\$30,926	0.5%	\$155	0.0%	0.00
maint. - water treat equip	\$1,736	A	99.5%	\$1,727	0.5%	\$9	0.0%	0.00
maint. - structure	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	0.00
<b>TRANS &amp; DISTR. EXPENSE</b>								
storage facilities exp.	\$561	D	75.0%	\$421	25.0%	\$140	0.0%	0.00
labor	\$31,954	B	80.6%	\$25,755	19.4%	\$6,199	0.0%	0.00
supplies	\$42,951	B	80.6%	\$34,619	19.4%	\$8,333	0.0%	0.00
labor-meter	\$34,064	C	0.0%	\$0	0.0%	\$0	100.0%	34,063.82
material-meter	\$6,435	C	0.0%	\$0	0.0%	\$0	100.0%	6,434.61
cust. install.	\$0	C	0.0%	\$0	0.0%	\$0	100.0%	0.00
misc.	\$16,606	F	59.1%	\$9,816	20.5%	\$3,398	20.4%	3,391.42
maint - struct. & improv.	\$241	F	59.1%	\$142	20.5%	\$49	20.4%	49.14
maint. - res & stdp	\$55,012	D	75.0%	\$41,259	25.0%	\$13,753	0.0%	0.00
maint. - mains	\$990,306	B	80.6%	\$798,187	19.4%	\$192,119	0.0%	0.00
maint. - service	\$183,245	C	0.0%	\$0	0.0%	\$0	100.0%	183,245.06
maint. - meters	\$87,293	C	0.0%	\$0	0.0%	\$0	100.0%	87,292.68
maint. - hydrants	\$91,677	E	0.5%	\$458	99.5%	\$91,219	0.0%	0.00
construction labor	(\$8,165)	F	59.1%	(\$4,827)	20.5%	(\$1,671)	20.4%	(1,667.64)
<b>CUSTOMER ACCOUNT</b>								
labor- meter read	\$81,410	C	0.0%	\$0	0.0%	\$0	100.0%	81,410.02
cust record labor	\$170,409	C	0.0%	\$0	0.0%	\$0	100.0%	170,409.43
cust records exp	\$61,264	C	0.0%	\$0	0.0%	\$0	100.0%	61,263.95
meter read supplies	\$0	C	0.0%	\$0	0.0%	\$0	100.0%	0.00
uncollectible	\$0	C	0.0%	\$0	0.0%	\$0	100.0%	0.00
<b>ADMIN. &amp; GENERAL</b>								
salaries	\$393,511	G	76.8%	\$302,386	7.8%	\$30,552	15.4%	60,573.28
office supplies & expenses	\$128,804	G	76.8%	\$98,977	7.8%	\$10,000	15.4%	19,826.86
insurance (property/liability)	\$128,228	G	76.8%	\$98,534	7.8%	\$9,955	15.4%	19,738.17
Insurance (worker's comp)	\$42,116	H	60.1%	\$25,292	11.0%	\$4,645	28.9%	12,177.91
injuries & damages	\$305	G	76.8%	\$235	7.8%	\$24	15.4%	47.00
employee benefits	\$753,357	H	60.1%	\$452,426	11.0%	\$83,094	28.9%	217,836.53
fees	\$32,500	G	76.8%	\$24,974	7.8%	\$2,523	15.4%	5,002.73
maint. - plant	\$215,918	G	76.8%	\$165,918	7.8%	\$16,764	15.4%	33,236.36
maint. - vehicles	\$114,021	G	76.8%	\$87,618	7.8%	\$8,852	15.4%	17,551.34
miscellaneous	\$27,315	G	76.8%	\$20,990	7.8%	\$2,121	15.4%	4,204.64
vacation, holiday, sick	\$267,397	H	60.1%	\$160,584	11.0%	\$29,494	28.9%	77,319.08
regul. exp.	\$128,155	G	76.8%	\$98,478	7.8%	\$9,950	15.4%	19,726.88
other	\$0	G	76.8%	\$0	7.8%	\$0	15.4%	0.00
outside service	\$136,637	G	76.8%	\$104,996	7.8%	\$10,608	15.4%	21,032.56
<b>SUBTOTAL O&amp;M</b>	<b>\$9,417,322</b>	<b>G</b>	<b>81.8%</b>	<b>\$7,702,177</b>	<b>6.2%</b>	<b>\$580,979</b>	<b>12.0%</b>	<b>1,134,165.84</b>

**ALLOCATION OF RATE YEAR EXPENSES TO  
GENERAL WATER, FIRE, AND CUSTOMER SERVICE**

EXPENSE ITEM	PRO FORMA EXPENSE	ALLOC. SYMBOL (1)	GENERAL WATER		FIRE SERVICE		CUST. SERVICE	
			%	AMOUNT	%	AMOUNT	%	AMOUNT
<b>FIXED CHARGES</b>								
Debt Service	\$3,932,319	J	80.9%	\$3,180,748	19.1%	\$751,028	0.0%	\$542
O&M Reserve	\$500,668	G	76.8%	\$384,729	7.8%	\$38,871	15.4%	\$77,068
R&R Reserve	\$463,332	J	80.9%	\$374,777	19.1%	\$88,491	0.0%	\$64
Renewal & Replacement - Equip	\$100,000	J	80.9%	\$80,887	19.1%	\$19,099	0.0%	\$14
Infrastructure Replacement	\$6,000,000	I	100.0%	\$6,000,000	0.0%	\$0	0.0%	\$0
Payroll Taxes	\$155,226	H	60.1%	\$93,221	11.0%	\$17,121	28.9%	\$44,884
PILOT	<u>\$23,123</u>	L	81.0%	<u>\$18,732</u>	18.1%	<u>\$4,190</u>	0.9%	<u>\$202</u>
SUBTOTAL FIXED	\$11,174,668		90.7%	\$10,133,094	8.2%	\$918,800	1.1%	\$122,774
OPERATING REVENUE	\$1,065,107	K	86.6%	\$922,517	7.3%	\$77,575	6.1%	\$65,014
TOTAL EXPENSES	\$21,657,097	K	86.6%	\$18,757,788	7.3%	\$1,577,355	6.1%	\$1,321,954
Less: Available Restricted Deb	\$0	J	80.9%	\$0	19.1%	\$0	0.0%	\$0
Miscellaneous Income	(\$179,384)	K	86.6%	(\$155,369)	7.3%	(\$13,065)	6.1%	(\$10,950)
Interest Income	(\$112,596)	K	86.6%	(\$97,522)	7.3%	(\$8,201)	6.1%	(\$6,873)
Merchand & Jobbing	(\$2,384)	K	86.6%	(\$2,065)	7.3%	(\$174)	6.1%	(\$146)
6.9% of Water Prot Fee	(\$60,600)	K	86.6%	(\$52,487)	7.3%	(\$4,414)	6.1%	(\$3,699)
Total Revenue Requirement	\$21,302,134	K	86.6%	\$18,450,345	7.3%	\$1,551,502	6.1%	\$1,300,287

(1) See CPNW Sch. 3B



**ALLOCATION OF RATE YEAR EXPENSES TO  
GENERAL WATER, FIRE, AND CUSTOMER SERVICE**

EXPENSE ITEM	RATE YEAR	ALLOC. SYMBOL (1)	GENERAL WATER		FIRE SERVICE		CUST. SERVICE	
	LABOR		%	AMOUNT	%	AMOUNT	%	AMOUNT
<b>SOURCE OF SUPPLY</b>								
operations & labor	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	\$0
purchased water	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	\$0
<b>PUMPING OPERATIONS</b>								
fuel for pumping	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	\$0
power-pumping	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	\$0
labor-pumping	\$71,083	P	84.4%	\$59,980	15.6%	\$11,103	0.0%	\$0
pumping expense	\$0	P	84.4%	\$0	15.6%	\$0	0.0%	\$0
maint. - structures & improv	\$33,115	P	84.4%	\$27,943	15.6%	\$5,173	0.0%	\$0
diesel oil	\$0	P	84.4%	\$0	15.6%	\$0	0.0%	\$0
maint. - equip	\$27,217	P	84.4%	\$22,966	15.6%	\$4,251	0.0%	\$0
<b>WATER TREATMENT</b>								
chemicals	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	\$0
labor	\$81,636	A	99.5%	\$81,228	0.5%	\$408	0.0%	\$0
operating	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	\$0
maint. - water treat equip	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	\$0
maint. - structure	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	\$0
<b>TRANS &amp; DISTR. EXPENSE</b>								
storage facilities exp.	\$0	D	75.0%	\$0	25.0%	\$0	0.0%	\$0
labor	\$31,954	B	80.6%	\$25,755	19.4%	\$6,199	0.0%	\$0
supplies	\$0	B	80.6%	\$0	19.4%	\$0	0.0%	\$0
labor-meter	\$37,664	C	0.0%	\$0	0.0%	\$0	100.0%	\$37,664
material-meter	\$0	C	0.0%	\$0	0.0%	\$0	100.0%	\$0
cust. install.	\$0	C	0.0%	\$0	0.0%	\$0	100.0%	\$0
misc.	\$0	F	59.1%	\$0	20.5%	\$0	20.4%	\$0
maint - struct. & improv.	\$0	F	59.1%	\$0	20.5%	\$0	20.4%	\$0
maint.- res & stdp	\$12,990	D	75.0%	\$9,743	25.0%	\$3,248	0.0%	\$0
maint. - mains	\$407,138	B	80.6%	\$328,153	19.4%	\$78,985	0.0%	\$0
maint. - service	\$99,336	C	0.0%	\$0	0.0%	\$0	100.0%	\$99,336
maint. - meters	\$60,594	C	0.0%	\$0	0.0%	\$0	100.0%	\$60,594
maint. - hydrants	\$46,382	E	0.5%	\$232	99.5%	\$46,150	0.0%	\$0
construction labor	\$0	F	59.1%	\$0	20.5%	\$0	20.4%	\$0
<b>CUSTOMER ACCOUNT</b>								
labor- meter read	\$81,410	C	0.0%	\$0	0.0%	\$0	100.0%	\$81,410
cust record labor	\$170,409	C	0.0%	\$0	0.0%	\$0	100.0%	\$170,409
cust records exp	\$0	C	0.0%	\$0	0.0%	\$0	100.0%	\$0
meter read supplies	\$0	C	0.0%	\$0	0.0%	\$0	100.0%	\$0
uncollectible	\$0	C	0.0%	\$0	0.0%	\$0	100.0%	\$0
<b>ADMIN. &amp; GENERAL</b>								
salaries	\$392,366	G	76.8%	\$301,507	7.8%	\$30,463	15.4%	\$60,397
office supplies & expenses	\$0	G	76.8%	\$0	7.8%	\$0	15.4%	\$0
insurance (property/liability)	\$0	G	76.8%	\$0	7.8%	\$0	15.4%	\$0
injuries & damages	\$0	G	76.8%	\$0	7.8%	\$0	15.4%	\$0
employee benefits	\$5,588	G	76.8%	\$4,294	7.8%	\$434	15.4%	\$860
fees	\$0	G	76.8%	\$0	7.8%	\$0	15.4%	\$0
maint. - plant	\$137,995	G	76.8%	\$106,040	7.8%	\$10,714	15.4%	\$21,242
maint. - vehicles	\$21,232	G	76.8%	\$16,316	7.8%	\$1,648	15.4%	\$3,268
miscellaneous	\$16,435	G	76.8%	\$12,629	7.8%	\$1,276	15.4%	\$2,530
vacation, holiday, sick	\$267,397	G	76.8%	\$205,476	7.8%	\$20,760	15.4%	\$41,161
regul. exp.	\$0	G	76.8%	\$0	7.8%	\$0	15.4%	\$0
other	\$0	G	76.8%	\$0	7.8%	\$0	15.4%	\$0
outside service	\$0	G	76.8%	\$0	7.8%	\$0	15.4%	\$0
<b>TOTAL LABOR</b>	<b>\$2,001,942</b>	<b>H</b>	<b>60.1%</b>	<b>\$1,202,259</b>	<b>11.0%</b>	<b>\$220,812</b>	<b>28.9%</b>	<b>\$578,871</b>

(1) See Sch. 3B

**ALLOCATION SYMBOLS**

ALLOCATION SYMBOL	GEN'L WATER	FIRE SERVICE	CUST SERVICE	
A	99.50%	0.50%	0.00%	Supply & Treatment
B	80.60%	19.40%	0.00%	T&D Mains
C	0.00%	0.00%	100.00%	Meters
D	75.00%	25.00%	0.00%	Storage
E	0.50%	99.50%	0.00%	Hydrants
F	59.11%	20.46%	20.42%	Misc T&D
G	76.84%	7.76%	15.39%	Direct O&M (50% of Purch Water) Benefits & Vacation
H	60.05%	11.03%	28.92%	Labor
I	100.00%	0.00%	0.00%	IFR Costs
J	80.89%	19.10%	0.01%	Debt/Capital
K	86.61%	7.28%	6.10%	Total Expense
L	81.01%	18.12%	0.87%	PILOT
M	--	--	--	Not Used
P	84.38%	15.62%	0.00%	Pumping Facilities

*Symbol B*

	Gal/Min	%
Highest Max. Day	14,544	80.60%
Fire Demand	3500	19.40%
Max. Day Plus Fire	18,044	100.00%

*Symbol J - Debt Service/CIP*

Repl. Value	Symbol	Gen Water	Fire	Cust A	Cust B
Plant Value From 2003 IFR Report					
Source of Supply \$3,000,707	A	\$2,985,703	\$15,004	\$0	\$0
Pumping Plant \$3,161,329	A	\$3,145,522	\$15,807	\$0	\$0
Water Treat. Plant \$405,970	A	\$403,940	\$2,030	\$0	\$0
T&D Storage \$4,336,912	D	\$3,252,684	\$1,084,228	\$0	\$0
T&D Mains \$292,283,430	B	\$235,580,445	\$56,702,985	\$0	\$0
T&D Hydrants \$116,261	E	\$581	\$115,680	\$0	\$0
T&D Services \$41,805	C	\$0	\$0	\$41,805	\$0
T&D Meters \$0	C	\$0	\$0	\$0	\$0
General Plant \$682,413	J	\$551,986	\$130,333	\$94	\$0
<b>Total</b>		<b>\$245,920,862</b>	<b>\$58,066,066</b>	<b>\$41,899</b>	<b>\$0</b>
Percent		80.89%	19.10%	0.01%	0.00%

*Symbol L - PILOT*

Total	Symbol	Gen Water	Fire	Cust A	Cust B
Storage \$7,258	D	\$5,443	\$1,814	\$0	\$0
Office \$1,311	G	\$1,008	\$102	\$101	\$101
PS/Wells/Treatment \$14,554	P	\$12,281	\$2,273	\$0	\$0
<b>Total</b>		<b>\$18,732</b>	<b>\$4,190</b>	<b>\$101</b>	<b>\$101</b>
Percent		81.01%	18.12%	0.44%	0.44%

*Symbol P - Pumping Facilities (per Decision in Dockets 2098, 2555, 3660)*

Percent	Symbol	Gen Water	Fire	Cust A	Cust B
Supply Well Pumps 20.00%	A	19.90%	0.10%	0.00%	0.00%
Distribution Pumps 80.00%	B	64.48%	15.52%	0.00%	0.00%
<b>Total</b> 100.00%	<b>P</b>	<b>84.38%</b>	<b>15.62%</b>	<b>0.00%</b>	<b>0.00%</b>

**PROPOSED FIRE SERVICE CHARGES**

**PUBLIC FIRE SERVICE**

Quarterly Charge/Hydrant =	\$147.74
Plus Billing Charge =	\$6.24

**PRIVATE FIRE SERVICE**

<u>SERVICE SIZE</u> <u>(inches)</u>	<u>QUARTERLY</u> <u>CHARGE</u>
4	\$58.64
6	\$158.46
8	\$330.62
10	\$589.59
12	\$948.51
HYDRANT	\$158.46

**ALLOCATION OF FIRE SERVICE EXPENSES  
TO PUBLIC AND PRIVATE FIRE SERVICE**

	<u>NUMBER</u>	<u>DEMAND FACTOR (1)</u>	<u>NO. OF EQUIVS.</u>	<u>PERCENT OF DEMAND</u>	<u>NON-HYDR. REQUIRED</u>	<u>DIRECT HYDRANT</u>	<u>TOTAL</u>
PUBLIC FIRE SERVICE							
Hydrants	2,317	111.31	257,907	87.50%	\$1,276,508	\$92,715	\$1,369,223
PRIVATE FIRE SERVICE							
SIZE (IN)							
4	15	38.32	575				
6	106	111.31	11,799				
8	28	237.21	6,642				
10	1	426.58	427				
12	1	689.04	689				
HYDRANTS	<u>150</u>	<u>111.31</u>	<u>16,697</u>				
TOTAL-PRIV.	<u>301</u>		<u>36,828</u>	<u>12.50%</u>	<u>\$182,279</u>	<u>\$0</u>	<u>\$182,279</u>
	=====		=====	=====	=====	=====	=====
GRAND TOTALS	2,618		294,735	100.00%	\$1,458,787	\$92,715	\$1,551,502
Total Fire Allocation					\$1,551,502		
Less Direct Hydrant Related							
O&M					(\$91,219)		
Debt					(\$1,496)		
Net Non-Hydrant					\$1,458,787		

(1) Based on size to the 2.63 power.

**DETERMINATION OF FIRE SERVICE CHARGES**

<u>PUBLIC FIRE PROTECTION</u>		CALCULATED CHARGE
PUBLIC FIRE ALLOCATION (1)	\$1,369,223	
----- =	----- =	\$590.95
NUMBER OF PUBLIC HYDRANTS	2,317	
	TOTAL QUARTERLY + BILLING	\$147.74 \$6.24

PRIVATE FIRE PROTECTION

PRIVATE FIRE ALLOCATION (1,2)	\$201,448	
----- =	----- =	\$5.47 /EQUIV.
NO. OF EQUIV. UNITS	36,828	

<u>SIZE (IN)</u>	<u>DEMAND FACTOR</u>	<u>ANNUAL CHARGE</u>	<u>QUARTERLY CHARGE</u>	<u>BILLING CHARGE</u>	<u>ALCULATED CHARGE</u>
4	38.32	\$209.61	\$52.40	\$6.24	\$58.64
6	111.31	\$608.87	\$152.22	\$6.24	\$158.46
8	237.21	\$1,297.52	\$324.38	\$6.24	\$330.62
10	426.58	\$2,333.39	\$583.35	\$6.24	\$589.59
12	689.04	\$3,769.07	\$942.27	\$6.24	\$948.51
HYDRANTS	111.31	\$608.87	\$152.22	\$6.24	\$158.46

(1) Allocation from Sch 4A.

(2) Private Fire includes allocated service maintenance costs as detailed below:

Service Line Maintenance Cost =	\$183,245	
Addnl Allocation to Fire Service =	\$19,169	(10.46%)

Service Line Equivalents

<u>Meter Size (in)</u>	<u>Service Size (in)</u>	<u>Equivalents *</u>	<u>Metered Water Service</u>		<u>Private Fire Service</u>	
			<u>Number</u>	<u>Equivalents</u>	<u>Number</u>	<u>Equivalents</u>
5/8 & 3/4	1	1	22,128	22,128		
1	1.5	1.8	3,561	6,410		
1 1/2	2	3.3	318	1,049		
2	3	4.6	526	2,420		
3	4	6.3	17	107	15	95
4	6	9.6	69	662	106	1,018
6	8	16.9	74	1,251	178	3,008
>8	10	29.6	59	<u>1,746</u>	2	<u>59</u>
Total				35,773		4,180
				89.54%		10.46%

\* From Dockets No. 2098 through 3660

**PROPOSED SERVICE CHARGES**

<u>METER SIZE</u> <u>(inches)</u>	<u>QUARTERLY</u> <u>ACCOUNTS</u>	<u>MONTHLY</u> <u>ACCOUNTS</u>
5/8 &		
3/4	\$10.51	\$7.66
1	\$13.92	\$8.80
1 1/2	\$20.32	\$10.93
2	\$25.87	\$12.78
3	\$33.12	\$15.20
4	\$47.20	\$19.89
6	\$78.35	\$30.28
>8	\$132.53	\$48.34

**ALLOCATION OF CUSTOMER SERVICE EXPENSES**

EXPENSE ITEM	TOTAL	ALLOC.	<-CUST. METER->		<-CUST. BILL->	
	CUST. SERV.	SYMBOL (1)	%	AMOUNT	%	AMOUNT
<b>TRANS &amp; DISTR. EXPENSE</b>						
labor	0.00	AA	100.00%	\$0	0.00%	0.00
supplies	0.00	AA	100.00%	\$0	0.00%	0.00
labor-meter	34,063.82	AA	100.00%	\$34,064	0.00%	0.00
material-meter	6,434.61	AA	100.00%	\$6,435	0.00%	0.00
cust. install.	0.00	AA	100.00%	\$0	0.00%	0.00
misc.	3,391.42	AA	100.00%	\$3,391	0.00%	0.00
maint - struct. & improv.	49.14	AA	100.00%	\$49	0.00%	0.00
maint.- res & stdp	0.00	AA	100.00%	\$0	0.00%	0.00
maint. - mains	0.00	AA	100.00%	\$0	0.00%	0.00
maint. - service	183,245.06	AA	100.00%	\$183,245	0.00%	0.00
maint. - meters	87,292.68	AA	100.00%	\$87,293	0.00%	0.00
maint. - hydrants	0.00	AA	100.00%	\$0	0.00%	0.00
construction labor	(1,667.64)	AA	100.00%	(\$1,668)	0.00%	0.00
<b>CUSTOMER ACCOUNT</b>						
labor- meter read	81,410.02	BB	0.00%	\$0	100.00%	81,410.02
cust record labor	170,409.43	BB	0.00%	\$0	100.00%	170,409.43
cust records exp	61,263.95	BB	0.00%	\$0	100.00%	61,263.95
meter read supplies	0.00	BB	0.00%	\$0	100.00%	0.00
uncollectible	0.00	BB	0.00%	\$0	100.00%	0.00
<b>ADMIN. &amp; GENERAL</b>						
salaries	60,573.28	CC	48.28%	\$29,243	51.72%	31,330.47
office supplies & expenses	19,826.86	CC	48.28%	\$9,572	51.72%	10,255.10
insurance (property/liability)	19,738.17	CC	48.28%	\$9,529	51.72%	10,209.23
Insurance (worker's comp)	12,177.91	CC	48.28%	\$5,879	51.72%	6,298.81
injuries & damages	47.00	CC	48.28%	\$23	51.72%	24.31
employee benefits	217,836.53	DD	44.67%	\$97,305	55.33%	120,531.18
fees	5,002.73	CC	48.28%	\$2,415	51.72%	2,587.58
maint. - plant	33,236.36	CC	48.28%	\$16,045	51.72%	17,190.92
maint. - vehicles	17,551.34	CC	48.28%	\$8,473	51.72%	9,078.12
miscellaneous	4,204.64	CC	48.28%	\$2,030	51.72%	2,174.78
vacation, holiday, sick	77,319.08	DD	44.67%	\$34,538	55.33%	42,781.44
regul. exp.	19,726.88	CC	48.28%	\$9,523	51.72%	10,203.38
other	0.00	CC	48.28%	\$0	51.72%	0.00
outside service	<u>21,032.56</u>	CC	48.28%	<u>\$10,154</u>	51.72%	<u>10,878.72</u>
<b>SUBTOTAL O&amp;M</b>	<b>1,134,165.84</b>	<b>CC</b>	<b>48.28%</b>	<b>\$547,538</b>	<b>51.72%</b>	<b>586,627.43</b>
<b>FIXED CHARGES</b>						
Debt Service	541.92	JJ	100.00%	\$542	0.00%	0.00
O&M Reserve	77,067.97	CC	48.28%	\$37,206	51.72%	39,862.06
R&R Reserve	63.85	JJ	100.00%	\$64	0.00%	0.00
O&M Reserve	13.78	JJ	100.00%	\$14	0.00%	0.00
Infrastructure Replacement	0.00	JJ	100.00%	\$0	0.00%	0.00
Payroll Taxes	44,884.41	DD	44.67%	\$20,049	55.33%	24,835.00
PILOT	<u>201.86</u>	EE	48.17%	<u>\$97</u>	51.83%	<u>104.62</u>
<b>SUBTOTAL FIXED</b>	<b>122,773.80</b>			<b>\$57,972</b>		<b>64,801.68</b>
<b>OPERATING REVENUE</b>	<b>65,014.35</b>	<b>EE</b>	<b>48.17%</b>	<b>\$31,320</b>	<b>51.83%</b>	<b>33,694.73</b>
<b>TOTAL EXPENSES</b>	<b>1,321,953.99</b>	<b>EE</b>	<b>48.17%</b>	<b>\$636,830</b>	<b>51.83%</b>	<b>685,123.84</b>
Less: Available Restricted D.	0.00	JJ	100.00%	\$0	0.00%	0.00
Miscellaneous Income	(10,949.64)	EE	48.17%	(\$5,275)	51.83%	(5,674.83)
Merchand & Jobbing	(145.52)	EE	48.17%	(\$70)	51.83%	(75.42)
6.9% of Water Prot Fee	(3,699.05)	EE	48.17%	(\$1,782)	51.83%	(1,917.09)
=====				=====		=====
<b>Total Revenue Requirement</b>	<b>1,307,159.78</b>	<b>EE</b>	<b>48.17%</b>	<b>\$629,703</b>	<b>51.83%</b>	<b>677,456.50</b>

(1) See Sch. 5C

**ALLOCATION OF CUSTOMER SERVICE LABOR**

<u>EXPENSE ITEM</u>	<u>TOTAL</u>		<u>&lt;-CUST. METER-&gt;</u>		<u>&lt;-CUST. BILL-&gt;</u>	
	<u>CUST. SERV.</u>	<u>ALLOC. SYMBOL (1)</u>	<u>%</u>	<u>AMOUNT</u>	<u>%</u>	<u>AMOUNT</u>
<b>TRANS &amp; DISTR. EXPENSE</b>						
labor	0.00	AA	100.00%	\$0	0.00%	0.00
supplies	0.00	AA	100.00%	\$0	0.00%	0.00
labor-meter	37,663.82	AA	100.00%	\$37,664	0.00%	0.00
material-meter	0.00	AA	100.00%	\$0	0.00%	0.00
cust. install.	0.00	AA	100.00%	\$0	0.00%	0.00
misc.	0.00	AA	100.00%	\$0	0.00%	0.00
maint.- res & stdp	0.00	AA	100.00%	\$0	0.00%	0.00
maint. - mains	0.00	AA	100.00%	\$0	0.00%	0.00
maint. - service	99,335.62	AA	100.00%	\$99,336	0.00%	0.00
maint. - meters	60,594.33	AA	100.00%	\$60,594	0.00%	0.00
maint. - hydrants	0.00	AA	100.00%	\$0	0.00%	0.00
construction labor	0.00	AA	100.00%	\$0	0.00%	0.00
<b>CUSTOMER ACCOUNT</b>						
labor- meter read	81,410.02	BB	0.00%	\$0	100.00%	81,410.02
cust record labor	170,409.43	BB	0.00%	\$0	100.00%	170,409.43
cust records exp	0.00	BB	0.00%	\$0	100.00%	0.00
meter read supplies	0.00	BB	0.00%	\$0	100.00%	0.00
uncollectible	0.00	BB	0.00%	\$0	100.00%	0.00
<b>ADMIN. &amp; GENERAL</b>						
salaries	60,397.09	CC	48.28%	\$29,158	51.72%	31,239.34
office supplies & expenses	0.00	CC	48.28%	\$0	51.72%	0.00
insurance (property/liability)	0.00	CC	48.28%	\$0	51.72%	0.00
injuries & damages	0.00	CC	48.28%	\$0	51.72%	0.00
employee benefits	860.17	DD	44.67%	\$384	55.33%	475.94
fees	0.00	CC	48.28%	\$0	51.72%	0.00
maint. - plant	21,241.59	CC	48.28%	\$10,255	51.72%	10,986.84
maint. - vehicles	3,268.31	CC	48.28%	\$1,578	51.72%	1,690.48
miscellaneous	2,529.90	CC	48.28%	\$1,221	51.72%	1,308.55
vacation, holiday, sick	41,160.51	DD	44.67%	\$18,386	55.33%	22,774.53
regul. exp.	0.00	CC	48.28%	\$0	51.72%	0.00
other	0.00	CC	48.28%	\$0	51.72%	0.00
outside service	<u>0.00</u>	CC	48.28%	<u>\$0</u>	51.72%	<u>0.00</u>
<b>TOTAL LABOR</b>	<b>578,870.77</b>	<b>DD</b>	<b>44.67%</b>	<b>\$258,576</b>	<b>55.33%</b>	<b>320,295.11</b>

(1) See Sch. 5C



**ALLOCATION SYMBOLS - CUSTOMER SERVICE**

<u>ALLOCATION SYMBOL</u>	<u>CUSTOM METER</u>	<u>CUSTOM BILL</u>	<u>TOTAL</u>
AA	100.00%	0.00%	100.00% Meters
BB	0.00%	100.00%	100.00% Billing
CC	48.28%	51.72%	100.00% O&M
DD	44.67%	55.33%	100.00% Labor
EE	48.17%	51.83%	100.00% All Expenses
JJ	100.00%	0.00%	100.00% Capital/Debt

**DETERMINATION OF EQUIVALENT METERS**

<u>METER SIZE (IN)</u>	<u>NUMBER</u>	<u>EQUIVALENCY FACTOR (1)</u>	<u>EQUIV. 5/8 IN. METERS</u>
5/8 & 3/4	22,128	1	22,128
1	3,561	1.8	6,410
1 1/2	318	3.3	1,049
2	526	4.6	2,420
3	17	6.3	107
4	69	9.6	662
6	74	16.9	1,251
>8	<u>59</u>	29.6	<u>1,746</u>
TOTALS	26,752		35,773

(1) From Dockets. No. 2098 through 3660

**DETERMINATION OF PROPOSED SERVICE CHARGES**

**BILLING CHARGE**

CUST. BILLING ALLOC. (1)	=	\$677,457	=	
-----		-----		\$6.24 PER BILLING
NUMBER OF BILLINGS		108,576		

**METER CHARGE**

CUST. METER ALLOC. (1,3))	=	\$610,534	=	
-----		-----		\$17.07 / EQ. METER/YR
NO. EQUIV. METERS (2)		35,773		

**TOTAL SERVICE CHARGES**

<u>METER SIZE (IN)</u>	<u>QUARTERLY ACCOUNTS</u>			<u>MONTHLY ACCOUNTS</u>		
	<u>METER CHARGE</u>	<u>BILLING CHARGE</u>	<u>TOTAL CHARGE</u>	<u>METER CHARGE</u>	<u>BILLING CHARGE</u>	<u>TOTAL CHARGE</u>
5/8 & 3/4	\$4.27	\$6.24	\$10.51	\$1.42	\$6.24	\$7.66
1	\$7.68	\$6.24	\$13.92	\$2.56	\$6.24	\$8.80
1 1/2	\$14.08	\$6.24	\$20.32	\$4.69	\$6.24	\$10.93
2	\$19.63	\$6.24	\$25.87	\$6.54	\$6.24	\$12.78
3	\$26.88	\$6.24	\$33.12	\$8.96	\$6.24	\$15.20
4	\$40.96	\$6.24	\$47.20	\$13.65	\$6.24	\$19.89
6	\$72.11	\$6.24	\$78.35	\$24.04	\$6.24	\$30.28
>8	\$126.29	\$6.24	\$132.53	\$42.10	\$6.24	\$48.34

(1) See Sch. 5A

(2) See Sch. 5D

(3) Less allocation of Service Maintenance Costs to Private Fire Service - see Sch. 4B

**ALLOCATION OF GENERAL WATER EXPENSES TO  
BASE AND EXTRA CAPACITY**

EXPENSE ITEM	TOTAL	ALLOC. SYMBOL (1)	BASE	EXTRA CAP.-MAX DAY	EXTRA CAP.-PEAK HR			
	GEN'L WATER		%		AMOUNT	%	AMOUNT	
<b>SOURCE OF SUPPLY</b>								
operations & labor	\$24,875	aa	100.00%	\$24,875	0.00%	\$0	0.00%	\$0
purchased water	\$4,151,681	aa	100.00%	\$4,151,681	0.00%	\$0	0.00%	\$0
<b>PUMPING OPERATIONS</b>								
fuel for pumping	\$9,766	aa	100.00%	\$9,766	0.00%	\$0	0.00%	\$0
power-pumping	\$602,492	aa	100.00%	\$602,492	0.00%	\$0	0.00%	\$0
labor-pumping	\$59,980	pp	55.36%	\$33,205	44.64%	\$26,775	0.00%	\$0
pumping expense	\$1,992	pp	55.36%	\$1,103	44.64%	\$889	0.00%	\$0
maint. - structures & improv	\$32,117	pp	55.36%	\$17,780	44.64%	\$14,337	0.00%	\$0
diesel oil	\$0	pp	55.36%	\$0	44.64%	\$0	0.00%	\$0
maint. - equip	\$33,368	pp	55.36%	\$18,472	44.64%	\$14,895	0.00%	\$0
<b>WATER TREATMENT</b>								
chemicals	\$124,787	aa	100.00%	\$124,787	0.00%	\$0	0.00%	\$0
labor	\$81,228	aa	100.00%	\$81,228	0.00%	\$0	0.00%	\$0
operating	\$30,926	aa	100.00%	\$30,926	0.00%	\$0	0.00%	\$0
maint. - water treat equip	\$1,727	aa	100.00%	\$1,727	0.00%	\$0	0.00%	\$0
maint. - structure	\$0	aa	100.00%	\$0	0.00%	\$0	0.00%	\$0
<b>TRANS &amp; DISTR. EXPENSE</b>								
storage facilities exp.	\$421	dd	0.00%	\$0	0.00%	\$0	100.00%	\$421
labor	\$25,755	bb	44.20%	\$11,384	55.80%	\$14,371	0.00%	\$0
supplies	\$34,619	bb	44.20%	\$15,302	55.80%	\$19,317	0.00%	\$0
labor-meter	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
material-meter	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
cust. install.	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
misc.	\$9,816	ff	42.20%	\$4,143	53.21%	\$5,224	4.58%	\$450
maint - struct. & improv.	\$142	ff	42.20%	\$60	53.21%	\$76	4.58%	\$7
maint.- res & stdp	\$41,259	dd	0.00%	\$0	0.00%	\$0	100.00%	\$41,259
maint. - mains	\$798,187	bb	44.20%	\$352,798	55.80%	\$445,388	0.00%	\$0
maint. - service	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
maint. - meters	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
maint. - hydrants	\$458	aa	100.00%	\$458	0.00%	\$0	0.00%	\$0
construction labor	(\$4,827)	ff	42.20%	(\$2,037)	53.21%	(\$2,569)	4.58%	(\$221)
<b>CUSTOMER ACCOUNT</b>								
labor- meter read	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
cust record labor	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
cust records exp	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
meter read supplies	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
W/P Reimbursement	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
<b>ADMIN. &amp; GENERAL</b>								
salaries	\$302,386	gg	82.78%	\$250,329	16.10%	\$48,682	1.12%	\$3,376
office supplies & expenses	\$98,977	gg	82.78%	\$81,938	16.10%	\$15,935	1.12%	\$1,105
insurance (property/liability)	\$98,534	gg	82.78%	\$81,571	16.10%	\$15,863	1.12%	\$1,100
Insurance (worker's comp)	\$25,292	ll	39.74%	\$10,050	31.14%	\$7,877	29.12%	\$7,366
injuries & damages	\$235	gg	82.78%	\$194	16.10%	\$38	1.12%	\$3
employee benefits	\$452,426	hh	66.56%	\$301,144	31.97%	\$144,619	1.47%	\$6,663
fees	\$24,974	gg	82.78%	\$20,675	16.10%	\$4,021	1.12%	\$279
maint. - plant	\$165,918	gg	82.78%	\$137,355	16.10%	\$26,712	1.12%	\$1,852
maint. - vehicles	\$87,618	gg	82.78%	\$72,534	16.10%	\$14,106	1.12%	\$978
miscellaneous	\$20,990	gg	82.78%	\$17,376	16.10%	\$3,379	1.12%	\$234
vacation, holiday, sick	\$160,584	hh	66.56%	\$106,888	31.97%	\$51,331	1.47%	\$2,365
regul. exp.	\$98,478	gg	82.78%	\$81,524	16.10%	\$15,854	1.12%	\$1,099
other	\$0	gg	82.78%	\$0	16.10%	\$0	1.12%	\$0
outside service	\$104,996	gg	82.78%	\$86,920	16.10%	\$16,904	1.12%	\$1,172
SUBTOTAL O&M	\$7,702,177	gg	87.36%	\$6,728,647	11.74%	\$904,023	0.90%	\$69,507

**ALLOCATION OF GENERAL WATER EXPENSES TO  
BASE AND EXTRA CAPACITY**

EXPENSE ITEM	TOTAL	ALLOC. SYMBOL (1)	BASE		EXTRA CAP.-MAX DAY		EXTRA CAP.-PEAK HR	
	GEN'L WATER		%	AMOUNT	%	AMOUNT	%	AMOUNT
<b>FIXED CHARGES</b>								
Debt Service	\$3,180,748	jj	44.53%	\$1,416,327	54.15%	\$1,722,256	1.33%	\$42,165
O&M Reserve	\$384,729	gg	82.78%	\$318,496	16.10%	\$61,938	1.12%	\$4,295
R&R Reserve	\$374,777	jj	44.53%	\$166,881	54.15%	\$202,928	1.33%	\$4,968
Renewal & Replacement - Equi	\$80,887	jj	44.53%	\$36,018	54.15%	\$43,797	1.33%	\$1,072
Infrastructure Replacement	\$6,000,000	ii	44.53%	\$2,671,687	54.15%	\$3,248,775	1.33%	\$79,538
Payroll Taxes	\$93,221	hh	66.56%	\$62,050	31.97%	\$29,798	1.47%	\$1,373
PILOT	\$18,732	ll	39.74%	\$7,443	31.14%	\$5,833	29.12%	\$5,455
<b>SUBTOTAL FIXED</b>	<b>\$10,133,094</b>			<b>\$4,678,902</b>	<b>52.46%</b>	<b>\$5,315,326</b>	<b>1.37%</b>	<b>\$138,866</b>
<b>OPERATING REVENUE</b>	<b>\$922,517</b>	<b>kk</b>	<b>63.96%</b>	<b>\$590,048</b>	<b>34.87%</b>	<b>\$321,692</b>	<b>1.17%</b>	<b>\$10,778</b>
<b>TOTAL EXPENSES</b>	<b>\$18,757,788</b>	<b>kk</b>	<b>63.96%</b>	<b>\$11,997,596</b>	<b>34.87%</b>	<b>\$6,541,041</b>	<b>1.17%</b>	<b>\$219,151</b>
Less: Available Restricted Deb	\$0	jj	44.53%	\$0	54.15%	\$0	1.33%	\$0
Miscellaneous Income	(\$155,369)	kk	63.96%	(\$99,375)	34.87%	(\$54,179)	1.17%	(\$1,815)
Interest Income	(\$97,522)	kk	63.96%	(\$62,376)	34.87%	(\$34,007)	1.17%	(\$1,139)
Merchand & Jobbing	(\$2,065)	kk	63.96%	(\$1,321)	34.87%	(\$720)	1.17%	(\$24)
6.9% of Water Prot Fee	(\$52,487)	kk	63.96%	(\$33,571)	34.87%	(\$18,303)	1.17%	(\$613)
	=====			=====		=====		=====
<b>Total Revenue Requirement</b>	<b>\$18,450,345</b>	<b>kk</b>	<b>63.96%</b>	<b>\$11,800,954</b>	<b>34.87%</b>	<b>\$6,433,832</b>	<b>1.17%</b>	<b>\$215,559</b>

(1) SeeSch. 6B

**ALLOCATION OF GENERAL WATER LABOR EXPENSE TO  
BASE AND EXTRA CAPACITY**

EXPENSE ITEM	TOTAL	ALLOC.	BASE	AMOUNT	EXTRA CAP.-MAX DAY		EXTRA CAP.-PEAK HR	
	GEN'L WATER	SYMBOL (1)	%		%	AMOUNT	%	AMOUNT
<b>PUMPING OPERATIONS</b>								
labor-pumping	\$59,980	pp	55.36%	\$33,205	44.64%	\$26,775	0.00%	\$0
maint. - structures & improv	\$27,943	pp	55.36%	\$15,469	44.64%	\$12,474	0.00%	\$0
maint. - equip	\$22,966	pp	55.36%	\$12,714	44.64%	\$10,252	0.00%	\$0
<b>WATER TREATMENT</b>								
labor	\$81,228	aa	100.00%	\$81,228	0.00%	\$0	0.00%	\$0
<b>TRANS &amp; DISTR. EXPENSE</b>								
labor	\$25,755	bb	44.20%	\$11,384	55.80%	\$14,371	0.00%	\$0
maint. - res & stdp	\$9,743	dd	0.00%	\$0	0.00%	\$0	100.00%	\$9,743
maint. - mains	\$328,153	bb	44.20%	\$145,044	55.80%	\$183,109	0.00%	\$0
maint. - hydrants	\$232	aa	100.00%	\$232	0.00%	\$0	0.00%	\$0
<b>CUSTOMER ACCOUNT</b>								
labor- meter read	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
cust record labor	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
cust records exp	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
meter read supplies	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
uncollectible	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
<b>ADMIN. &amp; GENERAL</b>								
salaries	\$301,507	gg	82.78%	\$249,601	16.10%	\$48,540	1.12%	\$3,366
employee benefits	\$4,294	hh	66.56%	\$2,858	31.97%	\$1,373	1.47%	\$63
maint. - plant	\$106,040	gg	82.78%	\$87,784	16.10%	\$17,072	1.12%	\$1,184
maint. - vehicles	\$16,316	gg	82.78%	\$13,507	16.10%	\$2,627	1.12%	\$182
miscellaneous	\$12,629	gg	82.78%	\$10,455	16.10%	\$2,033	1.12%	\$141
vacation, holiday, sick	\$205,476	hh	66.56%	\$136,769	31.97%	\$65,681	1.47%	\$3,026
<b>TOTAL LABOR</b>	<b>\$1,202,259</b>	<b>hh</b>	<b>66.56%</b>	<b>\$800,249</b>	<b>31.97%</b>	<b>\$384,306</b>	<b>1.47%</b>	<b>\$17,705</b>

(1) See Sch. 6B

**ALLOCATION SYMBOLS - GENERAL WATER**

ALLOCATION SYMBOL	BASE %	EXTRA CAPACITY		TOTAL	
		MAX DAY %	PEAK HOUR %		
aa	100.00%	0.00%	0.00%	100.00%	Supply & Treatment
bb	44.20%	55.80%	0.00%	100.00%	T&D Mains
cc	0.00%	0.00%	0.00%	0.00%	Meters
dd	0.00%	0.00%	100.00%	100.00%	Storage
ee	0.00%	0.00%	0.00%	0.00%	Not Used
ff	42.20%	53.21%	4.58%	100.00%	Misc. T&D
gg	82.78%	16.10%	1.12%	100.00%	Direct O&M plus 50% Purch Water
hh	66.56%	31.97%	1.47%	100.00%	Labor
ii	44.53%	54.15%	1.33%	100.00%	IFR - same as capital
jj	44.53%	54.15%	1.33%	100.00%	Debt/Capital
kk	63.96%	34.87%	1.17%	100.00%	All Expenses
ll	39.74%	31.14%	29.12%	100.00%	PILOT
pp	55.36%	44.64%	0.00%	100.00%	Pumping Facilities

*Symbol bb*

	Gal/Min	%
Average Day	6,424	44.17%
Max Day Increment	8,120	55.83%
Maximum Day	14,544	100.00%

*Symbol jj*

Item	Amount (1)	Symbol	BASE	EXTRA CAPACITY	
				MAX DAY	PEAK HOUR
Source of Supply	\$2,985,703	aa	\$2,985,703	\$0	\$0
Pumping Plant	\$3,145,522	pp	\$1,741,361	\$1,404,161	\$0
Water Treat. Plant	\$403,940	aa	\$403,940	\$0	\$0
T&D Storage	\$3,252,684	dd	\$0	\$0	\$3,252,684
T&D Mains	\$235,580,445	bb	\$104,126,557	\$131,453,888	\$0
T&D Hydrants	\$581	aa	\$581	\$0	\$0
T&D Meters	\$0	cc	\$0	\$0	\$0
General Plant	\$551,986	jj	\$245,789	\$298,880	\$7,317
<b>Total</b>	<b>\$245,920,862</b>		<b>\$109,503,931</b>	<b>\$133,156,929</b>	<b>\$3,260,001</b>
Percent			44.53%	54.15%	1.33%

(1) See Sch. 3B

*Symbol ll*

Item	Amount (1)	Symbol	BASE	EXTRA CAPACITY	
				MAX DAY	PEAK HOUR
Storage	\$5,443	dd	\$0	\$0	\$5,443
Office	\$1,008	kk	\$645	\$351	\$12
PS/Wells	\$12,281	pp	\$6,799	\$5,482	\$0
<b>Total</b>	<b>\$18,732</b>		<b>\$7,443</b>	<b>\$5,833</b>	<b>\$5,455</b>
Percent			39.74%	31.14%	29.12%

(1) See Sch. 3B

*Symbol pp*

Item	%	Symbol	BASE	EXTRA CAPACITY	
				MAX DAY	PEAK HOUR
Supply Wells	20.00%	aa	20.00%	0.00%	0.00%
Distribution	80.00%	bb	35.36%	44.64%	0.00%
<b>Total</b>	<b>1</b>	<b>pp</b>	<b>55.36%</b>	<b>44.64%</b>	<b>0.00%</b>

**ALLOCATION OF GENERAL WATER EXPENSES  
TO CUSTOMER CLASSES**

**Class Demands**

CUSTOMER CLASS	AVERAGE DEMANDS		MAX DAY EXTRA CAPACITY			
	(GALS/DAY)	PERCENT	FACTOR [1]	OTAL GAL/DAY	XTRA GAL/DAY	PERCENT
Small	6,756,329	89.56%	2.7	18,242,089	11,485,760	95.82%
Medium	310,693	4.12%	2	621,386	310,693	2.59%
Large	477,197	6.33%	1.4	668,076	190,879	1.59%
Total	7,544,219	100.00%		19,531,551	11,987,331	100.00%

CUSTOMER CLASS	AVERAGE DEMANDS		PEAK HOUR EXTRA CAPACITY			
	(GALS/DAY)	PERCENT	FACTOR	OTAL GAL/DAY	XTRA GAL/DAY	PERCENT
Small	6,756,329	89.56%	3.4	22,971,519	4,729,430	95.56%
Medium	310,693	4.12%	2.4	745,663	124,277	2.51%
Large	477,197	6.33%	1.6	763,516	95,439	1.93%
Total	7,544,219	100.00%		24,480,698	4,949,147	100.00%

[1] - Described in the April, 1992 Cost of Service Study and as used in the Dockets # 2098, 2555, and 3660

**Allocation of Costs to Classes**

CUSTOMER CLASS	BASE COSTS		MAX. DAY EXTRA CAPACITY		PEAK HR. EXTRA CAPACITY		TOTAL AMOUNT
	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	
Small	89.56%	\$10,568,506	95.82%	\$6,164,629	95.56%	\$205,989	\$16,939,124
Medium	4.12%	\$485,998	2.59%	\$166,755	2.51%	\$5,413	\$658,165
Large	6.33%	\$746,450	1.59%	\$102,448	1.93%	\$4,157	\$853,056
Total	100.00%	\$11,800,954	100.00%	\$6,433,832	100.00%	\$215,559	\$18,450,345



**METERED WATER RATES**

Small (5/8-2" meters)

Total Expense (2)	\$16,939,124	=		=	
-----	-----	=		=	\$5.1380
Metered Sales (HCF) (1)	3,296,872				

Medium (3&4" meters)

Total Expense (2)	\$658,165	=		=	
-----	-----	=		=	\$4.3410
Metered Sales (HCF) (1)	151,608				

Large (6" & up meters)

Total Expense (2)	\$853,056	=		=	
-----	-----	=		=	\$3.6630
Metered Sales (HCF) (1)	232,857				

(1) See CPNW Sch 2  
(2) See CPNW Sch 7

**COMPARISON TO CURRENT RATES**

		<u>Current</u>	<u>Proposed</u>	<u>% Change</u>	
<u>Metered Rates</u>					
	Small (5/8-2" meters)	\$3.790	\$5.138	35.57%	
	Medium (3&4" meters)	\$3.210	\$4.341	35.23%	
	Large (6" & up meters)	\$2.721	\$3.663	34.62%	
<u>Service Charges</u>					
Quarterly	5/8 & 3/4	\$8.20	\$10.51	28.17%	
	1	\$9.84	\$13.92	41.46%	
	1 1/2	\$12.92	\$20.32	57.28%	
	2	\$15.58	\$25.87	66.05%	
	3	\$19.07	\$33.12	73.68%	
	4	\$25.84	\$47.20	82.66%	
	6	\$40.82	\$78.35	91.94%	
	8 & up	\$66.87	\$132.53	98.19%	
	Monthly	5/8 & 3/4	\$6.83	\$7.66	12.15%
		1	\$7.38	\$8.80	19.24%
1 1/2		\$8.40	\$10.93	30.12%	
2		\$9.29	\$12.78	37.57%	
3		\$10.46	\$15.20	45.32%	
4		\$12.71	\$19.89	56.49%	
6		\$17.70	\$30.28	71.07%	
8 & up		\$26.39	\$48.34	83.18%	
<u>Fire Service (per quarter)</u>					
Public	/hydrant	\$118.39	\$147.74	24.79%	
	/bill	\$6.15	\$6.24	1.46%	
Private (per quarter)					
	4 in	\$51.67	\$58.64	13.49%	
	6 in	\$135.98	\$158.46	16.53%	
	8 in	\$280.57	\$330.62	17.84%	
	10 in	\$500.15	\$589.59	17.88%	
	12 in	\$803.32	\$948.51	18.07%	
	hydrant	\$135.98	\$158.46	16.53%	

**IMPACT OF PROPOSED RATES**

	METER SIZE	QUARTERLY USE - CU FT	CURRENT RATES	<----- PROPOSED ----->		
				NEW BILL	\$ INCREASE	% INCREASE
Small	5/8	2,000	\$84.00	\$113.27	\$29.27	34.8%
	5/8	2,500	\$102.95	\$138.96	\$36.01	35.0%
	<b>5/8</b>	<b>2,730</b>	<b>\$111.67</b>	<b>\$150.78</b>	<b>\$39.11</b>	<b>35.0%</b>
	5/8	3,500	\$140.85	\$190.34	\$49.49	35.1%
	5/8	4,000	\$159.80	\$216.03	\$56.23	35.2%
	5/8	5,000	\$197.70	\$267.41	\$69.71	35.3%
	5/8	6,000	\$235.60	\$318.79	\$83.19	35.3%
	5/8	6,666	\$260.84	\$353.01	\$92.17	35.3%
	5/8	8,000	\$311.40	\$421.55	\$110.15	35.4%
	5/8	10,000	\$387.20	\$524.31	\$137.11	35.4%
	5/8	12,000	\$463.00	\$627.07	\$164.07	35.4%
	5/8	14,000	\$538.80	\$729.83	\$191.03	35.5%
	5/8	15,000	\$576.70	\$781.21	\$204.51	35.5%
	5/8	20,000	\$766.20	\$1,038.11	\$271.91	35.5%
	5/8	25,000	\$955.70	\$1,295.01	\$339.31	35.5%
	1	30,000	\$1,146.84	\$1,555.32	\$408.48	35.6%
	1	40,000	\$1,525.84	\$2,069.12	\$543.28	35.6%
	1	46,666	\$1,778.48	\$2,411.62	\$633.14	35.6%
	1	75,000	\$2,852.34	\$3,867.42	\$1,015.08	35.6%
	2	100,000	\$3,805.58	\$5,163.87	\$1,358.29	35.7%
	2	200,000	\$7,595.58	\$10,301.87	\$2,706.29	35.6%
	2	300,000	\$11,385.58	\$15,439.87	\$4,054.29	35.6%
	2	400,000	\$15,175.58	\$20,577.87	\$5,402.29	35.6%
	2	600,000	\$22,755.58	\$30,853.87	\$8,098.29	35.6%
Medium	3	200,000	\$6,439.07	\$8,715.12	\$2,276.05	35.3%
	3	400,000	\$12,859.07	\$17,397.12	\$4,538.05	35.3%
	3	600,000	\$19,279.07	\$26,079.12	\$6,800.05	35.3%
	4	800,000	\$25,705.84	\$34,775.20	\$9,069.36	35.3%
	4	1,000,000	\$32,125.84	\$43,457.20	\$11,331.36	35.3%
	4	1,200,000	\$38,545.84	\$52,139.20	\$13,593.36	35.3%
Large	6	400,000	\$10,924.82	\$14,730.35	\$3,805.53	34.8%
	6	600,000	\$16,366.82	\$22,056.35	\$5,689.53	34.8%
	6	800,000	\$21,808.82	\$29,382.35	\$7,573.53	34.7%
	6	1,200,000	\$32,692.82	\$44,034.35	\$11,341.53	34.7%
	6	1,333,333	\$36,320.81	\$48,918.34	\$12,597.53	34.7%
	8	2,000,000	\$54,486.87	\$73,392.53	\$18,905.66	34.7%
	8	5,000,000	\$136,116.87	\$183,282.53	\$47,165.66	34.7%
	8	10,000,000	\$272,166.87	\$366,432.53	\$94,265.66	34.6%
	8	24,000,000	\$653,106.87	\$879,252.53	\$226,145.66	34.6%
Municipal Fire Service	300 hydrants		\$35,523.15	\$44,328.24	\$8,805.09	24.8%
Private Fire Service	6 Inch Service		\$135.98	\$158.46	\$22.48	16.5%

**REVENUE RECONCILIATION**

Service Charge:		<----- Current ----->		<----- Proposed ----->	
<u>Quarterly</u>	<u>Number</u>	<u>Rate</u>	<u>Revenue</u>	<u>Rate</u>	<u>Revenue</u>
5/8 & 3/4	88,504	\$8.20	\$725,733	\$10.51	\$930,177
1	14,240	\$9.84	\$140,122	\$13.92	\$198,221
1 1/2	1,240	\$12.92	\$16,021	\$20.32	\$25,197
2	2,056	\$15.58	\$32,032	\$25.87	\$53,189
3	68	\$19.07	\$1,297	\$33.12	\$2,252
4	252	\$25.84	\$6,512	\$47.20	\$11,894
6	272	\$40.82	\$11,103	\$78.35	\$21,311
8 & up	220	\$66.87	\$14,711	\$132.53	\$29,157
Monthly					
5/8 & 3/4	24	\$6.83	\$164	\$7.66	\$184
1	12	\$7.38	\$89	\$8.80	\$106
1 1/2	96	\$8.40	\$806	\$10.93	\$1,049
2	144	\$9.29	\$1,338	\$12.78	\$1,840
3	0	\$10.46	\$0	\$15.20	\$0
4	72	\$12.71	\$915	\$19.89	\$1,432
6	72	\$17.70	\$1,274	\$30.28	\$2,180
8 & up	48	\$26.39	\$1,267	\$48.34	\$2,320
Consumption Charge:	100/cu.ft.				
Proposed					
Small (5/8-2" meters)	3,296,872	\$3.79	\$12,495,144	\$5.14	\$16,939,327
Medium (3&4" meters)	151,608	\$3.21	\$486,662	\$4.34	\$658,131
Large (6" & up meters)	232,857	\$2.72	\$633,604	\$3.66	\$852,955
Fire Protection:					
Public Hydrants	2,317	\$473.56	\$1,097,239	\$590.96	\$1,369,254
# bills	52	\$6.15	\$320	\$6.24	\$324
Private Fire Protection					
4 in	15	\$206.68	\$3,100	\$234.56	\$3,518
6 in	106	\$543.92	\$57,656	\$633.84	\$67,187
8 in	28	\$1,122.28	\$31,424	\$1,322.48	\$37,029
10 in	1	\$2,000.60	\$2,001	\$2,358.36	\$2,358
12 in	1	\$3,213.28	\$3,213	\$3,794.04	\$3,794
hydrant	150	\$543.92	\$81,588	\$633.84	\$95,076
			=====		=====
Total			\$15,845,334		\$21,309,465
Plus: Misc Revenues			\$347,207		\$347,207
			=====		=====
Pro Forma Revenue			\$16,192,541		\$21,656,673
Required Revenue			\$21,657,097		\$21,657,097
Difference			-5,464,556		-425
					0.00%
Increase in Revenues					\$5,464,132
Increase in Rate Revenues					\$5,464,132
Percent Increase in Total Revenues					33.74%
Percent increase in Rate Revenues					34.48%

**SUMMARY OF COST OF SERVICE**

	<u>Test Year</u>	<u>Adjustments</u>	<u>Rate Year</u>
<b>Revenues</b>			
Service Charges	\$953,383	\$327,126	\$1,280,509
Metered Rates	\$13,615,410	\$4,835,003	\$18,450,414
Fire Protection	\$1,276,540	\$302,002	\$1,578,542
Miscellaneous	<u>\$347,207</u>	<u>\$0</u>	<u>\$347,207</u>
<i>Total Revenue</i>	\$16,192,541	\$5,464,132	\$21,656,673
<b>Expenses</b>			
<u>O&amp;M</u>			
Supply	\$3,658,536	\$539,008	\$4,197,544
Pumping	\$667,868	\$98,517	\$766,385
Treatment	\$207,829	\$32,038	\$239,867
T&D	\$1,409,859	\$122,320	\$1,532,179
Customer	\$286,602	\$26,481	\$313,083
Admin	<u>\$2,054,697</u>	<u>\$313,567</u>	<u>\$2,368,264</u>
Total O&M	\$8,285,390	\$1,131,932	\$9,417,322
<u>Fixed Charges</u>			
Debt Service	\$3,901,944	\$30,375	\$3,932,319
Reserves and Coverage	\$0	\$964,000	\$964,000
Renewal & Replacement	\$100,000	\$0	\$100,000
Infrastructure Replacement	\$4,004,478	\$1,995,522	\$6,000,000
Payroll Taxes	\$138,876	\$16,350	\$155,226
PILOT	<u>\$23,123</u>	<u>\$0</u>	<u>\$23,123</u>
Total Fixed	\$8,168,421	\$3,006,247	\$11,174,668
<u>Operating Revenue</u>	<u>\$0</u>	<u>\$1,065,107</u>	<u>\$1,065,107</u>
<i>Total Expenses</i>	\$16,453,811	\$5,203,286	\$21,657,097

**ALTERNATIVE SEASONAL RATE**

**Allocation of Costs to Classes (Sch. 7)**

CUSTOMER CLASS	BASE COSTS		MAX. DAY EXTRA CAPACITY		PEAK HR. EXTRA CAPACITY		TOTAL
	PERCENT	AMOUNT	PERCENT	AMOUNT	PERCENT	AMOUNT	AMOUNT
Small	89.56%	\$10,568,506	95.82%	\$6,164,629	95.56%	\$205,989	\$16,939,124
Medium	4.12%	\$485,998	2.59%	\$166,755	2.51%	\$5,413	\$658,165
Large	6.33%	\$746,450	1.59%	\$102,448	1.93%	\$4,157	\$853,056
Total	100.00%	\$11,800,954	100.00%	\$6,433,832	100.00%	\$215,559	\$18,450,345

**Billing By Quarter (cubic feet)**

	<u>Jul - Sep</u>	<u>Oct - Dec</u>	<u>Jan - Mar</u>	<u>Apr - June</u>	<u>Total</u>
Small (5/8-2" meters)	1,113,379	821,984	635,628	725,882	3,296,872
Medium (3&4" meters)	55,230	36,248	29,414	30,716	151,608
Large (6" & up meters)	<u>73,026</u>	<u>70,885</u>	<u>74,293</u>	<u>74,324</u>	<u>292,527</u>
Total	1,241,634	929,117	739,335	830,922	3,741,007
% of Total	33.2%	24.8%	19.8%	22.2%	

**Clariant Corp. Adjustment**

Acct 114730-medium	3,870	4,020	3,770	3,790	15,450
Acct 11403 -large	14,475	13,795	10,815	8,830	47,915
Acct 115436-small	4,023	4,101	2,677	2,115	12,915
Acct 115435-small	3,406	3,624	5,871	6,407	19,307
Acct 11402-large	<u>13,715</u>	<u>14,945</u>	<u>19,895</u>	<u>17,425</u>	<u>65,980</u>
	39,489	40,484	43,028	38,567	161,567

**Summary of Adjustment**

Small	7,429	7,724	8,548	8,522	32,222
Medium	3,870	4,020	3,770	3,790	15,450
Large	28,190	28,740	30,710	26,255	113,895

**ALTERNATIVE SEASONAL RATE**

<b>Seasonal Surcharge</b>	<----- Variable Alternative ----->			<b>Uniform Alt. Total</b>
	<b>Small</b>	<b>Medium</b>	<b>Large</b>	
<b>Maximum Day Costs</b>				
Percent	5.00%	8.50%	12.50%	
Amount	\$308,231	\$14,174	\$12,806	\$335,212
<b>Peak Hour Costs</b>				
Percent	50.00%	50.00%	50.00%	
Amount	\$102,995	\$2,706	\$2,078	\$107,780
Surcharge set to equal percentage of Peak Hour Costs =				
Plus Percentage of Maximum Day Costs =				
Amount of Surcharge =	\$411,226	\$16,881	\$14,884	\$442,991
Summer Period Billings (100 cu ft) =	1,113,379	55,230	73,026	1,241,634
Surcharge (\$/100 cu ft)	\$0.369	\$0.306	\$0.204	\$0.357

<b>A. Adjustment to Non-seasonal Rates - Variable</b>						
CUSTOMER CLASS	ORIGINAL ALLOCATION	LESS SURCH. REVENUES *	REVISED ALLOCATION	SALES (100 CU FT)	BASE RATE (\$/100 CU FT)	
Small	\$16,939,124	\$410,837	\$16,528,287	3,296,872	\$5.014	
Medium	\$658,165	\$16,900	\$641,265	151,608	\$4.230	
Large	<u>\$853,056</u>	<u>\$14,897</u>	<u>\$838,158</u>	292,527	\$2.866	
Total	\$18,450,345	\$442,634	\$18,007,711			
* Based on rate rounded to nearest \$0.001						
<b>Alternative Seasonal Metered Rates - Variable</b>						
Metered Rates	Current Cost of Service		Jul - Sep	Seasonal Alternative		
				Base	\$ Diff.	% Diff
Small (5/8-2" meters)	\$3.790	\$5.138	\$5.383	\$5.014	\$0.369	7.36%
Medium (3&4" meters)	\$3.210	\$4.341	\$4.536	\$4.230	\$0.306	7.23%
Large (6" & up meters)	\$2.721	\$3.663	\$3.070	\$2.866	\$0.204	7.12%

<b>B. Adjustment to Non-seasonal Rates - Uniform - NOT RECOMMENDED</b>						
CUSTOMER CLASS	ORIGINAL ALLOCATION	LESS SURCH. REVENUES *	REVISED ALLOCATION	SALES (100 CU FT)	BASE RATE (\$/100 CU FT)	
Small	\$16,939,124	\$397,476	\$16,541,648	3,296,872	\$5.018	
Medium	\$658,165	\$19,717	\$638,448	151,608	\$4.212	
Large	<u>\$853,056</u>	<u>\$26,070</u>	<u>\$826,986</u>	292,527	\$2.828	
Total	\$18,450,345	\$443,263	\$18,007,081			
* Based on rate rounded to nearest \$0.001						
<b>Alternative Seasonal Metered Rates - Uniform</b>						
Metered Rates	Current Cost of Service		Jul - Sep	Seasonal Alternative		
				Base	\$ Diff.	% Diff
Small (5/8-2" meters)	\$3.790	\$5.138	\$5.375	\$5.018	\$0.357	7.11%
Medium (3&4" meters)	\$3.210	\$4.341	\$4.569	\$4.212	\$0.357	8.48%
Large (6" & up meters)	\$2.721	\$3.663	\$3.185	\$2.828	\$0.357	12.62%