

RHODE ISLAND PUBLIC UTILITIES COMMISSION

**DOCKET NO. 4611
KENT COUNTY WATER AUTHORITY**

**PREFILED REBUTTAL TESTIMONY OF
CHRISTOPHER P.N. WOODCOCK
ON BEHALF OF
KENT COUNTY WATER AUTHORITY**

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4 **PREFILED TESTIMONY OF**
5 **CHRISTOPHER P.N. WOODCOCK**

6 **Q: Are you the same Christopher Woodcock that submitted prefiled direct testimony on be-**
7 **half of the Kent County Water Authority?**

8 A: Yes.

9 **Summary**

10 **Q: Have you reviewed the direct testimony filed by the Division's three witnesses in this**
11 **case along with the responses from various parties to data requests in this docket?**

12 A: Yes.

13 **Q: Please summarize the matters that have been raised that you would like to address.**

14 A: I have nothing to add to the testimony that was submitted by Mr. Mancini.

15
16 I have very few additional matters as a result of Mr. Mierzwa's testimony. He has provided
17 testimony opposing various rate design alternatives that were presented by KCWA, includ-
18 ing (a) the proposed demand surcharge, (b) the seasonal rate alternatives, and (c) the di-
19 rect public fire protection charges. On all three of these matters, we have proposed op-
20 tions for the Commission's consideration along with the thoughts or recommendations of
21 the Authority on each. I will comment more on these later.

22
23 Mr. Morgan presented a number of adjustments to the Authority's claimed revenue re-
24 quirements that I would like to address. The specific items are:

- 25
- 26 • The proper inflation factor to use
 - Adjustments to the miscellaneous revenues

- 1 • Employee benefits
- 2 • Liability, property, and worker’s compensation insurance
- 3 • Rate case expenses
- 4 • Disallowed costs for mandated studies
- 5 • Renewal & replacement fund deposits
- 6 • The allowance for debt service
- 7 • Additional deposits to the restricted operating revenue allowance
- 8 • The IFR costs included in the step increases
- 9 • Meter replacement costs

10

11 **Rate Design**

12 **Q: Please comment on the rate design issues raised by Mr. Mierzwa.**

13 A: There were three rate design matters that were presented in my testimony. Mr. Mierzwa
14 has provided testimony on each of these issues.

- 15 • Demand surcharge: As discussed in my direct testimony, the Authority has pro-
16 posed the adoption of a new demand surcharge that would be assessed based
17 on meter size. Initially, we have proposed the recovery of just \$500,000 through
18 this charge; resulting in a charge of about \$12.28/year (or just over 3 cents per
19 day) for customers with a 5/8” meter. This new fixed charge would recover less
20 than ¼ of the Authority’s fixed annual debt service. Contrary to Mr. Mierzwa’s
21 assertion, I believe the recovery of a fixed cost with a fixed charge is consistent
22 with sound rate making principles.
- 23 • Seasonal rates: The seasonal rate alternatives were presented based on past re-
24 quests from the Commission to consider such charges. The Authority agrees
25 with Mr. Mierzwa’s recommendation against the adoption of this rate alterna-
26 tive at this time.

- 1 • Direct fire charges: The final alternative proposed by the Authority has to do
2 with directly charging customers for public fire protection services. The Author-
3 ity has proposed these in light of state legislation that has allowed some larger
4 cities to opt out of paying public fire charges. In those cases, (Providence,
5 Woonsocket, and Pawtucket), the cost of public fire protection services are
6 charged directly to customers. The Authority has had issues with payments of
7 these charges in the past, and while it may have received judgements in its favor,
8 the cost of litigation is something the Authority would like to avoid. Further,
9 there is no guarantee that there will not be future litigation and the outcome is
10 not certain in those cases.

11 Mr. Mierzwa has also asserted that the Authority has not demonstrated that the
12 proposed charges are equitable. Certainly, the Commission has approved direct
13 charges in the past; I believe that there has been no question as to the equitabil-
14 ity of the charges in Pawtucket, Woonsocket, or Providence. In fact, one could
15 argue they are more equitable in that tax exempt properties that do not pay
16 property taxes (and thus do not share in the recovery of these costs from the
17 municipalities or fire districts) will pay for a share of public fire protection
18 through these charges. I would suggest that a system that enables the water
19 supplier to recover costs from all customers rather than just some has some ele-
20 ments of greater equity.

21 Lastly, Mr. Mierzwa suggests that the adoption of such charges would result in
22 double payments: once through the fire district fees and a second time through
23 the Authority's direct charge. As indicated in the Coventry Fire District's re-
24 sponse to KCWA 1-5, "If KCWA stopped billing the CFD for public fire protection
25 next year, the Board of Directors would reduce its proposed budget by a like
26 amount." Clearly, there would not be the double charging that Mr. Mierzwa has
27 expressed concern over.

1 **Inflation Factor**

2 **Q: What is the issue related to inflation factors in this case?**

3 A: As part of our filing, the Authority has made adjustments to certain test year expenses to
4 derive expenses for the rate year and two following years (for proposed step increases)
5 based, in part, on estimated inflation rates. These adjustments are made under the Com-
6 mission's Rules of Practice (Section 2.6 (c) (4)). As I noted in my direct testimony, the Com-
7 mission's rules state: "Inflationary Adjustments. These adjustments are based upon pro-
8 jected cost increases, e.g. Consumer Price Index changes." I agree that this wording does
9 not mandate the use of the CPI, but no other index is mentioned. It seems rather odd that
10 the only index specifically provided as an example would be dismissed by the Division's wit-
11 ness for one that is not even mentioned and has not been used in a recent municipal water
12 rate case.

13

14 **Q: What has the Division's position been in recent municipal water dockets?**

15 A: In some prior dockets, the Division's witness has proposed the use of the Gross Domestic
16 Product-Price Index (GDP-PI) as an alternative. This is not universal however. In the cur-
17 rent Providence Water docket (Docket No. 4618), the CPI was used and the Division's wit-
18 ness in that case raised no issues with the use of the CPI. About a year ago, Mr. Morgan
19 recommended using the Gross Domestic Product-Price Index (GDP-PI) in Docket 4550.
20 However, in Docket 4590, Newport Water adjusted its test year values to the rate year es-
21 sentially based on its internal budgets. No indices were explicitly mentioned. The Divi-
22 sion's witness in that docket (from the same firm as Mr. Morgan), had NO comment on
23 these adjustments nor did she recommend the use of any particular index. Mr. Morgan has
24 now proposed a totally new index – the "projected core price index for personal consump-
25 tion expenditure as reported by the Federal Reserve (sic) Open Market Committee."

26

1 Based on the Federal Reserve’s website, “the Federal Open Market Committee (FOMC) is
2 the monetary policymaking body of the Federal Reserve System.” It is a body that sets pol-
3 icy and reviews economic and financial developments; it typically sets short term interest
4 rates in response to world-wide economic outlooks and more recently has used purchases
5 of securities as a policy tool to impact interest rates, financial conditions, and growth. My
6 experience has been that the FOMC is not typically viewed as the body to provide inflation-
7 ary estimates.

8
9 Filing for rate cases is difficult and time consuming for the municipal utilities. When the
10 witnesses for the Division cannot agree on how to implement or interpret the Commis-
11 sion’s rules for adjusting test year costs for inflationary impacts, it makes this process even
12 more difficult. When different positions are taken by the Division for each docket and for
13 each water utility, there is little guidance that water utilities can rely upon.

14
15 In this case, we have proposed an element of the Consumer Price Index (water and sewer
16 maintenance). The CPI is explicitly mentioned in the Commission’s rules; it should not be
17 excluded based on the whim of whomever the Division’s witness happens to be or what
18 the new favourite index of that witness may be.

19
20 **Q: The Division has suggested that the CPI for “Water and Sewer Maintenance” is just for**
21 **maintenance. Do you agree?**

22 **A:** No I do not. The only basis for this notion (see response to KCWA-DIV 1-8) is the “descrip-
23 tive title of the category”. This index is a subcategory of Fuels and Utilities under the Hous-
24 ing costs. Under Fuels and Utilities are various categories including “water and sewer and
25 trash collection”. Water and sewer maintenance is one of the two subcategories along

1 with “garbage and trash collection”. I believe Mr. Morgan’s extremely narrow interpreta-
2 tion is incorrect, and that this category applies to all¹ water and sewer costs. I would also
3 note that the water and sewer portion of the CPI is now used by water and sewer utilities
4 throughout the country to adjust their overall water and sewer rates, not just the “mainte-
5 nance” portion of their rates.

6
7 **Q: The Division claims that the inflation measure you propose is your “own measure of in-
8 flation rather than ... (a) standard published measure of inflation”. Do you agree?**

9 A: No. My direct testimony is very clear that I used a combination of the Bureau of Labor Sta-
10 tistics published Consumer Price Index in concert with the Bureau’s published index for wa-
11 ter and sewer. While I could have simply used the historic 5.63% average of the water and
12 sewer index, I instead used the overall CPI and adjusted it based on the historic relationship
13 between the overall CPI and the water and sewer index. Both the overall CPI and the water
14 and sewer portion of the CPI are “standard measures of inflation”.

15
16 The Division suggests that the measure that I propose is “a broad measure of inflation”.
17 That is just absurd. The Division’s response to a data requests suggests its witness believes
18 that the water and sewer maintenance index is just for “maintenance”. How can the Divi-
19 sion possible suggest that such an index is broad, particularly in comparison to its proposal
20 in this Docket to use an index that covers far more categories and expenses?

21
22 Finally, the Division’s witness criticizes the inflation measure I propose because it is based
23 on historic data and “past inflation is not a good proxy for determining future inflation.”

24 While it may not suit him, the CPI is a broadly used index that is used to adjust many costs

¹ See [http://ipu.msu.edu/research/pdfs/IPU%20Consumer%20Price%20Index%20for%20Utilities%202013%20\(2014\).pdf](http://ipu.msu.edu/research/pdfs/IPU%20Consumer%20Price%20Index%20for%20Utilities%202013%20(2014).pdf) where the clear meaning is all water and sewer costs. This paper also confirms my direct testimony that water and sewer costs are rising much faster than general inflation and most other categories within the CPI.

1 for anticipated inflation. It is certainly more widely used than the index proposed by the
2 Division.

3
4 **Q: Why do you believe the Commission should reject the Division's proposed new inflation
5 factor?**

6 A: In KCWA-DIV 1-6 we asked if the Division's proposed measure from a committee of the
7 Federal Reserve has been used in any other water case in RI. The Division's witness could
8 not provide any examples. The CPI has certainly been accepted by the Commission in the
9 past and is even listed in the Commission's rules. In this case, we are asking the Commis-
10 sion to consider a far less broad measure of the CPI – one that just considers water and
11 sewer costs. However, we are not simply asking that the higher water and sewer CPI index
12 be used, but that the BLS's standard CPI be adjusted to account for the higher water and
13 sewer measure.

14
15 In their response to KCWA-DIV 1-8 and their testimony on this matter, the Division has
16 shown a lack of understanding of the CPI's water and sewer maintenance index by suggest-
17 ing that it only applies to "maintenance" and therefore should not apply to items such as a
18 water utility's "retiree benefits", "customer account expenses", or "administrative and gen-
19 eral expenses". (see page 13 of Mr. Morgan's testimony)

20
21 **Q: Does the Division provide any evidence that its proposed new measure is better than the
22 CPI?**

23 A: In KCWA-DIV 1-7 we asked the Division how well its proposed new measure has performed
24 historically; how well did its projected rates of inflation track with actual results. The Divi-
25 sion could not answer this. They have just proposed some new measure that has never be-
26 fore been suggested or used by the Commission, and they propose a factor with no basis
27 for its validity.

1

2 **Q: On page 14 of his testimony, Mr. Morgan states that it is “important that the source of**
3 **data, upon which I base my adjustment, be reputable.” Do you believe the Consumer**
4 **Price index is “reputable”?**

5 A: Yes. The Consumer Price Index is maintained by the Bureau of Labor Statistics within the
6 United States Department of Labor. In response to KCWA-DIV 1-11, Mr. Morgan states
7 “the inflation rate produced by the Bureau of Labor Statistics (BLS) is just as solid and repu-
8 table” as the new and untested measure that he is proposing. He goes on to state that “(i)f
9 the planning outlook is short-term, the BLS data are probably reasonable to use.” The
10 “outlook” we are looking at in this docket is the year running from July 1, 2016 – June 30,
11 2017. We are in that year now. That seems to be just the kind of “short-term” period Mr.
12 Morgan describes.

13

14 **Q: After reviewing Mr. Morgan’s direct testimony, what is your recommendation to the**
15 **Commission regarding the basis for an inflation value?**

16 A: The Commission’s rules suggest the use of the Consumer Price Index. While there is no
17 prohibition on using something else, if one is proposing a new measure, it should be sup-
18 ported. The Division was asked why this new measure is better and they were asked to
19 demonstrate how well it predicted inflation. Mr. Morgan could not provide this simple
20 analysis.

21

22 There needs to be some degree of consistency within the Division from one water rate case
23 to the next. I think we have seen that there is no such consistency, even within the past
24 year or so. In fact, there is no consistency within Mr. Morgan’s own firm on this topic.

25

1 I have proposed using an accepted and reputable measure of inflation that is broadly rec-
2 ognized and used in this country. It is explicitly mentioned in the Commission's own rules
3 of practice.

4
5 I am also cognizant of criticisms that the CPI may be overly broad and not necessarily appli-
6 cable to the costs of providing water. Because of this I have looked at an element of the
7 CPI that explicitly applies to the cost of water and sewer service. It is widely understood
8 and recognized that the cost of water and sewer service has been increasing greater than
9 the overall cost of inflation over the past few decades. While I could have just used the
10 water and sewer CPI, I chose to modify and moderate this by looking at the relationship be-
11 tween the overall CPI and the narrower water and sewer maintenance index. I believe the
12 Commission should continue to use the CPI as adjusted or modified for the specific water
13 and sewer portion of that index.

14
15 I am making this recommendation as a trained economist who understands these indices
16 and how they are used; I am also considering in excess of 40 years of real life experience in
17 the field. As the Commission is aware, I represent utilities that are seeking increases and I
18 represent intervenors that are opposing increases. I believe this provides a more balanced
19 view and approach than the Division's witness.

20

1 **Miscellaneous Revenues (Other Operating Revenues)**

2 **Q: The Division has recommended an additional \$373,588 be added to the Authority's Other**
3 **Operating Revenues, effectively reducing the amounts required from rates and charges**
4 **by this amount. Do you agree with this adjustment?**

5 A: No. The Division has taken the response to one of their data request (Div 2-10) that simply
6 asked for historical amounts from ten different expense and revenue items. With no ap-
7 parent analysis or understanding, they simply took three years of data and applied a simple
8 average to three historic years to derive their recommendation for the adjustment.

9
10 I have no significant issue with the Division's proposed adjustments to Interest Income.
11 They took a simple three-year average for FY 13, FY 14, and FY15 and applied that result.
12 After researching this matter, I found that the Authority had reported incorrect values for
13 Merchandising and Jobbing. I have updated my schedules with the corrected values and
14 used the three-year average proposed by the Division.

15
16 In the case of the Miscellaneous Income, I have found that the much larger values in FY13
17 and FY14 should have been better understood. In our filing, I had simply presented the
18 FY15 value of \$235,485. The amounts included in the response to Div 2-10 showed that
19 FY14 (\$875,213) and FY13 (\$689,235) were far out of line with the FY15 value. I would
20 think that upon seeing this, the Division might ask for some explanation for these wide var-
21 iances. I looked into this and found that the auditors have made subsequent adjustments
22 to these accounts to transfer outside contractor extensions from miscellaneous non-oper-
23 ating revenue to Transmission and Distribution plant.

- 24 • For FY13, \$652,280 was transferred from the initial \$689,235 to T&D plant leav-
25 ing a net amount for miscellaneous non-operating of \$36,955
- 26 • For FY14, \$855,837 was transferred from the initial \$875,213 to T&D plant leav-
27 ing a net amount for miscellaneous non-operating of \$19,376

- 1 • For FY15, we had used a preliminary value of \$235,485. The actual value was
2 \$215,505, with \$173,374 later transferred to T&D plant leaving a net amount for
3 miscellaneous non-operating of \$42,131.

4
5 As a result, the actual values were:

6 FY13: \$36,955

7 FY14: \$19,376

8 FY15: \$42,131

9 Average: \$32,821

10 Based on this, I am now proposing to accept the Division's three-year average values for
11 interest income, I have updated the values for merchandise & jobbing, and I propose to use
12 the three-year average of \$32,821 for miscellaneous non-operating revenue.

13
14 **Employee Benefits**

15 **Q: The Division has proposed adjustments to the Authority's proposed benefit expenses**
16 **based on more recent FY16 data. Further, they have proposed holding retiree costs con-**
17 **stant. Do you agree with these adjustments?**

18 A: Based on the Division's analysis and testimony, I have kept the retiree benefit costs at the
19 FY 2106 levels through the step increases in 2019. I have also adjusted all the estimated
20 benefits I had presented for FY16 based on the actual values we now have. However, I
21 continue to propose that future (non-retiree) benefits be estimated based on a percentage
22 of the pro forma salaries.

23
24 The Division has offered testimony that reduces the employee benefits expense from the
25 \$1,036,290 we had in the initial filing to \$965,853. With the adjustments discussed above,
26 I am proposing \$969,706, a difference of only \$3,853 from the amounts proposed by the
27 Division.

1

2 **Insurance**

3 **Q: The next item raised by the Division is property & liability insurance. Please comment on**
4 **this matter.**

5 A: The Division has simply taken the most recent insurance policy quotes and used those for
6 all future years. As shown on Schedule 1D of the Authority's filing, the cost of insurance is
7 not static – it has increased over the five-year period from FY12 through FY16. Based on
8 the most recent data provided in response to Div 3-13, I have updated the values for FY16.
9 However, I have not simply used these values as proposed by the Division. Recognizing
10 that the cost of these policies has been rising, I updated my analysis to include the new
11 FY16 values and used the average annual increase over the past five years to project the
12 rate year values. This has dropped the amount the Authority is seeking from \$276,051 to
13 \$269,341. This is some \$19,000 more than the static values proposed by the Division.

14

15 **Q: The Division's witness has proposed no increases for inflation or any other factor for**
16 **property and liability insurance. Is this consistent with the Division's position in other**
17 **cases?**

18 A: It is absolutely not consistent.

- 19 • In Docket 4618 (Providence Water) that is also currently ongoing, the Division did not
20 recommend the removal of the inflation allowance that Providence Water has pro-
21 posed.
- 22 • In Docket 4595 (Newport Water), Newport included an inflationary increase that was
23 not questioned by the Division².

24

² The Division's witness in Newport was from the same firm as the Division's revenue requirement witness in this docket.

1 Rate Case Expenses

2 **Q: The next matter raised by the Division concerns rate case expenses. The Division has rec-**
3 **ommended that the Commission provide no allowance for KCWA's rate case expenses**
4 **related to intervention in Providence Water's rate filings nor any allowance for the Au-**
5 **thority's costs of pass through filings associated with increases from Providence Water.**
6 **Do you agree with the disallowance of these costs?**

7 A: No. The Division is well aware that the Kent County Water Authority has been an active
8 and significant participant as an intervenor in rate filings by Providence Water. The Divi-
9 sion also gets annual reports every year that detail the Authority's rate case expenses and
10 should thus be quite aware of what the actual costs have been. The complaint that insuffi-
11 cient documentation was provided is extraordinary given the information that is available
12 to the Division.

13

14 This is yet another instance of the Division's witness departing from past practice and prec-
15 edent with either little apparent reason and/or a lack of effort³. For more than a dozen
16 years the Authority has included its rate case costs for intervention in the Providence Wa-
17 ter rate filings *and* for its pass through increases with **NO** opposition from the Division.
18 There has never been a question or issue about including these costs. Now, Mr. Morgan
19 has come in and is seeking to hold the Authority to a new standard. The Division is cer-
20 tainly well aware of the Kent County Water Authority's active participation in Providence
21 Water's rate filings; perhaps Mr. Morgan could have simply asked someone in the Division
22 about this before totally eliminating any allowance for these proceedings.

23

³ As a result of Mr. Morgan's complaints of insufficient data, the Authority has updated its response to the Division's data request on this matter and provided unprecedented documentation. This was an extraordinary effort that has never before been needed.

1 **Q: Do you have anything else to add on the question of rate case expenses?**

2 A: For this rate filing, the Authority is seeking \$130,000 in legal, consultant, and DPUC fees
3 that are proposed to be amortized over three years.

- 4 • Providence Water’s current rate filing (Docket 4618) shows rate case expenses of
5 \$206,760 that are proposed to be amortized over just two years.
- 6 • Newport Water’s recent filing (Docket 4595) included over \$200,000 of rate case
7 expenses amortized over two years.
- 8 • Pawtucket Water’s most recent filing (Docket 4550) included \$230,000 amor-
9 tized over 3 years.

10 By any measure, the Authority’s rate case expenses (even including the other dockets
11 where it intervenes or passes through the Providence increase) are quite reasonable.

12

13 **Study Costs**

14 **Q: What is the Division’s position on the various studies that the Authority has proposed
15 funding for?**

16 A: There are a number of studies that the Kent County Water Authority (and all other water
17 departments in RI) are required to undertake and periodically update. For decades, the
18 Authority has included funding for these studies in its rate cases and the Commission has
19 always accepted these. I can’t recall an instance when the Division has questioned the
20 need for these studies (some of which are required by state law) over the past few dec-
21 ades. They are included as part of the flings of water departments in Rhode Island. For the
22 first time I can recall, a Division witness has not only questioned the need for these studies
23 but has actually recommended to the Commission that no funds be provided for these
24 studies. This is incomprehensible when one considers that another Division witness (Mr.
25 Mancini) has recommended that one of these studies – the 5 year CIP - be updated
26 (“reevaluated”) in his testimony in this very docket.

27

1 **Q: What has the Commission allowed KCWA in prior dockets?**

2 A: The past amounts that have been allowed are noted below.

3 **Doc 3942 (2008):**

Source of Supply Operations (studies)	
Cost of Water Supply, Engin, & IFR Plans =	\$125,000
Amortize over 5 yrs	\$25,000

4 **Doc 3660 (2005):**

Source of Supply Operations	
Cost of Water Supply & Infrastructure Plans =	\$125,000
Amortize over 5 yrs	\$25,000

5 **Doc 3311 (2001)**

Source of Supply Operations	
Cost to update plan =	\$66,055
Amortize over 2 yrs	\$33,028

6

7 When specifically asked about this in KCWA-DIV 1-1, the Division said it needs the costs to
8 be broken out separately, yet they were not broken out in the past and in those past dock-
9 ets the Division did not recommend \$0 funding. Further, the Division was unable to iden-
10 tify any instance in the past five years where the Division recommended against funding
11 studies that are required by state law. It seems the Division, is once again looking to break
12 new ground and establish new precedent with regard to these studies.

13

14 **Q: What is Mr. Morgan's reasoning for the Division's apparent⁴ changed position?**

15 A: His first reason is that "all of the ... studies appear to have been conducted before the test
16 year" and that funding is not possible without the Commission authorizing "deferred ac-
17 counting for future recovery." As noted above, the Commission has authorized funding for
18 these studies for decades and for every water utility it regulates without any Commission

⁴ The Division's position is unclear with Mr. Mancini recommending a study and Mr. Morgan recommend-
ing that no funds be provided for any studies.

1 authorization of any special accounting treatment. When asked for any precedence for his
2 claim that the Commission must authorize deferred accounting for these costs, the Division
3 could provide none.

4
5 The Division's next reason to exclude all amounts for the required studies was the response
6 to Div 3-11. In that response we provided the basis for the costs. If this was not satisfac-
7 tory in this case (despite such showing being satisfactory to the Division for every other wa-
8 ter utility for the past few decades), it could have simply asked for additional information.

9
10 **Q: What is the Authority's position on these studies?**

11 **A:** The Authority believes that each of these studies is necessary and, in some cases, required
12 by statute. In the case of the CIP update, another of the Division's own witnesses has rec-
13 ommended that it be updated.

14
15 The Commission has allowed funding for these studies by KCWA and the other water sup-
16 pliers in RI with no more backup or supporting documentation than that provided by the
17 Authority in this case. These studies are important to the safe production and delivery of
18 water to the citizens of Rhode Island and funding for them should continue to be provided
19 by the Commission.

20
21 If the Commission now wishes more explanation or documentation for these studies, the
22 Authority will be glad to take the time and effort to provide this. However, if that is the
23 case, I expect that the Division will not single out the Kent County Water Authority. I ex-
24 pect that every water utility in RI will be required to provide the same depth and breadth
25 of documentation including Providence Water in Docket 4618.

1 **Renewal & Replacement Fund Deposits**

2 **Q: Please discuss the Division’s proposed adjustment to the Renewal and Replacement Re-**
3 **serve Fund.**

4 A: The Renewal & Replacement Reserve Fund is a fund that was established under the Au-
5 thority’s Trust Indenture and must be funded at 1% of the Net Asset value as described in
6 our testimony and data responses. At the time of the filing (April 2016), the fiscal year had
7 not been closed and we estimated that \$11,000,000 of additions would bring the net asset
8 balance to approximately \$148 million. In response to Div 3-8 we provided the basis for
9 the \$11 million of additions. In this docket, the Division has proposed no allowance for the
10 FY16 plant additions we presented. But said they would look at it again “pending verifica-
11 tion”⁵.

12

13 We now have the FY2016 financial statements that show the net asset value as of 6/30/16
14 was \$145,130,806. In the current fiscal year (FY17) the Authority expects to close out an
15 additional \$5.7 million of projects. Accordingly, we have provided an estimated net asset
16 value as of 6/30/17 of \$150,830,806 and a corresponding R&R Fund requirement of 1% of
17 this value or \$1,508,308.

18

19 **Debt Service Expenses**

20 **Q: What is the Division’s position on debt service?**

21 A: The Division’s witness has called this expense item “debt service coverage”. We are not
22 seeking additional funding for the debt service *coverage*⁶, we are seeking funding for the

⁵ In Docket 3942 the Division’s witness (from the same firm as Mr. Morgan) did NOT require such verification. No such verification was called for in Docket 3660 by another Division witness.

⁶ The witness may have the need for “coverage” under section 603 of the Bond Resolution confused with the requirements of the Debt Service Account within the Debt Service Fund under section 506 of the Bond Resolution.

1 monthly deposits required to the Debt Service Account so the Authority has the required⁷
2 balances in that fund to make the principal and interest payments when they become due.
3 The paying agent transfers the funds needed for the principal and interest payments from
4 the Debt Service Account⁸. There must be sufficient funds in the Debt Service Account on
5 June 30 of each year in order for the paying agent to transfer the funds on July 1 to make
6 the principal and interest payments.

7
8 The Division has just looked at the requirements for the payments by the paying agent.
9 These payments are made in January (interest only) and July (principal and interest) by the
10 paying agent. Because the July payment is at the start of a new fiscal year, Mr. Morgan has
11 gone back and looked at the amounts that *the paying agent must pay* to the bond holders.
12 He has not looked at *the amounts the Authority must deposit* each month to the Debt Ser-
13 vice Account to ensure there are sufficient funds for the paying agent. The Authority's rev-
14 enue requirements are the required monthly deposits to the Debt Service Account, not the
15 amounts the paying agent pays in January and July. This is a fundamental understand-
16 ing of how the Authority's debt service payments are made and funded.

17
18 **Q: What has the Authority proposed in its filing?**

19 **A:** Generally, the Authority must make monthly deposits to the Debt Service Account so there
20 are sufficient funds in that account to make the principal and interest payments when they
21 become due. We have looked at the sum of the 12 monthly deposits to the Debt Service
22 Account in the rate year. These are the amounts that the Authority must raise in rates in
23 order to make those monthly deposits. That a paying agent transfers the accumulated
24 funds from the Debt Service Account just days into a new fiscal year is of no relevance to

⁷ Required by the General Bond Resolution

⁸ These funds are all held by a trustee under the Bond Resolution. The Authority makes monthly pay-
ments to the Trustee held accounts and funds.

1 the Authority's revenue needs under the General Bond Resolution. The Authority's rele-
2 vant costs (revenue requirements) are the required monthly deposits to the Debt Service
3 Account.

4
5 **Q: Does Mr. Morgan understand how the funding works?**

6 A: I do not believe he does. I believe his statement⁹ that the Authority's "debt service re-
7 quirements for the rate year and the step increase periods are overstated" is incorrect.
8 The amounts we have shown are the amounts that the Authority must pay in the rate year
9 (or step increase years).

10
11 **Q: Are you aware of requirements for consultants to register with the Municipal Securities
12 Rulemaking Board (MSRB) and the Securities and Exchange Commission (SEC) under the
13 Dodd-Frank Act if they are providing advice on bonding and bond payments?**

14 A: Yes. As a result of provisions of the Dodd-Frank Act (PL 111-203), consultants that provide
15 financial advice regarding municipal bond issues and related revenue and payment projec-
16 tions must register as a Municipal Advisor with the MSRB and SEC.

17
18 In response to KCWA-DIV 1-13 Mr. Morgan states that he is not registered as a Municipal
19 Advisor with the MSRB/SEC. He goes on to state that he has "not helped prepare, inter-
20 pret, or implement provisions of a revenue bond trust indenture for a municipal water util-
21 ity." His only understanding of how the Authority makes payments to meet its debt service
22 obligations come from a response given by me in a data request.

23

⁹ Page 16, lines 17-18

1 I authored much of the Authority's 1994 General Bond Resolution. This bond resolution
2 served as the basis for the subsequent revenue bond resolutions adopted by other municipi-
3 pal water agencies in Rhode Island. I am very familiar with the requirements of the Author-
4 ity's General Bond Resolution and how various accounts that are required by the Resolu-
5 tion are funded. Each year I prepare documents for the Authority under its General Bond
6 Resolution that examine its compliance with the Resolution. When the MSRB first estab-
7 lished requirements for consultants to be registered with the Board as Municipal Advisors, I
8 was one of the initial group that was registered¹⁰ as a Municipal Advisor under the Dodd-
9 Frank Act.

10
11 I would hope that the Commission would take into account Mr. Morgan's acknowledged
12 lack of experience with municipal revenue bond requirements and non-registration as a
13 Municipal Advisor, particularly when compared to my extensive experience and past regis-
14 tration with the MSRB, when it evaluates our two positions on the Authority's actual debt
15 service expenses. Mr. Morgan clearly does not understand the difference between the
16 Authority's requirements to fund various debt service accounts and the payments of princi-
17 pal and interest that are made from those accounts¹¹.

¹⁰ I have since let that registration lapse as the annual expense to register grew.

¹¹ His incorrect use of the term "Debt Service Coverage" in his testimony demonstrates his fundamental lack of understanding.

1 **Restricted Operating Revenues**

2 **Q: The Division has recommended that the restricted portion of the operating revenue al-**
3 **lowance no longer be funded. Do you agree?**

4 A: I generally agree with the analysis presented by Mr. Morgan. As the Division notes, the re-
5 stricted portion of the operating fund is limited to 6% of the total rate revenue. While I cal-
6 culate a somewhat higher requirement based on a larger rate revenue allowance, I agree
7 that further funding of the restricted fund is not needed in the rate year.

8

9 **IFR Costs**

10 **Q: The Division states that “(b)oth Mr. Woodcock and Mr. Timothy Brown indicate in their**
11 **testimonies KCWA is not seeking to increase IFR funding above the \$5.4 million level.”**
12 **Based on this conclusion, the Division has recommended against the additional IFR fund-**
13 **ing included in the step increases. Do you agree with this?**

14 A: No. Both Mr. Brown and myself did state that additional funding for the IFR program
15 above the \$5.4 million was not being requested in the rate year. We made no such claim
16 regarding IFR costs in the subsequent years that are included in the proposed step in-
17 creases. In fact, in my Schedule 1D, I noted that the Authority’s approved annual IFR ex-
18 penses was actually \$7 million and I specifically stated, “However, to minimize the current
19 requested adjustment, the Authority is requesting the increase through the step adjust-
20 ments proposed.” (emphasis added)

21

22 The Authority has an approved annual IFR cost of \$7 million. The Division has provided no
23 testimony on what costs in the IFR should be excluded in the step increase years. The
24 funding of the IFR expenses is required under the Act that established the IFR program.
25 While the Commission certainly may modify the amounts allowed in revenues, there
26 should be a sound basis for such modifications or exclusions. The Division has offered no

1 such analysis. Mr. Mancini is the Division's engineering witness and he has made no state-
2 ment suggesting that any of the \$7 million IFR program costs are excessive or not needed.
3 I don't believe that Mr. Morgan is qualified to provide any engineering related recommen-
4 dations. Mr. Morgan's sole basis¹² for his recommendation is that he thinks "it would be
5 burdensome to ramp-up the IFR expenditures". As shown in our initial filing and in this re-
6 buttal filing, the proposed step increases in FY18 and FY19 are less than 6.5%. The Division
7 has presented no evidence or analysis that would suggest that step increases of this magni-
8 tude are "burdensome."

9
10 **Meter Replacement Costs**

11 **Q: The Division has recommended the removal of the \$600,000 you have included for meter**
12 **replacement costs in the second (FY19) step increase. Do you agree with this?**

13 A: No. The removal of these expenses is based on an apparent misunderstanding of the Au-
14 thority's response to Division data request 3-4. In that response, Mr. Brown stated, "Please
15 note FY 2019 step increase has \$600,000 of the meter program budgeted. We fully expect
16 that will be offset by scrap value and hopefully bid program cost savings." Mr. Morgan ap-
17 parently took this to mean that the entire \$600,000 cost would be offset by any sales of
18 scrap. This is not what Mr. Brown meant; he meant that any program costs would be re-
19 duced by any scrap sales, not that the entire cost would be offset.

20
21 Since the Authority must file for each of the step increases, at the time the second (FY19)
22 step increase is applied for, the Commission can see what funds the Authority has actually
23 received from scrap sales and, if appropriate, reduce any funding as it sees appropriate at
24 that time.

25

¹² Aside from his incorrect characterization of the Authority's position.

1 **Q: Do you have any other general comments?**

2 A: Rate case expenses are already a significant enough expense for water utilities without
3 having to guess what new issues the Division's witness may raise that were never issues in
4 prior proceedings. While I agree that there will always be new matters that may come to
5 the attention of the parties, I believe it is reasonable for applicants to rely on past prece-
6 dents and positions. The inconsistencies of the Division's positions in this docket compared
7 to their position in prior Authority filings and compared to dockets that have just com-
8 pleted or are ongoing, are unprecedented. I don't believe it is unreasonable to expect
9 some degree of consistency from docket to docket when the same matters are presented.

10

11 **Q: Does this conclude your direct testimony?**

12 A: Yes.

PRO FORMA EXPENSES

Expense Item	Test Year <u>June 30, 2015</u>	Summary of Adjustments	Rate Year <u>7/1/16-6/30/17</u>	Adjustments Detail				
				Labor Increase (Sch 1B/1D)	One Time Costs	Other Adjustments	Supporting Schedule	Non-Labor Inflation
SOURCE OF SUPPLY								
maint of wells/supply study	\$0	\$40,000	\$40,000	\$0		\$40,000	rebut. Sch. 1D	
purchased water	<u>\$4,999,638</u>	<u>-\$139,580</u>	<u>\$4,860,057</u>	<u>\$0</u>		<u>-\$139,580</u>	rebut. Sch. 1C	
Subtotal	\$4,999,638	-\$99,580	\$4,900,057	\$0	\$0	-\$99,580		\$0
PUMPING OPERATIONS								
fuel for pumping	\$22,662	\$1,418	\$24,080	\$0				\$1,418
power	<u>\$606,405</u>	\$163,277	\$769,682	\$0		\$163,277	rebut. Sch. 1E	
labor-pumping	<u>\$82,493</u>	\$3,428	\$85,921	\$3,160				\$268
pumping expense	\$0	\$0	\$0	\$0				\$0
maint. - structures & improv	<u>\$63,789</u>	\$22,768	\$86,557	\$22,228				\$540
diesel oil	\$0	\$0	\$0	\$0				\$0
maint. - equip	<u>\$36,986</u>	<u>\$21,914</u>	<u>\$58,900</u>	<u>\$20,728</u>				<u>\$1,186</u>
Subtotal	\$812,335	\$212,805	\$1,025,140	\$46,116	\$0	\$163,277		\$3,412
WATER TREATMENT								
chemicals	<u>\$40,519</u>	\$122,393	\$162,912	\$0		\$122,393	rebut. Sch. 1E	
labor	<u>\$186,426</u>	\$7,720	\$194,146	\$7,189				\$531
operating / Mishnock	<u>\$65,420</u>	\$4,093	\$69,513	\$0				\$4,093
maint. - water treat equip	<u>\$17,556</u>	\$1,098	\$18,654	\$0				\$1,098
maint. - structure	<u>\$651</u>	<u>\$41</u>	<u>\$692</u>	\$0				<u>\$41</u>
Subtotal	\$310,572	\$135,344	\$445,916	\$7,189	\$0	\$122,393		\$5,763
TRANS & DISTR. EXPENSE								
storage facilities exp.	\$0	\$0	\$0	\$0				\$0
labor	<u>\$23,745</u>	\$1,486	\$25,231	\$0				\$1,486
supplies	<u>\$106,875</u>	\$6,686	\$113,561	\$0				\$6,686
labor-meter	<u>\$52,568</u>	\$2,198	\$54,766	\$1,988				\$210
meter - supp & exp	\$12	\$1	\$13	\$0				\$1
cust. install.	\$0	\$0	\$0	\$0				\$0
misc.	<u>\$13,258</u>	\$829	\$14,087	\$0				\$829
maint - struct. & improv.	<u>\$57,000</u>	\$3,566	\$60,566	\$0				\$3,566
maint.- res & stdp	<u>\$20,465</u>	\$887	\$21,352	\$717				\$170
maint. - mains	<u>\$565,681</u>	\$67,271	\$632,952	\$54,800				\$12,471
maint. - service	<u>\$105,892</u>	\$45,060	\$150,952	\$42,852				\$2,208
maint. - meters	<u>\$139,823</u>	\$7,705	\$147,528	\$1,901				\$5,803
maint. - hydrants	<u>\$79,531</u>	\$4,194	\$83,725	\$1,426				\$2,768
construction labor	<u>-\$68</u>	\$0	<u>-\$68</u>	<u>\$0</u>				<u>\$0</u>
Subtotal	\$1,164,782	\$139,882	\$1,304,664	\$103,685	\$0	\$0	\$0	\$36,198

PRO FORMA EXPENSES

Expense Item	Test Year June 30, 2015	Summary of Adjustments	Rate Year 7/1/16-6/30/17	<----- Adjustments Detail ----->				
				Labor Increase (Sch 1B)	One Time Costs	Other Adjustments	Supporting Schedule	Non-Labor Inflation
CUSTOMER ACCOUNT								
labor- meter read	\$110,533	\$4,597	\$115,130	\$4,226				\$370
cust record labor	\$204,210	\$8,471	\$212,681	\$7,848				\$623
cust records sup	\$95,811	\$5,994	\$101,805	\$0				\$5,994
meter read supplies	\$2,505	\$157	\$2,662	\$0				\$157
uncollectible	\$57,397	\$3,591	\$60,988	\$0				\$3,591
Subtotal	\$470,456	\$22,809	\$493,265	\$12,074	\$0	\$0		\$10,735
ADMIN. & GENERAL								
salaries	\$428,341	\$44,089	\$472,430	\$17,291				\$26,798
office supplies & expenses	\$257,632	\$16,118	\$273,750	\$0				\$16,118
insurance (property/liability/wc)	\$249,166	\$20,175	\$269,341	\$0		\$20,175	rebut. Sch. 1D	
OPEB Trust Contrib.	\$0	\$80,000	\$80,000	\$0		\$80,000	rebut. Sch. 1D	
employee benefits	\$927,939	\$41,767	\$969,706	\$0		\$41,767	rebut. Sch. 1D	
maint. - plant	\$146,750	\$6,601	\$153,351	\$4,703				\$1,898
maint. - vehicles	\$60,303	\$3,695	\$63,998	\$142				\$3,553
miscellaneous	\$15,840	\$991	\$16,831	\$0				\$991
vacation, holiday, sick	\$299,762	\$12,829	\$312,591	\$12,829				\$0
regul. exp.	\$136,920	\$15,778	\$152,698	\$0		\$15,778	rebut. Sch. 1E	
outside service	\$89,877	\$5,623	\$95,500	\$0				\$5,623
Subtotal	\$2,612,530	\$247,666	\$2,860,196	\$34,965	\$0	\$157,720		\$54,980
TOTAL O&M	\$10,370,313	\$658,927	\$11,029,239	\$204,029	\$0	\$343,810		\$111,088

PRO FORMA EXPENSES

<u>Expense Item</u>	<u>Test Year June 30, 2015</u>	<u>Summary of Adjustments</u>	<u>Rate Year 7/1/16-6/30/17</u>	<u>----- Adjustments Detail -----></u>				
				<u>Labor Increase (Sch 1B/1D)</u>	<u>One Time Costs</u>	<u>Other Adjustments</u>	<u>Supporting Schedule</u>	<u>Non-Labor Inflation</u>
FIXED CHARGES								
Debt Service								
Existing	\$2,179,500	(\$1,000)	\$2,178,500			-\$1,000	rebut. Sch. 1D	
New	\$0	\$0	\$0			\$0	rebut. Sch. 1D	
Reserves and Coverage								
O&M Reserve	\$0	\$168,708	\$168,708			\$168,708	rebut. Sch. 1D	
R&R Reserve	\$77,607	\$54,729	\$132,336			\$54,729	rebut. Sch. 1D	
Renewal & Replacement - Equip	\$100,000	\$0	\$100,000					
Infrastructure Replacement	\$5,400,000	\$0	\$5,400,000			\$0	rebut. Sch. 1D	
Meter Replacement	\$0	\$2,000,000	\$2,000,000			\$2,000,000	rebut. Sch. 1D	
CIP	\$0	\$1,753,819	\$1,753,819			\$1,753,819	rebut. Sch. 1D	
Payroll Taxes	\$154,417	\$21,204	\$175,621			\$21,204	rebut. Sch. 1D	
PILOT	\$23,123	\$0	\$23,123			\$0		
SUBTOTAL FIXED	\$7,934,647	\$3,997,459	\$11,932,106	\$0	\$0	\$3,997,459		\$0
OPERATING REVENUE	\$583,313	-\$238,683	\$344,630			-\$238,683		
TOTAL EXPENSES	\$18,888,273	\$4,417,703	\$23,305,975	84.97%	\$204,029	\$0	\$4,102,586	\$111,088
Less:								
Miscellaneous Income	(\$235,485)	-\$9,310	(\$244,795)			-\$9,310	rebut. Sch. 1A	
Interest Income	(\$25,826)	\$4,362	(\$21,464)			\$4,362	rebut. Sch. 1A	
Merchand & Jobbing	(\$16,230)	-\$2,581	(\$18,811)			-\$2,581	rebut. Sch. 1A	
6.9% of Water Prot Fee	(\$46,107)	\$526	(\$45,581)			\$526	rebut. Sch. 1A	
NET REQUIRED FROM RATES	\$18,564,625	\$4,410,700	\$22,975,325					\$111,088

TEST YEAR & PRO FORMA REVENUES

<u>Revenues</u>	Test Year <u>Revenues</u>	<u>Adjustments</u>	Rate Year <u>7/1/16-6/30/17</u>	
Miscellaneous				
Less:				
Miscellaneous Income	\$42,131	-\$9,310	\$32,821	Rebut. Sch. 1D
Interest Income	\$25,826	\$4,362	\$30,188	Rebut. Sch. 1D
Merchand & Jobbing	\$16,230	-\$2,581	\$13,649	Rebut. Sch. 1D
6.9% of Water Prot Fee	<u>\$46,107</u>	<u>\$526</u>	<u>\$46,633</u>	(2)
Total Misc.	\$130,294		\$123,291	
Metered Rates	\$17,780,588	\$155,891	\$17,936,479	(1)
Public Fire	\$1,309,184	\$4,615	\$1,313,799	(1)
Private Fire	\$167,510	-\$7,819	\$159,691	(1)
 Total Revenue	 \$19,387,576	 \$152,688	 \$19,533,261	
 <u>Required Revenue</u>			 \$23,305,975	
<u>Required Revenue from Rates</u>			\$23,182,684	
 <u>Rate Increase Needed</u>			 \$3,772,714	

NOTES:

(1) Normalized Test Year Revenues at Current Rates based on Rebut. 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 =	3,086,260 ccf
Rate (\$/ccf)	\$0.01511
RY Revenue	\$46,633

TEST YEAR & RATE YEAR LABOR COSTS

EXPENSE ITEM	Test Year		Rate Year
	<u>June 30, 2015</u>	<u>Adjustments (1)</u>	<u>7/1/16-6/30/17</u>
SOURCE OF SUPPLY			
PUMPING OPERATIONS			
labor-pumping	\$78,206	\$3,160	\$81,365
maint. - structures & improv	\$55,160	\$22,228	\$77,388
maint. - equip	\$18,027	\$20,728	\$38,755
WATER TREATMENT			
labor	\$177,937	\$7,189	\$185,126
TRANS & DISTR. EXPENSE			
labor-meter	\$49,219	\$1,988	\$51,207
maint.- res & stdp	\$17,751	\$717	\$18,468
maint. - mains	\$366,344	\$54,800	\$421,144
maint. - service	\$70,596	\$42,852	\$113,448
maint. - meters	\$47,062	\$1,901	\$48,963
maint. - hydrants	\$35,288	\$1,426	\$36,713
CUSTOMER ACCOUNT			
labor- meter read	\$104,614	\$4,226	\$108,840
cust record labor	\$194,254	\$7,848	\$202,101
ADMIN. & GENERAL			
salaries	\$435,569	\$17,291	\$452,860
maint. - plant	\$116,408	\$4,703	\$121,111
maint. - vehicles	\$3,516	\$142	\$3,658
vacation, holiday, sick	\$317,555	\$12,829	\$330,384
SUBTOTAL LABOR	\$2,087,504	\$204,029	\$2,291,533
Capitalized Labor	\$4,000	\$162	\$4,162
TOTAL LABOR COSTS	\$2,091,505	\$204,191	\$2,295,695

(1) See Schedule 1D

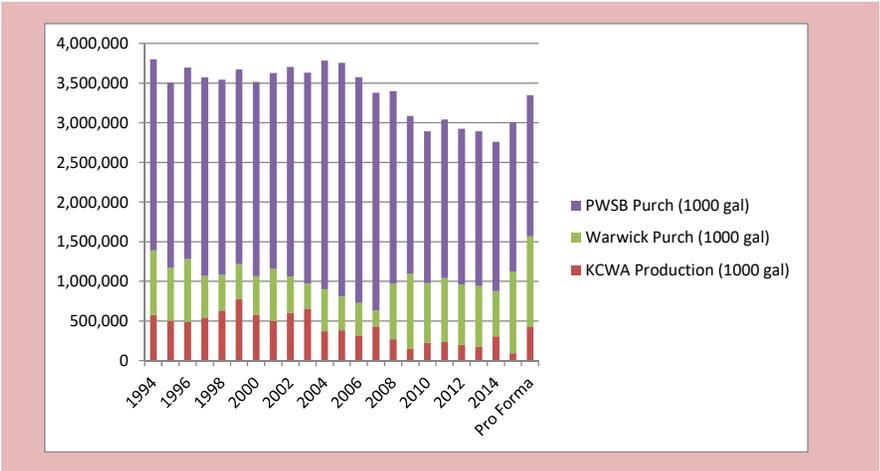
WHOLESALE WATER COSTS

Wholesale Water Purchases (updated per Div. DR 3-9)

	<u>Rate (\$/mg)</u>	<u>Purchases (mg)</u>	<u>Cost</u>
PWSB Rate (/mg)	\$1,731.16	2,807.40	\$4,860,057
Net Wholesale Purchases (gallons) - Rate Year			
Warwick Purchases		1,135,328,000	
PWSB Purchases		<u>1,781,270,124</u>	
Total Purchases		2,916,598,124	
Sales To Warwick		<u>-109,199,000</u>	
Net Purchases		2,807,399,124	
Rate Year Sales		2,807,399,124	

Fiscal Yr -- >	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>Pro Forma</u>
KCWA Production (1000 gal)	231,080	195,110	175,420	304,651	92,176		430,800 (1)
Warwick Purch (1000 gal)	808,282	766,301	763,513	572,651	1,028,956	1,135,328	1,135,328 (2)
PWSB Purch (1000 gal)	<u>1,999,838</u>	<u>1,962,717</u>	<u>1,952,095</u>	<u>1,883,039</u>	<u>1,882,339</u>	<u>1,781,270</u>	<u>1,781,270</u>
Total	3,039,200	2,924,128	2,891,028	2,760,341	3,003,471	2,916,598	2,935,062 (3)
Total Purchased	2,808,120	2,729,018	2,715,608	2,455,690	2,911,295	2,916,598	2,916,598
Sales To Warwick (1000 gal)	<u>73,595</u>	<u>92,976</u>	<u>91,487</u>	<u>92,039</u>	<u>102,354</u>	<u>109,199</u>	<u>109,199 (2)</u>
Net Purchases	2,734,525	2,636,042	2,624,121	2,363,651	2,808,941	2,807,399	2,807,399

- (1) KCWA rate year (FY 2017) production based on E. Greenwich start-up 11/16 and projections based on past monthly use, Mishnock on line 2/17
- (2) No change projected in purchases from or sales to Warwick from 2015 values
- (3) Overall amount changed from 2016 in same proportion as sales.



EXPLANATION OF ADJUSTMENTS TO TEST YEAR COSTS

<u>Adjustment to:</u>	<u>Explanation</u>	
Fixed Charges Associated with Debt Service:		
O&M Reserve	Set to achieve reserve level equal to 25% of operating costs.	
	"O&M" Costs (Rebut. Sch. 1) =	\$11,029,239
	Payroll Taxes	\$175,621
	PILOT	<u>\$23,123</u>
	Total Operating	\$11,227,983
	Required O&M Reserve (25%)	\$2,806,996
	Balance 6/30/15	\$2,382,240
	Additions October 2015	<u>\$256,048</u>
	Estim. Balance Start of Rate Year	\$2,638,288
	Required deposit =	\$168,708
R&R Reserve	Set to equal 1% of Net Utility Plant (NUP)	
	NUP Value (6/30/16)	<u>\$145,130,806</u>
	Estimated Additions	<u>\$5,700,000</u>
	Pro Forma NUP	\$150,830,806
	Required Balance (1%)	\$1,508,308
	Balance 6/30/15	\$1,350,565
	Additions October 2015	<u>\$25,407</u>
	Estim. Balance Start of Rate Year	\$1,375,972
	Addition to Reserve Required	\$132,336

Source of Supply Operations (studies)

Cost of Water Supply, CIP, & IFR Plans =	\$125,000
Cost of Conservation Program =	\$25,000
New Vulnerability Study =	\$50,000
Total	<u>\$200,000</u>
Normalize over 5 yrs	\$40,000
Change over Test Year	\$40,000

Admin - Fees

Based on the May 2015 notice from the Dept. of Health, the annual PWS Renewal Fee is \$32,500

EXPLANATION OF ADJUSTMENTS TO TEST YEAR COSTS

Debt Service	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>
<u>2012 Series A Bonds</u>						
Principal	\$1,485,000	\$1,540,000	\$1,605,000	1,690,000	\$1,775,000	\$1,870,000
Interest	<u>\$694,500</u>	<u>\$635,100</u>	<u>\$573,500</u>	<u>493,250</u>	<u>\$408,750</u>	<u>\$320,000</u>
Total	\$2,179,500	\$2,175,100	\$2,178,500	\$2,183,250	\$2,183,750	\$2,190,000
<u>New Debt</u>						
Principal	\$0	\$0	\$0	\$0	\$0	\$0
Interest	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Total	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Total Debt	\$2,179,500	\$2,175,100	\$2,178,500	\$2,183,250	\$2,183,750	\$2,190,000

Note that payments on bonds are due in January and July. Although the July payment is due the fiscal year following the due date, the funds must be accumulated the prior months to have sufficient amounts to make the payments.

Infrastructure Replacement

Based on most recently approved IFR Report for KCWA the annual IFR requirement is **\$7,000,000**
 However, to minimize the current requested adjustment, the Authority is requesting the increase through the step adjustments proposed.
 Increase over test year = **\$0**

PILOT

based on following payments in lieu of taxes:

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

Insurance - Liability/Property/Worker's Comp

	<u>FY 12</u>	<u>FY 13</u>	<u>FY 14</u>	<u>FY 15</u>	<u>FY 2016</u>	<u>Rate Year</u>	<u>Avg Increase</u>
Liability/Property Insurance	<u>130,590</u>	<u>146,686</u>	<u>156,105</u>	<u>166,811</u>	<u>166,015</u>	176,281	6.2%
Worker's Comp. Insurance	<u>62,127</u>	<u>65,154</u>	<u>80,541</u>	<u>85,521</u>	<u>84,158</u>	90,792	7.9%
Total	\$192,717	\$211,840	\$236,646	\$252,332	250,173	\$269,341	6.74%

Estimated Rate Year amounts based on average annual increases over past four years.

EXPLANATION OF ADJUSTMENTS TO TEST YEAR COSTS

Benefits	<u>FY 2014</u>	<u>Test Yr (FY15)</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>
Medical - Blue Cross	\$510,912	\$528,254	\$513,573				
Delta Dental	\$41,303	\$46,702	\$46,279				
Group P-65 Retirees	\$74,314	\$73,682	\$68,554				
Life Insurance	\$5,826	\$6,487	\$6,331				
Disability insurance	\$7,768	\$8,867	\$9,162				
Coastline Employee Assist	\$1,200	\$1,500	\$1,500				
Education	\$8,835	\$29,218	\$9,026				
Pension Contribution	\$311,745	\$228,129	\$246,738				
Xmas Bonus	\$5,100	\$5,100	\$5,100				
Total	\$967,003	\$927,939	\$906,263				
Less Retiree Costs (*)	-\$72,808	-\$46,337	-\$74,305				
Net for Current Employees	\$894,195	\$881,602	\$831,958	\$895,401	\$990,161	\$1,009,965	\$1,030,164
Labor Costs	\$1,956,599	\$2,091,505	\$2,133,035	\$2,295,695	\$2,341,609	\$2,388,441	\$2,436,210
Benefits as % of Current Labor	45.70%	42.15%	39.00%	42.29%	42.29%	42.29%	42.29%
Retiree Costs (**)				\$74,305	\$74,305	\$74,305	\$74,305
Plus Benefits (above)				\$895,401	\$990,161	\$1,009,965	\$1,030,164
Total Benefits				\$969,706	\$1,064,467	\$1,084,270	\$1,104,469
Change in Benefits for RY				\$41,767			
Annual Increase After Rate Year					136,528	\$19,803	\$20,199

* includes payments to retired employees for Delta-Dental, Group 65 Retirees and Life Insurance

** based on Division testimony, kept at FY2106 values

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>
New OPEB Contribution to Trust	\$80,000	\$80,000	\$80,000	\$80,000

Miscellaneous Revenues

	<u>Misc Income</u>	<u>Interest Inc</u>	<u>Merch & Jobbing</u>
FY15	\$42,131	\$25,826	\$16,320
FY14	\$19,376	\$26,152	\$20,277
FY13	\$36,955	\$38,586	\$4,350
Average	\$32,821	\$30,188	\$13,649

EXPLANATION OF ADJUSTMENTS TO TEST YEAR COSTS

Labor Adjustments

Test year (FY 2015) labor increased to FY 2016 based on 2% increase and actual 2015 OT
 For Rate Year, the FY 2016 labor costs were increased 2% for existing positions, with OT at FY 2015/2016 levels plus:
 Two operators to replace transfers to Treatment Plant @ \$40,000 each (split between maint of mains and services)
 One additional Maintenance Mechanic @ \$40,000 (split between pumping structures and equipment)
 FY 2018 increased at 2%

	<u>Test Yr (FY15)</u>	<u>FY 2016</u>	<u>Rate Yr (FY 17)</u>	<u>FY 2018</u>
<i>Pumping Expense</i>				
Pumping Labor	\$78,206	\$79,770	\$81,365	\$82,993
Maint. Structure	\$55,160	\$56,263	\$77,388	\$78,936
Maint. Equip.	\$18,027	\$18,387	\$38,755	\$39,530
<i>Water Treatment Expense</i>				
Operator Labor	\$177,937	\$181,496	\$185,126	\$188,829
<i>Transmission & Distribution</i>				
Meter Labor	\$49,219	\$50,203	\$51,207	\$52,231
Maint. Reser. & Standpipes	\$17,751	\$18,106	\$18,468	\$18,837
Maint. Mains	\$366,344	\$373,671	\$421,144	\$429,567
Maint. Services	\$70,596	\$72,007	\$113,448	\$115,717
Maint. Meters	\$47,062	\$48,003	\$48,963	\$49,942
Maint. Hydrants	\$35,288	\$35,993	\$36,713	\$37,448
<i>Customer Accounts</i>				
Meter Reading	\$104,614	\$106,706	\$108,840	\$111,017
Customer Records	\$194,254	\$198,139	\$202,101	\$206,143
<i>Admin. & General</i>				
Salaries (Admin & Board)	\$435,569	\$443,980	\$452,860	\$461,917
Genrl Plant Maint.	\$116,408	\$118,737	\$121,111	\$123,533
Vehicle Maint.	\$3,516	\$3,586	\$3,658	\$3,731
Vac., Holiday, Sick	\$317,555	\$323,906	\$330,384	\$336,992
Capitalized Labor	<u>\$4,000</u>	<u>\$4,080</u>	<u>\$4,162</u>	<u>\$4,245</u>
Totals	\$2,091,505	\$2,133,035	\$2,295,695	\$2,341,609

Payroll Taxes

FICA set at 7.65% of salary 175,621

Non-Labor Inflation

Non-labor items increased from test year using an average annual increase of 3.08%
 per year or 6.26% over 2 years to account for inflation.

Power

See Schedule 1E

Operating Revenue

See testimony-operating revenue based on total rate revenues (total less misc. revenues) at **1.50%** ~~1.5% restricted~~/1.5% non-restricted

EXPLANATION OF ADJUSTMENTS TO TEST YEAR COSTS**Capital Spending****Meter Replacement**

The authority is planning to replace all the customer owned water meters. The total estimated cost is \$6.6 million. For the rate year, initial funding of **\$2,000,000** is requested. In FY 2018 funding of \$2,000,000 is requested. For FY 2019, the balance is included.

Capital Improvement Program

The Authority has developed a capital improvement program (CIP) that it is looking to finance from rates. With the refinancing of its debt, available funds in the Restricted Debt Account, and available balances in the Restricted Operating Revenue Account, the Authority proposes to use these savings to help phase-in the program. The Authority is looking for authorization equal to the reduction in the debt service that had been authorized by the PUC.

Authorized Debt Doc. 4142 = \$3,932,319 Difference from rate year debt = \$1,753,819

Restricted Funds Activity for Rate Year

	<u>R&R Reserve</u>	<u>O&M Reserve</u>	<u>Debt</u>	<u>IFR</u>	<u>R&R Equip</u>	<u>Res. Oper. Rev.*</u>
Beginning Balance (7/1/14)	1,272,826	2,493,284	2,026,555	6,277,494	262,937	1,507,265
Funding	77,607	0	2,179,500	5,400,000	100,000	291,656
Interest	132	242	98	676	20	133
Expenditures (actual) *	0	111,286	2,373,650	4,391,122	303,930	0
Ending Balance (6/30/15)	1,350,565	2,382,240	1,832,503	7,287,048	59,027	1,799,054

	<u>2012 Refunding</u>	<u>2004 Series A</u>	<u>Total Debt</u>
Beginning Balance (7/1/14)	1,800,909	225,646	2,026,555
Funding (TY)	2,179,500	0	2,179,500
Interest	92	6	98
Expenditures (actual)	2,148,000	225,650	2,373,650
Ending Balance (6/30/15)	1,832,501	2	1,832,503

* Note -\$607,077 was withdrawn from the Restricted Operating Revenue Account after June 30, 2015 reducing this account

SUPPLEMENTAL DATA**Regulatory Expenses**

<u>Fiscal Year</u>	<u>Annual Assmnt</u>	<u>Legal</u>	<u>Consultants</u>	<u>DPUC Fees</u>	<u>Total</u>
2011	45,874	0	600	3,769	50,243
2012	53,179	0	1,800	698	55,677
2013	64,890	22,920	17,000	2,960	107,770
2014	97,253	30,289	53,328	908	181,778
2015	84,080	12,507	39,876	457	136,921
Estimated Rate Case Expense - this docket		50,000	60,000	20,000	130,000
			Other Rate Case (Prov Water, Pass Thru)		50,000
			Amortized over 3 yrs		60,000
			DPUC Assessment (Estim RY) *		92,698
			Rate Year Regulatory Expense =		152,698

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 Assessments

FY 2011	\$45,874	
FY 2012	\$53,179	15.92%
FY 2013	\$64,890	22.02%
FY 2014	\$97,253	49.87%
FY 2015	\$84,080	-13.55%
Average increase =	18.57%	
Estimated Annual Change =	5.00%	
Estim FY 2016 (RY)	\$88,284	
Estim FY 2017 (RY)	\$92,698	

SUPPLEMENTAL DATA

<u>Chemical Costs</u>							
<u>East Greenwich</u>							
	<u>Production</u> <u>(1000 gal/yr)</u>	<u>Chlorine</u> <u>Gallons</u>	<u>Tetrapotassium</u> <u>Pyrophosphate</u> <u>Gallons</u>	<u>Potassium</u> <u>Hydroxide</u> <u>Gallons</u>	<u>Chem Delivery and</u> <u>Freight</u> <u>PyroPhos</u>	<u>Chem Delivery</u> <u>and Freight</u> <u>POT HYD</u>	
FY 2011	232,130	533	271	26,025	\$427	\$1,305	
FY 2012	190,990	439	223	19,904	\$496	\$2,025	
FY 2013	175,282	403	205	19,560	\$525	\$2,120	
FY 2014	223,338	513	261	25,576	\$555	\$2,835	
FY 2015	off line						
FY 2016	off line						
FY 2017 Proj	138,819	319	162	15,384	\$556	\$1,400	
COST/GAL (12/15)		\$2.43	\$10.46	\$6.70			
FY 2016 COST		\$775	\$1,695	\$103,073	\$556	\$1,400	
			Total FY 2017 chemical costs (E. Greenwich)			\$107,498	

	<u>Production</u> <u>(1000 gal/yr)</u>	<u>Potassium</u> <u>Permanganate</u> <u>Gallons</u>	<u>Chlorine</u> <u>Gallons</u>	<u>Potassium Hydroxide</u> <u>Gallons</u>	<u>Citric Acid</u> <u>Gallons</u>	<u>Sodium Bisulfite</u> <u>Gallons</u>	<u>Sulfuric Acid</u> <u>Gallons</u>	<u>Chemical</u> <u>Deliver Fees</u>	<u>Lab Chems</u> <u>\$/FY</u>
<u>Mishnock</u>									
FY 2013	0	0	0	0	0	0	0	\$0	\$0
FY 2014	50,000	3,481	376	399	125	188	4	\$575	\$3,600
FY 2105	100,000	7,080	780	820	250	375	8	\$1,236	\$3,600
FY 2016	100,000	7,080	780	820	250	375	8	\$1,418	\$3,600
FY 2017 PROJ USE	292,000	20,674	2,278	2,394	250	375	8	\$14,818	\$4,000
COST/GAL		\$1.08	\$2.43	\$6.70	\$11.06	\$4.69	\$3.54		
FY 2017 COST		\$22,328	\$5,536	\$16,040	\$2,765	\$1,759	\$28		
			Total FY 2017 chemical costs (Mishnock)			\$48,455	\$3,358	\$3,600	
<u>FY 2017 Chemical Costs</u>		\$7,646	\$1,895	\$5,494	\$2,765	\$1,759	\$28	1,236	3,600
E. Greenwich	\$107,498								
Mishnock	\$48,455								
Mishnock Delivery	\$3,358								
Lab Chemicals	\$3,600								
Total - Rate Year	\$162,912								
Increase over Test Year	\$122,393								

	<u>East Greenwich</u>		<u>Mishnock</u>		<u>Both</u>
	<u>Power</u> <u>KWH USED</u>	<u>AVG Power</u> <u>\$/KWH</u>	<u>Power</u> <u>KWH USED</u>	<u>AVG Power</u> <u>\$/KWH</u>	
FY 2011	454,207	\$0.122			\$55,413
FY 2012	465,600	\$0.124			\$57,734
FY 2013	387,360	\$0.130			\$50,357
FY 2014	547,920	\$0.135	188,547	\$0.166	\$105,268
FY 2015			346,320	\$0.185	\$64,069
FY 2016			346,320	\$0.186	\$64,416
FY 2017 Proj	313,385	\$0.186	908,907	\$0.186	\$227,346
			Increase over test year		\$163,277

UNITS OF SERVICE

	Test Year <u>Actual</u>	<u>Adjustments</u>	Rate Year <u>Projected</u>
<u>Metered Water Sales (100 cubic feet)</u>			
Small (5/8-2" meters)	2,921,091	18,493	2,939,584
Medium (3&4" meters)	66,302	420	66,721
Large (6" & up meters)	<u>240,864</u>	1,525	<u>242,389</u>
	3,228,257		3,248,694

Meters By Size

	<u>Quarterly</u>	<u>June 2015</u>		
5/8 & 3/4	22,099	-19		22,080
1	3,636	14		3,650
1 1/2	322	2		324
2	503	-1		502
3	13	-2		11
4	84	5		89
6	85	4		89
8 & up	65	2		67
<u>Monthly</u>				
5/8 & 3/4	5	0		5
1	1	0		1
1 1/2	9	0		9
2	9	-1		8
3	1	0		1
4	4	-1		3
6	7	0		7
8 & up	5	0		5

Public Fire Service (Sept 2015)

Public Fire Hydrants	2,352	5	2,357
Bills	32		32

Private Fire Service

<u>Size (in)</u>			
4	16	0	16
6	97	-2	95
8	19	-3	16
10	1	0	1
12	1	0	1
Hydrants	128	-6	122

**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	
	EXPENSE		%	AMOUNT	%	AMOUNT	%	AMOUNT
SOURCE OF SUPPLY								
maint of wells/supply study	\$40,000	A	99.5%	\$39,800	0.5%	\$200	0.0%	0
purchased water	\$4,860,057	A	99.5%	\$4,835,757	0.5%	\$24,300	0.0%	0
PUMPING OPERATIONS								
fuel for pumping	\$24,080	A	99.5%	\$23,959	0.5%	\$120	0.0%	0
power	\$769,682	A	99.5%	\$765,834	0.5%	\$3,848	0.0%	0
labor-pumping	\$85,921	P	79.7%	\$68,513	20.3%	\$17,408	0.0%	0
pumping expense	\$0	P	79.7%	\$0	20.3%	\$0	0.0%	0
maint. - structures & improv	\$86,557	P	79.7%	\$69,021	20.3%	\$17,537	0.0%	0
diesel oil	\$0	P	79.7%	\$0	20.3%	\$0	0.0%	0
maint. - equip	\$58,900	P	79.7%	\$46,967	20.3%	\$11,933	0.0%	0
WATER TREATMENT								
chemicals	\$162,912	A	99.5%	\$162,097	0.5%	\$815	0.0%	0
labor	\$194,146	A	99.5%	\$193,175	0.5%	\$971	0.0%	0
operating / Mishnock	\$69,513	A	99.5%	\$69,165	0.5%	\$348	0.0%	0
maint. - water treat equip	\$18,654	A	99.5%	\$18,561	0.5%	\$93	0.0%	0
maint. - structure	\$692	A	99.5%	\$688	0.5%	\$3	0.0%	0
TRANS & DISTR. EXPENSE								
storage facilities exp.	\$0	D	75.0%	\$0	25.0%	\$0	0.0%	0
labor	\$25,231	B	74.8%	\$18,872	25.2%	\$6,358	0.0%	0
supplies	\$113,561	B	74.8%	\$84,944	25.2%	\$28,617	0.0%	0
labor-meter	\$54,766	C	0.0%	\$0	0.0%	\$0	100.0%	54,766
meter - supp & exp	\$13	C	0.0%	\$0	0.0%	\$0	100.0%	13
cust. install.	\$0	C	0.0%	\$0	0.0%	\$0	100.0%	0
misc.	\$14,087	F	48.3%	\$6,799	23.0%	\$3,242	28.7%	4,046
maint - struct. & improv.	\$60,566	F	48.3%	\$29,232	23.0%	\$13,940	28.7%	17,394
maint.- res & stdp	\$21,352	D	75.0%	\$16,014	25.0%	\$5,338	0.0%	0
maint. - mains	\$632,952	B	74.8%	\$473,448	25.2%	\$159,504	0.0%	0
maint. - service	\$150,952	C	0.0%	\$0	0.0%	\$0	100.0%	150,952
maint. - meters	\$147,528	C	0.0%	\$0	0.0%	\$0	100.0%	147,528
maint. - hydrants	\$83,725	E	0.5%	\$419	99.5%	\$83,306	0.0%	0
construction labor	(\$68)	F	48.3%	(\$33)	23.0%	(\$16)	28.7%	(20)
CUSTOMER ACCOUNT								
labor- meter read	\$115,130	C	0.0%	\$0	0.0%	\$0	100.0%	115,130
cust record labor	\$212,681	C	0.0%	\$0	0.0%	\$0	100.0%	212,681
cust records sup	\$101,805	C	0.0%	\$0	0.0%	\$0	100.0%	101,805
meter read supplies	\$2,662	C	0.0%	\$0	0.0%	\$0	100.0%	2,662
uncollectible	\$60,988	C	0.0%	\$0	0.0%	\$0	100.0%	60,988
ADMIN. & GENERAL								
salaries	\$472,430	G	74.4%	\$351,563	7.4%	\$34,757	18.2%	86,109
office supplies & expenses	\$273,750	G	74.4%	\$203,714	7.4%	\$20,140	18.2%	49,896
insurance (property/liability/wc)	\$269,341	G	74.4%	\$200,433	7.4%	\$19,816	18.2%	49,092
OPEB Trust Contrib.	\$80,000	H	56.1%	\$44,896	11.8%	\$9,411	32.1%	25,693
employee benefits	\$969,706	H	56.1%	\$544,197	11.8%	\$114,078	32.1%	311,431
maint. - plant	\$153,351	G	74.4%	\$114,118	7.4%	\$11,282	18.2%	27,951
maint. - vehicles	\$63,998	G	74.4%	\$47,625	7.4%	\$4,708	18.2%	11,665
miscellaneous	\$16,831	G	74.4%	\$12,525	7.4%	\$1,238	18.2%	3,068
vacation, holiday, sick	\$312,591	H	56.1%	\$175,426	11.8%	\$36,774	32.1%	100,392
regul. exp.	\$152,698	G	74.4%	\$113,632	7.4%	\$11,234	18.2%	27,832
outside service	<u>\$95,500</u>	G	74.4%	<u>\$71,067</u>	7.4%	<u>\$7,026</u>	18.2%	<u>17,407</u>
SUBTOTAL O&M	\$11,029,239	G	79.8%	\$8,802,428	5.9%	\$648,332	14.3%	1,578,479

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

EXPENSE ITEM	RATE YEAR EXPENSE	ALLOC. SYMBOL (1)	GENERAL WATER		FIRE SERVICE		CUST. SERVICE	
			%	AMOUNT	%	AMOUNT	%	AMOUNT
FIXED CHARGES								
Debt Service	\$2,178,500	J	78.2%	\$1,703,232	19.8%	\$430,431	2.1%	\$44,837
O&M Reserve	\$168,708	G	74.4%	\$125,546	7.4%	\$12,412	18.2%	\$30,750
R&R Reserve	\$132,336	J	78.2%	\$103,465	19.8%	\$26,147	2.1%	\$2,724
Renewal & Replacement - Equip	\$100,000	J	78.2%	\$78,184	19.8%	\$19,758	2.1%	\$2,058
Infrastructure Replacement	\$5,400,000	I	78.2%	\$4,221,920	19.8%	\$1,066,940	2.1%	\$111,140
Meter Replacement	\$2,000,000	M	100.0%	\$2,000,000	0.0%	\$0	0.0%	0
CIP	\$1,753,819	I	78.2%	\$1,371,200	19.8%	\$346,522	2.1%	\$36,096
Payroll Taxes	\$175,621	H	56.1%	\$98,558	11.8%	\$20,660	32.1%	\$56,402
PILOT	<u>\$23,123</u>	L	78.0%	<u>\$18,025</u>	21.0%	<u>\$4,860</u>	1.0%	<u>\$239</u>
SUBTOTAL FIXED	\$11,932,106		81.5%	\$9,720,129	16.2%	\$1,927,731	2.4%	\$284,247
OPERATING REVENUE	\$344,630	K	80.7%	\$278,007	11.2%	\$38,664	8.1%	\$27,958
TOTAL EXPENSES	\$23,305,975	K	80.7%	\$18,800,564	11.2%	\$2,614,728	8.1%	\$1,890,684
Less:								
Miscellaneous Income	(\$244,795)	K	80.7%	(\$197,473)	11.2%	(\$27,464)	8.1%	(\$19,859)
Interest Income	(\$21,464)	K	80.7%	(\$17,315)	11.2%	(\$2,408)	8.1%	(\$1,741)
Merchand & Jobbing	(\$18,811)	K	80.7%	(\$15,174)	11.2%	(\$2,110)	8.1%	(\$1,526)
6.9% of Water Prot Fee	(\$45,581)	K	80.7%	(\$36,769)	11.2%	(\$5,114)	8.1%	(\$3,698)
Total Revenue Requirement	\$22,975,325	K	80.7%	\$18,533,833	11.2%	\$2,577,631	8.1%	\$1,863,860

(1) See Rebut. Sch. 3B

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

EXPENSE ITEM	RATE YEAR	ALLOC.	GENERAL WATER		FIRE SERVICE		CUST. SERVICE	
	LABOR	SYMBOL (1)	%	AMOUNT	%	AMOUNT	%	AMOUNT
SOURCE OF SUPPLY								
maint of wells/supply study	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	\$0
purchased water	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	\$0
PUMPING OPERATIONS								
fuel for pumping	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	\$0
power	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	\$0
labor-pumping	\$81,365	P	79.7%	\$64,881	20.3%	\$16,485	0.0%	\$0
pumping expense	\$0	P	79.7%	\$0	20.3%	\$0	0.0%	\$0
maint. - structures & improv	\$77,388	P	79.7%	\$61,710	20.3%	\$15,679	0.0%	\$0
diesel oil	\$0	P	79.7%	\$0	20.3%	\$0	0.0%	\$0
maint. - equip	\$38,755	P	79.7%	\$30,903	20.3%	\$7,852	0.0%	\$0
WATER TREATMENT								
chemicals	\$0	A	99.5%	\$0	0.5%	\$0	0.0%	\$0
labor	\$185,126	A	99.5%	\$184,200	0.5%	\$926	0.0%	\$0
operating / Mishnock	\$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
TRANS & DISTR. EXPENSE								
storage facilities exp.	\$0	D	75.0%	\$0	25.0%	\$0	0.0%	\$0
labor	\$0	B	74.8%	\$0	25.2%	\$0	0.0%	\$0
supplies	\$0	B	74.8%	\$0	25.2%	\$0	0.0%	\$0
labor-meter	\$51,207	C	0.0%	\$0	0.0%	\$0	100.0%	\$51,207
meter - supp & exp	\$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	48.3%	\$0	23.0%	\$0	28.7%	\$0
maint - struct. & improv.	\$0	F	48.3%	\$0	23.0%	\$0	28.7%	\$0
maint.- res & stdp	\$18,468	D	75.0%	\$13,851	25.0%	\$4,617	0.0%	\$0
maint. - mains	\$421,144	B	74.8%	\$315,016	25.2%	\$106,128	0.0%	\$0
maint. - service	\$113,448	C	0.0%	\$0	0.0%	\$0	100.0%	\$113,448
maint. - meters	\$48,963	C	0.0%	\$0	0.0%	\$0	100.0%	\$48,963
maint. - hydrants	\$36,713	E	0.5%	\$184	99.5%	\$36,530	0.0%	\$0
construction labor	\$0	F	48.3%	\$0	23.0%	\$0	28.7%	\$0
CUSTOMER ACCOUNT								
labor- meter read	\$108,840	C	0.0%	\$0	0.0%	\$0	100.0%	\$108,840
cust record labor	\$202,101	C	0.0%	\$0	0.0%	\$0	100.0%	\$202,101
cust records sup	\$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
ADMIN. & GENERAL								
salaries	\$452,860	G	74.4%	\$337,000	7.4%	\$33,318	18.2%	\$82,542
office supplies & expenses	\$0	G	74.4%	\$0	7.4%	\$0	18.2%	\$0
insurance (property/liability/wc)	\$0	G	74.4%	\$0	7.4%	\$0	18.2%	\$0
OPEB Trust Contrib.	\$0	H	56.1%	\$0	11.8%	\$0	32.1%	0
employee benefits	\$0	H	56.1%	\$0	11.8%	\$0	32.1%	0
maint. - plant	\$121,111	G	74.4%	\$90,126	7.4%	\$8,910	18.2%	\$22,075
maint. - vehicles	\$3,658	G	74.4%	\$2,722	7.4%	\$269	18.2%	\$667
miscellaneous	\$0	G	74.4%	\$0	7.4%	\$0	18.2%	\$0
vacation, holiday, sick	\$330,384	H	56.1%	\$185,411	11.8%	\$38,867	32.1%	106,106
regul. exp.	\$0	G	74.4%	\$0	7.4%	\$0	18.2%	\$0
outside service	\$0	G	74.4%	\$0	7.4%	\$0	18.2%	\$0
TOTAL LABOR	\$2,291,533	H	56.1%	\$1,286,004	11.8%	\$269,580	32.1%	\$735,950

(1) See Rebut. Sch. 3B

ALLOCATION SYMBOLS

ALLOCATION SYMBOL	GEN'L WATER	FIRE SERVICE	CUST SERVICE	
A	99.50%	0.50%	0.00%	Supply & Treatment
B	74.80%	25.20%	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	48.26%	23.02%	28.72%	Misc T&D
G	74.42%	7.36%	18.23%	Direct O&M (50% of Purch Water) Benefits & Vacation
H	56.12%	11.76%	32.12%	Labor
I	78.18%	19.76%	2.06%	IFR Costs (same as Debt/Capital)
J	78.18%	19.76%	2.06%	Debt/Capital
K	80.67%	11.22%	8.11%	Total Expense
L	77.95%	21.02%	1.03%	PILOT
M	100.00%	0.00%	0.00%	Meter Replacement Program - all costs to small meter rate
P	79.74%	20.26%	0.00%	Pumping Facilities

Symbol B	Gal/Min	%
Model Max. Day	10,410	74.84%
Fire Demand	3,500	25.16%
Max. Day Plus Fire	13,910	100.00%

Symbol J - Debt Service/CIP	Plant In Service	Symbol	Gen Water	Fire	Cust A	Cust B
Plant Value 6/30/2015						
Source of Supply	\$1,841,541	A	\$1,832,333	\$9,208	\$0	\$0
Pumping Plant	\$8,413,011	A	\$8,370,946	\$42,065	\$0	\$0
Water Treat. Plant	\$22,057,416	A	\$21,947,129	\$110,287	\$0	\$0
T&D Storage	\$9,696,568	D	\$7,272,426	\$2,424,142	\$0	\$0
T&D Mains	\$95,652,793	B	\$71,548,289	\$24,104,504	\$0	\$0
T&D Hydrants	\$1,362,339	E	\$6,812	\$1,355,527	\$0	\$0
T&D Services	\$2,919,253	C	\$0	\$0	\$2,919,253	\$0
T&D Meters	\$2,193	C	\$0	\$0	\$2,193	\$0
General Plant	\$3,103,245	J	\$2,426,232	\$613,144	\$63,869	\$0
General Structures	\$727,760	J	\$568,990	\$143,792	\$14,978	\$0
Total	\$145,776,119		\$113,973,156	\$28,802,669	\$3,000,294	\$0
Percent			78.18%	19.76%	2.06%	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	\$976	\$96	\$120	\$120
PS/Wells/Treatment	\$14,554	P	\$11,605	\$2,949	\$0	\$0
Total	\$23,123		\$18,025	\$4,860	\$120	\$120
Percent			77.95%	21.02%	0.52%	0.52%

Symbol M - Meter Replacement Program

The Authority is proposing to replace all residential meters that are 2" and less. Accordingly, we propose to assign all the meter replacement costs to the small meter rate (for meters 2" and less).

Symbol P - Pumping Facilities (per Decision in Dockets 2098, 2555, 3660, 4067)

	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	59.84%	20.16%	0.00%	0.00%
Total	100.00%	P	79.74%	20.26%	0.00%	0.00%

PROPOSED FIRE SERVICE CHARGES

PUBLIC FIRE SERVICE

Quarterly Charge/Hydrant =	\$246.73
Plus Billing Charge =	\$8.83

PRIVATE FIRE SERVICE

<u>SERVICE SIZE</u> <u>(inches)</u>	<u>QUARTERLY</u> <u>CHARGE</u>
4	\$94.11
6	\$256.56
8	\$536.75
10	\$958.21
12	\$1,542.34
HYDRANT	\$256.56

**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	2,357	111.31	262,360	89.84%	\$2,222,640	\$103,563	\$2,326,203
PRIVATE FIRE SERVICE							
SIZE (IN)							
4	16	38.32	613				
6	95	111.31	10,575				
8	16	237.21	3,795				
10	1	426.58	427				
12	1	689.04	689				
HYDRANTS	<u>122</u>	<u>111.31</u>	<u>13,580</u>				
TOTAL-PRIV.	251		29,679	10.16%	\$251,428	\$0	\$251,428
	=====		=====	=====	=====	=====	=====
GRAND TOTALS	2,608		292,038	100.00%	\$2,474,068	\$103,563	\$2,577,631
Total Fire Allocation							\$2,577,631
Less Direct Hydrant Related							
O&M							(\$83,306)
Debt							(\$20,257)
Net Non-Hydrant							\$2,474,068

(1) Based on size to the 2.63 power.

DETERMINATION OF FIRE SERVICE CHARGES

<u>PUBLIC FIRE PROTECTION</u>		<u>CALCULATED CHARGE</u>
PUBLIC FIRE ALLOCATION (1)	\$2,326,203	
----- =	----- =	\$986.93
NUMBER OF PUBLIC HYDRANTS	2,357	
	TOTAL QUARTERLY	\$246.73
	+ BILLING	\$8.83

PRIVATE FIRE PROTECTION

PRIVATE FIRE ALLOCATION (1,2)	\$264,205	
----- =	----- =	\$8.90 /EQUIV.
NO. OF EQUIV. UNITS	29,679	

<u>SIZE (IN)</u>	<u>DEMAND FACTOR</u>	<u>ANNUAL CHARGE</u>	<u>QUARTERLY CHARGE</u>	<u>BILLING CHARGE</u>	<u>CALCULATED CHARGE</u>
4	38.32	\$341.13	\$85.28	\$8.83	\$94.11
6	111.31	\$990.92	\$247.73	\$8.83	\$256.56
8	237.21	\$2,111.67	\$527.92	\$8.83	\$536.75
10	426.58	\$3,797.51	\$949.38	\$8.83	\$958.21
12	689.04	\$6,134.03	\$1,533.51	\$8.83	\$1,542.34
HYDRANTS	111.31	\$990.92	\$247.73	\$8.83	\$256.56

(1) Allocation from Sch 4A.

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

Service Line Maintenance Cost =	\$150,952	
Addtnl Allocation to Fire Service =	\$12,777	(8.46%)

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	1.00	22,085	22,085		
1	1.5	1.80	3,651	6,572		
1 1/2	2	3.30	333	1,099		
2	3	4.60	510	2,346		
3	4	6.30	12	76	16	101
4	6	9.60	92	883	95	912
6	8	16.90	96	1,622	138	2,332
>8	10	29.60	72	<u>2,131</u>	2	<u>59</u>
Total				36,814		3,404
				91.54%		8.46%

* See Sch 5D

PROPOSED SERVICE CHARGES & DEMAND SURCHARGES

METER SIZE (inches)	<u>SERVICE CHARGE</u>		<u>DEMAND SURCHARGE</u>	
	<u>QUARTERLY</u> <u>ACCOUNTS</u>	<u>MONTHLY</u> <u>ACCOUNTS</u>	<u>QUARTERLY</u> <u>ACCOUNTS</u>	<u>MONTHLY</u> <u>ACCOUNTS</u>
5/8 &				
3/4	\$14.89	\$10.85	\$3.06	\$1.02
1	\$19.74	\$12.47	\$5.13	\$1.71
1 1/2	\$28.83	\$15.50	\$10.23	\$3.41
2	\$36.71	\$18.12	\$16.38	\$5.46
3	\$47.01	\$21.56	\$32.76	\$10.92
4	\$67.00	\$28.22	\$51.18	\$17.06
6	\$111.23	\$42.97	\$102.36	\$34.12
>8	\$188.19	\$68.62	\$163.80	\$54.60

ALLOCATION OF CUSTOMER SERVICE EXPENSES

EXPENSE ITEM	TOTAL	ALLOC.	<-CUST. METER->		<--CUST. BILL-->	
	CUST. SERV.	SYMBOL (1)	%	AMOUNT	%	AMOUNT
TRANS & DISTR. EXPENSE						
labor	\$0	AA	100.00%	\$0	0.00%	0.00
supplies	\$0	AA	100.00%	\$0	0.00%	0.00
labor-meter	\$54,766	AA	100.00%	\$54,766	0.00%	0.00
meter - supp & exp	\$13	AA	100.00%	\$13	0.00%	0.00
cust. install.	\$0	AA	100.00%	\$0	0.00%	0.00
misc.	\$4,046	AA	100.00%	\$4,046	0.00%	0.00
maint - struct. & improv.	\$17,394	AA	100.00%	\$17,394	0.00%	0.00
maint.- res & stdp	\$0	AA	100.00%	\$0	0.00%	0.00
maint. - mains	\$0	AA	100.00%	\$0	0.00%	0.00
maint. - service	\$150,952	AA	100.00%	\$150,952	0.00%	0.00
maint. - meters	\$147,528	AA	100.00%	\$147,528	0.00%	0.00
maint. - hydrants	\$0	AA	100.00%	\$0	0.00%	0.00
construction labor	(\$20)	AA	100.00%	(\$20)	0.00%	0.00
CUSTOMER ACCOUNT						
labor- meter read	\$115,130	BB	0.00%	\$0	100.00%	115,129.71
cust record labor	\$212,681	BB	0.00%	\$0	100.00%	212,680.73
cust records sup	\$101,805	BB	0.00%	\$0	100.00%	101,805.08
meter read supplies	\$2,662	BB	0.00%	\$0	100.00%	2,661.72
uncollectible	\$60,988	BB	0.00%	\$0	100.00%	60,987.84
ADMIN. & GENERAL						
salaries	\$86,109	CC	42.48%	\$36,576	57.52%	49,533.53
office supplies & expenses	\$49,896	CC	42.48%	\$21,194	57.52%	28,702.25
insurance (property/liability/w	\$49,092	CC	42.48%	\$20,852	57.52%	28,239.99
OPEB Trust Contrib.	\$25,693	CC	42.48%	\$10,913	57.52%	14,779.56
employee benefits	\$311,431	DD	41.02%	\$127,737	58.98%	183,693.85
maint. - plant	\$27,951	CC	42.48%	\$11,873	57.52%	16,078.63
maint. - vehicles	\$11,665	CC	42.48%	\$4,955	57.52%	6,710.06
miscellaneous	\$3,068	CC	42.48%	\$1,303	57.52%	1,764.70
vacation, holiday, sick	\$100,392	DD	41.02%	\$41,177	58.98%	59,214.92
regul. exp.	\$27,832	CC	42.48%	\$11,822	57.52%	16,010.17
outside service	<u>\$17,407</u>	CC	42.48%	<u>\$7,394</u>	57.52%	<u>10,013.01</u>
SUBTOTAL O&M	\$1,578,479	CC	42.48%	\$670,474	57.52%	908,005.77
FIXED CHARGES						
Debt Service	\$44,837	JJ	100.00%	\$44,837	0.00%	0.00
O&M Reserve	\$30,750	CC	42.48%	\$13,061	57.52%	17,688.78
R&R Reserve	\$2,724	JJ	100.00%	\$2,724	0.00%	0.00
O&M Reserve	\$2,058	JJ	100.00%	\$2,058	0.00%	0.00
Infrastructure Replacement	\$111,140	JJ	100.00%	\$111,140	0.00%	0.00
Meter Replacement	\$0	JJ	100.00%	\$0	0.00%	0.00
CIP	\$36,096	JJ	100.00%	\$36,096	0.00%	0.00
Payroll Taxes	\$56,402	DD	41.02%	\$23,134	58.98%	33,268.26
PILOT	<u>\$239</u>	EE	48.51%	<u>\$116</u>	51.49%	<u>123.07</u>
SUBTOTAL FIXED	\$284,247			\$233,167		51,080.11
OPERATING REVENUE						
OPERATING REVENUE	\$27,958	EE	48.51%	\$13,563	51.49%	14,395.05
TOTAL EXPENSES						
TOTAL EXPENSES	\$1,890,684	EE	48.51%	\$917,203	51.49%	973,480.92
Less:						
Miscellaneous Income	(\$19,859)	EE	48.51%	(\$9,634)	51.49%	(10,225.00)
Merchand & Jobbing	(\$1,526)	EE	48.51%	(\$740)	51.49%	(785.72)
6.9% of Water Prot Fee	(\$3,698)	EE	48.51%	(\$1,794)	51.49%	(1,903.88)
	=====			=====		=====
Total Revenue Requirement	\$1,865,602	EE	48.51%	\$905,035	51.49%	960,566.32

(1) See Rebut. Sch. 5C

ALLOCATION OF CUSTOMER SERVICE LABOR EXPENSES

<u>EXPENSE ITEM</u>	<u>TOTAL</u>	<u>ALLOC.</u>	<u><-CUST. METER-></u>		<u><--CUST. BILL--></u>	
	<u>CUST. SERV.</u>	<u>SYMBOL (1)</u>	<u>%</u>	<u>AMOUNT</u>	<u>%</u>	<u>AMOUNT</u>
TRANS & DISTR. EXPENSE			-	-----	-	-----
labor	0.00	AA	100.00%	\$0	0.00%	0.00
supplies	0.00	AA	100.00%	\$0	0.00%	0.00
labor-meter	51,207.23	AA	100.00%	\$51,207	0.00%	0.00
meter - supp & exp	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	113,447.63	AA	100.00%	\$113,448	0.00%	0.00
maint. - meters	48,962.86	AA	100.00%	\$48,963	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
CUSTOMER ACCOUNT						
labor- meter read	108,840.28	BB	0.00%	\$0	100.00%	108,840.28
cust record labor	202,101.46	BB	0.00%	\$0	100.00%	202,101.46
cust records sup	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
ADMIN. & GENERAL						
salaries	82,542.28	CC	42.48%	\$35,061	57.52%	47,481.69
office supplies & expenses	0.00	CC	42.48%	\$0	57.52%	0.00
insurance (property/liability/w	0.00	CC	42.48%	\$0	57.52%	0.00
OPEB Trust Contrib.	0.00	DD	41.02%	\$0	58.98%	0.00
employee benefits	0.00	DD	41.02%	\$0	58.98%	0.00
maint. - plant	22,074.81	CC	42.48%	\$9,376	57.52%	12,698.33
maint. - vehicles	666.73	CC	42.48%	\$283	57.52%	383.53
miscellaneous	0.00	CC	42.48%	\$0	57.52%	0.00
vacation, holiday, sick	106,106.33	DD	41.02%	\$43,521	58.98%	62,585.51
regul. exp.	0.00	CC	42.48%	\$0	57.52%	0.00
outside service	<u>0.00</u>	CC	42.48%	<u>\$0</u>	57.52%	<u>0.00</u>
TOTAL LABOR	735,949.60	DD	41.02%	\$301,859	58.98%	434,090.79

(1) See Rebut. Sch. 5C

ALLOCATION SYMBOLS - CUSTOMER SERVICE

<u>ALLOCATION</u> <u>SYMBOL</u>	<u>CUSTOM</u> <u>METER</u>	<u>CUSTOM</u> <u>BILL</u>	<u>TOTAL</u>
AA	100.00%	0.00%	100.00% Meters
BB	0.00%	100.00%	100.00% Billing
CC	42.48%	57.52%	100.00% O&M
DD	41.02%	58.98%	100.00% Labor
EE	48.51%	51.49%	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>	<u>DEMAND FACTOR (2)</u>	<u>DEMAND EQUIVLNTS</u>
5/8 & 3/4	22,085	1.00	22,085	1.00	22,085
1	3,651	1.80	6,572	1.67	6,085
1 1/2	333	3.30	1,099	3.33	1,110
2	510	4.60	2,346	5.33	2,720
3	12	6.30	76	10.67	128
4	92	9.60	883	16.67	1,533
6	96	16.90	1,622	33.33	3,200
>8	<u>72</u>	29.60	<u>2,131</u>	53.33	<u>3,840</u>
TOTALS	26,851		36,814		40,701

(1) Based on prior KCWA docket

(2) Based on rated capacity of meter sizes

DETERMINATION OF PROPOSED SERVICE & DEMAND CHARGES

SERVICE CHARGES

BILLING CHARGE

CUST. BILLING ALLOC. (1)	=	\$960,566	=	
-----		-----		\$8.83 PER BILLING
NUMBER OF BILLINGS		108,752		

METER CHARGE

CUST. METER ALLOC. (1,3)	=	\$892,258	=	
-----		-----		\$24.24 / EQ. METER/YR
NO. EQUIV. METERS (2)		36,814		

TOTAL SERVICE CHARGES

METER SIZE (IN)	<u>QUARTERLY ACCOUNTS</u>			<u>MONTHLY ACCOUNTS</u>		
	METER CHARGE	BILLING CHARGE	TOTAL CHARGE	METER CHARGE	BILLING CHARGE	TOTAL CHARGE
5/8 & 3/4	\$6.06	\$8.83	\$14.89	\$2.02	\$8.83	\$10.85
1	\$10.91	\$8.83	\$19.74	\$3.64	\$8.83	\$12.47
1 1/2	\$20.00	\$8.83	\$28.83	\$6.67	\$8.83	\$15.50
2	\$27.87	\$8.83	\$36.71	\$9.29	\$8.83	\$18.12
3	\$38.17	\$8.83	\$47.01	\$12.72	\$8.83	\$21.56
4	\$58.17	\$8.83	\$67.00	\$19.39	\$8.83	\$28.22
6	\$102.40	\$8.83	\$111.23	\$34.13	\$8.83	\$42.97
>8	\$179.35	\$8.83	\$188.19	\$59.78	\$8.83	\$68.62

(1) See Rebut. Sch. 5A

(2) See Rebut. Sch. 5D

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

DEMAND SURCHARGE

DEMAND COSTS (4)	=	\$500,000	=	
-----		-----		\$12.28 / DEMAND EQ./YR
NO. DEMAND EQUIVS (2)		40,701		

TOTAL DEMAND SURCHARGES

METER SIZE (IN)	QUARTERLY CHARGE	MONTHLY CHARGE
5/8 & 3/4	\$3.06	\$1.02
1	\$5.13	\$1.71
1 1/2	\$10.23	\$3.41
2	\$16.38	\$5.46
3	\$32.76	\$10.92
4	\$51.18	\$17.06
6	\$102.36	\$34.12
>8	\$163.80	\$54.60

(4) Share of fixed costs allocated based on meter capacity ratios

Costs to be recovered **\$500,000**

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

EXPENSE ITEM	TOTAL		BASE		EXTRA CAP.-MAX DAY		EXTRA CAP.-PEAK HR	
	GEN'L WATER	ALLOC. SYMBOL (1)	%	AMOUNT	%	AMOUNT	%	AMOUNT
SOURCE OF SUPPLY								
maint of wells/supply study	\$39,800	aa	100.00%	\$39,800	0.00%	\$0	0.00%	\$0
purchased water	\$4,835,757	aa	100.00%	\$4,835,757	0.00%	\$0	0.00%	\$0
PUMPING OPERATIONS								
fuel for pumping	\$23,959	aa	100.00%	\$23,959	0.00%	\$0	0.00%	\$0
power	\$765,834	aa	100.00%	\$765,834	0.00%	\$0	0.00%	\$0
labor-pumping	\$68,513	pp	62.64%	\$42,917	37.36%	\$25,597	0.00%	\$0
pumping expense	\$0	pp	62.64%	\$0	37.36%	\$0	0.00%	\$0
maint. - structures & improv	\$69,021	pp	62.64%	\$43,235	37.36%	\$25,786	0.00%	\$0
diesel oil	\$0	pp	62.64%	\$0	37.36%	\$0	0.00%	\$0
maint. - equip	\$46,967	pp	62.64%	\$29,420	37.36%	\$17,547	0.00%	\$0
WATER TREATMENT								
chemicals	\$162,097	aa	100.00%	\$162,097	0.00%	\$0	0.00%	\$0
labor	\$193,175	aa	100.00%	\$193,175	0.00%	\$0	0.00%	\$0
operating / Mishnock	\$69,165	aa	100.00%	\$69,165	0.00%	\$0	0.00%	\$0
maint. - water treat equip	\$18,561	aa	100.00%	\$18,561	0.00%	\$0	0.00%	\$0
maint. - structure	\$688	aa	100.00%	\$688	0.00%	\$0	0.00%	\$0
TRANS & DISTR. EXPENSE								
storage facilities exp.	\$0	dd	0.00%	\$0	0.00%	\$0	100.00%	\$0
labor	\$18,872	bb	53.30%	\$10,059	46.70%	\$8,813	0.00%	\$0
supplies	\$84,944	bb	53.30%	\$45,275	46.70%	\$39,669	0.00%	\$0
labor-meter	\$0	cc	0.00%	\$0	0.00%	\$0	0.00%	\$0
meter - supp & exp	\$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.	\$6,799	ff	51.90%	\$3,529	45.41%	\$3,087	2.70%	\$183
maint - struct. & improv.	\$29,232	ff	51.90%	\$15,170	45.41%	\$13,274	2.70%	\$788
maint.- res & stdp	\$16,014	dd	0.00%	\$0	0.00%	\$0	100.00%	\$16,014
maint. - mains	\$473,448	bb	53.30%	\$252,348	46.70%	\$221,100	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	\$419	aa	100.00%	\$419	0.00%	\$0	0.00%	\$0
construction labor	(\$33)	ff	51.90%	(\$17)	45.41%	(\$15)	2.70%	(\$1)
CUSTOMER ACCOUNT								
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 sup	\$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
ADMIN. & GENERAL								
salaries	\$351,563	gg	89.44%	\$314,422	10.03%	\$35,265	0.53%	\$1,876
office supplies & expenses	\$203,714	gg	89.44%	\$182,192	10.03%	\$20,434	0.53%	\$1,087
insurance (property/liability/wc)	\$200,433	gg	89.44%	\$179,258	10.03%	\$20,105	0.53%	\$1,070
OPEB Trust Contrib.	\$44,896	hh	75.90%	\$34,077	22.63%	\$10,160	1.47%	\$659
employee benefits	\$544,197	hh	75.90%	\$413,060	22.63%	\$123,154	1.47%	\$7,983
maint. - plant	\$114,118	gg	89.44%	\$102,062	10.03%	\$11,447	0.53%	\$609
maint. - vehicles	\$47,625	gg	89.44%	\$42,593	10.03%	\$4,777	0.53%	\$254
miscellaneous	\$12,525	gg	89.44%	\$11,202	10.03%	\$1,256	0.53%	\$67
vacation, holiday, sick	\$175,426	hh	75.90%	\$133,153	22.63%	\$39,700	1.47%	\$2,573
regul. exp.	\$113,632	gg	89.44%	\$101,627	10.03%	\$11,398	0.53%	\$606
outside service	\$71,067	gg	89.44%	\$63,559	10.03%	\$7,129	0.53%	\$379
SUBTOTAL O&M	\$8,802,428		92.34%	\$8,128,596	7.27%	\$639,683	0.39%	\$34,148

**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
FIXED CHARGES								
Debt Service	\$1,703,232	jj	60.52%	\$1,030,815	32.93%	\$560,804	6.55%	\$111,613
O&M Reserve	\$125,546	gg	89.44%	\$112,283	10.03%	\$12,593	0.53%	\$670
R&R Reserve	\$103,465	jj	60.52%	\$62,618	32.93%	\$34,067	6.55%	\$6,780
Renewal & Replacement - Equip	\$78,184	jj	60.52%	\$47,318	32.93%	\$25,743	6.55%	\$5,123
Infrastructure Replacement	\$4,221,920	ii	60.52%	\$2,555,152	32.93%	\$1,390,103	6.55%	\$276,664
Meter Replacement	\$2,000,000	mm	100.00%	\$2,000,000	0.00%	\$0	0.00%	\$0
CIP	\$1,371,200	ii	60.52%	\$829,866	32.93%	\$451,479	6.55%	\$89,855
Payroll Taxes	\$98,558	hh	75.90%	\$74,808	22.63%	\$22,304	1.47%	\$1,446
PILOT	<u>\$18,025</u>	ll	44.67%	<u>\$8,052</u>	24.97%	<u>\$4,501</u>	30.36%	<u>\$5,471</u>
SUBTOTAL FIXED	\$9,720,129			\$6,720,911	25.74%	\$2,501,594	5.12%	\$497,623
OPERATING REVENUE	\$278,007	kk	80.17%	\$222,878	16.96%	\$47,148	2.87%	\$7,981
TOTAL EXPENSES	\$18,800,564	kk	80.17%	\$15,072,386	16.96%	\$3,188,426	2.87%	\$539,753
Less:								
Miscellaneous Income	(\$197,473)	kk	80.17%	(\$158,313)	16.96%	(\$33,490)	2.87%	(\$5,669)
Interest Income	(\$17,315)	kk	80.17%	(\$13,881)	16.96%	(\$2,936)	2.87%	(\$497)
Merchand & Jobbing	(\$15,174)	kk	80.17%	(\$12,165)	16.96%	(\$2,573)	2.87%	(\$436)
6.9% of Water Prot Fee	(\$36,769)	kk	80.17%	(\$29,478)	16.96%	(\$6,236)	2.87%	(\$1,056)
	=====			=====		=====		=====
Total Revenue Requirement	\$18,533,833	kk	80.17%	\$14,858,548	16.96%	\$3,143,190	2.87%	\$532,095
Less: Demand Surcharge Rev	<u>(\$500,000)</u>	jj	60.52%	<u>(\$302,606)</u>	32.93%	<u>(\$164,629)</u>	6.55%	<u>(\$32,765)</u>
Required From Metered Rates	\$18,033,833			\$14,555,942		\$2,978,561		\$499,330
Less: Meter replace. costs	<u>(\$2,000,000)</u>	mm	100.00%	<u>(\$2,000,000)</u>	0.00%	\$0	0.00%	\$0
Net After Meter Replacement	\$16,033,833			\$12,555,942		\$2,978,561		\$499,330
(1) See Rebut. Sch. 6B				78.31%		18.58%		3.11%

**ALLOCATION OF GENERAL WATER LABOR EXPENSE 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
PUMPING OPERATIONS								
labor-pumping	\$64,881	pp	62.64%	\$40,641	37.36%	\$24,239	0.00%	\$0
maint. - structures & improv	\$61,710	pp	62.64%	\$38,655	37.36%	\$23,055	0.00%	\$0
maint. - equip	\$30,903	pp	62.64%	\$19,358	37.36%	\$11,545	0.00%	\$0
WATER TREATMENT								
labor	\$184,200	aa	100.00%	\$184,200	0.00%	\$0	0.00%	\$0
TRANS & DISTR. EXPENSE								
labor	\$0	bb	53.30%	\$0	46.70%	\$0	0.00%	\$0
maint.- res & stdp	\$13,851	dd	0.00%	\$0	0.00%	\$0	100.00%	\$13,851
maint. - mains	\$315,016	bb	53.30%	\$167,903	46.70%	\$147,112	0.00%	\$0
maint. - hydrants	\$184	aa	100.00%	\$184	0.00%	\$0	0.00%	\$0
CUSTOMER ACCOUNT								
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 sup	\$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
ADMIN. & GENERAL								
salaries	\$337,000	gg	89.44%	\$301,398	10.03%	\$33,804	0.53%	\$1,798
maint. - plant	\$90,126	gg	89.44%	\$80,605	10.03%	\$9,040	0.53%	\$481
maint. - vehicles	\$2,722	gg	89.44%	\$2,435	10.03%	\$273	0.53%	\$15
miscellaneous	\$0	gg	89.44%	\$0	10.03%	\$0	0.53%	\$0
vacation, holiday, sick	\$185,411	hh	75.90%	\$140,732	22.63%	\$41,959	1.47%	\$2,720
regul. exp.	\$0	gg	89.44%	\$0	10.03%	\$0	0.53%	\$0
outside service	\$0	gg	89.44%	\$0	10.03%	\$0	0.53%	\$0
TOTAL LABOR	\$1,286,004	hh	75.90%	\$976,111	22.63%	\$291,029	1.47%	\$18,865

(1) See Rebut. 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	53.30%	46.70%	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	51.90%	45.41%	2.70%	100.00%	Misc. T&D
gg	89.44%	10.03%	0.53%	100.00%	Direct O&M plus 50% Purch Water
hh	75.90%	22.63%	1.47%	100.00%	Labor
ii	60.52%	32.93%	6.55%	100.00%	IFR - same as capital
jj	60.52%	32.93%	6.55%	100.00%	Debt/Capital
kk	80.17%	16.96%	2.87%	100.00%	All Expenses
ll	44.67%	24.97%	30.36%	100.00%	PILOT
pp	62.64%	37.36%	0.00%	100.00%	Pumping Facilities
mm	100.00%	0.00%	0.00%	100.00%	Meter costs just to small meter class base

Symbol bb

	Gal/Min	%
Average Day	5,552	53.33%
Max Day Increment	4,858	46.67%
Maximum Day	10,410	100.00%

Symbol jj

Item	Amount (1)	Symbol	BASE	EXTRA CAPACITY	
				MAX DAY	PEAK HOUR
Source of Supply	\$1,832,333	aa	\$1,832,333	\$0	\$0
Pumping Plant	\$8,370,946	pp	\$5,243,561	\$3,127,386	\$0
Water Treat. Plant	\$21,947,129	aa	\$21,947,129	\$0	\$0
T&D Storage	\$7,272,426	dd	\$0	\$0	\$7,272,426
T&D Mains	\$71,548,289	bb	\$38,135,238	\$33,413,051	\$0
T&D Hydrants	\$6,812	aa	\$6,812	\$0	\$0
T&D Meters	\$0	cc	\$0	\$0	\$0
General Plant	\$2,426,232	jj	\$1,468,382	\$798,858	\$158,992
General Structures	\$568,990	jj	\$344,359	\$187,345	\$37,286
Total	\$113,973,156		\$68,977,813	\$37,526,639	\$7,468,704
Percent			60.52%	32.93%	6.55%

(1) See Rebut. Sch. 3B

Symbol ll

Item	Amount (1)	Symbol	BASE	EXTRA CAPACITY	
				MAX DAY	PEAK HOUR
Storage	\$5,443	dd	\$0	\$0	\$5,443
Office	\$976	kk	\$782	\$166	\$28
PS/Wells	\$11,605	pp	\$7,270	\$4,336	\$0
Total	\$18,025		\$8,052	\$4,501	\$5,471
Percent			44.67%	24.97%	30.36%

(1) See Rebut. 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	42.64%	37.36%	0.00%
Total	1	pp	62.64%	37.36%	0.00%

**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	6,024,134	90.49%	2.7	16,265,161	10,241,027	96.83%
Medium	136,733	2.05%	2	273,466	136,733	1.29%
Large	<u>496,732</u>	<u>7.46%</u>	1.4	<u>695,425</u>	<u>198,693</u>	<u>1.88%</u>
Total	6,657,599	100.00%		17,234,052	10,576,453	100.00%

CUSTOMER CLASS	AVERAGE DEMANDS		PEAK HOUR EXTRA CAPACITY			
	(GALS/DAY)	PERCENT	FACTOR	OTAL GAL/DAY	XTRA GAL/DAY	PERCENT
Small	6,024,134	90.49%	3.4	20,482,055	4,216,894	96.48%
Medium	136,733	2.05%	2.4	328,159	54,693	1.25%
Large	<u>496,732</u>	<u>7.46%</u>	1.6	<u>794,771</u>	<u>99,346</u>	<u>2.27%</u>
Total	6,657,599	100.00%		21,604,985	4,370,933	100.00%

[1] - Described in the April, 1992 Cost of Service Study and as used in the Dockets # 2098 through 4067

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 *	90.49%	\$13,361,255	96.83%	\$2,884,098	96.48%	\$481,732	\$16,727,085
Medium	2.05%	\$257,872	1.29%	\$38,507	1.25%	\$6,248	\$302,627
Large	<u>7.46%</u>	<u>\$936,815</u>	<u>1.88%</u>	<u>\$55,956</u>	<u>2.27%</u>	<u>\$11,349</u>	<u>\$1,004,120</u>
Total	100.00%	\$14,555,942	100.00%	\$2,978,561	100.00%	\$499,330	\$18,033,833

* Adjusted to include all meter replacement costs in small class rate.

METERED WATER RATES

Small (5/8-2" meters)

Total Expense (2)	\$16,727,085	=	
-----	-----	=	\$5.6900
Metered Sales (HCF) (1)	2,939,584		

Medium (3&4" meters)

Total Expense (2)	\$302,627	=	
-----	-----	=	\$4.5360
Metered Sales (HCF) (1)	66,721		

Large (6" & up meters)

Total Expense (2)	\$1,004,120	=	
-----	-----	=	\$4.1430
Metered Sales (HCF) (1)	242,389		

(1) See Sch 2

(2) See Sch 7

COMPARISON TO CURRENT RATES

		<u>Current</u>	<u>Proposed</u>	<u>\$ Change</u>	<u>% Change</u>	
<u>METERED RATES</u>						
	Small (5/8-2" meters)	\$5.254	\$5.690	\$0.436	8.30%	
	Medium (3&4" meters)	\$4.476	\$4.536	\$0.060	1.34%	
	Large (6" & up meters)	\$3.816	\$4.143	\$0.327	8.57%	
<u>SERVICE CHARGES</u>						
Quarterly	5/8 & 3/4	\$10.26	\$14.89	\$4.630	45.13%	
	1	\$13.57	\$19.74	\$6.170	45.47%	
	1 1/2	\$19.78	\$28.83	\$9.050	45.75%	
	2	\$25.17	\$36.71	\$11.540	45.85%	
	3	\$32.20	\$47.01	\$14.810	45.99%	
	4	\$45.86	\$67.00	\$21.140	46.10%	
	6	\$76.08	\$111.23	\$35.150	46.20%	
	8 & up	\$126.66	\$188.19	\$61.530	48.58%	
	Monthly	5/8 & 3/4	\$7.51	\$10.85	\$3.340	44.47%
		1	\$8.61	\$12.47	\$3.860	44.83%
1 1/2		\$10.67	\$15.50	\$4.830	45.27%	
2		\$12.47	\$18.12	\$5.650	45.31%	
3		\$14.82	\$21.56	\$6.740	45.48%	
4		\$19.37	\$28.22	\$8.850	45.69%	
6		\$29.44	\$42.97	\$13.530	45.96%	
8 & up		\$46.97	\$68.62	\$21.650	46.09%	
<u>DEMAND SURCHARGE</u>						
Quarterly		5/8 & 3/4	\$0.00	\$3.06		
	1	\$0.00	\$5.13			
	1 1/2	\$0.00	\$10.23			
	2	\$0.00	\$16.38			
	3	\$0.00	\$32.76			
	4	\$0.00	\$51.18			
	6	\$0.00	\$102.36			
	8 & up	\$0.00	\$163.80			
Monthly	5/8 & 3/4	\$0.00	\$1.02			
	1	\$0.00	\$1.71			
	1 1/2	\$0.00	\$3.41			
	2	\$0.00	\$5.46			
	3	\$0.00	\$10.92			
	4	\$0.00	\$17.06			
	6	\$0.00	\$34.12			
	8 & up	\$0.00	\$54.60			

COMPARISON TO CURRENT RATES

<u>FIRE CHARGES</u>		<u>Current</u>	<u>Proposed</u>	<u>\$ Change</u>	<u>% Change</u>
<u>Fire Service (per quarter)</u>					
Public	/hydrant	\$139.33	\$246.73	\$107.400	77.08%
	/bill	\$6.12	\$8.83	\$2.710	44.28%
Private (per quarter)					
	4 in	\$55.69	\$94.11	\$38.420	68.99%
	6 in	\$150.09	\$256.56	\$106.470	70.94%
	8 in	\$312.94	\$536.75	\$223.810	71.52%
	10 in	\$557.88	\$958.21	\$400.330	71.76%
	12 in	\$897.35	\$1,542.34	\$644.990	71.88%
	hydrant	\$150.09	\$256.56	\$106.470	70.94%

IMPACT OF PROPOSED RATES

METER SIZE	QUARTERLY USE - CU FT	CURRENT RATES	PROPOSED		
			NEW BILL	\$ INCREASE	% INCREASE
Small					
5/8	1,500	\$89.07	\$103.30	\$14.23	16.0%
5/8	2,000	\$115.34	\$131.75	\$16.41	14.2%
5/8	2,500	\$141.61	\$160.20	\$18.59	13.1%
5/8	3,500	\$194.15	\$217.10	\$22.95	11.8%
5/8	4,000	\$220.42	\$245.55	\$25.13	11.4%
5/8	5,000	\$272.96	\$302.45	\$29.49	10.8%
5/8	6,000	\$325.50	\$359.35	\$33.85	10.4%
5/8	6,666	\$360.49	\$397.25	\$36.75	10.2%
5/8	8,000	\$430.58	\$473.15	\$42.57	9.9%
5/8	10,000	\$535.66	\$586.95	\$51.29	9.6%
5/8	12,000	\$640.74	\$700.75	\$60.01	9.4%
5/8	14,000	\$745.82	\$814.55	\$68.73	9.2%
5/8	15,000	\$798.36	\$871.45	\$73.09	9.2%
5/8	20,000	\$1,061.06	\$1,155.95	\$94.89	8.9%
5/8	25,000	\$1,323.76	\$1,440.45	\$116.69	8.8%
1	30,000	\$1,589.77	\$1,731.87	\$142.10	8.9%
1	40,000	\$2,115.17	\$2,300.87	\$185.70	8.8%
1	46,666	\$2,465.40	\$2,680.17	\$214.76	8.7%
1	75,000	\$3,954.07	\$4,292.37	\$338.30	8.6%
2	100,000	\$5,279.17	\$5,743.09	\$463.92	8.8%
2	200,000	\$10,533.17	\$11,433.09	\$899.92	8.5%
2	300,000	\$15,787.17	\$17,123.09	\$1,335.92	8.5%
2	400,000	\$21,041.17	\$22,813.09	\$1,771.92	8.4%
2	600,000	\$31,549.17	\$34,193.09	\$2,643.92	8.4%
Medium					
3	200,000	\$8,984.20	\$9,151.77	\$167.57	1.9%
3	400,000	\$17,936.20	\$18,223.77	\$287.57	1.6%
3	600,000	\$26,888.20	\$27,295.77	\$407.57	1.5%
4	800,000	\$35,853.86	\$36,406.18	\$552.32	1.5%
4	1,000,000	\$44,805.86	\$45,478.18	\$672.32	1.5%
4	1,200,000	\$53,757.86	\$54,550.18	\$792.32	1.5%
Large					
6	400,000	\$15,340.08	\$16,785.59	\$1,445.51	9.4%
6	600,000	\$22,972.08	\$25,071.59	\$2,099.51	9.1%
6	800,000	\$30,604.08	\$33,357.59	\$2,753.51	9.0%
6	1,200,000	\$45,868.08	\$49,929.59	\$4,061.51	8.9%
6	1,333,333	\$50,956.07	\$55,453.58	\$4,497.51	8.8%
8	2,000,000	\$76,446.66	\$83,211.99	\$6,765.33	8.8%
8	5,000,000	\$190,926.66	\$207,501.99	\$16,575.33	8.7%
8	10,000,000	\$381,726.66	\$414,651.99	\$32,925.33	8.6%
Municipal Fire Service	400 hydrants	\$55,738.12	\$98,700.83	\$42,962.71	77.1%
Private Fire Service	3 Inch Service	\$150.09	\$256.56	\$106.47	70.9%

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	88,320	\$10.26	\$906,163	\$14.89	\$1,315,085	
1	14,600	\$13.57	\$198,122	\$19.74	\$288,204	
1 1/2	1,296	\$19.78	\$25,635	\$28.83	\$37,364	
2	2,008	\$25.17	\$50,541	\$36.71	\$73,714	
3	44	\$32.20	\$1,417	\$47.01	\$2,068	
4	356	\$45.86	\$16,326	\$67.00	\$23,852	
6	356	\$76.08	\$27,084	\$111.23	\$39,598	
8 & up	268	\$126.66	\$33,945	\$188.19	\$50,435	
<u>Monthly</u>						
5/8 & 3/4	60	\$7.51	\$451	\$10.85	\$651	
1	12	\$8.61	\$103	\$12.47	\$150	
1 1/2	108	\$10.67	\$1,152	\$15.50	\$1,674	
2	96	\$12.47	\$1,197	\$18.12	\$1,740	
3	12	\$14.82	\$178	\$21.56	\$259	
4	36	\$19.37	\$697	\$28.22	\$1,016	
6	84	\$29.44	\$2,473	\$42.97	\$3,609	
8 & up	60	\$46.97	\$2,818	\$68.62	\$4,117	
Demand Surcharge:						
<u>Quarterly</u>	<u>Number</u>	<u>Rate</u>	<u>Revenue</u>	<u>Rate</u>	<u>Revenue</u>	
5/8 & 3/4	88,320	\$0.00	\$0	\$3.06	\$270,259	
1	14,600	\$0.00	\$0	\$5.13	\$74,898	
1 1/2	1,296	\$0.00	\$0	\$10.23	\$13,258	
2	2,008	\$0.00	\$0	\$16.38	\$32,891	
3	44	\$0.00	\$0	\$32.76	\$1,441	
4	356	\$0.00	\$0	\$51.18	\$18,220	
6	356	\$0.00	\$0	\$102.36	\$36,440	
8 & up	268	\$0.00	\$0	\$163.80	\$43,898	
<u>Monthly</u>						
5/8 & 3/4	60	\$0.00	\$0	\$1.02	\$61	
1	12	\$0.00	\$0	\$1.71	\$21	
1 1/2	108	\$0.00	\$0	\$3.41	\$368	
2	96	\$0.00	\$0	\$5.46	\$524	
3	12	\$0.00	\$0	\$10.92	\$131	
4	36	\$0.00	\$0	\$17.06	\$614	
6	84	\$0.00	\$0	\$34.12	\$2,866	
8 & up	60	\$0.00	\$0	\$54.60	\$3,276	

REVENUE RECONCILIATION

	<u>Number</u>	<u><----- Current -----></u>		<u><----- Proposed -----></u>	
		<u>Rate</u>	<u>Revenue</u>	<u>Rate</u>	<u>Revenue</u>
Consumption Charge:	100/cu.ft.				
Proposed					
Small (5/8-2" meters)	2,939,584	\$5.25	\$15,444,574	\$5.69	\$16,726,233
Medium (3&4" meters)	66,721	\$4.48	\$298,644	\$4.54	\$302,648
Large (6" & up meters)	242,389	\$3.82	\$924,957	\$4.14	\$1,004,219
Fire Protection:					
Public Hydrants	2,357	\$557.32	\$1,313,603	\$986.92	\$2,326,170
# bills	32	\$6.12	\$196	\$8.83	\$283
Private Fire Protection					
4 in	16	\$222.76	\$3,564	\$376.44	\$6,023
6 in	95	\$600.36	\$57,034	\$1,026.24	\$97,493
8 in	16	\$1,251.76	\$20,028	\$2,147.00	\$34,352
10 in	1	\$2,231.52	\$2,232	\$3,832.84	\$3,833
12 in	1	\$3,589.40	\$3,589	\$6,169.36	\$6,169
hydrant	122	\$600.36	\$73,244	\$1,026.24	\$125,201
			=====		=====
Total			\$19,409,970		\$22,975,326
Plus: Misc Revenues			\$330,651		\$330,651
			=====		=====
Pro Forma Revenue			\$19,740,621		\$23,305,977
Required Revenue			\$23,305,975		\$23,305,975
Difference			-3,565,355		\$2
					0.00%
Increase in Revenues					\$3,565,356
Increase in Rate Revenues					\$3,565,356
Percent Increase in Total Revenues					18.06%
Percent increase in Rate Revenues					18.37%

SUMMARY OF COST OF SERVICE

	<u>Test Year</u>	<u>Adjustments</u>	<u>Rate Year</u>
Revenues			
Service Charges	\$1,268,303	\$575,231	\$1,843,535
Demand Surcharge:	\$0	\$499,168	\$499,168
Metered Rates	\$16,668,176	\$1,364,923	\$18,033,099
Fire Protection	\$1,473,490	\$1,126,034	\$2,599,524
Miscellaneous	<u>\$330,651</u>	<u>\$0</u>	<u>\$330,651</u>
<i>Total Revenue</i>	\$19,740,621	\$3,565,356	\$23,305,977
Expenses			
<u>O&M</u>			
Supply	\$4,999,638	(\$99,580)	\$4,900,057
Pumping	\$812,335	\$212,805	\$1,025,140
Treatment	\$310,572	\$135,344	\$445,916
T&D	\$1,164,782	\$139,882	\$1,304,664
Customer	\$470,456	\$22,809	\$493,265
Admin	<u>\$2,612,530</u>	<u>\$247,666</u>	<u>\$2,860,196</u>
Total O&M	\$10,370,313	\$658,927	\$11,029,239
<u>Fixed Charges</u>			
Debt Service	\$2,179,500	(\$1,000)	\$2,178,500
Reserves and Coverage	\$77,607	\$223,437	\$301,044
Renewal & Replacement	\$100,000	\$0	\$100,000
Infrastructure Replacement	\$5,400,000	\$0	\$5,400,000
Meter Replacement	\$0	\$2,000,000	\$2,000,000
CIP	\$0	\$1,753,819	\$1,753,819
Payroll Taxes	\$154,417	\$21,204	\$175,621
PILOT	<u>\$23,123</u>	<u>\$0</u>	<u>\$23,123</u>
Total Fixed	\$7,934,647	\$3,997,459	\$11,932,106
<u>Operating Revenue</u>	<u>\$583,313</u>	<u>(\$238,683)</u>	<u>\$344,630</u>
<i>Total Expenses</i>	\$18,888,273	\$4,417,703	\$23,305,975

ALTERNATIVE PUBLIC FIRE CHARGES

Because of collection issues, The Authority is asking the Commission to consider allowing KCWA to charge all its customers a direct public fire charge similar to what is being done in Providence and Pawtucket where the municipalities have opted for this.

Total Public Fire Allocation (Rebut. Sch. 4 \$2,326,203

Meter Demand Equivalents (Rebut. Sch. 4 40,701

Cost/Equivalent \$57.15 /yr
 \$14.29 /qurt
 \$4.76 /month

TOTAL PUBLIC FIRE CHARGES (to be added to service charges)

<u>METER SIZE (IN)</u>	<u>DEMAND EQUIVS (1)</u>	<u>QUARTRLY CHARGE</u>	<u>MONTHLY CHARGE</u>	<u>ANNUAL REVENUE</u>
5/8 & 3/4	1.00	\$14.29	\$4.77	\$1,262,379
1	1.67	\$23.82	\$7.94	\$347,867
1 1/2	3.33	\$47.63	\$15.88	\$63,444
2	5.33	\$76.21	\$25.41	\$155,469
3	10.67	\$152.41	\$50.81	\$7,316
4	16.67	\$238.14	\$79.38	\$87,636
6	33.33	\$476.28	\$158.76	\$182,892
>8	53.33	\$762.05	\$254.02	<u>\$219,471</u>
				\$2,326,472

(1) See Rebut. Sch. 5D

COMPARISON OF ALTERNATIVE FIRE CHARGES TO CURRENT RATES

		<u>Current</u>	<u>Proposed</u>	<u>\$ Change</u>	<u>% Change</u>
<u>METERED RATES</u>					
	Small (5/8-2" meters)	\$5.254	\$5.690	\$0.436	8.30%
	Medium (3&4" meters)	\$4.476	\$4.536	\$0.060	1.34%
	Large (6" & up meters)	\$3.816	\$4.143	\$0.327	8.57%
<u>SERVICE CHARGES PLUS NEW FIRE CHARGES</u>					
Quarterly	5/8 & 3/4	\$10.26	\$29.18	\$18.920	184.41%
	1	\$13.57	\$43.56	\$29.990	221.00%
	1 1/2	\$19.78	\$76.46	\$56.680	286.55%
	2	\$25.17	\$112.92	\$87.750	348.63%
	3	\$32.20	\$199.42	\$167.220	519.32%
	4	\$45.86	\$305.14	\$259.280	565.37%
	6	\$76.08	\$587.51	\$511.430	672.23%
	8 & up	\$126.66	\$950.24	\$823.580	650.23%
Monthly	5/8 & 3/4	\$7.51	\$15.62	\$8.110	107.99%
	1	\$8.61	\$20.41	\$11.800	137.05%
	1 1/2	\$10.67	\$31.38	\$20.710	194.10%
	2	\$12.47	\$43.53	\$31.060	249.08%
	3	\$14.82	\$72.37	\$57.550	388.33%
	4	\$19.37	\$107.60	\$88.230	455.50%
	6	\$29.44	\$201.73	\$172.290	585.22%
	8 & up	\$46.97	\$322.64	\$275.670	586.91%
<u>DEMAND SURCHARGE</u>					
Quarterly	5/8 & 3/4	\$0.00	\$3.06		
	1	\$0.00	\$5.13		
	1 1/2	\$0.00	\$10.23		
	2	\$0.00	\$16.38		
	3	\$0.00	\$32.76		
	4	\$0.00	\$51.18		
	6	\$0.00	\$102.36		
	8 & up	\$0.00	\$163.80		
Monthly	5/8 & 3/4	\$0.00	\$1.02		
	1	\$0.00	\$1.71		
	1 1/2	\$0.00	\$3.41		
	2	\$0.00	\$5.46		
	3	\$0.00	\$10.92		
	4	\$0.00	\$17.06		
	6	\$0.00	\$34.12		
	8 & up	\$0.00	\$54.60		

COMPARISON TO CURRENT RATES

<u>FIRE CHARGES</u>		<u>Current</u>	<u>Proposed</u>	<u>\$ Change</u>	<u>% Change</u>
<u>Fire Service (per quarter)</u>					
Public	/hydrant	\$139.33	\$0.00	(\$139.330)	-100.00%
	/bill	\$6.12	\$0.00	(\$6.120)	-100.00%
Private (per quarter)					
	4 in	\$55.69	\$94.11	\$38.420	68.99%
	6 in	\$150.09	\$256.56	\$106.470	70.94%
	8 in	\$312.94	\$536.75	\$223.810	71.52%
	10 in	\$557.88	\$958.21	\$400.330	71.76%
	12 in	\$897.35	\$1,542.34	\$644.990	71.88%
	hydrant	\$150.09	\$256.56	\$106.470	70.94%

IMPACT OF PROPOSED RATES

METER SIZE	QUARTERLY USE - CU FT	CURRENT RATES	PROPOSED		
			NEW BILL	\$ INCREASE	% INCREASE
Small					
5/8	1,500	\$89.07	\$117.59	\$28.52	32.0%
5/8	2,000	\$115.34	\$146.04	\$30.70	26.6%
5/8	2,500	\$141.61	\$174.49	\$32.88	23.2%
5/8	3,500	\$194.15	\$231.39	\$37.24	19.2%
5/8	4,000	\$220.42	\$259.84	\$39.42	17.9%
5/8	5,000	\$272.96	\$316.74	\$43.78	16.0%
5/8	6,000	\$325.50	\$373.64	\$48.14	14.8%
5/8	6,666	\$360.49	\$411.54	\$51.04	14.2%
5/8	8,000	\$430.58	\$487.44	\$56.86	13.2%
5/8	10,000	\$535.66	\$601.24	\$65.58	12.2%
5/8	12,000	\$640.74	\$715.04	\$74.30	11.6%
5/8	14,000	\$745.82	\$828.84	\$83.02	11.1%
5/8	15,000	\$798.36	\$885.74	\$87.38	10.9%
5/8	20,000	\$1,061.06	\$1,170.24	\$109.18	10.3%
5/8	25,000	\$1,323.76	\$1,454.74	\$130.98	9.9%
1	30,000	\$1,589.77	\$1,755.69	\$165.92	10.4%
1	40,000	\$2,115.17	\$2,324.69	\$209.52	9.9%
1	46,666	\$2,465.40	\$2,703.99	\$238.58	9.7%
1	75,000	\$3,954.07	\$4,316.19	\$362.12	9.2%
2	100,000	\$5,279.17	\$5,819.30	\$540.13	10.2%
2	200,000	\$10,533.17	\$11,509.30	\$976.13	9.3%
2	300,000	\$15,787.17	\$17,199.30	\$1,412.13	8.9%
2	400,000	\$21,041.17	\$22,889.30	\$1,848.13	8.8%
2	600,000	\$31,549.17	\$34,269.30	\$2,720.13	8.6%
Medium					
3	200,000	\$8,984.20	\$9,304.18	\$319.98	3.6%
3	400,000	\$17,936.20	\$18,376.18	\$439.98	2.5%
3	600,000	\$26,888.20	\$27,448.18	\$559.98	2.1%
4	800,000	\$35,853.86	\$36,644.32	\$790.46	2.2%
4	1,000,000	\$44,805.86	\$45,716.32	\$910.46	2.0%
4	1,200,000	\$53,757.86	\$54,788.32	\$1,030.46	1.9%
Large					
6	400,000	\$15,340.08	\$17,261.87	\$1,921.79	12.5%
6	600,000	\$22,972.08	\$25,547.87	\$2,575.79	11.2%
6	800,000	\$30,604.08	\$33,833.87	\$3,229.79	10.6%
6	1,200,000	\$45,868.08	\$50,405.87	\$4,537.79	9.9%
6	1,333,333	\$50,956.07	\$55,929.86	\$4,973.79	9.8%
8	2,000,000	\$76,446.66	\$83,974.04	\$7,527.38	9.8%
8	5,000,000	\$190,926.66	\$208,264.04	\$17,337.38	9.1%
8	10,000,000	\$381,726.66	\$415,414.04	\$33,687.38	8.8%
Municipal Fire Service	400 hydrants	\$55,738.12	\$0.00	(\$55,738.12)	-100.0%
Private Fire Service	6 Inch Service	\$150.09	\$256.56	\$106.47	70.9%

REVENUE RECONCILIATION

Service Charge Plus Fire 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	88,320	\$10.26	\$906,163	\$29.18	\$2,577,178
1	14,600	\$13.57	\$198,122	\$43.56	\$635,976
1 1/2	1,296	\$19.78	\$25,635	\$76.46	\$99,092
2	2,008	\$25.17	\$50,541	\$112.92	\$226,743
3	44	\$32.20	\$1,417	\$199.42	\$8,774
4	356	\$45.86	\$16,326	\$305.14	\$108,630
6	356	\$76.08	\$27,084	\$587.51	\$209,154
8 & up	268	\$126.66	\$33,945	\$950.24	\$254,664
<u>Monthly</u>					
5/8 & 3/4	60	\$7.51	\$451	\$15.62	\$937
1	12	\$8.61	\$103	\$20.41	\$245
1 1/2	108	\$10.67	\$1,152	\$31.38	\$3,389
2	96	\$12.47	\$1,197	\$43.53	\$4,179
3	12	\$14.82	\$178	\$72.37	\$868
4	36	\$19.37	\$697	\$107.60	\$3,874
6	84	\$29.44	\$2,473	\$201.73	\$16,945
8 & up	60	\$46.97	\$2,818	\$322.64	\$19,358
Demand Surcharge:					
<u>Quarterly</u>	<u>Number</u>	<u>Rate</u>	<u>Revenue</u>	<u>Rate</u>	<u>Revenue</u>
5/8 & 3/4	88,320	\$0.00	\$0	\$3.06	\$270,259
1	14,600	\$0.00	\$0	\$5.13	\$74,898
1 1/2	1,296	\$0.00	\$0	\$10.23	\$13,258
2	2,008	\$0.00	\$0	\$16.38	\$32,891
3	44	\$0.00	\$0	\$32.76	\$1,441
4	356	\$0.00	\$0	\$51.18	\$18,220
6	356	\$0.00	\$0	\$102.36	\$36,440
8 & up	268	\$0.00	\$0	\$163.80	\$43,898
<u>Monthly</u>					
5/8 & 3/4	60	\$0.00	\$0	\$1.02	\$61
1	12	\$0.00	\$0	\$1.71	\$21
1 1/2	108	\$0.00	\$0	\$3.41	\$368
2	96	\$0.00	\$0	\$5.46	\$524
3	12	\$0.00	\$0	\$10.92	\$131
4	36	\$0.00	\$0	\$17.06	\$614
6	84	\$0.00	\$0	\$34.12	\$2,866
8 & up	60	\$0.00	\$0	\$54.60	\$3,276

REVENUE RECONCILIATION

		<----- Current ----->		<----- Proposed ----->	
	<u>Number</u>	<u>Rate</u>	<u>Revenue</u>	<u>Rate</u>	<u>Revenue</u>
Consumption Charge:	100/cu.ft.				
Proposed					
Small (5/8-2" meters)	2,939,584	\$5.25	\$15,444,574	\$5.69	\$16,726,233
Medium (3&4" meters)	66,721	\$4.48	\$298,644	\$4.54	\$302,648
Large (6" & up meters)	242,389	\$3.82	\$924,957	\$4.14	\$1,004,219
Fire Protection:					
Public Hydrants	2,357	\$557.32	\$1,313,603	\$0.00	\$0
# bills	32	\$6.12	\$196	\$0.00	\$0
Private Fire Protection					
4 in	16	\$222.76	\$3,564	\$376.44	\$6,023
6 in	95	\$600.36	\$57,034	\$1,026.24	\$97,493
8 in	16	\$1,251.76	\$20,028	\$2,147.00	\$34,352
10 in	1	\$2,231.52	\$2,232	\$3,832.84	\$3,833
12 in	1	\$3,589.40	\$3,589	\$6,169.36	\$6,169
hydrant	122	\$600.36	\$73,244	\$1,026.24	\$125,201
			=====		=====
Total			\$19,409,970		\$22,975,345
Plus: Misc Revenues			\$330,651		\$330,651
			=====		=====
Pro Forma Revenue			\$19,740,621		\$23,305,996
Required Revenue			\$23,305,975		\$23,305,975
Difference			-3,565,355		\$21
					0.00%
Increase in Revenues					\$3,565,376
Increase in Rate Revenues					\$3,565,376
Percent Increase in Total Revenues					18.06%
Percent increase in Rate Revenues					18.37%

PROPOSED STEP INCREASES

<u>YEAR 1 - FY 2018</u>		
Rate Year (FY 2017) Revenue Requirements =		\$22,975,325
Step Increases for 2018		
New Debt (see Rebut. Sch. 1D)	\$	4,750
Salaries (full yr) (See Rebut. Sch. 1C)	\$	45,914
Inflation (non-labor O&M)	\$	269,176
Additional Benefits	\$	136,528
Additional Meter Program Costs	\$	-
Additional CIP Costs	\$	-
IFR Increase	\$	533,333
Rev. Stabiliz @ 1.5%	\$	14,846
	\$	1,004,547
FY 2018 Revenue Requirement =		\$23,979,871
Proposed Step Increase for FY 2018		4.37%

<u>YEAR 2 - FY 2019</u>		
FY 2018 Revenue Requirement (above) =		\$23,979,871
Step Increases for 2019		
New Debt (see Rebut. Rebut. Sch. 1)	\$	500
Salaries (2.0% Increase from FY 2018)	\$	46,832
Inflation (non-labor O&M)	\$	269,176
Additional Benefits	\$	19,803
Additional Meter Program Costs	\$	600,000
Additional CIP Costs	\$	-
IFR Increase	\$	533,333
Rev. Stabiliz @ 1.5%	\$	22,045
	\$	1,491,689
FY 2019 Revenue Requirement =		\$25,471,561
Proposed Step Increase for FY 2019		6.22%

PROPOSED STEP RATES

	<u>Current</u>	<u>Proposed</u> <u>(FY2017)</u>	<u>Step Increase (FY</u> <u>2018)</u>	<u>Step Increase (FY</u> <u>19)</u>
Metered Rates				
Small (5/8-2" meters)	\$5.254	\$5.690	\$5.939	\$6.308
Medium (3&4" meters)	\$4.476	\$4.536	\$4.734	\$5.029
Large (6" & up meters)	\$3.816	\$4.143	\$4.324	\$4.593
Service Charges				
<u>Quarterly</u>				
5/8 & 3/4	\$10.26	\$14.89	\$15.54	\$16.51
1	\$13.57	\$19.74	\$20.60	\$21.88
1 1/2	\$19.78	\$28.83	\$30.09	\$31.96
2	\$25.17	\$36.71	\$38.32	\$40.70
3	\$32.20	\$47.01	\$49.07	\$52.12
4	\$45.86	\$67.00	\$69.93	\$74.28
6	\$76.08	\$111.23	\$116.09	\$123.31
8 & up	\$126.66	\$188.19	\$196.42	\$208.64
<u>Monthly</u>				
5/8 & 3/4	\$7.51	\$10.85	\$11.32	\$12.03
1	\$8.61	\$12.47	\$13.02	\$13.82
1 1/2	\$10.67	\$15.50	\$16.18	\$17.18
2	\$12.47	\$18.12	\$18.91	\$20.09
3	\$14.82	\$21.56	\$22.50	\$23.90
4	\$19.37	\$28.22	\$29.45	\$31.29
6	\$29.44	\$42.97	\$44.85	\$47.64
8 & up	\$46.97	\$68.62	\$71.62	\$76.08
Demand Charges				
<u>Quarterly</u>				
5/8 & 3/4	\$0.00	\$3.06	\$3.19	\$3.39
1	\$0.00	\$5.13	\$5.35	\$5.69
1 1/2	\$0.00	\$10.23	\$10.68	\$11.34
2	\$0.00	\$16.38	\$17.10	\$18.16
3	\$0.00	\$32.76	\$34.19	\$36.32
4	\$0.00	\$51.18	\$53.42	\$56.74
6	\$0.00	\$102.36	\$106.84	\$113.48
8 & up	\$0.00	\$163.80	\$170.96	\$181.60
<u>Monthly</u>				
5/8 & 3/4	\$0.00	\$1.02	\$1.06	\$1.13
1	\$0.00	\$1.71	\$1.78	\$1.90
1 1/2	\$0.00	\$3.41	\$3.56	\$3.78
2	\$0.00	\$5.46	\$5.70	\$6.05
3	\$0.00	\$10.92	\$11.40	\$12.11
4	\$0.00	\$17.06	\$17.81	\$18.91
6	\$0.00	\$34.12	\$35.61	\$37.83
8 & up	\$0.00	\$54.60	\$56.99	\$60.53
Fire Service				
Public \$/hydrant/quarter	\$139.33	\$246.73	\$257.52	\$273.54
\$/bill	\$6.12	\$8.83	\$9.22	\$9.79
Private (\$/quarter)				
4 in	\$55.69	\$94.11	\$98.22	\$104.33
6 in	\$150.09	\$256.56	\$267.78	\$284.43
8 in	\$312.94	\$536.75	\$560.22	\$595.07
10 in	\$557.88	\$958.21	\$1,000.11	\$1,062.32
12 in	\$897.35	\$1,542.34	\$1,609.78	\$1,709.91
hydrant	\$150.09	\$256.56	\$267.78	\$284.43

PROPOSED STEP RATES - ALT. FIRE CHARGES

	<u>Current</u>	<u>Proposed</u> <u>(FY2017)</u>	<u>Step Increase (FY</u> <u>2018)</u>	<u>Step Increase (FY</u> <u>19)</u>
Metered Rates				
Small (5/8-2" meters)	\$5.254	\$5.690	\$5.94	\$6.31
Medium (3&4" meters)	\$4.476	\$4.536	\$4.73	\$5.03
Large (6" & up meters)	\$3.816	\$4.143	\$4.32	\$4.59
Service Charges (including Public Fire Charges)				
Quarterly				
5/8 & 3/4	\$10.260	\$29.18	\$30.46	\$32.35
1	\$13.570	\$43.56	\$45.46	\$48.29
1 1/2	\$19.780	\$76.46	\$79.80	\$84.77
2	\$25.170	\$112.92	\$117.86	\$125.19
3	\$32.200	\$199.42	\$208.14	\$221.09
4	\$45.860	\$305.14	\$318.48	\$338.29
6	\$76.080	\$587.51	\$613.20	\$651.34
8 & up	\$126.660	\$950.24	\$991.79	\$1,053.48
Monthly				
5/8 & 3/4	\$7.510	\$15.62	\$16.30	\$17.32
1	\$8.610	\$20.41	\$21.30	\$22.63
1 1/2	\$10.670	\$31.38	\$32.75	\$34.79
2	\$12.470	\$43.53	\$45.43	\$48.26
3	\$14.820	\$72.37	\$75.53	\$80.23
4	\$19.370	\$107.60	\$112.30	\$119.29
6	\$29.440	\$201.73	\$210.55	\$223.65
8 & up	\$46.970	\$322.64	\$336.75	\$357.69
Demand Charges				
Quarterly				
5/8 & 3/4	\$0.000	\$3.06	\$3.19	\$3.39
1	\$0.000	\$5.13	\$5.35	\$5.69
1 1/2	\$0.000	\$10.23	\$10.68	\$11.34
2	\$0.000	\$16.38	\$17.10	\$18.16
3	\$0.000	\$32.76	\$34.19	\$36.32
4	\$0.000	\$51.18	\$53.42	\$56.74
6	\$0.000	\$102.36	\$106.84	\$113.48
8 & up	\$0.000	\$163.80	\$170.96	\$181.60
Monthly				
5/8 & 3/4	\$0.000	\$1.02	\$1.06	\$1.13
1	\$0.000	\$1.71	\$1.78	\$1.90
1 1/2	\$0.000	\$3.41	\$3.56	\$3.78
2	\$0.000	\$5.46	\$5.70	\$6.05
3	\$0.000	\$10.92	\$11.40	\$12.11
4	\$0.000	\$17.06	\$17.81	\$18.91
6	\$0.000	\$34.12	\$35.61	\$37.83
8 & up	\$0.000	\$54.60	\$56.99	\$60.53
Private (\$/quarter)				
4 in	\$55.690	\$94.11	\$98.22	\$104.33
6 in	\$150.090	\$256.56	\$267.78	\$284.43
8 in	\$312.940	\$536.75	\$560.22	\$595.07
10 in	\$557.880	\$958.21	\$1,000.11	\$1,062.32
12 in	\$897.350	\$1,542.34	\$1,609.78	\$1,709.91
hydrant	\$150.090	\$256.56	\$267.78	\$284.43