RHODE ISLAND PUBLIC UTILITIES COMMISSION

DOCKET NO. ____

PAWTUCKET WATER SUPPLY BOARD

PREFILED TESTIMONY OF

CHRISTOPHER P.N. WOODCOCK

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Q: Please state your name and business address?

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

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

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

Prior Experience

Q: Please describe your qualifications and experience.

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

rience I have also held elected and appointed positions on municipal boards overseeing public works functions.

Q: Have your previously testified before state regulatory commissions or courts on rate related matters?

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

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

A: Yes, I am a member of the Water Environment Federation, the Rhode Island Water Works Association, the Massachusetts Water Works Association, the New England Water Works Association, and the American Water Works Association. For the Water Environment Federation, I was a member of the committee that prepared their manual on Wastewater Rates and Financing. For the New England Water Association, I am past chairman and a current member of the Financial Management Committee. In my capacity as Vice President for the New England Water Works Association I also sit on the Executive Committee and the Board of Directors as well as chairing and sitting on a number of other administrative committees. For the American Water Works Association, I am past chairman of the Financial Management Committee and the Rates and Charges Committee that has prepared the manuals on Revenue Requirements, Water Rates, Alternative Rate Structures, and Water Rates and Related Charges. I have been reappointed to and am currently a member of the Rates & Charges Committee.

Q: What is your role in this proceeding?

A: Working with the PWSB staff and its other consultants and advisors, I have prepared a summary of the requested rate year revenue requirements. The Public Utility Commission's Order in Docket 3497 stated: "The Commission orders PWSB to file a full cost of service study and rate design recommendation with its next full rate case, taking into account any differences between PWSB retail customers and Central Falls retail customers, including any avoided maintenance costs or any additional maintenance costs that may be required after a purchase of the system." In a subsequent docket I presented the cost of service study and rate design ordered by the Commission. Since the last docket, PWSB has completed the transfer and ownership of the Central Falls system. I have updated that study and believe it generally complies with the Commission's findings in Pawtucket's prior dockets as well as the requirements found under Commission Docket 2049 – the 1993 Water Task Force Report on Cost of Service Study Methodology. As I will explain later, I have proposed several modifications, including a change to minimize a major increase to the service charges.

Summary

Q: Will you summarize your findings and conclusions?

A: Pawtucket Water's rate year revenue requirement is $20,938,109. Revenues at current rates will provide revenues of $16,308,246. Additional miscellaneous revenues and use of funds in the stabilization fund will provide an additional $1,520,476 for total revenues of 17,828,722 As a result; the PWSB needs to increase its revenues by $3,109,387, or 17.4%. Excluding the miscellaneous revenues and proposed use of fund balances, PWSB needs to increase its water raters and charges by 19.1%. Based on the cost allocation study included in this filing, the proposed rates and charges change by varying amounts.

Q: Now that Pawtucket has purchased and has responsibility for the maintenance of the Central Falls system, do you believe there are any differences between the Central Falls and other retail customers?

A: Pawtucket believes that the Central Falls system has not received adequate maintenance in recent years and as a result, that system may require more work than others parts of the retail system. However, as the Commission is aware, Pawtucket is in the midst of a capital improvement program that includes replacement or rehabilitation of most of the distribution network. This will now apply to the Central Falls system as well. As a result, Pawtucket does not believe that the customers in Central Falls should be treated any differently for rate purposes than other retail customers; they are all part of the same system now and will all benefit in some way or another from the system improvements that will take place over the coming years.

I should also note that in its order in Docket 3497 the Commission stated: "(T)he Commission finds that Central Falls retail customers have sufficient similarities to other retail customers to pay the same rates as other retail customers. The Commission finds that the rates are not discriminatory."

Q: Are there any avoided or additional maintenance costs associated with the Central Falls system?

A: As discussed in Mr. DeCelle's prefiled testimony, Pawtucket expects that there will indeed be additional maintenance costs associated with the assumption of the Central Falls system. While there may be additional costs in Central Falls the next few years, in subsequent years there may be additional costs elsewhere. Again, Pawtucket does not propose to charge different rates to the Central Falls customers. Pawtucket does not believe that its rates should revolve around areas where it may happen to have more concentrated work in any one or few years. Over time, it is expected that additional work will impact all customers.

Content of Schedules

Q: Please describe the schedules included with your prefiled direct testimony.

A: There are 11 main schedules, several of which include supporting schedules. I have tried to use the same schedules and numbering as used in our prior dockets to make comparisons easier. The schedules included in this filing are:

- **CPNW Schedule 1.0** This schedule presents the test year (FY 2007) along with the adjustments that were used to derive the rate year (CY 2009) revenue requirements. The test year expenses match the Adjusted Test Year amounts presented in Mr. Bebyn's Schedule DGB-1. A number of the test year adjustments are provided in the schedules included with Mr. Benson's testimony. As described later, I have also made several adjustments. Most line items include adjustments from the test year to the rate year with notations as to which supporting schedule includes the explanation for the adjustment. Attached to Schedule 1.0 is a supporting schedule that supports the requested increase.
  - **CPNW Schedule 1.1.** This schedule provides the explanation for many of the individual adjustments to the test year expenses.
- **CPNW Schedule 2.0** This schedule presents the units of service including the number of meters by size and billing frequency, the number of private and public fire services by size of connection, and the retail and wholesale water sales. The miles of each size pipe are also presented – this is used to allocate transmission and distribution costs between retail and wholesale service and to derive the allocation of unmetered sales (unaccounted for water).
  - **CPNW Schedule 2.1** This schedule presents the historic water sales and shows the variations from year to year as well as the downward trend in sales.
  - **CPNW Schedule 2.2** This schedule presents the derivation of the base, maximum day, and peak hour use by meter size that is

used to allocate costs to the various rate classes. This also shows the historic production, sales and unaccounted for water for the system.

- **CPNW Schedule 3.0** presents the allocation of the rate year costs to various cost of service components. These are the same components and format used in the last two full rate filings. Schedule 3 also has several supporting schedules.
  - **CPNW Schedule 3.1** This schedule presents the allocation of the Pawtucket Water assets. It is based on the FY 2007 net assets (gross asset value less accumulated depreciation through the test year) plus the Construction Work in Process (CWIP). This is used to allocate many of the capital items.
  - **CPNW Schedule 3.2** This schedule presents the allocation of non-administrative labor costs. It is used to allocate labor related items that can not be allocated directly.
  - **CPNW Schedule 3.3** This shows the allocation of the costs from Schedule 3 to Fire Protection, Wholesale Service, and Retail Service. These values are used in later schedules to derive the proposed rates. This schedule also presents the allocation of the unaccounted for water to various classes.
  - **CPNW Schedule 3.4** contains an explanation for each of the symbols or allocators that were used in the prior schedules.
- **CPNW Schedule 4.0** summarizes the proposed fire protection charges.
  - **CPNW Schedule 4.1** presents the allocation of total fire service expenses (from Schedule 3.3) to Public Fire Service and to Private Fire Service.
  - **CPNW Schedule 4.2** shows the calculation of the proposed public and private fire protection charges.

- **CPNW Schedule 5.0** summarizes the proposed service charges and shows their derivation.
- **CPNW Schedule 6.0** presents the allocation of general water costs (metered rates) to the various customer classes.
- **CPNW Schedule 7.0** presents the calculation and summary of the proposed retail and wholesale metered rates for each rate class.
- **CPNW Schedule 8.0** presents a summary of the current rates and the proposed rates derived from the cost of service study, including the percentage change to each.
- **CPNW Schedule 9.0** This schedule presents the impact of the proposed rates and charges on various types of customers.
- **CPNW Schedule 10.0** This schedule contains the proof of revenues, showing the annual revenues under the existing and proposed rates. Because the rates are rounded to the nearest penny, the proposed rates provide slightly different total revenues from those required.
- **CPNW Schedule 11.0** This schedule is a summary of the test year and rate year revenues and expenses. The test year revenues are those derived from Schedule 10.0; that is the revenues at the current rates with the rate year usages.

Revenue Requirements

Q: What is the rate year proposed in this proceeding?

A: The proposed rate year is calendar year 2009. It is hoped that these proceedings can be concluded prior to December 31, 2008 and that new rates will be effective prior to January 1, 2009. However, because of the lag in billing, it is expected that full revenues at the proposed rates will not start to be received until after January 1, 2009.

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

A: Yes I have. CPNW Sch 1.0 presents a summary of the test year expenses, our proposed adjustments, and the proposed rate year revenue requirements. Mr. Benson has provided testimony and exhibits supporting many of the test year adjustments. I have presented others in CPNW Sch. 1.1.

Q: Can you discuss the adjustments presented in your schedule 1.1?

A: Yes. The first set of adjustments in my schedules relate to capital items.

- The first item I have presented is the property tax expenses. I have presented the test year property tax payments by functional category; the totals match those presented by Mr. Bebyn. In each case I have increased the FY 2007 amounts by 3.5% per year for 2 ½ years. The mid-point of the test year is January 1, 2007; the mid-point of the rate year is July 1, 2009; that is 2 ½ years.
- The next capital item is the debt service. On CPNW Sch. 1.1 I have shown the annual debt service requirements for FY 2008 – FY 2010 for the existing revenue bonds, proposed revenue bonds, and existing general obligation debt that remains. We have proposed using the FY 2010 debt.

Q: It appears that the existing debt increases by almost $2.3 million in FY 2009. Is this part of the reason Pawtucket Water needs an increase?

A: As shown on my Schedule 1.1, the existing debt service increases from just over $4.3 million to nearly $6.7 million in FY 2009. The principal payment on the 2004 Series A bonds increases from $800,000 to $1,900,000 and the first principal payment ($1,173,000) is due on the 2005 Series A bonds in FY 2009. Much of the increase in the revenue requirements is due to payments coming due on bonds that have already been issued. However, as discussed by Mr. Benson, we are not seeking an increase in the prior allowance for debt service; rather, we propose to use ex-

isting funds in the debt service rate stabilization fund (funds restricted for debt by the Commission in prior dockets) to offset the increase in debt.

Q: Please explain why you propose to use the FY 2010 debt requirement (July 1 2009 – June 30, 2010) when the rate year is calendar year 2009.

A: Under its bond indenture, Pawtucket Water is required to make monthly deposits to its debt service fund each month in order to have sufficient funds in the debt service fund to make the payments that are due to investors every six months. In effect, Pawtucket Water must start prefunding its debt payments six months before they are due. The largest payments are due in September of each year, right at the start of the fiscal year. By using the FY 2010 debt payments, Pawtucket Water will raise sufficient funds in the rate year to make the September 2009 (FY 2010) debt payments. I might further add that the amounts associated with debt service have historically been restricted by the Commission. We do not oppose this and expect that the allowance in this case will continue to be restricted for debt service.

Q: You indicated that you plan to use existing funds from the debt service stabilization fund to offset some of the debt increase. Can you explain how?

A: Yes. As shown on CPNW Sch. 1, page 4 of 4, I have included a revenue offset item labeled “Available Funds for Debt”. As presented on CPNW Sch. 1.1, we are proposing to use $952,529 from the debt service stabilization fund to reduce the amount needed to be raised from debt. This is used as a direct reduction to the revenues required from rates, and lowers the amount we are requesting in the docket.

Q: Please continue with your explanation of adjustments in CPNW Sch. 1.1.

A: The last capital items relate to trustee fees, lease purchase payments, IFR funding, and deposits to the O&M reserve fund.

- Pawtucket Water pays trustee fees to the RI Clean Water Finance Agency for the bonds that it has financed through this agency. They are the most significant

trustee fees. The other trustee fees are amounts paid to bank trustees, attorneys and an arbitrage service. Under the trust indenture, many of the funds are actually held by a bank trustee. The past fees for these services are shown on the schedule along with the rate year estimates.

- The fourth capital item is the vehicle lease purchases. CPNW Sch. 1.1 shows the payments that are due on these leases – that are the same amount each year.
- The fifth capital item is the funding for the IFR program. Pawtucket Water is not requesting an increase at this time and is proposing to continue to use $3.1 million per year for IFR funding.
- The final capital item is the required deposits to the O&M reserve fund. This is a trustee held fund required by the trust indenture. On the last day of the fiscal year, Pawtucket Water is required to have on deposit in its O&M reserve fund an amount that is equal to 25% of its operating budget for that year. In general, each month a deposit is required that equals 1/12 of 25% of the Pawtucket Water Supply Board's O&M budget. The amount presented on CPNW Sch. 1.1 is the difference between the amount required at the end of the rate year (25% of the rate year O&M costs) and the amount expected to be on deposit at the start of the rate year.

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

A: The O&M Reserve must be equal to 25% of Pawtucket's O&M ***budget*** by the end of each fiscal year. Because the PWSB's fiscal year does not coincide with the rate year (a calendar year), the actual requirement will be different and Pawtucket must fund the reserve at the levels required in its bond indenture. Recognizing the Commission's role in providing an allowed revenue requirement, we have asked for an allowance that is equal to 25% of the requested (rate year) operating costs. If Pawtucket's FY 2010 (starts half way through the proposed rate year) O&M budget

exceeds the amount provided in this docket, they must none-the-less fund the O&M Reserve at that higher level.

Q: Have you provided other non-capital adjustments to the test year expenses?

A: Yes I have.

- Pawtucket Water's new treatment facility is operating under contract by a private operating firm. The agreement with the operator calls for increases each year based on the increase to the Consumer Price Index (CPI). I have taken the test year cost for the new plant for the period February 2007 through February 2008 and increased it for inflation for two years. We are proposing to use the cost for February 2009 - February 2010 for the rate year. Although this is one month removed from the start of the rate year, I believe it is the appropriate value to use to account for the lag in billing new rates and the receipt of revenues from January 1, 2009.
- There are a number of items noted in CPNW Sch. 1.0 that have been increased for inflation. In these cases I have used an annual inflation rate of 3.32%. This is the four year average increase for calendar year 2003 through calendar year 2007, using the Northeast urban CPI rate as published by the US Department of Labor. For items associated with energy or utility costs, I have increased them at twice the normal inflation rate to account for the rapidly growing increases in energy costs.
- I have shown a separate calculation of the costs associated with police details. Pawtucket Water must pay for police details when traffic may be disrupted or for public safety reasons. I have shown the actual costs for the seven months ending January 31, 2008 as the most recent available. I have broken these down by community to show the high cost for Central Falls where they are requiring police details at greater levels than Pawtucket Water normally sees. This is addressed in Mr. Benson's testimony.
- The cost of power is passed through directly to PWSB and not covered under the treatment operating contract. As Mr. DeCelles can further explain, Pawtucket

Water gets power through the League of Cities and Towns. The contract for power is expiring shortly, and Pawtucket Water has been told to expect a doubling of the current rate. As shown on CPNW Sch. 1.1, PWSB has broken down the power costs between delivery and supply for the past 6 months. We have not factored in any increase on the delivery portion, but have shown the doubling of the supply related power costs.

- I have also included an adjustment for Regulatory Commission expenses and the amortization of rate case expenses. In the case of the regulatory expenses I have used the FY 2008 cost as a base and increased it for inflation for 1½ years. For rate case expenses we estimate that the cost to Pawtucket Water for this docket will be $200,000. Spread over a two year amortization period, the annual cost will be $100,000 for an increase over the test year of $16,567. We will be glad to update this item for actual costs as the docket reaches a conclusion.

Q: Why have you proposed to amortize the rate case expenses over two years?

A: As the record will show, Pawtucket has been before the Commission rather frequently with rate requests. The recent history has been:

- This Docket Approx 3/08
- Docket 3674: 4/11/05
- Docket 3593: 2/23/04
- Docket 3497: 2/28/03
- Docket 3378: 8/2/01
- Docket 3164: 6/30/00

This filing is the 6th such rate filing in eight years. The Commission typically spreads rate case expenses over several years to reflect a normal level of expenses. In the case of Pawtucket, the normal period has clearly been less than two years. Using a two year amortization period seems to be more than a reasonable request given this history.

Q: Can you explain why you are making no claims for the Calgon Royalties and Central Falls Franchise Fee accounts?

A: These are two restricted accounts that were established by the Commission in prior dockets. Neither of these accounts is needed anymore and we asked that the accounts and associated restrictions be eliminated with this case.

Operating Revenue Allowance

Q: What level is Pawtucket Water requesting for an Operating Revenue Allowance?

A: As with the last case we are asking for a 5% allowance on total rate revenues (excludes miscellaneous revenues). We are asking that this be split up with 1.5% as unrestricted and the remaining 3.5% restricted for use in cases where revenues have fallen short of expectations. In this later situation, we propose that Pawtucket Water make a filing with the Commission to use the funds when circumstances so dictate, and that the Commission rule on such requests within 60 days.

We recognize that this was disallowed in Docket No. 3674, but believe there are different circumstances.

- In the recent Newport Water rate filing (Docket No. 3818) the Commission indicated that a generic docket to review this issue would be opened. In the recent Providence Water Docket (Docket No. 3832) I had urged the Commission to use that docket in lieu of the generic docket. In the Report and Order in Docket No. 3832 the Commission provided a 3% Operating Revenue allowance with 1% unrestricted and 2% restricted to cover revenue shortfalls.
- In its decision the in the Providence docket, the Commission noted that water conservation is a priority in the state and with this comes reduced revenues while many costs remain fixed. The Commission went on to note how some water utilities in RI were experiencing “clear downward trends in water sales” while Provi-

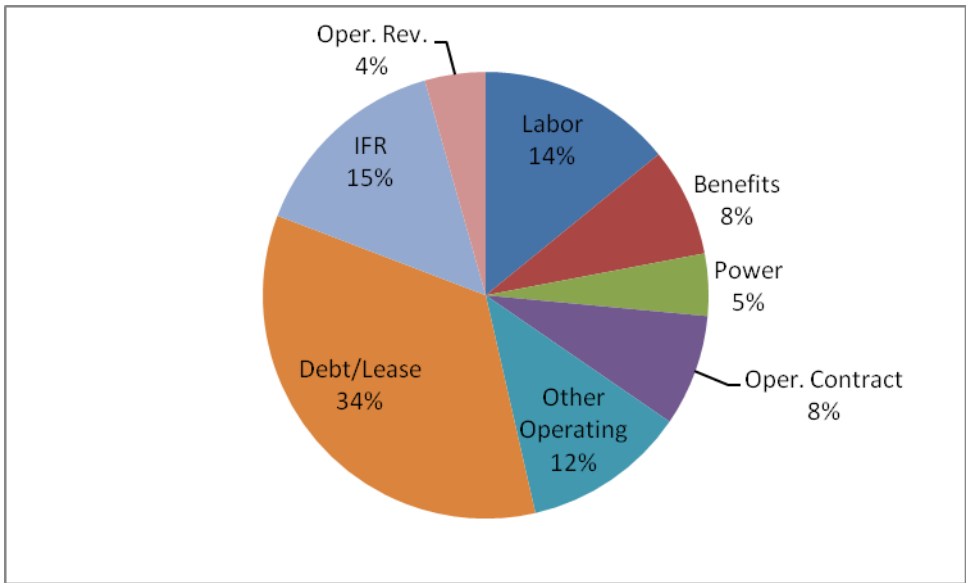
dence was experiencing fluctuations from year to year. In light of this decision I believe that Pawtucket is entitled to a 5% operating revenue allowance. I recognize that this is more than what was allowed in the Providence case; however Pawtucket is one of those utilities that are experiencing "clear downward trends in water sales". CPNW Sch. 2.1 shows that over the last four years that water sales have been dropping nearly 5% per year on average.

- In the Report and Order in Pawtucket's last rate filing (Docket No. 3674) the Commission said "However, even allowing a 5% operating reserve on total revenues and restricting 3.5% of it would be dangerous because of the way restricted accounts are funded under the Trust Indenture. Such an account would be the last to be funded and funds would not necessarily be there when needed." This may indeed be true for the unrestricted portion of the Operating Revenue Allowance, but I believe the trust indenture provides that PUC restricted accounts be funded. If the Commission restricts 3.5% for use only when revenues are short, then I believe this previous concern is addressed.
- In looking over historic records I can find no basis for the 1.5% allowance. I'm frankly unable to determine where it came from. I do know that it was derived based on the total revenue allowance until fairly recently however, and was still allowed as recently as Newport Water's last rate filing.
- The variability of an expense is not the only issue the Commission should examine. While it is true that debt service costs are indeed known with some degree of certainty, other costs are as well. Pawtucket now has a contract for operations. That contract is set with an allowance for inflation. Should that amount be removed from the calculation of the operating revenue allowance? And what about the labor costs? While not known exactly, they can be derived with a fair degree of certainty, especially if a contract is involved. Once established by the Commission – rate case expenses are also "known", so these too could be excluded. My point is that many operating costs are fairly well fixed; there is not a huge degree of uncertainty. If a 1.5% operating revenue allowance were only allowed to reflect the variability in expenses, it would be minimal.

- The greatest unknown is not expenses, but the sales of water and the resulting revenues. Looking at Schedule 2.1 one can see that over the past five years, Pawtucket's water sales have been consistently dropping. In the test year (FY 2007), sales were off by more than 6% from the four year average. Setting an operating revenue allowance in this case based on 1.5% of the operating costs provides an operating revenue allowance that is less than 0.8% of the total revenues. In only one year has the variation in sales been that low.

Q: Can you summarize the revenue requirements that are being requested?

A: I have depicted the various components on the request on the following chart. Capital items (debt service and IFR) are the largest components of the revenue requirements. Next are labor and other operating costs. The operating contract for the new treatment plant comprises 8% of the revenue requirements.



Water Use

Q: Over the past few years there has been considerable disagreement between water utilities and the Division over the best way to estimate water sales in the rate year. Often, utilities have presented cases of declining use while the Division has typically taken the position that an average of several years

should be used. What does Pawtucket propose to use for the rate year water sales in this docket?

A: This is presented in detail in Mr. Bebyn's exhibits DGB-3A. For cycles 1-6 (primarily residential accounts) we have used a four year average of consumption. Usage by these customers showed a slight upward trend in FY 05 and FY 06 then a drop in FY 07. In this case an average seemed appropriate. In the case of non-residential customers (cycles 7 and 11) we have used the FY 07 use. For these accounts there has been a noticeable downward trend in water use. The four year average would mask this trend and overstate what has clearly been a downward move in non-residential water use.

Q: In the last Docket the Division said we should not change from the Commission's historic use of a multiyear average unless there is a compelling reason – is there a compelling reason?

A: Yes, I believe there is. In a recent Kent County Water Authority Order the Commission noted that if a utility could demonstrate a clear downward trend in sales, then the Commission may depart from the typical multiyear averaging approach. I believe the historic data for the non-residential customers (cycles 7 and 11) does show this clear downward trend.

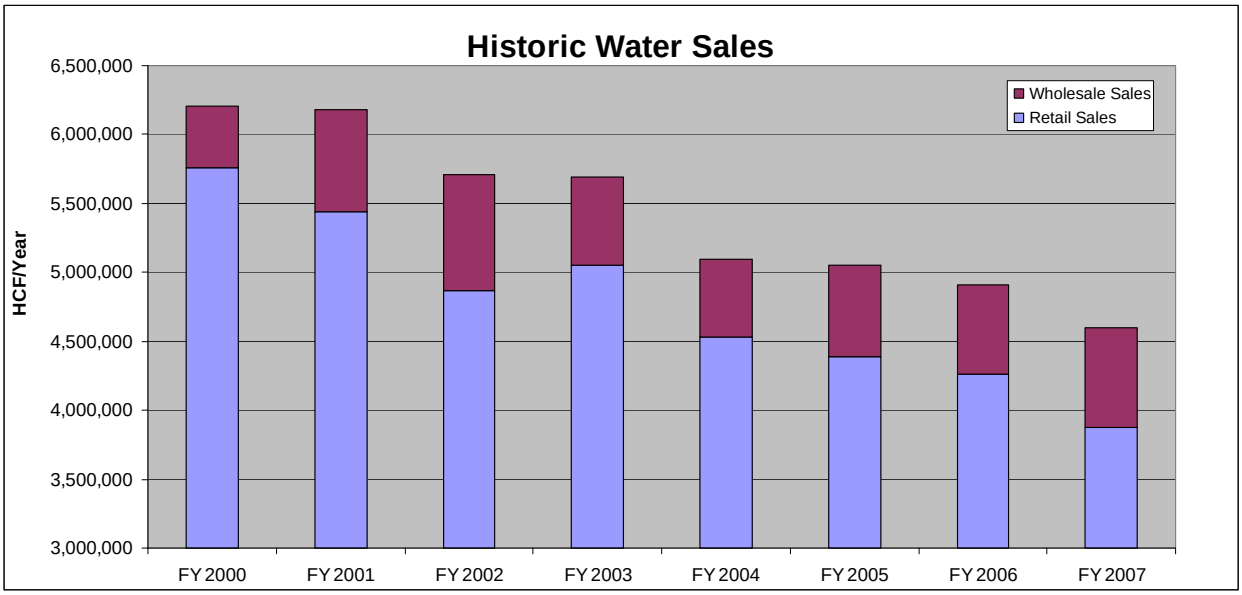
Simply averaging past water sales does not take into account trends. If water use is increasing at 4% per year the four year average will be exactly the same as consumption that started at the four year amount but drops 4% per year. This is illustrated in the following example.

Year 1	Year 2	Year 3	Year 4	Average
100	104	108	112	106
112	108	104	100	106

Clearly the trend in the first example shows annual increases in sales while decreasing sales are shown in the second example; yet sampling averaging the con-

sumption over four years gives the same result. This makes little practical sense. It is fairly evident that the year five sales will probably be higher than 112 in the first example and lower than 100 in the second example. The use of a multiyear average ignores these differences.

The following chart shows the historic water sales for Pawtucket Water. It is evident that sales are dropping. I think this is the compelling reason as to why a simple averaging should not be used in this case for the non-residential sales.



Q: In reviewing CPNW Sch. 3.3 I see that you are proposing to allocate the lost or unaccounted for water based on the miles of transmission vs. distribution pipe rather than the inch-miles of such pipe. Wasn't this matter brought up in the Providence Water Docket 3832?

A: Yes it was. As the Commission may recall, I had raised the idea in my direct testimony without any specifics and then in surrebuttal testimony with more specificity. I believe that allocating unaccounted for water based solely on the inch-miles of transmission vs. distribution pipe provides an incorrect result for several reasons.

1. Water that is used for fire fighting is not reflected in the inch-foot method at all. This is water that is used only in the retail distribution system and should only be

assigned to retail customers. Any water used for fire fighting by wholesale customers passes through the wholesale meter and is fully accounted for. Wholesale customers should not have to pay for water that is used for retail fire fighting. This was not addressed in the Commission's Report and Order in Docket 3832.

2. The inch-foot method used in past cases before the Commission has failed to include any accounting for water losses through customer service connections or pipes. These service pipes are subject to leaks and losses just like any other pipe but have been ignored in the past. Again referring to the recent Providence Water docket, the engineer for Providence Water was quite clear that service pipes are a significant source for leaks. It would be wrong to ignore the leaks from these retail pipes, yet leaving service connections out of the calculation of miles or inch-miles of pipe does just that – it ignores this significant source of unaccounted for water. I believe it is universally acknowledged that retail service pipes leak, yet they are not even included in the inch-foot method that was used in Providence Water. The issue of leaking service pipes was not addressed in the Commission's Report and Order in Docket 3832.
3. Lastly, the inch-foot method presumes that water losses not only are based on the length of pipe but also on the diameter of the pipe. There is no evidence to support this assumption. Going back 100 years, the accepted engineering judgment has always been that unavoidable water losses are in proportion to the length of pipe *not* the length times diameter; this was the basis for the Kuichling equation published in 1887. Over time it was recognized the density or number of service connections had an impact as well as the pressure of the water system. The International Water Association (IWA), with AWWA participation, developed a method "that is applicable worldwide for tabulating water use and loss." That method says that unavoidable annual real losses[1] (UARL) are proportional to the length of mains, number of service connections, length of private

service pipe, and pressure. No where does the formula take into consideration the diameter of pipes.

Q: Wasn't this information presented to the Commission in the Providence Water docket to consider?

A: It was only presented in limited form and late in the proceedings. Because this issue came up late (in surrebuttal) I don't believe the Commission or other parties were able to fully address the matter. Various peer review publications[2] address this matter and demonstrate that:

(1) pipe diameter is irrelevant in the determination of unavoidable annual real water losses ("leakage") and

(2) that service connections play a major role in these losses and should be considered.

Cost Allocations and Rate Design

Q: Have you prepared a cost allocation study?

A: Yes I have. Schedule 3.0 and its supporting schedules contain the cost allocation study. I have used the same *general* basis as the filing approved in Dockets 3378 and 3674. The revenue requirements and some basis have been updated to reflect more current information, but the basic structure is the same as that reviewed and accepted by the Division in the dockets since 2001 (Docket 3378).

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[1] The terms water losses, unaccounted for water, and non-revenue water are generally accepted as ambiguous and "only a very crude measure of true performance in managing water losses" (New England Water Works Association, Water Management Workshop, June 26, 2001, Lambert, Huntington & Brown)

[2] http://www.cuwcc.org/technical/bmp03/AWWA-Worldwide-BMPs-WaterLossControl-Aug2003.pdf

http://www.findmoreleaks.com/downloads/AOL_Paper_061.pdf

http://www.aquamedia.at/templates/index.cfm/id/17959

http://www.awwa.org/Resources/Content.cfm?ItemNumber=588

Q: Are you proposing a change in rate structure?

A: While I am not proposing any major change to the general structure of the rates, the changes to individual rates and charges vary by different percentages. There is one minor change to the rate *structure* that I recommend; that is the removal of the extra large rate class from the metered rates. While this removal was requested in the last docket[3], we failed to remove it from the tariff sheets. This class was essentially established for a single large user that had intervened in prior dockets. That customer's water use has been reduced substantially as a result of their movement of most jobs from Pawtucket. The extraordinary uses that justified a special class for that customer no longer exist, and I recommend that the class be eliminated.

Q: Are you proposing any revisions to the cost allocations?

A: Yes. While it does not impact the general structure of the tariffs, there is one change to the cost allocation process that I recommend. This has to do with the allocation of costs to the "metering"[4] portion of the service charges.

Prior to Docket 3378 the T&D operating costs were primarily allocated on the basis of investment in assets – plant value. In Docket 3378, the Division submitted a data request (Div 1-7) that asked for an analysis of time spent by employees of the T&D department. Based on this response and "informal follow-up" discovery, the Division recommended a revision of the T&D operating costs to 50% mains, 20% services, and 30% hydrants. On behalf of Pawtucket Water I accepted the Division's recommendations.

During the course of my analysis for this rate filing I asked Pawtucket Water to review the assignment of transmission and distribution labor. This had not been reviewed since PWSB embarked on its major capital improvement program in 2002. Based on the analysis of time spent by the T&D work crews over the past two years

[3] Was first recommended in Docket 3378.

it is apparent that there has been a significant shift in emphasis. The table below shows the shift.

	Docket 3378	Current
Mains	50%	13%
Hydrants	30%	9%
Services	20%	78%

Q: Can you explain this rather dramatic shift?

A: Not totally. However, when the initial allocation was developed it was based on information that was prior to the initiation of Pawtucket's main replacement program. The response to Division 1-7 in Docket 3378 actually indicated 20% of the time associated with "installing new services" and 20% with repair of services (40% total). It also showed 15% associated with installing new hydrants and 15% repairing hydrants (30% total). Since that time, Pawtucket's main replacement and relining program has meant less work is needed on fixing old pipes (they are being replaced) and more work is concentrated on the service connections to customers' properties. With the main replacement program it seems likely that installing hydrants may be done in conjunction with the main construction or rehabilitation. I have discussed this apparent shift with Mr. DeCelles. He reports that the system experiences most of leaks on service pipe connections, requiring crews to spend considerable time on service connections.

Q: What is the impact of this shift in emphasis?

A: Because the service charge recovers costs associated with metering and service lines, there has been a significant shift in costs onto the service charges. This is compounded by the fact that there are no longer labor costs associated with supply, pumping or treatment – all these functions are taken care of under the operating contract. As a result, Pawtucket's direct labor costs are concentrated in metering, service repairs, meter reading, billing and collection. This has added significant costs onto the customer service charge.

[4] Includes costs associated with meters and service pipes.

In addition, the lower allocation to hydrants has meant a reduction in the costs allocated to public fire hydrants.

Q: Do you have any suggestions on how to deal with this?

A: In part, this shift in cost allocations is a function of what PWSB is now vs. what they were in 2001. My initial cost allocation in this case, using the methods we have used in the past resulted in dramatic increases to the service charges; in general, increases of more than 170%. Because these increases were so dramatic, I have modified the cost allocation to remove all administrative and capital costs from the allocation to meters and services and to billing. As shown on CPNW Sch. 3.4 I have created three new allocators (E-M, L-M and P-M) for the allocation of administrative and capital costs. These allocators transfer the costs from the service charge to the consumption charge.

Q: Should the Commission be troubled by this proposed change in the allocations?

A: No I don't think so. First, this re-allocation is consistent with modifications that were made for other regulated water utilities in order to provide for a more a reasonable service charge.

Second, and perhaps more importantly, I don't think the traditional means of allocating administrative costs, particularly labor related costs is necessarily appropriate for Pawtucket. We now have a situation where there are no PWSB labor costs associated with supply, treatment or pumping, yet there are clearly cost, time and effort spent on supply, treatment and pumping by the administrative staff. I think this change in allocation may actually be a better reflection of the new PWSB.

Lastly, most of the capital costs are associated with the new treatment and storage facilities plus replacement or rehabilitation of mains. I don't think it is inappropriate

at this time to remove the allocations of debt and related costs from services and meters.

Q: Would this revision solve the large increases to the customer service charges?

A: Not entirely. Even with this revision to the allocations the increases to service charges would be about 55%. While I think these are a better reflection of PWSB's costs, they represent a significant increase to the service charges.

Q: Do you propose that the Commission adopt these increases to the service charges?

A: I do not. We have discussed this matter with the PWSB Board and they are troubled by the impact, particularly on smaller volume users that are trying to conserve water. Accordingly, I have proposed a further reduction to the amounts recovered through the service charges. This is shown on CPNW Sch. 5.0. I have reduced the billing and services components of the service charge by the amounts shown on CPNW Sch. 5.0. This results in new service charges and overall water rate increases that are more in line with the overall rate increase. To make up for this loss in revenue, I propose that the revenues be recovered through an increase to the retail metered water rates.

Q: Do you think that recovery of these "lost revenues" through the metered rate is an appropriate reallocation?

A: I do. First, we are recovering the revenues from the same group of customers – the retail water users – that the reallocated costs were originally being recovered through. Next, I think there is some correlation between meter size and water use. Those customers with larger meters typically use more water. Because much of the reallocated cost was based on meter size, the larger volume customers still pick up the larger share of this cost through their greater water use.

Lastly, and perhaps most importantly, I believe this reallocation from a fixed service charge to a rate based on how much water one uses, is consistent with the State's goals to encourage wise water use. By increasing the metered rate, this will provide a greater water conservation signal to PWSB's customers.

Q: If the Commission accepts this modification, are you concerned that encouraging water conservation will impact PWSB's revenues?

A: We certainly are. Because of that concern, we make this proposal with a degree of trepidation. While we believe that it is good for our smaller volume customers that are conserving water, we are cognizant of the impact reduced sales would have on revenues. We are hopeful that the Commission will take this into consideration when considering our request for the operating revenue allowance.

Q: Has this reallocation of transmission & distribution costs had any other impacts?

A: Yes it has. As the previous table comparing labor allocations shows, there was also a reduction in the time allocated to hydrants. This has resulted in a reduction to the public fire service charges. As I discussed earlier, this may very well be a reflection of the new operations of the Pawtucket Water Supply Board.

Q: Have you prepared a comparison of the current rates and those derived from your study?

A: Yes I have. Schedule 8.0 presents this comparison. As I noted earlier in my testimony, there are various percentage changes to the various rates and charges. This is a result of the cost allocations and the calculations presented in the earlier schedules as well as the reallocation of costs from the fixed service charges to the metered rates.

Q: What is the overall impact of the proposed rates on a typical residential customer?

A: Schedule 9.0 presents the impact on various customers and types of service. A typical residential customer using 2,500 cubic feet per quarter (205 gallons per day) will see their quarterly water bill increase by about $22.82 or 25.5%. This amounts to an increase of about $7.61 per month. I believe that the resulting total cost of water -- about $1.23 per day – is still reasonable for the value of the service being provided.

Q: Have you prepared a summary of revenues under the current and proposed rates?

A: Yes I have. Schedule 10.0 presents this calculation. Because the rates have been rounded off, the revenues do not match the requirements exactly. However, Schedule 10.0 does demonstrate that the difference is within limits that are normally accepted by the Commission.

Summary

Q: Does this conclude your testimony?

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

TEST YEAR & RATE YEAR EXPENSES

Expense Item	Test Year FY 2007	Summary of Adjustments	Rate Year CY 2009	<---------- Adjustments Detail ----------> Labor & Related Items	Other Adjustments	Supporting Schedule
ADMINISTRATION						
Salaries & Wages - (601)	$489,948	$227,935	$717,883	$227,935	$0	R. Benson
Salaries & Wages - Payroll Taxes	$35,743	$16,339	$52,082	$16,339	$0	R. Benson
Employee Pensions & Benefits (604)	$335,304	$124,076	$459,379	$124,076	$0	R. Benson
Materials and Supplies (Account 620)	$51,644	$4,394	$56,038	$0	$4,394	Sch. 1.1 (i)
Contractual Services - Legal (Account 633)	$68,726	$5,847	$74,573	$0	$5,847	Sch. 1.1 (i)
Contractual Services - Mgt. Fees (634) City Chg	$179,410	$15,264	$194,673	$0	$15,264	Sch. 1.1 (i)
Contractual Services - Other (Account 635)	$75,625	$6,434	$82,060	$0	$6,434	Sch. 1.1 (i)
Rental of Equipment (Account 642)	$4,938	$420	$5,358	$0	$420	Sch. 1.1 (i)
Transportation Expenses (Account 650)	$4,626	$394	$5,019	$0	$394	Sch. 1.1 (i)
Insurance - General Liability (Account 657)	$141,453	$62,035	$203,488	$0	$62,035	Sch. 1.1
Insurance - Worker's Compensation (658)	$59,588	$5,070	$64,658	$0	$5,070	Sch. 1.1 (i)
Insurance - Other (Account 659)	$2,140	$182	$2,322	$0	$182	Sch. 1.1 (i)
Regulatory Com Expense - Other (667)	$41,364	$13,480	$54,844	$0	$13,480	Sch. 1.1
Reg Com Exp - Amort of Rate Case Exp (666)	$83,433	$16,567	$100,000	$0	$16,567	Sch. 1.1
Miscellaneous Expense (Account 675)	$64,184	$5,461	$69,644	$0	$5,461	Sch. 1.1 (i)
Other -pba fees	$0	$0	$0	$0	$0	Sch. 1.1 (i)
Education Training	$4,726	$402	$5,129	$0	$402	Sch. 1.1 (i)
Maint of Misc Plant	$34,196	$2,909	$37,105	$0	$2,909	Sch. 1.1 (i)
Other Utilities	$45,204	$7,882	$53,086	$0	$7,882	Sch. 1.1 (u)
Printing	$18,143	$1,544	$19,687	$0	$1,544	Sch. 1.1 (i)
Postage	$151	$13	$164	$0	$13	Sch. 1.1 (i)
Subtotal - Admin	$1,740,547	$516,645	$2,257,192	$368,349	$148,296	
CUSTOMER SERVICE						
Salary & Wages - Cust Ser	$151,981	$41,313	$193,294	$41,313	$0	R. Benson
Salary & Wages - Meter	$389,648	$52,808	$442,456	$52,808	$0	R. Benson
Salary & Wages Payroll Tx(CS)	$11,688	$2,920	$14,608	$2,920	$0	R. Benson
Salary & Wages Payroll Tx (Meters)	$29,775	$3,579	$33,355	$3,579	$0	R. Benson
Empl Pensions & Benefits (Cust Ser)	$45,415	$42,802	$88,217	$42,802	$0	R. Benson
Empl Pensions & Benefits (Meters)	$141,699	$78,707	$220,406	$78,707	$0	R. Benson
Matls & Supp (Cust Serv)	$2,067	$176	$2,243	$0	$176	Sch. 1.1 (i)
Matls & Supp (Meters)	$8,808	$749	$9,557	$0	$749	Sch. 1.1 (i)
Contractual Services - Other - [Cust. Srvc.] (Account 63	$14,841	$1,263	$16,103	$0	$1,263	Sch. 1.1 (i)
Transportation Expenses - [Cust srvc.] (Account 650)	$3,746	$319	$4,065	$0	$319	Sch. 1.1 (i)
Transportation Expenses - [Meter] (Account 650)	$7,184	$611	$7,795	$0	$611	Sch. 1.1 (i)
Bad Debt Expense (Account 670)	$0	$0	$0	$0	$0	Sch. 1.1 (i)
Miscellaneous Expense - [Cust. Srvc.] (Account 675)	$491	$42	$533	$0	$42	Sch. 1.1 (i)
Miscellaneous Expense - [Meter] (Account 675)	$136	$12	$148	$0	$12	Sch. 1.1 (i)
Education Training - [Cust. Srvc.]	$230	$20	$250	$0	$20	Sch. 1.1 (i)
Education Training - [Meter]	$1,513	$129	$1,641	$0	$129	Sch. 1.1 (i)
Repairs & Maintenance - general	$893	$76	$969	$0	$76	Sch. 1.1 (i)
Repairs & Maintenance - meters	$2,531	$0	$2,531	$0	$215	Sch. 1.1 (i)
Other Utilities - [Cust. Srvc.]	$2,522	$0	$2,522	$0	$440	Sch. 1.1 (u)
Other Utilities - [Meter]	$3,837	$0	$3,837	$0	$669	Sch. 1.1 (u)
Printing - [Cust. Srvc.]	$15,651	$0	$15,651	$0	$1,332	Sch. 1.1 (i)
Printing - [Meter]	$357	$0	$357	$0	$30	Sch. 1.1 (i)
Postage--[Cust. Srvc.]	$33,478	$0	$33,478	$0	$2,848	Sch. 1.1 (i)
Subtotal - Customer Accts	$868,492	$225,524	$1,094,016	$222,129	$8,930	

TEST YEAR & RATE YEAR EXPENSES

				<---------- Adjustments Detail ---------->		
Expense Item	Test Year FY 2007	Summary of Adjustments	Rate Year CY 2006	Labor Increase	Other Adjustments	Supporting Schedule
SOURCE OF SUPPLY						
Salaries & Wages - (601)	$156,667	-$26,025	$130,642	-$26,025	$0	R. Benson
Salaries & Wages - Payroll Taxes	$11,789	-$1,898	$9,891	-$1,898	$0	R. Benson
Employee Pensions & Benefits (604)	$46,779	$7,098	$53,877	$7,098	$0	R. Benson
Purchased Power (Account 615)	$18,947	$12,031	$30,978	$0	$12,031	Sch. 1.1
Materials and Supplies (Account 620)	$2,501	$213	$2,714	$0	$213	Sch. 1.1 (i)
Transportation Expenses (Account 650)	$8,592	$731	$9,323	$0	$731	Sch. 1.1 (i)
Miscellaneous Expense (Account 675)	$104	$9	$112	$0	$9	Sch. 1.1 (i)
Security Service	$65,571	$5,579	$71,149	$0	$5,579	Sch. 1.1 (i)
Education Training	$245	$21	$266	$0	$21	Sch. 1.1 (i)
Maint of Misc Plant	$62,073	$5,281	$67,354	$0	$5,281	Sch. 1.1 (i)
Other Utilities	$2,053	$358	$2,411	$0	$358	Sch. 1.1 (u)
Subtotal - Supply	$375,321	$3,397	$378,718	-$20,825	$24,223	
PURIFICATION						
DBO O&M Contract	$1,236,302	$458,942	$1,695,244	$0	$458,942	Sch. 1.1
Purchased Power (Account 615)	$557,025	$353,711	$910,736	$0	$353,711	Sch. 1.1
Other Utilities	$0	$0	$0	$0	$0	
Subtotal - Purification	$1,793,326	$812,653	$2,605,979	$0	$812,653	

TEST YEAR & RATE YEAR EXPENSES

Expense Item	Test Year FY 2007	Summary of Adjustments	Rate Year CY 2009	<---------- Adjustments Detail ----------> Labor Increase	Other Adjustments	Supporting Schedule
TRANSMISSION & DISTRIBUTION						
Salaries & Wages - (601)	$794,555	$246,364	$1,040,920	$246,364	$0	R. Benson
Salaries & Wages -[Engineering] (601)	$417,411	$18,919	$436,329	$18,919	$0	R. Benson
Salaries & Wages - Payroll Taxes -	$61,534	$17,165	$78,699	$17,165	$0	R. Benson
Salaries & Wages - Payroll Taxes - [Engineering]	$30,845	$2,275	$33,121	$2,275	$0	R. Benson
Salaries & Wages - Police Details	$71,364	$8,666	$80,030	$0	$8,666	Sch. 1.1
Employee Pensions & Benefits - (604)	$289,173	$145,944	$435,117	$145,944	$0	R. Benson
Employee Pensions & Benefits - [Engineering] (604)	$110,609	$32,461	$143,071	$32,461	$0	R. Benson
Materials and Supplies - (Account 620)	$35,466	$3,017	$38,483	$0	$3,017	Sch. 1.1 (i)
Materials and Supplies - [Engineering] (Account 620)	$23,000	$1,957	$24,956	$0	$1,957	Sch. 1.1 (i)
Rental of Equipment (Account 642)	$1,200	$102	$1,302	$0	$102	Sch. 1.1 (i)
Rental of Equipment - [Engineering] (Account 642)	$2,497	$212	$2,709	$0	$212	Sch. 1.1 (i)
Transportation Expenses - (Account 650)	$44,984	$3,827	$48,811	$0	$3,827	Sch. 1.1 (i)
Transportation Expenses - [Engineering](Account 650)	$10,242	$871	$11,114	$0	$871	Sch. 1.1 (i)
Miscellaneous Expense - (Account 675)	$3,534	$301	$3,834	$0	$301	Sch. 1.1 (i)
Miscellaneous Expense - [Engineering] (Account 675)	$0	$0	$0	$0	$0	Sch. 1.1 (i)
Education Training	$4,676	$398	$5,074	$0	$398	Sch. 1.1 (i)
Education Training - [Engineering]	$3,549	$302	$3,851	$0	$302	Sch. 1.1 (i)
Repairs & Maintenance - general	$4,575	$389	$4,964	$0	$389	Sch. 1.1 (i)
Repairs & Maintenance - T&D	$11,515	$980	$12,494	$0	$980	Sch. 1.1 (i)
Repairs & Maintenance - fire services	$0	$0	$0	$0	$0	Sch. 1.1 (i)
Repairs & Maintenance - services	$100	$9	$109	$0	$9	Sch. 1.1 (i)
Repairs & Maintenance - Hydrants	-$1,344	$1,344	$0	$0	$1,344	One Time
Road surface restoration	$0	$0	$0	$0	$0	Sch. 1.1 (i)
Repairs & Maintenance - general	$517	$44	$561	$0	$44	Sch. 1.1 (i)
Other Utilities	$30,184	$5,263	$35,447	$0	$5,263	Sch. 1.1 (u)
Other Utilities - [Engineering]	$7,070	$1,233	$8,303	$0	$1,233	Sch. 1.1 (u)
Printing	$0	$0	$0	$0	$0	Sch. 1.1 (i)
Postage--[Engineering]	$0	$0	$0	$0	$0	Sch. 1.1 (i)
Subtotal - T&D	$1,957,256	$492,044	$2,449,300	$463,129	$28,915	

TEST YEAR & RATE YEAR EXPENSES

			<---------- Adjustments Detail ---------->			
Expense Item	Test Year FY 2007	Summary of Adjustments	Rate Year CY 2009	Labor Increase	Other Adjustments	Supporting Schedule
CAPITAL EXPENSE						
Property Taxes						
Source of Supply	$297,576	$26,725	$324,302	$0	$26,725	Sch. 1.1
Treatment-Pumping	$4,499	$404	$4,903	$0	$404	Sch. 1.1
Treatment-Purification	$131,289	$11,791	$143,080	$0	$11,791	Sch. 1.1
Trans & Distrib	$409,257	$36,755	$446,013	$0	$36,755	Sch. 1.1
Rental Property	$1,584	$142	$1,726	$0	$142	Sch. 1.1
Restrict. Bond Principal & Interest	$5,736,014	$952,530	$6,688,543	$0	$952,530	Sch. 1.1
Leases	$150,962	-$1,181	$149,781	$0	-$1,181	Sch. 1.1
IFR	$3,100,000	$0	$3,100,000	$0	$0	Sch. 1.1
CF Franchise Fee	$86,416	-$86,416	$0	$0	-$86,416	Sch. 1.1
Calgon Royalties Fund	$73,000	-$73,000	$0	$0	-$73,000	Sch. 1.1
CF System Fund	$255,202	-$255,202	$0	$0	-$255,202	included T&D
Trustee Fees	$308,657	$61,250	$369,907	$0	$61,250	Sch. 1.1
O&M Reserve Deposit	$31,480	-$31,480	$0	$0	-$31,480	Sch. 1.1
Subtotal - Capital	$10,585,934	$642,320	$11,228,254	$0	$642,320	
TOTAL EXPENSES	$17,320,876	$2,692,584	$20,013,460	$1,032,783	$1,665,335	
PLUS: Operating Revenue Allowance	$255,202	$669,447	$924,649			
LESS: Service Instal Revenue	-$208,054	$0	-$208,054			see DGB-1
LESS: State Surcharge Revenue	-$57,071	$0	-$57,071			see DGB-8
LESS: Penalties	-$67,936	$0	-$67,936			see DGB-1
LESS: Cumberland Tax Reduction		-$200,000	-$200,000		-$200,000	Per Agreement
LESS: Non-Operating Rental	-$17,530	$0	-$17,530			see DGB-1
LESS: Interest Income	-$10,365	$0	-$10,365			see DGB-1
LESS: Misc Non-Operating	-$6,990	$0	-$6,990			see DGB-1
LESS: Available Funds for Debt	$0	-$952,529	-$952,529		-$952,529	Sch 1.1
REQUIRED FROM RATES	$17,208,131	$2,209,501	$19,417,633	$1,032,783	$512,806	

DETAILS OF ADJUSTMENTS TO TEST YEAR EXPENSES

Capital Requirements

Property Taxes

TY tax bills increased annually by 3.5% , for 2.5 years to Rate Year = 8.98%

Debt Service

Projected Debt is as follows:

		FY 2008	FY 2009	FY 2010
Existing Revenue Bonds				
	Principal	$800,000	$3,075,000	$3,140,000
	Sinking Fund	$3,000	-$1,000	$2,000
	Interest	$3,296,620	$3,349,437	$3,296,758
	Total	$4,099,620	$6,423,437	$6,438,758
Projected Revenue Bonds				
	Principal		$0	$0
	Interest		$0	$0
	Total	$0	$0	$0
Existing General Obligation Bonds				
	Principal	$217,010	$200,404	$208,667
	Interest	$58,122	$49,614	$41,119
	Total	$275,132	$250,018	$249,786
Total All Bonds		$4,374,752	$6,673,455	$6,688,543
	For Rate Year Use			*$6,688,543*

Available Funds to Offset Debt

See testimony of Robert Benson. PWSB proposes to maintain the same net allowance for debt granted in Docket # 3674 of $ 5,736,014
The difference between the prior allowance and the actual debt (see above) will be funded from available funds in the Debt Stabilization fund.
This difference is set as a revenue offset equal to $952,529

Trustee Fees

		Estim RY
Bank of New York	Trustees Fees 4 @ $2,500	$ 10,000
US Bank	Admin Fess	$ 3,250
Partridge, Hahn & Snow	Legal Fees - Annual Disclosure filing	$ 1,500
Amtec	Annual Arbitrage Services	$ 600
Subtotal		$15,350
RI CWFA Fees		$ 354,557
Total Trustee Fees		*$ 369,907*

Capital Leases

	CY 2008	CY 2009	CY 2010
Principal	$134,430	$139,364	$144,478
Interest	$15,351	$10,417	$5,302
Total	$149,781	$149,781	$149,781
For Rate Year Use			*$149,781*

	Rate Year
IFR - PAYGO	$3,100,000

O&M Reserve Requirement

Rate Year O&M =	$9,705,229	(Operating Costs plus Property Taxes)
Required Level (25%)	$2,426,307	
Balance 12/30/07	$2,604,299	
Monthly Additions	$0	(includes estim interest)
Estimated Balance 12/30/08	$2,604,299	
Rate Year Addition =	$0	

DETAILS OF ADJUSTMENTS TO TEST YEAR EXPENSES

Operating Costs

DBO Contract

	New WTP	
Annual Contract 2/08-2/09	$1,640,770	current estimate from contractor
Annual Contract 2/09 - 2/10	$1,695,244	increased by estimated annual increase CPI
Increase Over Test Year =	$458,942	

Inflation Adjustments

Certain items (with an "i" notation) were increased from test year amounts by an inflation rate of 3.32% per year or 8.51% for 2.5 years.

Fuel costs (with "u" notation) were increased for inflation by twice this rate or 17.44% for 2.5 years.

Police Details

FY 07 was not representative as it included many older (catch-up) jobs. To develop rate year we used actual costs through January 2008.

	Pawtucket	Central Falls *	Cumberland	Total FY 08
7 months - Jan. 31 2008	$ 17,197	$ 11,286	$ 4,682	
Annual Amount (7/07 - 6/08)	$ 29,500	$ 38,700	$ 8,000	$ 76,200
Estimated Rate Year (1 1/2 year inflation)				$ 80,030

* see testimony of R. Benson - doubled for extra requirements for police details from Town of Central Falls

Power Costs

	Test Year	Adjustment **	Rate Year
Source of Supply			
Delivery *	$ 6,916	$ -	$ 6,916
Supply *	$ 12,031	$ 12,031	$ 24,063
Total	$ 18,947	$ 12,031	$ 30,978
Purification			
Delivery *	$ 203,314	$ -	$ 203,314
Supply *	$ 353,711	$ 353,711	$ 707,422
Total	$ 557,025	$ 353,711	$ 910,736

* based on 6 months analysis of billings, 36.5% = delivery charges and 63.5% = supply charges

** Based on discussions with League of Cities & Towns regarding future energy prices, supply costs expected to diuble in next contract.

Central Falls Franchise Fee & System Fund

The Central Falls System has been purchased so the Franchise Fee Fund is no longer needed
Costs for the Central Falls System have been included with the Transmission & Distribution operating expenses

Calgon Royalties Fund

This fund is no longer needed; no funding is proposed.

Regulatory Expenses

1. Rate Case Estimated Rate Year

Rate Case Costs (estim)	$200,000
Spread over 2 yrs	$100,000
Other	$0
Total Rate Year	$100,000
Test Year	$83,433
Adjustment	$16,567

2. PUC Fee - Admin

FY 2008 Fee	$52,222
Increase (1.5 yr inflation)	$2,622
Total Rate Year	$54,844
Test Year	$41,364
Adjustment	$13,480

Insurance - General Liability

See testimony of R. Benson -- increase to Rate Year = inflationary increase to rate year plus additional cost for new facilities of $ 50,000

Operating Revenue Allowance

See testimony of C. Woodcock. An operating reserve allowance of 5.0% on total revenues is requested in this case. As shown on Schedule 2, the average annual reduction in sales has been approximately 5% per year over the past four years.

UNITS OF SERVICE

METERS

	Test Year		Rate Year				
Meter Size	Quarterly	Monthly	Quarterly	Monthly *	Total	Equiv Factor	# of Equivs
5/8	21,445	9	21,362	92	21,454	1.00	21,454
3/4	251	4	210	45	255	1.39	353
1	480	11	353	138	491	2.00	982
1 1/2	231	6	121	116	237	4.07	965
2	377	30	114	293	407	5.29	2,151
3	28	14	22	20	42	6.00	252
4	12	6	9	9	18	14.00	252
6	0	5	0	5	5	21.00	105
8	0	0	0	0	0	30.00	0
Totals	22,824	85	22,191	718	22,909		26,515

* Reflects conversion of accounts projected to be converted to monthly billing.

PUBLIC FIRE HYDRANTS

	Test Year	Adjustments	Rate Year
Pawtucket	1,518	0	1,518
Central Falls	203	0	203
Valley Falls	197	0	197
Totals	1,918	0	1,918

PRIVATE FIRE SERVICE

Size	Test Year	Adjustments	Rate Year	Equiv Factor *	# of Equivs
2	25	0	25	4.07	102
4	42	0	42	6.00	252
6	371	0	371	14.00	5,194
8	91	0	91	21.00	1,911
10	4	0	4	21.00	84
12	2	0	2	21.00	42
Total	535	0	535		7,585

* one size down to equate to meter equivalent

UNITS OF SERVICE

METERED WATER USE (ccf/year)

Class	Test Year *	Adjustments *	Rate Year
Small (5/8 - 1")	2,884,356	152,494	3,036,850
Medium (1.5 - 2" & By pass)	641,275	-806	640,469
Large (3" and up)	342,742	0	342,742
Total	3,868,373	151,688	4,020,061
Wholesale			
Cumberland	723,207	-77,444	645,763
Seekonk	0	0	0
Total	723,207	-77,444	645,763

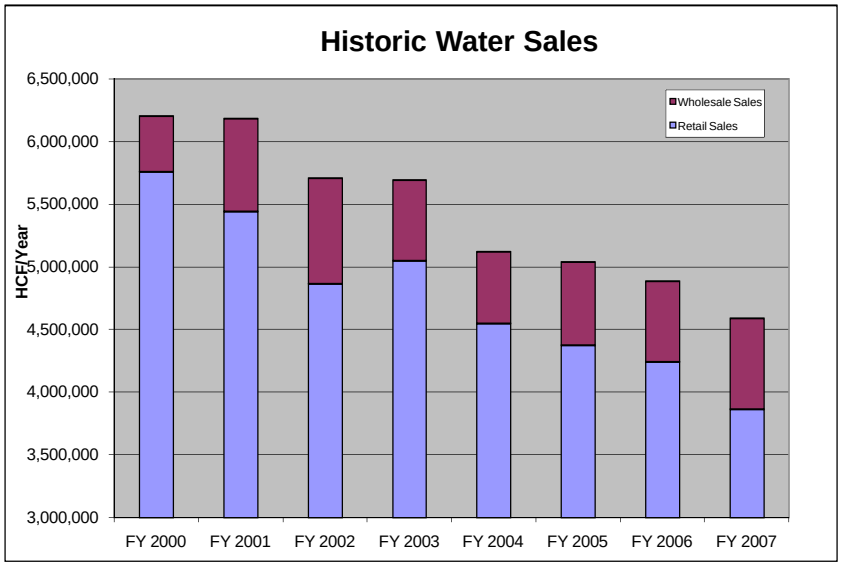
For Adjustments see DCB-3, DGB 3A, and DGB-4

Miles of Mains

Size	Miles		Inch-Miles	
Service Pipes	108.47			
2	1.24		2.5	
4	1.47		5.9	
6	109.16		655.0	
8	80.83		646.6	
10	1.78		17.8	
12	47.77	94.5%	573.2	80.9%
16	4.24		67.8	
20	9.13		182.6	
24	6.06		145.4	
30	0.10		3.0	
36	0.35		12.6	
48	0.04		1.9	
54	0.65	5.5%	35.1	19.1%
Totals	371.29		2,350	

Variations in Historic Water Sales (hcf/year)

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	4 Yr. Avg
Retail Sales	5,758,813	5,443,371	4,864,720	5,050,315	4,551,901	4,375,630	4,245,199	3,868,373	4,260,276
Wholesale Sales	443,892	741,077	845,377	645,992	569,609	666,953	644,728	723,207	651,124
Total	6,202,705	6,184,448	5,710,097	5,588,203	5,087,083	5,053,049	4,889,927	4,591,580	4,911,400
Change		-0.3%	-7.7%	-2.1%	-9.0%	-0.7%	-3.2%	-6.1%	-4.7%
Percent Variation from 4 Year Average									
Retail Sales			14.2%	18.5%	6.8%	2.7%	-0.4%	-9.2%	
Wholesale Sales			29.8%	-0.8%	-12.5%	2.4%	-1.0%	11.1%	
Total Sales			16.3%	13.8%	3.6%	2.9%	-0.4%	-6.5%	



UNITS OF SERVICE - DEMAND FACTORS

	BASE		MAXIMUM DAY			PEAK HOUR			Equivalent	
	Annual Use	Average Day	Demand	Maximum Day	Extra Capacity	Demand	Maximum Hou	Extra Capacity	Meters &	
Inside - Retail	ccf/year	ccf/day	Factor	ccf/day	ccf/day	Factor	ccf/day	ccf/day	Services	Bills
Small (5/8 - 1")	3,036,850	8,320	2.50	20,800	12,480	3.50	29,120	8,320	22,789	91,000
Medium (1.5 - 2" & By p	640,469	1,755	2.00	3,509	1,755	3.00	5,264	1,755	3,116	5,848
Large (3" and up)	342,742	939	1.80	1,690	751	2.50	2,348	657	609	532
Fire Protection	6,000 gal/min for 6 hours per Docket 3193			2,888	2,888		481	481		535
Wholesale										
Cumberland	645,763	1,769	2.50	4,423	2,654	3.50	6,192	1,769		
Seekonk	0	0	2.50	0	0	3.50	0	0		
Totals	4,665,824	12,783		33,311	20,528		43,406	12,983	26,515	97,915

Unaccounted For Water (thousand gallons/yr)

	FY 2004	FY 2005	FY 2006	FY 2007	Average	ccf/yr
Plant Production	4,452,629	4,427,640	4,156,939	3,962,147	4,249,839	5,296,620
Less: Retail Sales	3,405,059	3,273,199	3,175,630	2,893,744	3,186,908	3,868,373
Wholesale Sales	426,097	498,916	482,290	540,996	487,075	723,207
Semi-Annual Flush	59,918	102,737	43,435	52,512	64,651	70,199
Estimated Fire	22,263	22,138	20,785	19,811	21,249	26,483
Estim. Construction	0	20,913	0	0	5,228	0
Unaccounted Water	539,292	509,737	434,800	455,084	484,728	608,358

ALLOCATION OF RATE YEAR EXPENSES TO COST COMPONENTS

EXPENSE ITEM	PRO FORMA EXPENSE	ALLOC. SYMBOL (1)	BASE	MAX. DAY	PEAK HOUR	METERING	BILLING	DIRECT FIRE
ADMINISTRATION								
Salaries & Wages - (601)	$717,883	L-M	$655,768	$21,761	$7,267	$0	$0	$33,087
Salaries & Wages - Payroll Taxes	$52,082	L-M	$47,575	$1,579	$527	$0	$0	$2,400
Employee Pensions & Benefits (604)	$459,379	L-M	$419,631	$13,925	$4,650	$0	$0	$21,172
Materials and Supplies (Account 620)	$56,038	E-M	$47,393	$6,846	$334	$0	$0	$1,464
Contractual Services - Legal (Account (	$74,573	E-M	$63,069	$9,110	$445	$0	$0	$1,948
Contractual Services - Mgt. Fees (634	$194,673	E-M	$164,643	$23,782	$1,161	$0	$0	$5,087
Contractual Services - Other (Account (	$82,060	E-M	$69,401	$10,025	$490	$0	$0	$2,144
Rental of Equipment (Account 642)	$5,358	E-M	$4,531	$655	$32	$0	$0	$140
Transportation Expenses (Account 650	$5,019	E-M	$4,245	$613	$30	$0	$0	$131
Insurance - General Liability (Account (	$203,488	E-M	$172,098	$24,859	$1,214	$0	$0	$5,317
Insurance - Worker's Compensation (6	$64,658	L-M	$59,064	$1,960	$655	$0	$0	$2,980
Insurance - Other (Account 659)	$2,322	E-M	$1,964	$284	$14	$0	$0	$61
Regulatory Com Expense - Other (667)	$54,844	E-M	$46,384	$6,700	$327	$0	$0	$1,433
Reg Com Exp - Amort of Rate Case Ex	$100,000	E-M	$84,574	$12,216	$597	$0	$0	$2,613
Miscellaneous Expense (Account 675)	$69,644	E-M	$58,901	$8,508	$415	$0	$0	$1,820
Other -pba fees	$0	E-M	$0	$0	$0	$0	$0	$0
Education Training	$5,129	E-M	$4,337	$627	$31	$0	$0	$134
Maint of Misc Plant	$37,105	E-M	$31,381	$4,533	$221	$0	$0	$970
Other Utilities	$53,086	E-M	$44,897	$6,485	$317	$0	$0	$1,387
Printing	$19,687	E-M	$16,650	$2,405	$117	$0	$0	$514
Postage	$164	E-M	$139	$20	$1	$0	$0	$4
Subtotal - Admin	$2,257,192		$1,996,647	$156,892	$18,845	$0	$0	$84,806
CUSTOMER SERVICE								
Salary & Wages - Cust Ser	$193,294	B	$0	$0	$0	$0	$193,294	$0
Salary & Wages - Meter	$442,456	M	$0	$0	$0	$304,189	$138,268	$0
Salary & Wages Payroll Tx(CS)	$14,608	B	$0	$0	$0	$0	$14,608	$0
Salary & Wages Payroll Tx (Meters)	$33,355	M	$0	$0	$0	$22,931	$10,423	$0
Empl Pensions & Benefits (Cust Ser)	$88,217	B	$0	$0	$0	$0	$88,217	$0
Empl Pensions & Benefits (Meters)	$220,406	M	$0	$0	$0	$151,529	$68,877	$0
Matls & Supp (Cust Serv)	$2,243	B	$0	$0	$0	$0	$2,243	$0
Matls & Supp (Meters)	$9,557	M	$0	$0	$0	$6,571	$2,987	$0
Contractual Services - Other - [Cust. S	$16,103	B	$0	$0	$0	$0	$16,103	$0
Transportation Expenses - [Cust srvc.]	$4,065	B	$0	$0	$0	$0	$4,065	$0
Transportation Expenses - [Meter] (Acc	$7,795	M	$0	$0	$0	$5,359	$2,436	$0
Bad Debt Expense (Account 670)	$0	B	$0	$0	$0	$0	$0	$0
Miscellaneous Expense - [Cust. Srvc.] (	$533	B	$0	$0	$0	$0	$533	$0
Miscellaneous Expense - [Meter] (Acco	$148	M	$0	$0	$0	$101	$46	$0
Education Training - [Cust. Srvc.]	$250	B	$0	$0	$0	$0	$250	$0
Education Training - [Meter]	$1,641	M	$0	$0	$0	$1,128	$513	$0
Repairs & Maintenance - general	$969	B	$0	$0	$0	$0	$969	$0
Repairs & Maintenance - meters	$2,531	M	$0	$0	$0	$1,740	$791	$0
Other Utilities - [Cust. Srvc.]	$2,522	B	$0	$0	$0	$0	$2,522	$0
Other Utilities - [Meter]	$3,837	M	$0	$0	$0	$2,638	$1,199	$0
Printing - [Cust. Srvc.]	$15,651	B	$0	$0	$0	$0	$15,651	$0
Printing - [Meter]	$357	M	$0	$0	$0	$245	$112	$0
Postage--[Cust. Srvc.]	$33,478	B	$0	$0	$0	$0	$33,478	$0
Subtotal - Customer Accts	$1,094,016		$0	$0	$0	$496,432	$597,584	$0

ALLOCATION OF RATE YEAR EXPENSES TO COST COMPONENTS

EXPENSE ITEM	PRO FORMA EXPENSE	ALLOC. SYMBOL (1)	BASE	MAX. DAY	PEAK HOUR	METERING	BILLING	DIRECT FIRE
SOURCE OF SUPPLY								
Salaries & Wages - (601)	$130,642	A	$130,642	$0	$0	$0	$0	$0
Salaries & Wages - Payroll Taxes	$9,891	A	$9,891	$0	$0	$0	$0	$0
Employee Pensions & Benefits (604)	$53,877	A	$53,877	$0	$0	$0	$0	$0
Purchased Power (Account 615)	$30,978	A	$30,978	$0	$0	$0	$0	$0
Materials and Supplies (Account 620)	$2,714	A	$2,714	$0	$0	$0	$0	$0
Transportation Expenses (Account 650	$9,323	A	$9,323	$0	$0	$0	$0	$0
Miscellaneous Expense (Account 675)	$112	A	$112	$0	$0	$0	$0	$0
Security Service	$71,149	A	$71,149	$0	$0	$0	$0	$0
Education Training	$266	A	$266	$0	$0	$0	$0	$0
Maint of Misc Plant	$67,354	A	$67,354	$0	$0	$0	$0	$0
Other Utilities	$2,411	A	$2,411	$0	$0	$0	$0	$0
Subtotal - Supply	$378,718		$378,718	$0	$0	$0	$0	$0
PURIFICATION								
DBO O&M Contract	$1,695,244	D	$1,014,356	$680,888	$0	$0	$0	$0
Purchased Power (Account 615)	$910,736	A	$910,736	$0	$0	$0	$0	$0
Other Utilities	$0	A	$0	$0	$0	$0	$0	$0
Subtotal - Purification	$2,605,979		$1,925,092	$680,888	$0	$0	$0	$0

ALLOCATION OF RATE YEAR EXPENSES TO COST COMPONENTS

EXPENSE ITEM	PRO FORMA EXPENSE	ALLOC. SYMBOL (1)	BASE	MAX. DAY	PEAK HOUR	METERING	BILLING	DIRECT FIRE
TRANSMISSION & DISTRIBUTION								
Salaries & Wages - (601)	$1,040,920	O	$71,393	$47,922	$16,004	$832,736	$0	$72,864
Salaries & Wages -[Engineering] (601)	$436,329	O	$29,926	$20,088	$6,709	$349,064	$0	$30,543
Salaries & Wages - Payroll Taxes -	$78,699	O	$5,398	$3,623	$1,210	$62,960	$0	$5,509
Salaries & Wages - Payroll Taxes - [En	$33,121	O	$2,272	$1,525	$509	$26,497	$0	$2,318
Salaries & Wages - Police Details	$80,030	O	$5,489	$3,684	$1,230	$64,024	$0	$5,602
Employee Pensions & Benefits - (604)	$435,117	O	$29,843	$20,032	$6,690	$348,094	$0	$30,458
Employee Pensions & Benefits - [Engir	$143,071	O	$9,813	$6,587	$2,200	$114,457	$0	$10,015
Materials and Supplies - (Account 620)	$38,483	O	$2,639	$1,772	$592	$30,786	$0	$2,694
Materials and Supplies - [Engineering]	$24,956	O	$1,712	$1,149	$384	$19,965	$0	$1,747
Rental of Equipment (Account 642)	$1,302	O	$89	$60	$20	$1,042	$0	$91
Rental of Equipment - [Engineering] (A	$2,709	O	$186	$125	$42	$2,167	$0	$190
Transportation Expenses - (Account 65	$48,811	O	$3,348	$2,247	$750	$39,049	$0	$3,417
Transportation Expenses - [Engineerin	$11,114	O	$762	$512	$171	$8,891	$0	$778
Miscellaneous Expense - (Account 675	$3,834	O	$263	$177	$59	$3,068	$0	$268
Miscellaneous Expense - [Engineering]	$0	O	$0	$0	$0	$0	$0	$0
Education Training	$5,074	O	$348	$234	$78	$4,059	$0	$355
Education Training - [Engineering]	$3,851	O	$264	$177	$59	$3,081	$0	$270
Repairs & Maintenance - general	$4,964	O	$340	$229	$76	$3,971	$0	$347
Repairs & Maintenance - T&D	$12,494	T	$6,592	$4,425	$1,478	$0	$0	$0
Repairs & Maintenance - fire services	$0	F	$0	$0	$0	$0	$0	$0
Repairs & Maintenance - services	$109	S	$0	$0	$0	$109	$0	$0
Repairs & Maintenance - Hydrants	$0	F	$0	$0	$0	$0	$0	$0
Road surface restoration	$0	O	$0	$0	$0	$0	$0	$0
Repairs & Maintenance - general	$561	O	$39	$26	$9	$449	$0	$39
Other Utilities	$35,447	O	$2,431	$1,632	$545	$28,358	$0	$2,481
Other Utilities - [Engineering]	$8,303	O	$569	$382	$128	$6,642	$0	$581
Printing	$0	O	$0	$0	$0	$0	$0	$0
Postage--[Engineering]	$0	O	$0	$0	$0	$0	$0	$0
Subtotal - T&D	$2,449,300		$173,716	$116,607	$38,942	$1,949,467	$0	$170,569
TOTAL O&M	$8,785,205	I	$4,474,173	$954,387	$57,788	$2,445,899	$597,584	$255,375

ALLOCATION OF RATE YEAR EXPENSES TO COST COMPONENTS

EXPENSE ITEM	PRO FORMA EXPENSE	ALLOC. SYMBOL (1)	BASE	MAX. DAY	PEAK HOUR	METERING	BILLING	DIRECT FIRE
CAPITAL EXPENSE								
Property Taxes								
Source of Supply	$324,302	A	$324,302	$0	$0	$0	$0	$0
Treatment-Pumping	$4,903	D	$2,934	$1,969	$0	$0	$0	$0
Treatment-Purification	$143,080	D	$85,612	$57,467	$0	$0	$0	$0
Trans & Distrib	$446,013	T-C	$201,826	$135,476	$45,859	$38,555	$17,525	$6,771
Rental Property	$1,726	A	$1,726	$0	$0	$0	$0	$0
Restrict. Bond Principal & Interest	$6,688,543	P-M	$4,305,469	$2,006,168	$326,211	$0	$0	$50,696
Leases	$149,781	P-M	$96,415	$44,925	$7,305	$0	$0	$1,135
IFR	$3,100,000	A	$3,100,000	$0	$0	$0	$0	$0
CF Franchise Fee	$0	A	$0	$0	$0	$0	$0	$0
Calgon Royalties Fund	$0	A	$0	$0	$0	$0	$0	$0
CF System Fund	$0	T-C	$0	$0	$0	$0	$0	$0
Trustee Fees	$369,907	P-M	$238,112	$110,950	$18,041	$0	$0	$2,804
O&M Reserve Deposit	$0	E	$0	$0	$0	$0	$0	$0
Subtotal - Capital	$11,228,254		$8,356,396	$2,356,956	$397,416	$38,555	$17,525	$61,406
TOTAL EXPENSES	$20,013,460		$12,830,569	$3,311,343	$455,203	$2,484,454	$615,109	$316,781
PLUS: Operating Revenue Allowance	$924,649	I	$470,910	$100,450	$6,082	$257,433	$62,896	$26,878
LESS: Service Instal Revenue	-$208,054	S	$0	$0	$0	-$208,054	$0	$0
LESS: State Surcharge Revenue	-$57,071	I	-$29,065	-$6,200	-$375	-$15,889	-$3,882	-$1,659
LESS: Penalties	-$67,936	I	-$34,599	-$7,380	-$447	-$18,914	-$4,621	-$1,975
LESS: Cumberland Tax Reduction	-$200,000	O	-$13,717	-$9,208	-$3,075	-$160,000	$0	-$14,000
LESS: Non-Operating Rental	-$17,530	A	-$17,530	$0	$0	$0	$0	$0
LESS: Interest Income	-$10,365	I	-$5,279	-$1,126	-$68	-$2,886	-$705	-$301
LESS: Misc Non-Operating	-$6,990	I	-$3,560	-$759	-$46	-$1,946	-$475	-$203
LESS: Available Funds for Debt	-$952,529	P-M	-$613,151	-$285,703	-$46,456	$0	$0	-$7,220
REQUIRED FROM RATES	$19,417,633		$12,584,578	$3,101,417	$410,818	$2,334,197	$668,322	$318,302

ALLOCATION OF PLANT IN SERVICE TO COST COMPONENTS

EXPENSE ITEM	NET PLANT & CWIP *	ALLOC. SYMBOL (1)	BASE	MAX. DAY	PEAK HOUR	METERING	BILLING	DIRECT FIRE
SOURCE OF SUPPLY								
Land & Land Rights	$5,160,444	A	$5,160,444	$0	$0	$0	$0	$0
Structures & Improvements	$9,766,418	A	$9,766,418	$0	$0	$0	$0	$0
Wells & Springs	$372,105	A	$372,105	$0	$0	$0	$0	$0
PUMPING								
Land & Land Rights	$30,133	D	$18,030	$12,103	$0	$0	$0	$0
Structures & Improvements	$303,873	D	$181,824	$122,049	$0	$0	$0	$0
Electric Pumping Equipment	$128,396	D	$76,826	$51,570	$0	$0	$0	$0
PURIFICATION								
Land & Land Rights	$26,046	D	$15,585	$10,461	$0	$0	$0	$0
Structures & Improvements	$45,754,725	D	$27,377,526	$18,377,199	$0	$0	$0	$0
Water Treatment Equipment	$0	D	$0	$0	$0	$0	$0	$0
TRANSM & DISTRIBUTION								
Land & Land Rights	$1,590	H	$812	$545	$232	$0	$0	$0
Distribution Reservoirs	$2,479,568	H	$1,266,787	$850,333	$362,449	$0	$0	$0
Transmission Mains	$8,863,784	D	$5,303,681	$3,560,103	$0	$0	$0	$0
Distribution mains	$37,569,796	H	$19,194,042	$12,884,025	$5,491,729	$0	$0	$0
Services	$4,879,061	M	$0	$0	$0	$3,354,354	$1,524,706	$0
Meters	$2,279,970	M	$0	$0	$0	$1,567,480	$712,491	$0
Hydrants	$864,386	F	$0	$0	$0	$0	$0	$864,386
Other Misc Equip	$38,423	H	$19,630	$13,177	$5,617	$0	$0	$0
GENERAL								
Structures & Improvements	$1,268,480	E	$481,416	$154,964	$7,567	$475,271	$116,119	$33,144
Office furniture & equipment	$283,497	E	$107,593	$34,633	$1,691	$106,220	$25,952	$7,407
Transportation equipment	$274,079	E	$104,019	$33,483	$1,635	$102,691	$25,090	$7,161
Stores equipment	$0	E	$0	$0	$0	$0	$0	$0
Tools, shop & garage equipment	$0	E	$0	$0	$0	$0	$0	$0
Laboratory equipment	$20,967	A	$20,967	$0	$0	$0	$0	$0
Power equipment	$11,435	E	$4,340	$1,397	$68	$4,284	$1,047	$299
Communication equipment	$0	E	$0	$0	$0	$0	$0	$0
Miscellaneous equipment	$0	E	$0	$0	$0	$0	$0	$0
TOTAL PLANT	$120,377,178		$69,472,047	$36,106,041	$5,870,988	$5,610,300	$2,405,404	$912,398
PERCENT		P	57.71%	29.99%	4.88%	4.66%	2.00%	0.76%

*Note: Test Year Net Plant plus CWIP

ALLOCATION OF NON-ADMINISTRATIVE LABOR COSTS TO COST COMPONENTS

EXPENSE ITEM	PRO FORMA AMOUNT	ALLOC. SYMBOL (1)	BASE	MAX. DAY	PEAK HOUR	METERING	BILLING	DIRECT FIRE
CUSTOMER SERVICE								
Salary & Wages - Cust Ser	$193,294	B	$0	$0	$0	$0	$193,294	$0
Salary & Wages - Meter	$442,456	M	$0	$0	$0	$304,189	$138,268	$0
SOURCE OF SUPPLY								
Salaries & Wages - (601)	$130,642	A	$130,642	$0	$0	$0	$0	$0
TRANSMISSION & DISTRIBUTION								
Salaries & Wages - (601)	$1,040,920	O	$71,393	$47,922	$16,004	$832,736	$0	$72,864
Salaries & Wages -[Engineering] (601)	$436,329	O	$29,926	$20,088	$6,709	$349,064	$0	$30,543
TOTALS	$2,243,641		$231,961	$68,010	$22,713	$1,485,988	$331,561	$103,407
PERCENT		L	10.3%	3.0%	1.0%	66.2%	14.8%	4.6%

ALLOCATION TO FIRE, WHOLESALE & RETAIL SERVICE

UNITS OF SERVICE	TOTAL	BASE	MAX. DAY	PEAK HOUR	METERING	BILLING	DIRECT FIRE
Number		4,665,824	20,528	12,983	26,515	97,915	1,918
Units		ccf/yr	ccf/day	ccf/day	equiv meters	bills	hydrants
Revenue Requirements	$19,417,633	$12,584,578	$3,101,417	$410,818	$2,334,197	$668,322	$318,302
Allocation to Fire Protection	$832,742	$62,923	$436,288	$15,230	included in calculation		$318,302
Allocation to Wholesale *	$1,729,681	$1,544,213	$190,289	-$4,821			
Net To Retail Metered Rates	$16,855,210	$10,977,441	$2,474,840	$400,410	$2,334,197	$668,322	$0

* Allocation to wholesale based on:

BASE

Metered Sales (ccf/yr)	4,665,824	
Retail Sales (ccf/yr)	4,020,061	
Retail Unacctd For (ccf/yr)	630,177	Based on miles of pipe: 100% of distribution/service costs plus 86.2% of transmission plus estim fire
Total Retail (ccf/yr)	4,650,238	
Wholesale Sales (ccf/yr)	645,763	
Wholesale Unacctd For (ccf/yr)	4,665	
Total Wholesale (ccf/yr)	650,428	
Grand Total (ccf/yr)	5,300,665	
Wholesale Percent of Grand Total	12.3%	
Total Base Allocation	$12,584,578	
Wholesale Allocation	**$1,544,213**	

MAX DAY

Total Max Day Allocation	$3,101,417		
Less: Distribution Costs			
94.5% of T&D O&M	-$110,147		
Admin O&M Share	-$18,107	16.4%	
Distribution Capital Items	-$1,501,250	63.69%	(Less Distribution Mains & Gen'l Items allocated to Max Day)
Total Net of Distribution	$1,471,913		
Wholesale Max Day %	12.93%	See Sch. 2.2	
Wholesale Allocation	**$190,289**		

PEAK HOUR

Total Peak Hour Allocation	$410,818		
Less: Distribution Costs			
94.5% of T&D O&M	-$36,785		
Admin O&M Share	-$11,996	32.6%	
Capital Items	-$397,416	100.00%	(All Capital Peak Hour costs = distribution)
Total Net of Distribution	-$35,379		
Wholesale Peak Hr %	13.63%	See Sch. 2.2	
Wholesale Allocation	**-$4,821**		

ALLOCATION SYMBOLS

	ALLOCATION SYMBOL	BASE	MAX. DAY	PEAK HOUR	METERING	BILLING	DIRECT FIRE	
100.00%	A	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	Supply, IFR, Power & Chemicals
100.00%	B	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	Billing
100.00%	D	59.84%	40.16%	0.00%	0.00%	0.00%	0.00%	Max Day Demand
100.00%	E	37.95%	12.22%	0.60%	37.47%	9.15%	2.61%	O&M less A&G
100.00%	E-M	84.57%	12.22%	0.60%	0.00%	0.00%	2.61%	O&M less A&G - No Meter Alloc
100.00%	F	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Fire Service
100.00%	H	51.09%	34.29%	14.62%	0.00%	0.00%	0.00%	Max Hour Demand
100.00%	I	50.93%	10.86%	0.66%	27.84%	6.80%	2.91%	Total O&M
100.00%	L	10.34%	3.03%	1.01%	66.23%	14.78%	4.61%	Labor
100.00%	L-M	91.35%	3.03%	1.01%	0.00%	0.00%	4.61%	Labor-No Meter Alloaction
100.00%	M	0.00%	0.00%	0.00%	68.8%	31.3%	0.00%	Cust Serv - "Meter"
100.00%	O	6.86%	4.60%	1.54%	80.00%	0.00%	7.00%	O&M Mains, Hydrants & Service
100.00%	P	57.71%	29.99%	4.88%	4.66%	2.00%	0.76%	Plant
100.00%	P-M	64.37%	29.99%	4.88%	0.00%	0.00%	0.76%	Plant-No Meter
100.00%	S	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	Services and Meters
100.00%	T	52.76%	35.41%	11.83%	0.00%	0.00%	0.00%	T&D Mains
100.00%	T-C	45.25%	30.37%	10.28%	8.64%	3.93%	1.52%	T&D Capital

Symbol D

	MGD	%
Avg Day	12.010	59.84%
Max Day Inc	8.062	40.16%
Total Max Day	20.072	100.00%

Symbol E

	TOTAL	BASE	MAX. DAY	PEAK HOUR	METERING	BILLING	DIRECT FIRE
Amount	$6,528,014	$2,477,525	$797,495	$38,942	$2,445,899	$597,584	$170,569
Percent	E	38.0%	12.2%	0.6%	37.5%	9.2%	2.6%

Symbol H

	MGD	%
Avg Day	12.010	51.09%
Max Day Inc	8.062	34.29%
Peak Hour Inc	3.436	14.62%
Total Peak Hour	23.508	100.00%

	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	Average
Avg Day mgd)	13.389	13.035	11.954	12.229	12.33	10.42	10.714	12.010
Max Day (mgd)	21.085	21.395	17.583	19.087	21.05	20.23		20.072
Max Hour (mgd)	33.28	25.03	18.96	26.09	21	20.5	19.7	23.508
	1.6	1.2	1.1	1.4	1.0	1.0		1.30

Symbol M

These accounts include activities associated with meter reading, meter testing, backflow testing, etc.
Costs have been split based on the following personnel associated with these activities:

	# Employees	Meter Read	Meters
Meter Reader*	2.5	2.5	
Technician*	4.5		4.5
Backflow	1.0		1.0
Subtotal	8.0	2.5	5.5
Percent		31%	69%
Agent	1.0	0.31	0.69
Supervisor	1.0	0.31	0.69
Total	10.0	3.1	6.9
Percent		31%	69%

* Note: half of one meter reader's time is used as a meter technician.

ALLOCATION SYMBOLS

Symbol O

	% of Time	BASE	MAX. DAY	PEAK HOUR	METERING	BILLING	DIRECT FIRE
Mains	13.00%	6.86%	4.60%	1.54%	0.00%	0.00%	0.00%
Hydrants	7.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.00%
Services	80.00%	0.00%	0.00%	0.00%	80.00%	0.00%	0.00%
Total	100.0%	6.9%	4.6%	1.5%	80.0%	0.0%	7.0%

Note: In docket 3378 allocation of time set at 50% mains, 30% hydrants, 20% services, above based on actual TY and FY06 time records.

	FY06	FY07	Average
Mains	13.00%	13.00%	13.00%
Hydrants	9.00%	5.00%	7.00%
Services	78.00%	82.00%	80.00%
Total	100.0%	100.0%	100.0%

Symbol T

	Plant Amt.	BASE	MAX. DAY	PEAK HOUR	METERING	BILLING	DIRECT FIRE
Transmission	$8,863,784	$5,303,681	$3,560,103	$0	$0	$0	$0
Distribution	$37,569,796	$19,194,042	$12,884,025	$5,491,729	$0	$0	$0
Total	$46,433,580	$24,497,723	$16,444,127	$5,491,729	$0	$0	$0
		52.76%	35.41%	11.83%	0.00%	0.00%	0.00%

Symbol T-C

	Plant Amt.	BASE	MAX. DAY	PEAK HOUR	METERING	BILLING	DIRECT FIRE
Distribution Reservoirs	$2,479,568	$1,266,787	$850,333	$362,449	$0	$0	$0
Transmission Mains	$8,863,784	$5,303,681	$3,560,103	$0	$0	$0	$0
Distribution mains	$37,569,796	$19,194,042	$12,884,025	$5,491,729	$0	$0	$0
Services	$4,879,061	$0	$0	$0	$3,354,354	$1,524,706	$0
Meters	$2,279,970	$0	$0	$0	$1,567,480	$712,491	$0
Hydrants	$864,386	$0	$0	$0	$0	$0	$864,386
Total	$56,936,566	$25,764,511	$17,294,460	$5,854,178	$4,921,834	$2,237,197	$864,386
		45.25%	30.37%	10.28%	8.64%	3.93%	1.52%

FIRE SERVICE CHARGES

PUBLIC FIRE SERVICE

Annual Charge/Hydrant = $337.25

PRIVATE FIRE SERVICE

SERVICE SIZE (inches)	ANNUAL CHARGE
2	$137.81
4	$281.12
6	$710.14
8	$1,255.78
10	$1,775.55
12	$2,495.93

ALLOCATION OF FIRE SERVICE EXPENSES
TO PUBLIC AND PRIVATE FIRE SERVICE

	NUMBER	DEMAND FACTOR (1)	NO. OF EQUIVS.	PERCENT OF DEMAND	NON-HYDR. REQUIRED	DIRECT HYDRANT	TOTAL
PUBLIC FIRE SERVICE							
Hydrants	1,918	111.31	213,494.4	75.92%	$585,974	$60,868	$646,842
PRIVATE FIRE SERVICE							
SIZE (IN)							
2	25	6.19	154.8				
4	42	38.32	1,609.4				
6	371	111.31	41,296.4				
8	91	237.21	21,585.8				
10	4	426.58	1,706.3				
12	2	689.04	1,378.1				
TOTAL-PRIV.	535		67,730.7	24.08%	$185,899	$0	$185,899
GRAND TOTALS	2,453		281,225.1	100.00%	$771,873	$60,868	$832,742

Total Fire Allocation	$832,742
Less O&M for T&D Fire Hydrant Capital	$58,175
Net Non-Hydrant	$771,873

(1) Based on size to the 2.63 power.

DETERMINATION OF FIRE SERVICE CHARGES

PUBLIC FIRE PROTECTION			CALCULATED CHARGE
PUBLIC FIRE ALLOCATION (1)		$646,842	
----------	=	---------- =	$337.25 per year
NUMBER OF PUBLIC HYDRANTS		1,918	

PRIVATE FIRE PROTECTION

PRIVATE FIRE ALLOCATION (1,2)		$185,899	
----------	=	--------- =	$2.74 /EQUIV.
NO. OF EQUIV. UNITS		67,730.72	

SIZE (IN)	DEMAND FACTOR	DEMAND CHARGE	SERVICE LINE CHRG	BILLING CHARGE	CALCULATED CHARGE
2	6.19	$16.99	$116.38	$4.44	$137.81
4	38.32	$105.17	$171.51	$4.44	$281.12
6	111.31	$305.51	$400.19	$4.44	$710.14
8	237.21	$651.06	$600.29	$4.44	$1,255.78
10	426.58	$1,170.82	$600.29	$4.44	$1,775.55
12	689.04	$1,891.21	$600.29	$4.44	$2,495.93

(1) Allocation from CPNW Sch 4.1
(2) Private Fire includes allocated service maintenance costs as detailed below:

Service Line Maintenance Cost =	$974,733	(Half of total "Metering" O&M)
Service Line Debt Costs =	$0	
Addtnl Allocation to Fire Service =	$216,812	(22.24%)
Cost per Equiv/year =	$ 28.59	

DETERMINATION OF SERVICE CHARGES

BILLING CHARGE

CUST. BILLING ALLOC. (2)		$434,409	
----------	=	---------- =	$4.44 PER BILLING
NUMBER OF BILLINGS		97,915	

METER CHARGE

CUST. METER ALLOC. (1,2)		$1,693,908	
----------	=	---------- =	$63.89 / EQ. METER/YR
NO. EQUIV. METERS		26,515	

TOTAL SERVICE CHARGES

	QUARTERLY ACCOUNTS			MONTHLY ACCOUNTS		
METER SIZE (IN)	METER CHARGE	BILLING CHARGE	TOTAL CHARGE	METER CHARGE	BILLING CHARGE	TOTAL CHARGE
5/8	$15.97	$4.44	$20.41	$5.32	$4.44	$9.76
3/4	$22.13	$4.44	$26.57	$7.38	$4.44	$11.81
1	$31.94	$4.44	$36.38	$10.65	$4.44	$15.08
1 1/2	$65.03	$4.44	$69.46	$21.68	$4.44	$26.11
2	$84.42	$4.44	$88.86	$28.14	$4.44	$32.58
3	$95.83	$4.44	$100.27	$31.94	$4.44	$36.38
4	$223.60	$4.44	$228.04	$74.53	$4.44	$78.97
6	$335.40	$4.44	$339.84	$111.80	$4.44	$116.24
8	$479.14	$4.44	$483.58	$159.71	$4.44	$164.15

(1) Less allocation of Service Maintenance Costs to Private Fire Service - see CPNW Sch. 4.2,
(2) adjusted further to minimize large increase to service chares by reducing the allocations to
- meter and services by 20.0%
- billing by 35.0%

ALLOCATION OF GENERAL WATER EXPENSES
TO CUSTOMER CLASSES

Class Demands

CUSTOMER	AVERAGE DEMANDS		MAX DAY EXTRA CAPACITY			
CLASS	(CCF/DAY)	PERCENT	FACTOR	(CCF/DAY)	XTRA CCF/DAY	PERCENT
Retail						
Small (5/8 - 1")	8,320	65.09%	2.50	20,800	12,480	70.75%
Medium (1.5 - 2" & By pass	1,755	13.73%	2.00	3,509	1,755	9.95%
Large (3" and up)	939	7.35%	1.80	1,690	751	4.26%
Wholesale						
Cumberland	1,769	13.84%	2.50	4,423	2,654	15.04%
Seekonk	0	0.00%	2.50	0	0	0.00%
Total	12,783	100.00%		30,423	17,640	100.00%

CUSTOMER	AVERAGE DEMANDS		PEAK HOUR EXTRA CAPACITY			
CLASS	(CCF/DAY)	PERCENT	FACTOR	(CCF/DAY)	XTRA CCF/DAY	PERCENT
Retail						
Small (5/8 - 1")	8,320	65.09%	3.50	29,120	8,320	66.55%
Medium (1.5 - 2" & By pass	1,755	13.73%	3.00	5,264	1,755	14.04%
Large (3" and up)	939	7.35%	2.50	2,348	657	5.26%
Wholesale						
Cumberland	1,769	13.84%	3.50	6,192	1,769	14.15%
Seekonk	0	0.00%	3.50	0	0	0.00%
Total	12,783	100.00%		42,924	12,501	100.00%

Allocation of Retail Metered Sales Costs to Classes (see Sch 3.3)

CUSTOMER	BASE COSTS		MAX. DAY XTRA CAPACITY		PEAK HR. XTRA CAPACITY		TOTAL
CLASS	PERCENT	AMOUNT*	PERCENT	AMOUNT	PERCENT	AMOUNT	AMOUNT
Retail							
Small (5/8 - 1")	75.54%	$8,789,229	83.28%	$2,061,006	77.53%	$310,419	$11,160,654
Medium (1.5 - 2" & By pass	15.93%	$1,853,641	11.71%	$289,776	16.35%	$65,467	$2,208,884
Large (3" and up)	8.53%	$991,961	5.01%	$124,057	6.12%	$24,524	$1,140,543
Total	100.00%	$11,634,831	100.00%	$2,474,840	100.00%	$400,410	$14,510,081
		80.2%		17.1%		2.8%	

* Includes allocation of service costs -- see CPNW Sch. 5.0

METERED WATER RATES

Small (5/8 - 1")

Total Expense (2)	$11,160,654		
Metered Sales (HCF) (1)	3,036,850	=	$3.675 per ccf

Medium (1.5 - 2" & By pass)

Total Expense (2)	$2,208,884		
Metered Sales (HCF) (1)	640,469	=	$3.449 per ccf

Large (3" and up)

Total Expense (2)	$1,140,543		
Metered Sales (HCF) (1)	342,742	=	$3.328 per ccf

Wholesale

Total Expense (3)	$1,729,681		
Metered Sales (HCF) (1)	645,763	=	$2.679 per ccf

(1) See CPNW Sch 2.0
(2) See CPNW Sch 6.0
(3) See CPNW Sch. 3.3

COMPARISON OF CURRENT & PROPOSED RATES

		Current	Proposed	% Change
Metered Rates				
Small (5/8 - 1")		$2.903	$3.675	26.6%
Medium (1.5 - 2" & By pass)		$2.709	$3.449	27.3%
Large (3" and up)		$2.544	$3.328	30.8%
Wholesale		$2.217	$2.679	20.8%
Service Charges				
Quarterly	5/8	$16.89	$20.41	20.8%
	3/4	$21.84	$26.57	21.7%
	1	$29.72	$36.38	22.4%
	1 1/2	$56.29	$69.46	23.4%
	2	$71.87	$88.86	23.6%
	3	$81.03	$100.27	23.7%
	4	$183.66	$228.04	24.2%
	6	$273.47	$339.84	24.3%
	8	$388.93	$483.58	24.3%
Monthly	5/8	$8.34	$9.76	17.0%
	3/4	$9.99	$11.81	18.2%
	1	$12.61	$15.08	19.6%
	1 1/2	$21.47	$26.11	21.6%
	2	$26.66	$32.58	22.2%
	3	$29.72	$36.38	22.4%
	4	$63.93	$78.97	23.5%
	6	$93.86	$116.24	23.8%
	8	$132.35	$164.15	24.0%
Fire Service (annual)				
Public	/hydrant/yr	$629.93	$337.25	-46.5%
Private				
	2	$185.92	$137.81	-25.9%
	4	$523.75	$281.12	-46.3%
	6	$876.95	$710.14	-19.0%
	8	$1,386.65	$1,255.78	-9.4%
	10	$1,715.05	$1,775.55	3.5%
	12	$2,170.20	$2,495.93	15.0%

IMPACT OF PROPOSED RATES

(quarterly bills unless otherwise noted)

METER SIZE	QUARTERLY USE - CU FT	CURRENT RATES	<--------- PROPOSED ---------> NEW BILL	$ INCREASE	% INCREASE
Metered Service (Quarterly Bills)					
Small					
5/8	2,000	$74.95	$93.91	$18.96	25.30%
5/8	**2,500**	**$89.47**	**$112.29**	**$22.82**	**25.51%**
5/8	4,000	$133.01	$167.41	$34.40	25.86%
5/8	5,000	$162.04	$204.16	$42.12	25.99%
5/8	7,500	$234.62	$296.04	$61.42	26.18%
5/8	10,000	$307.19	$387.91	$80.72	26.28%
5/8	15,000	$452.34	$571.66	$119.32	26.38%
5/8	20,000	$597.49	$755.41	$157.92	26.43%
5/8	25,000	$742.64	$939.16	$196.52	26.46%
1	30,000	$900.62	$1,138.88	$238.26	26.46%
1	40,000	$1,190.92	$1,506.38	$315.46	26.49%
1	75,000	$2,206.97	$2,792.63	$585.66	26.54%
Medium					
1 1/2	100,000	$2,765.29	$3,518.46	$753.17	27.24%
1 1/2	200,000	$5,474.29	$6,967.46	$1,493.17	27.28%
2	300,000	$8,198.87	$10,435.86	$2,236.99	27.28%
2	400,000	$10,907.87	$13,884.86	$2,976.99	27.29%
Large					
3	250,000	$6,441.03	$8,420.27	$1,979.24	30.73%
3	500,000	$12,801.03	$16,740.27	$3,939.24	30.77%
4	750,000	$19,263.66	$25,188.04	$5,924.38	30.75%
6	1,000,000	$25,713.47	$33,619.84	$7,906.37	30.75%
6	3,000,000	$76,593.47	$100,179.84	$23,586.37	30.79%
Fire Service (Annual Bill)					
Municipal Fire Service	200 hydrants	$125,986.00	$67,450.00	-$58,536.00	-46.46%
	1400 hydrants	$881,902.00	$472,150.00	-$409,752.00	-46.46%
Private Fire Service	4 Inch Service	$523.75	$281.12	-$242.63	-46.33%
	6 Inch Service	$876.95	$710.14	-$166.81	-19.02%
	8 Inch Service	$1,386.65	$1,255.78	-$130.87	-9.44%

REVENUE RECONCILIATION

Service Charge:		<------- Current ------->		<------- Proposed -------->	
Quarterly	Number	Rate	Revenue	Rate	Revenue
5/8	21,362	$16.89	$1,443,217	$20.41	$1,743,994
3/4	210	$21.84	$18,346	$26.57	$22,319
1	353	$29.72	$41,965	$36.38	$51,369
1 1/2	121	$56.29	$27,244	$69.46	$33,619
2	114	$71.87	$32,773	$88.86	$40,520
3	22	$81.03	$7,131	$100.27	$8,824
4	9	$183.66	$6,612	$228.04	$8,209
6	0	$273.47	$0	$339.84	$0
8	0	$388.93	$0	$483.58	$0
Monthly					
5/8	92	$8.34	$9,207	$9.76	$10,775
3/4	45	$9.99	$5,395	$11.81	$6,377
1	138	$12.61	$20,882	$15.08	$24,972
1 1/2	116	$21.47	$29,886	$26.11	$36,345
2	293	$26.66	$93,737	$32.58	$114,551
3	20	$29.72	$7,133	$36.38	$8,731
4	9	$63.93	$6,904	$78.97	$8,529
6	5	$93.86	$5,632	$116.24	$6,974
8	0	$132.35	$0	$164.15	$0
Consumption Charge:					
Small (5/8 - 1")	3,036,850	$2.903	$8,815,976	$3.675	$11,160,424
Medium (1.5 - 2" & By p	640,469	$2.709	$1,735,031	$3.449	$2,208,978
Large (3" and up)	342,742	$2.544	$871,936	$3.328	$1,140,645
Extra Large	0	$2.544	$0	$3.328	$0
Wholesale	645,763	$2.217	$1,431,657	$2.679	$1,729,999

REVENUE RECONCILIATION

		<------- Current ------->		<------- Proposed -------->	
Fire Protection:					
Public Hydrants	1,918	$629.93	$1,208,206	$337.25	$646,846
Private Fire Protection					
2	25	$185.92	$4,648	$137.81	$3,445
4	42	$523.75	$21,998	$281.12	$11,807
6	371	$876.95	$325,348	$710.14	$263,462
8	91	$1,386.65	$126,185	$1,255.78	$114,276
10	4	$1,715.05	$6,860	$1,775.55	$7,102
12	2	$2,170.20	$4,340	$2,495.93	$4,992
			==========		==========
Total			$16,308,246		$19,418,084
Plus: Misc Revenues			$1,520,476		$1,520,476
			==========		==========
Pro Forma Revenue			$17,828,722		$20,938,560
Required Revenue			$20,938,109		$20,938,109
Difference			-$3,109,387		$452
Increase in Revenues					$3,109,838
Percent Increase in Total Revenues					17.4%
Percent Increase in Rate Revenues (non-misc)					19.1%

SUMMARY OF COST OF SERVICE

	Test Year	Adjustments	Rate Year
Revenues			
Service Charges	$1,756,062	$370,047	$2,126,109
Metered Rates	$12,854,598	$3,385,447	$16,240,046
Fire Protection	$1,697,585	-$645,656	$1,051,930
Miscellaneous	$367,947	$1,152,529	$1,520,476
Total Revenue	$16,676,193	$4,262,368	$20,938,560
Expenses			
O&M			
Admin	$1,740,547	$516,645	$2,257,192
Customer Serv	$868,492	$225,524	$1,094,016
Supply	$375,321	$3,397	$378,718
Purification	$1,793,326	$812,653	$2,605,979
Trans & Distrib	$1,957,256	$492,044	$2,449,300
Total O&M	$6,734,942	$2,050,264	$8,785,205
Capital			
Property Taxes	$844,205	$75,818	$920,023
Bond Principal & Interest	$5,736,014	$952,530	$6,688,543
Leases	$150,962	-$1,181	$149,781
IFR	$3,100,000		$3,100,000
CF Franchise Fee	$86,416		$0
Calgon Royalties Fund	$73,000	-$73,000	$0
CF System Fund	$255,202	-$255,202	$0
Trustee Fees	$308,657	$61,250	$369,907
O&M Reserve Deposit	$31,480	-$31,480	$0
Total Capital	$10,585,934	$728,735	$11,228,254
Operating Revenue Allowance	$255,202	$669,447	$924,649
Total Expenses	$17,576,078	$3,448,446	$20,938,109