

**BEFORE THE
PUBLIC UTILITIES COMMISSION
OF RHODE ISLAND**

**PROVIDENCE WATER)
SUPPLY BOARD)** **DOCKET NO. 4061**

**DIRECT TESTIMONY
OF
THOMAS S. CATLIN**

**ON BEHALF OF THE
DIVISION OF PUBLIC UTILITIES AND CARRIERS**

JULY 2009

EXETER

ASSOCIATES, INC.
5565 Sterrett Place
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OF RHODE ISLAND

PROVIDENCE WATER)
SUPPLY BOARD) DOCKET NO. 4061

Direct Testimony of Thomas S. Catlin

1 **Introduction**

2 Q. WOULD YOU PLEASE STATE YOUR NAME AND BUSINESS
3 ADDRESS?

4 A. My name is Thomas S. Catlin. I am a principal with Exeter Associates, Inc. Our
5 offices are located at 5565 Sterrett Place, Suite 310, Columbia, Maryland 21044.
6 Exeter is a firm of consulting economists specializing in issues pertaining to public
7 utilities.

8 Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

9 A. I hold a Master of Science Degree in Water Resources Engineering and Management
10 from Arizona State University (1976). Major areas of study for this degree included
11 pricing policy, economics, and management. I received my Bachelor of Science
12 Degree in Physics and Math from the State University of New York at Stony Brook
13 in 1974. I have also completed graduate courses in financial and management
14 accounting.

15 Q. WOULD YOU PLEASE DESCRIBE YOUR PROFESSIONAL
16 EXPERIENCE?

17 A. From August 1976 until June 1977, I was employed by Arthur Beard Engineers in
18 Phoenix, Arizona, where, among other responsibilities, I conducted economic

1 feasibility, financial and implementation analyses in conjunction with utility
2 construction projects. I also served as project engineer for two utility valuation
3 studies.

4 From June 1977 until September 1981, I was employed by Camp Dresser &
5 McKee, Inc. Prior to transferring to the Management Consulting Division of CDM in
6 April 1978, I was involved in both project administration and design. My project
7 administration responsibilities included budget preparation and labor and cost
8 monitoring and forecasting. As a member of CDM's Management Consulting
9 Division, I performed cost of service, rate, and financial studies on approximately
10 15 municipal and private water, wastewater and storm drainage utilities. These
11 projects included: determining total costs of service; developing capital asset and
12 depreciation bases; preparing cost allocation studies; evaluating alternative rate
13 structures and designing rates; preparing bill analyses; developing cost and revenue
14 projections; and preparing rate filings and expert testimony.

15 In September 1981, I accepted a position as a utility rates analyst with Exeter
16 Associates, Inc. I became a principal and vice-president of the firm in 1984. Since
17 joining Exeter, I have continued to be involved in the analysis of the operations of
18 public utilities, with particular emphasis on utility rate regulation. I have been
19 extensively involved in the review and analysis of utility rate filings, as well as other
20 types of proceedings before state and federal regulatory authorities. My work in
21 utility rate filings has focused on revenue requirements issues, but has also addressed
22 service cost and rate design matters. I have also been involved in analyzing affiliate
23 relations, alternative regulatory mechanisms, and regulatory restructuring issues.
24 This experience has involved electric, natural gas transmission and distribution, and
25 telephone utilities, as well as water and wastewater companies.

1 Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGULATORY
2 PROCEEDINGS ON UTILITY RATES?

3 A. Yes. I have previously presented testimony on more than 200 occasions before the
4 Federal Energy Regulatory Commission and the public utility commissions of
5 Arizona, California, Colorado, Delaware, the District of Columbia, Florida, Idaho,
6 Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Montana, Nevada, New
7 Jersey, Ohio, Oklahoma, Pennsylvania, Utah, Virginia and West Virginia, as well as
8 before this Commission. I have also filed rate case evidence by affidavit with the
9 Connecticut Department of Public Utility Control.

10 Q. ARE YOU A MEMBER OF ANY PROFESSIONAL SOCIETIES?

11 A. Yes. I am a member of the American Water Works Association (AWWA) and the
12 Chesapeake Section of the AWWA. I serve on the AWWA's Rates and Charges
13 Committee and on the AWWA Water Utility Council's Technical Advisory Group on
14 Economics.

15 Q. ON WHOSE BEHALF ARE YOU APPEARING?

16 A. I am presenting testimony on behalf of the Division of Public Utilities and Carriers
17 (the Division).

18 Q. HAVE YOU PREVIOUSLY TESTIFIED ON WATER UTILITY ISSUES
19 BEFORE THIS COMMISSION?

20 A. Yes, I have been asked by the Division to address water utility issues on numerous
21 occasions. I testified on revenue requirement, cost of service and/or rate design
22 issues in Newport Water Division, Docket Nos. 2029, 2985, 3457, 3578, 3675, 3818,
23 and 4025; Providence Water Supply Board, Docket Nos. 2022, 2048, 2304, 2961,
24 3163, 3446 and 3832; Kent County Water Authority, Docket Nos. 2098 and 3942;
25 Woonsocket Water Department, Docket Nos. 2099 and 2904; United Water Rhode

1 Island, Inc., (formerly Wakefield Water Company), Docket Nos. 2006 and 2873; and
2 Pawtucket Water Supply Board, Docket Nos. 3193, 3378, 3497 and 3674.

3 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

4 A. Exeter Associates was retained by the Division to assist it in the evaluation of the rate
5 filing submitted by the Providence Water Supply Board (Providence Water or PWSB)
6 on April 30, 2009. This testimony presents my findings and recommendations with
7 regard to the overall revenue increase to which Providence Water is entitled and the
8 design of rates to recover those revenues.

9 Q. HAVE YOU PREPARED SCHEDULES TO ACCOMPANY YOUR
10 TESTIMONY?

11 A. Yes. I have prepared Schedules TSC-1 through TSC-10. Schedule TSC-1 provides a
12 summary of revenues and expenses under present and proposed rates. Schedules
13 TSC-2 through TSC-9 present my adjustments to Providence Water's claimed
14 revenues and operating expenses. Schedule TSC-10 summarizes the rates necessary
15 to generate the Division's recommended revenues and provides a proof of revenue at
16 proposed rates.

17 Q. WHAT TIME PERIODS HAVE YOU UTILIZED IN MAKING YOUR
18 DETERMINATION OF PROVIDENCE WATER'S REVENUE
19 REQUIREMENTS?

20 A. Consistent with Providence Water's filing, I have utilized a test year that corresponds
21 to the fiscal year (FY) ended June 30, 2008 and a rate year that corresponds to the
22 calendar year (CY) ending December 31, 2010 as the basis for determining the
23 PSWB's revenue requirements and the revenue increase necessary to recover those
24 requirements.

1 Q. WHAT IS YOUR RECOMMENDATION WITH REGARD TO THE
2 APPROPRIATE INCREASE IN REVENUES IN THIS PROCEEDING?

3 A. As shown on Schedule TSC-1, it is my recommendation that Providence Water
4 receive a revenue increase of \$2,233,371 in this proceeding. This amount is
5 \$3,322,745 less than the increase of \$5,556,116 that Providence Water has identified
6 as necessary based on rate year revenues at present rates.

7 Q. WHAT IS YOUR RECOMMENDATION WITH REGARD TO HOW THE
8 ADDITIONAL REVENUES SHOULD BE RECOVERED?

9 A. I have accepted Providence Water's proposal to recover the allowed increase through
10 a uniform percentage increase in all existing rates and charges for water and fire
11 protection services.

12 Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

13 A. The remainder of my testimony is divided into sections corresponding to the issues
14 being addressed. These sections are set forth in the Table of Contents for this
15 testimony.

16

17 **Benefits Expense**

18 Q. PLEASE EXPLAIN WHAT ADJUSTMENTS YOU HAVE MADE TO
19 PENSION AND BENEFITS EXPENSE.

20 A. I have made four adjustments to Providence Water's claim for rate year pension and
21 benefits expense. First, I have updated the amounts included for Union Combined
22 Benefits, Union life insurance premiums and Laborers International Pension expense
23 to reflect updated Union 1033 contract amounts for the rate year.

24 Second, I have adjusted the amount included for medical and dental insurance
25 to reflect the actual premiums for FY 2010. In developing its rate year claim,

1 Providence increased test year (FY 2008) expense by the percentage increase for
2 FY 2009 compared to the average of FY 2007 and FY 2008. This results in an
3 escalation of FY 2008 costs for 18 months. By using FY 2010 premiums, I have
4 reflected the actual increase for 24 months.

5 Third, I have adjusted benefits expense to reflect increases in the percentage
6 co-share of health costs by both union and non-union employees. For union
7 employees, I have reflected the co-share percentages specified in the Union Contract
8 for FY 2010, consistent with my recognition of FY 2010 premiums. For non-union
9 employees, I have recognized the 20 percent health insurance co-pay incorporated in
10 the City's FY 2010 Revised Budget.

11 Finally, I have eliminated the \$248,180 included by Providence Water to
12 reflect the reimbursement to the City of Providence for retiree health benefits that the
13 City failed to bill PWSB for from 1997 until 2005. The Commission denied recovery
14 of this claim in Providence Water's last rate proceeding in Docket No. 3832.
15 Providence Water appealed this ruling to the Rhode Island Supreme Court and has
16 included the expense in this case pending a decision by the Supreme Court.
17 Consistent with the Commission's prior decision, I have excluded the \$248,180 since
18 no ruling has been received at the time my testimony was prepared.

19 Q. HAVE YOU PREPARED A SCHEDULE SHOWING THE
20 CALCULATION OF THE EFFECT OF YOUR ADJUSTMENTS TO
21 BENEFITS EXPENSE?

22 A. Yes. Schedule TSC-3 shows the calculation of my adjustment to Providence Water's
23 rate year benefits expense claim. As shown on that schedule, the effect of the four
24 changes I have made is to reduce rate year benefits expense by \$502,543.

1 **Capital Reimbursement**

2 Q. WHAT ADJUSTMENT ARE YOU PROPOSING TO MAKE TO THE
3 CAPITAL REIMBURSEMENT RECOGNIZED AS AN OFFSET TO O&M
4 EXPENSE?

5 A. The term capital reimbursement is utilized to refer to the portion of total payroll,
6 benefits, and materials and supplies that are recognized as chargeable to capital
7 projects. During the test year, PWSB recorded an offset to O&M of \$964,727. As
8 shown on Schedule HJS-4, Providence Water adjusted this test year offset to reflect
9 the effect of the employee wage increases on the payroll capitalized. However, no
10 adjustment was made to reflect the increase in the benefits capitalized to reflect the
11 claimed increases in benefits expense. I have adjusted the benefits capitalized to
12 account for the increase in benefits expense from the test year to the rate year.

13 Q. HAVE YOU PREPARED A SCHEDULE SHOWING THE
14 DEVELOPMENT OF YOUR ADJUSTMENT?

15 A. Yes. My adjustment to the benefits portion of the capital reimbursement is shown on
16 Schedule TSC-4. As indicated there, the benefits portion of the test year capital
17 reimbursement is \$327,594. I have increased this amount by the percentage increase
18 in benefits expense that I have developed on Schedule TSC-3. This results in an
19 increase in the capital reimbursement of \$18,029. I have not adjusted the materials
20 component of the capital reimbursements because Providence Water has not adjusted
21 test year materials expense.

22
23 **Insurance Expense**

24 Q. HOW DID PROVIDENCE WATER DEVELOP ITS CLAIM FOR
25 INSURANCE EXPENSE?

1 A. For property and casualty insurance and worker's compensation insurance, which
2 comprise over 95 percent of the total cost, Providence Water's claimed expense was
3 based on the average of the projected FY 2009 and FY 2010 premiums. For injuries
4 and damages, Providence Water included \$70,000 based on the average of claims
5 paid for the period FY 2006 through FY 2008. For safety supplies and other, the test
6 year amount of \$793 was utilized. For program expense, the test year amount was
7 increased from \$4,755 to \$9,705, but no explanation of the increase was provided.

8 Q. PLEASE EXPLAIN YOUR ADJUSTMENTS TO INSURANCE EXPENSE
9 FOR THE RATE YEAR.

10 A. I have adjusted the amounts included for both property and casualty insurance and
11 worker's compensation to reflect the actual FY 2010 premiums. As shown on
12 Schedule TSC-5, these premiums have been fairly stable and are well below the
13 amounts requested by PWSB of \$1,294,041 for property and casualty and \$769,641
14 for worker's compensation. For injuries and damages, I have included \$60,000 based
15 on the average claims paid for FY 2007 through FY 2009. I have based the amounts
16 for safety supplies and program expense on the expenses incurred in the test year. As
17 shown on Schedule TSC-5, my recommended allowance for insurance expense is
18 \$367,088 less than Providence Water's claim.

19

20

Chemicals Expense

21 Q. PLEASE SUMMARIZE PROVIDENCE WATER'S CLAIM FOR
22 CHEMICALS EXPENSE.

23 A. Providence Water developed its claimed rate year chemical expense based on a three-
24 year average of the chemical quantities utilized in FY 2007, FY 2008 and CY 2008
25 and projected prices for CY 2010. CY 2010 prices were projected by escalating

1 prices for FY 2009 by the percentage increase from FY 2007 to FY 2008 for all
2 chemicals with the exception of fluoride. For fluoride, the FY 2009 price was
3 escalated by 20 percent to obtain the estimated 2010 price.

4 Q. WHAT ADJUSTMENTS ARE YOU PROPOSING TO MAKE TO PWSB'S
5 CLAIM?

6 A. I am proposing to make two changes. First, as shown on Schedule TSC-1, the
7 quantity of ferric sulfate used in the treatment process has declined significantly since
8 FY 2007. According to the response to Div. 1-14, this decline is due to several
9 factors that include a higher strength of ferric solution and an improved mixing
10 process which reduce the quantity of ferric sulfate required. Accordingly, the
11 quantity of ferric sulfate used in FY 2007 is not representative of ongoing
12 requirements. Therefore, rather than using a three-year average, I have based the
13 quantity of ferric sulfate on the actual volume used during the FY 2008 test year.

14 Second, I have adjusted chemical costs to reflect the actual bid prices that
15 were recently received for 2010. It is worth noting that projected total chemical costs
16 based on FY 2010 (\$1,762,275 as shown on Schedule TSC-6) are less than the total
17 costs would be based on FY 2009 prices (\$1,835,647). This reflects the fact that there
18 was a significant escalation in prices in late 2007 and early 2008 due in large part to
19 the run-up in energy prices. Since that time, prices for chemicals and other
20 commodities have generally declined due to the global recession. Accordingly,
21 I have not made any adjustment to FY 2010 chemical prices to reflect changes that
22 might occur in the second half of the rate year.

23 As shown on Schedule TSC-6, my adjustments to the quantity of ferric sulfate
24 utilized and to reflect known prices result in a reduction to Providence Water's
25 claimed rate year chemical costs of \$365,689.

Sludge Maintenance Expense

1
2 Q. PLEASE EXPLAIN HOW PROVIDENCE WATER DERIVED ITS CLAIM
3 FOR SLUDGE MAINTENANCE COSTS.

4 A. Providence Water has a 15-year contract for the removal and disposal of treatment
5 residuals (sludge) from the lagoons at its water treatment plant. This removal and
6 disposal process takes place on a three-year cycle. In the first and second year of
7 each cycle, Providence Water pays fixed amounts specified in the contract. In the
8 third year, the payment is based on the quantity of residuals removed over the three-
9 year cycle less the amounts paid in years one and two. For purposes of determining
10 its claimed cost for sludge maintenance, Providence Water used an estimate of the
11 average annual costs over a three-year cycle. This is consistent with the procedure
12 followed in prior cases.

13 Q. WHAT CONCERN DO YOU HAVE WITH PWSB'S CLAIMED LEVEL
14 OF SLUDGE MAINTENANCE COSTS?

15 A. Providence Water calculated its claimed expense based on fixed annual payments of
16 \$520,000 for years one and two of the three-year cycle and an estimated payment of
17 \$1,200,000 in the third year of the current cycle. This third year payment is well in
18 excess of the actual third year payment in the last cycle of \$954,125.

19 Q. WHAT IS YOUR RECOMMENDATION?

20 A. I am proposing to base the three-year average cost on a third year payment of
21 \$1,050,000. This represents an increase of 10 percent over the third year payment in
22 the last cycle. I believe this allowance is conservative. However, even if the third
23 year payment is more than \$1,050,000, PWSB has more than sufficient funds in its
24 chemical and sludge maintenance restricted fund to cover any increment. As shown
25 on Schedule HJS-12A, Providence Water projects it will have a balance of over

1 \$1 million in the chemical and sludge maintenance restricted account at the end of
2 FY 2010 even if the third year payment is \$1,200,000.

3

4

Rate Case Expense

5 Q.

PLEASE EXPLAIN YOUR ADJUSTMENT TO RATE CASE EXPENSE.

6 A.

In its filing, Providence Water has proposed to recover the cost of this rate filing,
including its separately filed conservation rate filing (Docket No. 4070), as an annual
expense in the rate year. In response to Div. 1-3, Providence Water stated that its
reason for seeking recovery of rate case expense over one year is because such a large
portion of the expenses are associated with the conservation rate study that would be
(and was) filed prior to the rate year. However, as part of its conservation rate filing,
Providence Water has proposed to continue to collect data for an additional two years
before implementing any new conservation oriented rates. The Division supports this
approach. Recovery of the costs of the conservation study over two years is
consistent with this proposal. In addition, two years is also consistent with the
frequency of recent PWSB rate cases. Accordingly, it is appropriate to amortize the
costs of this case and the conservation rate filing over two years. As shown on
Schedule TSC-8, this adjustment reduces rate year expenses by \$105,425.

19

20

Property Taxes

21 Q.

WHAT ADJUSTMENT HAVE YOU MADE TO PROPERTY TAX
EXPENSE?

23 A.

In its filing, the level of Scituate property taxes included by Providence Water did not
reflect the effects of the tax settlement reached between PWSB and Scituate because
that settlement was not final. Subsequent to the filing, all steps necessary to finalize

24

25

1 that settlement have been completed. Accordingly, I have adjusted property tax
2 expense to recognize the reduced level of taxes that Providence Water will pay to
3 Scituate in the rate year pursuant to the settlement. As shown on Schedule TSC-9,
4 this adjustment reduces property tax expense by \$694,933.

5

6

Operating Reserve

7 Q.

PLEASE SUMMARIZE PROVIDENCE WATER'S REQUEST WITH
8 REGARD TO ITS OPERATING RESERVE.

9 A.

Providence Water has proposed to increase its operating reserve (sometimes referred
10 to as operating revenue allowance) from the three percent (3%) approved in Docket
11 No. 3832 to five percent (5%). PWSB's request includes a one percent increase in
12 both the unrestricted and restricted components of the reserve, which are currently set
13 at one percent and two percent, respectively.

14 Q.

WHAT IS YOUR RECOMMENDATION?

15 A.

It is my recommendation that the existing three percent operating reserve be retained
16 for several reasons. First, one of the primary reasons cited by Providence Water for
17 requesting the increase is the potential implementation of conservation rates.
18 However, as noted previously, PWSB has proposed to delay any implementation of
19 conservation rates for at least two years. Second, the existing three percent operating
20 reserve has been in place only since the beginning of 2008, so that there is not enough
21 experience to evaluate whether a three percent operating revenue allowance is
22 reasonable. Finally, three percent is consistent with the operating reserves that have
23 been recently approved for the Kent County Water authority and Newport Water.

24 Q.

WHAT IS THE EFFECT OF RETAINING THE THREE PERCENT
25 OPERATING REVENUE ALLOWANCE?

1 A. Based on Providence Water's filed cost of service, reducing the operating reserve
2 from five percent to three percent reduces the required allowance from \$2,889,816
3 to \$1,733,889, a reduction of \$1,155,926. Recognizing the Division's adjustments to
4 Providence Water's cost of service further reduces the required operating reserve to
5 \$1,670,778.

6

7

Rate Design

8 Q. HAVE YOU DEVELOPED RECOMMENDED RATES TO RECOVER
9 THE REVENUE INCREASE THAT YOU HAVE IDENTIFIED AS
10 NECESSARY?

11 A. Yes. I am proposing that the allowed revenue increase be recovered through a
12 uniform percentage increase in all rates for water service and fire service. The
13 calculations of my rate recommendations are presented on Schedule TSC-10. As
14 shown on page 1 of that Schedule, the revenue increase of \$2,233,371 that I have
15 recommended on behalf of the Division represents an increase of 4.051 percent over
16 the rate year revenue at existing water and fire service rates. Page 2 of Schedule
17 TSC-10 presents the calculation of the rates necessary to generate this increase and
18 provides a proof of revenue at proposed rates.

19 Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?

20 A. Yes, it does.

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**BEFORE THE
PUBLIC UTILITIES COMMISSION
OF RHODE ISLAND**

**PROVIDENCE WATER)
SUPPLY BOARD) DOCKET NO. 4061**

**SCHEDULES ACCOMPANYING THE
DIRECT TESTIMONY
OF
THOMAS S. CATLIN

ON BEHALF OF THE
DIVISION OF PUBLIC UTILITIES AND CARRIERS**

JULY 2009

EXETER

ASSOCIATES, INC.
5565 Sterrett Place
Suite 310
Columbia, Maryland 20904

PROVIDENCE WATER SUPPLY BOARD

Summary of Revenues and Expenses at
Present and Proposed Rates
Rate Year Ended December 31, 2010

	Rate Year Amount Per PWSB	Division Adjustments	Rate Year at Present Rates	Increase from Proposed Rates	Rate Year at Proposed Rates
Revenue					
Retail Water Sales	\$ 30,829,934	\$ -	\$ 30,829,934	\$ 1,244,155	\$ 32,074,089
Wholesale Water Sales	15,697,498	-	15,697,498	638,719	16,336,217
Retail Service Charges	4,999,279	-	4,999,279	203,154	5,202,433
Private Fire Protection	1,833,075	-	1,833,075	74,283	1,907,358
Public Fire Protection	1,770,227	-	1,770,227	71,707	1,841,934
Miscellaneous	1,777,137	-	1,777,137	-	1,777,137
Total Revenue	\$ 56,907,150	\$ -	\$ 56,907,150	\$ 2,232,018	\$ 59,139,168
Expenses					
Operation & Maintenance	27,804,463	(607,968)	27,196,495	-	27,196,495
Insurance	2,144,150	(367,088)	1,777,062	-	1,777,062
Chemical & Sludge	2,874,631	(415,689)	2,458,942	-	2,458,942
City Service Expense	839,167	-	839,167	-	839,167
Property Taxes	6,779,095	(694,933)	6,084,162	-	6,084,162
Capital Reimbursement	(980,125)	(18,029)	(998,154)	-	(998,154)
Net Operations	\$ 39,461,381	\$ (2,103,707)	\$ 37,357,674	\$ -	\$ 37,357,674
Capital Improvements	2,450,000	-	2,450,000	-	2,450,000
Western Cranston Fund	62,069	-	62,069	-	62,069
Infrastructure Replacement	16,000,000	-	16,000,000	-	16,000,000
Meter Replacement	1,000,000	-	1,000,000	-	1,000,000
Equipment Replacement	600,000	-	600,000	-	600,000
Net Restricted	\$ 20,112,069	\$ -	\$ 20,112,069	\$ -	\$ 20,112,069
Total Expenses	\$ 59,573,450	\$ (2,103,707)	\$ 57,469,743	\$ -	\$ 57,469,743
Operating Reserve	2,889,816	(1,219,037)	1,670,778	-	1,670,778
Total Cost of Service	\$ 62,463,266	\$ (3,322,745)	\$ 59,140,521	\$ -	\$ 59,140,521
Revenue Surplus/(Deficiency)	\$ (5,556,116)	\$ 3,322,745	\$ (2,233,371)	\$ 2,232,018	\$ (1,353)

PROVIDENCE WATER SUPPLY BOARD

Summary of Division Adjustments to
Rate Year Revenues and Expenses at Present Rates
Rate Year Ended December 31, 2010

<u>Description</u>	<u>Amount</u>	<u>Source</u>
Benefits Expense	(502,543)	Schedule TSC-3
Capital Reimbursement	(18,029)	Schedule TSC-4
Insurance Expense	(367,088)	Schedule TSC-5
Chemicals Expense	(365,689)	Schedule TSC-6
Sludge Maintenance	(50,000)	Schedule TSC-7
Rate Case Expense	(105,425)	Schedule TSC-8
Property Tax Expense	(694,933)	Schedule TSC-9
Operating Reserve	<u>(1,219,037)</u>	See Note (1)
Total Division Adjustments	<u>\$ (3,322,745)</u>	

Note:

(1) Based on 3.0% of total expenses net of miscellaneous revenue.

PROVIDENCE WATER SUPPLY BOARD

Adjustment to Pension and Benefits Expense
Rate Year Ended December 31, 2010

Benefit Description	Test Year FY 2008 (1)	Adjustment (2)	Pro-Forma Amount	Ampunt per PWSB (1)	Adjustment
1033 Union Combined Benefits (3)	\$ 532,995	9.68%	\$ 584,575	\$ 598,330	\$ (13,755)
Laborers International Pension (3)	362,742	1.96%	369,855	382,302	(12,447)
Life Insurance Premium (3)	1,845	9.68%	2,024	2,071	(47)
FICA (1)	953,638	3.0301%	982,534	982,534	-
1/2% Wage Assignment (1)	40,984	3.0301%	42,226	42,226	-
Blue Cross/United Health (4)	2,078,214	16.08%	2,412,391	2,476,269	(63,878)
Delta Dental (4)	224,371	8.89%	244,318	247,157	(2,839)
GASB 43/45 Reserve Required (1)	917,217	88,345	1,005,562	1,005,562	-
Reimburse City for Retired Health	-	-	-	248,180	(248,180)
City Retirement (1)	<u>2,726,971</u>	<u>61,333</u>	<u>2,788,304</u>	<u>2,788,304</u>	<u>-</u>
Total	\$ 7,838,977	\$ 149,678	\$ 8,431,788	\$ 8,772,935	\$ (341,147)
Plus Increase in Employee Co-Pays (5)					<u>(161,396)</u>
Total Adjustment to Benefits Expense					<u><u>\$ (502,543)</u></u>

Notes:

- (1) Per Schedule HJS-8.
- (2) Refer to footnotes for each line item for derivation.
- (3) Updated percentage increase from FY 2008 to FY 2010 per response to KCWA 1-5.
- (4) Reflects percentage increase from FY 2008 to FY 2010 per responses to KCWA-6 and updated Delta Dental premiums provided in informal response of July 17, 2009.

PROVIDENCE WATER SUPPLY BOARD

Adjustment to Benefits Component of the
Capital Reimbursement Offset to O&M
Rate Year Ended December 31, 2010

Test Year Capitalized Benefits (1)	\$ (327,594)
Rate Year Percent Increase in Benefits Expense (2)	<u>1.05503</u>
Capitalized Benefits in Rate Year	\$ (345,623)
Adjustment to Reflect Increase In Capitalized Benefits	<u><u>\$ (18,029)</u></u>

Notes:

- (1) Per Schedule HJS-2, page 2.
- (2) Reflects increase in benefits expense from test year to rate year per Schedule TSC-3.

PROVIDENCE WATER SUPPLY BOARD

Adjustment to Insurance Expense
 to Reflect Updated Results
 Rate Year Ended December 31, 2010

	<u>FY2008 (1)</u>	<u>FY 2009 (2)</u>	<u>FY 2010 (3)</u>	<u>Rate Year Expense (3)</u>
Property and Casualty	\$ 1,227,230	\$ 1,082,673	\$ 1,052,446	\$ 1,052,446
Workers Compensation	672,370	693,928	659,098	659,098
Old Workers Comp Claims	-	-	-	-
Injuries & Damages (4)	48,232	63,911	60,000	60,000
Safety Supplies & Other	793	793	793	793
Program Expense	4,755	4,755	4,755	4,755
Total Insurance Expense	\$ 1,953,380	\$ 1,846,060	\$ 1,777,092	\$ 1,777,092
Amount per PWSB Filing (3)				<u>2,144,180</u>
Adjustment to Rate Year Expense				<u>\$ (367,088)</u>

Notes:

- (1) Per Schedule HJS-7. The amount shown for Injuries & Damages has been adjusted to exclude prior year adjustments and to reflect actual claims paid.
- (2) Amounts for Property and Casualty and Worker's Compensation per the response to Div 1-6. Injuries and Damages reflects annualization of claims paid for the first 10 months of FY 2009. Safety Supplies and Program expense reflect amounts for the test year.
- (3) Amounts for Property and Casualty and Worker's Compensation per the response to KCWA 1-4 and informal response to Division request dated July 17, 2009. Injuries and Damages expense reflects average of claims paid in FY 2007 through 2009 rounded up. Safety Supplies and Program expense reflect amounts for the test year.

PROVIDENCE WATER SUPPLY BOARD

Adjustment to Chemical Expense
 to Reflect Estimated Quantities and FY 2010 Prices
 Rate Year Ended December 31, 2010

<u>Chemical</u>	<u>Quantity Used FY 2007 (1)</u>	<u>Quantity Used FY 2008 (1)</u>	<u>Quantity Used TME 12/31/08 (1)</u>	<u>3 year Average (2)</u>	<u>Unit Price (3)</u>	<u>Rate Year Expense</u>
Ferric Sulfate (gallons)	835,383.00	738,505.00	722,327.00	738,505.00	\$ 1.320	\$ 974,827
Lime (tons)	1,674.57	1,702.05	1,619.04	1,665.22	\$ 208.45	\$ 347,114
Chlorine (tons)	152.66	146.42	159.75	152.94	\$ 850.00	\$ 130,003
Flouride (gallons)	99,008.00	99,100.00	96,884.00	98,330.67	\$ 3.156	<u>\$ 310,332</u>
Projected Cost Per Division						\$ 1,762,275
Amount per Providence Water (1)						<u>\$ 2,127,964</u>
Adjustment to Rate Year Expense						<u>\$ (365,689)</u>

Notes:

(1) Per Schedule HJS-10A.

(2) Ferric Sulfate quantity is for the 12 months ended December 31, 2008. Refer to testimony.

(3) Reflects actual FY 2010 bid prices per response to Div 1-12.

PROVIDENCE WATER SUPPLY BOARD

Adjustment to Sludge Maintenance Expense
Rate Year Ended December 31, 2010

	<u>Amount per PWSB (1)</u>	<u>Amount per Division (2)</u>	<u>Difference</u>
Year 1	\$520,000	\$520,000	\$ -
Year 2	520,000	520,000	-
Year 3	<u>1,200,000</u>	<u>1,050,000</u>	<u>(150,000)</u>
Total	\$ 2,240,000	\$ 2,090,000	\$ (150,000)
Average Annual Expense	746,667	696,667	<u>\$ (50,000)</u>

Notes:

(1) Per response to Div 2-3.

(2) Refer to testimony for explanation of change to year 3 amount.

PROVIDENCE WATER SUPPLY BOARD

Adjustment to Rate Case Expense
Rate Year Ended December 31, 2010

Rate Expense per Providence Water (1)	\$ 210,850
Rate Expense per Division (2)	<u>105,425</u>
Adjustment to Rate Year Expense	<u><u>\$ (105,425)</u></u>

Notes:

- (1) Per Schedule HJS-9.
- (2) Based on 2 year amortization period.

PROVIDENCE WATER SUPPLY BOARD

Adjustment to Property Tax Expense
to Reflect Actual FY 2006 Tax Bills
Rate Year Ended December 31, 2010

<u>Municipality</u>	<u>Adjustment to Rate Year Expense</u>
Scituate Property Taxes per PWSB (1)	\$ 5,969,094
Scituate Property Taxes after Settlement (2)	<u>5,274,161</u>
Adjustment to Property Taxes	<u>\$ (694,933)</u>

Notes:

(1) Per Schedule HJS-6

(2) Per testimony of Harold J. Smith.

PROVIDENCE WATER SUPPLY BOARD

Calculation of Uniform Percentage Increase
Required to Recover Calculated Revenue Deficiency
Rate Year Ended December 31, 2010

	<u>Amount (1)</u>
Revenue at Existing Rates	
Retail Water Sales	\$ 30,829,934
Wholesale Water Sales	15,697,498
Retail Service Charges	4,999,279
Private Fire Protection	1,833,075
Public Fire Protection	<u>1,770,227</u>
Total Service Revenue	\$ 55,130,013
Revenue Deficiency per Division	<u>\$ 2,233,371</u>
Uniform Percentage Increase	<u><u>4.051%</u></u>

Note:

(1) Per Schedule TSC-1.

PROVIDENCE WATER SUPPLY BOARD

Development of Proposed Rates and
 Proof of Revenue at Proposed Rates
 Rate Year Ended December 31, 2010

Billing Unit	Units of Service	Current Rates	Proposed Rates	Proposed Revenues
Quarterly Service Charges				
5/8"	53,007	\$ 15.73	\$ 16.37	\$ 3,470,898
3/4"	10,265	16.70	17.38	713,623
1"	5,046	19.60	20.39	411,552
1.5"	1,479	23.47	24.42	144,469
2"	1,684	34.11	35.49	239,061
3"	83	112.49	117.05	38,861
4"	34	141.51	147.24	20,025
6"	69	209.25	217.73	60,093
8"	36	286.65	298.26	42,949
10"	2	356.80	371.25	2,970
12"	6	426.95	444.25	10,662
Total	71,711			\$ 5,155,162
Monthly Service Charges				
1"	-	\$ 10.57	\$ 11.00	\$ -
1.5"	2	11.86	\$ 12.34	296
2"	34	15.41	\$ 16.03	6,540
3"	11	41.53	\$ 43.21	5,704
4"	8	51.21	\$ 53.28	5,115
6"	20	73.78	\$ 76.77	18,425
8"	9	99.59	\$ 103.62	11,191
10"	-	122.97	\$ 127.95	-
12"	-	146.35	\$ 152.28	-
Total	84			\$ 47,271
Total Service Charge Revenue				\$ 5,202,433
Retail Consumption Charges				
Residential (HCF)	10,192,807	\$ 2.134	\$ 2.220	22,628,032
Commercial (HCF)	4,060,451	\$ 2.049	\$ 2.132	8,656,882
Industrial (HCF)	377,235	\$ 2.011	\$ 2.092	789,176
Total	14,630,493			\$ 32,074,089
Wholesale Consumption Charges				
Consumption (HCF)	14,415,751	\$ 1,08891	\$ 1,13322	\$ 16,336,217
	10,782.98	1,455.77	1,515.00	
Private Fire Service Charges				
3/4"	6	\$ 16.88	\$ 17.56	421
1"	10	20.00	20.81	832
1.5"	3	24.62	25.62	307
2"	31	36.57	38.05	4,718
4"	302	156.72	163.07	196,989
6"	1,220	253.42	263.69	1,286,807
8"	229	380.78	396.21	362,928
10"	4	526.08	547.39	8,758
12"	14	700.38	728.75	40,810
16"	1	1,149.93	1,196.51	4,786
Total	1,820			\$ 1,907,358
Public Fire Service Charges				
Hydrants	6,082	\$ 291.06	\$ 302.85	\$ 1,841,934
Miscellaneous Revenue				1,777,137
Total Revenue				\$ 59,139,168
Revenue Requirement				\$ 59,140,521
Difference				\$ (1,353)