

TESTIMONY
of
PAMELA M. MARCHAND
before the
PUBLIC UTILITIES COMMISSION

FOR

GENERAL RATE RELIEF

for

PROVIDENCE WATER

March 30, 2007

**PROVIDENCE WATER SUPPLY BOARD
TESTIMONY OF
PAMELA M. MARCHAND**

1 **Q Please state your full name and title?**

2 A. Pamela M. Marchand, P.E., Chief Engineer and General
3 Manager of the Providence Water Supply Board (Providence
4 Water).

5
6 **Q. How long have you held the position of Chief Engineer and
7 General Manager?**

8 A. I have held this position since January of 2006. Prior to
9 that, I held the position of Chief Engineer and General
10 Manager of the Pawtucket Water Supply Board from June,
11 1999. From 1986 until 1999 I held the positions of
12 Operations Manager, then Executive Engineer for the
13 Onondaga County Water Authority in Syracuse, NY.

14
15 **Q. Would you please state your education, background and
16 professional associations?**

17 A. I graduated from Syracuse University with an MS in
18 Environmental Engineering and Public Administration and a
19 BS in Environmental Engineering; and an AAS in Chemical
20 Technology from Onondaga Community College.

21
22 I am Director-at-Large for the American Water Works
23 Association, Vice-President of the RI Water Works
24 Association, a member of the Disinfection of Facilities

**PROVIDENCE WATER SUPPLY BOARD
TESTIMONY OF
PAMELA M. MARCHAND**

1 Standards Committee for AWWA, Chair of the Softening and
2 Conditioning Chemicals Standards Committee of the NEWWA,
3 and member of the Softening and Conditioning Chemicals
4 Standards Committee of AWWA.

5

6 **Q. Have you testified before a regulatory agency with respect**
7 **to operating matters or rates either in your current**
8 **position or in your previous positions?**

9 **A. Yes, in my position as Chief Engineer and General Manager**
10 **of the Pawtucket Water Supply Board.**

11

12 **Q. What is the purpose of this filing?**

13 **A. Providence Water is requesting an increase in rates to**
14 **secure sufficient funds to provide for adequate operation**
15 **and maintenance of the water system that provides potable**
16 **water to 600,000 people in central Rhode Island; funding**
17 **for debt service to perform major system capital**
18 **improvements as mandated by the RIDOH and EPA and to**
19 **provide for treatment reliability to meet present and**
20 **future regulations.**

21

22 **Q. Why is a revenue increase needed by Providence Water at**
23 **this time?**

24 **A. Providence Water's last rate increase was effective January**

**PROVIDENCE WATER SUPPLY BOARD
TESTIMONY OF
PAMELA M. MARCHAND**

1 1, 2006 for revenues required to meet the expenses for the
2 calendar year 2006. However, due to the inherent delay in
3 collections, we did not receive the entire amount of the
4 revenue required to meet expenses in the rate year. Then
5 there was not a rate increase to provide for the increased
6 expenses of CY 2007. Due to the fact that we needed to file
7 a full rate filing, with a cost of service study, and in
8 order to utilize the FY2006 audited expenses, this filing is
9 submitted at this time to provide funds to meet the expenses
10 calculated for the rate year of calendar year 2008.

11

12 **Q. How was this filing prepared?**

13 A. Providence Water has engaged the services of B&E
14 Consulting and Raftelis Financial Consultants to prepare
15 the City Service analysis and Cost of Service and Rate
16 Design. Our internal staff has provided and overseen the
17 preparation of the filing documents.

18

19 **Q. Has the Board approved this filing?**

20 A. Yes, at the regularly scheduled Board Meeting for the
21 month of February 2007.

22

23 **Q. What will the additional funding be utilized for?**

24 A. The major issues being addressed are as follows:

**PROVIDENCE WATER SUPPLY BOARD
TESTIMONY OF
PAMELA M. MARCHAND**

1 An additional \$2,000,000 for IFR funding for debt
2 service,
3 additional costs for insurance and chemical/sludge
4 expenses,
5 an increase in City Services,
6 the addition of costs associated with Post
7 Retirement health benefits required under GASB
8 43/45;
9 the amortization of past retiree's health benefits
10 paid by the City, but not charged to Providence
11 Water;
12 additional costs associated with property tax
13 increases;
14 an increase in the operations allowance;
15 funding for strategic planning;
16 and, Known and measurable increases in other
17 expenses.

- 18
- 19 **Q. Who prepared the documentation in support of this filing?**
- 20 **A.** Providence Water staff worked closely with the outside
21 consultants to prepare the calculations and testimony
22 necessary for this filing. Jeanne Bondarevskis as
23 Finance Director has provided guidance and oversight and
24 has coordinated these efforts. Ms. Bondarevskis has also

**PROVIDENCE WATER SUPPLY BOARD
TESTIMONY OF
PAMELA M. MARCHAND**

1 provided pre-filed testimony on behalf of Providence
2 Water as has our Director of Engineering, Paul Gadoury.

3

4 **Q. Who are the consultants Providence Water used for this**
5 **filing?**

6 A. Providence Water has engaged B & E Consulting to prepare
7 the cost of service and city service analysis, and
8 Raftelis Financial Consultants to prepare the cost
9 allocation and rate design. The testimony of Walter Edge
10 from B&E, David Bebyn from B&E, and Harold Smith from
11 Raftelis, is incorporated in this filing.

12

13 **Q. When is the proposed rate relief needed to take effect?**

14 A. Technically, Providence Water is asking that the new
15 rates go into effect 30 days from the filing date.
16 However, in light of the expected Commission suspension,
17 Providence Water is hopeful that the Commission will
18 authorize the new rates for billing on and after November
19 1, 2007. The test year reflects a calendar year ending
20 December 31, 2008.

21

22 **Q. Is there any proposed change to City Services?**

**PROVIDENCE WATER SUPPLY BOARD
TESTIMONY OF
PAMELA M. MARCHAND**

1 A. Yes. Providence Water has engaged B&E Consulting to
2 prepare an analysis of the services provided by the City
3 of Providence.

4
5 Q. **Have you attached the tables required by R.I.G.L. ? 39-3-**
6 **12.1?**

7 A. Yes, they are attached as an Exhibit to my testimony.

8
9 Q. **Has Providence Water evaluated the methodology of funding**
10 **the Infrastructure Replacement Program?**

11 A. Yes we have. We have previously depended on the pay-as-
12 you-go approach as the least cost to our ratepayers for
13 system improvements as there is no interest expense
14 incurred.

15 However, in the past year, additional major capital
16 expenses make it prudent to request bonding in the amount
17 of \$35,000,000 in order to keep the annual customer rates
18 at a relatively reasonable level. We are requesting
19 funds for debt service due to the requirement to replace
20 7% (1794) of our lead services per year, estimated to
21 cost approximately \$5.5 million/ year; and renovation of
22 the water treatment plant filtration system and
23 sedimentation system estimated to cost approximately \$70
24 Million over the next 5 years.

25

**PROVIDENCE WATER SUPPLY BOARD
TESTIMONY OF
PAMELA M. MARCHAND**

1 **Q. Why are you required to replace lead services?**

2 A. In August 2006, Providence Water exceeded the EPA Action
3 Level for lead for water samples taken at the taps of
4 customers. Under the Lead & Copper Rule, once this level
5 is exceeded, the utility is required to replace 7% of
6 lead services in the system (from the main to the
7 property line) per year. Per a consent agreement with
8 the RIDOH, in order to provide time to set up the program
9 and bid services, Providence Water must replace 14% of
10 the system lead services by September 30th, 2008.

11

12 **Q. What are the upgrades to the water treatment plant?**

13 A. Providence Water is replacing the entire filter system
14 (except for the concrete basins) installed in 1926. This
15 includes all piping, valves, underdrains, troughs, and
16 media. Filter structure renovations include the
17 installation of an exit to comply with code, and raising
18 and replacing the roofs over the filters.

19 The settling basins need to be redesigned and mechanized
20 to remove sludge on a continuous basis to improve the
21 water quality to the filters.

22

23 **Q. Do you have any additional items to address?**

24 A. Yes, the Operations Reserve and Strategic Planning.

25

**PROVIDENCE WATER SUPPLY BOARD
TESTIMONY OF
PAMELA M. MARCHAND**

1 Q. **Are you requesting changes to the Operations Reserve?**

2 A. Yes. We are requesting 3% of approved revenues for
3 operations reserve. In previous years, the Commission
4 has granted 1.5% of total expenses less miscellaneous
5 revenues. However, this has proven to be an insufficient
6 amount to cover the unknown expenses for the period
7 following the rate filing. For example, in FY2007,
8 Providence Water had additional expense for insurance in
9 the amount of \$257,979, and lead notification expense in
10 the amount of \$87,000. Fortunately, we were relieved of
11 the last two payments of the City of Cranston taxes in
12 the amount of \$175,593 resulting in a deficit of \$169,386
13 on just these items.

14
15 And, should Providence Water experience a below average
16 year for consumption (as in FYTD 2007), and lower than
17 predicted revenue, the operations reserve is all that is
18 available to pay the operational expenses. Although
19 operations costs tied to production may decrease
20 slightly, most costs do not. In the past, when faced with
21 a deficit in funding, the water utility was typically
22 expected to try to reduce expenses. However, most of the
23 Providence Water expense (41.5%) is in restricted funds
24 that are required to be fully funded. Salary and
25 benefits, which are negotiated by the City of Providence,

**PROVIDENCE WATER SUPPLY BOARD
TESTIMONY OF
PAMELA M. MARCHAND**

1 is an additional \$36.6%. Another 11.2% is allotted for
2 the payment of taxes. That leaves 10.6% for all services
3 and materials including utilities, billing expense,
4 repairs to equipment, City services, training,
5 unemployment insurance, etc. Therefore, there is very
6 little that can be practically eliminated from the
7 operations expense without impairing the operation.

8
9 Filing for an emergency rate increase is not always
10 practical, as the case would need to be prepared by
11 Providence Water and the time delay for approval and
12 collection would not solve the deficit in the fiscal year
13 in which it occurs. In this instance the Providence
14 Water Supply Board would be dependent on the City of
15 Providence for funding.

16
17 Another example for additional reserve is the expense of
18 the rate filing. A full rate filing costs the utility in
19 excess of \$200,000. This amount has to be paid in the
20 year of the filing, yet the expense is only allowed to be
21 recovered over the following two rate years.

22
23 **Q. Why do you need a strategic plan?**

24 **A. As I am new to Providence Water, I have seen the need for**
25 the development of a strategic plan, from the Board on

**PROVIDENCE WATER SUPPLY BOARD
TESTIMONY OF
PAMELA M. MARCHAND**

1 down throughout the organization. The organization has
2 much planning to do to oversee the reconstruction of an
3 aging water system. Sixty (60) miles of the distribution
4 system was constructed in the 1870's. The source water,
5 dam, water treatment plant and transmission system was
6 constructed in 1926. Although an aggressive renovation
7 program was started approximately 10 years ago, and a
8 considerable amount of work has been done on the dams,
9 pump stations, and treatment plant, the majority of the
10 system needs to be renovated or replaced in the next 20
11 years. In addition, an effective preventative maintenance
12 system should be installed as soon as possible.

13 An organization strategic plan that includes an asset
14 management program is essential to focus the funding and
15 manpower where it is the most effective in accomplishing
16 the mission of Providence Water and to direct the most
17 efficient use of ratepayer funds. In the 1994 Management
18 and Operations Study of the Providence Water Supply
19 Board, commissioned for the PUC, one of the key
20 recommendations of the Vista Consulting Group was to
21 "Initiate and institute a strategic planning
22 function...to,...at a minimum, reaffirm the mission of
23 the organization, establish long-term goals, develop a
24 strategy for achievement of the goals, and integrate the
25 planning process with the annual budgeting process." The

**PROVIDENCE WATER SUPPLY BOARD
TESTIMONY OF
PAMELA M. MARCHAND**

1 report recommended the "retention of an outside firm
2 skilled in strategic planning to assist in the
3 establishing and implementing the planning process."
4 Therefore, the amount of \$150,000 has been included in
5 this filing, based on a proposal by a firm that
6 specifically works with water utilities. (Providence
7 Water would issue a request-for-proposal for these
8 services should the funding be approved.)

9

10 **Q. Is this a one-time expense?**

11 A. No, as once the strategic plan is completed, we will need
12 funds for the next phase and for an asset management
13 program. The recommendations of the strategic planning
14 study may be readily achievable and not require any
15 further engagement of a consultant. However, it is
16 expected that a consultant will be required to ensure
17 proper implementation of more extensive improvement
18 plans.

19

20 **Q. Do you have any final comments?**

21 A. Providence Water has also provided a rate study to
22 accompany this filing. Please see the study submitted by
23 Raftelis Financial Consultants.

24

25 **Q. Does this conclude your testimony?**

26 A. Yes.

EXHIBIT I
TABLE A

STATUS OF PHYSICAL PLANT

The physical plant of the Providence Water Supply Board consists of five (5) feeder reservoirs (Ponagansett, Moswansicut, Barden, Westconnaug, and Regulating) and the main Scituate Reservoir, a 100% surface water supply with a total storage capacity of 41,268 million gallons; a filtration plant with associated sedimentation basins, and chemical storage and feeding equipment, and a filtration capacity of 144 million gallons per day; a transmission and distribution system, consisting of more than 948 miles of transmission and distribution mains, which vary in size from 6 inch to 66 inches, and consisting primarily of pipe constructed of cast and ductile iron, asbestos-cement and concrete; four (4) completely enclosed below-ground distribution reservoirs with a total capacity of 115.3 million gallons; one (1) prestressed concrete cylindrical tank with a capacity of 3.5 million gallons; four (4) distribution system pumping stations; a raw water booster pumping station; twelve (12) emergency power systems, eight (8) driven by diesel engines, four (4) driven by gas engines; six (6) pressure boosting pumping stations; and administrative and maintenance garage facilities.

EXHIBIT I
TABLE B

MAINTENANCE POLICY

It is the policy of the Water Supply Board to maintain its system in proper operating condition in accordance with all accepted standards. Leaks and damaged valves, hydrants and other appurtenances of the distribution system are repaired and/or replaced expeditiously. Physical plant maintenance is performed in a planned manner by permanent crews when possible. Outside contractors are used to supplement forces when needed. Distribution pipes (most recent main extension) were installed through fiscal reporting year ending June 30, 2006. Total pipe installed (and or replaced) in the last ten (10) year period is as follows:

<u>Year</u>	<u>Feet</u>	<u>Miles</u>
1997	11,951	2.26
1998	22,017	4.17
1999	6,513	1.23
2000	7,015	1.33
2001	8,420	1.59
2002	15,990	3.03
2003	11,424	2.16
2004	7,606	1.44
2005	11,400	2.16
2006	<u>13,388</u>	<u>2.54</u>
Total	115,724	21.91

EXHIBIT I
TABLE C

WATER TREATMENT METHODS AND CHEMICALS USED

During the last fiscal reporting period, (July 2005 through the end of June 2006), Providence Water utilized the following four (4) chemicals in the treatment process, as follows:

- 1) Ferric sulfate - used to coagulate and settle out micro-organisms and particles that cause color and turbidity,
- 2) Lime - used to adjust the pH,
- 3) Chlorine - used to control bacteria,
- 4) Fluoride - used to control dental cavities.

The quantities and costs of the chemicals used based on the purification plant reporting data are as follows:

	<u>Chemical Quantity Used</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Ferric Sulfate	1,027,481 gallons	\$0.97384 /per gallon*	\$1,000,601.76
Lime	2,107.0945 tons	\$133.75 /ton	\$281,823.89
Chlorine	145.7665 tons	\$840.00 /ton	\$122,443.86
Fluoride	103,828 gallons	\$0.83325 /per gallon	<u>\$86,514.68</u>
		Total	<u>\$1,491,384.19</u>

*Average cost, Ferric Sulfate, for fiscal reporting period.

EXHIBIT I
TABLE D

POLICY RELATING TO EXPANSION AND RENOVATION

It is the policy of the Board to assure that the system will continue to provide service to all existing customers. Technical evaluations are made to determine future needs so that required expansion can proceed in a timely manner in order to assure that new customers can be provided with the same level of service without any degradation of service to existing customers. Providence Water has an Infrastructure Replacement Program that addresses the renovation or replacement of major system components. A Capital Improvement Program is also in place to address the implementation of new capital asset needs. Funding has been provided through rates established by the Public Utilities Commission. The programs are administered through restricted funds for which semi-annual reports are provided to the Commission.

In fiscal year ending June 30, 2006, Providence Water invested approximately \$15.3 million into infrastructure replacements and capital improvements to the system.

EXHIBIT I
TABLE E

PROVIDENCE WATER SUPPLY BOARD
NON-ACCOUNTED FOR WATER
Hundred Cubic Feet

	<u>FYE '02</u>	<u>FYE '03</u>	<u>FYE '04</u>	<u>FYE '05</u>	<u>FYE '06</u>
Total Quantity of Water Pumped	33,530,214	34,607,340	34,403,770	33,733,529	34,461,096
Sales to Ultimate Consumer	15,565,691	15,967,340	15,915,370	15,249,684	16,258,137
Sales for Resale	<u>14,054,674</u>	<u>15,042,791</u>	<u>14,826,899</u>	<u>14,987,721</u>	<u>14,881,594</u>
Sub-total Sales	29,620,365	31,010,131	30,742,269	30,237,405	31,139,731
Water used by Company	0	0	0	0	0
Non-accounted for Water	3,909,849	3,597,209	3,661,501	3,496,124	3,321,365
% of Total Water Pumped	11.66%	10.39%	10.64%	10.36%	9.64%