



PROVIDENCE WATER

Tap Water Delivers

January 23, 2020

The Hon. Jorge O. Elorza
Mayor

Ricky Caruolo
General Manager

Mrs. Luly Massaro
Commission Clerk
RI Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

RE: Dk 4994; Division of Public Utilities & Carriers; Set 2

Dear Mrs. Massaro:

Attached please find an original and nine copies of Providence Water's responses to the second set of data requests from the Division. The excel files have been included in the email to the service list.

If you have any questions, I can be reached extension 7217.

Sincerely,

Mary L. Deignan-White
Division Manager-Finance

cc: service list(via email)

BOARD OF DIRECTORS

Xaykham Khamsyvoravong
Chairperson

Joseph D. Cataldi
Vice Chairperson

Michael J. Correia
Council President Pro Tempore

Jo-Ann Ryan
Councilperson

Sara Silveria
Ex-Officio

Cristen L. Raucci, Esq.
Member

Carissa R. Richard
Secretary

William E. O'Gara, Esq.
Legal Advisor

MEMBER

Rhode Island Water Works Assn.
New England Water Works Assn.
American Water Works Assn.
Water Research Foundation

An EPA WaterSense Partner

(401) 521-6300

125 Dupont Drive
Providence, RI 02907

www.provwater.com

Follow us @provwater

Like us at:
facebook.com/Providencewater

Providence Water Docket 4994

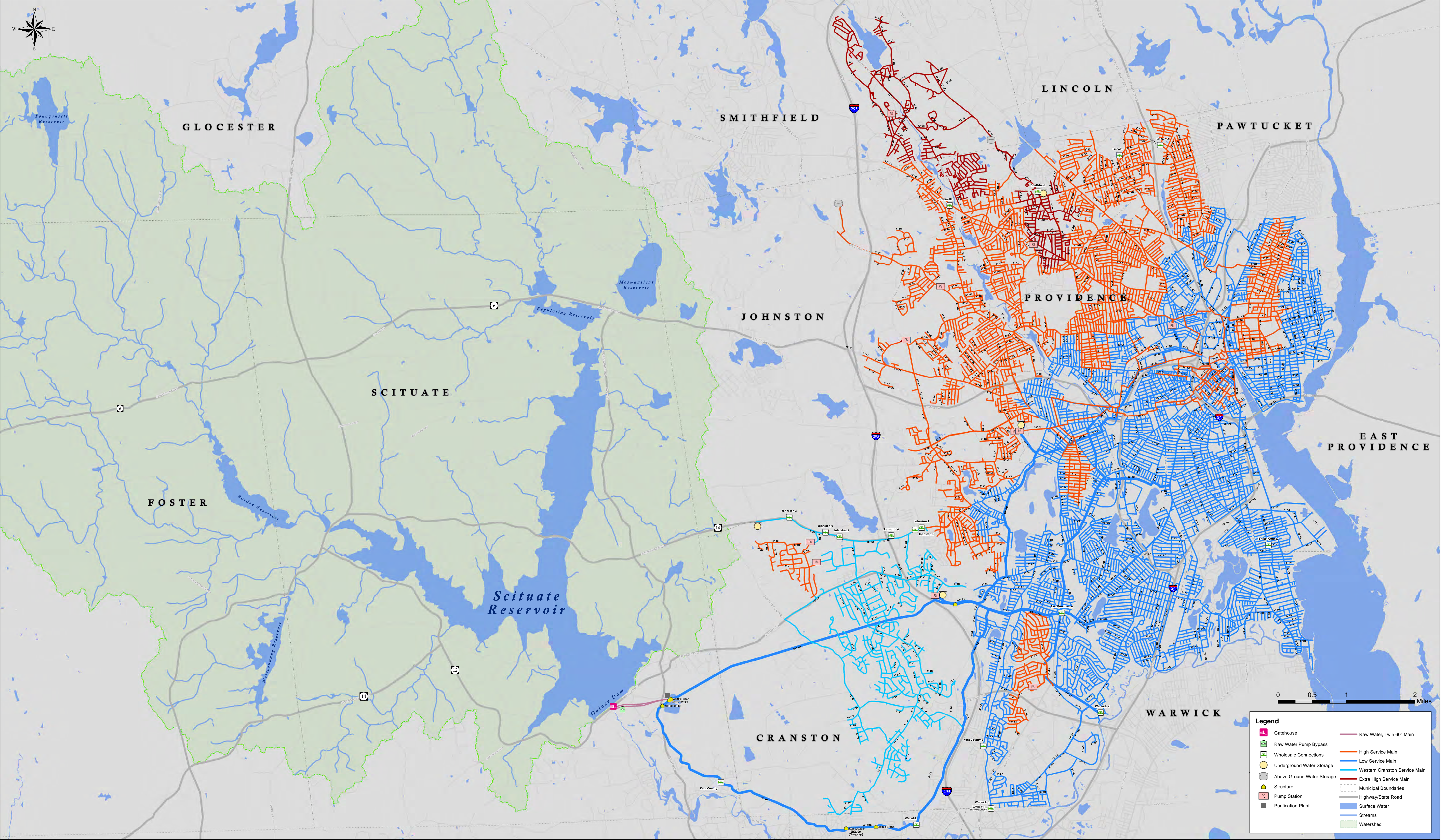
Division of Public Utilities Data Request – Set 2 December 19, 2019

DIV 2-1. Please provide a large-scale map of the PWSB system identifying sources of supply, wholesale customers, treatment facilities, and major transmission and distribution lines.

Response :

See attached Providence Water- “Water Supply, Transmission & Distribution System Map”

Providence Water Water Supply, Transmission, & Distribution System



Providence Water Docket 4994

Data Requests of the Division of Public Utilities and Carriers Set 2 December 19, 2019

DIV 2-2:

Please provide the average, maximum day, and maximum hour demands of the wholesale class and each wholesale customer for the last three years. Explain how wholesale customer demands were determined.

RESPONSE:

Please see attached excel file entitled “DIV 2-2 and 2-7 Wholesale Dmd and Class Demand Factors” Base demand was determined as indicated in the testimony of Harold Smith (see p. 24). Base demand, for all customers, represents Rate Year sales, plus an allocation of non-revenue water (NRW), as indicated on HJS-16A. Maximum day and Maximum hour demands were developed using daily and hourly demand records for each customer.

For maximum day, the highest usage day for wholesale customers (as a group) was divided by the average daily usage, to determine the maximum day peaking factor indicated on HJS-13A (1.74). This is then multiplied by wholesale average day, to determine total maximum day demand. This demand, less average day demand, represents maximum day extra capacity demand for wholesale customers.

Maximum hour demand for wholesale was determined in the same fashion. The highest usage hour (expressed on a 24 hour basis) was divided by the average daily usage to determine an hourly peaking factor (2.16). This factor was multiplied by wholesale average day, to determine the total maximum hour demand. This demand, less maximum day demand, represents the maximum hour extra capacity for wholesale customers.

Providence Water Docket 4994

Data Requests of the Division of Public Utilities and Carriers Set 2 December 19, 2019

DIV 2-3:

Please provide the average, maximum day, and maximum hour system-wide demands in each of the last three years

RESPONSE:

Providence Water is unable to determine system-wide maximum hour demand. The average and maximum day system-wide demands for each year as follows:

- FY 2017 –
 - Average Day: 78,236 HCF/d
 - Maximum Day: 136,805 HCF/d
- FY 2018 –
 - Average Day: 77,084 HCF/d
 - Maximum Day: 119,840 HCF/d
- FY 2019 –
 - Average Day: 76,829 HCF/d
 - Maximum Day: 130,348 HCF/d

Providence Water Docket 4994

Division of Public Utilities Data Request – Set 2 December 19, 2019

DIV 2-4. For each wholesale customer, explain whether the PWSB is the sole source of supply or whether the customer uses other sources of supply.

Response :

<u>Wholesale Customer</u>	<u>Source of Supply</u>
1. Bristol County Water Authority	Providence Water
2. East Providence Water District	Providence Water
3. Greenville Water District	Providence Water
4. Johnston Water District	Providence Water
5. Kent County Water Authority	Providence Water 80% KCWA Wells 20%
6. Lincoln Water Commision	Providence Water
7. Smithfield Water District	Providence Water
8. Warwick Water Department	Providence Water

Providence Water Docket 4994

Division of Public Utilities
Data Request – Set 2
December 19, 2019

Div 2-5. Please provide the monthly sales of each retail customer class and wholesale customer for the last three years in Excel format.

Response: Please see the attached “*Div 2-5 Monthly Sales Attachment*” for FY 2017- FY 2019 in excel format.

Providence Water Docket 4994

**Data Requests of the
Division of Public Utilities and Carriers Set 2
December 19,2019**

DIV 2-6:

Please identify what Mr. Smith would consider to be reasonable weekly adjustment factors for the residential, commercial, and industrial classes (per Appendix A, page 316 of the AWWA Manual M1).

RESPONSE:

Given that there is no specific data regarding the weekly usage characteristics of the different customer classes, any weekly adjustment factors would be speculative. Accordingly, I am of the opinion that it would not be reasonable to include any weekly adjustment factors.

Providence Water Docket 4994

Data Requests of the Division of Public Utilities and Carriers Set 2 December 19, 2019

DIV 2-7:

Please explain how the class demand factors in the class cost of service study were determined and provide all supporting documentation and workpapers.

RESPONSE:

Please see attached excel file entitled “DIV 2-2 and 2-7 Wholesale Dmd and Class Demand Factors” for workpapers supporting the development of class demand factors. Wholesale demand factors were determined as indicated in Providence Water’s response to DIV 2-2.

The factor for retail maximum day was determined as follows:

- Estimate retail daily demand by subtracting wholesale demand from plant production
- Divide retail maximum daily demand by average daily demand to determine a peaking factor for retail, in total (1.6 as shown on HJS-16A).

Using this factor, retail maximum day extra capacity demands were determined as follows:

- Multiply the retail maximum day peaking factor by retail average day demand to determine maximum day demand, in total for retail (55,343 HCF/d as shown on HJS-16A)
- Distribute the total maximum to each retail class (residential, commercial and industrial) based on total maximum day for each class as determined in a monthly analysis (see excel file entitled “DIV 2-2 and 2-7 Wholesale Dmd and Class Demand Factors” for retail monthly analysis).
- Subtract average day by class from total maximum day, by class, to determine maximum day extra capacity by class.

Sine no hourly data was available for the retail class, the retail maximum hour peaking factors were estimated as 2 times the maximum day peaking factors. Retail maximum hour extra capacity was then determined as follows.

- Multiply the retail maximum hour peaking factor by retail average day demand to determine total maximum hour for each class.

Providence Water Docket 4994

Data Requests of the Division of Public Utilities and Carriers Set 2 December 19, 2019

- Subtract total maximum day from total maximum hour to determine maximum hour extra capacity by retail class.

Providence Water Docket 4994

Division of Public Utilities Data Request – Set 2 December 19, 2019

DIV 2-8. Please identify the size of the main(s) serving each wholesale customer.

Response :

See attached sheet – “Data Request 2-8”.

Data Request 2-8

Wholesale Accounts	Svc Pipe Size
Bristol County - Columbia Park	30"
East Providence - Budlong Road	42"
Greenville - George Waterman	12"
Johnston - Capitol Street	8"
Johnston - Everbloom Drive	8"
Johnston - Green Hill Road	16"
Johnston - Nardolillo Street	8"
Johnston - Simmonsville Ave	8"
Johnston - Taylor Road	8"
Kent County - Clinton Ave	30"
Kent County - Oaklawn Ave	12"
Lincoln - Woodward Road	16"
Lincoln - Charles Street	12"
Smithfield - Smithfield Road	12"
Warwick - Natick Road	42"
Warwick - Pettaconsett	30"

Providence Water Docket 4994

Data Requests of the Division of Public Utilities and Carriers Set 2 December 19, 2019

DIV 2-9:

Reference HJS Schedule 14-a. Please identify the extent to which treatment plant salaries and wages would increase on a maximum day to an amount higher than that experienced on an average day.

RESPONSE:

Treatment plant salaries and wages for individual employees remain static during the year (absent pay or step increase) and would not be higher on a maximum day than on an average day. Under the Base/Extra capacity cost allocation approach, a portion of all treatment-related costs are allocated to Max Day, not just costs that increase on the Max Day.

Providence Water Docket 4994

Division of Public Utilities Data Request – Set 2 December 19, 2019

Div 2-10. Reference page 2, lines 27-28, of Mr. Smith's testimony. Please provide a copy of Mr. Smith's testimony before the Nova Scotia Utility and Review Board.

Response: A copy of Mr. Smith's direct pre-filed testimony is attached. Mr. Smith also testified at the NSURB rate hearing, but he was never provided with a transcript of the hearing.

**BEFORE THE
NOVA SCOTIA UTILITY AND REVIEW BOARD
HRWC – P-128.10**

IN THE MATTER OF AN APPLICATION by Halifax Regional Water Commission
("HRWC") for Approval of a Schedule of Rates and Charges and Schedules of Rules and
Regulations for the Provision of Water, Public and Private Fire Protection, Wastewater and
Stormwater Services

**DIRECT TESTIMONY
OF
HAROLD J. SMITH
ON BEHALF OF THE
CONSUMER ADVOCATE**

AUGUST 3, 2010

DIRECT TESTIMONY OF HAROLD J. SMITH

August 3, 2010

Table of Contents

<u>SECTION</u>	<u>PAGE</u>
I. QUALIFICATIONS	1
II. PURPOSE OF TESTIMONY	2
III. SUMMARY OF TESTIMONY	4
IV. EXPENSES/REVENUE REQUIREMENTS	5
V. COST ALLOCATION.....	7
VI. FIRE PROTECTION CHARGES	12
VII. EXTRA STRENGTH SURCHARGES.....	14

1 **DIRECT TESTIMONY**

2 **OF**

3 **HAROLD J. SMITH**

4
5 **I. QUALIFICATIONS**

6
7 **Q. Please state your name, position, and business address.**

8 A. My name is Harold J. Smith and I am a Vice President of Raftelis Financial
9 Consultants, Inc. My business address is 1031 South Caldwell Street, Suite 100,
10 Charlotte, North Carolina 28203.

11
12 **Q. Please describe your educational background and work experience.**

13
14 A. I obtained a Master of Business Administration from Wake Forest University in
15 1997 and a Bachelor of Science in Natural Resources from the University of the South in
16 1987. As an employee of RFC, I have been involved in numerous projects for public
17 utilities including a number of studies involving transition to new rate structures designed
18 to address specific pricing objectives. I have also served on engagements involving a
19 wide range of technical specialties including:

- 20 • Utility Cost of Service and Rate Structure Studies
- 21 • Privatization Feasibility Studies
- 22 • Alternative Project Delivery Procurements
- 23 • Utility Financial Planning Studies
- 24 • Municipal Financial Planning Studies

25
26 **Q. Have you previously testified before this or other regulatory commissions?**

27
28 A. I have not testified previously before the Nova Scotia Utility and Review Board;
29 however, I was involved in a study for the Board that involved the development of a
30 generic formula for the determination of an appropriate rate of return for water utilities. I

1 have submitted testimony or have testified in other regulatory jurisdictions. I have
2 prepared testimony in support of the City of Newport, Rhode Island's last five rate cases
3 before the Rhode Island Public Utility Commission (RIPUC Docket Nos. 3578, 3675,
4 3818, 4025 and 4128). I also prepared testimony in support of the Providence Water
5 Supply Board's two most recent rate filings before the RIPUC (Docket Nos. 3832 and
6 4061) and I prepared a conservation rate structure filing for Providence Water (Docket
7 No. 4070). I also prepared testimony on behalf of the City of Chattanooga, Tennessee
8 during Tennessee-American Water Company's most recent rate filing before the
9 Tennessee Regulatory Authority (TRA Docket No. 06-00290).

10
11 Attached as Schedule "A" to my testimony is a detailed summary of my
12 qualifications.

13
14 **II. PURPOSE OF TESTIMONY**

15
16 **Q. On whose behalf are you testifying?**

17
18 A. My testimony is sponsored by the Nova Scotia Consumer Advocate.

19
20 **Q. Please describe the purpose of your testimony.**

21
22 A. I have been asked to review and comment on the application of the Halifax
23 Regional Water Commission's application for approval of a schedule of rates and charges
24 for water, sewer and stormwater service.

25
26 **Q. Have you reviewed HRWC's application for approval of changes to their**
27 **schedules of rates and charges for water, sewer and stormwater service?**

28
29 A. Yes, I have and I have also reviewed HRWC's responses to Information Requests
30 submitted by the other parties to this filing.

1 **Q. Did the original filing contain the information necessary to draw conclusions**
2 **about the methodologies used to calculate the various proposed rates and charges?**

3
4 A. In my opinion it did not. The original filing was hard to follow and was unclear
5 as to the methodologies used to calculate rates and charges and provided very little
6 justification for many of the decisions made with respect to the allocation of costs and
7 rate design. The fact that such a large number of information requests were submitted by
8 the various parties to this case is demonstrative of the inadequacy of the original filing.

9
10 **Q. Did HRWC's responses to information requests provide the information**
11 **necessary to draw conclusions regarding the validity and appropriateness of their**
12 **proposed rates and charges?**

13
14 A. In some cases yes, but in many cases HRWC either refused to respond to
15 legitimate requests for information or their response did not provide the information that
16 was requested.

17
18 **Q. Can you provide some examples of HRWC's inadequate responses to**
19 **information requests?**

20
21 A. Yes, in the response to IR-17BCA I requested that HRWC provide the
22 quantitative buildup of revenue from Extra Strength Surcharges, including rates and the
23 forecasted quantities of extra strength waste. The response by HRWC directs the inquirer
24 to the response for IR-79LUG (a). The response to IR-79LUG (a) essentially states there
25 was an error in the revenue calculation, yet still does not provide any quantitative buildup
26 of the rates, strengths, and resulting revenue. The response to IR-79LUG (b) provides a
27 table of projected volume and the unit rate (no buildup of the rate is provided), yet the
28 volume is in different units (m^3) than the rate (\$/kg) and therefore does not provide even
29 the most basic calculation of rate determination or revenue.

30

1 Also, in the response to IR-7LUG which requested monthly water usage totals for each
2 customer class, HRWC claims that monthly data could not be provided despite the fact
3 that Exhibit 9 on page 27 of the "*Cost of Service Demand Analysis*" submitted with
4 HRWC's original filing purports to show monthly billed consumption for different
5 customer classes.

6
7 **Q. Do you have any concerns related to HRWC's application or their responses**
8 **to Information Requests?**

9
10 A. Yes, I do.
11

12 **III. SUMMARY OF TESTIMONY**
13

14 **Q. Please summarize each of your concerns.**
15

16 A. My concerns regarding HRWC's filing are as follows:

- 17 • While increases in annual expenditures for the water utility are generally small,
18 increases in annual expenditures for the wastewater and stormwater utility are quite high.
19 Specifically, wastewater depreciation expense in 2010/2011 is \$3.75 million (60%)
20 higher than in 2009/2010 and total operating expenditures for the stormwater utility in
21 2010/2011 are \$1.75 million (24%) higher than they were in 2009/2010. These increases
22 in expenditures result in significantly higher revenue requirements for both the
23 wastewater and stormwater utilities and as such are one cause of the large increases in
24 monthly bills that would be experienced by wastewater and stormwater customers if
25 HRWC's proposed rates are approved.
- 26 • The allocation of costs between the three utilities results in rates that do not
27 recover costs equitably from the customers of each utility. This is not as much of an
28 issue for customers that receive service from all three utilities; however, customers that
29 receive service from only one or two utilities may be inappropriately subsidizing the
30 utilities from which they do not receive service.

1 • The methodology that HRWC uses to calculate fire protection charges is flawed
2 and results in significant over recovery of costs from some fire protection customers.

3 • The methodology used by HRWC to calculate Extra Strength Surcharges assessed
4 to wastewater customers that discharge wastewater with strength characteristics greater
5 than those of domestic wastewater is flawed and results in an inequitable recovery of
6 costs associated with treating high strength wastewater.

7
8 **IV. EXPENSES/REVENUE REQUIREMENTS**
9

10 **Q. Please elaborate on your concerns with respect to the expenditures that**
11 **HRWC is proposing in their filing.**
12

13 A. I will, but first I would like to point out that in its responses to information
14 requests from the other parties to this filing, HRWC made a number of changes to the
15 schedules that support its proposed rates and charges. Revised schedules that reflect
16 these changes were included with a number of HRWC's responses to information
17 requests, but it does not appear that HRWC has provided a complete set of revised
18 schedules similar to those provided in Appendices 7, 8 and 9 of its rate filing, nor has it
19 provided a revised Schedule A similar to that provided in Appendix 10 of the rate filing.
20 As such it is difficult to determine, with any degree of certainty, exactly what HRWC is
21 currently proposing. For the purposes of this testimony my references to schedules
22 prepared by HRWC will be in reference to the schedules provided in its original filing
23 unless otherwise noted.
24

25 Like all businesses in today's economic environment, utilities will experience
26 year to year increases in the costs associated with providing service. These increases are
27 the result of inflation or are due to an increase in the services provided either in terms of
28 the number of customers served or volumes sold or in terms of an increase in the quality
29 of service such as greater reliability or a higher quality product. However, utilities should
30 seek to minimize these cost increases such that they do not cause dramatic increases in
31 rates and charges.

1 **Q. Does it appear that HRWC has minimized the annual increases in its cost to**
2 **provide service?**

3
4 A. With respect to the water utility it does appear that HRWC has been successful in
5 minimize the year to year increases in most of its expense line items. With the exception
6 of a few individual line items that show significant increases from 2009/2010 to
7 2010/2011, HRWC has managed the costs of its water utility such that the increase in
8 total annual expenditures (Operating Expenditures plus Non-Operating Expenditures
9 from Appendix 7; Schedule B-2) from 2009/2010 to 2010/2011 is approximately 2% and
10 the increase from 2010/2011 to 2011/2012 is approximately 5%. Consequently the
11 monthly bills under the proposed rates for most customers in 2010/2011 will be lower or
12 only slightly higher than their monthly bills under the current rates. Similarly, increases
13 in monthly bills from 2010/2011 to bills under the rates proposed for 2011/2012 are
14 generally quite low.

15
16 **Q. Does it appear that HRWC has been as effective in managing the costs**
17 **associated with providing wastewater and stormwater service?**

18
19 A. It does not appear that HRWC has been as effective in managing annual cost
20 increases for its wastewater and stormwater utilities. Specifically, 2010/2011 total
21 wastewater expenditures are 12% greater than the estimated total expenditures for
22 2009/2010 and total wastewater expenditures in 2011/2012 are projected to be 21%
23 greater than those projected for 2010/2011. Similarly, the proposed total annual
24 stormwater expenditures for 2010/2011 are 21% higher than the estimated annual
25 expenditures in 2009/2010 and the projected total annual stormwater expenditures for
26 2011/2012 are 10% higher than those proposed for 2010/2011.

27
28 **Q. Are there any specific increases in expenditure line items that do not appear**
29 **to be justified?**

1 A. In its original filing HRWC provided little, if any, justification for its proposed
2 increases in wastewater and stormwater expenditures; however, in response to
3 information requests it did provide some degree of justification for many of its proposed
4 increases. For example, in response to IR-25BCA, which asked for additional
5 information related to a 214% increase in the Environmental Service line item under
6 Engineering and Environmental Service for stormwater, HRWC states that the “increase
7 is based on a reallocation of staff to meet regulatory requirements and the estimated
8 amount of time spent with each service (water, wastewater and stormwater”. While this
9 is more justification that was provided in the original filing, it is still not clear that the
10 need to “meet regulatory requirements” justifies a \$400,000 increase in this line item.
11 However, since system staffing is outside my area of expertise, I am not able to refute the
12 necessity of such an increase, but will leave it to others to do so if appropriate.
13 In other cases HRWC revised its proposed expenditures in response to information
14 requests such that the year to year increases were smaller. For instance IR-132d HRWC
15 recognizes that certain increases that appeared to be quite large were in fact the result of
16 an error in their schedules and imply that the correct values represent a smaller increase,
17 but as mentioned previously they did not provide a corrected schedule and therefore it is
18 impossible to determine the impact of their correction of the error.

19

20 **Q. Does this conclude your testimony relating to expenditures and revenue**
21 **requirements?**

22

23 A. Yes, it does until HRWC provides a comprehensive set of schedules that reflect
24 any changes they have made since their original filing. At that time I would like the
25 opportunity to review and comment on their proposed expenses and revenue
26 requirements.

27

28 **V. COST ALLOCATION**

29

30 **Q. Please elaborate on your concerns with respect to HRWC’s allocation of**
31 **costs.**

1
2 A. Since HRWC provides water, sewer and stormwater services there are multiple
3 layers of cost allocation involved in the rate setting process. The first level of cost
4 allocation involves the allocation of certain costs between the three utilities. This level of
5 allocation recognizes that some of HRWC's resources are shared between the three
6 utilities and therefore the costs associated with these shared resources should be
7 recovered from the customers of all three utilities. When this level of cost allocation is
8 performed properly, the customers of each individual utility contribute to the recovery of
9 costs in proportion to the benefit they receive as a result of the utility incurring these
10 costs. When this level of allocation is not done properly the customers of one or more of
11 the three utilities end up subsidizing the customers of the third utility.

12
13 The second level of allocation involves allocation of an individual utility's
14 revenue requirements to specific charges such as the fixed base charge or a volumetric
15 charge. The purpose of this allocation to different charges is to help ensure that each
16 customer is paying for the specific services that they receive.

17
18 In many utilities there are additional levels of cost allocation as costs are allocated
19 between different customer classes and even between different rate blocks in a case
20 where inclining or declining rates are used, but in the case of HRWC there are only two
21 levels of allocation.

22
23 **Q. Do you have concerns about HRWC's cost allocations?**

24
25 A. I do. Specifically, I have a concern about the allocation of specific costs between
26 the three utilities and I also have concerns about the allocation of costs between the
27 different charges.

28
29 **Q. Please elaborate on your concerns related to the allocation of specific costs**
30 **between the three utilities.**

1 A. In its original filing HRWC noted in Worksheets 2e and 2c of Appendices 8 and 9
2 that Administration and General costs were first allocated between water and
3 wastewater/stormwater based on the number of customers served by each utility. The
4 note also states that Administration and General costs have been further allocated
5 between wastewater and stormwater “based on the percentage of direct operating costs
6 for each service”. When asked in IR-2BCA and IR-3BCA to provide additional
7 information regarding the allocation of Administration and General costs, HRWC
8 provided a schedule titled “IR-1BCA 1(a)(i) Allocation WW-SW”. This schedule shows
9 that 49.01% of the Administrative and General costs are allocated to
10 wastewater/stormwater based on the number of customers served by each utility, which is
11 a logical and acceptable basis for this allocation. The schedule also shows that 60.43% of
12 the costs allocated to wastewater/stormwater are allocated to the wastewater utility while
13 the remaining 39.57% is allocated to stormwater, but the schedule provides no
14 explanation of how these allocation percentages were determined.

15
16 **Q. Does the original filing provide any insight into how these percentages were**
17 **developed?**

18
19 A. As mentioned previously, the notes to Worksheets 2e and 2c of Appendices 8 and
20 9 indicated the allocation is “based on the percentage of direct operating costs for each
21 service”. One interpretation of this statement is that the percentages are based on the
22 relationship of each utility’s direct operating costs to the other utility’s direct operating
23 costs. This is a valid and often used method of allocating Administrative and General
24 costs between two utilities or divisions. However, if one compares the direct operating
25 costs of each utility as shown below, the allocation percentages would be closer to 80%
26 for wastewater and 20% for stormwater.

Direct Wastewater Operating Costs		2010/11 Budget	
Wastewater Pumping Stations		3,692,330	
Wastewater Treatment		17,662,973	
Engineering and Environmental Services		2,890,954	
Collection and Manholes		4,925,421	% of Total
Total	\$	29,171,678	79.6%
Direct Stormwater Operating Costs			
Engineering and Environmental Services		1,673,012	
Collection, Manholes, Catchbasins and Ditches		5,786,278	% of Total
Total	\$	7,459,290	20.4%
Total Direct Wastewater/Stormwater Operating Costs		\$ 36,630,968	

1

2

3 **Q. Are there other possibilities for the derivation of the percentages that HRWC**
4 **used to allocate costs between wastewater and stormwater?**

5

6 A. The percentages used, 60.43% to wastewater and 39.57% to stormwater are very
7 similar to the percentages discussed on page 92 of the document titled "*Halifax Water*
8 *Cost of Service Study; Final Report*" that was included with HRWC's original filing so it
9 is possible that the analysis discussed on that page is the basis for the allocation
10 percentages used.

11

12 **Q. What is the basis of the percentages shown on page 92 of the above**
13 **referenced report?**

14

15 A. My interpretation of the language on page 92 is that these percentages describe
16 the relationship of the volume of wastewater versus the volume of stormwater that flows
17 through the combined sewer system during the course of a year.

18

19 **Q. If your interpretation is correct, is this relationship a valid basis for**
20 **allocating costs between the two utilities?**

1 A. No it is not, because the combined sewer system represents a small portion of the
2 overall sanitary sewer system¹. Therefore the relationship of the volume of wastewater
3 and stormwater flowing through that small portion of the systems is not a valid basis for
4 allocating these costs.

5
6 **Q. What would be a more valid basis for the allocation of these costs?**

7
8 A. As mentioned previously, the relationship between the direct operating costs
9 incurred to provide each service would be a more appropriate basis for the allocation of
10 Administrative and General costs.

11
12 **Q. Do you have any other concerns related to the allocation of costs between**
13 **utilities?**

14
15 A. My next concern is related to the allocation of Wastewater Treatment costs
16 between the wastewater and stormwater utilities or more specifically, HRWC's failure to
17 allocate any Wastewater Treatment costs to the stormwater utility despite their response
18 to IR-38BM b, which states:

19
20 "Stormwater from combined sewers (up to 4 times dry weather
21 flow) is directed to the wastewater treatment facilities and treated
22 as part of the wastewater stream. All remaining stormwater is
23 discharged untreated."
24

25 This statement clearly implies that Wastewater Treatment costs are incurred in the
26 treatment of stormwater, and therefore a portion of the Wastewater Treatment costs, both
27 O&M and capital, should be allocated to the stormwater utility. Similarly, if any
28 wastewater pumping stations are utilized to transport wastewater and stormwater from
29 the combined sewers to the treatment plants, then a portion of the Wastewater Pumping
30 Station costs, both O&M and capital, should also be allocated to the stormwater utility.

¹ On page 91 of the above mentioned cost of service study report, it is stated that only 13% of the sanitary sewer system is combined sewer; however, in the notes to Worksheet WWB-2a/2b/2c/2d/2e in Appendix 8 of the original filing it is stated that 22% of the wastewater collection system is combined sewer.

1 **Q. Do you have a suggestion with regard to the basis for the allocation of**
2 **Wastewater Treatment costs to the stormwater utility?**

3
4 A. I do not have a specific suggestion, but the relationship between the estimated
5 volume of stormwater transported to the wastewater treatment plants to the volume of
6 wastewater treatment plant influent is one possibility for the allocation of Wastewater
7 Treatment costs; however, some recognition should be given to the fact that stormwater is
8 typically of lower strength than domestic or industrial wastewater and would therefore
9 require less treatment. Wastewater Pumping Station costs could be allocated based the
10 estimated volume of wastewater transported through the pumping stations versus the total
11 volume of pump station influent.

12
13 **Q. Does that conclude your testimony with regard to HRWC's allocation of**
14 **costs?**

15
16 A. Yes it does. However, if HRWC prepares a comprehensive set of revised
17 worksheets and schedules I would like the opportunity to review and comment on those
18 schedules.

19
20 **VI. FIRE PROTECTION CHARGES**

21
22 **Q. Please elaborate on your concerns with the way in which HRWC calculates**
23 **fire protection charges.**

24
25 A. My primary concern is that it appears that HRWC has purposely calculated Public
26 Fire Protection charges and Building Fire Protection Systems charges that will over
27 recover revenues by approximately \$3.3 million.

28
29 **Q. Why do you believe this to be the case?**
30

1 A. The calculation of public and private fire protection charges provided in
2 Addendum A of Appendix 10 of HRWC's original filing demonstrates this. First, the
3 first table in Appendix 10 shows the "Estimated Fire protection cost as per Rate Study".
4 While the \$8,000,000 amount shown on this table is not equal to the \$8,171,310 amount
5 allocated to fire protection charges shown on Worksheet C-1, I have assumed that the \$8
6 million figure is an approximation used for the purposes of calculating rates. From this
7 \$8 million amount HRWC subtracts the costs associated with maintaining public fire
8 hydrants and the annual depreciation on the actual fire hydrants to arrive at an amount of
9 \$6,946,009. This amount is then divided by the number of fire hydrants in the system to
10 arrive at the cost per hydrant of \$915.

11
12 This \$915 amount is then used as the charge for a private fire hydrant and the charge for a
13 150 mm private fire system connection. Charges for private fire connections of other
14 sizes are then developed by applying connection capacity factors to the charge for the 150
15 mm connection as shown on the second table on page 14 of Appendix 10. Also shown on
16 this table is the determination that private fire connection charges will generate
17 approximately \$3.3 million in addition to the estimated \$8 million in public fire
18 protection revenue for total fire protection revenue of \$11.3 million, an amount that is
19 \$3.3 million above the stated estimated fire protection costs.

20
21 **Q. Does this mean that the HRWC's proposed rates will generate \$3.3 million in**
22 **excess revenue?**

23
24 A. No it does not. As shown on Worksheet B-2 of Appendix 7, HRWC has used the
25 private fire charge revenue to offset the total revenue requirements of the water utility;
26 however, the \$3.3 million in excess fire protection revenue is subsidizing the other
27 customers of the water system. As a result, fire protection customers are being asked to
28 contribute more than their fair share of costs.

29
30 **Q. Do you have any suggestions as to how HRWC could calculate more**
31 **equitable fire protection charges?**

1 A. It is my opinion that a methodology similar to that referred to as “Alternative 1”
2 in the *Cost of Service Study*, would result in a more equitable recovery of fire protection
3 costs. Under this approach, total fire protection revenue requirements, less hydrant
4 maintenance and hydrant depreciation costs, would be divided by the total number of
5 equivalent 150 mm connections represented by all of the private fire connections and the
6 public hydrants to arrive at a cost per 150 mm equivalent meter. This unit cost would
7 serve as the private fire protection charge for private hydrants and 150 mm connections
8 and the charges for the remaining connection sizes would be calculated by applying the
9 appropriate capacity factors.

10
11 The total fire protection charge assessed to the municipality would be determined by
12 multiplying the unit cost for a 150 mm connection by the total number of public hydrants
13 and then adding the cost of hydrant maintenance and hydrant depreciation.

14
15 **Q. Would this approach result in lower fire protection revenues?**

16
17 A. Yes it should, which in turn would reduce the magnitude of the offset to total
18 revenue requirements thereby requiring retail water rates to increase to make up the
19 difference, but the recovery of costs would be more equitable than HRWC’s current
20 proposal.

21
22 **Q. Does this conclude your testimony with regard to fire protection charges?**

23
24 A. Yes it does unless I am given the opportunity to review additional information
25 provided by HRWC; in which case I would like the opportunity to supplement my
26 testimony.

27
28 **VII. EXTRA STRENGTH SURCHARGES**

29
30 **Q. Please elaborate on your concerns with the way in which HRWC calculates**
31 **Extra Strength Surcharges.**

1 A. Again, I would like to point out that HRWC's original filing provided very little
2 information pertaining to the methodology used to calculate Extra Strength Surcharges
3 and according to HRWC's response to IR-LUG79(a) the original filing contained
4 erroneous information with respect to Extra Strength Surcharge revenues. Additionally,
5 HRWC failed to provide information pertaining to the calculation of Extra Strength
6 Surcharges that was requested through information requests; therefore it is very difficult
7 to draw any definitive conclusions regarding the calculation of Extra Strength
8 Surcharges.

9
10 **Q. Were you able to ascertain with any level of certainty how the Extra Strength**
11 **Surcharges were calculated?**

12
13 A. Based on information provided in the original filing it appears that the Extra
14 Strength Surcharges were calculated by dividing the "Mill Cover (sic) budget expenditure
15 amount for the year ending March 31,2009" by the plant loading in either kilograms (kg)
16 or cubic meters (m^3) to arrive at a cost per kg or a cost per m^3 . However I was unable to
17 find a proposed Extra Strength Surcharge Rate in HRWC's original filing and when
18 asked to provide this information in IR-17BCA and IR-79LUG, HRWC provided a table
19 that shows loadings in m^3 and a rate in dollars per kg, thereby adding more uncertainty
20 with regard to their proposed Extra Strength Surcharges.

21
22 **Q. Aside from the confusion regarding the units of measure, is their proposed**
23 **methodology for calculating Extra Strength Surcharges consistent with standard**
24 **industry practice?**

25
26 A. Without additional information, it is impossible to tell whether their proposal is
27 consistent with industry practice?

28
29 **Q. What is the standard industry practice for calculating extra strength**
30 **surcharges?**

1 A. There are a variety of approaches to calculating extra strength surcharges, but in
2 general they all involve a determination of the costs associated with addressing certain
3 wastewater strength parameters and then the division of these costs by projected
4 wastewater loadings to arrive at a unit cost to address these strength parameters. In some
5 cases this process involves a very simple allocation of wastewater treatment costs to two
6 categories, flow and loadings. The costs assigned to loadings are then divided by the
7 projected treatment plant loadings in either units of mass or units of volume to arrive at a
8 unit cost to address the wastewater loadings. In other cases a more detailed allocation of
9 wastewater treatment plant costs to individual strength parameters such as Biochemical
10 Oxygen Demand (BOD), Total Suspended Solids (TSS), Phosphorous, Nitrogen, Flow
11 and others is involved.
12

13 **Q. Has HRWC used one of these approaches?**
14

15 A. That is difficult to say, because they have not provided any documentation
16 pertaining to the costs they are using for their calculation. As stated previously, on page
17 35 of "*Halifax Water Cost of Service Study*" it says that the rate is based on "the Mill
18 Cover (sic) budget expenditures", but there is no additional information regarding the
19 nature of these expenditures. If these costs are an allocation of costs to a loadings cost
20 category at one of the treatment plants then it appears that HRWC has used a standard
21 approach to determine an extra strength charge. But if that is the case, why have they not
22 included costs from their other treatment plants that presumably have to treat high
23 strength waste? Another possibility is that the cost of service report erroneously
24 attributes these costs to only one plant when indeed they are an allocation to a loadings
25 category for the entire system. If that is the case, I would be concerned that not enough
26 of the wastewater treatment costs have been assigned to the loadings category since the
27 \$1,627,887 amount shown on page 35 represents less than 10% of the projected
28 Wastewater Treatment expenditures shown on Worksheet WWB-2a/2b/2c/2d of
29 Appendix 8 and the cost of addressing loadings at most wastewater treatment facilities is
30 significantly more than 10% of the wastewater treatment budget.

1 **Q. Do you have any suggestions as to how HRWC should determine their Extra**
2 **Strength Surcharge rates?**

3

4 A. My suggestion is that HRWC perform an analysis that allows them to allocate the
5 costs associated with all of their treatment plants between flow and loadings cost
6 categories and then use the cost assigned to the loadings category to determine an
7 appropriate extra strength surcharge rate. If they believe they have already done that,
8 then I suggest they demonstrate this to the other parties to this rate filing by providing
9 information that has already been requested through the information request process.

10

11 **Q. Does that conclude your testimony with regard to the calculation of Extra**
12 **Strength Surcharges?**

13

14 A. It does unless HRWC provides additional information related to their calculation
15 of Extra Strength Surcharges; in which case I would like to be given the opportunity to
16 review and comment on that information.

17

18 **Q. Have you prepared any schedules to be included with your testimony?**

19

20 A. I have not. My original intent was to prepare schedules demonstrating my
21 recommendations for changes in the way HRWC calculated various rates and charges.
22 However, after review of HRWC's responses to information requests it became apparent
23 that revisions that HRWC made to various components of their rate proposal would result
24 in rates that are materially different from those proposed in their original filing. It was
25 also apparent that HRWC had not provided sufficient information regarding their
26 revisions such that I could incorporate these revisions into my schedules. Therefore, I
27 have not prepared schedules for inclusion with this testimony, but can do so easily once I
28 am provided with the necessary information.

29

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

31

1 A. Yes, it does.

Technical Specialties

- > Utility cost of service and rate structure studies
- > Utility valuation studies
- > Privatization procurements
- > Privatization feasibility studies
- > Regionalization/consolidation studies
- > Utility financial planning studies

Professional History

- > Raftelis Financial Consultants, Inc.: Vice President (2002-present); Manager (1997-2002)
- > Geoscience Group: Environmental Department Manager and Senior Geologist (1991-1997)
- > Trigon Engineering Consultants, Inc.: Project Geologist (1989-1991)

Education

- > Master of Business Administration - Wake Forest University (1997)
- > Bachelor of Science in Natural Resources - University of the South (1987)

Professional Registrations

- > Licensed Professional Geologist

Professional Memberships

- > American Water Works Association: - Past Chair of Competitive Practices Committee
- > New England Water Works Association - Member of Financial Management Committee

Harold Smith**Vice President, Raftelis Financial Consultants, Inc.****Profile**

Mr. Smith is a nationally recognized expert in water and wastewater finance, management, and pricing. During his 20-year career, he has focused on advising municipal water and wastewater utilities throughout the United States. Mr. Smith has participated in a variety of projects to assist water and wastewater utilities focusing on financial, management, and public policy requirements. His broad-based experience includes cost of service and pricing analyses, development of comprehensive financial plans, utility impact fee studies, revenue bond feasibility studies, management studies and strategic planning. Mr. Smith is the immediate past Chair of the AWWA Strategic Management Practices Committee and is a member of the Financial Management Committee of the New England Water Works Association.

Relevant Project Experience**Providence Water Supply Board, Rhode Island**

Mr. Smith has served as the Project Manager for two engagements that have involved the development rate models and preparation of expert testimony for the Providence Water Supply Board's (Providence Water) two most recent filings before the Rhode Island Public Utility Commission (RIPUC). For RIPUC Docket No. 3832, RFC used the rate year revenue requirements developed by others and allocated costs to Providence Water's customer classes which include three retail classes and several wholesale customers. In addition, we calculated both public and private fire protection charges. This filing, which was contested by the wholesale customers, resulted in rate increases ranging between 9% and 41%, depending on the class of customer. Providence Water's most recent filing, RIPUC Docket No. 4061, is an abbreviated filing for which RFC prepared the revenue requirements and developed the proposed rates. This filing resulted in a Settlement Agreement between Providence Water, the Division of Public Utilities and Carriers and interveners in the rate case that allowed for a 5.9% increase in Providence Water's rates.

Additionally, RFC assisted Providence Water with the preparation of a compliance filing to address the RIPUC's order in Docket No. 3832 to present conservation rate options. Based on testimony provided by Mr. Smith, the RIPUC determined that the implementation of conservation rates was not in the best interest of Providence Water or its customers at this time.

City of Newport, Rhode Island

RFC was most recently engaged by the City of Newport to perform analyses

and prepare information that was included in the City's five most recent General Rate Filings to the Rhode Island Public Utilities Commission (RIPUC Docket Nos. 3578, 3675, 3818, 4025, and 4128). For these engagements, RFC calculated retail rates for the City's retail customer and wholesale rates for the City's two wholesale customers, the Portsmouth Water and Fire District (PWFD) and the U.S. Navy. Mr. Smith provided both pre-filed testimony and direct testimony in support of Newport's requests. In Docket No. 3675 the RIPUC granted the City a water rate increase of approximately 20%. In Docket 3818, Newport was allowed an 11% increase and Docket No. 4025 resulted in a 15% increase in rates. Docket No. 4128 is still ongoing.

Mr. Smith was also the lead financial consultant during the City's process to select a private partner to operate their wastewater treatment and collection facilities. For this engagement, Mr. Smith participated in the preparation of the Request for Proposals and the Service Agreement and lead the development of an economic baseline as well as the creation of a financial model that was used to calculate the long-term economic impact of each proposal. He also played an active role in the contract negotiation process. As a result of the procurement process, the City entered into a 20-year contract for the operation, maintenance, repair and replacement of their wastewater system. The contract is expected to save the City \$22 million over the term of the contract.

Pima County, Arizona

Mr. Smith has served as the Project Manager on several projects Pima County Regional Wastewater Reclamation Department (PCRWRD). The first of these projects involved assisting the PCRWRD with the development of a long-term capital improvement program designed to allow the County to comply with recent environmental regulations and continued growth in the region. The study identified \$1.4 billion in capital needs over the next 15 years and RFC was charged with assisting the County in the development of a plan to fund this program looking not only at current rates and charges and tax-exempt debt, but also exploring opportunities that may be present through public/private

partnerships including design/build/operate and design/build/operate/finance. Mr. Smith also managed a project on which RFC assisted the PCRWRD with the evaluation of alternative project delivery methods for the delivery of a new Water Reclamation Campus. The project involved the development of risk adjusted estimates of the cost of delivering the project under a variety of delivery models including Construction Manager At Risk; Design-Build; Design-Build-Operate; and Design-Build-Finance-Operate. Based on this analysis, PCRWRD decided to deliver the project under the Design-Build-Operate model and RFC is currently assisting the County with the procurement of a Design-Build-Operate contractor.

Additionally, RFC has prepared the PCRWRD's Financial Plans for fiscal years 2008, 2009 and 2010. Each of these Financial Plans included recommended rate increases that were approved by the County's Board of Supervisors.

City of Buffalo, New York

Mr. Smith served as the Project Manager for a comprehensive cost of service and rate study for the Buffalo Water Board. Buffalo's primary pricing objectives were revenue sufficiency and equitable cost recovery from all customer classes. To achieve these objectives, RFC performed a cost of service study and developed two alternatives to the existing three-block, declining block rate structure. The results of the cost of service study indicated that the discount being realized by large volume customers was not cost justified and that only a minor portion of consumption was within the middle rate block. RFC recommended a phased approach to bringing the discount for consumption in the third rate block closer to a cost-justified level and phasing out the middle rate block. Both the Water Board and the City's Common Council unanimously approved RFC's recommendations.

San Antonio Water System, Texas

Mr. Smith was the Project Manager for a comprehensive cost of service and rate studies performed for the San Antonio Water System (SAWS) in 2003, and is the

Project Manager for the cost of service and rate study that RFC is currently performing for SAWS. For both of these projects RFC prepared and facilitated a rate setting workshop for SAWS staff and members of a Rates Advisory Committee (RAC); developed a comprehensive cost of service/rate model that calculated conservation water rates for residential, commercial, industrial and wholesale customers; and developed a wastewater rate model that calculated residential wastewater rates and high-strength surcharges. As part of the first project, RFC also reviewed SAWS' impact fee calculation methodology; developed recycled water rates; reviewed chilled water and steam rates; and assisted SAWS with the development of various miscellaneous charges.

City of Phoenix, Arizona

Mr. Smith has managed numerous projects for the City of Phoenix (City) over the past ten years. The projects have included rate analyses, bond feasibility analyses, calculating an environmental fee, and design/build/operate procurement. RFC has assisted the City with five debt issuances. In 2001, RFC assisted with the preparation of a bond feasibility analysis for a \$220,000,000 Junior Lien Water System Revenue Bond issuance. In 2003, RFC assisted with the preparation of a bond feasibility analysis for \$130,260,000 in Senior Lien Wastewater System Variable Rate Demand Revenue Refunding Bonds. In 2003, RFC assisted the City by performing a parity test and preparing a parity test certificate for \$11,325,000 in Junior Lien Water System Revenue Refunding Bonds, and, in 2004, RFC performed a parity test and issued a parity test certificate for \$180,000,000 in Junior Lien Wastewater System Revenue Bonds. In 2005, RFC prepared a bond feasibility analysis for a \$600,000,000 in Junior Lien Water System Revenue Refunding Bonds. For this engagement, RFC reviewed the financial forecast prepared by the City; reviewed the report prepared by the City for inclusion in the bond official statement; prepared an opinion letter related to the reasonableness of the City's financial forecast; and performed a parity test and issued a parity test certificate. The scope of work for this project also included a benchmarking study that compared the City's performance on a variety of financial performance metrics with the per-

formance of other similar utilities. Data for the benchmarking study was derived from information collected as part of RFC's biennial rate survey and from a targeted survey of the City's peer utilities that was created specifically for this project. Mr. Smith is currently managing the bond feasibility analysis for a \$450,000,000 water revenue bond issue. In 2009, RFC prepared a bond feasibility analysis for \$450,000,000 in Junior Lien Water System Revenue Bonds and \$90,295,000 in Junior Lien Water System Revenue Refunding Bonds. Also in 2009, RFC prepared parity test letters for loans from the Arizona Water Infrastructure Finance Authority for water and sewer system improvements.

Mr. Smith also led an RFC team that served as the City's financial consultant for the procurement of a contractor for a design/build/operate contract for the 80 MGD Lake Pleasant Water Treatment Plant. RFC assisted the City with the analysis of alternative project delivery methods, the preparation of procurement documents, the evaluation of proposals and the preparation of a benchmark financial model.

City of Niagara Falls, New York

Mr. Smith served as project manager on a wastewater capacity marketing plan (Plan) for the City of Niagara Falls. In the 1970's, the City's wastewater treatment plant (WWTP) was upgraded to provide both primary and secondary treatment processes due to the nature and quantity of waste being discharged by its Significant Industrial Users (SIU). Unfortunately, unfavorable economic conditions along with increased pretreatment requirements instituted by the EPA in the 1980's reduced the SIU revenue stream and resulted in a sophisticated facility that lacked an adequate volume of flow and quantity of pollutants to achieve cost efficient economies of scale. To address these issues, the City engaged RFC to evaluate various opportunities to market its excess wastewater treatment capacity. As project manager, Mr. Smith worked closely with WWTP staff, the Sewer Commission, and an Industrial Liaison Committee in developing a marketing plan that identified distinct segments of the imported waste market, assessed competition within the imported waste

market, and identified potential distribution channels for transporting the waste to the WWTP.

Other Relevant Project Experience

- > Cecil County, Maryland - Water and Wastewater Rate Study
- > City of Chattanooga, Tennessee – Expert Witness Testimony
- > Dalton Utilities/Whitfield County, Georgia – Utility Valuation Study
- > Town of Dartmouth, Massachusetts – Rate Model Development
- > City of Dayton, Ohio – Wholesale Water Rate Study
- > Town of Florence, South Carolina – Water and Wastewater Rate Study, Capital Planning Study
- > City of Fort Mill, South Carolina - Wholesale Water Rate Study
- > City of Goodyear, Arizona – Water and Wastewater Rate Study
- > City of Lexington, North Carolina - Water and Wastewater Rate Study
- > City of Los Angeles, California – Litigation Support
- > Miller's Pond, Connecticut - Utility Valuation Study
- > Montgomery County, Ohio - Wholesale Water Rate Study
- > City of North Myrtle Beach, South Carolina - Water and Wastewater Rate Study
- > City of Peoria, Arizona - Water and Wastewater Rate Study
- > City of Peoria, Illinois - Utility Valuation Study
- > City of Scottsdale, Arizona - Water and Wastewater Rate Study
- > United States Navy – Utility Privatization
- > Victor Valley Water District, California - Water and Wastewater Rate Study
- > Wake County, North Carolina – Utility Regionalization Study
- > Town of Winthrop, Massachusetts – Water and Wastewater Rate Study
- > York County, South Carolina - Wholesale Water Rate Study

Publications

- > Water and Wastewater Finance and Pricing: A Comprehensive Guide, Third Edition
- > Co-Author, AWWA Manual M-5, Water Utility Management
- > National Rural Water Association White Paper, "Privatization of Small Water Systems"

Providence Water Docket 4994

Division of Public Utilities Data Request – Set 2 December 19, 2019

DIV 2-11. Please identify the rates currently assessed to the customers served by the Johnston Water District.

Response: Please see a redacted copy of a Johnston Water bill attached as Exhibit DIV 2-11.

Read Information	Charge Description	Units	x	Rate	= Amount Due
Read Type : ACTUAL (Mtr#:11090103,Size:5/8)	Service Charge - 3/4"	1.0000		30.0000 \$ / CYCLE	30.00
Current Read: 38 on 04/03/2019	Consumption Charge	6.0000		3.2400 \$ / HCF	19.44
Prior Read : 32 on 01/04/2019	Water Resource Board	6.0000		0.1244 \$ / Cycle	0.75
Consumption : 6 HCF	Infrastructure Charge	6.0000		0.1000 \$ / HCF	0.60
	Providence WQP Chg	6.0000		0.0788 \$ / HCF	0.47
	Reserve Account <i>CAPITAL</i>	6.0000		0.0151 \$ / HCF	0.09
CURRENT BILL TOTAL :					51.35

FOR PROCESSING REASONS, PLEASE BE SURE TO WRITE A SEPARATE CHECK TO PAY YOUR WATER BILL. (DO NOT COMBINE PAYMENT WITH A MOTOR VEHICLE, TANGIBLE, OR REAL ESTATE BILL.)

Penalty is calculated at 12.00% per annum and is accrued daily. Your bill reflects penalty calculated as of 01/17/2020.

Data Requests of the
Division of Public Utilities and Carriers Set 2
December 19, 2019

DIV 2-12:

Reference page 9, lines 28-30, of Mr. Smith's testimony. Please explain how the actual rates for FY 2022 and FY 2023 would change from those developed for FY 2022 and FY 2023 in this proceeding.

RESPONSE:

As described in Harold Smith's testimony, the proposed rates for FY 2022 and FY 2023 are based on an across the board increase proportionate to the overall increase in the revenue requirement in those years. Under a compliance filing, the rates would only change based on a change in the revenue requirement or a change in customer usage. For example, if the revenue requirement remained the same, but usage decreased (below what is contemplated in this filing), rates would need to increase (over the level indicated in this filing) to achieve the same level of funding. If usage remained constant, but the revenue requirement increased (above the level contemplated in this filing), rates would need to increase to recover the revenue requirement.

Providence Water Docket 4994

Division of Public Utilities Data Request – Set 2 December 19, 2019

DIV 2-13. Please identify non-revenue producing water production by type for the last three years.

Response :

See attached WSSMP Annual Reports (Section #7) for FY 2017, FY 2018, and FY 2019.

Providence Water Docket 4994

Data Requests of the Division of Public Utilities and Carriers Set 2 December 19, 2019

DIV 2-14:

Reference Schedule HJS-13c. Please explain why there are no Inch-Miles assigned to services.

RESPONSE:

Services are included in the length breakdown to recognize that some leakage originates from retail customer service lines. The inch-miles breakdown is used to allocate transmission and distribution operation and maintenance costs between transmission mains, which are used by all customers, and distribution mains, which are used primarily by retail customers only. Work on service lines is already broken out and allocated directly to meters and services (see HJS-13D and 13E). Accordingly, it is not necessary to factor in inch-miles for services because the breakdown is only being applied to transmission and distribution mains, exclusive of services related costs, which are allocated separately.

Providence Water Docket 4994

Data Requests of the Division of Public Utilities and Carriers Set 2 December 19, 2019

DIV 2-15:

Reference Schedule HJS-13f. Please explain why it is appropriate to develop factors 19, 20, and 21 based on net plant investment rather than original plant in service given the position of Mr. Smith in his rebuttal testimony in Docket No. 4618 to allocate capital costs based on gross plant investment.

RESPONSE:

At the time of Harold Smith's rebuttal testimony in Docket 4618, the net plant investment values were not reliable. In some cases the accumulated depreciation exceeded the original cost for certain categories of assets, resulting in negative net plant investment. At the time the parties to that case agreed to use gross plant in place of the commonly used net plant investment. Since that time, Providence Water has reviewed and adjusted their asset records, resulting in more reliable net plant investment data. Net plant investment is the more commonly used approach for allocating capital cost and was used prior to Docket 4618 without issue. The approach used in Docket 4618 was not intended to be a permanent change in methodology, but rather a temporary solution due to the issues with the data at that time. Since those issues have been resolved, Mr. Smith has proposed using net plant investment in this case.

Providence Water Docket 4994

Data Requests of the Division of Public Utilities and Carriers Set 2 December 19, 2019

DIV 2-16:

Please explain how the line items reflected on Schedule HJS-13d differ from those reflected on Schedule HJS-13e.

RESPONSE:

The items on HJS-13D represent work orders completed by Providence Water employees and are used to allocate T&D labor costs on HJS-14A. The items on HJS-13E represent contract services purchased by Providence Water and are used to allocate the contract services costs indicated on HJS-14A.

Providence Water Docket 4994

Data Requests of the Division of Public Utilities and Carriers Set 2 December 19, 2019

DIV 2-17:

Reference Schedule HJS-14a:

- a. Please explain why Bad Debt Expense is assigned entirely to Billing & Collection and how this assignment is consistent with the AWWA M1 Manual;
- b. Please explain why Interest on Delinquent Accounts is assigned entirely to Meter Sources and Billing & Collection and how this assignment is consistent with the AWWA M1 Manual;
- c. Please provide a detailed description of the contract service costs incurred during the last three years and the amounts which were included in Account 63680, 63660, and 63640;
- d. Please explain the Capital Reimbursement line item
- e. Please explain the basis for the following non-rate revenue allocations:
 - i. Admin Fee from NBC;
 - ii. Narragansett Shut-off; and
 - iii. State 1 Surcharge.

RESPONSE:

- a. Bad debt results from delinquent bills a small proportion of which are ultimately written off. Given that wholesale customers have not failed to pay their bills, this cost must be assigned to one or more of the retail only cost components. Bad debt is not a function of max day or hour demand, but is a cost incurred by Providence Water simply by having retail customers, some of whom will occasionally have trouble paying their bills. Accordingly bad debt is a customer related costs and was split between meters and services and billing and collection. The only mention of bad debt in the AWWA M1 Manual (7th edition) is in relation to wholesale service, where it indicates that it would generally be considered a retail only cost.
- b. The rationale is the same as for bad debt. The non-rate revenue related to interest on delinquent accounts is related to retail customers, making it an appropriate offset to the customer related costs. The AWWA M1 Manual (7th edition) does not address the allocation of interest on delinquent accounts.
- c. See attached Division 2-17 c.
- d. The capital reimbursement represents capitalized labor which will be reimbursed from the IFR fund. Since these costs are already captured in the

Providence Water Docket 4994

Data Requests of the Division of Public Utilities and Carriers Set 2 December 19, 2019

requested IFR funding, they are removed from operation and maintenance expenses on HJS-14A and B.

- e. The treatment of each of these was consistent with prior filings (i.e., a split between meter & services and billing and collection). The first two relate to customer service functions provided on behalf of the Narragansett Bay Commission, which provides wastewater service to Providence Water customers. Given the nature of the services provided (i.e., customer service related), the allocation between meters and services and billing and collection is appropriate. The State 1 surcharge is mostly a pass-through of state taxes related to water quality. This revenue was split between meters & services and billing and collection, consistent with prior filings.

Schedule DIV 2-17 (c)

Providence Water

Contract Service Costs Incured FY2017, FY2018 and FY2019

WATER SUPPLY DETAILED CONTRACT COSTS

Accounts 63640, 63660, 63680

Fiscal Year 2017 through Fiscal Year 2019

		Description	Fiscal Year 2017	Fiscal Year 2018	Fiscal Year 2019
63640	Contract Services Other - WTM	Sludge Maintenance Contract	\$ 1,631,765	\$ 1,630,749	\$ 1,608,918
63660	Contract Services Other - T&DM	Maintenance & Services	\$ 93,580	\$ -	\$ -
		Police Details	174,132	124,242	150,299
		Private Contractors/Contractual Services	47,871	143,850	120,574
		Repairs to Streets	590,536	538,228	620,956
		Uniform Cleaning	25,500	7,100	-
		Total 63660	\$ 931,620	\$ 813,420	\$ 891,828
63680	Contract Services Other - AG&O	Building Repairs	\$ 6,416	\$ 3,660	\$ 1,839
		Garbage Removal	8,271	(4,158)	14,548
		Maintenance & Services	404,278	517,113	692,131
		Private Contractors/Contractual Services	143,286	138,985	352,880
		Telephone	260,731	231,914	220,019
		Uniform Cleaning	-	31,070	33,120
		Vehicle Repairs	61,321	63,898	69,188
		Total 63680	\$ 884,303	\$ 982,481	\$ 1,383,724

Providence Water Docket 4994

Data Requests of the
Division of Public Utilities and Carriers Set 2
December 19, 2019

DIV 2-18:

Reference Schedule HJS-20a. Please provide a similar schedule for the customers of the Johnston Water District.

RESPONSE:

Please see attached excel file entitled “DIV 2-18 HJS-20A for Johnston Customers.”