



Sayer Regan & Thayer, LLP

ATTORNEYS AND COUNSELLORS AT LAW

July 10, 2019

VIA FIRST-CLASS MAIL AND EMAIL

Luly E. Massaro, Commission Clerk
State of Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, Rhode Island 02888

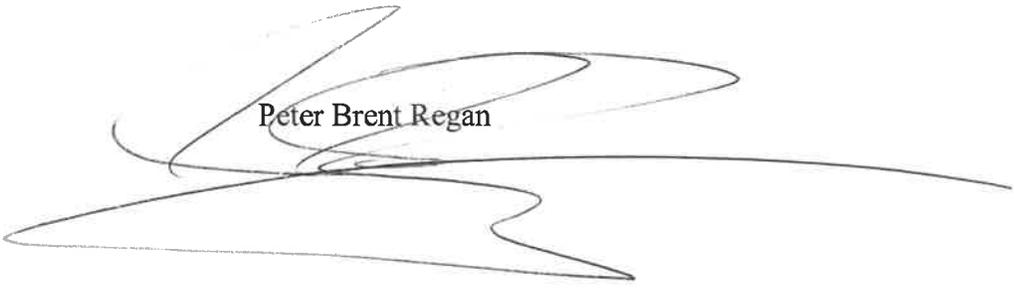
Re: *DOCKET NO. 4933 – CITY OF NEWPORT, UTILITIES DEPARTMENT,
WATER DIVISION APPLICATION TO IMPLEMENT A MULTI-YEAR RATE
PLAN*

Dear Ms. Massaro:

Enclosed for filing in the above-referenced matter, please find an original and ten (10) copies of the Direct Testimony of David F. Russell and Resume of David F. Russell, together with a Certificate of Service, filed on behalf of the Town of Middletown.

Please contact me if you have any questions. Thank you for your attention to this matter.

Sincerely,


Peter Brent Regan

cc: Service List via Email
Enclosures

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STATE OF
RHODE ISLAND AND PROVIDENCE PLANTATIONS
RHODE ISLAND PUBLIC UTILITIES COMMISSION

DIRECT TESTIMONY
of
DAVID F. RUSSELL, PE

FILED ON BEHALF OF THE TOWN OF MIDDLETOWN, RHODE ISLAND

IN THE MATTER OF
Newport Water DIVISION RATE CASE

DOCKET NO. 4933

JULY 10, 2019

1 **INTRODUCTION**
2

3 **Q. Please state your name and business address.**

4 A. My name is David F. Russell, and my business address is 15 Titcomb Street,
5 Suite 300, Newburyport, Massachusetts, 01950.
6

7 **Q. On whose behalf are you testifying in this case?**

8 A. I am testifying on behalf of the Town of Middletown, Rhode Island (the
9 “Town”) who is an Intervener in this case (Docket 4933 – Petition of Newport
10 Water for a multi-year increase in its base rates). Newport Water provides
11 retail water service to most of the residents and businesses in Middletown,
12 and Middletown pays substantial amounts annually for fire protection water
13 service to about 409 public fire hydrants located throughout the Town.
14

15 **Q. What is the nature of your involvement in this case?**

16 A. I am working with the Town as their expert consultant and witness to assist in
17 its intervention in this Docket. Specifically, I have been asked to review the
18 rate filing (Docket No. 4933) submitted by the Town of Newport’s Water
19 Division (“Newport Water”) to the Rhode Island Public Utilities Commission
20 (“RIPUC” or “Commission”), and to review Newport Water’s revenue
21 requirements, cost of service and rate design and analyze their impacts on
22 the Town’s residents and businesses served by Newport Water.
23

24 **Q. What is the purpose of your testimony?**

25 **A.** My involvement in this case is focused on reviewing the company's capital
26 improvements, certain revenue requirements proposed by the company, and
27 certain rate design and cost issues. My review and this testimony is
28 centered on the belief that the best capital improvement program for this
29 utility (or any other) and its operating costs are the ones that result in the
30 lowest total revenue requirements (or least cost) to its customers in the long
31 run, while maintaining safe, reliable and adequate service. My review,

1 analysis and the testimony provided herein may require supplementation or
2 modification after review of additional discovery, un-redacted documents or
3 consideration of further testimony that may be submitted.

4

5 **Q. What is your present occupation?**

6 A. I am a professional consultant specializing in utility management, economics
7 and rates. I am the owner and founder of my own consulting business -
8 **RUSSELL CONSULTING, LLC**. I specialize in providing the following
9 professional services to cities and towns, municipal utilities, regulatory
10 agencies and consumer advocacy groups: management reviews and audits,
11 needs assessment and facilities planning, utility economics and rate studies,
12 determination of component and total revenue requirements, cost-of-service
13 studies, demand management and conservation programs, expert witness
14 services, utility contracts and negotiations, feasibility studies, system
15 appraisals and related regulatory/institutional studies.

16

17 **Q. Please summarize your training and experience.**

18 I have over 40 years of experience as a professional engineer, utility
19 manager and consultant. My formal education consists of a B.S. Degree in
20 Electrical Engineering from Rutgers College, an M.S. Degree in Engineering
21 Management from Northeastern University and an M.A. Degree in
22 Economics from Rutgers University. I am a Registered Professional
23 Engineer in the States of Massachusetts (Registration Number 28342), New
24 Jersey (Registration Number 26512), and Florida (Registration Number
25 75247). For nearly all my career I have been actively involved in the
26 management and control of utility businesses, from small public water
27 systems to large multi-state, fully integrated, private electric companies.

28

29 I have provided expert witness testimony on many occasions before several
30 state public utility commissions, legislative committees and Superior Courts,
31 including testimony on matters directly related to utility planning, forecasting

1 and needs assessment, least cost planning, capital improvements, revenue
2 requirements, cost of service studies and rate design, and demand
3 management/conservation programs. I have testified before this
4 Commission on many occasions, several of which are listed below.

5
6 I have prepared numerous rate studies for water and wastewater utilities,
7 and both gas and electric utilities within this country and internationally. I
8 have also evaluated and critiqued many other utility rate studies prepared by
9 others as both a regulator and as a consultant. A few years ago, I was the
10 expert witness for the Bristol County Water Authority in a rate increase case
11 requested by the Providence Water Supply Board. I was the expert witness
12 for the Town of Cumberland in two prior rate increase cases proposed by the
13 Pawtucket Water Supply Board. And, since the mid-1990s I provided
14 testimony in the last five rate cases proposed by the largest private water
15 company in Massachusetts (Aquarion Water Company and its predecessor
16 Massachusetts-American Water Company), representing the five towns
17 served by that company. In the last 10 years I also reviewed and evaluated
18 a utility rate study for two large commercial customers of a utility in South
19 Carolina; and reviewed and evaluated a 5 year financial plan and rate study
20 prepared by the Guam Water Authority for the Public Utility Commission and
21 the Administrative Law Judge on that Island.

22
23 Early in my career I was directly employed by two state regulatory agencies.
24 For the Massachusetts Department of Public Utilities, I held the position of
25 Chief Engineer for 2 years before leaving State service for a position
26 (Strategic Planner for General Public Utilities in New Jersey) in the private
27 sector. For the New Jersey Board of Public Utilities, I was employed as a
28 consultant to the Board's Chief Economist. I have held management
29 positions for three large Electric Utilities operating in the Northeast and Mid-
30 Atlantic states, and was a Principal Management Consultant for a large

1 environmental Engineering Co. with headquarters in Boston, MA. for eight
2 years before establishing my own consulting business over 20 years ago.

3

4 I have written several papers and articles that have been published in
5 professional journals and/or presented at utility industry conferences. Topics
6 have included rate design and cost of service studies, appraisals of utility
7 systems, energy conservation and other measures to reduce total energy
8 costs, and cost/benefit analysis of alternative ownership options for utilities.
9 Many of these papers have been published in Professional Journals and/or
10 presented at industry conferences. I also taught undergraduate and
11 graduate courses in economics and management science, as an adjunct
12 professor at Boston University.

13

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

15 For nearly 30 years I have been an active member of the American Water
16 Works Association (AWWA) and its regional affiliate - the New England
17 Water Works Association (NEWWA). As a member of AWWA's Rates and
18 Charges Committee I was actively involved in revising and updating portions
19 of AWWA's publication entitled, "Principles of Water Rates, Fees, and
20 Charges," which was published as the seventh edition of that manual ("M1")
21 in 2017. I have held the position of Assistant Treasurer for NEWWA and for
22 the same 3 years was a member of its Executive Committee and Board of
23 Directors. Until recently and for many years I was Co-Chair of the Financial
24 Management Committee of NEWWA. I am currently an active member of
25 that Committee, and the Rates Committee of the Florida Section of the
26 AWWA. I am a member of the Water Environment Federation (WEF) and
27 the New England Chapter; a life member the Institute of Electrical and
28 Electronics Engineers; and the Rutgers Engineering Society

29

1 For additional details I have attached a copy of my resume as Exhibit No.
2 DFR-1. I have divided my testimony into several topics each of which is
3 preceded with an underlined heading.
4

5 **Q. At the outset how would you characterize this rate increase proposal?**

6 A. Newport Water proposes to increase rates in each of two succeeding years
7 starting in FY2020 at an overall increase of about 15%, followed by a 5.3%
8 increase in FY2022. The increase in FY2020 distributes the increases to
9 retail customers in Newport and Middletown, and two wholesale customers
10 (The Navy and the Portsmouth Water and Fire District (the "PWFD") based
11 on a COSS performed by its rate consultant (Mr. Harold J. Smith). The
12 second step increase in FY 2022 is proposed to be implemented on an
13 Across-The-Board (A-T-B) basis. Their case-in-chief is centered on their
14 belief that a large percentage (about two-thirds of the \$2.43 Mil. proposed
15 first step rate increase) of their need to increase rate revenues results from
16 historic and continuing declining sales of water. This was an accurate
17 assessment for most of the first two decades of this century, but it is not an
18 accurate representation of the short term trend in sales since FY2015. Total
19 water sales have leveled off in the past few years, and in fact have reversed
20 the earlier downward trend to a growth trend for fiscal years 2016 through
21 2019. The other portion of the need to increase rate revenues (about
22 \$768,000 or about one-third of the \$2.43 Mil. requested) results from O&M
23 cost increases through the rate year, and includes a fairly aggressive Capital
24 Improvement Program (CIP) over the next five years that only impacts the
25 second step increase.
26

27 **Q. What are your general impressions of this case and the proposed**
28 **increase?**

29 A. This is Newport Water's first base rate increase in about three years.
30 Because of this and because the proposed average increase is not unusually
31 high, the proposed two step increases on the surface do not appear to be

1 inordinately high. However, after a thorough review of their case-in-chief and
2 Newport Water's responses to many information requests, it does appear
3 that the proposed increases are not fully supported and that some
4 modifications to their proposals are warranted. In combination, these
5 modifications and other proposed adjustments to their case-in-chief
6 described below should result in sizable reductions in the proposed
7 increases in rate revenues, for both of the proposed step increases - one in
8 FY2020 and the second in FY2022.

9
10 **Overview of the Company's Case**

11 **Q. At the outset how would you characterize this rate increase proposal?**

12 A. Newport Water has portrayed this proposed increase as being relatively
13 small in percentage terms even though there has been very little price
14 inflation since the last base rate increase case. However, they fail to note
15 that the rates charged to its residential customers are among the highest in
16 the state and other bordering states. In fact, using the most recent rate
17 survey from the Commission's website, it is clear that residents using 90,000
18 gallons per year were charged about \$962.04 for just water service. The
19 Statewide average among regulated water utilities for the same timeframe
20 was \$600.10 for the same level of consumption. Thus, for that usage level,
21 customers in Newport and Middletown pay nearly 1.6 times or 60% more
22 than a large percentage of all residential customers in Rhode Island. While
23 90,000 gallons of usage is somewhat higher than what the average
24 residential customer Newport Water's service area uses in a year, it is not an
25 excessive level and many residential customers use close to or more than
26 that level. And, while average statewide bills may increase somewhat before
27 these proposed increases are effective, if the level of increase proposed by
28 the Company is allowed, residential customers in Newport Water's service
29 area will be paying about 1.8 times (80% more) more than what average

1 residential customers across the state would be paying. The following table
 2 contains the typical bills and rate comparisons referred to in this paragraph.
 3

<u>Water Utility in RI</u>	<u>Annual Charge for 90,000 gallons</u>
<i>Kent County Water Authority</i>	\$802.96
<i>Newport Water (current)</i>	\$962.04
<i>Newport Water (w/Prop.Incr.)</i>	\$1,065.48
<i>Pawtucket Water Supply Bd.</i>	\$602.52
<i>Providence Water Supply Bd.</i>	\$500.16
<i>Suez Water</i>	\$539.04
<i>Woonsocket Water Dept.</i>	\$555.80
<i>Total (w/o Newport Water)</i>	\$3,000.48
<i>Average (w/o Newport Water)</i>	\$600.10
<u>Newport Water Compared to</u>	
<i>Average Charge (w/no Incr.)</i>	60% Higher
<i>Average Charge (w/ Incr.)</i>	78% Higher

4
 5 To put this proposed increase in a regional perspective, a random sample of
 6 twelve communities near Rhode Island's two neighboring states –
 7 Massachusetts and Connecticut, was selected and compared with both
 8 Newport Water's current and proposed rates for the same usage level. The
 9 following table contains a listing of those 12 communities and their respective
 10 charges to residential customers that consume 90,000 gallons of water per
 11 year. All amounts were taken from the most recent rate survey data

1 available from Tighe and Bond's website. The results are provided in the
 2 following Table.

3

<u>Town</u>	<u>Annual Charge for 90,000 gallons</u>
<i>Attleborough (MA)</i>	\$559.44
<i>Douglas (MA)</i>	\$431.64
<i>Fall River (MA)</i>	\$356.16
<i>Seekonk (MA)</i>	\$431.64
<i>Somerset (MA)</i>	\$461.04
<i>Uxbridge (MA)</i>	\$561.48
<i>East Lyme (CN)</i>	\$505.80
<i>Groton (CN)</i>	\$670.44
<i>Ledyard (CN)</i>	\$789.24
<i>New London (CN)</i>	\$335.28
<i>Noank (CN)</i>	\$366.00
<i>Norwich (CN)</i>	\$665.16
<i>Total</i>	\$6,133.32
<i>Average of 12 Water Utilities.</i>	\$511.11
<i>Newport Water Compared to</i>	
<i>Average Charge (w/no Incr.)</i>	88% Higher
<i>Average Charge (w/ Incr.)</i>	108% Higher

4

1 The average of the 12 communities bordering RI for the same timeframe was
2 \$511.11 for the same level of consumption. Thus, for that usage level,
3 customers in Newport Water's service area pay on average 1.88 times or
4 88% more than a large percentage of all residential customers in those 12
5 communities pay for the same level of water consumption. While 90,000
6 gallons of usage is somewhat higher than what the average residential
7 customer in those 12 communities uses in a year, it is not an excessive level
8 and many residential customers use close to or more than that level in those
9 neighboring states. And, while average bills in those 12 communities may
10 increase somewhat before these proposed increases are effective, if the
11 level of increase proposed by the Company is allowed, residential customers
12 in Newport Water's service area will on average be paying about 2.08 times
13 (108% higher) more than what the average residential customers in those 12
14 communities would be paying.

15

16 **Q. How have you organized the remainder of your testimony?**

17 A. My testimony is separated into six general areas – Estimated Sales, Capital
18 Improvements and Funding, Use of Reserve Funds, Revenue Requirements,
19 and Mitigation Measures. Lastly, a summary of recommendations is
20 provided at the end of this testimony.

21

22 **ESTIMATED SALES (AND REVENUES)**

23

24 **Q. Mr. Russell, do you have any concerns about Newport Water's use of a**
25 **low estimate of rate year sales to estimate rate year revenues from user**
26 **charges?**

27 A. Yes, I do.

28

29

1 **Q. What is your concern about Newport Water’s use of low sales levels to**
2 **estimate rate year revenues?**

3 A. To begin with, after the revenue requirement is determined, the rates are
4 designed and their level set so that the realized revenues will match the total
5 costs that need to be recovered from the new rates. If the consumption levels
6 used to estimate the rate revenues in the rate year turn out to be significantly
7 higher than expected (i.e., the estimated levels proposed by Newport Water),
8 then Newport Water Company will collect more revenues than it needs (all
9 else being equal). Because some revenues are derived from fixed charges,
10 there is not a direct relationship between the percentage that realized
11 consumption levels are higher than expected and the percentage increase in
12 rate revenues. For this Company about 84% of rate revenues are derived
13 from consumption charges. Thus, for each percentage point (1.00%) that
14 consumption is greater than expected in the rate year, rate revenues will be
15 about 0.84% greater than expected.

16
17 So, my concern with respect to this issue is that there is a strong indication
18 that rate year consumption levels could be significantly higher than levels
19 estimated by Newport Water. And, ratepayers would be stuck with rates for
20 water service that would be higher than they need to be. My concern is
21 based on two significant facts. First, the level of consumption has been
22 increasing over the four years between 2016 and 2019, and the number of
23 customers has been steadily increasing for several years. All indications for
24 short term (next two or three years at least) economic growth are very
25 optimistic. If GDP growth continues at levels realized last year, or even at
26 higher levels (perhaps as much as 3% or 4%), the impact on total
27 consumption going forward.

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1 Estimated Rate Year (FY2020) Sales

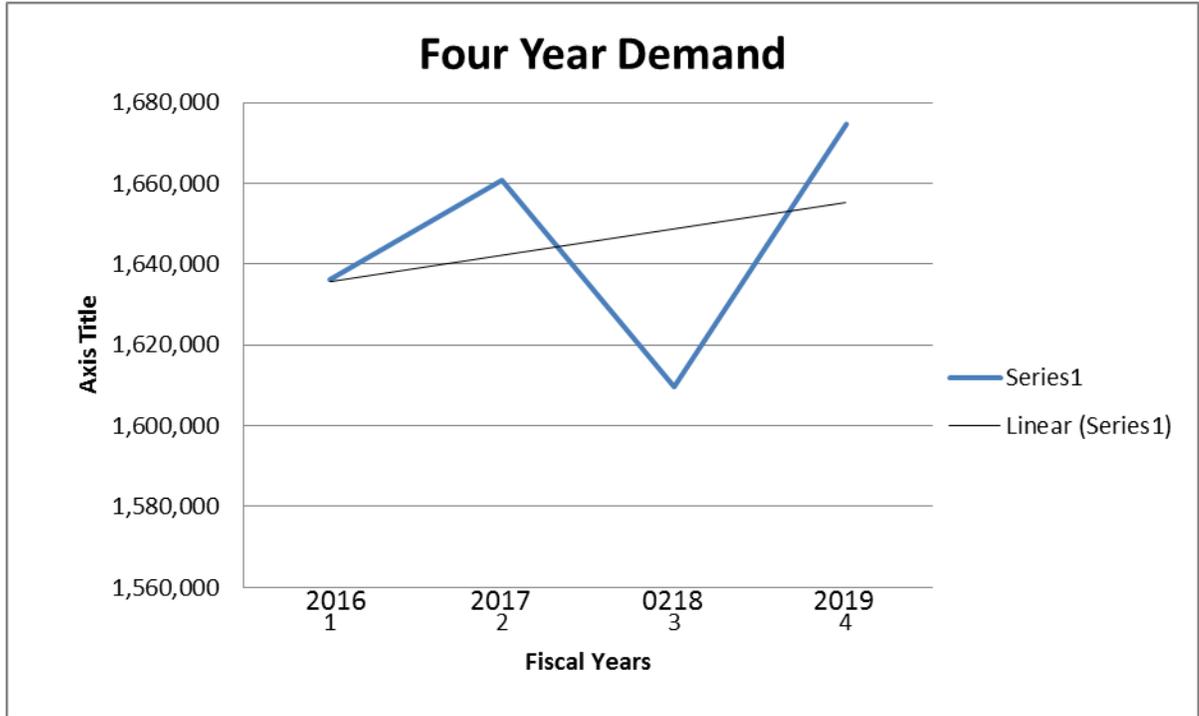
2 **Q. Please summarize your findings, conclusions and recommendations**
3 **relative to Newport Water's Estimated Sales and Revenues.**

4 A. Newport Water bases its projection of Rate Year sales by inferring that a
5 long-term trend of declining sales over the period from 2000 to 2015 should
6 continue to be applicable to the most recent 4 years (2016 through 2019).
7 However, as I will show, the long-term trend does not apply to the period
8 from FY2016 through FY2019. Newport Water's sales estimate (1,596,198
9 TG) for the first-rate year (FY2020) is significantly below levels realized in
10 each of the last 4 years, and 3.13% below the average level of sales
11 (1,645,383 TG) over those 4 most recently completed years. It should be
12 pointed out that Newport Water's reliance on an earlier long-term trend
13 through FY2018 was made before the results of sales for all of FY2019 were
14 known. To estimate rate year sales Newport Water's consultant applied a
15 linear regression calculation on each customer class for three years prior to
16 FY2019 (FY2016 to FY2018). The trend over those 3 years was still
17 downward but only slightly downward. So, their estimate was less than the
18 average of the 3 prior years. This method was different from prior cases,
19 which used the average of the most recent 3 years. However, because sales
20 in FY2019 were significantly higher than any of the 3 prior years, the short-
21 term trend is now upward. While their reasoning may be partially right
22 looking over the 15 years ending in 2015, over the short term (FY2016
23 through FY2019) the trend has changed dramatically. Looking at the last
24 three years (FY2016 through FY2018), which included only the three recent
25 years that had been completed at the time that this case was filed, the trend
26 had flattened out significantly. More importantly, sales in FY2019 (1,674,791
27 TG - see response to PWFd 1-10) showed a significant increase (4.04%)
28 over FY2018 sales. Furthermore, now that sales for FY2019 are known, the
29 short term (last four historic fiscal years including Y2019) trend is now
30 increasing. This is easily seen from the historic data presented in the
31 following table and graph.

1

Year	FY2016	FY2017	FY2018	FY2019
Total Sales	1,636,047 TG	1,660,901 TG	1,609,792 TG	1,674,791 TG

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From this graph it is clear the short-term trend line is now upward. This trend line [labeled “Linear (Series 1)”], which is based on the least squares method, produces a forecast of 1,651,998 TG for FY2020. The four-year average is 1,645,383 Thousand Gallons (TG), and the 3 year and 2 year averages are nearly identical at 1,648,495 TG (0.2% higher) and 1,642,292 TG (0.2% lower), respectfully. Thus, if it is assumed that Newport Water used the method it used in several cases prior to the current one, and using a completed year following the test year, Newport Water would have projected a total sales of about 1,645,000 TG for the rate year, which is about 3.1% higher than the outdated trend forecast proposed by Newport Water.

1 Newport Water's application of the long-term trend to the more recent sales
2 level is not appropriate simply because the short-term trend reverses the
3 long-term trend experienced by this utility since 2000. As they contend the
4 long-term trend was due largely to conservation measures, improved
5 appliance efficiency of water use and price elasticity. However, the
6 consumption impacts of conservation efforts and improved efficiencies have
7 both reached or will soon reach saturation levels resulting in a period of
8 diminishing returns. In other words, most of the more effective conservation
9 measures and most of appliance improvements have over time been
10 implemented and the associated reductions in water use have largely been
11 accounted for. Thus, both in recent years and going forward the
12 consumption impacts of these two factors are likely to be greatly reduced.
13 Newport Water's third reason - Price elasticity of water – is only somewhat
14 applicable to Commercial customers, and their ability to reduce their
15 consumption levels have been greatly reduced because of their already
16 extensive use of conservation measures and more efficient appliances.

17
18 From Newport Water's responses to some discovery requests (for example
19 see responses to Midd 1-34 and Midd 2-22, it also appears that the long-
20 term downward trend, nor the current upward trend have not been impacted
21 significantly by unusual levels of high rain, extended high temperatures, or
22 extended droughts. Thus, it appears that the only significant factor affecting
23 this short-term upward trend and recent increases are due largely to
24 improving economic conditions. It is generally accepted that improving
25 economic conditions leads to higher demands for water use. Residential
26 consumption increases with higher incomes and lower unemployment/higher
27 employment, and commercial/industrial water use increases with greater
28 demands/sales of their products and services, which are directly reflected in
29 growing regional and national economies, as evidenced by increasing or high
30 levels of Gross Domestic Product (at the National level and both regional and
31 state levels).

1 Newport Water states that about two-thirds its need to collect additional
 2 revenues of \$2.43 million results from decreasing sales (billed volumes of
 3 water) levels. In general, I do not disagree with this statement. However, the
 4 level of increase needed to compensate for this one factor has been
 5 significantly over-estimated. These recent increasing trends of FY2017 over
 6 FY2016 and FY2019 over FY2018 also closely correlate with the turnaround
 7 in economic conditions (from weak or stagnant growth to positive and
 8 improving growth) since FY2016. Given the more recent trends in sales
 9 levels (increasing rather than decreasing) and continuing improvements in
 10 regional and national economic conditions, it is clear that Newport Water's
 11 estimates of revenues from metered sales are overly pessimistic for the rate
 12 year (FY2020), and continuing through the second step year (FY2022).

13
 14 My assessment of national, regional (New England), and local (the State of
 15 Rhode Island) economies are based largely on the following indicators of
 16 economic conditions. First, economic growth in recent years is clearly
 17 demonstrated on the following table listing GDP (Gross Domestic Product)
 18 trends at all three levels.

19
 20 Annual % Change in Real GDP (Source – US Bureau of Econ. Analysis)

<u>YEAR</u>	<u>United States</u>	<u>New England</u>	<u>Rhode Island</u>
2014	2.5%	0.8%	0.2%
2015	2.9%	2.6%	1.5%
2016	1.6%	1.1%	0.0%
2017	2.2%	1.3%	0.8%
2018	2.9%	2.0%	0.6%
2019 (Est.) to be updates	3.0 to 3.5%	2.0 to 3.0%	1.0 to 2.0%
2020 (Est.)	3.0%+	2.0%+	1.5%+

21

1 As is evident from this table, growth in GDP has been very strong in recent years
2 both nationally and regionally. While that growth has been weaker in RI,
3 expectations for that state are similarly strong and likely reaching 1% to 2% in this
4 year and going forward.

5

6 Next, consider levels of employment over this same timeframe. Employment is
7 another good indicator of economic growth. Increasing employment indicates
8 improving economic conditions. Conversely, increasing unemployment level
9 indicates deteriorating economic conditions. Historic employment levels for the
10 same three levels and the associated trends are displayed in the following Table.

11

12 Total Employment (% change from preceding period)

13 (Source – US Bureau of Labor Statistics)

<u>YEAR</u>	<u>United States</u>	<u>New England</u>	<u>Rhode Island</u>
2013-2014	2.1%	1.6%	1.8%
2014-2015	2.2%	2.6%	2.2%
2015-2016	1.6%	1.2%	0.9%
2016-2017	1.4%	1.1%	1.0%
2017-2018 - Est. to be updated	1.5%+	1.5%+	1.0%+
2018-2019 – Est.	2.0%+	1.5%+	1.5%+
2019 -2020 - Est.	2.0%+	1.5%+	1.5%+

14

15 It is important to note that increasing employment levels are cumulative. Thus,
16 while the annual increases for RI are relatively low, total employment increased
17 by almost 10% from 2013 to 2019. So, for example, if there were 1,000,000
18 workers in RI in 2013, by 2019 there were nearly 100,000 more employed people
19 in RI.

20

1 Trends in personal income or listed over the period from 2013 through 2020 in the
 2 following Table. The annual percentage levels were derived by calculating the
 3 percent change from the preceding year.

4
 5 Real Personal Income (% change from preceding period)

6 (Source – US Bureau of Labor Statistics)

<u>YEAR</u>	<u>United States</u>	<u>New England</u>	<u>Rhode Island</u>
		MA - CN	
2012 – 2013	-0.1%	-0.6% - -2.6%	-1.2%
2013 – 2014	4.1%	3.0% - 2.9%	1.7%
2014 – 2015	4.6%	6.0% - 2.5%	3.8%
2015 – 2016	1.5%	1.6% - 0.5%	0.3%
2016 – 2017	2.6%	2.7% - 2.0%	3.8%
2017 – 2018 – Est. To be updated	3.0%+	3.0%+ - 2.2%+	3.0%+
2018 – 2019 – Est.	3.5%+	3.0%+ - 2.5%+	3.0%+
2019 – 2020 – Est.	3.5%+	3.0%+ - 3.0%+	3.0%+

7
 8 These statistics clearly show that the US, two other New England states
 9 (Massachusetts – MA and Connecticut – CN, and RI all experienced significant
 10 increases in real Personal Income (PI) since 2013. Since 2013 all 3 levels have
 11 experienced significant (close to or greater than 2% annually with only a few
 12 exceptions at all levels in FY2016). There is a clear correlation between PI and
 13 GDP, and a very close relationship between employment levels and PI.

14
 15 Furthermore, expectations of increases in sales going forward are supported by the
 16 number and magnitude of developments currently under construction or others soon
 17 to start that will be operational within a year or two in Newport Water’s service area.
 18 For example, Middletown has 59 single family units currently under construction; 26
 19 single family homes in 4 different subdivisions in advanced stages of being

1 approved; and an 18-room hotel in the Atlantic Beach District. Additionally, through
2 information requests comparable data about building/development growth has been
3 requested from all other communities served by Newport Water. Information from
4 all of these towns will be compiled and reported as soon as it is available.

5 Based on the forgoing and in an effort to be more closely estimate what the level of
6 sales for Newport Water is likely to be in the rate year, it is recommended that the
7 Commission adopt sales estimates based on the method of averaging sales over
8 the last 3 or 4 completed years, or by applying the methodology used by Newport
9 Water in their filing, but that it be modified by performing the analysis on the trend
10 over the most recent 4 years including FY2019. The averaging method produces a
11 sales level of 1,645,383 TG. The trend method produces a sales level of
12 1,651,998 TG. The forecast levels using the linear regression approach by class
13 are listed below:

14

15	Residential - - - - -	613,040 TG
16	Non-Residential - - - - -	456,218 TG
17	Navy - - - - -	200,548 TG
18	Portsmouth WFD - - - - -	382,194 TG
19		
20	TOTAL - - - - -	1,651,998 TG

21

22 The Commission should approve a level of sales for the first rate year midway
23 between the two methods because they are reasonably close to each other. This
24 results in an estimated level of sales equal to 1,648,905 TG. This level of sales is
25 52,707 TG (3.3%) higher than Newport Water’s estimated level. Assuming that
26 consumption revenues produce 84% of total rate revenues, this higher sales level
27 will produce an increase in rate revenues above that estimated by Newport Water of
28 approximately \$527,617 $[(52,707/1,596,198) \times 0.84\% \times \$19,021,902]$.

29
30 It is also recommended that prior to issuing its Order and Decision in this case that
31 the Commission compare actual sales for the first quarter of FY2020 (July through

1 September), with total sales in each of the first quarters of fiscal years 2016 through
2 2019, and if those sales are significantly lower than the four earlier quarters, then
3 the Commission should adjust the level of sales recommended here in some
4 proportion reflective of that quarter's decreased sales. If sales in FY 2020 turn out
5 to be significantly below the recommended level, Newport Water has available
6 reserves that can be and should be used to offset any directly related shortfall.
7 Furthermore, if the recommended sales levels are approved, and after the fact,
8 actual levels in FY2020 turn out to be significantly lower than the recommended
9 levels, and use of reserve funds are exhausted, then Newport Water has the option
10 of petitioning the Commission for emergency rate relief.

11

12 **CAPITAL IMPROVEMENTS AND ASSOCIATED FUNDING**

13

14 **Q. Please summarize your findings, conclusions and recommendations**
15 **relative to Newport Water's Capital Improvement Plans.**

16 A. This section addresses 2 issues related to Newport Water's proposed 5 year
17 capital improvement program. The discussion of each issue and the related
18 recommendation is preceded with a heading label identifying the issue.

19

20 **Funding of Major Fixed Assets**

21

22 Utilities typically divide assets into two general categories. One general category
23 consists of new large (and expensive) facilities that are designed to add
24 new/expansion capacity for many years or new large (and expensive) facilities that
25 fully, or to a large extent, replace existing facilities and are expected to have long
26 useful lives. For purposes of this testimony these will be referred to as "Large Fixed
27 Assets." Such facilities because of their cost and ability to provide service for many
28 years are almost always funded with long term debt. Debt funding makes sense
29 from the utility's point of view for these large investments because it is very difficult
30 to raise the large amounts needed in any other way. And, from the customer's point
31 of view it makes sense because they would prefer to have the costs spread over

1 many years rather than concentrated in one year. Furthermore, it makes sense
2 from an equity point of view because customers come and go, or modify their
3 consumption levels for many reasons. By spreading the associated costs over
4 many years, there is a much better match between those customers who benefit
5 most over time from use of those assets are the ones that pay for most of its
6 associated costs. For example, customer A moves and leaves the system five
7 years after a major fixed asset was placed in service. He would have paid for only 5
8 years of the associated cost of that asset through debt service payments, a portion
9 of which would be included in his rates. Customer B stays a customer for more than
10 20 years and the debt is retired after 20 years. He pays his portion of the
11 associated debt service costs for all 20 years that the debt was outstanding. If the
12 costs of major fixed asset was paid for from current revenues, both customers
13 would pay the same for that asset in one year (assuming their consumption levels
14 were equal). Would it be fair or equitable for customer A to pay the same as
15 customer B, even though he would only benefit from use of this asset for only 5
16 years, while Customer B benefited from all 20 years under the one year funding
17 approach? Clearly it would not be. On the other hand, under the 20 year funding
18 scenario both customers paid in proportion to the benefit each received from this
19 asset, resulting in a much more equitable sharing of the costs of that asset, and a
20 much closer nexus between those benefiting from this asset and the cost each
21 would pay for its use.

22

23 The other category includes almost all plant and equipment that are relatively less
24 expensive, are designed to renew or replace portions of larger facilities, or have
25 relatively shorter useful lives. For purposes of this testimony these will be referred
26 to as "Minor Fixed Assets." These facilities are paid for almost entirely from current
27 revenues. Replacement of relatively short sections of a water main due to a break
28 or the need to relocate part of an existing water main, meter replacements, and
29 Misc. Fence Repairs are examples of minor fixed assets that are paid for with
30 current revenues. The two water main replacement projects proposed by Newport
31 Water are examples of major fixed assets. Newport Water has proposed that these

1 two main replacements be paid for with the issuance new debt that will be paid for
 2 over 20 years. At least two other capital improvements listed on Exhibit 1 appear to
 3 be improvements being made to major fixed assets that should be paid for with new
 4 debt. These are the Reservoir Road Tank improvements and the Forest Avenue
 5 Pump Station Retrofit improvement. Both are relatively expensive, are designed to
 6 essentially replace older facilities in a manner that should extend their useful lives
 7 for many years, certainly beyond the 20 year term of new debt. Therefore, it is
 8 recommended that these two projects be funded with new debt. If the commission
 9 approves the alternative funding for these improvements, the estimated costs of this
 10 funding alternative are provided in the following table and are compared with
 11 Newport Water's cost estimates in the following table.

12

Year	FY2020	Fy2021	FY2022	FY2023	FY2024
Annual Costs of Newport Water's Funding Plan	\$700,000	\$800,000.	\$200,000.	\$500,000.	\$1.15 Mil.
Annual Costs of Alt. Funding Plan	\$28,000	\$0.0 Mil.	\$139,000	\$159,000	\$0.0
Annual Difference (Savings comp w/Newport Water)	\$672,000	\$800,000.	\$61,000	\$341,000.	\$1.15 Mil.
Cumulative Difference/Savings	\$672,000	\$1.47 Mil.	\$1.53 Mil.	\$1.87 Mil.	\$3.02 Mil.

13

14 The alternative funding plan consists of BANs in FY2020 (\$0.7 Mil., cost at 4% -
 15 \$28,000) and in FY2022 (\$0.2 Mil., - Cost at 4% - \$8,000), and in FY2023 (\$0.7
 16 Mil., - Cost at 4% - \$28,000), first debt issue (\$1.7 Mil.) in FY2021 with annual Debt
 17 Service payments of about \$131,000 starting in FY2023, a second debt issue (\$1.3
 18 Mil. in FY2024 with annual Debt Service payments of about \$101,000 starting in
 19 FY2025.

20

1 Thus, this alternative plan reduces total costs over the first 5 years by about \$3 Mil.¹
2 Beyond FY2024 there would be no additional capital costs associated with Newport
3 Water's plan. Under the alternative plan the debt service payments would continue
4 for 17 years at about \$232,000 per years (debt service on both debt issues), and for
5 3 years beyond that with debt service payments that would be reduced to about
6 \$101,000. Thus, overall the short run savings of the Alternative plan would be
7 offset by the 2 additional debt service payments for the remaining years of the 20
8 year terms of each bond. In the long run the present value of the short run savings
9 minus the present value of the additional debt service payments, may be close to
10 zero or a relatively small negative amount (net cost increase). Because of this and
11 the fact of this alternative has a large impact (in reducing capital costs) on this case
12 (next 5 years), it should be approved by the Commission. These savings could be
13 used to lower the need to increase rate revenues by about \$600,000 in the first rate
14 year (FY2020). Another option would be to reduce the annual contributions to the
15 Capital Reserve Fund by a significant portion of the \$600,000 (as much as
16 \$500,000), and use the balance to lower future debt service payments on the two
17 associated debt issues.

18

19 System Wide Main Improvements

20 With a relatively minor shift in the scheduling of the System Wide Main
21 Improvements Newport Water could significantly lower its capital costs associated
22 with these improvements over the next five years. Additionally, by spreading the
23 construction expenditures on a more equalized annual schedule, the planning and
24 scheduling of each project's implementation may be more effectively accomplished.
25 This alternative improvement plan for System Wide Main Improvements –
26 Construction along with the proposed plan are compared in the Table below:

27

1 This total amount and the annual amounts from the table for the alternative case are approximate estimates, but are based largely on similar estimates provided by Newport Water. Assuming the Commission approves this alternative or some variation of it, more precise estimates can be made when the amounts, timing and other terms of each debt and loan instrument are provided by Newport Water and their Financial Advisors.

1

Year	FY2020	Fy2021	FY2022	FY2023	FY2024
Newport Water's Proposed Constr. Expenditures	\$1.0 Mil.	\$2.5 Mil.	\$0.5 Mil.	\$2.5 Mil.	\$0.25 Mil.
Proposed Alternative	\$1.0 Mil.	\$1.5 Mil.	\$1.5 Mil.	\$1.5 Mil.	\$1.25 Mil.
Annual Difference	\$0.0 Mil.	-\$1.0 Mil.	+\$1.0 Mil.	-\$1.0 Mil.	+\$1.0 Mil.
Cumulative Difference	\$0.0 Mil.	-\$1.0 Mil.	+\$0.0 Mil.	-\$1.0 Mil.	+\$0.0 Mil.
Newport Water's Cumulative Expenditures	\$1.0 Mil	\$3.5Mil	\$4.0 Mil.	\$6.5 Mil.	\$6.75 Mil.
Alternative Cum. Expenditures	\$1.0 Mil	\$2.5Mil	\$4.0 Mil.	\$5.5 Mil.	\$6.75 Mil.
Cumulative Difference	\$0.0 Mil.	-\$1.0 Mil.	+\$0.0 Mil.	-\$1.0 Mil.	+\$0.0 Mil.

2

3 As seen from this Table, the level of expenditures is only somewhat different in two
4 years – FY2021 and FY2023. The cumulative expenditures are exactly the same in
5 FY2020, FY2022 and FY2024. Thus, the same level of improvements would be
6 accomplished under either plan. The only difference is a one year delay of \$1.0 Mil
7 in the construction schedule in FY2021 and again in FY 2023. However, by making
8 these two adjustments to the construction schedule, each of the proposed two
9 proposed debt issues can be delayed one year and with the use of Bond
10 Anticipation Notes prior to issuing the bonds, the annual associated capital costs
11 would be reduced significantly over the next 5 years. The alternative funding plan
12 consists of BANs in FY2020 (\$1.0 Mil., cost at 4% - \$40,000) and in FY2021 (\$2.5
13 Mil., - Cost at 4% - \$100,000), first debt issue (\$4.406 Mil.) in FY2022 with annual
14 Debt Service payments of about \$\$339,000 starting in FY2023, a BAN in FY2023
15 (\$1.5 Mil., cost at 4% - \$60,000, second debt issue (\$3.036 Mil. in FY2024 with
16 annual Debt Service payments of about \$\$234,000 starting in FY2025. The annual
17 costs of this alternative funding plan are compared with Newport Water's proposed
18 funding plan in the following Table.

1

Year	FY2020	Fy2021	FY2022	FY2023	FY2024
Annual Costs of Newport Water's Funding Plan	\$40,000	\$228,000.	\$339,000.	\$570,000.	\$573,000
Annual Costs of Alt. Funding Plan	\$40,000	\$100,000.	\$0.0	\$399,000.	\$339,000.
Annual Difference (Savings comp w/Newport Water)	\$0.0 Mil.	\$128,000.	\$339,000	\$171,000.	\$234,000.
Cumulative Difference/Savings	\$0.0 Mil.	\$128,000	\$467,000	\$638,000	\$872,000.

2

3 Beyond FY2024 the annual costs of each plan would be the same, but under the
4 alternative plan the debt service payments would continue for two additional years.
5 Thus, overall the short run savings of the Alternative plan would be offset by the 2
6 additional debt service payments at the end of their 20 year term. The present
7 value (PV) of short run savings minus the PV of two additional debt service
8 payments 19 and 20 years in the future, may be close to zero or somewhat negative
9 (Net PV of additional costs exceed the Net PV of savings). However, the impact on
10 this case is very significant (saves nearly \$900,000 in the first five years), and
11 therefore, should be approved by the Commission. These savings do not affect the
12 first step rate year increase. However, they do lower the total direct costs of
13 Newport Water's planned CIP by about \$467,000² through FY2022, and if used to
14 lower the revenue requirements of the second step increase, would offset most of
15 the increase initially proposed for FY2022 (\$557,000).

16

2 This total amount and the annual amounts from the table for the alternative case are approximate estimates, but are based largely on similar estimates provided by Newport Water. Assuming the Commission approves this alternative or some variation of it, more precise estimates can be made when the amounts, timing and other terms of each debt and loan instrument are provided by Newport Water and their Financial Advisors.

1 **USE OF RESERVE FUNDS**

2

3 In the last base rate case for Newport Water (Docket No. 4595) the Commission
4 allowed balances in certain Reserve Funds to be drawn down and the proceeds to
5 be used to offset/lower the level of the proposed rate revenue increase. It appears
6 that the estimated balances in all of the reserve funds at the end of the rate year will
7 be at levels that would not allow for similar drawdowns in this case, with the possible
8 exception of two reserve funds – the Revenue Reserve Fund and the Capital
9 Reserve fund. My concern with respect to the latter fund involves the level of
10 annual contributions, and it is covered under a separate heading above (Major
11 Fixed Assets). Relative to the Revenue Reserve Fund, in general I am supportive of
12 having this type of reserve, and not using a large part of it to lower a proposed
13 increase. However, in this case because half of the balance is not restricted (see
14 response to Midd 2-13); the impact to some customers is very high and possibly
15 resulting in rate shock; the likelihood that future sales will increase significantly; and
16 the fact that Newport Water always has the option of seeking emergency relief, if
17 circumstances warrant, I recommend that the Commission allow at least 25% (half
18 of the unrestricted amount) of the balance to be withdrawn from that account to
19 offset/lower the rate revenue increase sought in this case. Given that the balance in
20 this reserve account at the end of the test year was just under \$864,000, the
21 recommended drawdown amount used to Offset/lower the proposed increase in
22 revenues would be \$216,000. Going forward most of this withdrawn amount will be
23 made up with annual contributions of \$155,000 starting in FY2020, and in FY2021
24 the balance will exceed the test year balance by \$94,000 and will continue to
25 increase each year thereafter by \$155,000 (unless of course, future circumstances
26 warrant appropriate withdrawals). Alternatively, if the Commission prefers to keep
27 the current balance in this Reserve Fund, it is recommended that the proposed
28 annual increase of \$155,000 not be allowed at least until FY2023, or even longer, if
29 Newport Water realizes revenue surpluses during the next 2 or 3 years.

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31 **REVENUE REQUIREMENTS**

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Rate Case Expenses

Newport Water originally proposed to recover all Rate Case Expenses during the Rate Year (just one year amortization). Simply as a result of having to respond to an Information Request from the Commission (Comm. 1-26) Newport Water agreed to a two year amortization. Neither their original or second proposal of a two year amortization is appropriate in this case. In recent cases, all of which were not multi-year proposed increases, the Commission has allowed a period of 2.5 years. Thus, use of a 2.5 to 3 year period (number of years since the last base rate increase case) would likely be approved for this case, if it only involved a one-time increase for a single rate year. However, this case involves a multi-year rate increase, which is designed to provide adequate revenues for at least three years (FY2020 through FY2022) and more likely for another year or two. The law (Title 39, Chapter 39-15.1-4) establishing such multi-year rate increase allows for up to 6 years before the next base rate increase. Furthermore, Newport Water has stated (see response to Div. 2-18) that this case is intended to provide sufficient revenues to pay for all of the costs associated with its five year capital improvement plan. Therefore, it is entirely appropriate to spread the rate case expenses over a period of four to six years. Because of Newport Water statement regarding its ability to cover all Capital costs for the period equal to its five year capital Improvement plan, and given the likelihood of the need for another base rate increase before six years are completed, it is recommended that the amortization period be set at five years. If a base rate increase is needed before that time, the remaining balance can be carried forward as part of that next base rate case.

- Q. Have you estimated the reduction in rate year revenues that results from adjusting the amortization period from 2 years to 5 years?**
- A. Yes, I have. Once the total allowed amount for rate case expenses is determined, the adjustment amount should be determined by dividing the total by the number 5 and subtracting that amount from the total amount

1 divided by the number 2. For example, if the total allowed expense is
2 \$300,000, the two year period adds \$150,000 ($\$300,000/2$) to the rate year
3 revenue requirement. The five year period adds \$60,000 ($\$300,000/5$) to the
4 rate year revenue requirement. Thus, this one adjustment would lower the
5 rate year revenue requirement by \$90,000 ($\$150,000 - \$60,000$). Final
6 amounts for this expense will be provided by Newport Water near the end of
7 the evidentiary hearings.

8

9 Need for the Second Step Increase

10 Newport Water states the Second Step increase is needed to cover additional
11 capital costs associated with its new debt to pay for its System Wide Main
12 Improvements. The first of the two new bond issues is proposed to be issued near
13 the end of FY2020 with the associated debt service payments not starting until the
14 next year (Y2021). The second new bond issue, which would close near the end of
15 FY2022 with its first debt service payments not due until the next year (FY2023),
16 which is the year after the second step rate year (FY2022). The debt service on
17 that issue is estimated to start at about \$233,000 in FY2023 and continue at about
18 \$234,000 for at least 4 more years. Thus, there is no direct cost associated with
19 this second issue in FY2022. The only increase in capital costs in FY2022 is due to
20 the first two debt service payments on the bond issued in FY2020 (\$228,000) and
21 FY2021 (\$339,000) totaling \$567,000

22 .

23 As outlined above under a somewhat different alternative construction schedule and
24 funding plan for Newport Water's proposed System Wide Main Improvements,
25 Newport Water's capital costs could be lowered by about \$467,000 in FY2022,
26 which if approved could lower the need for increased rate revenues in FY2022 by
27 that same amount. This alternate plan, if approved, in combination with other
28 savings proposed here and possibly others proposed by other interveners, will likely
29 make the need for a second step increase greatly reduced or not needed before
30 FY2023 or later. Even if none of these reductions in the need for a second step are
31 realized, Newport Water has indicated considerable level of uncertainty as to the

1 exact timing and magnitude of the second step increase. Therefore, any decision
2 with respect to a second step increase should be held off until a decision on the
3 second step increase is needed. If the Commission decides to approve some level
4 of increase for the second step with its Order and Decision this year, it should limit
5 the increase due to issuance of new debt to \$228,000 in FY2020, which is the only
6 increase in FY2020 due to related capital costs of either new bond. Alternatively,
7 the Commission could require Newport Water to delay its second step increase one
8 year to FY2023 because that is the first year in which debt service payments are
9 required to be made for both new debt issues.

10 11 **MITIGATION MEASURES**

12 13 Phase-in to full COS Rates

14
15 While I generally follow the cost causation principle of ratemaking I recognize that
16 there are other criteria or principles of ratemaking that may under certain
17 circumstances lead to rates that are not based solely on following the exact rates
18 produced by a cost of service study. Also, there may be other social, economic or
19 environmental considerations that may warrant considerable deviation from rates
20 that are based solely or exactly on cost of providing water service to a particular
21 customer or class of customers. Furthermore, in making a transition from rates that
22 are not fully cost based to ones that are, it often makes sense to gradually phase-in
23 the difference over one or more additional periods of time to the rates that are fully
24 cost based. These statements are fully backed by Professor Bonbright's treatise
25 (Title – "Principles of Public Utility Rates." by James. C. Bonbright, Albert L.
26 Danielson and David R. Kamerschen, 2nd Edition 1988) on utility rates cited by the
27 Commission in its Order and Decision in Newport Water's last rate case (Docket
28 4595), and in the American Water Works Association's (AWWA) M1 manual on
29 water rates Entitled, "Principles of Water Rates, Fees and Charges," 7th edition,
30 2017.

1 In applying these considerations to this utility, it is clear that Newport Water has
2 been endeavoring to establish rates that are fully cost based following a cost of
3 service study developed/modified by their rate consultant over the last two or three
4 Rate cases. In fact, in the most recent case (Docket 4595) that consultant
5 recommended rates that exactly followed the results of his Cost of Service Study.
6 In their Order and Decision in that case the Commission decided to not allow those
7 rates in favor of a set of rates agreed to in Settlement by the parties that would at
8 least to some extent move in the direction of cost based rates, while mitigating the
9 impact to some customers. Had the full cost based rates been approved in that
10 case the Commission noted that the impact to some customers would have resulted
11 in rate shock. For exactly the same reasons in this case, it is recommended that the
12 Commission not allow immediate movement to fully cost based rates, but instead
13 phase-in the rates over time (minimum – one more base rate case), by mitigating
14 the impact to residential and public fire protection customers. There are many ways
15 to accomplish this. However, my recommended approach that could best balance
16 the need to mitigate some of the impact to those customer classes hardest hit with
17 the goal of reaching full cost of service rates within one or two future rate cases is
18 outlined below:

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1. No change to Base Charges, Residential Volume Charges, or private Fire Protection Charges.
2. For Public Fire Protection Charges limit the increase to 1.5 times the average increase.
3. For Non-Residential Volume Charges limit the increase to 1.5 times the average increase but increase these Charges to offset the revenue decreases resulting from the maximum limits placed on other Charges or Customer Class(s).
4. For the Navy and the PWFD (wholesale Customers) limit the increase to 2.0 times the average increase. Also, strongly encourage the PWFD to place a greater proportion of this increase on its

1 Commercial and industrial customers than on its residential
2 customers.

3 5. For any shortfalls resulting from adjustments 2 through 5 above make
4 up the difference from Non-Residential Customers up to the
5 maximum increase for that Customer Class. If there is still a shortfall
6 increase all rates Across-The-Board (A-T-B) to make up the
7 difference.

8 6. With the second step increase, if warranted, or with the next base rate
9 increase move the rates as close as possible, without major
10 increases to one or more Charges or Customer Classes, to full cost
11 based rates.

12

13 In addition to the dual objectives specified above (before this list of adjustments),
14 the reason or reasons for each numbered adjustment are outlined below:

15

16 1. Base charges are fixed charges and are cost based, and increases
17 can have significant impacts on many residential customers.
18 Additionally, many residential customers are least able to afford rate
19 increases. Charges to private fire protection customers are also fixed
20 charges with relatively high demand charges. Most customers for
21 this service are either commercial or industrial businesses. Lastly,
22 fixed charges add some revenue stability to rate revenues, and
23 therefore, any decreases should generally be avoided.

24 2. These customers are cities and towns that must pass on any increase
25 to its residents and businesses.

26 3. These are commercial and industrial customers that have the lowest
27 percentage increase, and therefore the greatest ability to make up for
28 shortfalls from other adjustments. If the sum of the shortfalls would
29 result in this class receiving an increase greater than the 1.5 times
30 the average increase, it will be capped at 1.5 times the average.

- 1 4. These two wholesale customers have in the past benefited most from
2 the largest subsidy from the other classes, and therefore, should
3 have a higher multiple of the average increase applied to them.
- 4 5. As commercial and industrial customers they are the class of
5 customer best able to afford increases. This is the case in part
6 because any increase along with current charges can be used as a
7 business deduction allowing them to offset a significant part of their
8 water bills by paying fewer taxes.
- 9 6. The stated objective is to mitigate customer impacts where
10 appropriate, but move to cost based rates within one or possibly two
11 more base rate increases.

12

13 Rate Design

14

15 **Q. Please summarize your findings, conclusions and recommendations**
16 **relative to Newport Water's Rate Design.**

17 A. With respect to rate design it is recommended that Newport Water modify
18 its rate structure for residential customers as outlined below:

19

- 20 ➤ The current uniform consumption rates by class do not provide
21 additional incentives (other than the price itself) to customers in each
22 class to use less or be more efficient with usage. This is particularly
23 true for the residential class. A two block increasing rate structure for
24 residential customers provides two additional benefits. First, it can be
25 designed to provide most customers with a lower rate for water that is
26 used for health and sanitation purposes. Second, it provides low
27 income customers and many senior citizens with an opportunity to pay
28 lower average rates for most, if not all of, their water consumption.
29 Therefore, it is recommended that Newport Water consider adopting a
30 two block increasing rate structure for its residential customers, and
31 that the commission should require Newport Water to adopt such a

1 structure with a breakpoint between rate blocks somewhere in the
2 range of 18,000 gallons to 36,000 gallons per year (1,500 gallons to
3 3,000 gallons per month), or close thereto; at a first block rate that is
4 significantly below cost, with the difference made up in the second
5 block rate. The final parameters should be determined by Newport
6 Water as part of this case, as part of the second step review and
7 approval process, if needed, or as part of the next base rate case.

8

9 Customer Assistance Programs

10

11 **Q. Has the company proposed any customer assistance programs?**

12 **A.** To my knowledge they have not.

13

14 **Q. Do you have a recommendation relative to this issue?**

15 **A.** Yes, I do. Because of the high bills charged to many residential customers
16 and the incidence of low income customers in both service areas, I
17 recommend that the Company institute a lifeline rate or a discount
18 percentage to low income customers. A lifeline rate should be applicable to
19 a level of consumption approximated by the level of use needed for health
20 and sanitation purposes, plus a reasonable mark-up (additional amount) to
21 compensate for variability of household demographics and usage patterns.
22 For this level of use an eligible customer would be charged a unit rate that is
23 significantly less than the cost based rate determined for that level of use.
24 Alternatively, a discount percentage for a low income customer could be
25 applied to the whole bill (for example, between 10% to 25%), or a flat
26 discount (for example, \$25 to \$50 per billing period) could be used to
27 decrease an eligible customers total bill. Eligibility should be based on a
28 multiple (for example, 1.25 times) of the Federal Poverty Level for the Area.
29 Verification of low income could be determined by various means, but the

1 simplest and easiest to administer would be to piggy-back on an existing
2 program, like those administered by electric or gas utilities.

3
4 Two examples of these types of low income assistance programs offered by
5 two major cities in the US are described in detail along with implementation
6 considerations are contained in an article in an industry publication issued a
7 few years ago. The citation for this article is, American Water Works
8 Association's Journal, August, 2017, Volume 109, Number 8, pages 30 to 36,
9 entitled, "Model Water Utility Affordability Programs."

10

11 **SUMMARY OF RECOMMENDATIONS**

12

13 The following Table summarizes my estimates of reductions to the proposed
14 increase that would result from each of the recommendations provided above. Most
15 of these estimates depend on many variables that will only be known near the end
16 of the hearing process. Thus, each will need to be re-estimated as those variables
17 become known.

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Table summarizing the impacts of the recommendations on the proposed Revenue Requirements

<u>Reason for Recommended Adjustment</u>	<u>Change in Rate Year Revenue Increase</u>
Estimated Rate Year Sales	-\$528,000 (Step 1)
Funding of Major Fixed Assets	-\$500,000 (Step 1)

System Wide Main Improvements	-\$467,000 (Step 2)
Use of Reserve Funds	-\$155,000 to -\$216,000 (Step 1)
Rate Case Expenses	-90,000 (Step 1)
Need for Second Step Increase	Likely not needed Certainly not before FY2023
Phase-in to full COS Rates	Mitigate Impacts
Rate Structure	Change to a 2 Block Increasing Rate Structure (Res. Custs.)
Customer Assistance Program	Implement to mitigate impacts to low income customers
<u>TOTAL (Rate Year) Reduction</u>	<u>About \$1,273,000 (Step 1)</u>

1

2 **Q. Mr. Russell, do you anticipate having to file or provide supplemental**
3 **testimony in this case?**

4

5 A. Yes, I do. My review, analysis and the testimony provided herein may
6 require supplementation or modification after review of discovery responses
7 not yet received, additional discovery, the availability of documents not
8 available before the date of filing this testimony, and consideration of further
9 testimony submitted by other parties in this Docket. Responses to several
10 information requests were not received prior to the required filing date of this
11 testimony. Thus, it may be necessary to produce a supplement to this pre-
12 filed direct testimony; to submit sur-rebuttal testimony; or additional
13 testimony during the evidentiary hearings, and the Town would like to
14 reserve the opportunity to do so.

15

16 **Q. Mr. Russell, does that conclude your testimony at this time?**

17 A. Yes, it does.

Resume

DAVID F. RUSSELL, P.E.

CAREER SUMMARY:

Since the early 1970s Mr. Russell has been professionally involved in the management, control and regulation of public utilities in the Northeast. He has also successfully completed many related projects throughout the United States and Internationally. He has worked for two regulatory agencies; in MA. – the Department of Public Utilities – as its Chief Engineer; and in NJ. – the Board of Public Utilities – as a special consultant to the Chief Economist. He has held senior engineering and management positions for two New England electric utilities (Eastern Utilities Associates and Unutil Service Corp.), and one in NJ./PA.(General Public Utilities). He has also been a Principal Management Consultant for a major engineering company (Camp, Dresser & McKee, Inc.) at its headquarters in Boston/Cambridge, MA. for several years. Over the past 20 years he founded and developed a successful consulting business (***RUSSELL CONSULTING, LLC***) with an office centrally located in New England, about 30 minutes north of Boston, in Newburyport, MA. In 2014, a second office was opened in Venice, Florida to serve clients in the southeast.

He is an Engineer and Economist by training (BSEE from Rutgers College), and has advanced degrees in Engineering Management (MS. from Northeastern Univ.) and Economics (MA. from Rutgers Univ.) specializing in resource and regulatory economics. He has testified before three of the six Public Utility Commissions in New England (and several others nationally) on many occasions as an expert on utility management, finance, rate design and cost of service studies, and related industry issues. He is a Registered Professional Engineer in MA. (License No. 28324) and NJ. (License No. 26512) and the State of Florida (License No. 75247). He has authored several papers published in professional journals, and has presented his work at many professional seminars and industry conferences.

Mr. Russell has been a lead technical negotiator for several municipal clients in negotiating multi-million dollar contracts with private utilities and energy customers. He has prepared numerous reports and technical presentations for utility CEO's; and municipal, regional and state governments. He has been responsible for the planning, review and feasibility analysis of numerous utility capital improvement projects, totaling many billions of dollars. This included a broad spectrum of utility facilities (electric, gas, water, sewer and solid waste facilities) - production plants, transmission facilities, and distribution systems. He has also led teams of consultants in the appraisal of utility system components and entire systems (all assets). He has considerable international experience having worked for many other countries, including Mexico, Columbia, Egypt, Sri Lanka, Guam and the Bahamas. For the Government of Egypt, he has worked on several projects each of which involved the feasibility and implementation of public-private partnerships in both the water and wastewater sectors.

PROFESSIONAL EXPERIENCE:

RUSSELL CONSULTING, LLC

Public and Private Utility Consultant, 1994-Present

This consulting practice provides management and financial consulting services to public and private utilities, municipalities, governmental agencies and private companies. Areas of expertise include management consulting, management reviews and audits, rate design and cost of service studies, expert witness services, appraisals of utility plant and equipment, assistance to owners of large residential developments in obtaining utility services at least costs (initial costs of extensions and long term rates for service), utility contracts and negotiations, performance enhancement and benchmarking, utility economics, power markets and deregulation, and the feasibility and implementation of public-private partnerships. **RUSSELL CONSULTING, LLC** has teamed with other firms to successfully complete multi-disciplinary projects for International clients.

Unitil Service Corp.

Director of Regulatory Services, 1993-1994

Managed the staff and resources of the Regulatory Services Department for this regional utility holding company. Areas of functional responsibility included sales and load forecasting, customer and load research, rate research and analysis, rate design, rate and tariff administration, revenue requirements and cost of service studies, economic analysis, demand side management (DSM) planning, program design and evaluation, and related analytical services. Responsible for insuring that rates and cost recovery for the retail companies contributed positively to the continued financial strength of the corporation and that positive regulatory relations were maintained. Successfully developed and maintained expanded DSM programs in Massachusetts and New Hampshire. Also responsible for preparing and filing each retail company's Least Cost Integrated Resource Plans, covering a 10 year planning horizon, including the first Integrated Gas Resource Plan. Successfully managed and coordinated an external (PUC) audit of the accounting and control of all DSM expenditures by the affiliated retail companies in New Hampshire.

Camp, Dresser and McKee, Inc.

Principal Management Consultant, 1985-1993

Took a lead role in many projects including management audits, financial feasibility reports, privatization studies and rate/cost of service studies for a wide range of municipal and private utilities. Gained international experience as a financial advisor to the World Bank, the Governments of Egypt and Mexico, and the Water and Sewerage Authority of the Bahamas. Served as project manager for management audits. As Assistant Team Leader for the Management and Financial Services Group helped to expand its size and capabilities from four professional consultants to nearly 20 over a two year period.

Eastern Utilities Associates

Section Manager, 1982-1985

Responsible in the Rate Department for the development and implementation of several pass-through rate clauses designed to recover specific capital and operating costs based on customer demands and/or total use. These cost recovery mechanisms included fuel, purchased power and

oil-conservation adjustment clauses. Was lead engineer for cost of service and rate design studies prepared for rate cases involving affiliated retail electric companies. Also played a key role in rate filings before the Federal Energy Regulatory Commission for the Company's wholesale affiliate. Responsible for all PURPA-related programs for the Company's retail affiliates in Massachusetts and Rhode Island.

New Jersey Board of Public Utilities

Consultant, 1981-1982

Participated in the development of standard purchase and sale rates for cogeneration facilities and small powerplants as required by PURPA. Presented the staff's case on rate-of-return issues involving proposed rate increases by major electric and gas utilities. Assisted the Board's Chief Economist in the evaluation of mergers and acquisitions, and a major financing proposed by the State's largest electric utility needed to fund its capital improvement program.

General Public Utilities

Senior Engineer, 1978-1980

Provided in-house consulting services to the Corporate Planning Division. Instrumental in implementing the system-wide strategic planning process. Also assisted the Forecasting, Load Research and Supply Planning Groups in determining the need for new power plants and least-cost alternatives. This work included the development of the firm's conservation and load-management programs (the first in the industry).

Commonwealth of Massachusetts, Department of Public Utilities

Chief Engineer, 1971-1978

Designated Hearing Officer for public hearings and reported on the need for and costs of major construction projects proposed by electric and gas utilities including power plants, substations, transmission lines and gas storage facilities (LNG, SNG and Propane) and gas pipelines. Was instrumental in developing the State's gas-pipeline safety code and was responsible for the gas-pipeline safety program funded by the U.S. Department of Transportation. Also helped to design and implement the Cost of Gas Adjustment clause for all retail gas utilities. Managed the environmental review process, which included writing internal procedures, the Scope of Work for major facilities, and State-wide rules and regulations. Was appointed by the Governor to the Cogeneration Commission and the Public Power Commission.

RELATED PROFESSIONAL EXPERIENCE:

- Registered Professional Engineer in Massachusetts (28342), New Jersey (26512) and Florida (75247).
- Author of several papers published in professional journals.
- Numerous presentations at regional and national meetings of professional organizations.
- Provided expert testimony in numerous quasi-judicial proceedings before several state public utility commissions, state legislative committees two state Superior Courts.
- Part-time instructor at Boston University teaching undergraduate and graduate courses in Economics, Management Science and Finance.

PROFESSIONAL MEMBERSHIPS:

- American Public Power Association
- American Water Works Association, Member of the Rates and Charges Committee (responsible for 3 Chapters. of the revised M1, "Rates" Manual), also a member of the Florida Section (and member of the recently formed Finance and Rates Committee).
- City of Newburyport Chamber of Commerce
- International Water Resources Association (Peer Review Editor)
- Inst. of Electrical and Electronics Engineers (Power Engr. & Engr. Management Sections)
- National Society of Professional Engineers
- New England Water Works Association, Assistant Treasurer (Assoc. Officer) - Member of the Executive Committee and the Board of Directors; Member of the Financial Mngt. (Co-Chairman) Comm., the Conservation (Chairman) Comm., and the Investment Comm.
- Rutgers Engineering Society
- Water Environment Federation (Member of the Management & Admin. Committee)

EDUCATION:

- Rutgers University, MA in Economics (Resource and Regulatory Economics), Research Assistantship with Full Scholarship, 1984
- Northeastern Univ., MS in Engineering Management (Oper. Research & Finance), 1977
- Rutgers College, BS in Electrical Engineering, Alumni Scholarship (full tuition and expenses), 1971

PUBLICATIONS\PRESENTATIONS: Author of several papers published in professional journals and presentations given at regional and national conventions.

EXPERT WITNESS SERVICES: Provided expert testimony in numerous quasi-judicial proceedings before several State Public Utility Commissions, and Legislative Committees. Also presented expert testimony in litigated proceedings before the New Hampshire Superior Court and the Massachusetts Superior Court. Areas of expertise include many of the issues and topics outlined above.

COMMUNITY SERVICE: Chairman of the Planning Board, City of Newburyport, Ma.; Commissioner – Newburyport Harbor Comm.; Chairman of the Building Comm. to rebuild and expand the City's 70 year old Police Station; Member of the Merrimack Valley Planning Comm.; I.C. Parish Council; Member of American Legion - Post 150 (MA) and Post 159 (FL); Treasurer for the City Comm. (Major Political Party); and Treas. for a State Representative.

ADJUNCT PROFESSOR: Part-time instructor at Boston University teaching Undergraduate and Graduate courses in Economics, Management Science and Finance.

WHO'S WHO IN AMERICA: His biography was included in the Millennium and subsequent Editions of Marquis' Who's Who in the America. Recipient of the 2019 Albert Nelson Marquis Lifetime Achievement Award.

PERSONAL: U.S. Citizen - Married, three children - Golfer/Runner/Coach (youth athletics)
FED. ID#: 46-4250630 1st Lt., U.S Army NG (Inactive Res.)