

REBUTTAL TESTIMONY
OF
HAROLD J. SMITH
VICE PRESIDENT
RAFTELIS FINANCIAL CONSULTING, INC.
ON BEHALF OF THE CITY OF NEWPORT, UTILITIES DEPARTMENT,
WATER DIVISION

In re: City of Newport Utilities Department, Water Division

Docket No. 4128

March 1, 2010

Rebuttal Testimony of Harold J. Smith
Docket No. 4128

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Harold J. Smith and my business address is 1031 South Caldwell Street, Suite 100, Charlotte, North Carolina 28203.

Q: Are you the same Harold Smith who submitted pre-filed direct testimony in this docket?

A: Yes I am.

Q: What is the purpose of this testimony?

A: I would like to respond to certain points or conclusions that were made in the pre-filed testimony filed by the Division, Portsmouth and the Navy. I will address some of the points raised in these testimonies. Julia Forgue will address certain issues in her rebuttal testimony.

Q. Have you had an opportunity to review the testimony submitted by the Division, Portsmouth and the Navy with regard to Newport's rate filing in this docket?

A. Yes. I have reviewed the testimony submitted by Mr. Mierzwa on behalf of the Division, Mr. Woodcock on behalf of Portsmouth and Mr. Harwig on behalf of the Navy.

Q: How would you like to address the issues presented in the testimony prepared by these experts on behalf of the other parties to this case?

I would like to address the testimony of each expert in turn, beginning with the testimony of Mr. Harwig.

II. Navy Direct Testimony

Q. Please summarize Mr. Harwig's testimony?

A. Mr. Harwig addresses four issues in his testimony. First, he comments on the results of the analysis of daily meter reading data that Newport Water collected from a sample of its customers during the summer of 2009. Second, Mr. Harwig addresses the class peaking factors that were developed based on billing data for Newport Water's

1 customers. Third, Mr. Harwig comments on the validity of Newport Water's decision to
2 only allocate costs associated with the production of unaccounted for water (UFW) to
3 Newport Water's retail customer classes. Last, Mr. Harwig recommends that the
4 Commission accept the results of the cost of service study as presented in my original
5 testimony and approve the rates proposed in that testimony.

6
7 **Q. Do you agree with Mr. Harwig's comments regarding the analysis of daily**
8 **demand data?**

9 A. Generally speaking, I concur with Mr. Harwig's observations with regard to the
10 results of the analysis of daily data. I agree that it is unusual that the residential class
11 would exhibit maximum day and maximum hour peaking factors that are lower than those
12 exhibited by the commercial class; however, this kind of customer behavior is not
13 unprecedented. In fact, Raftelis Financial Consulting encountered similar demand
14 patterns in a recent study for a client in Virginia. Additionally, as Mr. Harwig notes, he
15 did not find any errors in the analysis.

16
17 **Q. Do you agree with Mr. Harwig's comment's regarding the peaking factors that**
18 **were used in the cost of service study?**

19 A. I do agree with Mr. Harwig's suggestion that it is more appropriate to use billing data
20 for Newport's customers to develop peaking factors than it is to use the results of the
21 analysis of daily data, and I agree that the peaking factors developed using the billing
22 data reasonably reflect the demand characteristics of each of Newport's retail customer
23 classes and its wholesale customers.

24
25 **Q. Do you agree with Mr. Harwig's comments regarding the assignment of costs**
26 **associated with UFW?**

27 A. Considering that Mr. Harwig supports the approach I proposed in my original
28 testimony, I must agree with him on this issue; however, as I will address later in this
29 testimony, the Division's expert, Mr. Mierzwa, makes a compelling argument for
30 assigning at least some of the costs associated with UFW to the Navy.

31

1 **Q. Do you agree with Mr. Harwig's recommendation that the Commission accept**
2 **the cost of service study and resulting rates as submitted in your pre-filed**
3 **testimony?**

4 A. I would be comfortable if the Commission approved the rates as originally proposed
5 by Newport Water. However, the experts for Portsmouth and the Division in particular
6 have suggested some modifications to the cost of service study that should result in rates
7 that more accurately reflect the cost of service. Therefore, I would prefer that the
8 Commission accept the cost of service study and resulting rates that are presented with
9 this testimony and in my rebuttal schedules.

10
11 **Q. Does this conclude your testimony with respect to Mr. Harwig's testimony?**

12 A. Yes it does.
13

14 **III. Division Direct Testimony**

15 **Q. Please summarize Mr. Mierzwa's testimony on behalf of the Division.**

16 A. Mr. Mierzwa begins his testimony with a brief summary of the two most common
17 approaches to determining cost of service for water utilities and then provides
18 recommendations for several changes to the cost of service model that was included with
19 my original testimony.

20
21 **Q. Will you please list Mr. Mierzwa's recommended changes?**

22 A. Mr. Mierzwa recommends the following changes:

- 23 1) Modify the model to more accurately reflect the maximum hour demands
24 associated with fire protection;
- 25 2) Modify the model to correct an over allocation of costs to the fire protection
26 charges;
- 27 3) Modify the cost allocation model such that service line investment is allocated to
28 private fire protection;
- 29 4) Modify the way in which Administration salaries, wages and benefits are
30 allocated;
- 31 5) Calculate base charges that vary by meter size;

- 1 6) Reduce the allocation of transmission and distribution costs to the Navy;
- 2 7) Modify the cost allocation model such that laboratory and chemical expenses are
- 3 allocated based on average demands;
- 4 8) Modify the cost allocation approach such that a portion of the costs associated
- 5 with UFW is assigned to the Navy; and
- 6 9) Allocate Water Quality Protection Fee revenues only to the residential and
- 7 commercial classes.

8

9 **Q. Do you agree with any of Mr. Mierzwa's recommended changes?**

10 A. I am in full agreement with the suggested changes 1 through 7 in the above list, and

11 have a qualified agreement with the last two changes suggested by Mr. Mierzwa,

12 numbers 8 and 9.

13

14 **Q. With respect to Mr. Mierzwa's recommendations for which you are in full**

15 **agreement, could you summarize the changes you have made to the cost**

16 **allocation model to reflect your agreement?**

17 A. Yes, the attached RFC Schedules A- 1 Rebuttal through A-4 Rebuttal; RFC

18 Schedules B-1 Rebuttal through B-11 Rebuttal; and RFC Schedules D-1 Rebuttal

19 through D-5 Rebuttal reflect changes I have made to the cost allocation model in

20 response to Mr. Mierzwa's testimony. There are also some changes to these models

21 that are based on suggestions made by Mr. Woodcock, which I address later in my

22 testimony.

23

24 In the following section, I will refer to the numbered list of recommendations by Mr.

25 Mierzwa as set forth above, and I will describe the changes I made to the model to

26 reflect my agreement with his recommendations. Please note that these changes

27 "flow through" the model and result in changes to schedules other than those to

28 which the changes were made.

29

30 1) **Recommendation** - Modify the model to more accurately reflect the

31 maximum hour demands associated with fire protection

1 **Revision** – Schedule B-9 Rebuttal has been changed such that Max Hour
2 fire demands reflect the maximum hourly flow for 24 hours.

- 3
4 2) **Recommendation** - Modify the model to correct an over allocation of
5 costs to the fire protection charges

6 **Revision** – Schedules B-1 Rebuttal and B-3 Rebuttal have been changed
7 such that only costs in the Fire Protection account are assigned to the Fire
8 category during the allocation to Base/Extra Capacity cost categories. The
9 allocation of other costs to the Fire Protection charges based on the
10 implied peak demands of the fire protection system are shown on RFC
11 Schedule B-2 Rebuttal.

- 12
13 3) **Recommendation** - Modify the cost allocation model such that service
14 line investment is allocated to private fire protection

15 **Revision** – RFC Schedules B-2 Rebuttal and D-2 Rebuttal have been
16 revised such that service line investment is allocated to the Private Fire
17 Charges.

- 18
19 4) **Recommendation** - Modify the way in which Administration salaries,
20 wages and benefits are allocated

21 **Revision** – RFC Schedules B-1 Rebuttal and B-3 Rebuttal have been
22 revised such that Administration salaries, wages and benefits are allocated
23 to Base/Extra Capacity cost categories based on the distribution of costs to
24 categories as a result of the allocation process.

- 25
26 5) **Recommendation** - Calculate base charges that vary by meter size

27 **Revision** – The cost allocation model has been revised such that it
28 calculates Base Charges that vary by meter size. This changed required
29 making revisions to RFC Schedules A-2 Rebuttal, A-3 Rebuttal, B-2
30 Rebuttal, and D-1 Rebuttal.

31

1 6) **Recommendation-** Reduce the allocation of transmission and distribution
2 costs to the Navy.

3 **Revision** – RFC Schedule B-9 has been revised to reflect an allocation of
4 a 50% share of Transmission and Distribution costs to the Navy.

5
6 7) **Recommendation-** Modify the cost allocation model such that laboratory
7 and chemical expenses are allocated based on average demands

8 **Revision** – RFC Schedule B-1 Rebuttal has been revised such that costs in
9 the Laboratory account and treatment chemicals costs are allocated based
10 on average day demands.

11

12 **Q. You indicated that you did not fully agree with two of Mr. Mierzwa's**
13 **recommended changes. Can you explain further?**

14 A. Yes. I do not completely agree with his recommendation relating to the assignment
15 of unaccounted for water. However, I do agree an adjustment should be made on this
16 issue as explained herein below. In addition, while I agree with his assertion that
17 Water Quality Protection Fees should be allocated only to the Residential and
18 Commercial customer classes, I do not agree with the way he has revised the model
19 to reflect this change. Rather, I have made an adjustment, which I believe is more
20 appropriate as described below in my testimony.

21

22 **Q. Please elaborate on your disagreement with Mr. Mierzwa on the issue of the**
23 **assigning costs associated with UFW?**

24 A. As stated earlier, I believe Mr. Mierzwa makes a compelling argument that since the
25 Navy benefits from Newport's transmission and distribution system, and since it is
26 losses from this transmission and distribution system that account for much, but not
27 all of the UFW, that the Navy should bear some of the cost associated with UFW. I
28 do not however, agree that the allocation of UFW costs should be based on a 50
29 percent weighting of annual consumption. Instead, I believe the Navy should be
30 assigned UFW costs based on a 25 percent weighting of annual consumption.

31

Q. Please explain the rationale behind your recommendation to assign UFW costs to the Navy based on a 25 percent weighting of annual consumption.

A. First, it is important to recognize that I have accepted Mr. Mierzwa's recommendation to modify the allocation of transmission and distribution costs such that the Navy is assigned a 50 percent share of the costs on the basis that the Navy has a "...reduced reliance on Newport's transmission and distribution system."¹ The 50 percent allocation implies that the Navy benefits from approximately half of the transmission and distribution system; which is a reasonable assumption. As such, the Navy should be allocated a 50 percent share of the UFW costs associated with losses from the transmission and distribution system.

However, it should be noted that not all of the UFW is the result of losses from the transmission and distribution system. Some UFW is also attributable to other activities that result in water being used, but not billed for. Such activities include fire fighting activities, inaccurate meters, and illegal connections to name a few. While it is not possible to determine with any degree of certainty how much UFW is attributable to losses from the transmission and distribution system and how much is attributable to other activities, I believe it is appropriate to assume that half of the UFW is lost in the transmission and distribution system. This leads to an allocation of UFW costs to the Navy based on a 25 percent weighting of annual consumption, which is more appropriate.

Q. Do the schedules submitted with this testimony reflect your recommendation for the allocation of UFW costs to the Navy?

A. Yes, they do. Specifically, RFC Schedule B-9 Rebuttal has been revised to reflect the allocation of a 25% share of UFW costs to the Navy.

¹ Testimony of J. Mierzwa, page 10, line 18

1 **Q. Please explain your disagreement with Mr. Mierzwa on the allocation of Water**
2 **Quality Protection Fees.**

3 A. I agree with Mr. Mierzwa's suggestion that Water Quality Protection Fees be
4 assigned only to the retail customer classes; however, it appears the Mr. Mierzwa has
5 treated the Water Quality Protection Fees as an expense when in fact they are a
6 source of revenue that serves to reduce the amount of revenue Newport needs to
7 recover from its rates and charges. As such, they should reduce the amount that is
8 allocated for recovery through the commodity charge for the Residential and
9 Commercial class.

10
11 **Q. Have you revised the cost of service model to reflect this new treatment of Water**
12 **Quality Protection Fees?**

13 A. Yes, on RFC Schedules B-1 Rebuttal and B-2 Rebuttal, instead of allocating Water
14 Quality Protection Fee revenues to Base/Extra Capacity categories, I assigned these
15 revenues directly to the Residential and Commercial classes based on each classes
16 share of consumption by retail customers.

17
18 **Q. Does that conclude your list of revisions made in response to Mr. Mierzwa's**
19 **testimony?**

20 A. Yes, it does.

21
22 **Q. Would you like to comment on any other issues that Mr. Mierzwa addressed in**
23 **his testimony?**

24 A. Yes, Mr. Mierzwa noted that in this cost of service study, treatment costs have been
25 allocated based on average and maximum day demands, while in past cost of service
26 studies Newport has submitted to the Commission, treatment costs have been
27 allocated based on average day demands only. Mr. Mierzwa suggests that Newport
28 should provide some explanation for this change in the approach to allocating
29 treatment costs.

30
31

1 **Q. Do you have an explanation for this change?**

2 A. Yes, I believe that it is clear that Newport Water's treatment facilities are operated in
3 a way such that Newport is able to meet both the average day and maximum day
4 demands of its customers; therefore I have allocated costs accordingly.
5

6 **Q. Why were treatment costs not allocated this way in previous filings?**

7 A. The only other cost of service study I prepared for Newport was the study submitted
8 in Docket No. 3578, so that is the only study I can speak to. Since the study I
9 prepared for Newport in Docket No. 3578 was the first such study that I had
10 prepared for Newport, I chose for the sake of consistency to deviate as little as
11 possible from the allocation approaches used in previous filings. As Mr. Mierzwa
12 notes, treatment costs were allocated based on average demands in previous studies;
13 therefore I elected to allocate them in the same way for that study. As I have
14 mentioned earlier, after more careful study of the way in which Newport operates its
15 system, it is clear that treatment facilities are operated to meet both average day and
16 maximum day demands.
17

18 **Q. Does this conclude your testimony with respect to Mr. Mierzwa's testimony?**

19 A. Yes.
20

21 **IV. Portsmouth Direct Testimony**

22 **Q. Please summarize Mr. Woodcock's testimony on behalf of the Division.**

23 A. Mr. Woodcock's testimony consists of three components: a number of potentially
24 constructive recommendations for changes to the cost allocation model; a summary
25 of Newport Water's history before the Commission; and, an unproductive discussion
26 of a fact that is known by all parties with any knowledge of Newport Water (that
27 Newport Water does not bill all of its customers on a monthly basis and therefore
28 does not have monthly demand data that can be used to develop estimated customer
29 class peaking factors).
30
31

Recommended Changes to Cost of Service Study

Q. Which of the three components of Mr. Woodcock's testimony would you like to address first?

A. Since Mr. Woodcock's potentially constructive recommendations for changes to the cost allocation model could make a contribution to the effort of developing cost of service based rates, I would like to address them first.

Q. Are any of Mr. Woodcock's recommended changes similar to those recommended by Mr. Mierzwa?

A. Yes, similar to Mr. Mierzwa, Mr. Woodcock made the following recommendations (please note that they have been numbered to coincide with the list of Mr. Mierzwa's recommendations set forth earlier in my testimony):

- 1) Modify the model to more accurately reflect the maximum hour demands associated with fire protection;
- 2) Modify the model to correct an over allocation of costs to the fire protection charges;
- 3) Modify the cost allocation model such that service line investment is allocated to private fire protection;
- 4) Modify the way in which Administration salaries, wages and benefits are allocated; and
- 5) Calculate base charges that vary by meter size.

Q. Do you agree with Mr. Woodcock's recommendations that are the same as those suggested by Mr. Mierzwa?

A. Yes, all of the recommended changes that are common to the testimony of both Mr. Woodcock and Mr. Mierzwa are changes I am comfortable making, and I have described those changes in my testimony regarding Mr. Mierzwa's testimony.

Q. Does Mr. Woodcock suggest any other revisions to the cost of service model?

A. Yes, Mr. Woodcock suggests making the following changes to the model:

- 1 a) Use 31 days instead of 30 days in determining the maximum day to maximum
2 month ratios in RFC B-7 for FY 2008 and FY 2009;
3
4 b) Modify the cost allocation model such that allocation of costs to Base/Extra
5 Capacity cost categories is based on system data alone;
6
7 c) Modify the way in which unaccounted for water is allocated to customer classes;
8
9 d) In determining system wide use, the model should use actual volumes delivered to
10 the system from storage tanks instead of the volumes delivered to storage;
11
12 e) Modify the model such that pumping costs are allocated differently than treatment
13 costs; and,
14
15 f) Revise the allocation of costs to Base/Extra Capacity cost categories such that
16 each individual line item of costs is allocated instead of using the same allocation
17 factor for costs within functional accounts.
18

19 **Q. Do you agree with any of these recommended changes suggested by Mr.**
20 **Woodcock?**

21 A. With respect to some of Mr. Woodcock's recommendations, I agree completely and
22 have revised the model to reflect my agreement. With respect to other
23 recommendations, I agree in principle, but have not made changes to the model for
24 practical reasons.
25

26 **Q. Please address those recommendations on which you agree with Mr. Woodcock**
27 **and have made changes to the model accordingly.**

28 A. The first recommended change that falls into this category is recommendation (a) in
29 the list above to use 31 days instead of 30 days in determining the maximum day to
30 maximum month ratios in RFC B-7 for FY 2008 and FY 2009. Since the months in
31 which the maximum month occurs in each of these two years is a month with 31

1 days, 31 day should be used in determining maximum day to maximum month ratios
2 and RFC Schedule B-7 Rebuttal reflects this change. It should be noted that this
3 change in no way affects the results of the model.
4

5 I also agree with recommendation (b) above, that the model should be modified such
6 that the allocation of costs to Base/Extra Capacity categories is based on system data
7 alone. RFC Schedule B-10 Rebuttal has been revised to reflect this change and this
8 change flows through the RFC Schedules B-1 Rebuttal and B-3 Rebuttal.
9

10 Lastly, I agree with Mr. Woodcock's recommendation (c) above and this revision
11 was made in conjunction with the change in the allocation of UFW recommended by
12 Mr. Mierzwa.
13

14 **Q. Please address the first change recommended by Mr. Woodcock on which you**
15 **agree in principle, but have not made changes due to practical reasons.**

16 A. In recommendation (d) above, Mr. Woodcock points out that system demand
17 calculations are based on volumes delivered to storage and not on volumes delivered
18 from storage to the system and that the system peaking ratios should be based on
19 water delivered to the system. First, it should be noted that this is really only an
20 issue with respect to water produced at the Lawton Valley plant in that the majority
21 of the water treated at Station 1 is delivered directly to the system. Second, it is also
22 important to recognize that water moved from storage at the Lawton Valley plant to
23 the system is not metered and therefore there is no readily obtainable data relating to
24 the volume of water delivered from storage to the system.
25

26 While Newport was able to provide this information for the peak production days at
27 Lawton Valley in response the PWFD data request 1-6, this data was obtained by
28 estimating changes in the volumes of water stored in the 2MG Standpipe and the
29 4MG storage tank based on difficult to read tank level charts. Getting the data Mr.
30 Woodcock suggests should be used would require the review of over 2,000 tank
31 level log charts (one for each day of the three year period for each of the two tanks,

1 365 X 3 X 2 = 2,190). Instead, Newport relied on metered volumes of water
2 produced at each plant.

3

4 **Q. Wouldn't it be possible to get the necessary data by only reading the tank level**
5 **charts for the days on which maximum production occurred at the treatment**
6 **plants?**

7 A. No, if Mr. Woodcock's assertion that the maximum production volumes differ
8 significantly from the maximum delivery volumes, then it is also likely that the day
9 on which these two maximums occur would be different. Therefore, in order to
10 verify that the maximum delivery volumes used in the model are the true maximums,
11 it would be necessary to read the tank level charts for every day.

12

13 **Q. Are there any other changes recommended by Mr. Woodcock on which you**
14 **agree in principle, but have not made changes due to practical reasons?**

15 A. Yes, in reference item (e) above, on page 10 of his testimony Mr. Woodcock implies
16 that he believes that pumping costs should be allocated differently than treatment
17 costs, and I agree with him on this matter.

18

19 **Q. Did you change the model to reflect your agreement?**

20 A. No, I did not change the model since pumping costs are allocated differently than
21 treatment costs in both the original model and in the model submitted with this
22 testimony.

23

24 **Q. Are there changes recommended by Mr. Woodcock that you disagree with**
25 **completely?**

26 A. Yes, I do not agree with recommendation (f) above, which is Mr. Woodcock's
27 suggestion that the allocation of costs to Base/Extra Capacity cost categories should
28 be changed such that each individual line item of costs is allocated individually.

29

30

31

1 **Q. Why do you disagree with Mr. Woodcock on this issue?**

2 A. First, such an allocation implies a level of precision that is non-existent with respect
3 to Newport and with respect to most utilities. Such a precise allocation of costs
4 requires that a utility precisely track how each dollar within each line item is spent.
5 Newport does not track all of its costs with this level of precision, nor do most other
6 utilities. Tracking costs with such precision would require a great deal of
7 unnecessary effort.

8
9 Second, such a line item allocation adds an unnecessary level of complexity to the
10 cost allocation model. This is evident when one examines the schedules attached to
11 Mr. Woodcock's testimony. With the exception of the Administration, Customer
12 Service and the two treatment plant accounts, all of which were allocated at a greater
13 level of detail in Newport's model, the dollar amount allocated to each Base/Extra
14 Capacity cost category would change very little if all costs within the account were
15 allocated the same way.

16
17 **Q. Does this conclude your testimony with respect to specific changes that Mr.**
18 **Woodcock recommended?**

19 A. Yes it does.
20

21 **Cost of Service Study History**

22 **Q. What is your reaction on Mr. Woodcock's review of Newport Water's history in**
23 **his testimony?**

24 A. Mr. Woodcock's extensive testimony on this subject is disappointing and somewhat
25 surprising. I have been representing Newport before the Commission since Docket
26 3578, which was filed in 2003. I have continued to represent Newport in each
27 Docket (Nos. 3675, 3818, 4025 and 4128) since that time. In each of these Dockets,
28 Portsmouth seems to spend an inordinate amount of time rehashing the past, rather
29 than focusing on productive solutions to issues. However, I don't recall Portsmouth
30 reaching this far into the past before.

31

1 In this case, Mr. Woodcock's revisiting of past issues starts 34 years ago. In doing
2 so, he forces everyone in this case, Newport specifically, to spend time and resources
3 reviewing information that only serves to point out what everyone knows – Newport
4 has been in need of a Commission ordered cost service study for a long time. The
5 irony of Mr. Woodcock's history lesson is that he uses it, in part, to argue that the
6 proposed cost allocation in this Docket should not be implemented.

7
8 **Q. Do you have any comments on the specific historical issues raised by Mr.**
9 **Woodcock?**

10 A. I don't think it is productive to address each issue raised by Mr. Woodcock.
11 Frankly, it only serves to confuse the issues in this case and distracts from the
12 relevant topics in this case, which may be the point of Portsmouth's testimony.
13 However, I do think it is important to address some of the issues Mr. Woodcock
14 raised.

15
16 **Q. Mr. Woodcock discusses issues that were raised in Docket 2029, which was filed**
17 **in 1991. Do you have any comments on this?**

18 A. Yes. Again, I don't think it is productive, or fair, to re-litigate a Docket that is almost
19 twenty years old. As Mr. Woodcock pointed out in his response to NWD 1-11, it is
20 difficult to know all the details surrounding these older Dockets. Most of the parties
21 to this current Docket don't have access to the transcripts and full written testimonies
22 from older Dockets. Furthermore, even if they did, the context in which these issues
23 were litigated has changed dramatically. Most of people who worked for Newport,
24 the Division, Portsmouth and the Navy are not involved in this current Docket. In
25 quoting passages from these older Dockets, such as Docket 2029, Mr. Woodcock's
26 testimony seems to ignore these facts.

27
28 **Q. Can you give some examples of this?**

29 A. Yes. First, Mr. Woodcock indicates that in Docket 2029, "Mr. Catlin opined that
30 Newport should not allocate any of the retail distribution system to the Navy or

PWFD.”² Mr. Catlin is not a witness in this case, and he does not have the opportunity to respond directly. But Mr. Mierzwa works with Mr. Catlin, and he does not advocate this position. To insinuate that this continues to be Mr. Catlin’s position, or the Division’s position for that matter, is unfair.

Next, Mr. Woodcock mentions, on more than one occasion, that Newport criticized Mr. Harwig twenty years ago for “using estimated data on maximum day and hour requirements.”³ I find this comment to be particularly unfair.

Q. Please explain why.

A. Because no one from Newport Water who is involved in this Docket, or who has represented Newport Water since Docket 3578 was filed in 2003, was involved in Docket 2029. Thus, no one who has represented Newport Water since 2003 leveled this criticism at Mr. Harwig. I did not criticize Mr. Harwig’s use of estimated data; Ms. Forgue did not criticize Mr. Harwig’s use of estimated data; and, Mr. Keough did not criticize Mr. Harwig’s use of estimated data.

Frankly, I don’t know who from Newport criticized Mr. Harwig’s data, nor do I know why. However, in reviewing the Commission’s Order, it appears there were a number of other issues surrounding Mr. Harwig’s cost of service study in Docket 2029. First, it appears that Mr. Harwig may have filed his cost of service study without proper notice and in violation of scheduling deadlines.⁴ Second, and perhaps most important, it appears there was dispute over the proper methodology to be used in performing the cost of service study.⁵

The Commission’s order indicates that Newport criticized Mr. Harwig for using the Base/Extra Capacity method of cost allocation.⁶ Thus, perhaps Newport’s criticism

² Woodcock Direct, p.4

³ Woodcock, Direct p. 4, 5, 6, and response to NWD Data Request 1-2.

⁴ See Commission Order, Docket 2029 attached as Woodcock Direct, Exhibit B, p. 17.

⁵ See Commission Order, Docket 2029 attached as Woodcock Direct, Exhibit B, p. 17.

⁶ See Commission Order, Docket 2029 attached as Woodcock Direct, Exhibit B, p. 17.

1 of Mr. Harwig's data was part of this larger dispute. Whatever the issue was, this
2 illustrates the problem with dwelling on a twenty year old decision. I would clearly
3 never criticize the use of the Base/Extra Capacity method of allocating costs for
4 Newport Water. Despite Mr. Woodcock's protestations to the contrary, this is the
5 methodology I used in my cost allocation study in this Docket.

6
7 I think it is also worth noting Mr. Woodcock's use of the Commission's findings in
8 Docket 2029 is highly selective. Mr. Woodcock notes that "The Commission agreed
9 with the concerns raised by the Division and Newport regarding the validity of the
10 demand data used by the Navy."⁷ This ignores the fact that in the next sentence of
11 the Commission's Docket 2029 order it stated that "We further find that the de facto
12 study methodology must be more fully explored before specific application is
13 mandated."⁸ Furthermore, one paragraph later in the Order, the Commission found
14 the Navy's cost of service study to be "persuasive."⁹ Thus, Mr. Harwig's data could
15 not have been completely invalid.

16
17 **Q. Are there any other issue raised by Mr. Woodcock concerning Docket 2029 that**
18 **you would like to address?**

19 A. Yes. Mr. Woodcock states that as "a direct result of issues associated with
20 Newport's cost of service filing in Docket 2029, the Commission opened a docket
21 (Docket 2049) to review generic cost of service methodologies."¹⁰ He also states that
22 "Newport's rate filing in docket 2029...necessitated the opening of a generic docket
23 on cost of service."¹¹ In reading this particular testimony in conjunction with Mr.
24 Woodcock's other testimony, it seems he is suggesting that some wrongdoing on
25 Newport's part prompted the opening of the generic docket. One could even read Mr.
26 Woodcock's testimony as suggesting that the generic docket was related to the
27 dispute over maximum day and maximum hour demand data in Docket 2029.

⁷ Woodcock Direct, p. 4

⁸ See Commission Order, Docket 2029 attached as Woodcock Direct, Exhibit B, p. 17.

⁹ See Commission Order, Docket 2029 attached as Woodcock Direct, Exhibit B, p. 17.

¹⁰ Woodcock Direct, p. 4-5

¹¹ Woodcock Direct, p. 5

1 In reality, the generic Docket referred to by Mr. Woodcock emanated from a much
2 more basic issue. As set forth above, it appears that Docket 2029 was litigated at a
3 time when there was debate in Rhode Island over the proper method for conducting a
4 cost of service study. The Commission's order in Docket 2029 states "because we
5 are aware that the appropriate type of cost-of-service study is in issue, we shall open,
6 through this report and order, a generic cost-of-service methodology docket for the
7 purpose of exploring this issue."¹² In fact, it appears that the Commission was
8 considering whether to adopt a single universal method to be used by all regulated
9 utilities in Rhode Island.

10
11 Thus, the Commission opened the generic Docket (2049) to consider "the possibility
12 of adopting a universal cost of service methodology for all regulated water utilities"
13 in the State of Rhode Island.¹³ In Docket 2049, the Commission appointed a Task
14 Force to determine whether this was advisable. The task force was made up of
15 representatives from all the regulated water utilities, and it included Mr. Woodcock
16 and Mr. McGlinn. Thus, the task force and the Docket were not established to
17 examine any wrongdoing or transgression on the part of Newport Water.

18
19 **Q. Mr. Woodcock states that "Newport's filing in this docket does not meet the**
20 **requirements set forth by the Commission nearly twenty years ago." Do you**
21 **agree?**

22 A. No I do not agree. If Mr. Woodcock is referring to the Commission's Order in
23 Docket 2029, Newport is in compliance with that Order, which required Newport to
24 file "a fully allocated class cost of service study." I have prepared and filed a fully
25 allocated cost of service study in this Docket (4128). If Mr. Woodcock is referring to
26 the lack of daily demand data in my cost of service study, there is nothing in the
27 Commission's Docket 2029 Order that required such data.

28

¹² See Commission Order, Docket 2029 attached as Woodcock Direct, Exhibit B, p. 17.

¹³ See Exhibit 1

1 **Q. Can you briefly review your history with Newport Water and your attempts to**
2 **conduct a cost of service study?**

3 A. Yes. I would like to stress that my disagreements with the specifics of Mr.
4 Woodcock's testimony regarding Newport Water's cost of service study history does
5 not mean I don't recognize that a cost-of-service study is long overdue. I have been
6 working with Newport since 2003 to accomplish this goal.

7 I began representing Newport Water in Docket 3578. In that filing, I submitted a cost
8 of service study, which was essentially rejected by the parties. The parties settled
9 Docket 3578, and paragraph 23 of the Settlement Agreement stated:

10 "The parties agree that Newport's cost allocation study in this Docket does not
11 seek to charge Portsmouth with transmission, distribution or peak costs associated
12 with supply or treatment. However, should Newport seek to charge Portsmouth
13 with such charges in future rate cases, Newport shall be required to submit a
14 demand study with any cost allocation study. The requirements of the demand
15 study shall be established by the experts for the four parties in this Docket. These
16 requirements of the required demand study as agreed to by the parties are
17 incorporated herein and attached hereto as Exhibit 2."
18

19 Thus, it was the assignment of costs to Portsmouth that was the sole determining
20 factor of whether a Demand Study was required. The demand study only became
21 necessary if Newport sought to charge Portsmouth with specific costs in future
22 cases. Had Newport not sought to charge Portsmouth with these costs, the demand
23 study would not have been necessary. Exhibit 2 to the Settlement Agreement
24 provided as follows:

25 "Purpose
26

27 The Water Demand Study is intended to satisfy the requirements imposed by the
28 RI PUC in Docket 2985. The purpose of the water demand study will be to gather
29 data with respect to the water demand characteristics of the different customer
30 classes that are served by Newport Water to better allocate the costs associated
31 with meeting peak demand to the customers responsible for the peaks.
32

33 Methodology
34

35 Once it has been determined that the Demand Study is necessary, Newport Water
36 will propose a methodology to each of the parties in this docket for review and
37 comment. It is expected that it may be necessary to gather data on a daily basis
38 from the meters used to measure consumption by each of Newport's wholesale

1 customers and from statistically representative samples of each of Newport's
2 retail customer classes.

3
4 **Retail** – Newport may gather daily demand data from a statistically representative
5 sample of customers from each of its retail customer classes or may determine the
6 peak demands of the retail class through some other agreed upon method. This
7 data can be gathered either by using remote meter reading capabilities or by direct
8 daily reading of meters without remote read capabilities. It is anticipated that
9 these data collection efforts would focus on those periods of the year or years in
10 which peak demands are expected to occur and therefore would not necessarily
11 continue during the course of an entire year(s).

12
13 **Portsmouth** – Newport may utilize daily demand data for Portsmouth that is
14 collected by Portsmouth's SCADA system.

15
16 **Navy** – It is anticipated that daily demand data for the Navy can be gathered by
17 reading the meters used to serve the Navy on a daily basis during the portion of
18 the year(s) in which peak demands are expected to occur.

19
20 The maximum cost for the study should be limited to \$75,000 unless it can be
21 demonstrated that a study of that magnitude will not yield the necessary
22 information."
23

24 In Docket 3675 (filed on April 22, 2005), Newport did not seek to change its cost
25 allocation, and Newport had not determined whether it would seek to charge
26 Portsmouth with transmission, distribution or peak costs associated with supply or
27 treatment. Nevertheless, in the Docket 3675 Settlement Agreement (dated November
28 4, 2005), Newport agreed to initiate the demand study "within the next twelve
29 months," and to file a cost of service study in its next general rate filing after the
30 studies were completed.¹⁴
31

32 Thereafter, Newport began gathering daily demand data. Before the cost-of-service
33 and demand studies were completed, Newport filed another general rate filing,
34 Docket 3818. During the course of that Docket, I testified that a cost of service study
35 and demand study could be completed by September 1, 2009. Thus, the Commission
36 ordered that the studies be completed by this date.
37

¹⁴ The Settlement Agreement did not "prohibit Newport from submitting a general rate filing...prior to the completion of the demand and cost of service study."

1 Thereafter, it was my intention to file a cost allocation study, which would include
2 the results of the demand study, in Newport's next general rate filing.¹⁵ In the
3 summer of 2008, a dispute arose with Portsmouth over the demand study and the
4 data to be used. In an attempt to resolve the dispute, Newport agreed to collect
5 additional demand data from a sample of customers during a five month period from
6 May through September 2009. It was anticipated that Newport Water would have to
7 seek an extension of time to November 1, 2009 to file the studies, which it eventually
8 did, and which resulted in this Docket (4128).

9
10 **Q. Do you agree with Mr. Woodcock's recommendation that the Commission not**
11 **"order or allow any change in rates at this time, with the possible exception of**
12 **revising the fixed service or base charge"?**

13 A. No. I believe the rates as set forth in my rebuttal schedules, which incorporate all of
14 the Division's proposed adjustments, and most of Mr. Woodcock's, should be
15 implemented by the Commission. As set forth in the next section of my testimony, I
16 don't think the arguments set forth by Mr. Woodcock regarding the demand data
17 should serve as the basis for keeping rates as they are currently structured.

18
19 **Data Used For Peaking Factors**

20 **Q. Please summarize Mr. Woodcock's issues with the data used by Newport to**
21 **develop class peaking factors.**

22 A. Mr. Woodcock takes issue with the data used to support the cost allocation model,
23 stating at various places in his testimony that:

24
25 "...Newport tried to force its tri-annual and quarterly billing data into a method
26 calling for monthly billing records." (Page 6, lines 5-7); and

27
28 "Moreover, the billing information that formed the basis for the "demand study"
29 in Newport's submission is deficient." (Page 17, lines 13-14).

30

¹⁵ This would eventually be Docket 4025 filed on December 9, 2008.

1 Then, citing these perceived deficiencies, he suggests that the Commission deny
2 Newport's requested rates until such time that there is data to support a cost of
3 service study.
4

5 **Q. Do you agree with Mr. Woodcock's characterization of Newport's data as**
6 **"deficient"?**

7 A. I do not. In responding to Newport's data requests, Mr. Woodcock states that he has
8 performed over 125 cost of service studies in the past ten years.¹⁶ Mr. Woodcock
9 further acknowledges that he "did not use daily consumption data derived
10 specifically from the client or utility to estimate residential class peaking factors" in
11 any of these studies.¹⁷
12

13 Mr. Woodcock is, in part, asking the Commission to disregard Newport's revised
14 cost allocation because it is not based on data that even Mr. Woodcock doesn't
15 utilize in his own cost of service studies. Mr. Woodcock is attempting to hold
16 Newport to a standard of precision he apparently has not met in over 125 cost
17 allocation studies. This only serves to benefit Portsmouth, which will pay higher
18 rates under the revised cost allocation presented with my rebuttal testimony.
19

20 It seems that Mr. Woodcock and I have a fundamental disagreement about what type
21 of data can and should be used to develop peaking factors for a cost of service study.
22 It seems that Mr. Woodcock believes that a utility must have monthly or even daily
23 data in order to perform an acceptable cost of service study. In the absence of such
24 data, Mr. Woodcock apparently believes that either the utility cannot perform a cost
25 of service study or, based on his response to NWD 1-4,a., that it should allocate costs
26 based on the demand characteristics of customers served by other utilities. I on the
27 other hand believe that to the extent possible, a utility should calculate rates using
28 data specific to its customers.
29

¹⁶ See Woodcock response to NWD 1-1.

¹⁷ See Woodcock response to NWD 1-2 (a)

1 **Q. Does Mr. Woodcock's assertion regarding the necessity of monthly billing data**
2 **have merit?**

3 A. No, his contention that the methodology for estimating capacity factors described in
4 the M-1 Manual requires monthly data is incorrect. In fact, on pages 297 and 298,
5 the M-1 Manual states: "For utilities with other than monthly billing frequency, the
6 available billing records will need to be used, but the results of the analysis will
7 likely be less accurate." Obviously the authors of the M-1 Manual recognized that
8 some utilities do not bill all of their customers on a monthly basis and would
9 therefore have to rely on data other than monthly billing data to develop capacity
10 factors. Nowhere in the M-1 Manual does it say that data resulting from a billing
11 frequency of less than once a month cannot be used to develop capacity factors.
12

13 **Q. But it does say that the results will likely be less accurate if data other than**
14 **monthly data is used?**

15 A. Yes it does and it is the case with any analysis, that accuracy will likely decrease as
16 the precision of the data on which the analysis is based decreases; however, just
17 because the results will be less accurate does not mean they should be ignored.
18

19 **Q. Does Mr. Woodcock suggest that the data Newport has gathered should be**
20 **ignored?**

21 A. Not in so many words, but his ultimate conclusion that Newport's rates should not be
22 changed based on the results of the cost of service study is essentially saying that the
23 data should be ignored.
24

25 **Q. Does the M-1 Manual stipulate that data that is the result of less than monthly**
26 **billing should be manipulated such that the accuracy of any study that relies on**
27 **the data will be increased?**

28 A. No, as mentioned above, the M-1 Manual simply states that "...the available billing
29 records will need to be used..."
30

1 **Q. Does Mr. Woodcock manipulate the available data to derive capacity factors**
2 **that he believes are more accurate than those presented in Newport's cost of**
3 **service model?**

4 A. Yes he does, as described on pages 20 through 23 of his testimony Mr. Woodcock
5 manipulates the data derived from Newport's monthly billing records to arrive at
6 data that he apparently believes is more indicative of the demand characteristics of
7 Newport's residential and commercial classes and then uses this data to derive
8 demand factors.

9
10 **Q. Do you agree that Mr. Woodcock's data manipulation results in demand factors**
11 **that are better than those provided in Newport's original cost of service model?**

12 A. I do not. His method simply results in demand factors that are more consistent with
13 what *he* would expect to see, with the residential class having the highest peaking
14 factors. First, his attempt to arrive at "monthly averages" fails to recognize that
15 monthly billed consumption in each month includes volumes billed monthly as well
16 as volumes billed quarterly; therefore his method of summing the consumption for
17 three month periods and dividing by three produces "maximum month" values that
18 understate maximum demand even more than the actual billing data does. Second, I
19 believe that Mr. Woodcock's use of the actual max day value in determining the
20 system wide peaking factors is inappropriate in this case and is contradictory to his
21 argument for disregarding Portsmouth's maximum consumption month in FY 2009.

22
23 **Q. How does his use of the actual max day value contradict his argument for**
24 **disregarding Portsmouth's maximum consumption month is FY 2009?**

25 A. On page 21, lines 15-21, Mr. Woodcock argues that Portsmouth's peak month of
26 demand (July 2008) should be dismissed because this demand resulted from "...an
27 unusual condition that would not be repeated...", yet he advocates using a system
28 wide peak month (July 2008) that includes the very consumption that he has argued
29 should be dismissed.

30

1 **Q. Are there any other reasons that you do not agree that the demand factors**
2 **created using the methods described in Mr. Woodcock's testimony are better**
3 **than those proposed in Newport's original model?**

4 A. Yes, as described on page 22 of his testimony, Mr. Woodcock rejects an adjustment
5 factor that was derived based on actual data and instead uses an adjustment factor,
6 for which he did not provide any description of the rationale. Review of the
7 electronic version of his exhibits reveals that the adjustment factor for the residential
8 class is arrived at by multiplying 1.05 by 1.7 and then rounding to the nearest tenth.
9 The commercial class adjustment is determined by multiplying 1.17 by 1.2. The
10 significance of these numbers is unknown. In the absence of an explanation of the
11 derivation of these adjustment factors, it appears that Mr. Woodcock may be simply
12 manipulating the data to arrive at peaking factors that are consistent with his
13 expectations.

14
15 Similarly, in his derivation of max hour factors, he simply uses the max hour/max
16 day adjustment factor for the residential class that is used in the example in the M-1
17 Manual despite his long history of testifying that the values used in the M-1 Manual
18 are examples only and should not be used for cost of service studies.

19
20 **Q. Mr. Woodcock suggests that Newport should continue to collect individual daily**
21 **meter readings. Do you agree with this suggestion?**

22 A. Yes. I don't have any problem with Newport continuing to gather daily demand data
23 as suggested on page 11 of Mr. Woodcock's testimony. However, I do disagree with
24 his suggestion that the Commission not "order or allow any change in rates at this
25 time, with the possible exception of revising the fixed service or base charge." I
26 believe that my revised cost allocation, which encompasses all of Mr. Mierzwa's
27 changes and most of Mr. Woodcock's, results in fair and equitable rates to all of
28 Newport's customers. I do not agree that we should wait to implement these rates so
29 that different demand data can be "developed over the next few summers."

1 **Q. Were there other issues that Mr. Woodcock raised in his testimony?**

2 A. Yes, similar to Mr. Mierzwa, he suggested that Newport provide an explanation as to
3 why in this filing treatment costs were allocated based on average day and maximum
4 day demands while in previous filings they were allocated based on average day
5 demands only. This explanation was provided earlier in this testimony.

6

7 **Q. Does this conclude your testimony with respect to Mr. Woodcock's**
8 **testimony?**

9 A. Yes.

10

11 **V. CONCLUSION**

12 **Q. Do you recommend that the Commission approve the rates proposed in your**
13 **rebuttal schedules that are attached to your testimony?**

14 A. Yes I do. The revised cost of service model incorporates changes suggested by
15 the witnesses for the Division and Portsmouth and does not deviate dramatically

16

17 **Q: Does this conclude your rebuttal testimony?**

18 A: Yes it does.

EXHIBIT 1

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

IN RE: WATER TASK FORCE REPORT ON :
COST OF SERVICE STUDY METHODOLOGY : DOCKET NO. 2049

REPORT AND ORDER

Docket No. 2049 was created by the Commission through the Commission's final report and order in the Newport Water Department's last general rate filing, in Docket No. 2029. Our decision in the Newport case was issued on June 19, 1992 (Order No. 13947). In Docket No. 2029 the Commission considered the possibility of adopting a universal cost of service methodology for all regulated water utilities. Based on this premise, the Commission created and opened the instant docket "for the purpose of exploring this issue" (Order No. 13947, p. 37).

By letter dated June 30, 1992, the Commission notified each regulated water utility of the Commission's interest in undertaking a generic review of cost of service methodologies for regulated water utilities. Subsequently, a Water Task Force ("Task Force") made up of representatives of each of the regulated water utilities was established.¹

On March 22, 1993 the Task Force submitted to the Commission its "Water Task Force Report" (the "Report") which offered several

¹ In addition to the regulated water utilities, some consulting firms and a non-regulated water company also comprised the Task Force.

conclusions and recommendations on the issue. The Commission scheduled and conducted a public hearing on May 5, 1993, at which time the Task Force's report became part of the record in this docket (Joint Exh. 1). The Task Force's principal conclusion is as follows:

"To require one cost of service methodology over another would put an undue burden on the regulated utility industry in Rhode Island to adhere to that methodology without the ability to produce the required statistical, historic, and computed data" (Id., p. 2).

The Report explains that a broad range of statistical data is needed in order to develop a substantial database for a cost of service study. However, the findings also show that most New England water utilities are not able to adequately supply the quantity, accuracy and the diversity of information needed to complete the various sophisticated methodologies. Consequently, the Report offers the following five recommendations:

1. That each utility adopt a costing methodology which most appropriately reflects their water system's supply, service and cost characteristics and is based upon appropriate underlying system data. Utilities should consider: customer classes, respective load factors of rate classes, peak-to-average use requirements, system capacity available for peak demands and customer growth, off-peak supply requirements, customer/class water conservation efforts, fire protection, and such other factors as appropriate. To this end, all water utilities should be required in their rate application to the PUC to document support for their

choice of cost methodology and rate design and obtain Division's concurrence.

(2.) That water utilities should develop separate tariffs for different retail rate classes to reflect the appropriate cost to serve differing rate groups. This would allow for the development of meaningful pricing signals in rates. Consideration should be given to separately tariffing rate classes, for example residential, multi-dwelling, commercial, industrial, wholesale service, and fire protection.

3. That the PUC revise and update its annual report by water utilities to conform with the National Association of Regulatory Utility Commissioners (NARUC) chart of accounts.

4. That all water utilities adopt the NARUC chart of accounts for reporting in rate cases or annual reports.

5. That water utilities should take advantage of abbreviated filing procedures and file with the Commission more frequently, for smaller increases, rather than extend the time that results in large percentage increases. (Id., pp. 2-3).

FINDINGS

The Commission has carefully examined the Water Task Force Report and finds its conclusions and recommendations helpful and informative. The Commission commends the members of the Task Force for their time and effort spent in the preparation of the Report. It was a job well-done.

The Commission has determined that the Report's recommendations ought to be adopted. We find the recommendations

mutually beneficial to the utilities and their respective ratepayers. We do require one change to recommendation No. 1, supra, prior to its adoption. Specifically, the Commission does not believe the Division's concurrence on a particular cost of service methodology or rate design ought to be a prerequisite to the filing of a rate case. Albeit the Commission welcomes the Division's input on these issues during rate proceedings, we do not believe that a Division objection to a particular cost of service methodology or rate design should preclude the filing coming before the Commission. We shall therefore adopt recommendation No. 1 with the modification that the last four words---"...and obtain Division's concurrence" be excised. With this modification, the last sentence in recommendation No. 1 shall end with a period after the word "design".

Accordingly, it is

(14216) ORDERED:

1. That the recommendations contained in the Water Task Force Report, filed with the Commission on March 22, 1993, are hereby adopted by the Commission for immediate implementation.

2. That recommendation No. 1, supra, is adopted with the modifications described herein.

Effective at Providence, Rhode Island on May 18, 1993,


pursuant to an open meeting decision. Written order issued on June
21, 1993.

PUBLIC UTILITIES COMMISSION




James J. Malachowski, Chairman


Paul E. Hanaway, Commissioner


Kate F. Racine, Commissioner

CERTIFICATION

I hereby certify that on March 1, 2010, I sent a copy of the within to all parties set forth on the attached Service List by electronic mail and copies to Luly Massaro, Commission Clerk, by electronic mail and regular mail.

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/s/

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Newport Water Cost of Service Model

Index of Model Schedules

Raftelis Financial Consultants

Summary Schedules

RFC Schedule A-1 Rebuttal	Revenue Requirements
RFC Schedule A-2 Rebuttal	Proposed Rates and Charges
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RFC Schedule A-4 Rebuttal	Revenue Proof

Core Model Schedules

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RFC Schedule B-2 Rebuttal	Allocation of Costs to Water Rate Classes
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RFC Schedule B-10 Rebuttal	Summary of Peak Load Distributions (by Rate Class and Base/Extra-Capacity Categories)
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Supporting Data

RFC Schedule D-1 Rebuttal	Water Accounts, by Size and Class
RFC Schedule D-2 Rebuttal	Fire Protection Accounts
RFC Schedule D-3 Rebuttal	Production Summary
RFC Schedule D-4 Rebuttal	Demand Summary
RFC Schedule D-5 Rebuttal	Development of Pumping Costs

O&M COSTS

Administration

	Rate Year Approved in Docket 4025
Salaries & Wages	\$ 265,000
AFSCME retro	-
NEA retro	-
AFSCME benefits on retro pay	-
NEA benefits on retro pay	-
Standby Salaries	12,500
Accrued Benefits Buyout	175,000
Employee Benefits	96,500
Retiree Insurance Coverage	347,200
Workers Compensation	114,000
Annual Leave Buyback	2,400
Advertisement	9,000
Membership Dues & Subscriptions	2,500
Conferences & Training	2,500
Tuition Reimbursement	2,000
Consultant Fees	201,500
Postage	1,000
Fire & Liability Insurance	86,000
Telephone & Communication	8,300
Water	1,050
Electricity	8,000
Natural Gas	8,000
Property Taxes	229,000
Legal & Administrative	253,535
Data Processing	137,000
Mileage Allowance	2,000
Gasoline & Vehicle Allowance	8,481
Repairs & Maintenance	1,200
Regulatory Expense	10,000
Regulatory Assessment	46,770
Office Supplies	30,000
Self Insurance	10,000
Unemployment Claims	12,000
Subtotal:	\$ 2,082,436

		Rate Year Approved in Docket 4025
Customer Service		
Salaries & Wages	\$	326,100
Overtime		21,218
Collections		47,865
Temp Salaries		22,800
Injury Pay		-
Employee Benefits		175,200
Annual Leave Buyback		4,950
Copying & binding		1,000
Conferences & Training		5,000
Support Services		21,000
Postage		34,300
Gasoline & Vehicle Allowance		27,852
Repairs & Maintenance		41,500
Meter Maintenance		11,000
Operating Supplies		9,000
Uniforms & protective Gear		1,000
Customer Service Supplies		15,000
Subtotal:	\$	764,785
Source of Supply - Island		
Salaries & Wages	\$	216,900
Overtime		28,200
Temp Salaries		10,000
Injury Pay		-
Employee Benefits		111,296
Annual Leave Buyback		6,300
Electricity		34,100
Gas/Vehicle Maintenance		48,300
Repairs & Maintenance		8,300
Reservoir Maintenance		25,000
Operating Supplies		3,750
Uniforms & protective Gear		750
Chemicals		54,000
Subtotal:	\$	546,896
Source of Supply - Mainland		
Overtime	\$	4,500
Temp Salaries		15,300
Permanent Part time		13,000
Employee Benefits		2,600
Electricity		92,600
Repairs & Maintenance		8,800
Reservoir Maintenance		6,000
Operating Supplies		500
Subtotal:	\$	143,300

	Rate Year Approved in Docket 4025
Station One	
Salaries & Wages	\$ 441,500
Overtime	58,100
Holiday Pay	19,100
Employee Benefits	237,000
Annual Leave Buyback	4,950
Conferences & Training	5,500
Fire & Liability Insurance	12,700
Electricity	247,500
Natural Gas	23,300
Rental of Equipment	1,000
Sewer Charge	184,000
Gas/Vehicle Maintenance	8,100
Repairs & Maintenance	35,000
Operating Supplies	27,800
Uniforms & protective Gear	1,350
Chemicals	399,000
Subtotal:	\$ 1,705,900
Lawton Valley	
Salaries & Wages	\$ 500,100
Overtime	42,400
Holiday Pay	20,000
Employee Benefits	275,500
Annual Leave Buyback	3,850
Conferences & Training	3,500
Fire & Liability Insurance	13,600
Electricity	180,600
Natural Gas	28,900
Rental of Equipment	500
Sewer Charge	242,000
Gas/Vehicle Maintenance	8,400
Repairs & Maintenance	43,400
Operating Supplies	22,000
Uniforms & protective Gear	1,000
Chemicals	216,000
Subtotal:	\$ 1,601,750
Laboratory	
Salaries & Wages	\$ 127,700
Employee Benefits	62,400
Annual Leave Buyback	2,750
Repairs & Maintenance	1,000
Regulatory Assessment	36,500
Laboratory Supplies	18,500
Subtotal:	\$ 248,850

		Rate Year Approved in Docket 4025
Transmission & Distribution		
Salaries & Wages	\$	416,200
Overtime		52,000
Temp Salaries		10,000
Injury Pay		-
Employee Benefits		224,996
Annual Leave Buyback		5,900
Conferences & Training		4,000
Contract Services		12,500
Fire & Liability Insurance		2,400
Electricity		19,600
Heavy Equipment Rental		8,900
Gas/Vehicle Maintenance		99,400
Repairs & Maintenance		32,000
Main Maintenance		84,800
Service Maintenance		33,500
Operating Supplies		11,000
Uniforms & protective Gear		1,500
Subtotal:	\$	1,018,696
Fire Protection		
Repair & Maintenance - Equipment	\$	14,500
Subtotal:	\$	14,500
Total O&M Costs	\$	8,127,113

CAPITAL COSTS

Contribution to Capital Spending Acct.

Existing Debt Service

Revenue Bonds

SRF Loans

New Debt Service

Revenue Bonds

SRF Loans

Total Debt Service

Total Capital Costs

Contribution to Repayment to City Account

Operating Revenue Allowance

Total Costs before Offsets

OFFSETS

Nonrate Revenues

Sundry charges

WPC cost share on customer service

Middletown cost share on customer service

Rental of Property

Water Penalty

Miscellaneous

Investment Interest Income

Water Quality Protection Fees

Total Nonrate Revenues

Net Costs to Be Recovered through Rates

Rate Year Approved in Docket 4025
\$ 1,146,918
\$ 910,552
\$ 413,954
\$ -
\$ 686,317
2,010,823
-
\$ 3,157,741
\$ 243,813
\$ 11,528,667
\$ 140,016
269,842
134,819
81,000
42,320
7,515
39,191
25,676
\$ 740,378
\$ 10,788,289

Rate Year costs are those approved in Docket No. 4025.

Newport Water

Cost Of Service Analysis

RFC Schedule A-2 Rebuttal

Proposed Rates and Charges

Cost of Service (COS) or Phase In (PI)

COS

(1)

Base Charge (per bill)		Docket 4025				
Monthly		Rates	Cost of Service	Proposed Rates	% Change	Projected Revenues
5/8		\$ 15.31	\$ 7.3451	\$ 7.35	-52%	\$ 8,996
3/4		15.31	7.5268	7.53	-51%	\$ 5,241
1		15.31	8.2721	8.28	-46%	\$ 17,587
1.5		15.31	9.6435	9.65	-37%	\$ 18,296
2		15.31	12.0056	12.01	-22%	\$ 30,986
3		15.31	27.8591	27.86	82%	\$ 23,737
4		15.31	33.3110	33.32	118%	\$ 5,198
5		15.31	46.0324	46.04	201%	\$ 1,105
6		15.31	60.5710	60.58	296%	\$ 14,539
8		15.31	73.8376	73.84	382%	\$ 886
10		15.31	86.9224	86.93	468%	\$ 1,043
Quarterly						
5/8		15.31	11.4451	\$ 11.45	-25%	493,495
3/4		15.31	11.9903	12.00	-22%	116,016
1		15.31	14.2262	14.23	-7%	22,199
1.5		15.31	18.3404	18.35	20%	12,698
2		15.31	25.4265	25.43	66%	10,070
3		15.31	72.9870	72.99	377%	8,759
4		15.31	89.3430	89.35	484%	1,430
5		15.31	127.5069	127.51	733%	-
6		15.31	171.1229	171.13	1018%	685
8		15.31	210.9225	210.93	1278%	844
10		15.31	250.1769	250.18	1534%	-
Volume Charge (per 1,000 gallons)						\$ 793,809
Retail						
Residential		\$ 5.25	\$ 5.3306	\$ 5.34	2%	4,023,242
Commercial		\$ 5.25	\$ 5.6455	\$ 5.65	8%	2,751,457
Wholesale						\$ 6,774,699
Navy		\$ 3.2280	\$ 3.6892	\$ 3.6892	14%	1,026,670
Portsmouth Water & Fire District		\$ 2.573	\$ 3.067	\$ 3.067	19%	1,385,268
Fire Protection						\$ 2,411,938
Public (per hydrant)		\$ 869.00	\$ 572.06	\$ 572.06	-34%	\$ 571,488
Private (by Connection Size) (2)						
Connection Size	Existing Charge Differential					
<2		\$17.05	\$ 11.63	\$ 11.63	-32%	
2	6.19	\$72.00	\$ 49.09	\$ 49.10	-32%	49
4	38.32	\$442.00	\$ 227.82	\$ 227.82	-48%	12,986
6	111.31	\$884.00	\$ 602.94	\$ 602.94	-32%	148,323
8	237.21	\$2,023.00	\$ 1,249.97	\$ 1,249.98	-38%	77,499
10	426.58	\$3,340.00	\$ 2,223.21	\$ 2,223.21	-33%	-
12	689.04	\$5,362.00	\$ 3,572.07	\$ 3,572.07	-33%	7,144
						\$ 246,001

Total Projected Rate Revenues \$ 10,797,935

(1) From RFC Schedule B-2 Rebuttal, 'Allocation of Costs to Water Rate Classes'.

(2) From RFC Schedule D-2 Rebuttal, 'Fire Protection Accounts'.

Newport Water
 Cost Of Service Analysis
 RFC Schedule A-3 Rebuttal
 Bill Impacts

Customer Class	Monthly Consumption (gallons)	Bill at Current Rates	Proposed 5/8"			Proposed 3/4"			Proposed 1"		
			Bill at Proposed Rates	\$ Change	% Change	Bill at Proposed Rates	\$ Change	% Change	Bill at Proposed Rates	\$ Change	% Change
Residential (Monthly)	1,000	\$20.56	\$12.69	-\$7.87	-38.3%	\$12.87	-\$7.69	-37.4%	\$13.62	-\$6.94	-33.8%
	2,000	\$25.81	\$18.03	-\$7.78	-30.1%	\$18.21	-\$7.60	-29.4%	\$18.96	-\$6.85	-26.5%
	4,000	\$36.31	\$28.71	-\$7.60	-20.9%	\$28.89	-\$7.42	-20.4%	\$29.64	-\$6.67	-18.4%
	5,000	\$41.56	\$34.05	-\$7.51	-18.1%	\$34.23	-\$7.33	-17.6%	\$34.98	-\$6.58	-15.8%
	7,500	\$54.69	\$47.40	-\$7.29	-13.3%	\$47.58	-\$7.11	-13.0%	\$48.33	-\$6.36	-11.6%
	10,000	\$67.81	\$60.75	-\$7.06	-10.4%	\$60.93	-\$6.88	-10.1%	\$61.68	-\$6.13	-9.0%
	19,000	\$115.06	\$108.81	-\$6.25	-5.4%	\$108.99	-\$6.07	-5.3%	\$109.74	-\$5.32	-4.6%
	Avg. Monthly Bill	\$209.56	\$204.93	-\$4.63	-2.2%	\$205.11	-\$4.45	-2.1%	\$205.86	-\$3.70	-1.8%
	40,000	\$225.31	\$220.95	-\$4.36	-1.9%	\$221.13	-\$4.18	-1.9%	\$221.88	-\$3.43	-1.5%
	200,000	\$1,065.31	\$1,075.35	\$10.04	0.9%	\$1,075.53	\$10.22	1.0%	\$1,076.28	\$10.97	1.0%
Residential(Quarterly)											
Avg. Quarterly Bill	4,000	\$36.31	\$32.81	-\$3.50	-9.6%	\$33.36	-\$2.95	-8.1%	\$35.59	-\$0.72	-2.0%
	6,000	\$46.81	\$43.49	-\$3.32	-7.1%	\$44.04	-\$2.77	-5.9%	\$46.27	-\$0.54	-1.2%
	12,500	\$80.94	\$78.20	-\$2.74	-3.4%	\$78.75	-\$2.19	-2.7%	\$80.98	\$0.05	0.1%
	19,000	\$115.06	\$112.91	-\$2.15	-1.9%	\$113.46	-\$1.60	-1.4%	\$115.69	\$0.63	0.5%
	21,000	\$125.56	\$123.59	-\$1.97	-1.6%	\$124.14	-\$1.42	-1.1%	\$126.37	\$0.81	0.6%
	37,000	\$209.56	\$209.03	-\$0.53	-0.3%	\$209.58	\$0.02	0.0%	\$211.81	\$2.25	1.1%
	43,000	\$241.06	\$241.07	\$0.01	0.0%	\$241.62	\$0.56	0.2%	\$243.85	\$2.79	1.2%
	148,000	\$792.31	\$801.77	\$9.46	1.2%	\$802.32	\$10.01	1.3%	\$804.55	\$12.24	1.5%
	160,000	\$855.31	\$865.85	\$10.54	1.2%	\$866.40	\$11.09	1.3%	\$868.63	\$13.32	1.6%
	800,000	\$4,215.31	\$4,283.45	\$68.14	1.6%	\$4,284.00	\$68.69	1.6%	\$4,286.23	\$70.92	1.7%
Commercial (Monthly)											
Avg. Monthly Bill	1,000	\$20.56	\$13.00	-\$7.56	-36.8%	\$13.18	-\$7.38	-35.9%	\$13.93	-\$6.63	-32.2%
	2,000	\$25.81	\$18.65	-\$7.16	-27.7%	\$18.83	-\$6.98	-27.0%	\$19.58	-\$6.23	-24.1%
	4,000	\$36.31	\$29.95	-\$6.36	-17.5%	\$30.13	-\$6.18	-17.0%	\$30.88	-\$5.43	-15.0%
	5,000	\$41.56	\$35.60	-\$5.96	-14.3%	\$35.78	-\$5.78	-13.9%	\$36.53	-\$5.03	-12.1%
	9,000	\$62.56	\$58.20	-\$4.36	-7.0%	\$58.38	-\$4.18	-6.7%	\$59.13	-\$3.43	-5.5%
	14,000	\$88.81	\$86.45	-\$2.36	-2.7%	\$86.63	-\$2.18	-2.5%	\$87.38	-\$1.43	-1.6%
	17,000	\$104.56	\$103.40	-\$1.16	-1.1%	\$103.58	-\$0.98	-0.9%	\$104.33	-\$0.23	-0.2%
	55,000	\$304.06	\$318.10	\$14.04	4.6%	\$318.28	\$14.22	4.7%	\$319.03	\$14.97	4.9%
	75,000	\$409.06	\$431.10	\$22.04	5.4%	\$431.28	\$22.22	5.4%	\$432.03	\$22.97	5.6%
	150,000	\$802.81	\$854.85	\$52.04	6.5%	\$855.03	\$52.22	6.5%	\$855.78	\$52.97	6.6%
Commercial(Quarterly)											
Avg. Quarterly Bill	4,000	\$36.31	\$34.05	-\$2.26	-6.2%	\$34.60	-\$1.71	-4.7%	\$36.83	\$0.52	1.4%
	5,000	\$41.56	\$39.70	-\$1.86	-4.5%	\$40.25	-\$1.31	-3.2%	\$42.48	\$0.92	2.2%
	9,000	\$62.56	\$62.30	-\$0.26	-0.4%	\$62.85	\$0.29	0.5%	\$65.08	\$2.52	4.0%
	20,000	\$120.31	\$124.45	\$4.14	3.4%	\$125.00	\$4.69	3.9%	\$127.23	\$6.92	5.8%
	28,500	\$164.94	\$172.48	\$7.54	4.6%	\$173.03	\$8.09	4.9%	\$175.26	\$10.32	6.3%
	50,000	\$277.81	\$293.95	\$16.14	5.8%	\$294.50	\$16.69	6.0%	\$296.73	\$18.92	6.8%
	75,000	\$409.06	\$435.20	\$26.14	6.4%	\$435.75	\$26.69	6.5%	\$437.98	\$28.92	7.1%
	100,000	\$540.31	\$576.45	\$36.14	6.7%	\$577.00	\$36.69	6.8%	\$579.23	\$38.92	7.2%
	250,000	\$1,327.81	\$1,423.95	\$96.14	7.2%	\$1,424.50	\$96.69	7.3%	\$1,426.73	\$98.92	7.4%
	500,000	\$2,640.31	\$2,836.45	\$196.14	7.4%	\$2,837.00	\$196.69	7.4%	\$2,839.23	\$198.92	7.5%
Commercial (Monthly with 4" Fire Connection)											
		Annual Bill at	Bill at			Bill at	\$		Bill at	\$	%
Annual Consumption		Current Rates	Proposed Rates	\$ Change	% Change	Proposed Rates	Change	% Change	Proposed Rates	Change	Change
660,000		\$4,090.72	\$4,045.02	-\$45.70	-1.1%	\$4,047.18	-\$43.54	-1.1%	\$4,056.18	-\$34.54	-0.8%

Newport Water
 Cost Of Service Analysis
 RFC Schedule A-3 Rebuttal
 Bill Impacts

Customer Class	Proposed 1 1/2"			Proposed 2"			Proposed 3"		
	Bill at Proposed Rates	\$ Change	% Change	Bill at Proposed Rates	\$ Change	% Change	Bill at Proposed Rates	\$ Change	% Change
Residential (Monthly)									
	\$14.99	-\$5.57	-27.1%	\$17.35	-\$3.21	-15.6%	\$33.20	\$12.64	61.5%
	\$20.33	-\$5.48	-21.2%	\$22.69	-\$3.12	-12.1%	\$38.54	\$12.73	49.3%
	\$31.01	-\$5.30	-14.6%	\$33.37	-\$2.94	-8.1%	\$49.22	\$12.91	35.6%
	\$36.35	-\$5.21	-12.5%	\$38.71	-\$2.85	-6.9%	\$54.56	\$13.00	31.3%
	\$49.70	-\$4.99	-9.1%	\$52.06	-\$2.63	-4.8%	\$67.91	\$13.23	24.2%
	\$63.05	-\$4.76	-7.0%	\$65.41	-\$2.40	-3.5%	\$81.26	\$13.45	19.8%
	\$111.11	-\$3.95	-3.4%	\$113.47	-\$1.59	-1.4%	\$129.32	\$14.26	12.4%
Avg. Monthly Bill	\$207.23	-\$2.33	-1.1%	\$209.59	\$0.03	0.0%	\$225.44	\$15.88	7.6%
	\$223.25	-\$2.06	-0.9%	\$225.61	\$0.30	0.1%	\$241.46	\$16.15	7.2%
	\$1,077.65	\$12.34	1.2%	\$1,080.01	\$14.70	1.4%	\$1,095.86	\$30.55	2.9%
Residential(Quarterly)									
	\$39.71	\$3.40	9.4%	\$46.79	\$10.48	28.9%	\$94.35	\$58.04	159.8%
	\$50.39	\$3.58	7.6%	\$57.47	\$10.66	22.8%	\$105.03	\$58.22	124.4%
	\$85.10	\$4.16	5.1%	\$92.18	\$11.25	13.9%	\$139.74	\$58.81	72.7%
	\$119.81	\$4.75	4.1%	\$126.89	\$11.83	10.3%	\$174.45	\$59.39	51.6%
	\$130.49	\$4.93	3.9%	\$137.57	\$12.01	9.6%	\$185.13	\$59.57	47.4%
	\$215.93	\$6.37	3.0%	\$223.01	\$13.45	6.4%	\$270.57	\$61.01	29.1%
	\$247.97	\$6.91	2.9%	\$255.05	\$13.99	5.8%	\$302.61	\$61.55	25.5%
	\$808.67	\$16.36	2.1%	\$815.75	\$23.44	3.0%	\$863.31	\$71.00	9.0%
	\$872.75	\$17.44	2.0%	\$879.83	\$24.52	2.9%	\$927.39	\$72.08	8.4%
	\$4,290.35	\$75.04	1.8%	\$4,297.43	\$82.12	1.9%	\$4,344.99	\$129.68	3.1%
Commercial (Monthly)									
	\$15.30	-\$5.26	-25.6%	\$17.66	-\$2.90	-14.1%	\$33.51	\$12.95	63.0%
	\$20.95	-\$4.86	-18.8%	\$23.31	-\$2.50	-9.7%	\$39.16	\$13.35	51.7%
	\$32.25	-\$4.06	-11.2%	\$34.61	-\$1.70	-4.7%	\$50.46	\$14.15	39.0%
	\$37.90	-\$3.66	-8.8%	\$40.26	-\$1.30	-3.1%	\$56.11	\$14.55	35.0%
	\$60.50	-\$2.06	-3.3%	\$62.86	\$0.30	0.5%	\$78.71	\$16.15	25.8%
	\$88.75	-\$0.06	-0.1%	\$91.11	\$2.30	2.6%	\$106.96	\$18.15	20.4%
	\$105.70	\$1.14	1.1%	\$108.06	\$3.50	3.3%	\$123.91	\$19.35	18.5%
	\$320.40	\$16.34	5.4%	\$322.76	\$18.70	6.2%	\$338.61	\$34.55	11.4%
	\$433.40	\$24.34	6.0%	\$435.76	\$26.70	6.5%	\$451.61	\$42.55	10.4%
	\$857.15	\$54.34	6.8%	\$859.51	\$56.70	7.1%	\$875.36	\$72.55	9.0%
Commercial(Quarterly)									
	\$40.95	\$4.64	12.8%	\$48.03	\$11.72	32.3%	\$95.59	\$59.28	163.3%
	\$46.60	\$5.04	12.1%	\$53.68	\$12.12	29.2%	\$101.24	\$59.68	143.6%
	\$69.20	\$6.64	10.6%	\$76.28	\$13.72	21.9%	\$123.84	\$61.28	98.0%
	\$131.35	\$11.04	9.2%	\$138.43	\$18.12	15.1%	\$185.99	\$65.68	54.6%
	\$179.38	\$14.44	8.8%	\$186.46	\$21.52	13.0%	\$234.02	\$69.08	41.9%
	\$300.85	\$23.04	8.3%	\$307.93	\$30.12	10.8%	\$355.49	\$77.68	28.0%
	\$442.10	\$33.04	8.1%	\$449.18	\$40.12	9.8%	\$496.74	\$87.68	21.4%
	\$583.35	\$43.04	8.0%	\$590.43	\$50.12	9.3%	\$637.99	\$97.68	18.1%
	\$1,430.85	\$103.04	7.8%	\$1,437.93	\$110.12	8.3%	\$1,485.49	\$157.68	11.9%
	\$2,843.35	\$203.04	7.7%	\$2,850.43	\$210.12	8.0%	\$2,897.99	\$257.68	9.8%
Commercial (Monthly with 4" Fire Conne									
	Bill at Proposed Rates	\$ Change	% Change	Bill at Proposed Rates	\$ Change	% Change	Bill at Proposed Rates	\$ Change	% Change
	\$4,072.62	-\$18.10	-0.4%	\$4,100.94	\$10.22	0.2%	\$4,291.14	\$200.42	4.9%

Newport Water
 Cost Of Service Analysis
 RFC Schedule A-3 Rebuttal
 Bill Impacts

Customer Class	Proposed 4"			Proposed 6"			Proposed 8"		
	Bill at Proposed Rates	\$ Change	% Change	Bill at Proposed Rates	\$ Change	% Change	Bill at Proposed Rates	\$ Change	% Change
Residential (Monthly)									
	\$38.66	\$18.10	88.0%	\$65.92	\$45.36	220.6%	\$79.18	\$58.62	285.1%
	\$44.00	\$18.19	70.5%	\$71.26	\$45.45	176.1%	\$84.52	\$58.71	227.5%
	\$54.68	\$18.37	50.6%	\$81.94	\$45.63	125.7%	\$95.20	\$58.89	162.2%
	\$60.02	\$18.46	44.4%	\$87.28	\$45.72	110.0%	\$100.54	\$58.98	141.9%
	\$73.37	\$18.69	34.2%	\$100.63	\$45.95	84.0%	\$113.89	\$59.21	108.3%
	\$86.72	\$18.91	27.9%	\$113.98	\$46.17	68.1%	\$127.24	\$59.43	87.6%
	\$134.78	\$19.72	17.1%	\$162.04	\$46.98	40.8%	\$175.30	\$60.24	52.4%
Avg. Monthly Bill	\$230.90	\$21.34	10.2%	\$258.16	\$48.60	23.2%	\$271.42	\$61.86	29.5%
	\$246.92	\$21.61	9.6%	\$274.18	\$48.87	21.7%	\$287.44	\$62.13	27.6%
	\$1,101.32	\$36.01	3.4%	\$1,128.58	\$63.27	5.9%	\$1,141.84	\$76.53	7.2%
Residential(Quarterly)									
	\$110.71	\$74.40	204.9%	\$192.49	\$156.18	430.1%	\$232.29	\$195.98	539.7%
	\$121.39	\$74.58	159.3%	\$203.17	\$156.36	334.0%	\$242.97	\$196.16	419.1%
	\$156.10	\$75.17	92.9%	\$237.88	\$156.95	193.9%	\$277.68	\$196.75	243.1%
	\$190.81	\$75.75	65.8%	\$272.59	\$157.53	136.9%	\$312.39	\$197.33	171.5%
	\$201.49	\$75.93	60.5%	\$283.27	\$157.71	125.6%	\$323.07	\$197.51	157.3%
	\$286.93	\$77.37	36.9%	\$368.71	\$159.15	75.9%	\$408.51	\$198.95	94.9%
	\$318.97	\$77.91	32.3%	\$400.75	\$159.69	66.2%	\$440.55	\$199.49	82.8%
	\$879.67	\$87.36	11.0%	\$961.45	\$169.14	21.3%	\$1,001.25	\$208.94	26.4%
	\$943.75	\$88.44	10.3%	\$1,025.53	\$170.22	19.9%	\$1,065.33	\$210.02	24.6%
	\$4,361.35	\$146.04	3.5%	\$4,443.13	\$227.82	5.4%	\$4,482.93	\$267.62	6.3%
Commercial (Monthly)									
	\$38.97	\$18.41	89.5%	\$66.23	\$45.67	222.1%	\$79.49	\$58.93	286.6%
	\$44.62	\$18.81	72.9%	\$71.88	\$46.07	178.5%	\$85.14	\$59.33	229.9%
	\$55.92	\$19.61	54.0%	\$83.18	\$46.87	129.1%	\$96.44	\$60.13	165.6%
	\$61.57	\$20.01	48.1%	\$88.83	\$47.27	113.7%	\$102.09	\$60.53	145.6%
	\$84.17	\$21.61	34.5%	\$111.43	\$48.87	78.1%	\$124.69	\$62.13	99.3%
	\$112.42	\$23.61	26.6%	\$139.68	\$50.87	57.3%	\$152.94	\$64.13	72.2%
	\$129.37	\$24.81	23.7%	\$156.63	\$52.07	49.8%	\$169.89	\$65.33	62.5%
Avg. Monthly Bill	\$344.07	\$40.01	13.2%	\$371.33	\$67.27	22.1%	\$384.59	\$80.53	26.5%
	\$457.07	\$48.01	11.7%	\$484.33	\$75.27	18.4%	\$497.59	\$88.53	21.6%
	\$880.82	\$78.01	9.7%	\$908.08	\$105.27	13.1%	\$921.34	\$118.53	14.8%
Commercial(Quarterly)									
	\$111.95	\$75.64	208.3%	\$193.73	\$157.42	433.5%	\$233.53	\$197.22	543.2%
	\$117.60	\$76.04	183.0%	\$199.38	\$157.82	379.7%	\$239.18	\$197.62	475.5%
	\$140.20	\$77.64	124.1%	\$221.98	\$159.42	254.8%	\$261.78	\$199.22	318.4%
	\$202.35	\$82.04	68.2%	\$284.13	\$163.82	136.2%	\$323.93	\$203.62	169.2%
	\$250.38	\$85.44	51.8%	\$332.16	\$167.22	101.4%	\$371.96	\$207.02	125.5%
	\$371.85	\$94.04	33.9%	\$453.63	\$175.82	63.3%	\$493.43	\$215.62	77.6%
	\$513.10	\$104.04	25.4%	\$594.88	\$185.82	45.4%	\$634.68	\$225.62	55.2%
	\$654.35	\$114.04	21.1%	\$736.13	\$195.82	36.2%	\$775.93	\$235.62	43.6%
	\$1,501.85	\$174.04	13.1%	\$1,583.63	\$255.82	19.3%	\$1,623.43	\$295.62	22.3%
	\$2,914.35	\$274.04	10.4%	\$2,996.13	\$355.82	13.5%	\$3,035.93	\$395.62	15.0%
Commercial (Monthly with 4" Fire Conne									
	Bill at Proposed Rates	\$ Change	% Change	Bill at Proposed Rates	\$ Change	% Change	Bill at Proposed Rates	\$ Change	% Change
	\$4,356.66	\$265.94	6.5%	\$4,683.78	\$593.06	14.5%	\$4,842.90	\$752.18	18.4%

Newport Water
 Cost Of Service Analysis
 RFC Schedule A-3 Rebuttal
 Bill Impacts

Customer Class	Monthly Consumption (gallons)	Bill at Current Rates	Proposed		
			Bill at Proposed Rates	\$ Change	% Change
Portsmouth (Monthly)					
Avg. Monthly Bill	10,000,000	\$25,745.31	\$30,705.27	\$4,959.96	19.3%
	20,000,000	\$51,475.31	\$61,377.22	\$9,901.91	19.2%
	38,000,000	\$97,789.31	\$116,586.73	\$18,797.42	19.2%
	40,000,000	\$102,935.31	\$122,721.12	\$19,785.81	19.2%
	75,000,000	\$192,990.31	\$230,072.94	\$37,082.63	19.2%
	100,000,000	\$257,315.31	\$306,752.81	\$49,437.50	19.2%
	150,000,000	\$385,965.31	\$460,112.56	\$74,147.25	19.2%
Navy (Monthly)					
Avg. Monthly Bill (All Meters)	10,000,000	\$32,295.31	\$36,952.82	\$4,657.51	14.4%
	20,000,000	\$64,575.31	\$73,845.05	\$9,269.74	14.4%
	38,000,000	\$122,679.31	\$140,251.08	\$17,571.77	14.3%
	50,000,000	\$161,415.31	\$184,521.76	\$23,106.45	14.3%
	75,000,000	\$242,115.31	\$276,752.36	\$34,637.05	14.3%
	100,000,000	\$322,815.31	\$368,982.95	\$46,167.64	14.3%

Newport Water Division
 Cost Of Service Analysis
 RFC Schedule A-3 Rebuttal
 Revenue Proof

	Rate Year Revenue	
	Existing Rates	Proposed Rates
REVENUES		
Water Rates		
Base Charge (Billing Charge)	\$ 1,000,907	\$ 793,809
Volume Charge		
Residential	3,955,435	4,023,242
Commercial	2,556,663	2,751,457
Navy	898,317	1,026,670
Portsmouth Water & Fire District	1,162,070	1,385,268
Fire Protection		
Public	868,131	571,488
Private	733,330	246,001
Total Rate Revenues	\$ 11,174,852	\$ 10,797,935
Other Operating Revenues		
Sundry charges	\$ 140,016	140,016
WPC cost share on customer service	\$ 269,842	269,842
Middletown cost share on customer service	\$ 134,819	134,819
Rental of Property	\$ 81,000	81,000
Total Other Operating Revenues	\$ 625,676	625,676
Total Operating Revenues	\$ 11,800,528	\$ 11,423,611
Add: Non-Operating Revenues		
Water Penalty	42,320	42,320
Miscellaneous	7,515	7,515
Investment Interest Income	39,191	39,191
Water Quality Protection Fees	25,676	25,676
Total Non Operating Revenues	\$ 114,702	\$ 114,702
Total Revenues	\$ 11,915,230	\$ 11,538,313
COSTS		
Departmental O&M	\$ (8,127,113)	(8,127,113)
Capital Costs		
Contribution to Capital Spending Acct.	(1,146,918)	(1,146,918)
Existing Debt Service	(1,324,506)	(1,324,506)
New Debt Service	(686,317)	(686,317)
Total Capital Costs	\$ (3,157,741)	(3,157,741)
Operating Revenue Allowance	(243,813)	(243,813)
Total Costs	\$ (11,528,667)	\$ (11,528,667)
Revenue Surplus (Deficit)	\$ 386,563	\$ 9,646

Newport Water Division
Cost Of Service Analysis
RFC Schedule B-1 Rebuttal
Base Extra Capacity Cost Allocations

Docket No. 4128

Docket 4025 Rate Year		Allocation Notes	Base	Max Day	Max Hour	Metering	Billing	Services	Fire	Total % Allocated
O&M COSTS										
Administration										
	Salaries, Wages, & Benefits	1,012,600	RFC Schedule B-4 Rebuttal, 'Allocation Analyses.'							100%
	All other admin costs	1,069,836	RFC Schedule B-3 Rebuttal, 'Cost Allocation Bases.'							100%
	Subtotal:	2,082,436								
Customer Service										
	Salaries, Wages, & Benefits	550,268	RFC Schedule B-4 Rebuttal, 'Allocation Analyses.'							100%
	Collections	47,865	100% billing (based on budget analysis)							100%
	Copying & binding	1,000	100% billing (based on budget analysis)							100%
	Conferences & Training	5,000	100% billing (based on budget analysis)							100%
	Support Services	21,000	100% billing (software support & printing/mailling)							100%
	Postage	34,300	100% billing (based on budget analysis)							100%
	Gasoline & Vehicle Allowance	27,852	RFC Schedule B-4 Rebuttal, 'Allocation Analyses.'							100%
	Repairs & Maintenance	41,500	100% metering (meter repairs)							100%
	Meter Maintenance	11,000	100% metering (based on budget analysis)							100%
	Operating Supplies	9,000	100% metering (based on budget analysis)							100%
	Uniforms & protective Gear	1,000	100% metering (based on budget analysis)							100%
	Customer Service Supplies	15,000	100% billing (based on budget analysis)							100%
	Subtotal:	764,785								
	Source of Supply - Island	546,896	Average Day Demand Patterns							100%
	Source of Supply - Mainland	143,300	Average Day Demand Patterns							100%
	Station One (Excludes pumping and chemicals)	1,294,577	Maximum Day Demand Patterns							100%
	Station One Pumping	12,323	Maximum Hour Demand Patterns							100%
	Station One Chemicals	399,000	Average Day Demand Patterns							100%
	Lawton Valley (Excludes pumping and chemicals)	1,354,061	Maximum Day Demand Patterns							100%
	Lawton Valley Pumping	31,689	Maximum Hour Demand Patterns							100%
	Lawton Valley Chemicals	216,000	Average Day Demand Patterns							100%
	Laboratory	248,850	Average Day Demand Patterns							100%
	Transmission and Distribution	1,018,696	Maximum Hour Demand Patterns							100%
	Fire Protection	14,500	100% Fire							100%
	Total O&M Costs	8,127,113								

CAPITAL COSTS		Docket 4025 Rate									
		Year	Allocation Notes	Base	Max Day	Max Hour	Metering	Billing	Services	Fire	Total % Allocated
	Water Supply	731,711	Average Day Demand Patterns	100%	0%	0%	0%	0%		0%	100%
	Treatment Station 1	994,352	Maximum Day Demand Patterns	62%	38%	0%	0%	0%		0%	100%
	Treatment Lawton Valley	236,326	Maximum Day Demand Patterns	62%	38%	0%	0%	0%		0%	100%
	Treatment Both Plants	120,392	Maximum Day Demand Patterns	62%	38%	0%	0%	0%		0%	100%
	T&D	888,921	Maximum Hour Demand Patterns	48%	30%	22%	0%	0%		0%	100%
	Fire	22,550	100% Fire	0%	0%	0%	0%	0%		100%	100%
	Meters	65,726	100% Meters	0%	0%	0%	100%	0%		0%	100%
	Services	65,726	100% Services	0%	0%	0%	0%	0%	100%	0%	100%
	Billing	32,037	100% Billing	0%	0%	0%	0%	100%		0%	100%
	Total Capital Costs		3,157,741								
Revenue Allowance		243,813	100% base	100%							100%
Total Costs before Offsets		11,528,667									
OFFSETS											
Nonrate Revenues											
	Sundry charges	140,016	Admin. Non-Salary	55%	24%	5%	8%	8%		0%	100%
	WPC cost share on customer service	269,842	50/50 Split between Metering and Billing	0%	0%	0%	50%	50%		0%	100%
	Middletown cost share on customer service	134,819	50/50 Split between Metering and Billing	0%	0%	0%	50%	50%		0%	100%
	Rental of Property	81,000	Admin. Non-Salary	55%	24%	5%	8%	8%		0%	100%
	Water Penalty	42,320	Admin. Non-Salary	55%	24%	5%	8%	8%		0%	100%
	Miscellaneous	7,515	Admin. Non-Salary	55%	24%	5%	8%	8%		0%	100%
	Investment Interest Income	39,191	Admin. Non-Salary	55%	24%	5%	8%	8%		0%	100%
	Water Quality Protection Fees	25,676	Direct to Retail classes	0%	0%	0%	0%	0%		0%	
	Total Nonrate Revenues		740,378								
Net Costs To Recover Through Rates		\$ 10,788,289									

Newport Water Division
Cost Of Service Analysis
RFC Schedule B-1 Rebuttal
Base Extra Capacity Cost Allocations

Docket No. 4128

O&M COSTS

Administration

Salaries, Wages, & Benefits
All other admin costs

Subtotal:

Customer Service

Salaries, Wages, & Benefits
Collections
Copying & binding
Conferences & Training
Support Services
Postage
Gasoline & Vehicle Allowance
Repairs & Maintenance
Meter Maintenance
Operating Supplies
Uniforms & protective Gear
Customer Service Supplies

Subtotal:

Source of Supply - Island
Source of Supply - Mainland
Station One (Excludes pumping and chemicals)
Station One Pumping
Station One Chemicals
Lawton Valley (Excludes pumping and chemicals)
Lawton Valley Pumping
Lawton Valley Chemicals
Laboratory
Transmission and Distribution
Fire Protection

Total O&M Costs

Base	Max Day	Max Hour	Metering	Billing	Services	Fire	Total \$ Allocated
554,031	245,955	48,929	81,320	79,319	-	3,046	1,012,600
585,347	259,858	51,695	85,916	83,803	-	3,218	1,069,836
-	-	-	309,015	241,253	-	-	550,268
-	-	-	-	47,865	-	-	47,865
-	-	-	-	1,000	-	-	1,000
-	-	-	-	5,000	-	-	5,000
-	-	-	-	21,000	-	-	21,000
-	-	-	-	34,300	-	-	34,300
-	-	-	15,641	12,211	-	-	27,852
-	-	-	41,500	-	-	-	41,500
-	-	-	11,000	-	-	-	11,000
-	-	-	9,000	-	-	-	9,000
-	-	-	1,000	-	-	-	1,000
-	-	-	-	15,000	-	-	15,000
546,896	-	-	-	-	-	-	546,896
143,300	-	-	-	-	-	-	143,300
797,608	496,969	-	-	-	-	-	1,294,577
5,928	3,694	2,701	-	-	-	-	12,323
399,000	-	-	-	-	-	-	399,000
834,257	519,804	-	-	-	-	-	1,354,061
15,245	9,499	6,946	-	-	-	-	31,689
216,000	-	-	-	-	-	-	216,000
248,850	-	-	-	-	-	-	248,850
490,057	305,342	223,298	-	-	-	-	1,018,696
-	-	-	-	-	-	14,500	14,500
4,836,518	1,841,120	333,569	554,392	540,751	-	20,763	8,127,113

Newport Water Division
Cost Of Service Analysis
RFC Schedule B-1 Rebuttal
Base Extra Capacity Cost Allocations

Docket No. 4128

CAPITAL COSTS

	Base	Max Day	Max Hour	Metering	Billing	Services	Fire	Total \$ Allocated
Water Supply	731,711	-	-	-	-	-	-	731,711
Treatment Station 1	612,635	381,717	-	-	-	-	-	994,352
Treatment Lawton Valley	145,604	90,722	-	-	-	-	-	236,326
Treatment Both Plants	74,176	46,217	-	-	-	-	-	120,392
T&D	427,627	266,443	194,851	-	-	-	-	888,921
Fire	-	-	-	-	-	-	22,550	22,550
Meters	-	-	-	65,726	-	-	-	65,726
Services	-	-	-	-	-	65,726	-	65,726
Billing	-	-	-	-	32,037	-	-	32,037
Total Capital Costs	1,991,752	785,099	194,851	65,726	32,037	65,726	22,550	3,157,741
Revenue Allowance	243,813	-	-	-	-	-	-	243,813
Total Costs before Offsets	7,072,083	2,626,219	528,420	620,117	572,789	65,726	43,313	11,528,667

OFFSETS

Nonrate Revenues

Sundry charges	76,608	34,009	6,766	11,244	10,968	-	421	140,016
WPC cost share on customer service	-	-	-	134,921	134,921	-	-	269,842
Middletown cost share on customer service	-	-	-	67,409	67,409	-	-	134,819
Rental of Property	44,318	19,674	3,914	6,505	6,345	-	244	81,000
Water Penalty	23,155	10,279	2,045	3,399	3,315	-	127	42,320
Miscellaneous	4,112	1,825	363	604	589	-	23	7,515
Investment Interest Income	21,443	9,519	1,894	3,147	3,070	-	118	39,191
Water Quality Protection Fees	-	-	-	-	-	-	-	-
Total Nonrate Revenues	169,635	75,308	14,981	227,229	226,616	-	933	714,702
							Direct Allocation of WQPF to Retail	25,676

Net Costs To Recover Through Rates

\$ 6,902,448	\$ 2,550,912	\$ 513,438	\$ 392,888	\$ 346,172	\$ 65,726	\$ 42,381	\$ 10,788,289
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Other Departmental Costs	\$ 3,697,140	\$ 1,335,307	\$ 232,945	\$ 387,155	\$ 377,630	\$ -	\$ 14,500	\$ 6,044,677
Less: Chemicals								
Station One	\$ (399,000)							\$ (399,000)
Lawton Valley	\$ (216,000)							\$ (216,000)
Source Supply	\$ (54,000)							\$ (54,000)
Electricity								
Source Supply	\$ (126,700)							\$ (126,700)
Station One	\$ (152,488)	\$ (95,012)						\$ (247,500)
Lawton Valley	\$ (111,270)	\$ (69,330)						\$ (180,600)
Costs Adjusted	\$ 2,637,681	\$ 1,170,966	\$ 232,945	\$ 387,155	\$ 377,630	\$ -	\$ 14,500	\$ 4,820,877
	55%	24%	5%	8%	8%	0%	0%	100%

ALLOCATION PERCENTAGES

<u>Cost Category</u>	Allocation Basis	Commodity Charges					
		Base Charge	Retail		Navy	Portsmouth	Fire
			Residential	Commercial & Governmental			
Base	Average annual demand		42%	27%	12%	18%	100%
Base Excluding PWFD			56%	36%	8%	0%	100%
Water Quality Protection Fee	Direct Assignment based on consumption		61%	39%			100%
Max Day	Estimated customer peaking factors		33%	26%	9%	16%	100%
Max Day Excluding PWFD			42%	32%	6%	0%	100%
Max Hour	Estimated customer peaking factors		15%	17%	5%	8%	100%
Max Hour Excluding PWFD			16%	19%	3%	0%	100%
Metering	Direct Assignment	100%					100%
Billing	Direct Assignment	100%					100%
Fire	Direct Assignment						100%

ALLOCATION RESULTS

ALLOCATION RESULTS		Commodity Charges							
		Retail		Navy	Portsmouth				
		Base Charge	Residential			Commercial			
<u>Cost Category</u>	Docket 4025 Rate Year						Fire	Total \$ Allocated	
Base									
<i>Base excluding T&D</i>	\$ 5,984,765		\$ 2,540,019	\$ 1,641,785	\$ 730,273	\$ 1,072,687		5,984,765	
<i>T&D to Base</i>	\$ 917,683		\$ 512,638	\$ 331,352	\$ 73,693	\$ -		917,683	
Water Quality Protection Fees	\$ (25,676)		\$ (15,595)	\$ (10,080)	\$ -	\$ -		(25,676)	
Max Day									
<i>Max Day Except T&D</i>	1,979,126		658,191	505,586	174,476	308,358	332,515	1,979,126	
<i>Transmission & Distribution</i>	571,785		237,661	182,558	31,500	-	120,065	571,785	
Max Hour									
<i>Max Hr. Except T&D & Pumping</i>	51,277	-	7,490	8,818	2,761	4,222	27,987	51,277	
<i>Pumping</i>	44,012	-	7,217	8,497	1,330	-	26,968	44,012	
<i>Transmission & Distribution</i>	418,149	-	68,566	80,727	12,637	-	256,218	418,149	
Metering	392,888	392,888	-	-	-	-	-	392,888	
Services	65,726	65,726	-	-	-	-	-	65,726	
Billing	346,172	346,172	-	-	-	-	-	346,172	
Fire	42,381	-	-	-	-	-	42,381	42,381	
Total To Recover through Rates	\$ 10,788,289	\$ 804,786	\$ 4,016,187	\$ 2,749,243	\$ 1,026,670	\$ 1,385,268	\$ 806,134	\$ 10,788,289	

COST OF SERVICE PER UNIT

Description of Billing Units
Percentage of Dollars Allocated
Allocated Cost
Divided by: Number of Units
Unit Cost of Service

(1)	(2)	(2)	(2)	(2)	(3)	
# of accounts x 12 months	1000's of gallons annually	1000's of gallons annually	1000's of gallons annually	1000's of gallons annually	Equivalent Connections	Total
7.5%	37.2%	25.5%	9.5%	12.8%	7.5%	100.0%
\$ 392,888	\$ 4,016,187	\$ 2,749,243	\$ 1,026,670	\$ 1,385,268	\$ 806,134	\$ 10,376,391
216,190	753,416	486,983	278,289	451,640	156,856	
\$1.8173 per account per month	\$5.33 per 1000 gallons	\$5.65 per 1000 gallons	\$3.69 per 1000 gallons	\$3.07 per 1000 gallons	\$5.14 Equivalent connections	

Description of Billing Units
Percentage of Dollars Allocated
Allocated Cost
Divided by: Number of Units
Unit Cost of Service

Billing	Services
No. of bills per year	No. of bills per year
2.0%	7.0%
\$ 346,172	\$ 65,726
65,376	282,488
\$5.30 per bill	\$0.2327 per bill

(1)

- (1) From RFC Schedule D-1 Rebuttal, 'Water Accounts, by Size and Class'.
(2) From RFC Schedule B-6 Rebuttal, 'Water Demand History'.
(3) From RFC Schedule D-2 Rebuttal, 'Fire Protection Accounts'.

Newport Water Division
 Cost Of Service Analysis
 RFC Schedule B-3 Rebuttal
 Cost Allocation Bases

Allocation Basis

Average Day Demand Patterns
 Maximum Day Demand Patterns
 Maximum Hour Demand Patterns
 Fire Protection
 Salary Costs
 Administration
 Customer Service
 Other Costs

Used to allocate the following cost categories	Source Schedule	Base	Max Day	Max Hour	Metering	Billing	Services	Fire Protection	Total % Allocated
<i>Supply, Laboratory</i>	N/A	100%							100%
<i>Treatment</i>	B-1	62%	38%	0%				0%	100%
<i>Pumping, Transmission/Distribution, Storage</i>	B-1	48%	30%	22%				0%	100%
<i>Public/Private Fire Protection Costs</i>	D-2							100%	100%
<i>Administration Salaries, Wages, & Benefits</i>	B-4	55%	24%	5%	8%	8%		0%	100%
<i>Customer Service Salaries, Wages, & Benefits</i>	B-4	0%	0%	0%	56%	44%		0%	100%
<i>Administration Non-Salary Costs</i>	B-1	55%	24%	5%	8%	8%		0%	100%

Newport Water Division
 Cost Of Service Analysis
 RFC Schedule B-4 Rebuttal
 Allocation Analyses

Administration 15-500-2200

Salaries by Staff Position

	FY 2010 Salary
Director of Utilities	\$ 60,298
Administrative Secretary	\$ 32,441
Deputy Director - Finance	\$ 52,865
Deputy Director - Engineering	\$ 55,294
Financial Analyst	\$ 67,594
Salary \$ Allocation Results	\$ 268,492

Resulting % Allocation of Administration Salaries, Wages, & Benefits

Customer Service 15-500-2209

Salaries by Staff Position

Meter Repairman/Reader	\$ 40,934
Meter Repairman/Reader	45,601
Principal Account Clerk	49,491
Meter Repairman/Reader	42,818
Maintenance Mechanic	48,879
SAE - Sr. Maintenance Mechanic	46,822
Water Meter Foreman	51,493
Salary \$ Allocation Results	\$ 326,038

Resulting % Allocation of Customer Service Salaries, Wages, & Benefits

Allocation of Salary Costs							Total Allocated
Base	Max Day	Max Hour	Metering	Billing	Services	Fire Protection	
55%	24%	5%	8%	8%		0%	100%
55%	24%	5%	8%	8%		0%	100%
55%	24%	5%	8%	8%		0%	100%
55%	24%	5%	8%	8%		0%	100%
55%	24%	5%	8%	8%		0%	100%
\$ 146,902	\$ 65,215	\$ 12,974	\$ 21,562	\$ 21,032		\$ 808	\$ 268,492
55%	24%	5%	8%	8%		0%	100%

	50%	50%		100%		
	50%	50%		100%		
		100%		100%		
	100%			100%		
	50%	50%		100%		
	100%			100%		
	50%	50%		100%		
	\$ 183,094	\$ 142,945		\$ 326,038		
0%	0%	0%	56%	44%	0%	100%

Newport Water Division
 Cost Of Service Analysis
 RFC Schedule B-5 Rebuttal
 Capital Functionalization

Page 1 of 2

Functional Break Down of Existing Fixed Assets

		Supply	Treatment Station 1	Treatment Lawton Valley	Treatment Both Plants	T&D	Fire	Meters	Services	Billing	
TRANSMISSION/DISTRIBUTION	\$ 18,817,129					100%					100%
LAWTON VALLEY	\$ 5,351,452			100%							100%
STATION 1	\$ 22,516,441		100%								100%
TREATMENT BOTH	\$ 2,726,208				100%						100%
STORAGE	\$ 1,311,908					100%					100%
SOURCE OF SUPPLY	\$ 16,492,953	100%									100%
METERS	\$ 2,976,622							50%	50%		100%
BILLING	\$ 725,466									100%	100%
FIRE	\$ 510,621						100%				100%
Total	\$ 71,428,801										
LABORATORY	\$ 80,000	100%									100%
LAND AND ROW	\$ 3,594,491	23%	32%	7%	4%	28%	1%	2%	2%	1%	100%
	\$ 3,674,491										

Total Fixed Assets \$ 75,103,292

		Supply	Treatment Station 1	Treatment Lawton Valley	Treatment Both Plants	T&D	Fire	Meters	Services	Billing	Total
TRANSMISSION/DISTRIBUTION	\$ 18,817,129	\$ -	\$ -	\$ -	\$ -	\$ 18,817,129	\$ -	\$ -	\$ -	\$ -	\$ 18,817,129
LAWTON VALLEY	\$ 5,351,452	-	-	5,351,452	-	-	-	-	-	-	5,351,452
STATION 1	\$ 22,516,441	-	22,516,441	-	-	-	-	-	-	-	22,516,441
TREATMENT BOTH	\$ 2,726,208	-	-	-	2,726,208	-	-	-	-	-	2,726,208
STORAGE	\$ 1,311,908	-	-	-	-	1,311,908	-	-	-	-	1,311,908
SOURCE OF SUPPLY	\$ 16,492,953	16,492,953	-	-	-	-	-	-	-	-	16,492,953
METERS	\$ 2,976,622	-	-	-	-	-	-	1,488,311	1,488,311	-	2,976,622
BILLING	\$ 725,466	-	-	-	-	-	-	-	-	725,466	725,466
FIRE	\$ 510,621	-	-	-	-	-	510,621	-	-	-	510,621
Total	\$ 71,428,801	\$ 16,492,953	\$ 22,516,441	\$ 5,351,452	\$ 2,726,208	\$ 20,129,037	\$ 510,621	\$ 1,488,311	\$ 1,488,311	\$ 725,466	\$ 71,428,801
		23%	32%	7%	4%	28%	1%	2%	2%	1%	
LABORATORY	\$ 80,000	80,000	-	-	-	-	-	-	-	-	80,000
LAND AND ROW	\$ 3,594,491	829,970	1,133,088	269,300	137,190	1,012,948	25,696	74,896	74,896	36,507	3,594,491
	\$ 3,674,491	\$ 909,970	\$ 1,133,088	\$ 269,300	\$ 137,190	\$ 1,012,948	\$ 25,696	\$ 74,896	\$ 74,896	\$ 36,507	\$ 3,674,491
		25%	31%	7%	4%	28%	1%	2%	2%	1%	
Total Allocated	\$ 75,103,292	\$ 17,402,924	\$ 23,649,529	\$ 5,620,752	\$ 2,863,398	\$ 21,141,985	\$ 536,317	\$ 1,563,207	\$ 1,563,207	\$ 761,973	\$ 75,103,292
		23%	31%	7%	4%	28%	1%	2%	2%	1%	

Newport Water Division
 Cost Of Service Analysis
 RFC Schedule B-5 Rebuttal
 Capital Functionalization

Page 2 of 2

Functionalization of Capital Costs

		Supply	Treatment Station 1	Treatment Lawton Valley	Treatment Both Plants	T&D	Fire	Meters	Services	Billing	
Capital Spending Restricted Account	\$ 1,146,918	23%	31%	7%	4%	28%	1%	2%	2%	1%	100%
Debt Service	\$ 2,010,823	23%	31%	7%	4%	28%	1%	2%	2%	1%	100%
	<u>\$ 3,157,741</u>										

		Supply	Treatment Station 1	Treatment Lawton Valley	Treatment Both Plants	T&D	Fire	Meters	Services	Billing	Total
Capital Spending Restricted Account	\$ 1,146,918	\$ 265,764	\$ 361,157	\$ 85,836	\$ 43,728	\$ 322,864	\$ 8,190	\$ 23,872	\$ 23,872	\$ 11,636	\$ 1,146,918
Debt Service	\$ 2,010,823	465,948	633,195	150,491	76,665	566,058	14,359	41,853	41,853	20,401	2,010,823
	<u>\$ 3,157,741</u>	<u>\$ 731,711</u>	<u>\$ 994,352</u>	<u>\$ 236,326</u>	<u>\$ 120,392</u>	<u>\$ 888,921</u>	<u>\$ 22,550</u>	<u>\$ 65,726</u>	<u>\$ 65,726</u>	<u>\$ 32,037</u>	<u>\$ 3,157,741</u>

Newport Water Division
 Cost Of Service Analysis
 RFC Schedule B-6 Rebuttal
 Water Demand History

Docket No. 4128

	Annual Demand in 1000s Gallons										Baseline	Rate Year
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	3-Year Average	Docket 4025
Annual Demand by Class												
Residential	682,937	698,765	773,872	780,666	736,577	716,037	749,409	734,137	780,264	690,544	734,982	753,416
Commercial	724,094	640,379	580,798	583,184	663,766	573,711	493,539	456,486	505,014	519,521	493,674	486,983
Navy	466,167	450,247	307,051	348,222	511,299	417,869	373,306	278,441	247,728	225,392	250,520	278,289
Portsmouth	438,179	442,582	455,142	451,723	422,944	429,465	463,253	445,232	473,338	444,777	454,449	451,640
Total (in 1000's Gallons)	2,311,377	2,231,973	2,116,863	2,163,795	2,334,586	2,137,082	2,079,508	1,914,297	2,006,344	1,880,234	1,933,625	1,970,329
		-3.4%	-5.2%	2.2%	7.9%	-8.5%	-2.7%	-7.9%	4.8%	-6.3%		

Combined Station #1 and LV WTP Production Volumes in 1,000 gals			Peaking Comparison		
FY 2007	FY 2008	FY 2009	3 Year Average Production Peaks	System Peaks Estimated from Monthly Data	System Diversity Ratio (1)
Annual Production	2,456,363	2,524,784	2,437,440	2,472,862	
Average Day Production	6,730	6,917	6,678	6,775	
Maximum Month Production	256,796	269,819	280,875	269,163	
Maximum Day Production	10,165	10,724	12,100	10,996	
Max Day Date	6/28/2007	8/4/2007	7/18/2008		
Maximum Day Peaking Factor	1.51	1.55	1.81	1.62	1.12
Max-Day to Avg. Day/Max-Month Ratio	1.19	1.23	1.34	1.27	
Maximum Hour	13,800	15,200	13,250	14,083	1.29
Maximum Hour Peaking Factor	2.05	2.20	1.98	2.08	
			Coincident	Noncoincident	
			Excluding Fire Protection		

(1) Calculated according to AWWA M-1 Guidelines

Billed Demand Peaking Analysis: Determination of Customer Class Peaking Factors

Enter "A" to use all data or "B" to use monthly only data

A

 Enter "B" to use billing data or "D" to use daily demand study data

B

Estimation of Each Customer Class' Peaking Factors

Estimation of Each Customer Class' Peaking Factors										Max Day Peaking			Max Hour Peaking	
Customer Class	Max Month Water Demand (1000's gallons)				Average Daily Demand in Max Month (1,000 gals.)	Average Daily Demand (1,000 gals.)	Max Month Avg. Day to Avg. Day			Monthly to Daily Peaking Multiplier	System Max Day/ Avg. Day Max Month Ratio	Max Day Ratio	Daily to Hourly Peaking Multiplier	Max Hour Ratio
	2007	2008	2009	Typical Max Month (1,000 gals.)			All Meters (QRT + Monthly)	Monthly Meters Only	Ratios Used in Rate Calculations					
Residential	79,586	103,115	83,630	88,777	2,959	2,014	1.47	N/A	1.47	1.06	1.27	1.97	1.20	2.37
Commercial	51,545	66,684	61,978	60,069	2,002	1,353	1.48	N/A	1.48	1.15	1.27	2.16	1.33	2.87
Navy	29,771	30,475	24,640	28,295	943	686	1.37	1.37	1.37	1.09	1.27	1.90	1.27	2.40
Portsmouth	51,270	58,023	61,048	56,780	1,893	1,245	1.52	1.52	1.52	1.08	1.27	2.08	1.25	2.61
Fire														
Estimated Systemwide Peaks												2.03		2.55

(1) (2) (3) (4)

- (1) These monthly peaking ratios was calculated using demand records from only those customers metered on a monthly basis.
 (2) Daily Peaking Multipliers developed using data daily data collected during the summer of 2009.
 (3) Max Day / Avg. Day Max Month water production ratios are from RFC Schedule B-7 Rebuttal, 'Water Production Peaking Analysis'.
 (4) Navy and Portsmouth demand peaking behavior is assumed to have both residential and nonresidential characteristics that resemble demand in the rest of the system.
 As such, the following assumptions are used to weight residential and nonresidential peaking for Portsmouth and the Navy.

	% Residential Demand	% NonResidential Demand	
Navy	50%	50%	Used in Max Day and Max Hour calculations
Portsmouth	60%	40%	Used in Max Hour calculations only.

- (5) Fire peaking behavior is estimated using a separate methodology demonstrated in RFC Schedule B-11 Rebuttal, Fire Protection Demand Analysis'.

Newport Water Division
 Cost Of Service Analysis
 RFC Schedule B-9 Rebuttal
 System Demands Imposed by Each Customer Class' Peaking Behavior

Docket No. 4128

Rate Year Demand (1,000 gallons)						% UFW to Navy	% T&D to Navy
Customer Class	Annual Demand	Average Daily Demand	Lost Water Adjustment	Adjusted Average Daily Demand	% Average Demand by Class		
Residential	753,416	2,064	866	2,930	42.4%	25%	50%
Commercial	486,983	1,334	560	1,894	27.4%		
Navy	278,289	762	80	842	12.2%		
Portsmouth	451,640	1,237	-	1,237	17.9%		
Fire					N/A		
Total, w Fire Prot.	1,970,329	5,398	22%	6,904	100%		
						(1)	
						2519802	0

Max Day Calculations				% of Daily Peaks		Max Hour Calculations			% of Hourly Peaks		
Customer Class	Max Day Peaking Factor	Demand x Peaking Factor (3)	Incremental Peak Demand	% of Daily Peaks	With	Without	Max Hour Peaking Factor	Demand x Peaking Factor (3)	Incremental Peak Demand	With	Without
					Portsmouth and 100% Navy	Portsmouth and 50% Navy				Portsmouth and 100% Navy	Portsmouth and 50% Navy
Residential	1.97	5,780	2,850	33.3%	33.3%	41.6%	2.37	6,936	1,156	14.6%	16.4%
Commercial	2.16	4,083	2,190	25.5%	25.5%	31.9%	2.87	5,444	1,361	17.2%	19.3%
Navy	1.90	1,598	756	8.8%	8.8%	5.5%	2.40	2,024	426	5.4%	3.0%
Portsmouth	2.08	2,573	1,335	15.6%	15.6%		2.61	3,225	652	8.2%	
Fire		1,440	1,440	16.8%	16.8%	21.0%		5,760	4,320	54.6%	61.3%
Total, w Fire Prot.		15,474	8,571	100.0%	100.0%	100.0%		23,390	7,915	100.0%	100.0%
Total, without Fire Protection		14,034	7,131					17,630	3,595		
(demand is in thousands of gallons)											

(1) From RFC Schedule D-4 Rebuttal. The lost water adjustment is made to the peaking analysis so that Portsmouth and the Navy will not share in that portion of certain operating costs.

(2) From RFC Schedule B-11 Rebuttal, Fire Protection Demand Analysis'.

Newport Water Division
 Cost Of Service Analysis
 RFC Schedule B-10 Rebuttal
 Summary of Peak Load Distributions (by Rate Class and Base/Extra-Capacity Categories)

Docket No. 4128

EACH RATE CLASS' SHARE OF SYSTEM PEAKS

Rate Class	Average Demand	Daily Peaks	Hourly Peaks
Retail			
Residential	42%	33%	15%
Commercial	27%	26%	17%
Navy	12%	9%	5%
Portsmouth	18%	16%	8%
Fire	N/A	17%	55%
	100%	100%	100%

Percentages are from RFC Schedule B-9 Rebuttal, 'System Demands Imposed by Each Customer Class' Peaking Behavior '.

BASE/EXTRA-CAPACITY DISTRIBUTION OF SYSTEM PEAKS

	Incremental Demand	% Distribution for Max Day	% Distribution for Max Hour
Base	6,775	61.6%	48.1%
Extra Capacity			
Max Day	4,221	38.4%	30.0%
Max Hour	3,087		21.9%
Private Fire Protection			
Max Day	-	0.0%	0.0%
Max Hour	-		0.0%
Total%		100.0%	100.0%
Total 1000's Gallons		10,996	14,083

Incremental demand data is from RFC Schedule B-11 Rebuttal, Fire Protection Demand Analysis'.
 and from RFC Schedule B-9 Rebuttal, 'System Demands Imposed by Each Customer Class' Peaking Behavior '.

FIRE PROTECTION ASSUMPTIONS

Fire Protection Flow	(gals per minute)	4,000
Hourly Fire Protection Flow	(1000's of gallons)	240
Length of Fire Event	(in hours)	6

Newport Water Division
 Cost Of Service Analysis
 RFC Schedule D-1 Rebuttal
 Water Accounts, by Size and Class

Connection Size	Meter Factors	COMMERCIAL				RESIDENTIAL				WHOLESALE (Monthly)			
		Meter Read Frequency		Equivalent Meters		Meter Read Frequency		Equivalent Meters		Navy		Portsmouth	
		Monthly	Quarterly	Monthly	Quarterly	Monthly	Quarterly	Monthly	Quarterly	Meters	Equivalents	Meters	Equivalents
5/8	1.0	97	559	97	559	5	10,216	5	10,216	0	0	0	0
3/4	1.1	52	179	57	197	5	2,238	6	2,462	1	1	0	0
1	1.4	157	29	220	41	20	361	28	505	0	0	0	0
1.5	1.8	137	27	247	49	21	146	38	263	0	0	0	0
2	2.9	180	30	522	87	35	69	102	200	0	0	0	0
3	11.0	59	14	649	154	12	16	132	176	0	0	0	0
4	14.0	11	3	154	42	1	1	14	14	0	0	1	14
5	21.0	2	0	42	0	0	0	0	0	0	0	0	0
6	29.0	12	0	348	0	0	1	0	29	8	232	0	0
8	36.3	0	0	0	0	1	1	36	36	0	0	0	0
10	43.5	0	0	0	0	0	0	0	0	1	44	0	0
Total	14,708	707	841	2,336	1,128	100	13,049	360	13,901	10	277	1	14

Billing Units	
Billed Monthly	818
Billed Quarterly	13,890
Total	65,376

Equivalent Units	
Billed Monthly	2,986
Billed Quarterly	15,030
Total	216,190

Newport Water Division
 Cost Of Service Analysis
 RFC Schedule D-2 Rebuttal
 Fire Protection Accounts

		Docket 4025			
	Connection Size	Existing Differential	Number of Connections	Equivalent Connections (2)	
Public Hydrants	Newport	6	111.31	583	64,894
	Middletown	6	111.31	408	45,414
	Portsmouth	6	111.31	8	890
	Subtotal: Public Hydrants			999	111,199
					% of Equiv Connections
					71%
Private Fire Connections					
	2	6.19	1	6	
	4	38.32	57	2,184	
	6	111.31	246	27,382	
	8	237.21	62	14,707	
	10	426.58	0	-	
	12	689.04	2	1,378	
Subtotal: Private Fire Connections			368	45,658	% of Equiv Connections
Total Fire Connections			1,367	156,856	29%
					100%

(1) Demand factors are based on the principles of the Hazen-Williams equation for flow through pressure conduits.
 For more information, see the AWWA M1 rate manual chapter on fire protection charges.

(2) Equivalent connections are arrived at by multiplying the number of connections by the demand factor.

General Water Service

Connection	Service	No. of	Equivalent	
Size	Cost	Services	Connections	
5/8	1.000	10,877	10,877	
3/4	1.000	2,475	2,475	
1	1.860	567	1,055	
1.5	4.630	331	1,533	
2	6.190	314	1,944	
3	11.060	101	1,117	
4	11.060	17	188	
5	11.060	2	22	
6	11.060	21	232	
8	11.060	2	22	
10	11.060	1	11	
Subtotal General Service		14,708	19,475	83%

Private Fire Connections

2	6.190	1	6	
4	11.060	57	630	
6	11.060	246	2,721	
8	11.060	62	686	
10	11.060	0	-	
12	11.060	2	22	
Subtotal: Private Fire Connections		368	4,065	17%

Annualized

Total Retail & Private Fire Connections

	12	
15,076	282,488	100%

Newport Water Division
 Cost Of Service Analysis
 RFC Schedule D-3 Rebuttal
 Production Summary

		Station #1			Lawton Valley			Combined	
		In Gallons	in 1000's		In Gallons	in 1000's		In Gallons	in 1000's
<u>FY 07 JULY 2006 - JUNE 2007</u>	Max. Month June	1,176,356,210	1,176,356	August	1,280,006,852	1,280,007	August	2,456,363,062	2,456,363
		116,724,700	116,725		140,288,300	140,288		256,795,580	256,796
<u>FY 08 JULY 2007 - JUNE 2008</u>	Max. Month August	1,268,356,660	1,268,357	July	1,256,427,700	1,256,428	July	2,524,784,360	2,524,784
		141,803,530	141,804		144,557,900	144,558		269,819,450	269,819
<u>FY 09 JULY 2008 - JUNE 2009</u>	Max. Month March	1,152,697,400	1,152,697	July	1,284,742,500	1,284,743	July	2,437,439,900	2,437,440
		110,288,000	110,288		177,163,200	177,163		280,874,500	280,875

MAX DAY PRODUCTION AVAILABLE FOR SALE

	Station #1			Lawton Valley			Combined		
	Max Day Production			Max Day Production			Max Day Production		
	Date	In Gallons	in 1000's	Date	In Gallons	in 1000's	Date	In Gallons	in 1000's
<u>FY 07 JULY 2006 - JUNE 2007</u>	8/2/2006	5,114,940	5,115	8/14/2006	5,958,100	5,958	6/28/2007	10,165,100	10,165
	includes booster to LV at 1,256,000 Gallons								
<u>FY 08 JULY 2007 - JUNE 2008</u>	8/25/2007	6,179,670	6,180	6/10/2008	6,805,400	6,805	8/4/2007	10,723,620	10,724
	includes booster to LV at 2,251,000 Gallons								
<u>FY 09 JULY 2008 - JUNE 2009</u>	7/20/2008	4,341,000	4,341	7/18/2008	7,845,700	7,846	7/18/2008	12,100,100	12,100
	includes booster to LV at 324,000 Gallons								

PEAK HOURLY FLOW

	Date	Station #1		Date	Lawton Valley	
<u>FY 07 JULY 2006 - JUNE 2007</u>	7/6/2006	5.8	MGD	7/1/2006	8.0	MGD
<u>FY 08 JULY 2007 - JUNE 2008</u>	8/26/2007	7.2	MGD	6/18/2008	8.0	MGD
<u>FY 09 JULY 2008 - JUNE 2009</u>	7/18/2008	5.25	MGD	7/18/2008	8.0	MGD

Newport Water Division
 Cost Of Service Analysis
 RFC Schedule D-4 Rebuttal
 Demand Summary

Fiscal Year Annual Demand

	FY 2006	FY 2007	FY 2008	FY 2009
Residential	718,022	734,137	780,264	690,544
Commercial (includes governmental)	505,804	456,486	505,014	519,521
Navy	373,306	278,441	247,728	225,392
Portsmouth	453,618	445,232	473,338	444,777
Total 1000's Gallons	2,050,751	1,914,297	2,006,344	1,880,234
		-6.7%	4.8%	-6.3%

Max Month Demand*(1000's of gallons)*

	FY 2007	FY 2008	FY 2009
Residential	79,586	103,115	83,630
Commercial	51,545	66,684	61,978
Navy	29,771	30,475	24,640
Portsmouth	51,270	58,023	61,048
NonCoincident Max Month	212,172	258,296	231,296
Coincident Max Month	196,132	221,941	201,008
Production Volume, Max Month	256,796	269,819	280,875

Unaccounted for Water Analysis

	FY 2007	FY 2008	FY 2009	Average
Billed Consumption (1,000 gals.)	1,914,297	2,006,344	1,880,234	1,933,625
Total Water Produced (1,000 gals.)	2,456,363	2,524,784	2,437,440	2,472,862
Unaccounted for Water (1,000 gals.)	542,066	518,440	557,206	539,237
Percent Unaccounted for Water	22%	21%	23%	22%

Newport Water Division
 Cost Of Service Analysis
 RFC Schedule D-5 Rebuttal
 Development of Pumping Costs

Pumping Labor and Benefits

Station One		Lawton Valley	
Labor hours per day pump	0.5000	Labor hours per day pump	0.1667
Days per year	365	Days per year	365
Total Hours	182.5000	Total Hours	60.8455
Average per hour pay	\$21.78	Average per hour pay	\$22.10
Average per hour benefits	\$4.69	Average per hour benefits	\$4.82
Pumping Salaries	\$3,974.85	Pumping Salaries	\$1,344.69
Pumping Benefits	\$855.01	Pumping Benefits	\$293.15

Pumping Repairs and Supplies

Station One		Lawton Valley	
50275 Repair & Maintenance - Equipment		Repair & Maintenance - Equipment	
None	\$0.00	Vendor	amount
Total Repair & Maintenance Pumping	\$0.00	Bristol County Machine	\$125.00
		Broadway Electric	\$160.00
50311 Operating Supplies		Bristol County Machine	\$128.00
Vendor	amount	Broadway Electric	\$85.10
National Electric Testing	\$300.00	Bristol County Machine	\$60.00
		Ralco Electric	\$306.00
Total - Operating Supplies - Pumping	\$300.00	Delta Electric Motor	\$496.00
		Industrial Pump Sales & Service	\$5,521.56
		Industrial Pump Sales & Service	\$1,152.00
		Total Repair & Maintenance Pumping	\$8,033.66
		Operating Supplies	
		Vendor	amount
		National Electric Testing	\$300.00
		Ralco Electric	\$499.00
		Total Operating Supplies Pumping	\$799.00

Pumping Electricity

Station One		Lawton Valley	
Annual Pumping Power	\$7,193	Annual Pumping Power	\$21,712

Total Pumping Costs

Station One		Lawton Valley	
Pumping Salaries	\$3,975	Pumping Salaries	\$1,345
Pumping Benefits	\$855	Pumping Benefits	\$293
Total Repair & Maintenance Pumping	\$0	Total Repair & Maintenance Pumping	\$8,034
Total - Operating Supplies - Pumping	\$300	Total Operating Supplies Pumping	\$306
Annual Pumping Power	\$7,193	Annual Pumping Power	\$21,712
Total Annual Pumping Costs	\$12,323	Total Annual Pumping Costs	\$31,689