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July 14, 2015

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

Re: Pawtucket Water Supply Board – Docket No. 4550

Dear Luly:

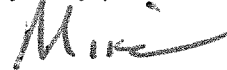
As you know, this office represents the Town of Cumberland in this matter.

Enclosed are an original and nine copies of the Town of Cumberland's Responses to the 1st set of data requests from Pawtucket Water Supply Board.

An electronic version of this Objection has been provided to the service list. Hard copies are being sent to you and the Attorney General.

If you have any questions, please feel free to call.

Very truly yours,



Michael R. McElroy

MRMc:tmg
cc: Service List

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

IN RE: PAWTUCKET WATER SUPPLY BOARD : DOCKET No. 4550
GENERAL RATE FILING :

THE TOWN OF CUMBERLAND'S RESPONSES TO THE
1ST SET OF DATA REQUESTS FROM PAWTUCKET WATER SUPPLY BOARD

Data Requests to David F. Russell, P.E.

1. In Mr. Russell's testimony, he made a number of suggested changes to the PWSB's revenue request, cost allocations and rate design. He also made several suggestions regarding mitigation measures. As such:
 - a. Please provide a copy of the rates that result from all of Mr. Russell's recommendations, including an electronic copy of the spreadsheet (with any and all linked spreadsheets and all formulas intact).
 - b. If Mr. Russell has not prepared new rates or developed a model, how can he be sure that his recommendations do not result in charges that are contrary to his "mitigation measures"?
 - c. If Mr. Russell has not prepared new rates or a spreadsheet model, does he expect to submit one at a later date for review?
 - d. If Mr. Russell does not submit a spreadsheet model until after PWSB submits its rebuttal testimony, how does he expect PWSB to comment on it?

RESPONSE:

- a. Cumberland has filed an objection to this part of PWSB's 1st information request of Cumberland.
- b. I see this as an iterative process. PWSB has already made some changes to its proposed revenue requirements. The Division has suggested other changes as has the Town of Cumberland. I have estimated the impacts of Cumberland's recommended changes on PWSB's revenue requirements in the rate year, and for some recommendations in the two following years of the 3 year rate plan. Similarly, the impacts of proposed "mitigation measures" have been estimated. The combined effects of these estimates provide a quantitative measure of net annual change in total revenue requirements. The Division appears to be following a similar approach.

- c. He does not expect to. Also, see response to 1a.
- d. I expect PWSB to comment on one or more of my recommendations, just as I would expect them to comment on one or more of the Division's recommendations. Notwithstanding the foregoing, if PWSB would like to see the impacts on the individual proposed rates, they could incorporate one or more of the recommended changes (Cumberland's or the Division's) in the model developed by their expert to test the impact(s) on total revenue requirements and the reduced level of unit charges that those changes would result in.

Prepared by David F. Russell, P.E.

2. Regarding Mr. Russell's testimony on Pg. 4 l. 12:
 - a. For the Aquarion Water Company – how did you recommend capital cost be allocated?
 - b. Did you propose that the capital costs related to any pipes be recovered through meter or service charges?
 - c. If so, how did you decide which costs to recover through a meter or service charge?

RESPONSE:

- a. In the Aquarion Water Company (AWC) case I did recommend that a small shift be made in the manner that the very large lease cost associated with their WTP is recovered through rates. Under the company's proposal typical residential customers would pay about \$300 a year in fixed charges just for the leasing costs. As proposed in that case about 2/3rds of the total leasing costs would be recovered from a fixed surcharge, and the other 1/3rd would be recovered through a uniform consumption charge. Because this was such a large fixed charge, and to give customers the ability to lower their water bills, I recommended that one-half of the leasing costs be recovered through the fixed surcharges, and the other half be recovered through the consumption charge. Thus, this would shift about 1/6th of those costs from the fixed surcharge (not part of the fixed customer service charge) to the consumption charge. This is very different from my recommendation relative to recovering some fixed capital costs (relatively small) through fixed charges (not as part of the customer service charge) in this PWSB case. First, the Water Treatment Plant is a general benefit facility (to be paid for by both wholesale and retail customers) and distribution pipes are special benefit facilities (to be paid for by only retail customers). Second the relative magnitudes of the fixed charges in the AWC case and this case are almost an order of magnitude apart. Third, AWC doesn't have a large wholesale customer in Massachusetts.
- b. No, I did not. Nor am I proposing that in this case. My recommendation with respect to some capital improvements is that PWSB (and the Commission) should consider, as a means of improving revenue stability, recovering some capital costs for facilities that are designed to serve only retail customers (and that only benefit retail customers – special benefit facilities) from fixed charges to retail customers. These charges could be added to the meter and service charges in an appropriate manner or they could be designed as a separate fixed charge with a different label on a customer's bill.

c. NA

Prepared by David F. Russell, P.E.

3. Regarding Mr. Russell's testimony on Pg. 7 ll. 7-8:
 - a. What are the "clear signs" that sales are increasing in the "near term"?
 - b. What period does the "near term" encompass?

RESPONSE:

- a. Two of PWSB's witness have stated that the trend in declining sales has leveled off in recent years. This is clear from the information provided in PWSB's filing. Moreover, between FY2013 and FY2014 total sales increased, and it is clear that total sales in FY2015 are going to be higher than FY2014. That's 2 consecutive (and most recent) years in a row. I do not see that as anything but a "clear sign" that sales are increasing in the near term.
- b. FY2013 through today (most recent three years ending June 30, 2015).

Prepared by David F. Russell, P.E.

4. Regarding Mr. Russell's testimony on Pgs. 12-13:

- a. Please provide all analysis of rainfall and weather in the Pawtucket service area or Rhode Island that Mr. Russell examined or used to reach his conclusions regarding metered sales projections. (Please note, the PWSB does not seek any analysis or data examined after June 17, 2015 – only that data considered in the development of Mr. Russell's testimony.)
- b. If Mr. Russell did not consider rainfall or weather, please indicate why these were not considered.

RESPONSE:

- a. I did not make an independent evaluation of rainfall and weather in the Pawtucket service area and Rhode Island. I relied on the testimonies of Mr. Woodcock and Mr. DeCelles; conversations with Mr. Champi; responses to related information requests; and my general knowledge of New England weather having lived and worked in the Northeast most of my life, including several years just over the border of RI in Westport, Ma.
- b. I did consider rainfall and weather along with several other factors when evaluating historic usage levels and PWSB's estimates of sales going forward. I also based my estimates of sales going forward on the same analysis used by Mr. Woodcock. However, with sales data available for almost all of FY2015, I simply updated his analysis by one year calculating the average change in sales over the period FY2013 through FY2015, instead of his use of the average change in sales from FY2012 through FY2014. If actual total sales for all of FY2015 turn out to be significantly different from the estimate I used based on 11 months of actual results and one month (June FY2015) estimated, I would be glad to revise my estimates for FY2016 using the total sales realized in FY2015.

Prepared by David F. Russell, P.E.

5. Regarding Mr. Russell's testimony on Pg. 13 ll. 2-7:
- a. Does Mr. Russell consider FY 2013 – FY 2015 representative or normal years in terms of water sales for Pawtucket Water?
 - b. Does Mr. Russell consider FY 2012 representative or normal?
 - c. If yes, please provide all data that Mr. Russell examined or relied upon to reach the conclusion that these were representative or normal years for water sales in Pawtucket.

RESPONSE:

- a. Water sales over the period FY2013 to FY2015 appear to be “representative” or “normal” in comparison to recent history. Retail sales were essentially flat from FY2013 to FY2014, and FY2015 (11 months actual, 1 month estimated) showed a little over 1.2% increase over FY2014. Wholesale sales increased by about 15% in both FY2014 and FY2015. Total system water sales increased by about 0.9% in FY 2014, and another 2.18% in FY 2015. In comparison to water sales over the period FY2008 through FY2011 they were not normal or representative of that period. They were on average much lower than total sales during that earlier period – about 20% lower on average.
- b. In comparison to the average sales between FY2013 to FY2015 (3,634,172 HCF), total sales in FY 2012 3,676,132 HCF) were also representative of recent history. That average (3,634,172) is about 1% less than the total in FY2012 (3,676,132 HCF).
- c. See responses to parts a. and b.

Prepared by David F. Russell, P.E.

6. Regarding Mr. Russell's testimony on Pg. 13, ll. 5-7: To what does Mr. Russell attribute the change in sales ("departure from decreasing sales prior to FY 2013") for the FY 2013 – FY 2015 period as opposed to the decreasing sales prior to FY 2013?

RESPONSE:

There are many reasons or factors that could lead to this apparent changing trend. Some that come to mind are demographics (population, household size, average age, etc.), saturation of efficient (low use) water fixtures and appliances, economic conditions and weather. I did not attempt to quantify any one of these factors let alone the interactions between them.

Prepared by David F. Russell, P.E.

7. Regarding Mr. Russell's testimony on Pgs. 8-17: The PWSB experienced a 9% increase in sales for large retail customers between FY 2013 and FY 2014 followed by a 9% drop in large retail sales for the first 11 months of FY 15. Given Mr. Russell's testimony regarding various economic indicators and their relationship to water sales, please provide the following:
- a. Please explain how or why these increases and decreases correlate to, match, or are in any way influenced by the economic factors Mr. Russell describes in his testimony and provide all supporting data.

RESPONSE:

I did not attempt to explain any of the year to year changes in water sales for each customer class. I simply showed that there was some correlation between total sales and economic conditions, particularly between the period of relatively high percentage decreases experienced from 2008 until about 2010/2011 when economic conditions were deteriorating, and the leveling off of decreases and some increases as economic conditions continued to improve since the 2011/2012 timeframe. It is not a perfect correlation and certainly many other factors are at work as well (see response to number 6 above). My main contention is that given the increases in sales over the two most recent years (FY2014 and FY2015), it is at least as likely that sales will increase by a small amount in FY2016, as it is that sales will decrease by a comparable small amount, and probably more likely that sales will increase by a small amount. Furthermore, by using the exact same methodology as was used by PWSB to estimate sales in FY 2016, but updating it by one year, that methodology results in a small increase (about 0.65%, or two-thirds of one percent) in total sales for the rate year. Having said all that, some of the irregularity cited in this information request could be explained by the fact that customers in the large retail class have changed their class to the medium retail class by switching to a smaller meter/service size (as stated by at least one of PWSB's witnesses). See PWSB's response to Div. 2-3.

Prepared by David F. Russell, P.E.

8. Regarding Mr. Russell's testimony on Pgs. 8-17: The PWSB experienced a 1.4% increase in small residential sales for the first 11 months of FY 2015 as compared to the first 11 months of FY 2014, when at the same time large retail sales actually dropped 9%. Given Mr. Russell's testimony regarding various economic indicators and their relationship to water sales, please provide the following:
- a. Please explain how or why these increases and decreases correlate to, match, or are in any way influenced by the economic factors Mr. Russell describes in his testimony and provide all supporting data.
 - b. Please explain and reconcile the discrepancies in the increases and decreases between these two classes of customers and how or why these increases and decreases correlate to, match, or are in any way influenced by the economic factors Mr. Russell describes in his testimony and provide all supporting data.

RESPONSE:

a.) and b.) Please see responses to information requests (IR) 6 and 7 above. Additionally, beyond my general responses, as stated in response to IR number 7 some of the irregularity cited in this IR could be explained by the fact that customers in the large retail class have changed their class to the medium retail class by switching to smaller meter/service sizes (as stated by at least one of PWSB's witnesses).

Prepared by David F. Russell, P.E.

9. Regarding Mr. Russell's testimony on Pgs. 8-17: The PWSB experienced a 0.9% decrease for small residential sales between FY 2013 and FY 2014 and large retail sales increased by 9%. Given Mr. Russell's testimony regarding various economic indicators and their relationship to water sales, please provide the following:
- a. Please explain how or why these increases and decreases correlate to, match, or are in any way influenced by the economic factors Mr. Russell describes in his testimony and provide all supporting data.
 - b. Please explain and reconcile the discrepancies in the increases and decreases between these two classes of customers and how or why these increases and decreases correlate to, match, or are in any way influenced by the economic factors Mr. Russell describes in his testimony and provide all supporting data.

RESPONSE:

a.) and b.) Please see responses to information requests 6 and 7 above. Additionally, beyond my general responses, the increase in large retail sales could, at least partially, be due to improving economic conditions, and the decreasing usage by small residential customers could be due to weather conditions or other factors that may have significant impacts to residential use while at the same time having very little or no effect on industrial usage.

Prepared by David F. Russell, P.E.

10. Regarding Mr. Russell's testimony on Pgs. 8-17: The PWSB's wholesale sales increased by 16% for the first 11 months of FY 2015 as compared to the first 11 months of FY 2014, when at the same time large retail sales dropped 9% and small retail sales increased by 1.4%. Given Mr. Russell's testimony regarding various economic indicators and their relationship to water sales, please provide the following:
- a. Please explain how or why these increases and decreases correlate to, match, or are in any way influenced by the economic factors Mr. Russell describes in his testimony and provide all supporting data.
 - b. Please explain and reconcile the discrepancies in the increases and decreases between these classes of customers and how or why these increases and decreases correlate to, match, or are in any way influenced by the economic factors Mr. Russell describes in his testimony and provide all supporting data.

RESPONSE:

a.) and b.) Please see responses to information requests (IR) 6 and 7 above. Additionally, beyond my general responses, as stated in response to IR number 7, some of the decrease in large retail usage could be explained by the fact that customers in the large retail class have changed their class to the medium retail class by switching to lower meter/service sizes (as stated by at least one of PWSB's witnesses). Other than the relative magnitude of the increases in small retail usage and that of the wholesale customer, I don't see any discrepancies between those increases and some correlation with improving economic conditions. The relatively large increase in wholesale usage is probably due partially to other reasons/factors, one of which could be operational variances on the Cumberland Water Department's system.

Prepared by David F. Russell, P.E.

11. Regarding Mr. Russell's testimony on Pgs. 8-17: The PWSB's wholesale sales increased by essentially the same amount (15%) between FY 2013 and FY 2014, when at the same time large retail sales increased by 9%, and small retail sales dropped 0.9%. Given Mr. Russell's testimony regarding various economic indicators and their relationship to water sales, please provide the following:
- Please explain how or why these increases and decreases correlate to, match, or are in any way influenced by the economic factors Mr. Russell describes in his testimony and provide all supporting data.
 - Please explain and reconcile the discrepancies in the increases and decreases between these classes of customers and how or why these increases and decreases correlated to, matched, or are in any way influenced by the economic factors Mr. Russell describes in his testimony and provide all supporting data.

RESPONSE:

a.) and b.) Please see responses to information requests 6 and 7 above. Additionally, beyond my general responses, I would point out that the Medium Retail and the Wholesale classes have experienced consistent increases over the 3 year period between FY2013 and FY2015. And, except for a very small decrease in usage by the Small Retail class in FY2014, that class has experienced a significant increase in usage over the full 3 year period. Similarly, while the Large Retail class did experience a fairly large decrease in usage in FY2015, over the whole 3 year period their usage has been essentially flat and the methodology used to estimate the FY2016 water sales results in no increase for that class in the rate year. Lastly, while the methodology results in another large increase in Wholesale water sales in FY2016, to be conservative, usage for that class was also not increased significantly in the rate year. Thus, the level of water sales that I've recommended approval of in this case shows no increase for 2 of the 4 classes, and increases for the other 2 classes are relatively small and consistent with increases realized by those classes over the preceding 3 years. In total, the updated methodology used by PWSB results in estimated total water sales in FY2016 just 2/3rd of one percent higher than in FY2015. The bottom line with respect to PWSB's total revenue requirements in the rate year due to this one factor (water sales being below the level allowed in the last case), is that I agree with about 70% of the increase they propose (\$1.7 million), but have shown, using their methodology, that they have overstated that need by about \$520,000 (or 30%).

Prepared by David F. Russell, P.E.

12. Did Mr. Russell discuss his projections of Cumberland's purchased water volumes from Pawtucket with anyone in the Town of Cumberland's water department prior to submitting his testimony? If in the negative, please explain why he did not. If in the affirmative, please state:
- a. The name and address of the person Mr. Russell spoke with;
 - b. The date of the conversation; and,
 - c. The substance of the conversation.

RESPONSE:

- a. Mr. Christopher Champi, Superintendent of the Cumberland Water Department.

Cumberland Water Department
98 Nate Whipple Highway
Cumberland, RI 02864

- b. Once in March 2015, and once in June 2015.
- c. March discussion – General Introduction, General Information about Cumberland Water Department's service area, customer base, service rates, system demands, etc. June discussion- additional information about water usage, internal supply levels and wholesale purchases, plus number of services by meter size.

Prepared by David F. Russell, P.E.

13. Did Mr. Russell obtain any written projections or any other documentation that would support his estimate of Cumberland's future purchased water volumes from anyone in the Town's water department prior to submitting his testimony? If in the negative, please explain why he did not. If in the affirmative, please state:
- The name and address of the person who provided the projections or documentation; and,
 - Provide a copy of all projections or documentation he received.

RESPONSE:

- Mr. Christopher Champi, Superintendent of the Cumberland Water Department (CWD). Address:

Cumberland Water Department
98 Nate Whipple Highway
Cumberland, RI 02864

- We discussed system demands and expected wholesale purchases – verbal responses only, no written documents were provided, except for a list of number of customers by meter size. Mr. Champi indicated he was budgeting for wholesale purchases in FY2016 from PWSB at the same level as what the CWD expected to purchase in FY2015 (about 274,000 HCF). He didn't expect much of a change in FY 2017 (which starts 12 months from now). And for FY2018 (which starts 24 months from now) he expected that wholesale purchases that year could be somewhat less due to additional internal supplies coming on line, but not to a significant degree before FY2019 (which starts 36 months from now).

Prepared by David F. Russell, P.E.

14. Did Mr. Russell discuss Cumberland's Town wide evaluation of Town owned property within the Town of Cumberland for the purpose of the exploration of new municipal groundwater well water supply with anyone from the Town of Cumberland or Cumberland's Water Department prior to submitting his testimony? If in the negative, please explain why he did not. If in the affirmative, please state:
- a. The name and address of the person Mr. Russell spoke with;
 - b. The date of the conversation; and,
 - c. The substance of the conversation.

RESPONSE:

- a. Mr. Christopher Champi, Superintendent of the Cumberland Water Department (CWD). Address:

Cumberland Water Department
98 Nate Whipple Highway
Cumberland, RI 02864
- b. Early June 2015.
- c. He did mention that program briefly, but he didn't think there would be significant additions to their internal supply sources in the short-run (next 2 or 3 fiscal years).

Prepared by David F. Russell, P.E.

15. Did Mr. Russell discuss his projections of Cumberland's purchased water volumes with anyone from Woodard & Curran (W&C), who is conducting a Town wide evaluation of Town owned property within the Town of Cumberland for the purpose of the exploration of new municipal groundwater well water supply prior to submitting his testimony? If in the negative, please explain why he did not. If in the affirmative, please state:
- The name and address of the person Mr. Russell spoke with;
 - The date of the conversation; and,
 - The substance of the conversation.

RESPONSE:

- No, I did not have the discussion referred to in this information request. I didn't think it was necessary having had the two conversations I did have with CWD's Superintendent.
- NA.
- NA.

Prepared by David F. Russell, P.E.

16. Please reconcile Mr. Russell's 15.5% annual increase in purchases in light of the Town of Cumberland's evaluation of Town owned property within the Town of Cumberland for the purpose of the exploration of new municipal groundwater well water supply, including obtaining supply from Franklin Farm?

RESPONSE:

For FY2015, as indicated in this information request, the updated methodology used by PWSB did result in an increase of 15% for FY2016. However, to err on the conservative side (predicting lower growth in sales to Cumberland than the level resulting from PWSB's updated methodology), and because of the level budgeted by CWD for FY2016, I essentially kept the level of sales to CWD very close to the expected sales (based on 11 months of actual data) in FY2015. I used the level of purchases budgeted by the Cumberland Water Department for FY 2016 (274,064 HCF), which is about 13.1% lower than the level estimated (315,500 HCF) using PWSB's updated methodology.

Prepared by David F. Russell, P.E.

17. Please list and explain all factors that will cause Cumberland's water purchase to increase to 274,064 in FY 2016?

RESPONSE:

As indicated above in my response to information request 16, the recommended level of sales for this customer Class in FY 2016 (274,064 HCF) is only about 0.33% higher than the level (273,160 HCF) realized (based on 11 months of actual data and an estimate of 1 month) by the Cumberland Water Department in FY2015. The CWD estimated their wholesale water purchases to be 274,064 HCF in FY2015. They are using this same value (no increase) as their expected purchases from PWSB in FY2016 (CWD's budgeted level of wholesale purchases from PWSB in FY2016). I have not estimated what portion of that small increase is attributable to increasing economic sales or any other factors affecting future sales levels.

Prepared by David F. Russell, P.E.

18. What economic factors does Mr. Russell believe will cause Cumberland's water purchases to increase 15% for the rate year, but result in Pawtucket's retail sales being essentially flat?

RESPONSE:

Please note that I intend to correct numbers in my testimony. The PWSB's updated methodology actually does result in a significant increase (about 0.7%) in total retail sales for FY2016 over FY2015. My recommendation relative to the rate year level of water sales to Cumberland is for a 0.33% increase over the sales to that customer realized (based on 11 months of actual data and an estimate of 1 month) in FY2015; not a 15 % increase. Also, see the response to information request 17.

Prepared by David F. Russell, P.E.

19. Does Mr. Russell agree that the Town of Cumberland has trouble meeting peak demand periods during the summer months. If he does not agree, please explain the basis for his disagreement.

RESPONSE:

I am generally aware of this “trouble” from discussions with Mr. Champi. I have no reason to disagree with Mr. Champi’s statement that such a condition can, and in some years does, occur on his system.

Prepared by David F. Russell, P.E.

20. Regarding Mr. Russell's testimony on Pg. 19, ll. 21-22: Please provide all data to support Mr. Russell's claim that "the predominant expectation (is) that inflation rates are expected to continue to be low in the short run." Please note that considering Mr. Russell's testimony that the inflation rate that should be used in this case is 2.02% (pg. 22 l. 11, pg. 23, l. 23), in responding to this question, we are looking for all sources Mr. Russell relied upon that suggested that "continue to be low" suggests inflation rates around 2.02% or less for the next two years.

RESPONSE:

In addition to my reading of business/economic literature, I rely on the following specific sources:

- Board of Governors of the Federal Reserve System
Inflation Expectations (2015 Q2: -0.04%, Long-run target: 2%)
- Congressional Budget Office expected inflation rates
2016: 1.9%
2017: 1.9%
- Federal Reserve Bank (Philadelphia)
1 year: 1.97%
10 year: 2.14%
- PriceWaterhouseCoopers
2016: 1.8%
2017: 1.9%

Prepared by David F. Russell, P.E.

21. Regarding Mr. Russell's testimony on Pg. 22, ll. 20-31: Regarding rate case expense:
- a. Does Mr. Russell believe that PWSB will have no additional rate case expenses in this Docket until 2018?
 - b. Does Mr. Russell maintain that the PWSB does not have to submit compliance filings to implement the step increases it seeks?
 - c. Does Mr. Russell believe there will be no costs to make filings for the step increases?
 - d. Does the Town of Cumberland believe it will intervene and issue data requests if the PWSB files for any step increases?
 - e. When does Mr. Russell believe it would be reasonable for PWSB to begin incurring rate case expenses for its next full rate filing after the final step increase in this docket?

RESPONSE:

- a. No.
- b. It is my understanding that PWSB will have to submit annual performance reviews of the rate plan, but unless it decides to petition for modifications to the plan, the costs associated with these reports should be relatively minor. (Also see the response to information request 36.)
- c. See response to b.) above.
- d. The Town of Cumberland may or may not intervene in a case where PWSB petitions to modify one or both of the two proposed step increases in the future depending on the magnitude or impacts such modifications would have on the rates paid by its residents and businesses. (Also see the response to information request 36.)
- e. It is my belief and hope that PWSB will not incur significant additional rate case expenses, once this case is resolved (either through settlement or the full adjudicatory process), until at least the second half of FY2018, or preferably later when it decides another base rate increase is absolutely needed.

Prepared by David F. Russell, P.E.

22. Regarding Mr. Russell's testimony on Pg. 24, l. 6: Regarding power costs:
- a. Please explain what "doable" programs Mr. Russell believes can be undertaken by PWSB between now January 2016 (half way through the rate year) that will produce a 5% savings in power consumption for the full fiscal year.
 - b. If PWSB cannot lower its power consumption by 5%, where does Mr. Russell propose that PWSB make up the \$34,650 that he proposes to reduce the annual power costs?

RESPONSE:

- a. On page 24 of my testimony I have listed several measures or programs that would aid PWSB in reducing its electricity usage and/or its time of usage. Industry literature contains many other options that PW could take advantage of. For example, see the related publications I authored that are listed in the attachment to this information request (Attachment PW-C 1-22). My concern here is that in the face of a very large increase in the cost of power there is no evidence in the filing indicating that PW has taken all measures it can to minimize its use of electricity. The burden of proof should be on PW to demonstrate it is or will be doing all it can to minimize the associated costs. The 5% level is a reasonable and doable start because it is a small percentage and unless PW has had a comprehensive energy audit in the last year or two, it should be relatively easy for a qualified energy efficiency company to help PW realize at least that level of savings during the current fiscal year. Also I agree with the Division's position that the level of escalation applied to this expense should be at or near the level prescribed by their expert in their direct testimony.
- b. If PW can't lower its power consumption by 5%, and all other costs are equal to or greater than those allowed by the Commission, and/or revenues are less than the levels approved in this case, then PW may have to deal with the consequences of less than preferred income level, or petition the Commission for interim relief, or wait until review of the next step increase to petition the Commission for a modification to the approved rate plan.

Prepared by David F. Russell, P.E.

Attachment PW-C 1-22 (6 pages)

LIST OF PUBLICATIONS & PRESENTATIONS - DAVID F. RUSSELL, P.E.

- David F. Russell, P.E., "What is GASB-34 and How it Can Benefit Your Water Utility." Paper presented at the Annual Conference of the New England Water Works Association, held in Hyannis, MA, September, 2004.
- David F. Russell, "Revenue Impacts Resulting from Conservation and Mitigation Strategies." A Presentation given at a Water Conservation Seminar and Workshop sponsored by the New England Water Works Association through the Conservation Committee (Mr. Russell is a member) held in Boxborough, Ma., October, 1996.
- David F. Russell, P.E., "Evaluation of Privatization Alternatives for Municipal Water Services." Paper presented at a Joint Meeting of the Massachusetts Water Works Association and the New England Water Works Association, Hyannis, MA, April, 1991.
- David F. Russell, "Cost of Service Studies" A Presentation given at a Water Utility Ratemaking Seminar and Workshop sponsored by the New England Water Works Association through the Financial Management Committee (Mr. Russell is Co-Chairman) held at NEWWA's headquarters in Holliston, Ma., during the fourth quarter each year.
- David F. Russell and Christopher P. N. Woodcock, "What Will Water Rates be Like in the 1990s?" American Water Works Association Journal, Vol. 84, September 1992, pp. 68-72.
- Theodore C. Schlette and David F. Russell, P.E., "Issues in Peak Load Pricing: Can Water Be Priced Like Electricity." Paper presented at the Joint Management Conference of the American Water Works Association and the Water Environment Association, March 1993.
- David F. Russell and Daniel D. Lanning, "Evaluation of the Town's Electric Division, Town of Wallingford, Connecticut." A Report prepared for the Finance Committee of Wallingford's Town Council while employed by CDM, July 1991.
- David F. Russell, "Commercial Systems Study." A Management Audit Report Prepared for Management of the Sewerage & Water Board of New Orleans while with CDM, Feb., 1986.
- David F. Russell, P.E. and Mary Ellen Hardy, "Appraisal/Acquisition Report, East Boston - Properties Bordering the Logan Airport Egress Road" A land and buildings hazardous waste appraisal report (one of many) prepared for the Ma. Highway Dept. and the Central Artery Project while employed by CDM, August 1993.
- David F. Russell, "Inventory and Appraisal Report" A systemwide inventory and asset evaluation report prepared for Executive Management of the Warwick (Rhode Island) Water Department while employed by CDM, October 1991.
- David F. Russell, P.E., "Fire Protection Charges." Paper presented at a New England Water Works Assoc. Seminar - Alternative Revenue Source Development for Water Utilities, 1989.

- David F. Russell, "An Econometric Model and forecast of Jersey Central Power and Light Company's Residential Kwh Sales, 1980 - 2000." Graduate Research paper, Fairleigh Dickinson University, Madison, NJ, Spring Semester 1981.
- David F. Russell, "Natural Gas-Fired Superheating of Steam From MSW Energy Recovery Facilities (Section 8 - Financial and Institutional Considerations)." A Report prepared for Executive Management of the New York State Energy Research and Development Authority while employed by CDM, JI.1989.
- David F. Russell, "Management Audit Phase-One Report." A Management Audit Report Prepared for Executive Management of the Kent County (RI) Water Authority while employed by CDM, Feb., 1986.
- David F. Russell, "Economic Analysis of Public-Private Partnership projects." A Presentation given at a week long training seminar sponsored by the Institute for Public-Private Partnerships (I3P) for utility managers from several countries, entitled, "Public-Private Partnerships in Water and Wastewater Infrastructure," held in Washington, D.C. in November 1995.
- David F. Russell, "Software, Handbook Designed to Help Systems Cut Energy Costs." Water World, Vol. 14, No. 1 January 1998, p. 10-15.
- David F. Russell, "Tariff Setting and Regulation for Russian Utilities," A Presentation given at a week long training seminar sponsored by the Institute for Public-Private Partnerships (I3P) for utility managers from Russia. Mr. Russell introduced the technical sessions and had responsibility for covering the general topics of Regulation in the United States, and Principles and Practices of Tariff Setting. He also lead a workshop and case study, including development of total revenue requirements, a fully allocated cost of service study and both rate design and customer impact evaluations. This Seminar was held in Washington, D.C. in November 1997.
- David F. Russell, "Deregulation in the Electric Utility Industry." Graduate Research Paper, Master of Arts in Economics Program, Rutgers Univ., New Brunswick NJ, Spr. Semester 1983.
- David F. Russell, "An Empirical Examination of Economies of Scale of the Electric Utility Industry in New England." Graduate Research Paper, Master of Arts in Economics Program, Rutgers University, New Brunswick NJ, fall semester 1983.
- David F. Russell and Daniel D. Lanning, "The 'Value' of Appraising Municipal Water Systems: A Case Study." Journal of the New England Water Works Association, Vol. 107, No. 3 Sept. 1993, p.176-186.
- David F. Russell, P.E., "Energy Savings at Wastewater Treatment Plants." Proceedings of the Water Environment Federation, 65th Annual Conference & Exposition, New Orleans, LA, 1992.
- David F. Russell, "The Fuel Adjustment Clause in Rate Schedules of Electric Utilities. A Cost Benefit Analysis." Masters Thesis, Masters of Arts Graduate Program in Economics, Rutgers University, New Brunswick, NJ, October 1984.

- David F. Russell, "PASNY and Indian Point No. 3, A Descriptive Summary and Implications for GPU." Report prepared for Executive Management of General Public Utilities while employed as a Strategic Planner, January 1979.
- David F. Russell, "A Retrospective Analysis of Total Costs Associated with Oyster Creek, Three Mile Island 1 and Alternatives." Report prepared for Executive Management of General Public Utilities while employed as a Strategic Planner, March, 1980.
- David F. Russell, "Focused Management Audit - Logansport Municipal Utilities, Electric Generating Plant." Draft Report prepared for Executive Management of the Town's Municipal Electric Utility while employed by Camp Dresser & McKee Inc. (CDM), August 1993.
- David F. Russell and Mark Abrahams, "GASB-34: Friend or Foe?" A half day Seminar and Workshop sponsored by the New England Water Works Association through the Financial Management Committee (Mr. Russell is Co-Chairman) presented at NEWWA's headquarters in Holliston, Ma., two to three times a year.
- David F. Russell, Seminar entitled, "The Fundamentals of Accounting for the Non-Financial." A two-day training seminar for utility managers, related staff personnel, and board members. This seminar was specifically developed to assist non-financial managers and supervisors in water utilities and organizations in improving their financial expertise and developing a sound understanding of their organization's finance and accounting functions. It is offered two times a year—in the Spring and Fall—and is certified for 1.2 CEUs.
- David F. Russell, "Appraisal of the Chicopee Hydroelectric Plant, November 2004." This was a comprehensive inventory and appraisal study of a 2.5 Megawatt Hydroelectric generating Plant prepared for the City of Chicopee, Massachusetts. The purpose of the appraisal was to determine the reasonableness of the payment in-lieu-of taxes (PILOT) made by the plant's lessee to the City instead of a traditional property tax.
- David F. Russell, "Final Report – Evaluation of Capital Improvement Programs and Alternative Funding Options, August 2004." This was a comprehensive financial feasibility study prepared for the City of Groton and the management of the Water Department. Specific recommendations for the phasing of required capital improvement projects, funding options, and preferred rate increase options for the next five years were included.
- David F. Russell, "Final report - Comparison Study of Readings Water and Sewer Rates, November 14, 2001." Prepared for the Town of Reading and management of the Department of Public Works. The focus of this study was the evaluation and comparison of the Town's current costs and resultant water and sewer rates with those of 5 other systems. The purpose of this study was the identification, explanation and quantification of the reasons for rate differences.
- David F. Russell, "Guidelines for Preparation of Cost and Rate Studies," March 2000. Prepared for the Government of Egypt as one of the deliverables in a multi-year project sponsored by the United States Agency for International Development (USAID) known as the Legal and Institutional Regulatory Reform of the Water/Wastewater Sector in Egypt (LIRR). This report was prepared to establish the overall framework for preparation of rate studies in

Egypt, to describe the process and steps involved, and to establish a baseline of generally accepted principals and practices for consideration in this country. Additionally, a base case was introduced for putting the principles and practices into operation in a developing community in Egypt – the Town of Beheira.

- David F. Russell and Anthony Stellato, “Beheira Water Supply Cost and Rates Study,” November 2000. Prepared for the Government of Egypt as one of the deliverables in a multi-year project sponsored by the United States Agency for International Development (USAID) known as the Legal and Institutional Regulatory Reform of the Water/Wastewater Sector in Egypt (LIRR). This study and report illustrates the concepts and procedures set out in the associated “Guidelines” report listed above by applying them to develop a cost and rates study for an actual Egyptian Utility – the Beheira Water Company.
- David F. Russell, "FINAL REPORT - Feasibility Study Regarding the Acquisition of the Oxford District Water Utility, April 29, 2009," prepared for Town of Oxford, Massachusetts to evaluate the advantages and disadvantages of the Town acquiring all of the assets of the privately owned water company within the Town's borders. The Town subsequently voted by a two-thirds margin to purchase those assets based at least in part on the findings and recommendations in this report.
- Stone and Webster Management Consultants, Inc. and **RUSSELL CONSULTING**, "Comprehensive Business Process Review and Audit - Final Report, December 24, 2007." Prepared for the Vermont Electric Cooperative, Inc., and the Vermont Department of Public Service (VDPS). **RUSSELL CONSULTING** provided considerable assistance and expertise throughout this management audit and took a lead role in the interview and analysis phases for several functional areas. These areas included; financial management and control, capital planning and asset management, risk management and insurance coverage, and employee health care and wellness programs. We also assisted in the review and assessment of organizational issues, strategic planning, and both the composition of the Board of Directors, its policies and procedures and overall effectiveness. This project resulted in numerous recommendations designed to improve the efficiency and effectiveness of most systems and processes within this utility, and was well received by both management of this utility and its regulators.
- David F. Russell, "FEASIBILITY STUDY – TOWN OF MILFORD, MASSACHUSTTS, JUNE 2, 2014," prepared for the Town of Milford, Massachusetts to evaluate the advantages and disadvantages of the Town acquiring all of the assets of the privately owned water company within the Town's borders. This included analysis of both the economic and non-economic impacts of this acquisition along with the financial capability of the Town, and to present a comparison of projected water rates under both private and public sector ownership. The evaluation focused on two key issues. First, what would the Town be required to pay the Company for the acquisition of its water system assets in Milford? The purchase price would likely be the primary factor impacting the future cost of water service in the Town if the system was acquired. Second, what would the likely impact be of municipal acquisition on the system's ratepayers. The analysis projected significant ratepayer savings. The Town is pursuing the recommended acquisition.

- David F. Russell, "ENERGY CONSERVATION AND UTILIZATION HANDBOOK," prepared for the Illinois Association of Wastewater Agencies (IAWA). This Project consisted of the necessary research to prepare an Energy Conservation and Utilization Handbook and associated software. This publication provides a blueprint for member agencies, identifying and evaluating all cost effective measures to minimize total energy costs. This handbook applies to wastewater treatment plants, but is also very useful for water treatment plants and any industrial facilities using pumps and motors to drive machinery. Primary topics include; conservation and utilization improvements; identification of optimal utility rate options; and procurement of least cost suppliers. The software package was marketed to member Agencies with the proceeds used to pay for preparation of the handbook.

- David F. Russell, "FIXED ASSET EVALUATION – WATER SYSTEM, IPSWICH UTILITIES DEPARTMENT, NOVEMBER 2002" for the Town of Ipswich. This was a comprehensive inventory and appraisal study and included establishment of a fixed asset accounting system. This study included a complete inventory and listing of all of the physical assets owned by the Utilities Department and used to provide water and wastewater services within the Town; an appraised value of all of these assets; and the establishment of a system of continuing property records (fixed asset accounting system). GASB Statement (No. 34 established new requirements, which in essence, called for the establishment and maintenance of a system of Continuing Property Records (CPRs) for all municipal utilities and roadway systems. The major tasks, which were accomplished as part of this project, include the following: obtain Asset Records; Inventory of all Assets; Reproduction Cost New (RCN) estimates; Engineering Assessment; Estimate Remaining Useful Lives; Annual and Accumulated Depreciation; and the Establishment and Integration

- David F. Russell, "ORIGINAL COST ESTIMATES OF THE VERMETTE COURT AND ELM STREET SUBSTATIONS," prepared for the Ipswich Municipal Light Department. The purpose of this project was to determine or estimate the installed original cost of two substations owned by the Department in order to adjust the asset records of this utility to reflect the eminent retirement of both substations. When a fixed asset is retired from service by an electric utility it is necessary and appropriate to reduce the gross asset account for that asset and the associated accumulated depreciation account by the total amount of the original cost of that facility. Because no records or reports were found that contained (definitively) the original cost of either substation, it became necessary to estimate these values through other means. This was accomplished by estimating the RCN of each substation and deflating these values back in time to their installation years using an appropriate cost index.

- David F. Russell, "THE FINANCIAL AND RATE IMPACT EVALUATION OF CAPITAL IMPROVEMENT ALTERNATIVES FOR THE NEWBURYPORT WATER TREATMENT PLANT," prepared for the Newburyport Department of Public Services. The central focus of our work and this report is the financial and rate impact evaluation of several capital improvement alternatives proposed for the City's Water Treatment Plant. The City's Consulting Engineer for this work evaluated a range of needed improvements that would extend the useful life of the current plant and enhance its capabilities to treat surface water supplies, which will insure adequate and reliable service to all of its water customers for the next twenty years. These alternatives are numbered as follows along with a brief description of each:

- Alternative 1 - Upgrade of Existing WTP using tube settler sedimentation
- Alternative 2 - Upgrade of Existing WTP using DAF clarification
- Alternative 3 - Construct new process building adjacent to existing WTP using DAF clarification
- Alternative 3A - Construct new process building adjacent to existing WTP and Demolish the existing WTP building
- Alternative 4 - Minimal Upgrade Approach

Each alternative includes an upgrade to the residuals handling process, a new clearwell and finished water pump station, and an upgrade of the SCADA system. We estimating all of the revenue requirements (or total system costs) through the construction period and 20 years beyond, which extended the period of the analysis to the year 2036. Initially we projected all costs and the associated user charges needed to breakeven each year over the forecast period for each of the five recommended improvements to the WTP. From this analysis it became clear which alternative was the most cost effective.

- David F. Russell, "REVIEW AND EVALUATION OF THE PWD'S ASSESSMENT OF ITS FINANCIAL CAPABILITY TO IMPLEMENT ITS LTCPU," prepared for PENNFUTURE. The purpose of this work was to provide an independent review of the Financial Capability assessment proffered by the Philadelphia Water Department (PWD) as to their and their customer's ability to fund and pay for the needed improvements to the Department's Combined Sewer System. These improvements will over time require large investments in the sewer and storm water facilities in addition to very sizable increases in the O&M costs of the Department. In 2009 the City of Philadelphia through its Water Department developed a 20 year plan to reduce pollution from entering surrounding waterways during storm-water events through its combined sewer system. This plan has been named the Green City Plan and its details are fully described in the Department's 2009 Report, entitled "Green City, Clean Waters: The City of Philadelphia's Program for Combined Sewer Overflow Control -- A Long Term Control Plan Update," or the "LTCPU." The focus of this study and report is Section 11 of that report, which is designed to, "establish the burden of compliance on both ratepayers and the permittee" (The City of Philadelphia).

23. Regarding Mr. Russell's testimony on Pg. 25, l. 5 and Pg. 27, l. 31: Mr. Russell claims that PWSB's capital program has been "relatively aggressive in the past and continues to be over the next five years" and is "fairly aggressive."
- a. To what or who is Mr. Russell comparing the PWSB capital program when he claims it is fairly or relatively aggressive – relative to what?
 - b. Provide all data used to support this contention.

RESPONSE:

PW's current capital program is relatively aggressive as compared to its capital program just a few years ago. For example, for the 5 years prior to FY2013, total capital expenditures averaged about \$5 million. However, in the past 5 years since FY 2012, total capital expenditures averaged about \$6 million per year, which is a 20% increase over the earlier 5 years. Furthermore, PW's capital programs are relatively aggressive as compared to the capital improvement programs of many, if not most, other water utilities. For example, while PW is approaching having replaced or relined all of its infrastructure, many water utilities are just starting or certainly not at a point where they have replaced or renewed even half (50%) of their infrastructure.

Prepared by David F. Russell, P.E.

24. Regarding Mr. Russell's testimony on Pg. 26, l.: 8-9:
- a. What are the positive impacts on "supervision and quality" that will occur as a result of the delays recommended by Mr. Russell?
 - b. What projects does Mr. Russell recommend be delayed?

RESPONSE:

- a. The positive impacts are relatively small, particularly given the relatively minor recommended decreases in funding levels. The primary positive impacts relate to closer management and supervision of the procurement, funding and construction of the projects that are not delayed. PWSB admittedly has several unfilled positions. With limited staffing (as stated by one or more of PWSB's witnesses) and increasing levels of capital projects to manage and supervise, the attention to detail declines and more mistakes/shortcuts occur leading to lower quality construction.
- b. The prioritization of which projects to delay and the duration of the delay for the few projects affected is best determined by the management of PW. The reduced funding level is just 10% of the level requested by PW. Which also means Cumberland agrees with 90% of the scheduling of PWSB's projects funded with IFR Funds.

Prepared by David F. Russell, P.E.

25. Regarding Mr. Russell's testimony on Pgs. 25-28 regarding the PWSB's Capital Improvement Plan:
- a. Please provide a revised Capital Improvement Plan that accounts for Mr. Russell's reductions and shows which projects should be delayed, and when they should be completed.
 - b. Please include the projected cost of each project that is delayed in Mr. Russell's revised plan along with his basis for each projection.

RESPONSE:

- a. Relative to capital projects funded by new debt it is recommended that only one project – (CL-6) - be delayed for one or two years, preferably for two years. With respect to the IFR funded projects - see the response to information request 24. b.
- b. See the response to information request 24. b.

Prepared by David F. Russell, P.E.

26. Regarding Mr. Russell's testimony on Pg. 26, l. 10: The \$250,000 reduction in IFR costs represents about 1.3% of PWSB's total revenue requirements. This represents about \$0.60 per month or \$0.02 per day to the average residential customer.
- a. Please explain how Mr. Russell determined that this would "significantly lower the financial burden" on PWSB's customers.
 - b. Please explain how Mr. Russell determined that this savings would not be canceled out by increased project costs and provide all supporting calculations.

RESPONSE:

- a. I do not consider an annual reduction of \$250,000 or \$750,000 over 3 years an insignificant amount, regardless of the scaling that can be made to make its magnitude appear to be small. Does PWSB believe that a 1.3% reduction of its allowed total revenue requirements is insignificant? If it does, why would it be difficult to lower its electric bills by \$44,000, or just 0.2% of its total revenue requirements? The larger point here is it not the level of one reduction or increase that is significant or not, it is the cumulative impact on total revenue requirements that is either significant or not.
- b. I did not make the determination that is attributed to me in this information request. Furthermore, as PWSB pointed out in their responses to at least a few information requests, it is very difficult to estimate the increases (or possible decreases for that matter) in project costs resulting from delays. See responses to Cumb. 1-15 and 1-16. In both responses Mr. DeCelles makes the following statement, "There is no way to definitively predict construction costs if PWSB delayed this project."

Prepared by David F. Russell, P.E.

27. Regarding Mr. Russell's testimony on Pg. 27, l. 9:

- a. Is it Mr. Russell's contention that the only water projects that should be completed at this time are those that prevent "major customer disruptions or dangerous water quality issues"? If this is not Mr. Russell's contention, please state why it is not.
- b. Is it Mr. Russell's contention that the State's water utilities should slow down or delay construction plans to allow for minor customer disruptions and/or minimal (but not dangerous or life-threatening) water quality problems? If this is not Mr. Russell's contention, please state why it is not.

RESPONSE:

- a. That is not my contention because there are other reasons for completing projects at a particular time.
- b. That is not my contention. My contention relative to the need and timing of capital projects is that management needs to take into account several factors when making such decisions, including the potential consequences of not making a particular improvement or delaying its scheduled construction; and both the severity and probability of occurrence of those potential consequences. Projects with potentially severe consequences and high probabilities of occurring should be given a high priority. Projects with mid-level consequences (moderate or less than severe) and mid-level (lower than high, but not low) probabilities of occurring should be given a mid-level priority. Projects with relatively minor consequences and low probabilities of occurring should be given a low priority. High priority projects in general should not be delayed. Mid priority projects could be delayed in some instances, particularly if some high priority projects take precedence. Low priority projects can usually be delayed for short periods without causing significant customer disruptions or significantly diminishing water quality. It is only projects that fall into this low priority category that should be considered for short delays (one or two years).

Prepared by David F. Russell, P.E.

28. Regarding Mr. Russell's testimony on Pg. 27:
- a. Does Mr. Russell agree there is no funding for CL-6 included in the rate year?
 - b. Does he agree that if it is delayed for some reason, the Commission can delay or modify the step increases that would be used to fund the future debt service for this project?

RESPONSE:

- a. Yes.
- b. I am recommending that the Commission can delay it to FY2018 as part of its decision in approving the 3 year rate plan. I am also aware that if the Commission approves this recommendation (delay CL-6 for 1 or 2 years), and if circumstance change significantly relative to this project (or the level of sales are even higher than the level I recommend), the PWSB could petition to accelerate the scheduling of CL-6 into FY2017.

Prepared by David F. Russell, P.E.

29. Regarding Mr. Russell's testimony on page 27, ll. 28-30 regarding CL-6:
- a. What is Mr. Russell's estimate for how much the project costs will increase if it is delayed one year?
 - b. What is Mr. Russell's estimate of the interest rates the PWSB will pay if it delays the project for one year?
 - c. How much will these two factors increase the overall debt service for this project?
 - d. What is Mr. Russell's estimate for how much the project costs will increase if it is delayed two years?
 - e. What is Mr. Russell's estimate of the interest rates the PWSB will pay if it delays the project for two years?
 - f. How much will these two factors increase the overall debt service for this project?
 - g. Can Mr. Russell guarantee that the PWSB won't incur higher project costs if it delays the project?

RESPONSE:

a.) and d.) With only a one or two year delay the costs could increase, but if inflation remains low and interest rates also stay low, the increase would be minimal, perhaps in the order of a percent or two, if they do increase. See responses to Cumb. 1-15 and 1-16. In both responses Mr. DeCelles makes the following statement, "There is no way to definitively predict construction costs if PWSB delayed this project."

b.) and e.) Interest rates may increase over the next year or two, but they may not. The likelihood of them increasing significantly two years from now is probably higher than the likelihood of them increasing significantly next year. Also, I agree with Mr. DeCelles statement in response to a couple of information requests (Cumb 1-15 and Cumb. 1-16) - "Finally, PWSB does not know how much interest rates are likely to increase over the next year or two, or whether they will remain unchanged."

c.) and f.) I haven't estimated the cost impact of these two factors, but I don't expect their combined effect on the total cost of a short delay in CL-6 is not likely to be greater than 1 or 2 percent, and possibly less. Again, I agree with Mr. DeCelles when he states (Cumb. 1-15 and Cumb. 1-16), "There is no way to definitively predict construction costs if PWSB delayed this project."

Prepared by David F. Russell, P.E.

30. Regarding Mr. Russell's testimony on Pg. 28, ll. 1:
- a. Does Mr. Russell have any evidence that PWSB's management of its capital projects over the past 5 years has not been "diligent"?
 - b. If so, please provide such evidence.
 - c. Mr. Russell also suggests that more diligent management will result in higher quality projects. What projects has PWSB completed or worked on over the past five years where the quality could or would be higher with more diligent management?

RESPONSE:

- a. No, I do not. Nor do I have any evidence that PWSB's management of its capital projects over the past five years has been diligent.
- b. NA.
- b. I have not performed the type of analysis that would be required to offer an opinion relative to the question raised in this information request. Also, see responses to 30 a. and 30 b.

Prepared by David F. Russell, P.E.

31. Regarding Mr. Russell's testimony on Pg. 28, l. 24-30: Please indicate where PWSB has proposed any funding for a restricted Revenue Stabilization or Operating Revenue Allowance in FY 2016 or in FY 2017 (first year of the step increase).

RESPONSE:

It is my understanding that PWSB is seeking to have all of the funds in the Revenue Stabilization or Operating Reserve Allowance be "unrestricted." If that is not the case, I stand corrected. Whether restricted or unrestricted, this account according to PWSB's filing, is funded at 1.5% in FY2016 and FY2017, and is proposed to increase to 3.0% in FY2018. This is clear from Mr. Woodcock's filed testimony (page 5, lines 9 through 13) where he states, "As in Docket 4171, the PWSB is only seeking an operating reserve allowance of 1.5% in the rate year and is not seeking an additional 1.5% restricted amount as has been allowed in recent years for RI's other regulated municipally owned water utilities, until the final step of the multi-year increase." My recommendation lowers that percentage to half that level (0.75%) in the first 2 years of the rate plan, but also increases it to the same level proposed by PWSB (3.0%) in FY2018. This would lower the total revenue requirement in FY2016 by \$147,189 and in FY2017 by approximately \$160,000.

Prepared by David F. Russell, P.E.

32. Regarding Mr. Russell's testimony on Pg. 29, l. 8: Please indicate which docket authorized or "currently allowed" PWSB to fund a restricted Revenue Stabilization or Operating Revenue Allowance up to 1.5% of its operating costs.

RESPONSE:

See the response to information request 31. Additionally, the reference to "operating costs" in line 9 (page 29) of my testimony was misstated. It should have been "operating revenues."

Prepared by David F. Russell, P.E.

33. Pg. 32 Mr. Russell recommends allocating new debt service costs (MR-10 and CL-6) to meter and service costs:
- a. On pages 3-4, Mr. Russell describes providing expert testimony before a number of state public utility commissions. Please provide a list of all such cases involving water utilities over the past 10 years (or 5 years if overly burdensome)
 - b. For each of the water utilities in part (a) above, identify which ones he recommended allocating specific bond issues differently from other bond issues of the utility. For each of these, indicate whether his recommendation was accepted by the Commission.
 - c. For each of the water utilities in part (a) above, identify which ones he recommended allocating specific bond issues (or bond issues for “special benefit facilities”) to the fixed meter and service charge. For each of these, indicate whether his recommendation was accepted by the Commission.
 - d. List all water utilities Mr. Russell has provided consulting for in the past 10 years where he recommended that individual bonds be allocated other than based on an asset allocation was accepted.
 - e. Please confirm that for the NEWWA Water Rates class Mr. Russell teaches (pg. 5, lines 8-10) that he instructs students to allocate debt service costs based on the allocation of assets.
 - f. Please confirm that each of the editions of the AWWA M1 “Rates Manual” that he has been involved with (see page 5) present the allocation of debt service based on the allocation of bonds.
 - g. Please indicate where (what page and edition) of an authoritative manual or book on water rates it suggests the allocation of debt service as suggested by Mr. Russell.

RESPONSE:

- a. Please see the attached list (Attachment PW-C 1-33. a.).
- b. To the best of my recollection none.
- c. To the best of my recollection none. Nor am I proposing what is implied in this information request. See the response to information request 34. Also debt service costs are fixed costs and including more fixed costs in fixed charges is not counter to the principals of cost based ratemaking or the guideline established in the M1 manual.
- d. See the response to information request 2.

- e. It is confirmed. However, that class is an introductory one day course in ratemaking. It contains very little, if any, discussion of alternatives to or variances from the basic model used during the class.
- f. The “Rates Manual” does present the allocation of debt service (costs) on the allocation of assets (not “bonds,” which apparently was incorrectly inserted for the word “assets” for the last word in this information request.). However, as clearly stated in the M1 manual, the methods described and examples provided are meant to provide guidance and are necessarily applicable for all utilities in all circumstances. For example, in the Forward to the 6th edition of M1 it states, “As with other manuals prepared by the Rates and Charges Committee and AWWA in general, this manual will not prescribe a solution. Rather it is intended to provide guidance and advice.” Also I refer to the Introduction to that Edition and Chapter 1.1 for further support of M1 not being rigid in the guidance and advice it does provides as not necessarily being the only or best approach that should be used in all cases.
- g. I have not performed the exhaustive research for such documentation. Furthermore, innovative thought or approaches that are different from norms are by their nature not generally the subject of “authoritative manuals or books” until after they have been applied.

Prepared by David F. Russell, P.E.

Cost-of-Service/Rate Design and Related Studies (David F. Russell, P.E.) by
Client

[Water and/or Wastewater Utilities]

[Note – the clients that are underlined included expert testimony, and those in boldface were performed in the past 10 years.]

- Abbington-Rockland Joint Water Works
- Alexandria (Egypt) Wastewater System
- Allentown (Pa.) Water and Sewer Department
- **Aquarion Water Company (Rate Case Testimony)**
- Artesian Water Company (Delaware)
- **Assabet Water Company (Rate Case Expert)**
- Bahamas Water and Sewerage Corporation
- **Barnstable Water Company (Negotiated Settled Rate Case)**
- Beheira (Egypt) Water Company
- Blackstone Valley District Commission (Wastewater)
- Boston Water and Sewer Commission
- **Bristol County Water Authority (Rate Case Testimony)**
- Cairo (Egypt) Wastewater System
- Cohasset (Ma.) Water Commission
- Consumer Advocate of NH (Rate Case Testimony)
- Cromwell (Conn.) Water Department
- **Cumberland (RI) Water Department (Rate Case Testimony)**
- Dartmouth (Ma.) Sewer Department
- East Providence (R.I.) Wastewater Department
- **Guam Public Utilities Comm. (Guam Water Authority Rate Case)**
- Gilroy (Ca.) Water Board
- **Groton (Ma.) Water Department**
- Citizens Utility Board (Illinois-American Water Company Rate Case)
- Town of Hudson NH (Costs of municipal acquisition, severance and rate base treatment)
- **Ipswich (Ma.) Public Utilities Dept. (Water)**
- Jamaica Water Supply Company (New York)
- Kent County (R.I.) Water Authority
- Manchester (N.H.) Water Work

Attachment PW-C 1-33 a. (page 2 of 3)

- **Marblehead (Ma.) Public Works Department (Water and Sewer Rates)**
- **Milton (Ma.) Public Works Department (Water)**
- **Milford Water Company (Negotiated 2 Settled Rate Cases)**
- **Hull (MA.) Massachusetts-American Water Company (Rate Case Testimony)**
- **Narragansett Bay Commission (Wastewater)**
- **Newburyport (Ma.) Water Works**
- **Norton (Ma.) Water Department**
- **Oak Bluffs Water District**
- **Old Bridge Municipal Utilities Authority (NJ) (Middlesex Water Company – Settlement negotiations last two Rate Cases)**
- **Onset (Ma.) Water Department**
- **Orrville (Ohio) Wastewater Department**
- **Pittsfield (Ma.) Water and Sewer Department**
- **Pittsfield (N.H.) Aqueduct Company**
- **Plainville (Ma.) Sewer Commission**
- **Portland (Me.) Water District**
- **Providence Water Supply Board**
- **Putnam (Conn.) Water Pollution Control Authority**
- **Reading (Ma.) Dept. of Public Works (Water and Sewer)**
- **Rowley (Ma.) Water Department**
- **Salisbury (Ma.) Water Department**
- **San Antonio Water Department**
- **Sensor Enterprises, Inc. (Palmetto Utilities, Inc. Rate Case - Wastewater) (SC)**
- **Sixth of October City (Egypt) (Water and Sewer)**
- **Springfield (Ma.) Water Department**
- **Taunton (Ma.) Wastewater Department**
- **Tewksbury (Ma.) Water Department**
- **Towns of Oxford, Hingham, Hull and Cohasset (Ma.) (Rate Case Testimony)**
- **Upton (Ma.) Water Department**
- **Warwick (R.I.) Sewer Authority**
- **Webster (Ma.) Wastewater Department**
- **West Newbury Water Department**

**Cost-of-Service/Rate Design and Related Studies (David F. Russell, P.E.) by
Client**

[Electric and/or Gas Utilities]

- Advisors to the City Council of New Orleans (La.) (Entergy New Orleans – Electric Rate Case)
- Advisors to the City Council of New Orleans (La.) (Entergy New Orleans – Gas Rate Case)
- Blackstone Valley Electric Company (R.I.)
- Chicopee (Ma.) Hydroelectric Plant
- Concord (N.H.) Electric Company
- Eastern Edison Company (Ma.)
- Exeter and Hampton Electric Company (N.H.)
- Fitchburg (Ma.) Gas and Electric Company (Ma.)
- Guam Public Utilities Comm. (Guam Power Authority Rate Case)
- Ipswich (Ma.) Utilities Department
- Hillsborough County (Fla.) (Negotiated Power Contract with Florida Power and Light)
- Jersey Central Power and Light (New Jersey)
- Logansport (Indiana) Municipal Utilities Department
- Metropolitan Edison Company (Pa.)
- Merrimac (Ma.) Municipal Light Department
- Montaup Electric Company (Ma.) (FERC Case)
- Reading (Ma.) Municipal Light Department
- Russell (Ma.) Municipal Electric Department
- Pennsylvania Electric Company (Pa.)
- Staff of the New Jersey Board of Public Utilities (Public Service Electric and Gas Rate Case)
- Vermont Electric Cooperative
- Wallingford (Conn.) Electric Department

34. Does Mr. Russell agree that the recovery of new debt service for projects such as MR-10 and CL-6 through increased service charges is unprecedented with the RI PUC? If not, please indicate other dockets where the Commission allowed this?

RESPONSE:

What I have recommended is that PWSB and the Commission consider recovering some portion of the fixed debt service costs from one or more specific benefit capital improvement projects (such as MR-10 and CL-6) through fixed charges (possibly, but not preferably added to the fixed service charges). I haven't done an exhaustive search of RIPUC decisions for either recovery method, either the one posed in this information request or the one that I recommend. Also see the response to information request 29.

Prepared by David F. Russell, P.E.

35. Regarding Mr. Russell's testimony on Pg. 32, l. 24: Given Mr. Russell's prior testimony on stable and/or increasing water sales, please explain what he means by "declining sales."

RESPONSE:

I mean just that – water sales that are declining (decreasing or going down) over time. For example, PWSB's total water sales were clearly decreasing (declining) from FY2008 until about FY2011/2012, but have leveled off after that and have started increasing (inclining) over the most recent 3 years (FY2013 through FY 2015).

Prepared by David F. Russell, P.E.

36. Please outline your understanding of how step increases are implemented before the Rhode Island Public Utilities Commission.

RESPONSE:

It is my understanding that the Commission may approve the three year rate plan as proposed or as the Commission determines the manner in which it should be amended or modified. PWSB must report annually to the Commission and the Division about the performance of the rate plan, and if there are significant variances from the plan (for example, if revenues are much lower than expected), PWSB could petition the Commission to modify the plan going forward. I assume the burden of proof that such modifications were needed and appropriate would be on the petitioner.

Prepared by David F. Russell, P.E.

37. Regarding Mr. Russell's testimony on Pg. 34, l. 16:
- a. Please explain how Mr. Russell derived his recommended 10% value.
 - b. Please explain how he derived the 50% value for fire service.

RESPONSE:

- a. I suggest the 10% level of increase based on the following considerations. First, a double digit increase is seen by many as a threshold level for a very significant level of increase. Second, even as proposed none of PWSB's retail rates to its direct residential customers and businesses would increase by more than 10%.
- b. I suggest the 50% level of increase based on the following considerations. First, many would consider an increase exceeding 50% as a level characterized as "rate shock." Second, a level near or above 50% presents considerable financial burdens on those receiving such an increase, even municipalities whose fire protection charges are proposed to increase by much more than 50%.

Prepared by David F. Russell, P.E.

Town of Cumberland

38. With regard to Cumberland's future wholesale water purchases:
- Please provide Cumberland's estimate of sales for FY 2016, FY 2017 and FY 2018.
 - Will Cumberland commit to paying for these minimum water purchases each year?
 - If not, why not?
 - If not, what minimum level would Cumberland commit to paying for each of these years?

RESPONSE:

- In regard to Cumberland's estimated wholesale water purchases see the table below:

| Estimated Wholesale Purchase | |
|------------------------------|-------------|
| FY-16 projected | 275,000 HCF |
| FY-17 projected | 281,685 HCF |
| FY-18 projected | 133,690 HCF |

- Cumberland will not commit to paying for these minimum purchases in each year.
- Although Cumberland is projecting the above level of wholesale purchase, there are unknown variables which have lead to the decision to not commit to these minimum purchases. Cumberland will need to evaluate the outcome of this rate filing and pursue the most economical option for its ratepayers.
- Cumberland will always need to purchase water from the PWSB to maintain the integrity of its wholesale connection and to maintain the water quality of the connection. What the actual amount of wholesale purchase that will be required is unknown however initial estimates show that the minimum amount could be around 33,422 HCF annually. This amount could easily double or triple in the event of an equipment failure at any of its own sources of supply. That being said Cumberland would be willing to commit to 33,422 HCF annually in FY-17 and FY-18.

Prepared by Christopher Champi, Superintendent of Cumberland Water Department.

39. Did Mr. Russell discuss his projections of Cumberland's purchased water volumes with anyone in the Town's water department prior to submitting his testimony? If in the affirmative, please state:
- a. The name and address of the person Mr. Russell spoke with;
 - b. The date of the conversation; and,
 - c. The substance of the conversation.

RESPONSE:

- a. Christopher Champi, 98 Nate Whipple Highway, Cumberland, RI, 02864
- b. Once in March of 2015, and once in June of 2015.
- c. March discussion; General Introduction and information about the Cumberland Water Department (CWD). We discussed the CWD service area, customer base and rates as well as overall system demands. June discussion; additional information about water usage and number of services by meter size. We discussed internal supply levels and wholesale purchase levels. I indicated to Mr. Russell that my projected wholesale purchase amount for FY-16 was very close to the actual amount of wholesale purchase in FY-15 (within 7,000 HCF). I also informed Mr. Russell that I did not expect to see a significant change in CWD's wholesale purchase amount until FY-19, which would be contingent on new sources of supply becoming active.

Prepared by Christopher Champi, Superintendent of Cumberland Water Department.

40. Please provide Cumberland's monthly production from the Sneece Pond Surface Water Treatment Plant and the Abbot Run and Manville well fields for each year since 2010, and provide the most current monthly data for the current year.

RESPONSE:

See attached Appendix A.

Prepared by Christopher Champi, Superintendent of Cumberland Water Department.

Appendix A

Production from Sneeceh Pond Water Treatment Plant in Gallons

| Month | FY-10 | FY-11 | FY-12 | FY-13 | FY-14 | FY-15 |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|
| July | 25,562,462 | 26,119,606 | 24,795,407 | 25,721,211 | 25,843,569 | 26,278,110 |
| August | 25,996,563 | 24,907,962 | 25,441,443 | 24,957,114 | 24,140,083 | 25,833,159 |
| September | 25,750,548 | 24,990,253 | 25,210,139 | 25,782,308 | 25,700,412 | 24,495,961 |
| October | 24,925,539 | 25,600,601 | 26,035,474 | 24,498,757 | 25,091,797 | 23,740,256 |
| November | 25,087,881 | 23,774,042 | 21,659,606 | 22,588,341 | 25,266,042 | 23,640,185 |
| December | 24,665,313 | 24,938,416 | 25,779,899 | 26,023,404 | 24,439,674 | 18,730,106 |
| January | 25,838,191 | 25,732,034 | 22,282,911 | 19,223,965 | 25,644,867 | 19,711,755 |
| February | 23,361,011 | 22,195,654 | 22,032,580 | 16,931,887 | 21,486,006 | 18,258,775 |
| March | 24,699,166 | 25,064,991 | 25,193,824 | 25,512,319 | 25,411,198 | 18,253,808 |
| April | 24,886,544 | 24,736,130 | 22,396,002 | 24,239,407 | 24,924,798 | 23,842,960 |
| May | 24,843,689 | 25,376,939 | 25,782,068 | 25,063,401 | 25,986,189 | 25,863,088 |
| June | 24,935,695 | 24,826,077 | 23,132,863 | 24,927,685 | 23,108,525 | 23,756,527 |
| Totals | 300,552,602 | 298,262,705 | 289,742,216 | 285,469,799 | 297,043,160 | 272,404,690 |

Production Manville Wells in Gallons

| Month | FY-10 | FY-11 | FY-12 | FY-13 | FY-14 | FY-15 |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|
| July | 19,977,700 | 20,052,111 | 28,085,600 | 24,976,700 | 22,457,900 | 22,535,400 |
| August | 20,508,300 | 19,730,400 | 23,761,300 | 25,164,200 | 20,996,400 | 22,844,600 |
| September | 19,158,800 | 19,076,600 | 27,642,300 | 24,121,100 | 17,346,000 | 22,088,100 |
| October | 20,468,700 | 19,188,700 | 25,246,710 | 24,140,000 | 17,714,400 | 21,687,100 |
| November | 19,463,900 | 18,654,060 | 22,790,300 | 21,674,800 | 15,383,100 | 22,137,200 |
| December | 20,569,300 | 19,999,040 | 26,360,200 | 22,833,700 | 17,634,300 | 23,215,400 |
| January | 20,353,300 | 19,945,510 | 25,120,400 | 23,288,200 | 9,818,900 | 22,812,200 |
| February | 18,358,100 | 17,746,000 | 23,310,200 | 21,840,100 | 14,147,400 | 20,825,100 |
| March | 19,259,900 | 19,801,300 | 24,594,800 | 25,663,100 | 21,930,500 | 23,031,700 |
| April | 19,501,500 | 15,895,900 | 24,873,600 | 24,083,467 | 22,337,700 | 16,603,900 |
| May | 20,829,500 | 0 | 26,738,200 | 24,194,200 | 24,116,000 | 17,472,100 |
| June | 19,542,600 | 7,919,380 | 25,546,000 | 24,612,400 | 22,397,100 | 21,696,500 |
| Totals | 237,991,600 | 198,009,001 | 304,069,610 | 286,591,967 | 226,279,700 | 256,949,300 |

Production from Abbott Run Wells in Gallons

| Month | FY-10 | FY-11 | FY-12 | FY-13 | FY-14 | FY-15 |
|-----------|-------|-----------|------------|------------|------------|------------|
| | | | | | | |
| July | - | - | 8,753,500 | 9,839,407 | 9,265,255 | 9,133,130 |
| August | - | - | 7,645,598 | 8,376,734 | 9,060,620 | 9,027,769 |
| September | - | - | 8,502,173 | 9,253,876 | 8,996,710 | 8,596,540 |
| October | - | - | 7,300,489 | 6,323,377 | 8,504,070 | 6,618,960 |
| November | - | - | 5,773,856 | 5,482,008 | 6,132,750 | 3,931,980 |
| December | - | - | 3,945,641 | 4,726,948 | 6,709,450 | 5,265,200 |
| January | - | - | 2,438,219 | 4,309,294 | 7,510,480 | 4,768,920 |
| February | - | - | 2,566,635 | 3,886,604 | 3,380,132 | 2,992,980 |
| March | - | - | 4,290,553 | 4,436,858 | 6,746,120 | 3,063,027 |
| April | - | - | 7,824,740 | 4,909,058 | 6,234,480 | 2,902,990 |
| May | - | - | 4,833,781 | 8,498,237 | 8,463,720 | 6,394,330 |
| June | - | 6,712,620 | 8,728,887 | 8,909,180 | 5,703,430 | 6,456,790 |
| | | | | | | |
| Totals | | 6,712,620 | 72,604,072 | 78,951,581 | 86,707,217 | 69,152,616 |

41. Will the Town of Cumberland commit to the level of wholesale sales forecasted by Mr. Russell in his testimony? If not, please explain why not.

RESPONSE:

Cumberland will not commit to the level of wholesale purchase which Mr. Russell has forecasted in his testimony. Cumberland will need to evaluate the outcome of this rate filing and pursue the most economical option for its ratepayers.

Prepared by Christopher Champi, Superintendent of Cumberland Water Department.

42. Does the Town of Cumberland agree that the level of wholesale sales forecasted by Mr. Russell is accurate? If it does, please set forth all facts upon which it bases its agreement. If it does not, please set forth all facts upon which it bases its disagreement.

RESPONSE:

Cumberland agrees with the level of wholesale purchase which Mr. Russell has forecasted in FY-16 (roughly 274,000 HCF). CWD has estimated nearly the same level of wholesale purchase as Mr. Russell taking into account the recent trends in sales due to weather and increasing population within its service area.

Prepared by Christopher Champi, Superintendent of Cumberland Water Department.

43. Please provide:
- a. The Cumberland Water Department's monthly retail consumption by month beginning July 1, 2010 through June 30, 2015.
 - b. How the Cumberland Water Department supplied this monthly demand broken down between well production, plant production and wholesale water purchases.

RESPONSE:

- a. Monthly retail data for the period encompassing July 10, 2010 through June 30, 2015 is unavailable. CWD billed Commercial/Industrial customers quarterly over the requested time period and Residential customers biannually until FY-11. FY-12 was the transition year to quarterly billing with FY-13 to present representing full quarterly billing years. Data has been supplied in Appendix B on a quarterly and biannual basis as outlined above.
- b. See Appendix C. (Also supplied as outlined above)

Prepared by Christopher Champi, Superintendent of Cumberland Water Department.

Appendix B

CWD Retail Consumption

| FY 10 | | |
|----------|--------------------|----------------|
| Billing | Dates Covered | Gallons Billed |
| | | |
| 10-1 Ind | 7/3/09 - 10/15/09 | 21,408,479 |
| 10-2 Ind | 10/15/09 - 1/19/09 | 17,353,738 |
| 10-1 Res | 7/1/09 - 1/1/10 | 271,416,760 |
| 10-3 Ind | 1/19/10 - 4/28/10 | 19,299,939 |
| 10-4 Ind | 4/28/10 - 6/30/10 | 14,914,154 |
| 10-2 Res | 1/1/10 - 7/1/10 | 254,873,392 |
| | Total | 599,266,462 |

| FY 11 | | |
|----------|--------------------|----------------|
| Billing | Dates Covered | Gallons Billed |
| | | |
| 11-1 Ind | 6/30/10 - 11/18/10 | 30,979,498 |
| 11-2 Ind | 11/18/10 - 1/24/11 | 12,385,066 |
| 11-1 Res | 7/1/10 - 12/31/10 | 374,224,643 |
| 11-3 Ind | 1/24/11 - 4/20/11 | 16,645,886 |
| 11-4 Ind | 4/20/11 - 6/30/11 | 12,841,735 |
| 11-2 Res | 12/31/10 - 7/1/11 | 259,795,556 |
| | Total | 706,872,384 |

| FY 12 | | |
|----------|--------------------|----------------|
| Billing | Dates Covered | Gallons Billed |
| | | |
| 12-1 Ind | 6/30/11 - 2/1/12 | 44,384,906 |
| 12-1 Res | 7/1/11 - 12/19/11 | 238,756,865 |
| 12-2 Ind | 2/1/12 - 3/17/12 | 10,964,107 |
| 12-2 Res | 12/19/11 - 3/17/12 | 102,689,651 |
| 12-3 Ind | 3/17/12 - 6/29/12 | 24,509,288 |
| 12-3 Res | 3/17/12 - 6/29/12 | 156,011,853 |
| | Total | 577,316,670 |

CWD Retail Consumption

| FY 13 | | |
|----------|--------------------|----------------|
| Billing | Dates Covered | Gallons Billed |
| | | |
| 12-4 Ind | 6/29/12 - 9/29/12 | 21,727,449 |
| 12-4 Res | 6/29/12 - 9/29/12 | 178,841,299 |
| 13-1 Ind | 9/29/12 - 12/31/12 | 16,329,949 |
| 13-1 Res | 9/29/12 - 12/31/12 | 107,767,842 |
| 13-2 Ind | 12/31/12 - 4/1/13 | 18,759,416 |
| 13-2 Res | 12/31/12 - 4/1/13 | 101,231,145 |
| 13-3 Ind | 4/1/13 - 6/30/13 | 22,666,140 |
| 13-3 Res | 4/1/13 - 6/30/13 | 137,644,540 |
| | Total | 604,967,780 |

| FY 14 | | |
|----------|---------------------|----------------|
| Billing | Dates Covered | Gallons Billed |
| | | |
| 13-4 Ind | 6/30/13 - 10/17/13 | 23,176,324 |
| 13-4 Res | 6/30/13 - 12/31/13 | 190,803,391 |
| 14-1 Ind | 10/17/13 - 12/31/13 | 19,275,575 |
| 14-1 Res | 12/31/13 - 4/2/13 | 109,546,204 |
| 14-2 Ind | 12/31/13 - 4/22/14 | 20,605,005 |
| 14-2 Res | 12/31/14 - 3/31/14 | 98,495,707 |
| 14-3 Ind | 4/22/14 - 6/30/14 | 21,167,372 |
| 14-3 Res | 3/31/14 - 6/30/14 | 141,726,194 |
| | Total | 624,795,772 |

| FY 15 | | |
|----------|--------------------|----------------|
| Billing | Dates Covered | Gallons Billed |
| | | |
| 14-4 Ind | 6/30/14 - 9/30/14 | 25,955,735 |
| 14-4 Res | 6/30/14 - 9/30/14 | 206,505,890 |
| 15-1 Ind | 9/30/14 - 12/31/14 | 21,429,963 |
| 15-1 Res | 9/30/14 - 12/31/14 | 106,943,225 |
| 15-2 Ind | 12/31/14 - 3/31/15 | 19,209,455 |
| 15-2 Res | 12/31/14 - 3/31/15 | 96,772,889 |
| 15-3 Ind | 3/31/15 - 6/30/15 | |
| 15-3 Res | 3/31/15 - 6/30/15 | |
| | Total | 476,817,157 |

Appendix C

CWD Retail Consumption by Source of Supply

FY 10

| Billing | Dates Covered | Gallons Billed | Sneech Pond | Wells | Purchased |
|----------|--------------------|----------------|-------------|--------|-----------|
| 10-1 Ind | 7/3/09 - 10/15/09 | 21,408,479 | | | |
| 10-2 Ind | 10/15/09 - 1/19/09 | 17,353,738 | | | |
| 10-1 Res | 7/1/09 - 1/1/10 | 271,416,760 | 31.50% | 24.50% | 44.00% |
| 10-3 Ind | 1/19/10 - 4/28/10 | 19,299,939 | | | |
| 10-4 Ind | 4/28/10 - 6/30/10 | 14,914,154 | | | |
| 10-2 Res | 1/1/10 - 7/1/10 | 254,873,392 | 31.50% | 25.00% | 43.50% |
| Total | | 599,266,462 | 31.50% | 24.75% | 43.75% |

FY 11

| Billing | Dates Covered | Gallons Billed | Sneech Pond | Wells | Purchased |
|----------|--------------------|----------------|-------------|--------|-----------|
| 11-1 Ind | 6/30/10 - 11/18/10 | 30,979,498 | | | |
| 11-2 Ind | 11/18/10 - 1/24/11 | 12,385,066 | | | |
| 11-1 Res | 7/1/10 - 12/31/10 | 374,224,643 | 32.00% | 25.50% | 42.50% |
| 11-3 Ind | 1/24/11 - 4/20/11 | 16,645,886 | | | |
| 11-4 Ind | 4/20/11 - 6/30/11 | 12,841,735 | | | |
| 11-2 Res | 12/31/10 - 7/1/11 | 259,795,556 | 40.00% | 24.00% | 36.00% |
| Total | | 706,872,384 | 36.00% | 24.75% | 39.25% |

FY 12

| Billing | Dates Covered | Gallons Billed | Sneech Pond | Wells | Purchased |
|----------|--------------------|----------------|-------------|--------|-----------|
| 12-1 Ind | 6/30/11 - 2/1/12 | 44,384,906 | | | |
| 12-1 Res | 7/1/11 - 12/19/11 | 238,756,865 | 35.00% | 46.00% | 19.00% |
| 12-2 Ind | 2/1/12 - 3/17/12 | 10,964,107 | | | |
| 12-2 Res | 12/19/11 - 3/17/12 | 102,689,651 | 42.00% | 50.00% | 8.00% |
| 12-3 Ind | 3/17/12 - 6/29/12 | 24,509,288 | | | |
| 12-3 Res | 3/17/12 - 6/29/12 | 156,011,853 | 33.00% | 46.00% | 21.00% |
| Total | | 577,316,670 | 37.50% | 48.00% | 14.50% |

CWD Retail Consumption by Source of Supply

FY 13

| Billing | Dates Covered | Gallons Billed | Sneech Pond | Wells | Purchased |
|----------|--------------------|----------------|-------------|--------|-----------|
| 12-4 Ind | 6/29/12 - 9/29/12 | 21,727,449 | | | |
| 12-4 Res | 6/29/12 - 9/29/12 | 178,841,299 | 30.00% | 41.00% | 29.00% |
| 13-1 Ind | 9/29/12 - 12/31/12 | 16,329,949 | | | |
| 13-1 Res | 9/29/12 - 12/31/12 | 107,767,842 | 44.00% | 51.00% | 5.00% |
| 13-2 Ind | 12/31/12 - 4/1/13 | 18,759,416 | | | |
| 13-2 Res | 12/31/12 - 4/1/13 | 101,231,145 | 37.50% | 51.00% | 11.50% |
| 13-3 Ind | 4/1/13 - 6/30/13 | 22,666,140 | | | |
| 13-3 Res | 4/1/13 - 6/30/13 | 137,644,540 | 34.00% | 43.50% | 22.50% |
| Total | | 604,967,780 | 36.00% | 46.50% | 17.50% |

FY 14

| Billing | Dates Covered | Gallons Billed | Sneech Pond | Wells | Purchased |
|----------|---------------------|----------------|-------------|--------|-----------|
| 13-4 Ind | 6/30/13 - 10/17/13 | 23,176,324 | | | |
| 13-4 Res | 6/30/13 - 12/31/13 | 190,803,391 | 29.50% | 34.00% | 36.50% |
| 14-1 Ind | 10/17/13 - 12/31/13 | 19,275,575 | | | |
| 14-1 Res | 12/31/13 - 4/2/13 | 109,546,204 | 43.50% | 41.50% | 15.00% |
| 14-2 Ind | 12/31/13 - 4/22/14 | 20,605,005 | | | |
| 14-2 Res | 12/31/14 - 3/31/14 | 98,495,707 | 46.00% | 40.00% | 14.00% |
| 14-3 Ind | 4/22/14 - 6/30/14 | 21,167,372 | | | |
| 14-3 Res | 3/31/14 - 6/30/14 | 141,726,194 | 34.50% | 42.00% | 23.50% |
| Total | | 624,795,772 | 38.38% | 39.38% | 22.25% |

FY 15

| Billing | Dates Covered | Gallons Billed | Sneech Pond | Wells | Purchased |
|----------|--------------------|----------------|-------------|--------|-----------|
| 14-4 Ind | 6/30/14 - 9/30/14 | 25,955,735 | | | |
| 14-4 Res | 6/30/14 - 9/30/14 | 206,505,890 | 27.50% | 33.50% | 39.00% |
| 15-1 Ind | 9/30/14 - 12/31/14 | 21,429,963 | | | |
| 15-1 Res | 9/30/14 - 12/31/14 | 106,943,225 | 30.75% | 30.75% | 30.75% |
| 15-2 Ind | 12/31/14 - 3/31/15 | 19,209,455 | | | |
| 15-2 Res | 12/31/14 - 3/31/15 | 96,772,889 | 38.00% | 10.00% | 33.50% |
| 15-3 Ind | 3/31/15 - 6/30/15 | | | | |
| 15-3 Res | 3/31/15 - 6/30/15 | | | | |
| Total | | 476,817,157 | 32.08% | 24.75% | 34.42% |


44. Did Mr. Russell obtain any written projections or any other documentation that would support his estimate of Cumberland's future purchased water volumes from anyone in the Town's water utility prior to submitting his testimony? If in the affirmative, please state:
- a. The name and address of the person Mr. Russell who provided the projections or documentation;
 - b. Provide all projections or documentation he received.

RESPONSE:

Mr. Russell did not obtain any written projections or other documentation from anyone at CWD, only through phone discussions with Mr. Champi.

CERTIFICATION

I hereby certify that on the 14th day of July, 2015, I sent a copy of the foregoing to the attached service list.



Michael R. McElroy

Cumberland/Pawtucket Water Supply Board 4550/Response 1

DOCKET NO. 4550 - Pawtucket Water Supply Board – Multi-Year Rate Filing
Service List updated 3/12/15

| Parties/Address | E-mail Distribution | Phone |
|---|--|--------------|
| Joseph A. Keough, Jr., Esq. Keough & Sweeney 41 Mendon Ave. Pawtucket, RI 02861 | jkeoughjr@keoughsweeney.com | 401-724-3600 |
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| Karen Lyons, Esq. Dept. of Attorney General 150 South Main St. Providence, RI 02903 | Klyons@riag.ri.gov | 401-222-2424 |
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| David Bebyn B&E Consulting 21 Dryden Lane Providence, RI 02904 | dbebyn@beconsulting.biz | 401-785-0800 |
| Thomas S. Catlin Exeter Associates, Inc. 10480 Little Patuxent Parkway Suite 300 Columbia, MD 21044 | tcatlin@exeterassociates.com | 410-992-7500 |
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| Thomas Hefner Town of Cumberland | thefner@cumberlandri.org | |
| David Russell | Davidrussell015@comcast.net | |
| File original and nine (9) copies w/: Luly E. Massaro, Commission Clerk Public Utilities Commission 89 Jefferson Boulevard Warwick, RI 02888 | Luly.massaro@puc.ri.gov | 401-780-2104 |
| | Amy.dalessandro@puc.ri.gov | 401-941-1691 |
| | Sharon.colbycamara@puc.ri.gov | |