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November 28, 2012

Ms. Luly Massaro, Clerk  
Rhode Island Public Utilities Commission  
89 Jefferson Boulevard  
Warwick, RI 02888

**Re: *City of Newport, Utilities Department, Water Division***  
***Docket 4355***

Dear Ms. Massaro:

Enclosed please find an original and nine (9) copies of the following documents:

1. Newport Water's Response to the United States Department of the Navy's First Set of Data Requests.

Please be advised that an electronic copy of these documents has been sent to the service list.

Thank you for your attention to this matter.

Sincerely,



Joseph A. Keough Jr.

JAK/kf  
Enclosure

STATE OF RHODE ISLAND  
PUBLIC UTILITIES COMMISSION  
DOCKET NO. 4355  
Response Of The City Of Newport,  
Utilities Division, Water Department  
To The United States Department of the Navy's  
Data Requests  
Set 1

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Navy 1-1: Referring to the file submitted by the City of Newport on October 30, 2012 Entitled "Newport Summer 2012 Daily Demand Analysis.xlsx," at tab "Navy," a usage of 613,081 on 9/25/12 was recorded for the Fort Adams account in cell FX12. Is the City of Newport aware that this level of usage resulted from a scheduled flushing program by Navy? Does the City of Newport agree that usage resulting from Navy's flushing program should not be used in the demand ratio calculations? Please explain answer in detail.

Response: Newport's consultant was not aware that the consumption recorded at the Fort Adams meter on 9/25/12 was the result of scheduled flushing.

Newport does not agree that usage resulting from Navy's flushing program should not be used in the demand ratio calculations. Newport must operate its system in a way to meet the peak demands of its customers and the purpose of cost of service rates is to develop rates that recover costs from each customer class in a way that reflects the way in which they demand service. Therefore, in order to be consistent with cost of service principles, the rate assessed to the Navy must take into consideration consumption resulting from a flushing program if that consumption drives peak demand.

Prepared by: Harold J. Smith

Navy 1-2: In calculating the MH/MD ratios, the AWWA M1 Manual recommends a ratio of 1.66 for both the Residential and Commercial classes. Referring to the City of Newport's cost of service study ("COSS") model, specifically HJS Schedule D-7 Update, please explain the City of Newport's rationale for using a ratio of 1.33 for the Residential Class and a ratio of 1.5 for the Commercial class. In your response, please include an explanation as to why the City of Newport has deviated from the AWWA M1 Manual for these ratios.

Response: First, the AWWA M1 Manual does not make any recommendations with respect to the MD/MH ratios that should be used in calculating demand factors. As stated in the Foreward to the Manual.

“As with the 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. The examples presented are used only to demonstrate the generally accepted methodologies discussed in this manual. **The underlying data and assumptions are not endorsed or recommended either by AWWA or the Rates and Charges Committee for use elsewhere.** The purpose of this manual is to describe and present issues associated with developing water rates, fees, and charges, to enumerate the advantages and disadvantages of various alternatives, and to provide information to help users determine water rates, fees and charges that are most relevant to a particular situation.” (emphasis added).

Since the question did not provide a citation in the M1 Manual, it can only be assumed that the question refers to the section headed “Maximum-Hour Peaking Factors” in Appendix A on page 317 of the M-1 Manual. As can be seen below in the excerpts from this section of the M-1 Manual, the value of 1.66 for MD/MH peaking factor for the Residential and Commercial class is in no way a recommendation

“For industrial customers, the relationship of maximum hour and maximum day peaking factors may be a function of manufacturing processes, input/output logistics scheduling or

simply the hours of operation during the day in which the maximum hour for the class is likely to occur. **For purposes of this example**, it is assumed that the industries in the example utility operate 2 equal 9-hour shifts each day during the 6-day work week. Thus, the maximum hour demand is at least 1.33 times the maximum day demand (24 hours per day/18 hours work period). Care must be taken to recognize the usage characteristics of each utility's customers; **the assumptions herein are for illustrative purposes only.**

The relationship between the maximum hour demand and maximum day demand for the residential and commercial customer classes is a function of even more factors due to the diversity of customers within these classes. . It is likely that the overall relationship of maximum hour to maximum day demands for these two classes is greater than that discussed above for the industrial class, since the time of consumption for these two classes may be concentrated in a shorter time frame throughout the day. **For purposes of this example**, a maximum hour to maximum day ratio of 1.66 is selected for the residential and commercial classes. **This assumed ratio**, and the resulting maximum day peaking factors for the three retail classes, can be tested using the diversity analysis that was previously described for the maximum day capacity ratios." (Emphasis added)

The MD/MH ratios used in the COS model were developed in accordance with the Settlement Agreement in Docket 4128. The ratio for the Residential class assumes that the vast majority of the demand by this class will take place during an 18 hour period between 5:00 AM and 11:00 PM. Therefore, similar to the example presented in the M-1 Manual the MD/MH ratio is determined by dividing 24 by 18 to yield 1.33. The ratio for the Non-Residential class assumes the vast majority of the demand will take place during a 16 hour period; therefore the Non-Residential MD/MH ratio is determined by dividing 24 by 16 to yield 1.50.

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Navy 1-3: Referring to HJS Schedule D-1 Update, COSS model tab "Accounts+Fire," cell H24, please explain how the 176,124 equivalent meter units were calculated.

Response: The equivalent meter units were calculated using the methodology agreed to by all parties as part of the Docket 4128 Settlement Agreement. The actual calculations used to arrive at the value of 176,124 can be followed in the electronic version of the Excel rate model that was provided to all parties.

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Navy 1-4: Referring to HJS Schedule D-2 Update, COSS model tab "Accounts+Fire," please explain how the Service Cost ratios in Column N were determined.

Response: The Service Cost ratios in the referenced schedule are those that were agreed to by all parties in the Docket 4128 Settlement Agreement.

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Navy 1-5: Referring to HJS Schedule D-2 Update, COSS model tab "Accounts+Fire," please explain how the total Retail & Private Fire Connections of 275,639 in cell P61 is calculated. In your response, please explain how monthly and quarterly connections are annualized.

Response: The calculations of Retail & Private Fire Connections and the annualization of monthly and quarterly connections were performed in accordance with the approach agreed to by all parties in the Docket 4128 Settlement Agreement. The actual calculations used to arrive at the values used in the model can be followed in the electronic version of the Excel rate model that was provided to all parties.

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Navy 1-6: Referring to HJS Schedule A-2 Update, COSS model tab "Rates," please explain the rationale in determining the Public Hydrant charge of \$546.54 in cell G44. In your response, include a detailed description of the calculation.

Response: The calculation of the Public Hydrant Charge performed in accordance with the approach agreed to by all parties in the Docket 4128 Settlement Agreement. The actual calculations used to arrive at the values used in the model can be followed in the electronic version of the Excel rate model that was provided to all parties.

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Navy 1-7: Referring to HJS Schedule 8-7 Update, COSS model tab "Demand+Peaks," please explain the basis for the calculation of the Production Peaks in column J. In your response, include a detailed description of the calculation and specify the specific years of data used.

Response: The Production Peaks shown in HJS Schedule 8-7 Update are calculated in accordance with the Settlement Agreement in Docket 4128, but do not take into account the most current production data. The COS model that in the Settlement Agreement used the average of the respective values for the three year period FY 08 through FY 10.

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Navy 1-8: Referring to HJS Schedule B-7 Update, COSS model tab "Demand+Peaks," Please explain how the System Peaks Estimated from Daily Demand Data in Column K (Max Day Peaking Factor of 1.78 and Max Hour Peaking Factor of 2.47) in cells K40 and K43 are calculated? In your response, specify the years of Data used for the calculations.

Response: These cells reference the values in labeled "Estimated System wide Peaks" on HJS Schedule B-8. When the model from Docket 4128 was updated to incorporate peaking factors based on the daily demand data these cells were not updated properly. These values should reference the Max Day and Max Hour demands from HJS Schedule B-9 Update. The correct values for the referenced cells are 1.99 for Maximum Day Peaking Factor and 2.77 for the Max Hour Peaking Factor. These changes have no effect on the calculated rate since these values are only used to calculate the System Diversity Ratio shown on HJS Schedule B-7 Update.

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Navy 1-9: Referring to HJS Schedule B-9 Update, COSS model tab "Demand+Peaks," please explain the basis for the calculation of the Annual Demands in column D and specify the years of data used.

Response: The values referenced are the projected annual demands by customer class that were approved in Docket 4243 as shown on HJS Schedule B-6 Update. As was the case in the model used for the Settlement Agreement in Docket 4128, the projected demands are also used to calculate the values in HJS Schedule B-9 Update.

Prepared by: Harold J. Smith

Navy 1-10: Referring to HJS Schedule 8-9 Update, COSS model tab "Demand+Peaks," a loss factor of 26.35% is used. Please explain how this loss factor was calculated. Please describe all measures put in place by the City of Newport to moderate its loss factor.

Response: First, it should be recognized that this "loss factor" is not representative of the amount of water that is truly unaccounted for in the Newport system. This factor is calculated for the purposes of rate setting only and is an estimate of the amount of water Newport produces that does not generate revenue. Much of this water is used for such things as system flushing, fire fighting and other legitimate purposes and therefore is accounted for to some degree.

The loss factor is calculated in the same way that it was calculated in the COS model included in the Settlement Agreement in Docket 4128. The actual calculation can be followed in the Excel version of the COS model that was provided to all parties.

Newport Water has several measures in place to reduce unaccounted for water in the system. The measures include the change-out of all the meters in the system as part of the radio read project in order to have accurate accounting of water sold and eliminate estimated billings. Newport Water has downsized several of the meters in the system to capture all water sold. In addition, system wide leak detection survey programs have been conducted. The most recent survey was completed in August 2011. All leaks that are identified are repaired promptly.

Prepared by: Harold J. Smith and J. Forgue

**CERTIFICATION**

I hereby certify that on November 28, 2012, I sent a copy of the within to all parties set forth on the attached Service List by electronic mail and copies to Luly Massaro, Commission Clerk, by electronic mail and regular mail.

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