

December 13, 2018

Ms. Julie Miller
Director of Fiscal Operations
Brunswick County
45 Courthouse Drive, NE, Bldg. E
PO Box 249
Bolivia, NC 284222

Via Email

Dear Ms. Miller:

As you requested, Raftelis is pleased to submit this engagement letter to provide assistance to Brunswick County ("County") with: 1) a comprehensive review and examination of all cost components of wholesale water rates, without constraints of existing contractual provisions, in order to develop a recommendation for future wholesale rates and contractual provisions, 2) a review and update of retail and industrial water rates, and 3) assistance with proposed revenue bonds and Water Infrastructure Finance and Innovation Act (WIFIA) funding. The examination of wholesale and retail rates will be based on industry accepted guidelines for setting water rates. This letter describes our understanding of each study component, our proposed work approach, and associated fees. While each study component is described separately, Raftelis will conduct overall project management to ensure the study progresses in an efficient and deliberate manner, specifically focusing on project management, quality assurance, and the collection of all relevant data.

I. WHOLESALE WATER RATE ANALYSIS

The County currently has several wholesale contracts and a wholesale water rate that was established several years ago. Under the existing contracts, with some to expire soon, the wholesale water rate is escalated annually using the producer price index. The County is interested in calculating wholesale rates under industry accepted methodologies and comparing these rates to the current methodology. There are two industry accepted methodologies for calculating wholesale rates: the utility approach the cash approach. The utility approach looks at two primary cost components including: 1) an O&M component which is based on the allocated **share** of direct costs for O&M of the assets used to provide water service to the wholesale customer and 2) a capital component based on an allocated portion of the depreciation expenses associated with these assets and a rate of return on these assets based on the proportion of the wholesale customers' reserved capacity to the total system capacity.

The cash-needs approach also looks at two cost components. Similar to the utility approach, the O&M component is based on the allocated share of direct O&M costs for facilities used to provide water service to the wholesale customer. However, the capital component does not include a rate of return or depreciated expenses and instead includes a proportionate share of annual debt service payments and any other capital expenses (or on-going capital investment) associated with the assets used to serve wholesale water/sewer customers.

TASK 1-1: Data Collection and Review

Raftelis will prepare a detailed data request list that will identify the information needed to complete the study. Examples of data may include, but is not limited to, the following:

-)] Detailed water fixed asset data as of June 30, 2017 – *this data was already provided for the system development fee study and therefore will be utilized by Raftelis but County will provide any additional fixed assets/disposals*
-)] Inch feet analysis for water/sewer lines to assist with identifying transmission versus distribution/collection assets, or other data that can approximate a reasonable allocation factor– *this data was also already provided for the system development fee study*
-)] History of water use information for each wholesale customer for the past 5 years
-)] Most recent comprehensive annual financial report (*already obtained via the County's website*)
-)] Most recent detailed operating budget for the water system including non-operating revenues
-)] Annual principal and interest for bonds issued for the water system
-)] Any capital contributions paid for by the water wholesale customers

Task 1-2: Calculation of Wholesale Rates Under Both Approaches

Raftelis will then calculate the wholesale rate under both industry accepted methodologies. A summary of the calculations is described below.

O&M Component (for both the Cash Needs or Utility Approach):

The O&M costs will be functionalized to identify costs used to serve wholesale customers. The functional categories typically include source of supply, treatment, transmission/distribution, storage/pumping, customer service, meter reading, administration, etc. *Direct* costs used to serve wholesale customers are typically source of supply, treatment and transmission costs (allocated based on inch feet analysis already provided in system development fee study). Costs that are typically excluded because they relate to serving only retail customers are costs associated with meter reading, customer service, distribution lines maintenance and operations, etc.

Capital Component – Cash Needs

For the capital component under the Cash Needs Approach, several items will be considered:

-)] Capital outlay – Any vehicle or equipment purchased that is used to provide wholesale service
-)] Debt Service – Any debt service issued for treatment or transmission assets (We may be able to use the fixed asset information to determine an allocation factor for debt service)
-)] Rate funded CIP – Any capital item related to infrastructure that provides service to wholesale customers

These costs will also be allocated to functions to identify the debt service, rate funded CIP, and capital outlay used for providing wholesale water service.

Capital Component – Utility Approach

For the capital component under the Utility Approach, the following will be calculated:

-)] *Rate of return on fixed assets used to serve wholesale customers.* Fixed asset data will be used to identify assets that serve wholesale water customers. This data will also be functionalized, which was done as part of the system development fee analysis. Once the assets used to service wholesale customers are identified, then a rate of return (based on water system specific and industry data) is applied to the assets to determine the rate of return.
-)] Annual depreciation on fixed assets used to serve wholesale customers will also be identified and included in the capital component.

Once wholesale rates are calculated under each approach, Raftelis will compare the wholesale water rates to the rates under the current wholesale rate methodology as defined in the contract. This will allow the County to understand the impacts of choosing one approach versus another approach, or whether the existing methodology is appropriate. The impact of choosing an alternative wholesale water rate will be incorporated into the second and third study components, as described below. The analysis will be structured such that it can also be used to assist the County will determining stand by or emergency supply rates.

II. RETAIL, IRRIGATION, AND INDUSTRIAL RATE ANALYSIS

The County's industrial water rate is similar to the current wholesale rate. Since the wholesale rate may change based on the wholesale rate analysis, the County would also like to review and re-assess retail, irrigation, and industrial water rates. Raftelis developed a rate and financial planning model for the County several years ago. While the County has not maintained the model, County staff has developed similar information/data which can be used to update the

original model. The original model will be updated and then a cost allocation will be performed to determine the costs to be recovered from each class. The cost allocation used for the wholesale analysis (under the cash needs approach) will be utilized but will require additional allocation of costs and data to derive retail, irrigation, and industrial rates.

Task 2-1 – Data Collection and Review

Most of the data for this study component will already be requested as part of the wholesale analysis. However, additional data items will include the following:

-)] Peaking data for the entire water system (already obtained for the system development fee study)
-)] Monthly billable water flow for retail, irrigation, and industrial customers by tier, over the past 5 years (the County will provide peaking data for each class based on its AMI system)
-)] Number of retail, irrigation, and industrial customers over the past 3 years by meter size
-)] Revenues for retail and industrial customers over the past 3 years
-)] Five-year capital improvement plan for the water system and funding sources

Task 2-2 – Cost Allocation, Rates, and Customer Impacts

Raftelis will update the original model and allocate costs to functions as part of the wholesale analysis. This information will be subsequently used to determine the retail, irrigation, and industrial rates. The functional costs will be further allocated to fixed versus volumetric components. System and customer class peaking information will then be used to allocate costs to each customer class. More than likely the cost allocation will be based on the base-extra capacity method. Cost recovery for each class will be compared to the current level of cost recovery from each class. This data can then be used to determine rates by customer class. It is assumed the existing rate structure (3 tiers for retail customers and the tier differentials) will remain in effect. The resulting rates will be used to calculate water bills for various customers. The customer impacts will be analyzed to determine the impact on retail, irrigation, and industrial customers.

Task 2-3: Workshop

It will be important for key stakeholders, such as the Commission and wholesale customers, to understand the methodology used to calculate wholesale rates and the impacts on wholesale customers, and the impact on retail and industrial customers as well. Raftelis will first hold a workshop with the Commission and key staff to review the various wholesale methodologies and understand the benefits and challenges under each alternative. Raftelis will facilitate the discussion to achieve consensus as to which methodology should be implemented. During this workshop, the Commission and key staff members will also review the results of the retail and industrial water rate analysis to understand the full impact of any changes to water rates. Raftelis will then hold a separate workshop with wholesale customers to explain the new methodology to be used and any resulting impacts to wholesale customers.

Task 2-5: Written Analysis

Raftelis will document the study in a letter report. County staff will be provided a draft of the letter report prior to it being finalized. The wholesale contracts may need to be amended to reflect the methodology to be used over the contract period. Raftelis can assist in providing language regarding the methodology to be used, if requested.

III. REVENUE BOND AND WATER INFRASTRUCTURE FINANCE AND INNOVATION ACT ISSUANCE ASSISTANCE

The County is planning to issue bonds to fund capital improvements for the water and wastewater utility system in late 2019/early 2020. The County is pursuing both Water Infrastructure Finance and Innovation Act (WIFIA) funding, as well as revenue bond funding. Raftelis aided the County in 2015 to prepare an abbreviated feasibility report for the Series 2015 Revenue Bonds that included an opinion letter, an updated financial forecast, and a summary of key information and assumptions used to develop the financial forecast. The County has requested assistance in preparing a new forecast from the model and an opinion letter to demonstrate that the forecast revenues generated from water and wastewater operations are sufficient to meet rate covenants and other requirements necessary to issue the proposed Series 2019 or 2020 Revenue Bonds. The County also seeks assistance from Raftelis in providing a financial forecast in support of the WIFIA funding, and in answering questions regarding the forecast. It is assumed that the forecast prepared for the revenue bond issue can be utilized to obtain WIFIA funding, the tasks of which are explained below.

Task 3-1: Provide Five-Year Forecast for Bond Issuance

Raftelis will use data provided by County staff for the wastewater system to update the model originally built by Raftelis (which will also be used for the water retail and industrial rate update). The model was built to not only calculate water and sewer rates, but also to generate a forecast for the issuance of bonds. Essentially, this will involve updating the model with similar information used to update the model for the retail, irrigation, and industrial analysis. Data that will be needed to update the model includes, but is not limited to, the following:

-) Most recent detailed operating budget for the sewer system including non-operating revenues
-) Annual principal and interest for bonds issued for the sewer system paid by each partner
-) Number of wastewater customers over the past 3 years
-) Revenues for sewer customers over the past 3 years
-) Five-year capital improvement plan for the sewer system and funding sources

Based on this updated version of the model, Raftelis will prepare a five-year forecast for the water and sewer utility to show projected debt service coverage and to demonstrate compliance with the specific requirements for issuing additional revenue bonds (“Additional Bonds Test”). Raftelis will then review this forecast with County staff to make sure that it represents a reasonable forecast of the County’s expected financial results for the sewer enterprise fund over the next five years.

Task 3-2: Provide Opinion Letter for Forecast

Based on the results of the forecast, Raftelis will prepare an opinion letter documenting the reasonableness of the five-year forecast. The letter will include supporting schedules or information from the model to provide sufficiently detailed information to support the forecast, but not at the same level of detail as the full feasibility report required to be included in an official statement (OS). The forecast will be structured to demonstrate compliance with the requirements of the Additional Bonds Test outlined in the General Indenture. It is not expected that the opinion letter will be included in the OS, but information from the forecast may be used to complete certain sections of the OS.

As Raftelis works to update the model and develop the five-year forecast, it is Raftelis’ understanding that the County will be developing historical information based on the FY 2019 audit for the water and sewer utilities to demonstrate, based on this historical information, that the County had adequate revenues in FY 2019 to meet the requirements for satisfying the Additional Bonds Test, based on past performance, as documented in the General Indenture. The Additional Bonds Test has two parts, and satisfying any one of the parts is all that is required to pass the test. If the Additional Bonds Test can be satisfied based on historical performance (as addressed in Sections 6.8 (d) (1) (A) and (B)), then the forecast will only need to demonstrate continued compliance with the Rate Covenant. If the County cannot demonstrate compliance

based on the audited information, then the forecast will include the necessary calculations to demonstrate compliance with the forward looking test described in Section 6.8 (d) (2) (B).

Schedule

The County anticipates starting the project in January of 2019. The County would like to have the wholesale and retail rate study components completed by the end of March of 2019 so that any changes in the wholesale (or retail and industrial) rates and revenues can be considered for implementation (or phased implementation) in FY 2020. While this is an aggressive schedule, Raftelis recently completed a system development fee study for the County and can use some of analysis in this study to inform the wholesale and rate study. In addition, the original model can be used to expedite the rate study. The revenue bond and WIFIA assistance would not take place until late 2019 or early 2020.

Project Fees

Attachment A provides a work plan detailing the anticipated level of effort required to complete all the study components and their associated tasks. The fees shown represent not-to-exceed amounts. The initial expectation is that it will not be necessary to travel to Raleigh for a meeting with the Local Government Commission to review and discuss the forecast. If a trip to Raleigh is necessary or desirable, this would be addressed as a separate additional task. The project fees are based on our standard hourly billing rates for professional and administrative personnel assigned to the project, plus direct expenses. Expenses would relate to travel costs, computers, postage, supplies, etc.

It is our practice to bill monthly for fees and expenses as they are incurred during a project. The attached work plan provides an estimate of the time required to complete each task, and we reserve the right to shift hours among tasks and personnel as circumstances may change during the project. Total fees and expenses will be limited to the not-to-exceed amount unless specific approval for an adjustment in scope is approved by the County. If the actual fees incurred are less than the estimated fees in the work plan, then these savings will be passed on to the County.

Registered Municipal Advisor

Raftelis is registered with the U.S. Securities Exchange Commission (SEC) and the Municipal Securities Rulemaking Board (MSRB) as a Municipal Advisor. Registration as a Municipal Advisor is a new requirement under the Dodd-Frank Wall Street Reform and Consumer Protection Act. All firms that provide financial forecasts that include assumptions about the size, timing, and terms for possible future debt issues, as well as debt issuance support services for specific proposed bond issues, including bond feasibility studies and coverage forecasts, must be registered with the SEC and MSRB to legally provide financial opinions and advice. Raftelis' registration as a Municipal Advisor means our clients can be confident that Raftelis is fully qualified and capable of providing financial advice related to all aspects of utility financial planning in compliance with the applicable regulations of the SEC and the MSRB.

As a registered Municipal Advisor under the Dodd-Frank Act, Raftelis is also required to inform our clients of any existing or potential conflicts of interest that may be relevant to the proposed scope of services. As of the date of this engagement letter, no conflicts of interest are known to exist. In addition, the services to be provided by Raftelis will be limited to the scope of work and tasks described in this engagement letter and will not include other services often provided by Municipal Advisors or independent Financial Advisors. In particular, unless requested to do so as part of a scope adjustment, Raftelis will not be responsible for completing a detailed review of the Official Statement, the Bond Resolution, or other documents prepared for the Series 2018 Bonds. Our services will relate only to the preparation of the forecast and opinion letter, and Raftelis will only be responsible for reviewing the relevant portions of other documents that specifically address the information provided in the forecast and opinion letter. By signing this engagement letter indicating its approval and acceptance of the of the proposed scope of work and fees, the County is also explicitly acknowledging that Raftelis has provided the necessary disclosures addressing conflicts of interest and any limitations on the scope of Municipal Advisory services to be provided by Raftelis as part of this engagement.

We look forward to working with you and the County. Should you have any questions, please do not hesitate to contact me at 704.373.1199. If the provisions of this engagement letter are acceptable, please sign and return one copy of the letter for our files. We are delighted to have this opportunity to be of continued assistance to Brunswick County.

Very truly yours,



Elaine Conti
Senior Manager

We accept the terms of this engagement letter:

_____ Signature	_____ Name of authorized agent
_____ Date	_____ Title

ATTACHMENT A

Tasks	Vice President	Senior Manager	Senior Consultant	Consultant	Admin	Total Hours				
	\$290	\$260	\$205	\$180	\$75		Labor	T&C Charge	Travel	Total
0 Overall Project Management		8				8	\$ 2,080	\$ 80	\$ -	\$ 2,160
Wholesale Rate Analysis						0	\$ -	\$ -	\$ -	\$ -
1-1 Project Initiation and Information Gathering		4		12		16	\$ 3,200	\$ 160	\$ -	\$ 3,360
1-2 Calculate Wholesale Rates Under Cash/Utility Approach & Standby/Emergency		20		68	2	90	\$ 17,590	\$ 900	\$ -	\$ 18,490
										\$ 21,850
Retail and Industrial Rate Analysis										
2-1 Data Collection and Review		2		8	2	12	\$ 2,110	\$ 120	\$ -	\$ 2,230
2-2 Cost Allocation, Rates and Customer Impacts		20		48		68	\$ 13,840	\$ 680	\$ -	\$ 14,520
2-3 Workshops for Key Stakeholders (two in total)		20		24	4	48	\$ 9,820	\$ 480	\$ 1,427	\$ 11,727
2.4 Written Analysis		12		16		28	\$ 6,000	\$ 280	\$ -	\$ 6,280
										\$ 34,757
Revenue Bond/WIFIA Issuance Assistance										
3-1 Provide Five-Year Forecast for Bond Issuance	8	16		28	2	54	\$ 11,670	\$ 540	\$ -	\$ 12,210
3-2 Provide Opinion Letter for Forecast	8	16		16		40	\$ 9,360	\$ 400	\$ -	\$ 9,760
										\$ 21,970
TOTAL						364	\$ 75,670	\$ 3,640	\$ 1,427	\$ 80,737