



Draft Memorandum
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City of Portsmouth Wholesale Water Rates



Prepared by



Municipal & Financial Services Group

This document was prepared to summarize the work performed by the Municipal & Financial Services Group (MFSG) for the City of Portsmouth (the City) to analyze the City’s water rates charged to the City’s wholesale customers.

1.0 Background

The City currently provides water on wholesale basis to New Caste and Rye Water Districts. The City has been providing water to these districts since 19xx at which time the City and the Districts entered into a wholesale water agreement establishing the terms and conditions of the service. The service is provided via a total of five master meters with annual water sales of approximately 46 million gallons. The City has not increased the rate charged to the wholesale customers since the inception of the agreement. The current wholesale water rate per hundred cubic feet (ccf) of metered water is \$0.81.

Since the wholesale rates have not been adjusted and the City’s costs of providing water service have increased over the last 20 years, the City engaged the Municipal & Financial Services Group (MFSG) to determine the appropriate wholesale water rate to be charged by the City.

2.0 Approach

In 2012, the City hired MFSG to complete a water and sewer cost of service and rate study. As part of this effort, MFSG developed a financial model for the Water and Sewer Funds which models the current and future cost of providing water and sewer service. MFSG has continued to provide support with the model on an annual basis. The model documents the full cost of providing water service including all operating and capital expenditures. To calculate the wholesale water rates the financial model was used to examine the portion of expenditures that are associated with wholesale service. This was accomplished by developing several allocation ratios based on the characteristics of the City’s main service area and the wholesale customers. The allocation ratios that were used in the analysis are shown in Table 1.

Table 1: Wholesale Cost Allocation Ratios

Allocation Percentage Type	Allocation to Wholesale	Description
Wholesale Consumption	3.80%	Ratio of Total Water Volumes Sold to Wholesale Sales
Wholesale Bills	0.06%	Ratio of Total Bills to Wholesale Bills
Wholesale Transmission ⁽¹⁾	2.18%	Ratio of Total Linear Feet of Transmission Water Lines to Total Linear Feet of Distribution Water Lines Times Consumption Ratio ⁽²⁾

⁽¹⁾For the analysis it was assumed that transmission mains are mains larger than 8-inches in diameter

⁽²⁾This ratio represents the portion of the water transmission system that serves wholesale customers.

It should be noted that in some instances the City incurs costs while providing water service that are exclusively for serving customers located within the City and therefore none of these costs are allocated to wholesale customers.

3.0 Wholesale Water Rate Determination

The allocation ratios shown in Table 1 were applied to each of the water system expenses based on type of expense to determine the annual cost of providing wholesale water service. Table 2 provides a general overview of allocation ratios used to allocate each type of expenditure.

Table 2: Application of Allocations

Type of Expense	Allocation to Wholesale
Water Production (operating and capital)	Consumption: 3.80%
Administration (operating)	Bills: 0.06%
Engineering (operating)	Consumption: 3.80%
Pumping (operating and capital)	Consumption: 3.80%
Storage (operating and capital)	Consumption: 3.80%
Transmission (operating and capital)	Transmission: 2.18%
Meters and Hydrants (operating)	City Only: 0.00%

Using the allocations percentages, the cost of providing wholesale water over a five-year projection period was determined. The total wholesale water cost of service is shown in Table 3.

Table 3: Wholesale Revenue Requirements

Expenditure Type	FY2015	FY2016	FY2017	FY2018	FY2019
Operating Costs					
Total Operating Expenses	103,554	108,079	112,826	117,806	123,033
Capital Costs					
Existing Debt Service Payments	58,867	55,989	54,398	52,806	51,106
Cash Funded Capital Projects	28,913	20,428	19,882	15,660	14,709
Projected Debt Service Expense	4,828	7,178	16,096	16,429	16,600
Capital Stabilization	6,052	6,052	6,052	6,052	6,052
Total Revenue Requirements	\$202,215	\$197,727	\$209,254	\$208,754	\$211,501

As shown in Table 3, the annual revenue requirements in providing wholesale water average around \$200,000 per year. The current revenue generated from wholesale customers, given the current wholesale rate and water sales totals approximately \$50,000 per year. This result is not surprising given the increasing cost of providing water service over the last several decades and the fact that the City has not adjusted the wholesale water rate over this period of time.

On an annual basis the wholesale revenue requirements represent approximately 2% of the total water system revenue requirements within the Water Fund. The calculation of the appropriate wholesale water rate given the revenue requirements is presented in Table 4.

Table 4: Wholesale Rate Calculation

Expenditure Type	FY2015	FY2016	FY2017	FY2018	FY2019
Total Revenue Requirements	\$202,215	\$197,727	\$209,254	\$208,754	\$211,501
Wholesale Water Volume (ccf)*	62,081	61,896	61,817	61,724	61,631
Wholesale Water Rate per ccf	\$3.27	\$3.20	\$3.39	\$3.39	\$3.44

**Assumes annual 0.1% decline in water sales*

Table 4 demonstrates that the appropriate wholesale water rate should average around \$3.35 per hundred cubic feet (ccf) over the next five years. The calculated rate is substantially higher than the current rate of \$0.81 per ccf.

4.0 Recommendations

Based on our review and analysis of the cost of providing wholesale water service recommend that the City:

- Increase the wholesale water rates charged to the New Caste and Rye Water Districts to reflect the actual cost of providing water service to these customers.
- Evaluate and adjust wholesale water rates on an annual basis to ensure that the City recovers the cost of providing the wholesale water service.

The adoption of these recommendations will ensure that the customers located within the City are not subsidizing service provided to wholesale customers. It should be noted that it is not uncommon to charge an ownership premium above the cost of providing service to compensate the City for the risks it bears in providing service outside its limits. In New Hampshire a premium of **10%** can be applied without approval from the New Hampshire Public Utilities Commission (PUC). A premium above **10%** requires approval from the PUC. Due to the increases in wholesale rates recommended at this time, we are not recommending that the City apply a premium but in the future the City should consider its ownership risk in providing service outside the City and consider whether a premium should be applied.