



Jersey City Municipal Utilities Authority
Solid Waste Collection Rate Study

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Hoboken, New Jersey



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SECTION 1. PURPOSE AND OVERVIEW OF THE STUDY

Background and Study Objectives

The Jersey Authority Municipal Utilities Authority (“Authority”) is initiating a solid waste collection service municipal utility. The solid waste utility has accepted assignment, effective January 1, 2021, of the solid waste collection contract (the “Contract”) (see Appendix A) entered into between the City of Jersey City and Regional Industries Inc. (the “Collector”) on July 30, 2020. Under the terms of the Contract the Collector will provide complete solid waste collection services for all eligible properties within the City of Jersey City for a period of 5 years. The Authority will pay for the cost of the Contract beginning on January 1, 2021 from the proceeds of the solid waste utility rates established in conjunction with this rate study.

In early 1998 the Jersey City Sewerage Authority was reorganized as the Jersey City Municipal Utilities Authority to operate both the sewer and water systems. The addition of solid waste collection services is an authorized activity for a municipal utility authority under N.J.S.A. 40: 14B-1 et seq.

Solid Waste System

The solid waste system is comprised of three major components:

- 1- The Collection Contract to be undertaken by the Authority
- 2- Disposal of solid waste by the Collector in accordance with the flow control directives of the Hudson County Improvement Authority
- 3- Oversight of Collector compliance with the Contract by the City of Jersey City Sanitation Department, including oversight of recycling mandates from the New Jersey Department of Environmental Protection



JCMUA Solid Waste Budget Summary

Revenue

Solid Waste Collection Fees	\$ 16,100,000
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Appropriations

Collection Contract	\$ 15,100,000
Administrative Costs	600,000
Reserves	<u>400,000</u>
Total Expense	\$16,100,000

A. PURPOSE OF THE STUDY

The Authority retained NWFG in 2020 to evaluate and establish its initial solid waste rates. The rates developed in this study are based upon a fair and equitable approach to assessing rates related to unit occupancy and thus be correlated to the amount of solid waste generated by occupants. In developing proposed new water and sewer rates, NWFG and Authority Staff worked cooperatively in developing study results and rate alternatives. Based on input from the Authority Staff, NWFG recommends the Authority adopt the water and sewer rates summarized in this report.



B. OVERVIEW OF THE STUDY

Key Issues Addressed – As part of the effort to meet the overall objectives summarized above, the specific elements addressed in this study included:

Overall Rate Design – The impacts of solid waste rates on customer bills are significant concerns to the Authority and staff and, therefore were critical considerations in evaluating the overall rate design.

C. RATE STUDY METHODOLOGY

Components of the Rate Study Methodology – A comprehensive solid waste utility rate study typically encompasses three major components: (1) the utility's overall revenue requirements and financial plan, (2) the cost-of-service for each customer class, and (3) rate structure design. These three components were used in this study, and are summarized below:

- A- Revenue Requirements & Financial Plan
 - i. Compare projected revenues and expenses
 - ii. Calculate total revenues needed from rates
 - iii. Project annual rate percentage increases needed

- B- Cost of Service Analysis
 - i. Allocate requirements to customer classes

- C- Rate Design
 - i. Determine rate structure by customer class
 - ii. Reflect JCMUA policies and rate objectives

These components are intended to address general requirements for equity and fairness.



As a part of this rate study, NWFG projected revenues, expenditures, net revenue requirements, performed cost-of-service rate analyses, and evaluated rate design alternatives that resulted in the recommended initial solid waste rates. The following sections present an overview of the methodologies, assumptions, and data used along with the financial plans and rates developed during this study.

Rate Design Criteria – Several criteria are typically considered in setting rates and developing sound rate structures, including:

- Rates should be easy to understand from the customer’s perspective.
- Rates should be easy to administer from the utility’s perspective.
- Rates should be equitable and non-discriminating (that is, cost based).
- There should be continuity in the rate making philosophy over time.
- Other utility policies should also be considered (for example, encouraging conservation and economic development).
- Rates should provide month-to-month and year-to-year revenue stability.

The following section covers basic rate design criteria that NWFG and Authority staff considered as a part of their review of the rate structure alternatives.

Rate Structure Issues – One of the most fundamental components in rate design is the relationship between fixed and variable costs; many rate structures contain a fixed charge in combination with a volumetric charge. Fixed costs typically do not vary with the amount of service consumed and the proposed solid waste rate is expected to be charged as a fixed cost based upon the expected production of solid waste for collection under the Contract.

Key Financial Assumptions

Following are the key assumptions used in the water and sewer rate analyses:

- **Cost of Collection Contract** – Review of the actual collection contract to determine total annual costs and any allowances for adjustments.
- **Reserve Targets** – Target reserves for solid waste operations in connection with the contract to assure positive cash flow:
 - Operating Reserve target levels – 90 days of Contract and Authority related expenses.

- Emergency Reserve – 30 days of budget

- **Inflation and Growth Projection Assumptions**

- No annual customer growth.
- Contract costs are inflated as per the terms of the Contract, or if not specified at 2 percent annually.
- Authority expenses are inflated at a rate of 2 percent annually,

SECTION 2. SOLID WASTE RATE STUDY

A. KEY SOLID WASTE RATE STUDY OBJECTIVES

A few of the more specific objectives for the water rate study included:

- Evaluating volumetric rates based upon water meter readings in a manner that is incorporating the Authority's need to ensure adequate revenues to pay for the costs of the annual operation of the system as well as to fund prudent reserve requirements.
- Finding an acceptable plan for generating sufficient revenue to meet projected funding requirements.

B. SOLID WASTE UTILITY REVENUE REQUIREMENTS

It is important for municipal utilities to maintain reasonable reserves to handle emergencies, fund working capital, maintain a good credit rating, and generally follow sound financial management practices.

Water usage is considered a reliable measurement of occupancy per meter location and occupancy the key factor is solid waste disposal volume. Therefore, we recommend that solid waste collection billing be based upon water meter readings just as sewer billing is currently. For each ccf of water consumed the user will be billed \$2.477 per ccf for solid waste collection which will reflect the estimated occupancy of the unit(s) the meter serves. The billing rate and amount will be reflected on the periodic bills issued by SUEZ on behalf of the JCMUA for water and sewer but will now have a line on the bill for solid waste collection which will show the rate for that service and the amount due by multiplying the rate by the water meter reading for the relevant period.

Based upon the 2021 budget shown above the amount to be raised for solid waste collection services is \$16,100,000. In 2019 the JCMUA billed Jersey City users who will also receive the benefits of the solid waste collection service an estimated 6.5 million ccf of water. Using this metered volume as the benchmark JCMUA will require a rate of \$2.477 per ccf to pay for the expenses of the solid waste collection budget in 2021.

This is a fair and equitable rate as water usage reflects occupancy and occupancy relates to trash production. In the event any accounts billed for solid waste service are not beneficiaries of the collection contract then, upon notice from the account and proper investigation, the account is question will have the bill adjusted and future billing terminated as appropriate.

Rate establishment is governed by the need to meet operating and contractual costs costs and maintain reserve funds. The Authority's solid waste utility objectives are as follows:

- **Meeting Net Revenue Requirements:** The Authority's solid waste utility has a projected net revenue requirement in 2021 of \$16.1 million.
- **Building and Maintaining Reserve Funds:** The Authority shall build and maintain sufficient reserves; this analysis assumes reserves will be gradually built over time with the intent of reaching recommended target reserve fund target balances.
- **Operating Reserve** is intended to promote financial viability in the event of any short-term fluctuation in revenues and/or expenditures. Typical industry practices are to maintain 90 days (or 25 percent) of the Utility's budgeted annual operating expenses.
- **Rate Stabilization Fund** is designed to further promote financial stability when there are fluctuations in rate revenue. The target fund balance is typically set to 30 days of the Utility's budgeted annual operating expenses.

c. COST-OF-SERVICE ANALYSIS

The second component of a solid waste rate study is the cost-of-service analysis whereby annual revenue requirements are fairly and equitably allocated to customer classes.

A key component of any multi-user water system rate study is the development of the cost of solid waste collection in relationship to solid waste disposal. We have determined that billing for solid waste collection based upon water meter readings provides a fair and equitable approach to charging users with a close correlation to the number of occupants at the meter location and thus the amount of solid waste per person to be collected.

In considering the collection cost for the JCMUA and its customers the cost is determined by allocating both the operating cost and the capital cost for all expenses/investment related to solid waste collection.

Summary of Solid Waste Revenue Requirements

Cost of Service

Solid Waste Utility Revenue Requirement		2021
Operating Expenses		
Administrative	\$	500,000
Non Administrative	\$	100,000
Collection Contract	\$	15,100,000
Reserves	\$	400,000
Total Cost of Service	\$	16,100,000

Meeting Net Revenue Requirement

Initial Rate Requirement		2021
Revenues		
Rate Revenue	\$	16,100,000
Delinquent Payment Interest	\$	-
Interest Earnings	\$	-
Total Revenues	\$	16,100,000
Solid Waste Revenue Requirement	\$	16,100,000
Surplus (Deficiency) before rate increase	\$	-

Charge for Solid Waste Utility

JCMUA Solid Waste		2021
Per Unit Rate Charges		
Solid Waste	Charge Required	\$ 16,100,000
	Annual Water Billed CCF	6,500,000
	Charge/ccf	\$ 2.477
	Average Water Volume/ Month (ccf)	10
	Average Charge per Month	\$ 24.77
	Average Charge per Year	\$ 297.23