



City of Houston

Combined Utility System Water and Wastewater Rate Study

Executive Summary

July 2015

Report Prepared By:



00854496.0000

Table of Contents

Table of Contents	i
Executive Summary	1
1.1. Definitions	1
1.2. Study Assumptions	1
1.3. Capital Improvement Program	2
1.4. Combined Water and Wastewater Utilities	3
1.4.1. Financial Plan	3
1.4.2. Cost of Service.....	3
1.4.3. Rate Design	4

List of Tables

Table 1. Capital Improvement Program Fiscal Years 2015 through 2019	3
Table 2. Projected Combined Utilities Revenue Increases	3

Executive Summary

The City of Houston, Texas (City) provides water and wastewater service to over 440,000 customer accounts. The City's water and wastewater utilities are funded primarily from water and wastewater rates.

The Combined Utility System (CUS) has a three-fold mission of protecting public health, protecting the environment and providing superior customer service. The CUS must continue to be financially sustainable in order to meet this mission. Financial sustainability requires having adequate revenues to fund revenue requirements, maintain appropriate cash reserves and meet bond covenants including having adequate debt service coverage.

The City authorized ARCADIS to review the utilities' financial status and to recommend rate adjustments, as necessary, to ensure their continuing financial sustainability. This study includes:

- Development of water and wastewater financial plans for the five-year study period, fiscal years (FY) 2015 through 2019;
- Analysis of water and wastewater customer class cost of service for FY 2015 through FY 2019; and
- Design of water and sewer rates for implementation on April 1, 2015.

1.1. Definitions

The following words are used throughout the report and are defined as follows:

- *Fiscal Year (FY)* is the year July 1 through June 30.
- *Existing Rates* are water and wastewater rates in effect beginning April 1, 2014.
- *Cost of Service* is the amount of FY 2015 budgeted annual operating expense and capital costs to provide water and wastewater service to each customer class. Capital costs include FY 2015 debt service payments, pay-as-you-go funding, and previous lien and first lien debt service coverage.

1.2. Study Assumptions

This rate study is based on numerous assumptions. Changes in these assumptions could have a material effect on study findings. ARCADIS incorporated the following key assumptions into the study:

- Based on recent historical trends, the number of residential and contract raw water accounts will increase 0.3% during FY 2015 and 0.0% annually during FY 2016 through FY 2019. All other customer classes will increase 0.3% annually during FY 2015 through FY 2019.
- Beginning in FY 2016, annual water usage per account will decrease 0.50% for residential and multifamily customers and 0.25% for nonresidential customers due to conservation and price elasticity.
- Costs will increase at the following annual inflation rates:
 - ◆ General inflation at 2.5% in FY 2016, 2.8% in FY 2017, and 3.0% in FY 2018 and subsequent years.
 - ◆ Labor Costs at 4.34% in FY 2016, 4.33% in FY 2017, 4.31% in 2018, and 4.29% in subsequent years.
 - ◆ Supplies and Services at 2.0% annually.
 - ◆ Other Services and Charges at 2.0% in FY 2016 and subsequent years.
- The combined utility system must maintain minimum operating reserves of at least 425 days of operation and maintenance expenses (O&M) for water and 538 days of O&M for wastewater as working capital in the operating funds.
- The combined utility system will strive to maintain minimum capital reserves of at least 2.5% of par (total outstanding principal on debt).
- For water system demand factors, the calculated max day demand to average day demand ratio is 1.30; adding a max hour factor of 0.65, the max hour demand to average day demand ratio is 1.95.
- Using the 3-year average influent data, the contributed wastewater strength is 141mg/L for Biological Oxygen Demand (BOD) and 254 mg/L for Total Suspended Solids (TSS).
- The capital improvements program is allocated between water and wastewater based on the associated costs; the Pay-Go funding is allocated 50% to water and wastewater.
- The existing debt service is allocated 47% to water and 53% to wastewater; using the net capital improvements program allocation, the new debt is allocated 47% to water and 53% to wastewater.

1.3. Capital Improvement Program

Utility staff provided the capital improvement program (CIP) information. Table 1-1 shows the projected 5-year CIP costs.

Table 1.
Capital Improvement Program
Fiscal Years 2015 through 2019
(\$1,000)

Description	Water	Wastewater	Total
Debt	\$695,382	\$819,618	\$1,515,000
Pay-As-You-Go	178,600	172,500	351,100
Total	873,982	992,118	1,866,100

1.4. Combined Water and Wastewater Utilities

1.4.1. Financial Plan

ARCADIS developed combined water and wastewater five-year financial plans for CUS. The revenue from existing rates is inadequate to meet projected revenue requirements, provide adequate reserves and produce required debt service coverage of 1.30 during the study period. Table 1- 2 shows the revenue adjustments projected during the study period to meet these criteria.

Table 2.
Projected Combined Utilities Revenue Increases

Fiscal Year	Revenue Increase
2015*	4.4%
2016	3.9%
2017	3.7%
2018	3.7%
2019	2.2%

*The revenue increases exclude Water Authorities and Co-Participants, which pay contract rates.

ARCADIS recommends the financial plan be updated annually to reflect current estimates of revenue, operating expenses, capital improvement needs, and capital financing requirements, and to ensure the CUS uses the appropriate automatic rate increase index per Ordinance 2010-305.

1.4.2. Cost of Service

ARCADIS conducted comprehensive cost of service analyses for the water and wastewater utilities in accordance with standard methods supported by the American Water Works Association and the Water Environment Federation, respectively. These determined the cost of providing water and wastewater service to each customer class.

Table 4-1 in Section 4 of this report presents the findings of the cost of service analysis, as well as the projected revenue from proposed rates.

1.4.3. Rate Design

The findings of the cost of service analysis serve as a target for customer class rate design. The City elected to design proposed water and wastewater rates to be effective April 1, 2015, to increase combined annual non-contributed capital contract water and wastewater service revenue by 4.4%. In accordance with automatic rate adjustments using Houston's regional consumer price index (CPI) of 2.8% plus the change in U.S. Census estimated population of 1.6%. The proposed April 1, 2015 rates are shown in subsequent sections of this report.