

# Item 12



7447 E. Indian School Rd. Suite #210  
Scottsdale, AZ 85251

PHONE 480-312-2427  
WEB [www.ScottsdaleAZ.gov](http://www.ScottsdaleAZ.gov)

**Date:** February 11, 2026  
**To:** Honorable Mayor Borowsky and Members of the City Council  
**From:** Sonia Andrews, City Treasurer/Chief Financial Officer  
**Subject:** Water Sewer Rates

---

The city is proposing a 4.5% water rate increase and a 3.5% sewer rate increase for FY26/27. These increases were determined by the Water Resources Department using a 5-year rate model to calculate revenue requirements for upcoming water and sewer operating and capital needs.

In accordance with City Comprehensive Financial Policy No. 9.02 and 9.03, the city establishes water and sewer rates pursuant to a multi-year financial plan applying debt financing and excess reserves for capital projects to avoid significant rate fluctuations.

As the Water Department is still assessing the need for certain capital projects, and due to significant unknowns with certain capital projects, the 5-year financial plans are still being refined and Council should be aware of the following:

1. The rate increases do not include funding for capital projects that do not have accurate cost projections and capital projects that are still being defined.
2. Capital asset reinvestments over the 5-year planning period may still need to be refined in the rate model.
3. Debt financing and debt service considerations are still being determined. The water and sewer capital funding program should consider an appropriate allocation of debt financing versus cash funding for capital projects in accordance with Comprehensive Financial Policy No. 9.05.

As the Water Department refines the capital projects and related needs, the water and sewer 5-year financial plans and rate models will be updated in compliance with our Comprehensive Financial Policies.

Please contact me if you have any questions or would like additional information.

**C:** Charter Officers  
Kira Peters  
Anna Henthorn  
Scott Selin

# CITY COUNCIL REPORT



Meeting Date: February 24, 2026  
General Plan Element: *Public Services & Facilities*  
General Plan Goal: *Maintain a sustainable water and wastewater system.*

## **ACTION**

---

Adopt notice of intention to increase water and wastewater rates, increase miscellaneous water charges, and make housekeeping adjustments to Chapter 49 City of Scottsdale Revised Code for fiscal year 2026/27 and establish May 19, 2026, as the date for a public hearing.

## **BACKGROUND**

---

**Financial Planning Process:** As prescribed by the City of Scottsdale's adopted Comprehensive Financial Policies, the City sets rates for water and wastewater customers based on annually updated five-year financial plan for each enterprise fund. The five-year plans are used to ensure that rate changes generate sufficient revenues to cover costs of serving customers and to maintain adequate reserves in accordance with the City's adopted financial policies; reserve policies provide for contingencies and stabilize rate increases over the five-year planning period. As part of the comprehensive planning effort, the impact on the combined utility is carefully considered in determining the appropriate balance between rate increases and expenditure needs including future capital improvements and debt financing needs. The City believes that a strategy of annual marginal rate increases to smooth out long term revenue requirements produces more affordable and predictable rates for customers.

**State Public Notification Process:** State statutes establish the public notice and public hearing process to ensure that City water and wastewater customers receive adequate notice time, the ability to study the rate report supporting the proposed rate increases, and the opportunity to speak at a public hearing regarding the proposed increases. State statutes require:

- Adoption of a notice of intention to modify rates and miscellaneous water charges at a regular Council meeting (February 24, 2026) and setting of a date for a public hearing (May 19, 2026) on the proposed changes to be held not less than 60 days after adoption of the notice of intention;
- Posting of a written report or data supporting the changes with the City Clerk at least 30 days prior to the public hearing (April 17, 2026);
- Publication of a notice of public hearing regarding the City's intention to modify rates and miscellaneous water charges in a newspaper of general circulation within the

Action Taken \_\_\_\_\_

boundaries of the municipality not less than 20 days prior to the public hearing (March 18, 2026);

- A public hearing at a City Council meeting (May 19, 2026);
- Adoption of the proposed changes any time after the public hearing (May 19, 2026);
- Implementation of changes no sooner than 30 days after adoption (proposed water rates effective November 1, 2026, miscellaneous water charges and wastewater rates effective July 1, 2026).

## **IMPACT ANALYSIS**

---

In accordance with its adopted financial policies, the City completed the annual updates to the comprehensive five-year financial plans that incorporate all projected operating and capital revenues and expenses to determine the cash needs of the water and wastewater enterprise funds. The City is proposing modifications to the water and wastewater rates and is proposing increases to miscellaneous water charges to meet cost recovery requirements for services provided to specific customers. As part of the comprehensive planning effort, the impact on the combined utility bill for water and wastewater service was carefully considered in determining the appropriate balance between the proposed rate changes and debt financing. Based on the updated five-year financial plans, a synopsis of cost impacts is explained below.

**Water** – The water enterprise fund is impacted by multiple cost factors over the five-year planning period including:

- Operating cost increases for raw water to include current drought pricing, put in place by Central Arizona Project (CAP),
- Costs associated with additional water source and supply,
- Operating cost increases for electricity in the Arizona Public Service (APS) service area,
- Increasing cost for replacing and repairing aging infrastructure,
- Operating cost increases for personnel services and benefits.

Increases to base fees are proposed to better reflect the recovery of standard operating costs and adjusted to capture the demand availability designed into the system. Increases to commodity rates are proposed to generate sufficient revenues to maintain the water fund as self-sustaining enterprise, encourage efficient water use and urge conservation.

A 4.5% increase to base water fee is proposed.

- 3.5% to cover standard operating costs and capital improvements/projects,
- 1.0% to assist in funding additional water sources and supply amidst the uncertainty on the Colorado River.

Overall, the water base fee and commodity rate changes are forecasted to generate an annual revenue increase of approximately \$6,259,870 or 4.5% and proposed to become effective November 1, 2026.

**Wastewater** – The wastewater enterprise fund is impacted by multiple cost factors over the five-year planning period including:

- Operating cost increases for electricity in the APS service area,
- Increasing cost for replacing and repairing aging infrastructure,
- Expansion of facilities and sewer line extensions within the service area that are not covered by development fees,
- Maintenance cost increases of system infrastructure due to increased system demand,
- Operating cost increases for personnel services and benefits.

Increases to base fees are proposed to better reflect the recovery of fixed operating costs and adjusted to capture the demand availability designed into the system. Increases to volumetric rates are proposed to reflect the cost of wastewater loadings by customer class and generate sufficient revenues to maintain the wastewater fund as a self-sustaining enterprise.

Overall, the wastewater base fee and volumetric rate changes are forecasted to generate an annual revenue increase of approximately \$2.1 million or 3.5% and proposed to become effective July 1, 2026.

**Water Miscellaneous Charges** – To address cost recovery, increases to several water miscellaneous charges are proposed to meet the City’s financial policy that charges to recover all direct and indirect costs of service. Miscellaneous charges are assessed to specific users of the service so that general rate payers do not bear the burden. The proposed water miscellaneous charge increases include:

- Meter Service Line fees for 5/8", 3/4", 1", and 2" meter sizes
- Meter Service Line, Meter and Delivery fees for 5/8", 3/4", 1", and 2" meter sizes

Increases to water miscellaneous charges are proposed to maintain cost recovery for specific services. The fee changes are forecasted to generate an annual revenue increase of approximately \$62,030 and proposed to become effective July 1, 2026.

There are no proposed changes for wastewater miscellaneous charges.

Changes to the City Code for housekeeping updates, including processes, definitions, and titles, are proposed to be effective July 1, 2026.

**OPTIONS & STAFF RECOMMENDATION**

---

**Recommended Approach**

Adopt the notice of intention to increase water and wastewater rates and charges for fiscal year 2026/27 and establish May 19, 2026, as the date for public hearing to proceed with proposed rate increases in conformity with State statutes.

**RESPONSIBLE DEPARTMENT(S)**

---

Water Resources and City Treasurer's Office

**STAFF CONTACTS (S)**

---

David Walby, Interim Water Resources Senior Director, (480) 312-7931,  
[DWalby@scottsdaleaz.gov](mailto:DWalby@scottsdaleaz.gov)

Kira Peters, Deputy City Manager, (480) 312-7288, [KiPeters@scottsdaleaz.gov](mailto:KiPeters@scottsdaleaz.gov)

**APPROVED BY**

---



\_\_\_\_\_  
David Walby, Interim Water Resources Senior Director  
(480) 312-7931, [DWalby@scottsdaleaz.gov](mailto:DWalby@scottsdaleaz.gov)

2/10/26 06:42 MST

\_\_\_\_\_  
Date

\_\_\_\_\_  
Sonia Andrews, City Treasurer/Chief Financial Officer  
(480) 312-2364, [SAndrews@scottsdaleaz.gov](mailto:SAndrews@scottsdaleaz.gov)

\_\_\_\_\_  
Date



\_\_\_\_\_  
Greg Caton, City Manager  
(480) 312-7759, [GCaton@scottsdaleaz.gov](mailto:GCaton@scottsdaleaz.gov)

2/9/26 17:50 MST

\_\_\_\_\_  
Date

**ATTACHMENTS**

---

1. Draft-Proposed Legal Notice of Public Hearing

LEGAL NOTICE

CITY OF SCOTTSDALE  
NOTICE OF PUBLIC HEARING REGARDING  
CITY'S INTENTION TO INCREASE  
WATER AND WASTEWATER RATES

The City of Scottsdale hereby gives notice pursuant to Arizona Revised Statutes section 9-511.01 of a public hearing to be held at the regularly scheduled City Council meeting on **May 19, 2026 at 5 p.m.** in the Kiva in City Hall, 3939 N. Drinkwater Boulevard, Scottsdale, Arizona in connection with the City's intention to consider an ordinance modifying water and wastewater rates and charges for City water and wastewater services for fiscal year 2026/27. At the hearing, the City will accept verbal and written comments concerning the proposed water and wastewater rate ordinance. A report, including documentation supporting the modification, is available at the City Clerk's office and the City's website at: <https://www.scottsdaleaz.gov/water/water-service/rates-fees>.



# Item 12

## Memorandum

To: Honorable Mayor Borowsky and Members of Council  
From: Greg Caton, City Manager  
David Walby, Interim Senior Director Water Resources  
Date: February 17, 2026  
Subject: Currently Available Water and Sewer Rate Studies

---

This memo gives some background information on water and wastewater rate studies. In addition to the study in progress with a consultant, staff already have two recent studies to help evaluate needs and guide proposed rates. These water and wastewater studies are critical as they help staff evaluate operating and capital needs while proposing rates that are affordable for customers.

### Available Studies

---

Currently, staff have access to two recent studies to help inform and guide the rate-setting process. The most recent studies, conducted by Raftelis, were completed for water in 2024 (Attachment 1) and wastewater in 2020 (Attachment 2).

In addition, Scottsdale Water Resources is currently completing a comprehensive water and wastewater rate study with the consultant company Black and Veatch. Once the study is complete staff will present the study to City Council.

### Critical Direction is Needed for Final Rate Model

---

While proposed rates have been offered, decisions about the Colorado River and direction from Council about ways to address possible water allocation reductions will need to be incorporated into the final rates for our residents. Knowing this, the proposed rates for FY26/27 were developed using a current cost model that is flexible to ensure rates are valid, cover costs for a robust water utility and maintain healthy reserves as required by financial policies.

There is significant uncertainty with Arizona water resources, particularly regarding the Colorado River and its expiring usage guidelines. This uncertainty affects planning. Scottsdale Water anticipates reductions in Colorado River water allocations through the Central Arizona Project (CAP) and is prepared to face these challenges.

Scottsdale Water will offer various options for Council to consider in the management of water resources. These options include but are not limited to; being involved in the raising of Bartlett Dam project, purchasing water credits, Advanced Water Purification (AWP) initiatives, accessing more groundwater (within limits) and enhanced conservation efforts.

As more information becomes available about the Colorado River and allocation reductions, Scottsdale Water will provide solutions and associated costs to the City Council. The decisions on solutions will inform accurate updates to the water and wastewater rate model.

As the water landscape changes, Scottsdale Water will continue to meet customer needs with the highest quality standards while adapting to the changes in Arizona water resources.

C: Charter Officers  
Jeff Walther, Assistant City Manager

*Attachments:*  
2024 Water Rate Study  
2020 Wastewater Rate Study

# City of **SCOTTSDALE**

**Water Financial Plan, Cost of Service,  
and Rate Study**

Final Report / January 26, 2024





January 26, 2024

Ms. Gina Kirklin  
Scottsdale Water  
7447 East Indian School Road  
Scottsdale, AZ 85251

Subject: Water Financial Plan, Cost of Service, and Rate Study

Dear Ms. Kirklin,

Raftelis is pleased to provide this Water Financial Plan, Cost of Service, and Rate Study (study) for Scottsdale Water.

The primary objectives of the study included the following:

- A financial plan for the study period FY24 through FY29.
- Cost of service analysis to ensure costs are allocated equitably to customer classes.
- Design rates to recover the revenue requirements of each customer class.
- Develop an interactive rate model for Scottsdale Water to develop financial plans and rates in the future.

The Report summarizes the key findings and recommendations related to the study. The key findings and results are based on data provided as of December 2023. Since that time, the City may have refined and reduced some forecasts which impact the results.

It has been a pleasure working with you, and we thank you and the Scottsdale Water staff for the support provided throughout this study.

Sincerely,

A handwritten signature in black ink that reads 'Todd Cristiano'.

**Todd Cristiano**  
*Senior Manager*

# Table of Contents

<b>Executive Summary</b> .....	<b>7</b>
INTRODUCTION .....	7
STUDY GOALS AND OBJECTIVES .....	7
STUDY FINDINGS.....	8
RELIANCE ON CITY-PROVIDED DATA.....	9
<b>Section 2: Assumptions</b> .....	<b>10</b>
CUSTOMER GROWTH.....	10
REVENUE INFLATION FACTORS.....	10
EXPENSE INFLATION FACTORS .....	10
<b>Section 3: Financial Plan</b> .....	<b>12</b>
INTRODUCTION .....	12
OPERATING FUND CASH FLOW.....	12
Beginning Balance.....	12
Revenues .....	12
Revenue Requirements.....	13
Target Reserves.....	13
Debt Service Coverage Requirements .....	13
Indicated Water Service Revenue Adjustments.....	13
<b>Section 4: Cost of Service</b> .....	<b>15</b>
INTRODUCTION .....	15
COST OF SERVICE PROCESS.....	15
Project FY24 Revenue at Current Rates.....	15
Determine Test Year Revenue Requirement.....	15
Functionalize Revenue Requirement .....	16
Allocate Functionalized Costs to Cost Components.....	17
Customer Class Units of Service .....	18
Determine Customer Class Units of Service .....	19
Distribute Costs to Customer Classes .....	19
COMPARISON OF FY25 COST OF SERVICE TO REVENUE AT CURRENT RATES.....	20
<b>Section 5: Rate Design</b> .....	<b>22</b>
INTRODUCTION .....	22
CURRENT RATES .....	22
FY25 COST-OF-SERVICE RATES .....	23

## List of Tables

Table 1: FY25 – FY29 Financial Plan Summary .....	2
Table 2: Comparison of Current and FY25 Cost-of-Service Rates .....	3
Table 3: Customer Growth .....	4
Table 4: Revenue Inflation Factors.....	4
Table 5: Expense Inflation Factors .....	5
Table 6: Beginning Fund Balances.....	6
Table 7: FY25 – FY29 Financial Plan Summary .....	8
Table 8: Projected FY25 Revenue Under Current Rates .....	1
Table 9: FY25 Revenue Requirement (\$ millions).....	2
Table 10: Functional Components.....	2
Table 11: Revenue Requirement Among Functional Components (\$ millions).....	3
Table 12: FY25 Allocated Revenue Requirement (\$ millions).....	4
Table 13: FY25 Units of Service [1].....	5
Table 14: FY25 Unit Cost of Service .....	5
Table 15: FY25 Customer Class Cost of Service (\$ millions).....	6
Table 16: FY25 Comparison of Cost of Service to Revenue at Current Rates.....	6
Table 17: FY25 Comparison of Adjusted Cost of Service to Revenue at Current Rates.....	6
Table 18: Current Rates .....	8
Table 19: FY25 Cost-of-Service Rates.....	9
Table 20: Five-Year Rate Forecast, Alt 1 .....	12
Table 21: Five-Year Rate Forecast - Alt 2.....	13
Table 22: Five-Year Rate Forecast - Alt 3.....	14

## List of Figures

Figure 1: Residential Bill Impacts, 11,500 gallons .....	17
--	----

## List of Appendices

Appendix A: Rate Schedules (FY25 – FY29)	
--	--

This page was intentionally left blank to facilitate two-sided printing.

# Executive Summary

## INTRODUCTION

The City of Scottsdale's (City) water utility provides water service to approximately 95,000 customers inside and outside the City. Scottsdale Water is financially self-sufficient, with funding for capital and operating requirements derived primarily from rates. Scottsdale Water authorized this study to ensure that an adequate level of revenue from water rates is maintained to finance Scottsdale Water's daily operations as well as future capital improvements and expansions. The study included the following:

- Development of a water financial plan for the five-year study period, Fiscal Year (FY) 25 to FY29
- Analysis of customer class cost of service
- Design of water rates for the test year of FY25

Raftelis used industry standard methodologies supported by the American Water Works Association (AWWA) *Principles of Water Rates, Fees, and Charges* M1 manual.

## STUDY GOALS AND OBJECTIVES

Scottsdale Water's overarching goals for this study were to develop long-term financial plans for the water utility while ensuring:

- Rate revenues are sufficient to meet annual operating expenses, debt service, and capital expenditures
- Capital projects are funded with the optimal mix of rate revenue and debt to minimize impacts to customers
- Reserve levels are maintained in accordance with annually adopted Comprehensive Financial Policies, industry best practices, and bond covenants for debt service coverage requirements
- Rates are based on a cost-of-service analysis that equitably recover the cost to provide service to customer classes

In addition to the cost-of-service rate design, Scottsdale Water identified specific pricing objectives to develop the rate alternatives presented in this study. These objectives were guided by two primary goals: revenue sufficiency and defensibility.

- **Wise use of water.** In conjunction with other Scottsdale Water conservation initiatives, water rates promote the wise use of discretionary water.
- **Rate stability:** Annual rate adjustments produce sufficient revenue to meet annual revenue requirements. This includes determining the appropriate balance between rate increases and debt financing with marginal rate changes from year to year.
- **Revenue stability:** Produce rates that maintain a steady stream of revenue during periods of water usage variability.
- **Interclass equity:** Maintain equity between the customer classes (i.e., prevent one class from subsidizing another).

## STUDY FINDINGS

The principal findings of this study are as follows:

- Projected water rate revenues should be sufficient to meet annual revenue requirements through the study period. Revenue requirements include operation and maintenance expenses, payments on existing and forecasted debt service, transfers, and rate-funded capital projects while maintaining reserve levels and debt service coverage. It is recommended that the water financial plan be updated annually to reflect current revenue and revenue requirements estimates. Table 1 summarizes the results of the financial plan. The results are based on data provided as of December 2023. Since that time, the City may have refined and reduced some forecasts which impact the results.

**Table 1: FY25 – FY29 Financial Plan Summary**

Description	FY25	FY26	FY27	FY28	FY29
Annual Revenue Adjustments	11.0%	11.0%	11.0%	11.0%	11.0%
Cumulative Adjustments	11.0%	23.2%	36.8%	51.8%	68.5%
Ending Op Fund Balance, \$ mil	\$21.2	\$22.0	\$22.9	\$23.8	\$24.6
Target Reserves, \$ mil	20.4	21.2	22.0	22.9	23.8
Capital Reserves Balance, \$ mil	112.5	74.8	50.1	15.3	57.9
Debt Service Coverage <sup>1</sup>	2.69	3.23	3.88	4.66	6.16

- The FY25 cost-of-service rates (FY25 rates) retain the existing rate structure: a monthly service charge that varies by meter size and a volume rate that increases by volume block. Table 2 shows the monthly base fee and volume rates for current FY24 and FY25 rates. Current rates recover approximately 23.1% of total rate revenue from the base fees, while FY25 cost of service rates recover 27.9% of total revenue from the base fees.

<sup>1</sup> Comprehensive Adopted Financial Policies, Policy 9 – Enterprise Funds: 9.07 Debt Coverage Ratio Target. Bond covenants may exist that require maintaining a minimum debt coverage ratio. In order to maintain the city's high bond rating, the city will recommend rates based on a target debt coverage ratio of at least 2.0 times for Water and Wastewater and 1.5 times for Aviation and Solid Waste. For financial planning purposes, the debt coverage ratios will be calculated without consideration of development fee revenues.

**Table 2: Comparison of Current and FY25 Cost-of-Service Rates**

Description	Current Rates	Alternate 1 (Across the Board Increases)	Alternative 2 (Cost of Service)	Alternative 3 (One Volumetric Rate)
<b>Base Fees, \$ per bill</b>				
5/8"	\$15.05	\$16.71	\$16.71	\$16.71
3/4"	19.40	21.53	23.05	23.05
1"	27.55	30.58	35.74	35.74
1.5"	45.15	50.12	67.46	67.46
2"	60.20	66.82	105.53	105.53
3"	120.40	133.64	226.09	226.09
4"	188.20	208.90	403.74	403.74
6"	376.25	417.64	828.85	828.85
8"	526.75	584.69	1,526.79	1,526.79
<b>Volume Rate, \$ per kgal</b>				
<b>Residential</b>				
Tier 1	\$1.65	\$1.83	\$1.83	\$1.70
Tier 2	3.10	3.44	3.43	3.23
Tier 3	4.25	4.72	4.70	4.42
Tier 4	5.70	6.33	6.31	5.95
Tier 5	7.05	7.83	7.80	7.30
<b>Multifamily</b>				
Tier 1	\$1.65	\$1.83	\$1.52	\$1.70
Tier 2	3.10	3.44	2.86	3.23
Tier 3	4.25	4.72	3.92	4.42
Tier 4	5.70	6.33	5.26	5.95
<b>Commercial</b>				
Tier 1	\$1.65	\$1.83	\$1.67	\$1.70
Tier 2	3.10	3.44	3.14	3.23
Tier 3	4.25	4.72	4.31	4.42
Tier 4	5.70	6.33	5.78	5.95

Note: kgal = 1,000 gallons

### RELIANCE ON CITY-PROVIDED DATA

During this project, Scottsdale Water provided Raftelis with a variety of technical information, including cost and revenue data. Raftelis did not independently assess or test the accuracy of such data – historical or projected. Raftelis has relied on this data in the formulation of our findings and subsequent recommendations, as well as in the preparation of this report.

There are often differences between actual and projected data. Some of the assumptions used in this report will not be realized, and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between the data or results projected in this report and the actual results achieved, and those differences may be material. As a result, Raftelis takes no responsibility for the accuracy of data or projections provided by or prepared on behalf of Scottsdale Water, nor do we have any responsibility for updating this report for events occurring after the date of this report.

# Section 2: Assumptions

The assumptions outlined in this section are utilized to project the number of customer accounts, revenues, and expenses for future years. Changes in these assumptions could materially impact the results of the findings and conclusions. Scottsdale Water staff provided data on customer accounts and usage for FY21 through FY23, actual revenues and expenses for FY22, and budget revenues and expenses for FY23 and FY24. The remaining years of the study were projected based on assumptions shown in this section.

## CUSTOMER GROWTH

Table 3 shows customer account growth projections for all customer classes based on discussions with Scottsdale Water. The water conservation savings factor is used to reflect customer reductions in consumption during the study period. Scottsdale Water provided additional consumption to be included in the projections for multifamily on Line 3 and commercial customers on Line 5.

**Table 3: Customer Growth**

Line No.	Description	FY25	FY26	FY27	FY28	FY29
1	Account growth	1.0%	1.0%	1.0%	1.0%	1.0%
2	Water conservation savings	99.0%	99.0%	99.0%	99.0%	99.0%
3	Multifamily (kgal)	8,675	21,290	1,314	--	--
4	Total multifamily (kgal)	<b>4,378,978</b>	<b>4,408,505</b>	<b>4,409,378</b>	<b>4,408,937</b>	<b>4,408,496</b>
5	Commercial (kgal)	50,126	142,885	92,773	22,266	--
6	Total Commercial(kgal)	<b>4,822,540</b>	<b>5,015,063</b>	<b>5,107,335</b>	<b>5,129,090</b>	<b>5,128,577</b>

Note: kgal = 1,000 gallons

## REVENUE INFLATION FACTORS

Table 4 shows the revenue inflation factors used to project future miscellaneous revenues and calculate interest earnings. Projections conservatively assume a minor increase in miscellaneous, non-rate revenues throughout the study period. The reserve interest rate is used to calculate the interest earnings income based on projected fund balances and is based on conservative estimates.

**Table 4: Revenue Inflation Factors**

Description	FY25	FY26	FY27	FY28	FY29
Miscellaneous or other revenues	2.0%	2.0%	2.0%	2.0%	2.0%
Interest earnings	0.5%	0.5%	0.5%	0.5%	0.5%

## EXPENSE INFLATION FACTORS

Table 5 shows the expense inflation factors used to project future operating and capital project expenses for the study period. These factors were determined with input from City staff.

**Table 5: Expense Inflation Factors**

Description	FY25	FY26	FY27	FY28	FY29
General	3.0%	3.0%	3.0%	3.0%	3.0%
Salary	5.0%	5.0%	5.0%	5.0%	5.0%
Benefits	5.0%	5.0%	5.0%	5.0%	5.0%
Utilities	7.5%	7.5%	7.5%	7.5%	7.5%
Chemicals	2.0%	2.0%	2.0%	2.0%	2.0%
Transfers	3.0%	3.0%	3.0%	3.0%	3.0%
Capital	3.0%	3.0%	3.0%	3.0%	3.0%

# Section 3: Financial Plan

## INTRODUCTION

Scottsdale Water is a self-supporting enterprise fund for the City. Scottsdale Water maintains three funds: the water development fee fund, the water resource fund, and the operating fund. The operating fund tracks activities associated with the daily operations and maintenance of the water utility. Water rates are based on the operating fund. The other two funds are associated with funding from new development and the growth-related capital projects. This study focuses on the operating fund because user rates and fees fund all expenditures.

The other two funds track sources and uses of funds associated with growth-related projects. Scottsdale Water has various funds for the water utility to track activities associated with impact fee revenues and growth-related projects separate from activities associated with the daily utility operations and maintenance. Scottsdale Water maintains distinct funds to monitor the revenue generated from Water Development and Water Resource fees. The difference between revenues and capital expenditures in these funds is subsidized using the operating fund.

The capital cash flow includes capital-related activities.

## OPERATING FUND CASH FLOW

The operating fund cash flow tracks activities associated with funding annual operating revenues.

### Beginning Balance

The cash balance includes required reserves and unrestricted carryover monies from previous years, which are transferred into the capital fund. The fund balance is projected to be \$19.6 million at the beginning of FY24.

Table 6: Beginning Fund Balances

Description	FY24
Operating reserve, 25% of O&M	\$19,579,406
Repair and Replacement, 2% of original cost assets	\$17,726,530
Capital fund beginning balance	\$116,695,229

### Revenues

Operating revenue is generated from three main sources: water rate revenue, other revenue, and investment income. The forecasted water service revenue under current rates is based on the expected number of water accounts and billed volume for each customer class. On average, the revenue from current rates amounts to \$128.9 million annually throughout the study period, making up approximately 94% of the total operating income.

In addition to water rate revenue, the City receives income from various other sources, including late charges, account initiation fees, non-potable water service charges, resale of water from the advanced water treatment facility, and miscellaneous sources. This additional revenue totals around \$8.6 million annually, representing 6% of the total revenue. Notably, approximately \$2.7 million of this \$8.6 million comes from the resale of water from the advanced water treatment facility.

Moreover, the City foresees a 1% annual growth in accounts over the study period. Anticipating the water consumption associated with significant one-time developments, the planning department has provided a summary of forthcoming significant developments to estimate additional one-time commercial and multifamily accounts.

## Revenue Requirements

The revenue requirements encompass various components, including operation and maintenance expenses (O&M), transfers like Advanced Water Treatment, Franchise Fees, and city transfers, debt service payments, as well as cash-funded capital expenditures. O&M, which covers personnel, materials, supplies, and indirect costs linked to collection and treatment expenses, amounts to an average of \$86.5 million annually during the study period. On the other hand, the bond debt service averages \$22.8 million annually throughout the study period, including payments for a proposed \$100 million debt issuance in 2025.

The City has a comprehensive capital improvement plan that outline whether capital is funded by water rates, contractual funds, the development fee fund, or the water resource fund. Transfers from the operating fund are made to the water development fee fund and the water resource fee fund in cases where the annual capital expenditures exceed the fund's revenues. The average annual cash required to finance the rate-funded capital improvement program is \$84.4 million for costs associated with the water fund. Additional transfers of a yearly average of \$9.1 million are required to the water development and water resource fee funds. Franchise fees paid to the City, transfers to the Advanced Water Treatment Plant, and citywide cost allocation transfers collectively average \$14.9 million annually.

## Target Reserves

The City has established two distinct reserves to safeguard the financial stability of the water utility and prepare for unforeseen expenses or disruptions to revenue streams. This proactive approach to maintaining ample reserves helps prevent the utility from hastily adjusting rates in reaction to unexpected events. The City ensures an operating reserve amounting to 25% of annual operation and maintenance (O&M) expenses, occasionally denoted as equivalent to 90 days of O&M expenses. Additionally, Raftelis modeled a capital reserve of \$17.7 million, representing 2% of the book value of the asset list.<sup>2</sup>

## Debt Service Coverage Requirements

Most lenders require that the borrower maintain a minimum debt service coverage (DSC) ratio, where the DSC is defined as net revenues divided by the annual debt service. Net revenues are defined as operating revenues excluding development impact fee revenues less O&M expenses. O&M expenses exclude depreciation expenses. The City's revenue bonds require the water utility to maintain a minimum DSC ratio of 1.25, and the City has a policy to maintain a coverage ratio of 2.00.

## Indicated Water Service Revenue Adjustments

Water rate revenue should be sufficient to meet revenue requirements, finance the capital improvement program, maintain adequate reserves, and debt service coverage. The City has identified specific policy reserve requirements for the water utility. These include an operating reserve equal to 90 days of operating expenses and a capital reserve of 2% of original cost fixed assets. These amounts provide a reasonable operating allowance for sound water utility operations and meet revenue cycle interruptions or unanticipated capital expenditures. Annual adjustments of 11.0% are necessary each year from FY25 to FY29. Revenue increases are effective on November 1 each year.

---

<sup>2</sup> Comprehensive Adopted Financial Policies, Policy 9 – Enterprise Funds: 9.05 Water and Wastewater Asset Replacement Reserve. The city will maintain a “Water and Wastewater Asset Replacement Reserve” in its Enterprise Fund as stated in Policy 2 to provide funding for the repair and maintenance of critical assets.

**Table 7: FY25 – FY29 Financial Plan Summary**

Description	FY25	FY26	FY27	FY28	FY29
Annual Revenue Adjustments	11.0%	11.0%	11.0%	11.0%	11.0%
Cumulative Adjustments	11.0%	23.2%	36.8%	51.8%	68.5%
Ending Op Fund Balance, \$ mil	\$21.2	\$22.0	\$22.9	\$23.8	\$24.6
Target O&M Reserves, \$ mil	20.4	21.2	22.0	22.9	23.8
Capital Reserves Balance, \$ mil	112.5	74.8	50.1	15.3	57.9
Debt Service Coverage <sup>3</sup>	2.69	3.23	3.88	4.66	6.16

<sup>3</sup> Comprehensive Adopted Financial Policies, Policy 9 – Enterprise Funds: 9.07 Debt Coverage Ratio Target. Bond covenants may exist that require maintaining a minimum debt coverage ratio. In order to maintain the city’s high bond rating, the city will recommend rates based on a target debt coverage ratio of at least 2.0 times for Water and Wastewater and 1.5 times for Aviation and Solid Waste. For financial planning purposes, the debt coverage ratios will be calculated without consideration of development fee revenues.

# Section 4: Cost of Service

## INTRODUCTION

Equitable water rates fairly recover the cost of service from each customer class. Determination of cost of service considers water use, the rate of use, and number of customers. The cost-of-service analysis is conducted for a test year considered representative of the period in which resultant rates are expected to be in effect. The year FY25 was selected as the test year for this study.

## COST OF SERVICE PROCESS

The cost-of-service process is a method to assign costs based on each customer class's proportionate share of water flow characteristics and the number of customers. The cost-of-service analysis consists of the following seven steps:

1. Project FY24 rate revenue at current rates
2. Determine test year revenue requirement
3. Functionalize revenue requirement
4. Allocate functionalized costs to cost components
5. Determine customer class units of service
6. Distribute costs to customer classes
7. Design rates to recover class cost of service and total revenue requirement

### Project FY24 Revenue at Current Rates

Raftelis projected FY25 revenue at current rates using detailed billing records provided by the City. Revenue projections are based on the current number of customers by meter size and class, projected use per account, and growth in the number of accounts by class forecasted for that year. The FY25 revenue at current rates is shown below. The projection of bills and volume shown in this table also serves as the basis for the FY25 units of service and calculation of the customer class revenue requirement. Table 8 shows the FY25 projected bills, billed volume, and rate revenue.

**Table 8: Projected FY25 Revenue Under Current Rates**

Customer Class	Bills	Volume (kgal)	Revenue (\$ million)
Residential	1,006,790	13,377,142	\$73.6
Multifamily	55,232	4,343,864	25.5
Commercial	74,059	4,824,440	29.0
Fire Service	20,724	0	.04
<b>Total</b>	<b>1,156,806</b>	<b>22,545,446</b>	<b>\$128.1</b>

### Determine Test Year Revenue Requirement

The revenue requirement shown in Table 9 below shows the level of revenue required from rates with the FY25 revenue adjustment.

**Table 9: FY25 Revenue Requirement (\$ millions)**

Item	Operating	Capital	Total
Operation and Maintenance Expenses	\$81.5	-	\$81.5
Debt Service	-	24.0	24.0
Capital Improvements	-	106.3	106.3
<b>Total Expenditures</b>	<b>\$81.5</b>	<b>\$130.3</b>	<b>\$211.8</b>
<b>Non-Rate Revenue Offsets</b>			
Other Operating Income	\$8.6	-	8.6
Bond Issuance	-	100.0	100.0
Change in Fund Balance	-	(\$34.8)	(34.8)
<b>Total Non-Rate Revenue Offsets</b>	<b>\$8.6</b>	<b>\$45.5</b>	<b>\$55.2</b>
<b>Net FY25 Revenue Requirement</b>	<b>\$77.5</b>	<b>\$64.6</b>	<b>\$142.2</b>

### Functionalize Revenue Requirement

Water systems comprise several facilities (unit processes or functions) designed and operated to collect, treat, and distribute water to customers. The separation of costs into functional components provides a means for distributing costs to customer classes based on their responsibility in the system. The O&M revenue requirement can be functionalized based on the line item descriptions in the budget. Water system assets served as a reasonable basis for functionalizing annual capital costs. Annual capital projects vary by cost and type on an annual basis. Functionalizing annual capital based on the actual capital program can shift cost allocations, resulting in swings in the cost of service rates. Because the percent of costs by function in an asset listing does not vary as much over time, proportionately allocating the capital revenue requirement based on assets provides a smooth and predictable method for allocating costs. Table 10 shows the functional cost components.

**Table 10: Functional Components**

Unit Process	Unit Process
• Source of Supply	• Meters and Services
• Pumping	• Customer Billing
• Wells/Treatment	• Fire Protection
• Treated Storage	• All Other Infrastructure
• Transmission	• All Other
• Distribution	

Table 11 shows the FY 2025 O&M revenue requirement allocated to functional components. The allocation of functional costs was determined by City staff. The basic premise supporting the functionalization process is to assign an expense to a facility or facilities that have the most impact on those costs. Raftelis provided guidance on this approach but ultimately relied on the City's best judgment in assigning the costs. Once these expenses are functionalized, they can be allocated based on their function or how they are designed to operate in the system. The O&M revenue requirement totals \$81.5 million.

**Table 11: Revenue Requirement Among Functional Components (\$ millions)**

Functional Component	Cost
Source of Supply	\$5.0
Pumping	8.2
Wells/Treatment	35.7
Treated Storage	1.3
Transmission	1.5
Distribution	5.7
Meters and Services	6.6
Customer Billing	1.3
Fire Protection	0.1
All Other Infrastructure	9.1
All Other	7.0
<b>Total</b>	<b>\$81.5</b>

### Allocate Functionalized Costs to Cost Components

Once costs have been separated into cost categories by function, they can be further allocated to cost components. Allocating costs to cost components provides a means of assigning the functionalized expenses based on the design and functional parameters that characterize each water system expense. Cost components correspond to the unique demand characteristics of the customer classes to recover costs from the customers who cause the utility to incur them.

The allocation methodology used in this study is the base extra-capacity method, which is the most common allocation methodology employed for water utilities throughout Arizona and the West. This methodology incorporates the following standard cost components: supply, base, maximum day demand, maximum hour demand, fire protection, and customer services. For example, water treatment plants are designed and operated to meet maximum day demands. The functional costs associated with the treatment plant are allocated to the base and maximum day components. This split of costs is based on the percent base demands of the maximum day demands and the remainder to the maximum day demand cost component.

Whereas the functional O&M costs can be directly allocated to cost components, allocating capital costs includes one additional step. The allocation of system assets to functional cost components provides the basis for allocating annual capital costs. Cost of service is generally allocated to cost components that reflect the design and functional parameters of the associated facility. A detailed listing aids in allocating the annual capital revenue requirement to specific cost components or a combination of cost components. This allocation is based on that facility's particular function or design parameter. Although the City's detailed asset listing does not specifically identify the functional area of each asset, Raftelis reviewed each asset and assigned it a particular function to the extent possible. This functionalization was used to develop the cost component allocation percentages. General plant assets not specifically assigned are allocated in proportion to all other plant assets.

Meters and services are allocated using equivalent meter ratios. Equivalent meter ratios allow for allocating the fixed cost of providing this capacity to customers based on their potential demand. Equivalent meter units in this study are based on American Water Works Association (AWWA) -rated hydraulic capacities and are calculated to represent the potential demand on the water system relative to a base meter size. AWWA capacity ratios are calculated by dividing the capacity of each meter size by the capacity of a ¾-inch meter, the base meter size in this

study. For example, the capacity of a 1-inch meter is divided by the capacity of a ¾" (50/30) to derive the 1-inch meter capacity ratio of 1.67.

Customer and private fire costs are allocated based on the quantity, such as total bills and number of meters. Indirect costs are reallocated in proportion to all other costs. Table 12 summarizes the allocated revenue requirement. The allocated revenue requirement is distributed to customer classes based on their proportionate share of total units of service.

**Table 12: FY25 Allocated Revenue Requirement (\$ millions)**

Description	Supply	Base	Max Day	Max Hour	Meters	Customer	Private Fire	Indirect	Total
O&M Expense	\$6.93	\$37.90	\$15.74	\$2.76	\$6.28	\$1.20	\$0.10	\$6.65	\$77.54
Capital Costs	8.08	36.72	13.95	2.40	1.40	0.00	0.38	1.69	64.62
Adjustments	0.94	4.65	0.19	(1.76)	4.68	0.07	(0.42)	(8.34)	0.00
<b>Net Rev. Req.</b>	<b>\$15.95</b>	<b>\$79.24</b>	<b>\$29.88</b>	<b>\$3.40</b>	<b>\$12.36</b>	<b>\$1.28</b>	<b>\$0.06</b>	<b>\$0.00</b>	<b>\$142.16</b>

### Customer Class Units of Service

Customers of a water utility are often identified according to customer class. Each customer class has unique water demands and usage characteristics. Because the cost of service is based on the concept of proportionality, customer service characteristics for each customer class must be analyzed to distribute the functionalized and allocated system revenue requirements based on their respective demand profiles.

The peaking factors for each customer class were calculated using the City's detailed billing data for FY 2021 and FY 2022. The multi-family, commercial/industrial/outside city, irrigation, and temporary construction maximum day and maximum hour peaking factors are each calculated considering their maximum month and the average month demands. The City does not have daily demands from customers, so peak demands must be estimated using class data and system peaking data. The following equation is used to estimate the maximum day and maximum hour peaking factors.

$$\text{Class Peaking Factor} = (\text{Class Average Day of Max Month} \div \text{Class Average Day}) \times (\text{System Max Day} \div \text{System Average Day of Max Month})$$

The class maximum day peaking factor is multiplied by the ratio of the system max hour to system max day demands.

Fire protection units are based on one simultaneous fire event lasting 4 hours at 4,000 gallons per minute. These units of service are allocated to private fire and public fire based on the number of equivalent hydrants. Table 13 summarizes the customer class units of service.

**Table 13: FY25 Units of Service [1]**

Customer Class	Annual Demand (Kgal)	Max Day Demand Factor	Max Day Extra Capacity gpd	Max Hour Demand Factor	Max Day Hour Capacity Gpd	Bills	¾" Meter Equivalent
Residential	13,377,142	1.35	12,804	1.17	6,092	1,006,790	165,844
Multifamily	4,343,864	1.31	3,731	1.16	1,926	55,232	27,516
Commercial	4,824,440	1.50	6,551	1.18	2,435	74,059	36,981
<b>Total</b>	<b>22,545,446</b>		<b>23,086</b>		<b>10,453</b>	<b>1,136,081</b>	<b>230,340</b>

[1] Includes inside City and outside City.

### Determine Customer Class Units of Service

The unit cost of service is the share of the allocated revenue requirement by cost component divided by the units of service for each. The unit costs for each cost component are used to determine the customer class cost of service. Table 14 shows the development of the unit cost of service by cost component.

**Table 14: FY25 Unit Cost of Service**

Customer Class	Supply	Annual Demand	Max Day	Max Hour	Meters	Customer	Fire	Indirect	Total
<b>Revenue Requirement, \$ Millions</b>									
O&M Expense	\$6.93	\$37.9	\$15.74	\$2.76	\$6.28	\$1.20	\$0.10	\$6.65	\$77.54
Capital Costs	8.08	36.72	13.95	2.40	1.40	0.00	0.38	1.69	64.63
Adjustments [1]	0.94	4.65	0.19	(1.76)	4.68	0.07	(0.42)	(8.34)	0
Revenue Requirement	<b>\$15.95</b>	<b>\$79.24</b>	<b>\$29.88</b>	<b>\$3.40</b>	<b>\$12.36</b>	<b>\$1.28</b>	<b>\$0.06</b>	<b>0</b>	<b>\$142.16</b>
Units of Service	22,545,446	22,545,446	23,086	10,453	230,340	1,136,081	1,727	-	-
<b>Unit Cost of Service, \$ per unit [2]</b>									
	<u>\$ per Kgal</u>	<u>\$ per Kgal</u>	<u>\$ per gpd</u>	<u>\$ per gpd</u>	<u>\$ per eq. Meter</u>	<u>\$ per bill</u>	<u>\$ per Eq Hydrant</u>		
O&M Expense	\$0.31	\$1.68	\$681.61	\$264.27	\$2.27	\$1.06	\$4.85	-	-
Capital Costs	0.36	1.63	604.40	229.22	0.51	0.00	18.26	-	-
Adjustments	.04	.21	8.23	(168.65)	1.69	.07	(20.33)	-	-
Total Unit Costs	<b>\$0.71</b>	<b>\$3.51</b>	<b>\$1,294.24</b>	<b>\$324.85</b>	<b>\$4.47</b>	<b>\$1.12</b>	<b>\$2.78</b>	<b>-</b>	<b>-</b>

[1] Costs allocated to the Indirect cost component are re-allocated in proportion to all other cost components.

[2] An equivalent meter is equal to the number of meters in the system stated on a 5/8" equivalency basis

### Distribute Costs to Customer Classes

The cost of service process is based on the concept of proportionality. Allocated costs must be distributed by the units of service for each customer class. This distribution is the product of the customer class units of service in Table 13 by the unit costs in Table 14. The customer class cost of service is shown in Table 15.

**Table 15: FY25 Customer Class Cost of Service (\$ millions)**

Customer Class	Supply (Kgal)	Annual Demand (Kgal)	Max Day	Max Hour	Meters	Customer	Fire	Total
Residential	\$9.5	\$47.0	\$16.6	\$2.0	\$8.9	\$1.1	\$0.0	\$85.1
Multifamily	3.1	15.3	4.8	0.6	1.5	0.1	0	25.3
Commercial	3.4	17.0	8.5	0.8	2.0	0.1	0	31.7
Fire Service	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
<b>Total</b>	<b>\$16.0</b>	<b>\$79.2</b>	<b>\$29.9</b>	<b>\$3.4</b>	<b>\$12.4</b>	<b>\$1.3</b>	<b>\$0.1</b>	<b>\$142.2</b>

**COMPARISON OF FY25 COST OF SERVICE TO REVENUE AT CURRENT RATES**

Table 16 shows the comparison of FY25 cost of service to revenue at current rates for each customer class. The change in each customer class' cost is a product of two components: 1) the functionalization and allocation of the revenue requirement and 2) the distribution of these costs to customer classes based on their units of service.

**Table 16: FY25 Comparison of Cost of Service to Revenue at Current Rates**

Class	FY25 Cost of Service	FY24 Revenue Under Current Rates	Change - \$	Change - %
Residential	\$85,063,607	\$73,642,623	\$11,420,985	15.5%
Multifamily	25,333,183	25,478,575	(145,392)	-0.6%
Commercial	31,706,944	28,952,163	2,754,781	9.5%
Fire Service	57,696	41,449	16,247	39.2%
<b>Total</b>	<b>\$142,161,430</b>	<b>\$128,114,809</b>	<b>\$14,046,621</b>	<b>11.0%</b>

In order to avoid rate decreases, followed by increases, City staff provided direction that the cost of service for each class should be adjusted to keep cost recovery at least equal to existing rates. Table 17 shows the adjusted cost of service.

**Table 17: FY25 Comparison of Adjusted Cost of Service to Revenue at Current Rates**

Class	FY25 Cost of Service	FY24 Revenue Under Current Rates	Change - \$	Change - %
Residential	\$84,957,694	\$73,642,623	\$11,315,071	15.4%
Multifamily	25,478,575	25,478,575	0	0.0%
Commercial	31,667,465	28,952,163	2,715,302	9.4%
Fire Service	57,696	41,449	16,247	39.2%
<b>Total</b>	<b>\$142,161,430</b>	<b>\$128,114,809</b>	<b>\$14,046,621</b>	<b>11.0%</b>



# Section 5: Rate Design

## INTRODUCTION

In the development of water rate schedules, a basic consideration is to establish equitable charges to customers commensurate with the cost of providing service. The only method of assessing equitable water rates would be determining each customer's bill based on their unique service requirements. Since this is impractical, schedules of rates are usually designed to meet average conditions for groups (classes) of customers having similar service requirements. Rates should be reasonably straightforward in application and subject to as few misinterpretations as possible.

## CURRENT RATES

The City's existing rate structure consists of a monthly service charge and volumetric rates that vary by class. Table 18 lists the current rates and structures. Current base fees recover approximately 22.9% of total rate revenue.

Table 18: Current Rates

Description	Current Rates
<b>Base Fees, \$ per bill</b>	
5/8"	\$15.05
3/4"	19.40
1"	27.55
1.5"	45.15
2"	60.20
3"	120.40
4"	188.20
6"	376.25
8"	526.75
<b>Volume Rate, \$ per kgal</b>	
<b>Residential</b>	
Tier 1	\$1.65
Tier 2	3.10
Tier 3	4.25
Tier 4	5.70
Tier 5	7.05
<b>Multifamily/Commercial</b>	
Tier 1	\$1.65
Tier 2	3.10
Tier 3	4.25
Tier 4	5.70

## FY25 COST-OF-SERVICE RATES

The cost of service rates retains the existing structure. The base fee recovers approximately 22.9% of total rate revenue. Table 19 shows the monthly base fees by meter size, the O&M, and capital volume rates.

**Table 19: FY25 Cost-of-Service Rates**

Description	Current Rates	Alternate 1 (Across the Board Increases)	Alternative 2 (Cost of Service)	Alternative 3 (One Volumetric Rate)
<b>Base Fees, \$ per bill</b>				
5/8"	\$15.05	\$16.71	\$16.71	\$16.71
3/4"	19.40	21.53	23.05	23.05
1"	27.55	30.58	35.74	35.74
1.5"	45.15	50.12	67.46	67.46
2"	60.20	66.82	105.53	105.53
3"	120.40	133.64	226.09	226.09
4"	188.20	208.90	403.74	403.74
6"	376.25	417.64	828.85	828.85
8"	526.75	584.69	1,526.79	1,526.79
<b>Volume Rate, \$ per kgal</b>				
<b>Residential</b>				
Tier 1	\$1.65	\$1.83	\$1.83	\$1.70
Tier 2	3.10	3.44	3.43	3.23
Tier 3	4.25	4.72	4.70	4.42
Tier 4	5.70	6.33	6.31	5.95
Tier 5	7.05	7.83	7.80	7.30
<b>Multifamily</b>				
Tier 1	\$1.65	\$1.83	\$1.52	\$1.70
Tier 2	3.10	3.44	2.86	3.23
Tier 3	4.25	4.72	3.92	4.42
Tier 4	5.70	6.33	5.26	5.95
<b>Commercial</b>				
Tier 1	\$1.65	\$1.83	\$1.67	\$1.70
Tier 2	3.10	3.44	3.14	3.23
Tier 3	4.25	4.72	4.31	4.42
Tier 4	5.70	6.33	5.78	5.95

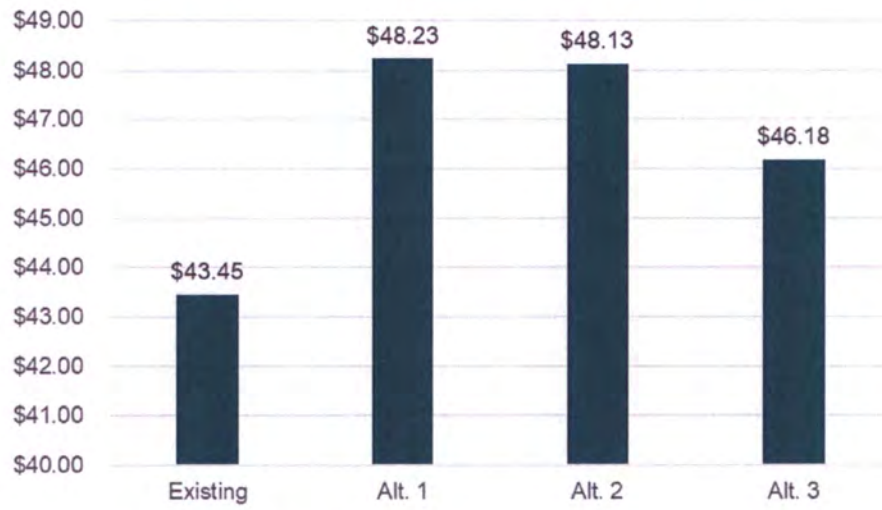
Note: kgal = 1,000 gallons

Figure 1 outlines the customer bill impacts for existing rates compared to the rate design alternatives for a single-family residential customer with a 5/8-inch meter using 11,500 gallons per month. Because of the impacts between the current structure and the alternatives, Scottsdale Water may consider implementation of structural changes over multiple periods of time.

The increased revenue requirement placed in the base fee is driven by the inclusion of the cost of water-capital component. The inclusion of the capital component, a fixed cost based on contractual allocation, achieves a greater level of revenue stability. The rate of base fee increase, from the 5/8-inch meter size to larger meter sizes, is driven by a shift to align with AWWA meter capacities.

While the study results reflect structural changes in a single year, Scottsdale Water may elect to change its structure over multiple years to ease the amount of change occurring in any specific meter size or customer class.

**Figure 1: Residential Bill Impacts, 11,500 gallons**



APPENDIX A:  
**Rate Schedules  
(FY25 – FY29)**

**Table 20: Five-Year Rate Forecast, Alt 1**

**Alt 1 (Across the Board Increases)**

Customer Class	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>SFR</b>					
Tier 1	\$1.83	\$2.03	\$2.26	\$2.50	\$2.78
Tier 2	\$3.44	\$3.82	\$4.24	\$4.71	\$5.22
Tier 3	\$4.72	\$5.24	\$5.81	\$6.45	\$7.16
Tier 4	\$6.33	\$7.02	\$7.80	\$8.65	\$9.60
Tier 5	\$7.83	\$8.69	\$9.64	\$10.70	\$11.88
<b>Multifamily Residential</b>					
Tier 1	\$1.83	\$2.03	\$2.26	\$2.50	\$2.78
Tier 2	\$3.44	\$3.82	\$4.24	\$4.71	\$5.22
Tier 3	\$4.72	\$5.24	\$5.81	\$6.45	\$7.16
Tier 4	\$6.33	\$7.02	\$7.80	\$8.65	\$9.60
<b>Commercial</b>					
Tier 1	\$1.83	\$2.03	\$2.26	\$2.50	\$2.78
Tier 2	\$3.44	\$3.82	\$4.24	\$4.71	\$5.22
Tier 3	\$4.72	\$5.24	\$5.81	\$6.45	\$7.16
Tier 4	\$6.33	\$7.02	\$7.80	\$8.65	\$9.60

**Potable Monthly Meter Charges**

Meter Size	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
5/8"	\$16.71	\$18.54	\$20.58	\$22.85	\$25.36
3/4"	\$21.53	\$23.90	\$26.53	\$29.45	\$32.69
1"	\$30.58	\$33.94	\$37.68	\$41.82	\$46.42
1-1/2"	\$50.12	\$55.63	\$61.75	\$68.54	\$76.08
2"	\$66.82	\$74.17	\$82.33	\$91.39	\$101.44
3"	\$133.64	\$148.34	\$164.66	\$182.78	\$202.88
4"	\$208.90	\$231.88	\$257.39	\$285.70	\$317.13
6"	\$417.64	\$463.58	\$514.57	\$571.17	\$634.00
8"	\$584.69	\$649.01	\$720.40	\$799.64	\$887.60

**Private Fire Monthly Meter Charges**

Line Size	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
5/8"	\$2.22	\$2.46	\$2.74	\$3.04	\$3.37
3/4"	\$2.22	\$2.46	\$2.74	\$3.04	\$3.37
1"	\$2.22	\$2.46	\$2.74	\$3.04	\$3.37
1-1/2"	\$2.22	\$2.46	\$2.74	\$3.04	\$3.37
2"	\$2.22	\$2.46	\$2.74	\$3.04	\$3.37
3"	\$2.22	\$2.46	\$2.74	\$3.04	\$3.37
4"	\$2.22	\$2.46	\$2.74	\$3.04	\$3.37
6"	\$2.22	\$2.46	\$2.74	\$3.04	\$3.37
8"	\$2.22	\$2.46	\$2.74	\$3.04	\$3.37

**Table 21: Five-Year Rate Forecast - Alt 2**

**Alt 2 (Cost of Service)**

Customer Class	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>SFR</b>					
Tier 1	\$1.83	\$2.03	\$2.25	\$2.50	\$2.77
Tier 2	\$3.43	\$3.81	\$4.23	\$4.69	\$5.21
Tier 3	\$4.70	\$5.22	\$5.79	\$6.43	\$7.14
Tier 4	\$6.31	\$7.00	\$7.77	\$8.63	\$9.57
Tier 5	\$7.80	\$8.66	\$9.61	\$10.67	\$11.84
<b>Multifamily Residential</b>					
Tier 1	\$1.52	\$1.69	\$1.88	\$2.08	\$2.31
Tier 2	\$2.86	\$3.18	\$3.53	\$3.91	\$4.34
Tier 3	\$3.92	\$4.36	\$4.83	\$5.37	\$5.96
Tier 4	\$5.26	\$5.84	\$6.48	\$7.20	\$7.99
<b>Commercial</b>					
Tier 1	\$1.67	\$1.86	\$2.06	\$2.29	\$2.54
Tier 2	\$3.14	\$3.49	\$3.87	\$4.30	\$4.77
Tier 3	\$4.31	\$4.79	\$5.31	\$5.90	\$6.54
Tier 4	\$5.78	\$6.42	\$7.12	\$7.91	\$8.78

**Potable Monthly Meter Charges**

Meter Size	FY 2025	FY 2026	FY 2027	FY 2028	FY 2028
5/8"	\$16.71	\$18.54	\$20.58	\$22.85	\$25.36
3/4"	\$23.05	\$25.59	\$28.40	\$31.52	\$34.99
1"	\$35.74	\$39.67	\$44.04	\$48.88	\$54.26
1-1/2"	\$67.46	\$74.89	\$83.12	\$92.27	\$102.42
2"	\$105.53	\$117.14	\$130.03	\$144.33	\$160.21
3"	\$226.09	\$250.96	\$278.56	\$309.20	\$343.22
4"	\$403.74	\$448.16	\$497.45	\$552.17	\$612.91
6"	\$828.85	\$920.02	\$1,021.23	\$1,133.56	\$1,258.25
8"	\$1,526.79	\$1,694.74	\$1,881.16	\$2,088.08	\$2,317.77

**Private Fire Monthly Meter Charges**

Line Size	FY 2025	FY 2026	FY 2027	FY 2028	FY 2028
5/8"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
3/4"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
1"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
1-1/2"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
2"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
3"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
4"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
6"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
8"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23

**Table 22: Five-Year Rate Forecast - Alt 3**

**Alt 3 (One Volumetric Rate)**

Customer Class	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>SFR</b>					
Tier 1	\$1.70	\$1.89	\$2.09	\$2.32	\$2.58
Tier 2	\$3.23	\$3.58	\$3.98	\$4.41	\$4.90
Tier 3	\$4.42	\$4.90	\$5.44	\$6.04	\$6.71
Tier 4	\$5.95	\$6.60	\$7.33	\$8.13	\$9.03
Tier 5	\$7.30	\$8.11	\$9.00	\$9.99	\$11.09
<b>Multifamily Residential</b>					
Tier 1	\$1.70	\$1.89	\$2.09	\$2.32	\$2.58
Tier 2	\$3.23	\$3.58	\$3.98	\$4.41	\$4.90
Tier 3	\$4.42	\$4.90	\$5.44	\$6.04	\$6.71
Tier 4	\$5.95	\$6.60	\$7.33	\$8.13	\$9.03
		\$0.00	\$0.00	\$0.00	\$0.00
<b>Commercial</b>					
Tier 1	\$1.70	\$1.89	\$2.09	\$2.32	\$2.58
Tier 2	\$3.23	\$3.58	\$3.98	\$4.41	\$4.90
Tier 3	\$4.42	\$4.90	\$5.44	\$6.04	\$6.71
Tier 4	\$5.95	\$6.60	\$7.33	\$8.13	\$9.03

**Potable Monthly Meter Charges**

Meter Size	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
5/8"	\$16.71	\$18.54	\$20.58	\$22.85	\$25.36
3/4"	\$23.05	\$25.59	\$28.40	\$31.52	\$34.99
1"	\$35.74	\$39.67	\$44.04	\$48.88	\$54.26
1-1/2"	\$67.46	\$74.89	\$83.12	\$92.27	\$102.42
2"	\$105.53	\$117.14	\$130.03	\$144.33	\$160.21
3"	\$226.09	\$250.96	\$278.56	\$309.20	\$343.22
4"	\$403.74	\$448.16	\$497.45	\$552.17	\$612.91
6"	\$828.85	\$920.02	\$1,021.23	\$1,133.56	\$1,258.25
8"	\$1,526.79	\$1,694.74	\$1,881.16	\$2,088.08	\$2,317.77

**Private Fire Monthly Meter Charges**

Line Size	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
5/8"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
3/4"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
1"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
1-1/2"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
2"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
3"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
4"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
6"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23
8"	\$2.78	\$3.09	\$3.43	\$3.81	\$4.23

# **CITY OF SCOTTSDALE**

## **Wastewater Rate Study**

Final Report / March 27, 2020



March 27, 2020

Ms. Leslie DeReche  
Senior Financial Analyst  
City of Scottsdale  
7447 East Indian School Road  
Scottsdale, AZ 85251

**Subject: Wastewater Rate Study**

Dear Ms. DeReche,

Raftelis is pleased to provide this Wastewater Rate Study Report for the City of Scottsdale (City).

The major objectives of the study include the following:

- A 10-year financial plan for the study period FY2021 through FY2029.
- Cost of service analysis to ensure costs are allocated in an equitable manner to customer classes
- Design rates to recover each class' revenue requirement
- Research and provide recommendations on strength loadings for the City's commercial customer classes
- Develop an interactive rate model for the City to develop financial plan and rates in the future.

The Report summarizes the key findings and recommendations related to the study.

It has been a pleasure working with you, and we thank you and the City staff for the support provided throughout the course of this study.

Sincerely,

A handwritten signature in black ink that reads 'Todd Cristiano'.

**Todd Cristiano**  
*Senior Manager*

# Table of Contents

<b>TABLE OF CONTENTS</b> .....	<b>4</b>
<b>LIST OF TABLES</b> .....	<b>5</b>
<b>LIST OF APPENDICES</b> .....	<b>5</b>
<b>EXECUTIVE SUMMARY</b> .....	<b>8</b>
<b>INTRODUCTION</b> .....	<b>8</b>
<b>STUDY GOALS AND OBJECTIVES</b> .....	<b>8</b>
<b>STUDY FINDINGS</b> .....	<b>9</b>
<b>RELIANCE ON CITY-PROVIDED DATA</b> .....	<b>10</b>
<b>SECTION 2: ASSUMPTIONS</b> .....	<b>11</b>
<b>SECTION 3: WASTEWATER RATES</b> .....	<b>13</b>
<b>INTRODUCTION</b> .....	<b>13</b>
<b>FINANCIAL PLAN</b> .....	<b>13</b>
<b>CAPITAL FUND CASH FLOW</b> .....	<b>13</b>
<b>Operating Cash Flow</b> .....	<b>14</b>
<b>COST OF SERVICE</b> .....	<b>15</b>
<b>Cost of Service Process</b> .....	<b>15</b>
<b>FY21 Revenue At Existing Rates</b> .....	<b>15</b>
<b>Test Year Revenue Requirement</b> .....	<b>16</b>
<b>Revenue Requirement Allocation</b> .....	<b>16</b>
<b>Rate Design</b> .....	<b>21</b>

## List of Tables

Table 1: Comparison of FY21 Proposed and Cost of Service Rates .....	9
Table 2: Study Assumptions .....	11
Table 3: Wastewater Utility Operating Fund Cash Flow Projections.....	14
Table 4: FY21 Revenue Under Proposed Rates .....	15
Table 5: FY21 Revenue Requirement (\$ million).....	16
Table 6: FY21 Allocated Revenue Requirement (\$ million) .....	17
Table 7: FY21 Units of Service .....	18
Table 8: FY21 Unit Cost of Service .....	20
Table 9: FY21 Customer Class Cost of Service (\$ million) .....	20
Table 10: FY21 Comparison of Cost of Service to Revenue at Proposed Rates.....	21
Table 11: FY21 Proposed Rates .....	22
Table 12: FY21 Cost of Service Rates .....	23

## List of Appendices

- APPENDIX A: FINANCIAL PLAN
- APPENDIX B: COST OF SERVICE
- APPENDIX C: EXTRA STRENGTH SURVEY
- APPENDIX D: RATE DESIGN

# Executive Summary

## Introduction

The City of Scottsdale (City) provides sewer service to approximately 82,000 customers to both customers inside the City and outside the City. The City is financially self-sufficient with funding for capital and operating requirements derived primarily from rates. The City authorized this study to assure that an adequate level of revenue from wastewater rates is maintained to finance the City's daily operations as well as future capital improvements and expansions. The study includes the following:

- Development of wastewater financial plans for the 6-year study period, Fiscal Year (FY) 2019-2024.
- Analysis of customer class cost of service.
- Design of wastewater rates.

Raftelis used industry standard methodologies supported by the American Water Works Association (AWWA) *Principles of Water Rates, Fees, and Charges* M1 manual and the Water Environment Federation MOP27, *Financing for Wastewater Systems* for this rate study.

## Study Goals and Objectives

The City's overarching goal for this study was to develop long-term financial plans for the wastewater utilities while ensuring:

- Rate revenues are sufficient to meet annual operating expenses, debt service, and capital expenditures
- Capital projects are funded with the optimal mix of rate revenue and debt to minimize impacts to customers
- Reserve levels are maintained in accordance with industry best practices, and that debt service coverage as required by bond covenants is met
- Rates are based on a cost-of-service analysis which equitably recovers the cost to provide service to customer classes

In addition, the City identified specific pricing objectives to develop the rate alternatives presented in this study, in addition to cost-of-service rate design. These objectives were guided by two primary goals: revenue sufficiency and defensibility.

- **Revenue stability:** produce rates that maintain a steady stream of revenue during periods of water usage variability.
- **Interclass equity:** maintain equity between the customer classes (i.e. prevent one class subsidizing another).
- **Intraclass equity:** maintain equity between low and high volume customers within a class.

## Study Findings

Principal findings of this study are as follows:

- Projected wastewater service revenue should be sufficient to meet annual revenue requirements through the study period. Revenue requirements include operation and maintenance expense, payments on existing debt service, transfers, rate funded capital projects, while maintaining reserve levels and debt service coverage. It is recommended that the wastewater financial be updated annually to reflect current estimates of revenue, operating expenses, capital improvement needs, maintaining reserve targets, and debt service coverage.
- The proposed rates alternatives retain the existing rate structure; a monthly service charge which varies by meter size and a volume rate which varies by class based on their strength loadings. The volume rate consists of two components – an O&M rate and a capital rate. Those rates are detailed in the rate design section. Table 1 shows the monthly base fee and volume rates at existing and the proposed rates. The proposed FY21 base fees recover approximately 18.4% of total rate revenue. The FY21 cost of service rates retain that fixed and variable cost relationship.

**Table 1: Comparison of FY21 Proposed and Cost of Service Rates**

Description [1]	Existing	Proposed
<b>Base Fees, \$ per bill</b>		
1" and less	\$4.50	\$4.74
1.5"	\$4.50	\$4.74
2"	\$4.50	\$4.74
3"	\$27.00	\$25.15
4"	\$63.00	\$57.82
6"	\$81.00	\$74.16
8"	\$119.00	\$108.46
<b>Volume Rate, \$ per 1,000 gallons</b>	<b>Total O&amp;M and Capital</b>	<b>Total O&amp;M and Capital</b>
Single-family Residential	\$2.68	\$2.65
Multi-family Residential	\$2.68	\$2.65
Commercial without dining	\$2.68	\$2.52
Commercial with dining	\$3.57	\$4.30
Hotels, motels without dining	\$2.92	\$2.60
Hotels, motels with dining	\$3.57	\$4.30
Carwashes	\$2.65	\$1.92
Commercial Laundry	\$3.21	\$3.52
Laundromats	\$2.68	\$2.16
Metal Platers	\$2.95	\$3.02
Restaurants; bakeries	\$4.98	\$5.85
Service station auto repair	\$2.68	\$2.67
Medical Institutes	\$2.68	\$2.39
Schools	\$2.68	\$2.08
<b>Black Mountain [2]</b>		

[1] Out of City customers are charged a surcharge up to 15% applied to O&M, Capital and Base fees.

[2] Black Mountain is assessed a contractual rate.

## Reliance on City-Provided Data

During this project, the City (and/or its representatives) provided Raftelis with a variety of technical information, including cost and revenue data. Raftelis did not independently assess or test for the accuracy of such data – historic or projected. Raftelis has relied on this data in the formulation of our findings and subsequent recommendations, as well as in the preparation of this report.

There are often differences between actual and projected data. Some of the assumptions used in this report will not be realized, and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between the data or results projected in this report and actual results achieved, and those differences may be material. As a result, Raftelis takes no responsibility for the accuracy of data or projections provided by or prepared on behalf of the City, nor do we have any responsibility for updating this report for events occurring after the date of this report.

# Section 2: Assumptions

This section presents the major assumptions used in this study. Changes in these assumptions could materially impact the results of the findings and conclusions.

**Table 2: Study Assumptions**

<b>Reserve Fund Targets</b>	
Beginning balance	\$4,080,192
Operating fund, 60 days of O&M	60
Repair and replacement (2% of Gross Assets)	\$4,604,686
Undesignated for future capital	\$17,126,861
Escalation factors:	
Customer growth	500 accts per year
Chemical cost inflation	5.0%
ENR construction cost index	3.0%
General cost inflation	2.0%
General cost inflation + Growth	2.0%
Labor cost inflation	2.0%
One-Time (non-recurring) expense	3.5%
Capital improvements	
Operating fund FY21 beginning balance	\$25,811,741
Target DSC	1.20
Outside City Differential	1.15

# Section 3: Wastewater Rates

## Introduction

The City's wastewater utility is a self-supporting enterprise fund. The City has one combined fund for the wastewater utility but must track activities associated with impact fee revenues and growth-related projects separate from activities associated with the daily operations and maintenance of the utility. For the purposes of this study, Raftelis developed two separate cash flows for the rate analysis.

- Operating cash flow (unrestricted cash)
- Capital cash flow

The operating cash flow is used for the basis of determining the annual revenue requirement and proposed revenue adjustments. The capital cash flow includes capital related activities. Tables for the wastewater utility financial plan, cost of service, and rate analysis can be found in Appendix B.

## Financial Plan

### CAPITAL FUND CASH FLOW

The capital fund cash flow tracks activities associated with the projected capital improvement program and the funding sources required to meet those requirements.

### Beginning balance

The cash balance includes unrestricted carryover monies from previous years. The fund balance will be \$47.2 million at the beginning of FY21.

### Sources of funds

Sources include impact fee revenue, investment income, and transfers from the operating cash flow. Impact fee revenue averages \$1.5 million annually beginning in FY21. Impact fee revenue projections is based on data from the City's budget documents. This equates to approximately 500 new accounts per year. Transfers from the operating cash balance average \$16.8 million per year to fund the wastewater capital improvement program. Investment income is calculated using a 1.0 percent annual interest rate applied to the average fund balance and averages \$1.4 million annually.

### Uses of funds

The City's capital projects for the study period totals \$132.6million with inflation. The capital improvement program includes projects for overall system improvements, wastewater treatment, technology master plan identified projects, and SROG projects. An annual inflation allowance of 3.5 percent is applied to the projected capital costs.

### Capital fund reserves

The capital fund ending balance in FY24 is approximately \$42.7 million. These funds are reserved for future capital projects.

## OPERATING CASH FLOW

Financial activities associated with funding annual operating revenues and revenue requirements are tracked separately from the activities associated with impact fee project funding.

### Beginning balance

The cash fund balance includes unrestricted carryover monies from previous years. The fund balance is projected to be \$25.8 million at the beginning of FY21.

### Revenues

Operating revenue is derived from wastewater rate revenue, investment income, and interfund payments for wastewater services used by City facilities. Wastewater service revenue under existing rates is based on the projected number of wastewater accounts and billed volume for each customer class. Revenue from proposed FY21 rates averages \$42.7 million annually during the study period. The City anticipates 500 new accounts per year over the study period. Wastewater service rate revenue accounts for approximately 81% of total operating income with existing rate revenue. The City also receives income for other service rate revenue such as late charges, account initiation fees, non-hazardous liquid waste, non-potable water service charges, stormwater quality fees, and other miscellaneous sources. This service rate revenue is approximately \$4.7 million annually and represents 9% of total revenue. Transfers from the City for the advanced water treatment plant, the reclaimed water distribution system, and other debt service averages \$6.3 annually. The debt service transfer ends in FY25. These transfers are approximately 10% of total existing revenues.

### Revenue Requirements

Revenue requirements include operation and maintenance expense (O&M) and transfers to the wastewater impact fee and bond cash flow. O&M consists of personnel, materials and supplies associated with treatment building rent city indirect costs. O&M averages \$26.5 million annually during the study period. Transfers for impact fee projects are for the ongoing capital improvement program projects. MPC Bonds debt service averages \$8.1 million per year through the study period. Sewer revenue bonds average \$4.6 million per year and will be defeased in FY23. Debt service related to non-growth and growth-related projects are funded from rate revenues. Transfers to the capital fund to fund the capital improvement program average \$14.0 million per year. Franchise fees paid to the City average \$2.6 million annually.

### Indicated Wastewater Service Revenue Adjustments

Wastewater rate revenue should be sufficient to meet revenue requirements, finance the capital improvement program, and maintain adequate reserves. A minimum operating reserve equal to 60 days of operating expenses is recommended. This amount provides a reasonable operating allowance for sound wastewater utility operations. The City has identified additional policy reserve requirements. Equal annual adjustments of 2.0% are required in FY22-FY24. Revenue increases are effective July 1 of each year. It is also recommended that the financial plan be updated annually to determine if the projected increases are appropriate.

**Table 3: Wastewater Utility Operating Fund Cash Flow Projections**

Description	FY19	FY20	FY21	FY22	FY23	FY24
Revenue Adjustment	0.0%	0.0%	2.0%	2.0%	2.0%	0.0%
Ending Balance (\$ millions)	\$25.81	\$25.43	\$20.72	\$21.68	\$23.81	\$25.81
Target Reserves (\$ millions)	\$8.68	\$18.84	\$20.68	\$21.64	\$23.11	\$8.68
Undesignated Reserves (\$ millions)	\$17.13	\$6.60	\$0.04	\$0.04	\$0.70	\$17.13
Debt Service Coverage	184.5%	179.1%	181.1%	193.6%	315.6%	184.5%

## Cost of Service

Equitable wastewater rates fairly recover cost of service from each customer class. Determination of cost of service takes into account volume of contributed flow, strength, and number of customers. The cost of service analysis is conducted for a test year considered representative of the period in which resultant rates are expected to be in effect. The year FY21 was selected as the test year for this study.

### COST OF SERVICE PROCESS

The cost-of-service process is a method to assign costs based on each customer class' proportionate share of wastewater flow characteristics and number of customers. The cost-of-service analysis consists of the following seven steps:

1. Determine the FY21 rate revenue at existing rates
2. Determine test year revenue requirement
3. Functionalize revenue requirement
4. Allocate functionalized costs to cost components
5. Determine units of service
6. Distribute costs to customer classes
7. Design rates to recover class cost-of-service and total revenue requirement

### FY21 REVENUE AT EXISTING RATES

Raftelis developed FY21 rate revenue at existing rates using detailed billing records provided by the City. Revenue projections are based on the current number of customers by meter size and class, projected use per account and growth in the number of accounts by class. The FY21 revenue at existing rates is shown below. This projection serves as the basis for determining the FY21 revenue requirement. This billing data analysis is also used in the units of service analysis.

**Table 4: FY21 Revenue Under Proposed Rates**

Customer Class	Bills	Volume (kgals)	Revenue (\$ million)
Res/Comm/Ind	891,262	7,897,828	\$26,028,476
Multifamily	43,074	1,976,765	\$6,731,804
Commercial without dining	35,233	879,302	\$3,352,908
Commercial with dining	2,734	199,518	\$827,576
Hotels, motels without dining	795	102,604	\$350,937
Hotels, motels with dining	1,232	312,497	\$1,223,450
Carwashes	274	58,299	\$166,691
Commercial Laundry	143	12,999	\$47,894
Laundromats	59	8,294	\$25,671
Metal Platers	24	190	\$689
Restaurants; bakeries	5,485	368,184	\$2,041,405
Service station auto repair	1,806	48,724	\$174,591
Medical Institutes	1,415	200,382	\$622,458
Schools	1,031	66,803	\$183,087
Black Mountain	12	90,156	\$252,061
<b>Total</b>	<b>984,579</b>	<b>12,222,544</b>	<b>\$42,029,697</b>

## TEST YEAR REVENUE REQUIREMENT

The revenue requirement shown in Table 5 below shows the level of revenue required from rates with the FY21 proposed revenue adjustments.

**Table 5: Wastewater – FY21 Revenue Requirement (\$ millions)**

Item	FY21
Operation and Maintenance Expense	\$26.8
Debt Service	\$12.6
Capital Improvements	\$15.0
<b>Total Expenditures</b>	<b>\$54.5</b>
<b>Adjustments</b>	
Other Operating Income	(\$2.5)
Transfers In	(\$6.9)
Other Rate Revenue	(\$2.6)
Change in Fund Balance	(\$0.5)
<b>Total Adjustments</b>	<b>(\$12.4)</b>
<b>Net FY21 Revenue Requirement</b>	<b>\$42.0</b>

## REVENUE REQUIREMENT ALLOCATION

The underlying principle in cost allocation is to convert the test year revenue requirement into costs that best reflect the cost associated with customer wastewater demands placed on the system. Those costs are proportionately allocated to customer classes based on their respective units of service to determine class cost of service. Customer class units of service typically include billable flow, strength, and number of bills.

### Functional Cost Components

Wastewater systems are comprised of several facilities (unit processes or functions) that are designed and operated to collect, treat, and dispose of effluent to natural bodies of water. The separation of costs into functional components provides a means for distributing costs to customer classes based on their respective responsibility in the system. The City's asset listing and line item detail budget were used as a basis for the functionalization of costs.

### Allocation of Functionalized Costs

Once costs have been separated by function, they can be further allocated to cost components. Allocating to cost components provides a means of assigning costs based on the design and functional parameters that predominately influence the amount of that cost. Cost components include contributed flow, chemical oxygen demand (COD), total suspended solids (TSS), and customer and billing costs.

Volume costs are those which vary directly with the quantity of contributed sewer volumes to the plant. COD and TSS costs are associated the processes needed to treat and discharge effluent. Billing costs are related to customer service, billing, and other general administrative costs. The customer costs represent a portion of annual repair and replacement capital costs to be recovered through the month base fee. Allocating these costs to the base fee also provides revenue stability.

O&M related to the treatment plant are allocated to their respective volume, COD or TSS cost component. For example, lift station and collection line expenses are allocated directly to the flow cost component. Other treatment related expenses such as operations, maintenance and fleet management are allocated to flow, COD, and TSS cost

components. Treatment related costs were allocated based on the current percent of costs for flow, COD, and TSS assessed by SROG. Other expenses not specifically assigned are allocated in proportion to all other treatment expenses.

The allocation of system assets to functional cost components provides the basis for allocating annual capital costs. Cost of service is generally allocated to cost components that reflect the design and functional parameters of the associated facility. For example, assets such as the trunk mains, collection mains, and interceptor mains reflect assets used to serve customers served by the collection system and are allocated directly to the flow cost component. The City does not maintain a detailed listing of treatment plant assets. A detailed listing aids in allocating costs to specific cost components or combination of cost components based on that facilities particular function or design parameter. Treatment plant assets have been assigned to cost components based on Raftelis' experience with other similar size utilities. General plant assets not specifically assigned are allocated in proportion to all other plant assets.

### Allocated Revenue Requirement

Table 6 summarizes the allocated revenue requirement. The allocated revenue requirement is distributed to customer classes based on their proportionate share of total units of service.

**Table 6: Wastewater – FY21 Allocated Revenue Requirement (\$ millions)**

Description	Flow	COS	TSS	Billing	Customer	Total
O&M Expense	\$10.3	\$7.7	\$7.3	\$1.4	\$0.0	\$26.8
Capital Costs	\$9.6	\$2.0	\$1.5	\$0.0	\$7.1	\$20.3
Adjustments	(\$1.6)	(\$1.5)	(\$1.3)	(\$0.8)	\$0.0	(\$5.1)
<b>Net Rev Req.</b>	<b>\$18.4</b>	<b>\$8.3</b>	<b>\$7.6</b>	<b>\$0.6</b>	<b>\$7.1</b>	<b>\$42.0</b>

### Customer Class Units of Service

Customers of a wastewater utility are often identified according to customer class. Because cost-of-service is based on the concept of proportionality, the units of service for each customer class must be analyzed to distribute the functionalized and allocated system revenue requirements based on their respective flow and billing profiles. Table 7 details the proposed units of service.

**Table 7: FY21 Units of Service [1]**

Customer Class	Flow (kgal)	COD (mg/l)	COD (lbs)	TSS (mg/l)	TSS (lbs)	Bills	Customer
Single-family Residential	7,897,828	450	29,640,548	225	14,820,274	891,262	1,066,908
Multi-family Residential	1,976,765	450	7,418,798	225	3,709,399	43,074	310,410
Commercial w/ dining	879,302	400	2,933,351	200	1,466,675	35,233	217,945
Commercial w/ dining	199,518	1,000	1,663,980	600	998,388	2,734	24,522
Hotels, motels w/o dining	102,604	620	530,545	120	102,686	795	9,090
Hotels, motels w/ dining	312,497	1,000	2,606,221	600	1,563,733	1,232	15,362
Carwashes	58,299	40	19,448	150	72,932	274	2,711
Commercial Laundry	12,999	900	97,569	340	36,859	143	682
Laundromats	8,294	300	20,752	110	7,609	59	574
Metal Platers	190	600	949	300	474	24	24
Restaurants; bakeries	368,184	2,200	6,755,449	600	1,842,395	5,485	44,429
Service station auto repair	48,724	360	146,290	280	113,781	1,806	9,608
Medical Institutes	200,382	500	835,594	100	167,119	1,415	18,693
Schools	66,803	260	144,856	100	55,714	1,031	16,568
Black Mountain	90,156	0	290,941	0	118,978	12	317
<b>Total</b>	<b>12,222,544</b>		<b>53,105,289</b>		<b>25,077,016</b>	<b>984,579</b>	<b>1,737,842</b>

[1] Includes inside City and outside City.

### Commercial Customer Extra Strength Survey

The City’s commercial volume rates are based on extra strength characteristics of the quality of wastewater. The treatment system must be designed to handle the various flow and loadings from each customer class. Therefore, customer classes that contribute higher strength flows should also contribute more to the costs of operating and maintaining the system. The City uses Chemical Oxygen Demand (COD), the amount of organic compounds, and Total Suspended Solids (TSS), the amount of suspended particles for their high strength customer classes.

Raftelis surveyed several industry sources such as utilities rate schedules, research documents, and state and federal publications to compare COD and TSS strengths of the City’s 15 customer classes. Many entities reference the California State Water Resources Control Board standards published in 1998. Since then, the EPA Onsite Wastewater Treatment Systems Manual was published in 2002, Connecticut Department of Environmental Protection published Guidance for Design of Large-Scale On-Site Wastewater Renovation Systems in 2006 and the Ohio Administrative Code, Chapter 3745-42 Permits to Install and Plan Approvals for Water Pollution Control in 2018, have provided comprehensive summaries of COD and TSS strengths for high strength customer classes. In addition, many research publications have focused on the variation of strengths within specific customer classes including restaurants, car washes, breweries, and others. Raftelis also compared the COD and TSS strengths for high strength customer classes with 8 other utilities.

The City’s current COD and TSS strengths for high strength customer classes are within the range of the industry practices as shown in charts below. Each chart lists the City of Scottsdale’s (City) customer classes and plots the strength used in rate setting (shown in red). The largest variability was within the restaurants/ bakeries and commercial laundry customer classes. Figures 1 and 2 illustrate the relative position of the City’s strengths to that of the survey information collected by Raftelis.

Figure 1: COD Strength Ranges by Customer Class

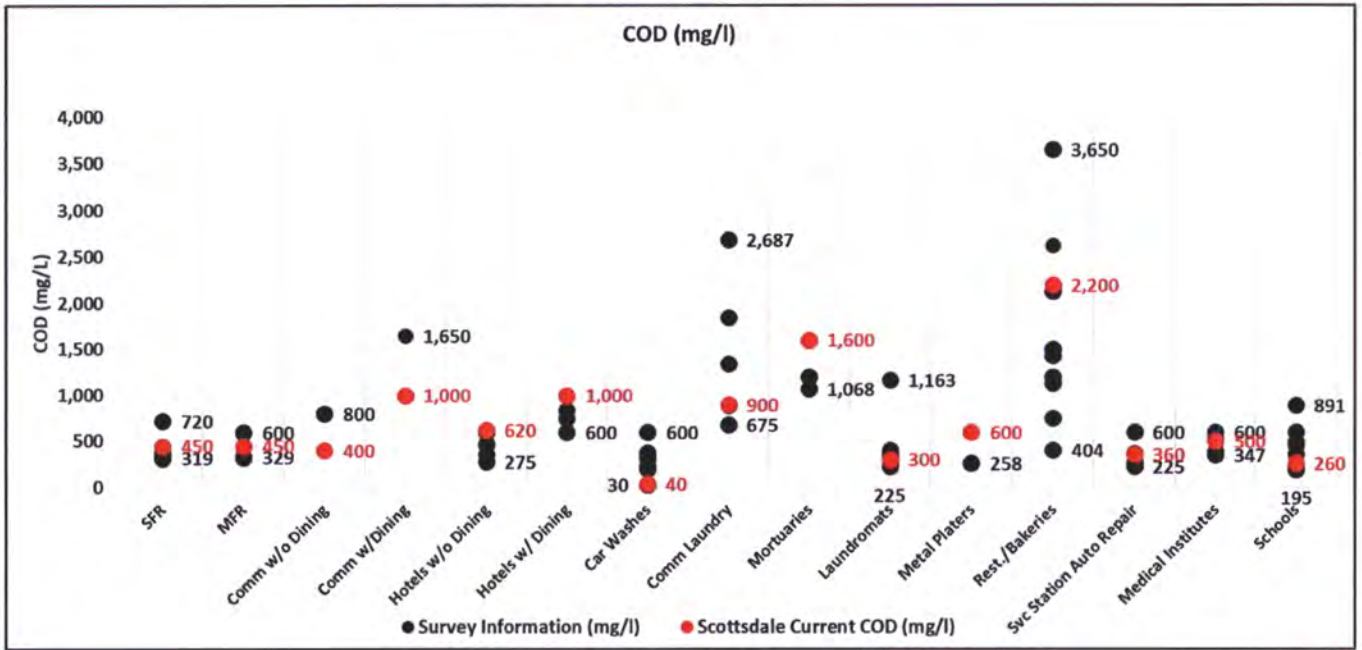
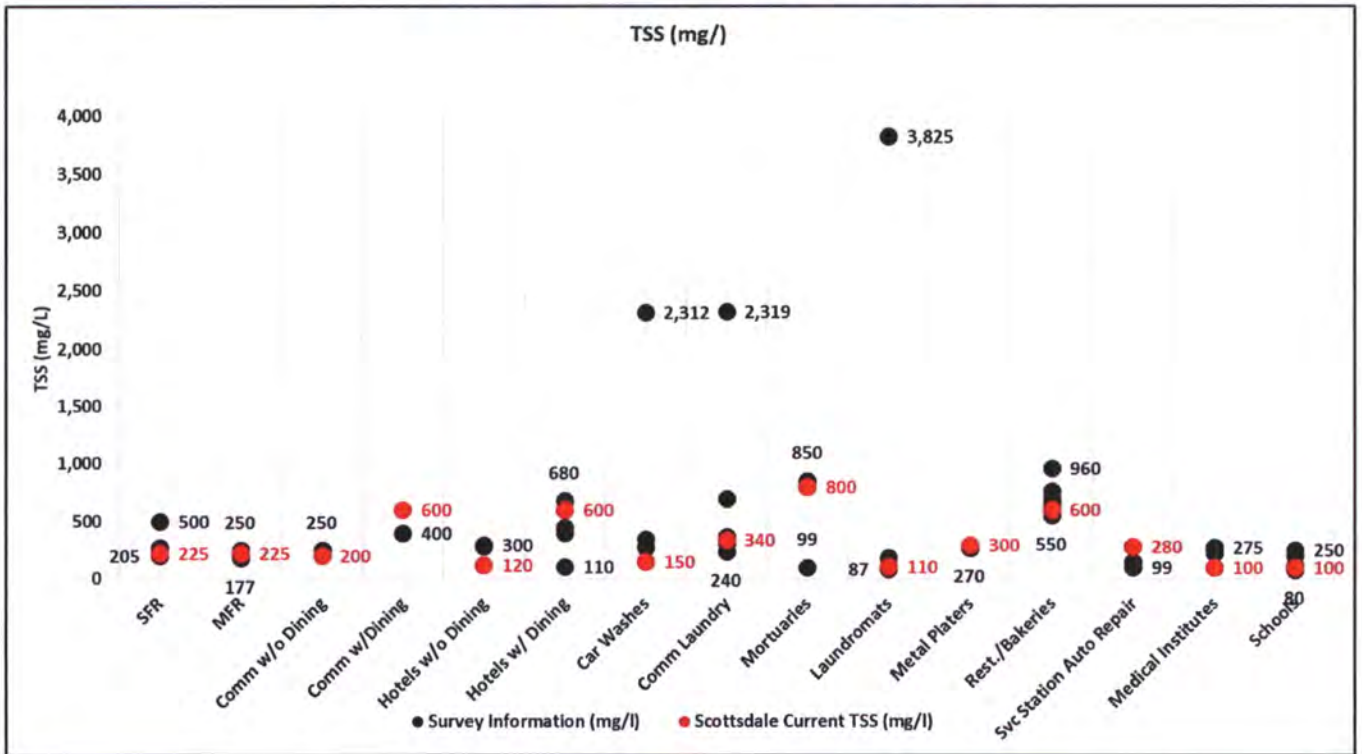


Figure 2: TSS Strength Ranges by Customer Class



## Unit Cost of Service

The unit cost of service is the quotient of the allocated revenue requirement by cost component divided by the units of service for each. The unit costs for each cost component are used to determine the customer class cost of service.

**Table 8: Wastewater – FY21 Unit Cost of Service**

Description	Flow	COD	TSS	Billing	Ready to Serve	Total
<b>Revenue Requirement, \$ millions</b>						
O&M Expense	\$10.3	\$7.7	\$7.3	\$1.4	\$0.0	\$26.8
Capital Costs	\$9.6	\$2.0	\$1.5	\$0.0	\$7.1	\$20.3
Rev. Req Adj.	(\$1.6)	(\$1.5)	(\$1.3)	(\$0.8)	\$0.0	(\$5.1)
<b>Net Revenue. Req.</b>	<b>\$18.4</b>	<b>\$8.3</b>	<b>\$7.6</b>	<b>\$0.6</b>	<b>\$7.1</b>	<b>\$42.0</b>
<b>Units of Service</b>						
Inside City	11,803,410	50,983,839	24,041,392	959,990	1,713,037	
Outside City	419,134	2,121,450	1,035,624	24,589	24,805	
<b>Total Units of Service</b>	<b>12,222,544</b>	<b>53,105,289</b>	<b>25,077,016</b>	<b>984,579</b>	<b>1,737,842</b>	
<b>Unit Cost of Service [1]</b>						
O&M Expense	\$0.842	\$0.145	\$0.291	\$1.420	\$0.007	
Capital Costs	\$0.782	\$0.038	\$0.060	\$0.000	\$4.077	
Adjustments	(\$0.128)	(\$0.028)	(\$0.050)	(\$0.769)	\$0.000	
<b>Total Unit Costs</b>	<b>\$1.496</b>	<b>\$0.155</b>	<b>\$0.302</b>	<b>\$0.652</b>	<b>\$4.084</b>	
[1] Out of city unit costs are charged a surcharge up to 15%						

Because cost-of-service is based on the concept of proportionality, customer class units of service must be analyzed to distribute the functionalized and allocated system revenue requirements.

## Distribution of Costs to Customer Classes

Table 9 shows the distributed cost-of-service to customer classes. The customer class units of service in Table 7 are multiplied by the unit cost of service in Table 8 to determine the customer class cost of service.

**Table 9: Wastewater – FY21 Customer Class Cost of Service (\$ millions)**

Customer Class	Flow	COD	TSS	Bills	Customer	Total
Single-family Residential	\$11.85	\$4.61	\$4.48	\$0.58	\$4.37	\$25.89
Multi-family Residential	\$2.98	\$1.16	\$1.13	\$0.03	\$1.27	\$6.56
Commercial without dining	\$1.32	\$0.46	\$0.45	\$0.02	\$0.89	\$3.14
Commercial with dining	\$0.30	\$0.26	\$0.30	\$0.00	\$0.10	\$0.97
Hotels, motels without dining	\$0.16	\$0.09	\$0.03	\$0.00	\$0.04	\$0.31
Hotels, motels with dining	\$0.48	\$0.42	\$0.49	\$0.00	\$0.06	\$1.45
Carwashes	\$0.09	\$0.00	\$0.02	\$0.00	\$0.01	\$0.12
Commercial Laundry	\$0.02	\$0.02	\$0.01	\$0.00	\$0.00	\$0.05
Laundromats	\$0.01	\$0.00	\$0.00	\$0.00	\$0.00	\$0.02
Metal Platers	\$0.0003	\$0.0002	\$0.0001	\$0.0000	\$0.0001	\$0.0007
Restaurants; bakeries	\$0.55	\$1.05	\$0.56	\$0.00	\$0.18	\$2.35
Service station auto repair	\$0.07	\$0.02	\$0.03	\$0.00	\$0.04	\$0.17
Medical Institutes	\$0.30	\$0.13	\$0.05	\$0.00	\$0.08	\$0.56
Schools	\$0.10	\$0.02	\$0.02	\$0.00	\$0.07	\$0.21
Black Mountain	\$0.13	\$0.05	\$0.04	\$0.00	\$0.00	\$0.22
<b>Total</b>	<b>\$18.38</b>	<b>\$8.28</b>	<b>\$7.61</b>	<b>\$0.64</b>	<b>\$7.11</b>	<b>\$42.03</b>

[1] Includes inside and outside city.

## Comparison of FY21 Cost of Service to Revenue at Existing Rates

Table 10 shows the comparison of FY21 cost of service to revenue at existing rates for each customer class. The change in each customer class' cost is a product of two components: 1) the functionalization and allocation of the revenue requirement and 2) the distribution of these costs to customer classes based on their units of service.

**Table 10: FY21 Comparison of Cost of Service to Revenue at Existing Rates (\$ millions)**

Class	FY21 Cost of Service	FY21 Revenue Under Existing Rates	Change - \$	Change - %
Single-family Residential	\$25.89	\$26.03	(\$0.14)	-0.5%
Multi-family Residential	\$6.56	\$6.73	(\$0.17)	-2.5%
Commercial without dining	\$3.14	\$3.35	(\$0.21)	-6.3%
Commercial with dining	\$0.97	\$0.83	\$0.14	16.7%
Hotels, motels without dining	\$0.31	\$0.35	(\$0.04)	-10.6%
Hotels, motels with dining	\$1.45	\$1.22	\$0.23	18.8%
Carwashes	\$0.12	\$0.17	(\$0.04)	-25.9%
Commercial Laundry	\$0.05	\$0.05	\$0.00	8.5%
Laundromats	\$0.0210	\$0.0257	(\$0.00)	-18.2%
Metal Platers	\$0.0007	\$0.0007	\$0.00	3.0%
Restaurants; bakeries	\$2.35	\$2.04	\$0.31	15.0%
Service station auto repair	\$0.17	\$0.17	(\$0.00)	-2.0%
Medical Institutes	\$0.56	\$0.62	(\$0.06)	-10.3%
Schools	\$0.21	\$0.18	\$0.03	15.1%
Black Mountain	\$0.22	\$0.25	\$0.00	0.0%
<b>Total</b>	<b>\$42.03</b>	<b>\$42.03</b>	<b>\$0.03</b>	<b>0.0%</b>

## RATE DESIGN

In the development of schedules of wastewater rates, a basic consideration is to establish equitable charges to customers commensurate with the cost of providing service. The only method of assessing entirely equitable wastewater rates would be the determination of each customer's bill based upon their unique service requirements. Since this is impractical, schedules of rates are normally designed to meet average conditions for groups (classes) of customers having similar service requirements. Rates should be reasonably simple in application and subject to as few misinterpretations as possible.

## Existing Rates

The City's existing rate structure consists of a monthly service charge that varies by class and two volumetric rates for billed volume. Billed volume is based on a return to sewer factor of 90% of the customers average winter consumption for the prior December, January, and February. Table 11 lists the existing rates and structures. The proposed FY21 base fees recover approximately 18.4% of total rate revenue.

**Table 11: FY21 Proposed Rates**

Description		Current Rates	
<b>Base Fee, \$ per bill</b>			
	5/8"		\$4.50
	3/4"		\$4.50
	1"		\$4.50
	1.5"		\$27.00
	2"		\$63.00
	3"		\$81.00
	4"		\$119.00
	6"		\$225.00
	8"		\$315.00
<b>Volume Rate, \$ per 1,000 gallons [1]</b>	<b>O&amp;M Charge</b>	<b>Capital Charge</b>	<b>Total</b>
Single-family Residential	\$1.17	\$1.51	\$2.68
Multi-family Residential	\$1.17	\$1.51	\$2.68
Commercial without dining	\$1.16	\$1.52	\$2.68
Commercial with dining	\$1.72	\$1.85	\$3.57
Hotels, motels without dining	\$1.25	\$1.67	\$2.92
Hotels, motels with dining	\$1.71	\$1.86	\$3.57
Carwashes	\$1.08	\$1.57	\$2.65
Commercial Laundry	\$1.48	\$1.73	\$3.21
Laundromats	\$1.10	\$1.58	\$2.68
Metal Platers	\$1.33	\$1.62	\$2.95
Restaurants; bakeries	\$2.43	\$2.55	\$4.98
Service station auto repair	\$1.18	\$1.50	\$2.68
Medical Institutes	\$1.12	\$1.56	\$2.68
Schools	\$1.09	\$1.59	\$2.68
<b>Black Mountain [2]</b>			

[1] Out of City customers are charged a surcharge up to 15% applied to O&M, Capital and Base fees.

[2] Black Mountain is assessed a contractual rate.

## Proposed Rate

The proposed rates retain the existing structure. Strength loadings for the commercial customers also remain the same.

Table 12: FY21 Cost of Service Rates

Description		Proposed Rates	
<b>Service Charge, \$ per bill</b>			
5/8"			\$4.74
3/4"			\$4.74
1"			\$4.74
1.5"			\$25.15
2"			\$57.82
3"			\$74.16
4"			\$108.46
6"			\$204.83
8"			\$286.50
<b>Volume Rate, \$ per 1,000 gal [1]</b>	<b>O&amp;M Charge</b>	<b>Capital Charge</b>	<b>Total</b>
Single-family Residential	\$1.61	\$1.04	\$2.65
Multi-family Residential	\$1.61	\$1.04	\$2.65
Commercial without dining	\$1.51	\$1.01	\$2.52
Commercial with dining	\$2.90	\$1.40	\$4.30
Hotels, motels without dining	\$1.56	\$1.04	\$2.60
Hotels, motels with dining	\$2.90	\$1.40	\$4.30
Carwashes	\$1.05	\$0.87	\$1.92
Commercial Laundry	\$2.28	\$1.24	\$3.52
Laundromats	\$1.23	\$0.93	\$2.16
Metal Platers	\$1.90	\$1.12	\$3.02
Restaurants; bakeries	\$4.07	\$1.78	\$5.85
Service station auto repair	\$1.63	\$1.04	\$2.67
Medical Institutes	\$1.40	\$0.99	\$2.39
Schools	\$1.17	\$0.91	\$2.08
<b>Black Mountain [2]</b>			

[1] Out of City customers are charged a surcharge up to 15% applied to O&M, Capital and Base fees.

[2] Black Mountain is assessed a contractual rate.



APPENDIX A:  
**FINANCIAL PLAN**

FY21 Proposed Rates

<b>Operating Fund (S-OP)</b>										
Months Increase is Effective in First Year	12	12	12	12	12	12	12	12	12	12
Annualized Percentage Increase	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Cumulative Increase	0.0%	0.0%	2.0%	4.0%	6.1%	8.2%	10.4%	12.6%	14.9%	17.2%
Transfer to Capital Fund	14,292,116	15,000,000	19,200,000	14,000,000	18,200,000	18,200,000	18,200,000	18,200,000	18,200,000	18,200,000
Operating Fund Ending Balance	25,811,741	25,359,209	20,566,517	21,456,296	23,501,134	26,719,705	25,731,634	25,168,402	24,996,547	22,168,596
<b>Target Reserves</b>										
Operating Reserve	4,080,192	5,232,391	6,632,981	7,249,068	8,304,110	8,583,836	5,018,209	5,170,683	5,329,905	5,496,287
Repair/Replacement Reserve	0	13,604,582	14,048,446	14,395,503	14,807,299	15,480,318	16,121,092	16,539,964	16,918,929	17,237,345
Revenue Bond Debt Service Reserve	4,604,688	0	0	0	0	0	0	0	0	0
<b>Total Target Reserves</b>	<b>8,684,880</b>	<b>18,836,972</b>	<b>20,681,427</b>	<b>21,644,572</b>	<b>23,111,409</b>	<b>24,064,154</b>	<b>21,139,301</b>	<b>21,710,646</b>	<b>22,248,834</b>	<b>22,733,632</b>
Unreserved Fund Balance	17,126,861	6,522,237	(114,910)	(188,275)	389,725	2,655,552	4,592,333	3,457,755	2,747,713	(565,037)
Debt Service Coverage	184.5%	179.1%	181.1%	193.6%	315.6%	347.2%	313.9%	317.1%	319.0%	231.6%
<b>Capital Fund</b>										
Annual CIP with Inflation	16,525,432	22,356,477	22,193,214	17,352,864	20,589,790	33,650,957	32,038,700	20,943,581	18,948,249	15,920,810
Revenue Bond Issuance Proceeds	0	0	0	0	0	0	0	0	0	0
State & Other Loan Proceeds	0	0	0	0	0	0	0	0	0	0
Ending Capital Fund Balance	47,150,623	42,666,509	42,564,195	42,129,431	42,701,840	30,213,083	19,336,583	19,555,202	21,769,153	27,010,543

City of Scottsdale, AZ  
Wastewater Utility  
Capital Fund Cash Flow Analysis (Capital Portion of S-OP)

Table A-1  
3/17/2020

Line No.	Description	For the Fiscal Period Ending June 30											
		Actual	Adopted	Approved	Projected								
		2019	2020	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Beginning Fund Balance	89,736,572	89,736,572	108,968,581	47,150,623	42,666,509	42,564,195	42,129,431	42,701,840	30,213,083	19,336,583	19,555,202	21,769,153
	<b>Sources of Funds</b>												
2	New Bond Issues			0	0	0	0	0	0	0	0	0	0
3	Interest Earnings	1,312,231	1,299,218	1,299,218	1,372,363	1,390,900	1,418,100	1,462,200	1,462,200	1,462,200	1,462,200	1,462,200	1,462,200
4	Miscellaneous Revenue	163,741	0	0	0	0	0	0	0	0	0	0	0
5	Transfer from the Operating Fund	2,558,024	7,738,005	14,292,116	15,000,000	19,200,000	14,000,000	18,200,000	18,200,000	18,200,000	18,200,000	18,200,000	18,200,000
6	Development Fee Revenue	1,518,747	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
7	<b>Total Sources</b>	5,552,743	10,537,223	17,091,334	17,872,363	22,090,900	16,918,100	21,162,200	21,162,200	21,162,200	21,162,200	21,162,200	21,162,200
	<b>Uses of Funds</b>												
8	Cash Flow CIP	17,700,252	40,975,663	16,525,432	22,356,477	22,193,214	17,352,864	20,589,790	33,650,957	32,038,700	20,943,581	18,948,249	15,920,810
9	<b>Total Uses</b>	17,700,252	40,975,663	16,525,432	22,356,477	22,193,214	17,352,864	20,589,790	33,650,957	32,038,700	20,943,581	18,948,249	15,920,810
10	Annual Surplus (Deficiency)	(12,147,509)	(30,438,440)	565,902	(4,484,114)	(102,314)	(434,764)	572,410	(12,488,757)	(10,876,500)	218,619	2,213,951	5,241,390
11	<b>Beginning Balance</b>	89,736,572	77,589,063	47,150,623	47,150,623	42,666,509	42,564,195	42,129,431	42,701,840	30,213,083	19,336,583	19,555,202	21,769,153
12	<b>Ending Balance</b>	77,589,063	47,150,623	47,716,526	42,666,509	42,564,195	42,129,431	42,701,840	30,213,083	19,336,583	19,555,202	21,769,153	27,010,543

Line No.	Description	For the Fiscal Period Ending June 30											
		Actual	Adopted	Approved	Projected								
		2019	2020	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<b>Beginning Fund Balance</b>													
1	Operating Reserve	4,402,471	4,080,192	4,402,471	4,080,192	5,232,391	6,632,981	7,249,068	8,304,110	8,583,836	5,018,209	5,170,683	5,329,905
2	Repair/Replacement Reserve	12,680,876	13,680,876	0	0	13,604,582	14,048,446	14,395,503	14,807,299	15,480,318	16,121,092	16,539,964	16,918,929
3	Revenue Bond Debt Service Reserve	4,604,688	4,604,688	4,604,688	4,604,688	0	0	0	0	0	0	0	0
4	Water Drought Reserve	0	0	0	0	0	0	0	0	0	0	0	0
5	Special Contractual Fund Balance	0	0	0	0	0	0	0	0	0	0	0	0
6	Undesignated, Unreserved Fund Balan	(2,456,026)	16,692	18,610,924	17,126,861	6,522,237	(114,910)	(188,275)	389,725	2,655,552	4,592,333	3,457,755	2,747,713
7	<b>Total Beginning Fund Balance</b>	<b>19,232,009</b>	<b>22,382,448</b>	<b>27,618,083</b>	<b>25,811,741</b>	<b>25,359,209</b>	<b>20,566,517</b>	<b>21,456,296</b>	<b>23,501,134</b>	<b>26,719,705</b>	<b>25,731,634</b>	<b>25,168,402</b>	<b>24,996,547</b>
<b>Sources of Funds</b>													
<b>Rate Revenue</b>													
8	User Rate Revenue (Base Charge, OI	41,631,187	42,784,100	42,784,100	42,029,697	42,448,065	42,866,434	43,284,802	43,703,171	44,121,539	44,539,908	44,958,276	45,376,645
9	Additional Rate Revenue from Increases	0	0	0	0	848,961	1,731,804	2,649,376	3,602,547	4,592,205	5,619,262	6,684,651	7,789,327
10	<b>Total Rate Revenue with Increases</b>	<b>41,631,187</b>	<b>42,784,100</b>	<b>42,784,100</b>	<b>42,029,697</b>	<b>43,297,027</b>	<b>44,598,238</b>	<b>45,934,178</b>	<b>47,305,717</b>	<b>48,713,744</b>	<b>50,159,170</b>	<b>51,642,927</b>	<b>53,165,971</b>
<b>Other Rate Revenue w/o Increase</b>													
11	Sewer Late Charge	84,595	90,000	90,000	91,100	92,000	92,900	93,900	94,800	94,800	94,800	94,800	94,800
12	Sewer Account Initiation Fee	106,558	135,800	135,800	110,000	111,100	112,200	113,300	114,500	114,500	114,500	114,500	114,500
13	Out Of City Surcharge - Sewer	75,422	49,500	49,500	63,000	0	0	0	0	0	0	0	0
14	Non-Hazardous Liquid Waste	2,278,239	2,180,000	2,180,000	2,316,400	2,362,728	2,409,983	2,458,182	2,507,346	2,557,493	2,608,643	2,660,815	2,714,032
15	Sewer Service Charges	710	0	0	0	0	0	0	0	0	0	0	0
16	<b>Total Additional Rate Revenue</b>	<b>2,545,524</b>	<b>2,455,300</b>	<b>2,455,300</b>	<b>2,580,500</b>	<b>2,565,828</b>	<b>2,615,083</b>	<b>2,665,382</b>	<b>2,716,646</b>	<b>2,766,793</b>	<b>2,817,943</b>	<b>2,870,115</b>	<b>2,923,332</b>
17	<b>Total Wastewater Fee Revenue</b>	<b>44,176,711</b>	<b>45,239,400</b>	<b>45,239,400</b>	<b>44,610,197</b>	<b>45,862,855</b>	<b>47,213,320</b>	<b>48,599,561</b>	<b>50,022,363</b>	<b>48,713,744</b>	<b>50,159,170</b>	<b>51,642,927</b>	<b>53,165,971</b>
<b>Other Operating Income</b>													
18	Non-Potable Water Service Charges	815,943	1,000,000	1,000,000	1,050,000	1,060,500	1,071,100	1,081,800	1,092,600	1,114,500	1,136,800	1,159,500	1,182,700
19	Interest Earnings	287,283	733,592	733,592	774,001	783,900	800,200	823,700	823,700	823,700	823,700	823,700	823,700
20	Indirect Costs	174,978	221,300	221,300	210,500	214,700	219,000	223,400	227,900	232,500	237,200	241,900	246,700
21	Miscellaneous [1]	221,086	98,076	98,076	110,676	111,576	112,476	113,276	114,176	115,376	116,576	117,776	118,976
22	Stormwater Quality Fees	234,882	332,750	332,750	336,000	339,400	342,800	346,200	349,600	349,600	349,600	349,600	349,600
23	Property Rental	0	0	0	0	0	0	0	0	0	0	0	0
24	Contributions & Donations	0	0	0	0	0	0	0	0	0	0	0	0
25	<b>Total Other Operating Income</b>	<b>1,734,172</b>	<b>2,385,718</b>	<b>2,385,718</b>	<b>2,481,177</b>	<b>2,510,076</b>	<b>2,545,576</b>	<b>2,588,376</b>	<b>2,607,976</b>	<b>2,635,676</b>	<b>2,663,876</b>	<b>2,692,476</b>	<b>2,721,676</b>
<b>Transfers In</b>													
26	AWT	2,842,514	2,985,000	2,985,000	2,863,545	2,892,200	2,921,100	2,950,300	2,979,800	2,979,800	2,979,800	2,979,800	2,979,800
27	Transfer In Debt Service	3,875,681	0	0	3,168,720	2,833,600	2,478,700	2,120,400	1,975,000	0	0	0	0
28	RWDS	0	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000
29	<b>Total Transfers In</b>	<b>6,718,195</b>	<b>3,885,000</b>	<b>3,885,000</b>	<b>6,932,265</b>	<b>6,625,800</b>	<b>6,299,800</b>	<b>5,970,700</b>	<b>5,854,800</b>	<b>3,879,800</b>	<b>3,879,800</b>	<b>3,879,800</b>	<b>3,879,800</b>
30	<b>Total Sources</b>	<b>52,629,078</b>	<b>51,510,118</b>	<b>51,510,118</b>	<b>54,023,639</b>	<b>54,998,731</b>	<b>56,058,696</b>	<b>57,158,637</b>	<b>58,485,139</b>	<b>55,229,221</b>	<b>56,702,846</b>	<b>58,215,204</b>	<b>59,767,447</b>
<b>Uses of Funds</b>													
31	NON DIVISIONAL	-	-	-	-	-	-	-	-	-	-	-	-
32	CITY TREASURER	831,352	999,349	1,021,325	985,077	998,100	1,012,200	1,026,500	1,040,900	1,061,718	1,082,952	1,104,611	1,126,704
33	WATER RESOURCES	16,849,802	17,602,289	17,678,079	17,701,350	18,290,200	18,595,900	18,907,900	19,229,800	19,616,148	20,010,311	20,412,448	20,822,725
34	Citywide Indirect Cost Allocation (Tran	1,189,297	1,384,027	1,384,027	1,352,090	1,419,700	1,490,700	1,565,200	1,643,500	1,676,370	1,709,897	1,744,095	1,778,977
35	Department Indirect Cost	-	-	-	-	-	-	-	-	-	-	-	-
36	Citywide Pay Program	-	143,599	12,271	-	-	-	-	-	-	-	-	-
37	Compensation Other	-	231,485	7,031	1,012	1,000	1,100	1,100	1,100	1,100	1,100	1,100	1,100
38	Vacation Trade	-	-	-	-	-	-	-	-	-	-	-	-

Line No.	Description	For the Fiscal Period Ending June 30											
		Actual	Adopted	Approved	Projected								
		2019	2020	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
39	Savings from Vacant Positions	-	(148,200)	(34,922)	(148,200)	(151,600)	(154,900)	(158,400)	(161,900)	(165,138)	(168,441)	(171,810)	(175,246)
40	Leave Accrual Payments	-	58,666	58,666	58,666	60,000	61,400	62,700	64,100	65,382	66,690	68,023	69,384
41	Utilities	4,265,353	4,301,100	4,301,100	4,558,100	4,692,500	4,831,100	4,973,300	5,213,000	5,585,457	5,985,477	6,415,121	6,876,603
42	Total Operation and Maintenance Expr	23,135,804	24,572,315	24,427,577	24,508,095	25,309,900	25,837,500	26,378,300	27,030,500	27,841,037	28,687,986	29,573,590	30,500,248
	<b>Debt Service</b>												
	<b>Existing</b>												
43	MPC Bonds Debt Service-Sewer	7,793,145	7,919,889	7,919,889	8,024,922	8,139,523	7,750,829	7,861,900	7,372,868	7,489,856	7,611,092	7,763,469	10,959,651
44	MPC Bonds Debt Service-Water	0	0	0	0	0	0	0	0	0	0	0	0
45	Sewer Revenue Bonds	4,566,588	4,574,588	4,574,588	4,584,025	4,592,700	4,605,088	0	0	0	0	0	0
	<b>Proposed</b>												
46	Revenue	0	0	0	0	0	0	0	0	0	0	0	0
47	MPC	0	0	0	0	0	0	0	0	0	0	0	0
48	Total Debt Service	12,359,733	12,494,477	12,494,477	12,608,947	12,732,223	12,355,917	7,861,900	7,372,868	7,489,856	7,611,092	7,763,469	10,959,651
	<b>Transfers Out</b>												
49	AWT	0	0	0	0	0	0	0	0	0	0	0	0
50	Transfers to the Capital Fund	2,558,024	7,738,005	14,292,116	15,000,000	19,200,000	14,000,000	18,200,000	18,200,000	18,200,000	18,200,000	18,200,000	18,200,000
51	CIP Technology	110,165	40,455	40,455	30,829	154,000	511,300	138,400	55,000	0	0	0	0
52	Debt Service Fund	3,875,681	0	0	0	0	0	0	0	0	0	0	0
53	Franchise Fees	2,203,597	2,061,835	2,061,835	2,328,301	2,395,300	2,464,200	2,535,200	2,608,200	2,686,400	2,767,000	2,850,000	2,935,500
54	Total Transfers Out	8,747,467	9,840,295	16,394,406	17,359,130	21,749,300	16,975,500	20,873,600	20,863,200	20,886,400	20,967,000	21,050,000	21,135,500
55	<b>Total Uses</b>	<b>44,243,004</b>	<b>46,907,087</b>	<b>53,316,460</b>	<b>54,476,172</b>	<b>59,791,423</b>	<b>55,168,917</b>	<b>55,113,800</b>	<b>55,266,568</b>	<b>56,217,292</b>	<b>57,266,078</b>	<b>58,387,059</b>	<b>62,595,398</b>
56	Annual Surplus (Deficiency)	8,386,074	4,603,032	(1,806,341)	(452,533)	(4,792,692)	889,779	2,044,837	3,218,572	(988,072)	(563,232)	(171,855)	(2,827,951)
	<b>Ending Balance</b>												
57	Operating Reserve	4,402,471	4,080,192	4,080,192	5,232,391	6,632,981	7,249,068	8,804,110	8,583,836	5,018,209	5,170,683	5,329,905	5,496,287
57	Repair/Replacement Reserve	-	-	-	13,604,582	14,048,446	14,395,503	14,807,299	15,480,318	16,121,092	16,539,964	16,918,929	17,237,345
58	Revenue Bond Debt Service Reserve	4,604,688	4,604,688	4,604,688	-	-	-	-	-	-	-	-	-
58	Water Drought Reserve	-	-	-	-	-	-	-	-	-	-	-	-
59	Special Contractual Fund Balance	-	-	-	-	-	-	-	-	-	-	-	-
59	Unreserved Fund Balance	18,610,924	18,300,600	17,126,861	6,522,237	(114,910)	(188,275)	389,725	2,655,552	4,592,333	3,457,755	2,747,713	(565,037)
60	<b>Total Ending Balance</b>	<b>27,618,083</b>	<b>26,985,480</b>	<b>25,811,741</b>	<b>25,359,209</b>	<b>20,566,517</b>	<b>21,456,296</b>	<b>23,501,134</b>	<b>26,719,705</b>	<b>25,731,634</b>	<b>25,168,402</b>	<b>24,996,547</b>	<b>22,168,596</b>
61	Annual Wastewater Rate Revenue Incr	N/A	N/A	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
62	Cumulative Revenue Increase	N/A	N/A	0.0%	0.0%	2.0%	4.0%	6.1%	8.2%	10.4%	12.6%	14.9%	17.2%
63	All In Debt Service Coverage	1.84	1.85	1.86	1.79	1.81	1.94	3.16	3.47	3.14	3.17	3.19	2.32

Line	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1	Sources of Funds											
2	Beginning Cash Balance	108,968,581	105,082,431	77,432,619	69,027,361	61,118,655	59,268,770	59,562,717	48,027,732	35,813,560	35,119,347	36,811,843
3	Water Reclamation Charges	47,835,168	50,124,400	49,423,742	50,715,555	52,105,520	53,531,661	54,994,763	53,708,044	55,175,770	56,682,227	58,228,471
4	Interest Earnings	1,999,514	2,032,810	2,146,964	2,218,300	2,285,900	2,353,300	2,421,700	2,490,100	2,558,500	2,626,900	2,695,300
5	Miscellaneous Revenue	559,805	319,376	321,176	326,276	331,376	336,476	341,576	346,676	351,776	356,876	361,976
6	Development Fee Revenue	1,518,747	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
7	New Bond Issues	0	0	0	0	0	0	0	0	0	0	0
8	Total Sources	160,481,816	159,059,017	132,936,626	130,823,901	123,743,992	117,273,952	116,923,007	118,685,457	105,869,552	95,129,006	99,191,890
9	Operating Expenses	23,946,507	23,188,288	23,043,550	23,156,005	23,890,200	24,946,800	24,813,100	25,387,000	26,164,667	26,978,089	27,829,495
10	Operating Transfers	3,392,894	3,445,862	3,680,391	3,815,000	3,954,900	4,100,400	4,251,700	4,362,770	4,476,897	4,594,095	4,714,477
11	Debt Service	12,359,732	12,489,164	12,603,667	12,726,923	12,950,617	13,175,000	13,400,000	13,625,000	13,850,000	14,075,000	14,300,000
12	Capital Improvements	17,700,252	40,975,663	16,525,432	22,356,477	17,352,864	20,589,790	33,650,957	32,038,700	20,943,581	18,948,249	15,920,810
13	Total Uses	55,399,385	80,098,977	55,504,007	61,796,540	62,625,337	58,005,181	57,360,290	70,057,725	70,055,992	60,009,659	59,135,308
14	Ending Cash Balance	105,082,431	78,960,040	77,432,619	69,027,361	61,118,655	59,268,770	59,562,717	48,027,732	35,813,560	35,119,347	36,811,843
15	Change in Fund Balance	(3,886,151)	(26,122,391)	(1,527,421)	(8,405,258)	(7,908,706)	(1,849,885)	293,947	(11,534,985)	(12,214,172)	(694,213)	1,692,496
16	Operating Reserve	4,402,471	4,080,192	4,080,192	5,232,391	6,632,981	7,249,068	8,304,110	8,583,836	5,018,209	5,170,683	5,329,905
17	Repair/Replacement Reserve	0	0	0	13,604,582	14,048,446	14,395,503	14,807,299	15,480,318	16,121,092	16,539,964	17,237,545
18	Revenue Bond Debt Service Reserve	4,604,688	4,604,688	4,604,688	0	0	0	0	0	0	0	0
19	Drumright Contingency Reserve	0	0	0	0	0	0	0	0	0	0	0
20	Special Contractual Fund Balance	0	0	0	0	0	0	0	0	0	0	0
21	Capital/Rate Stabilization Balance	96,075,272	70,275,160	68,747,739	50,190,389	40,437,229	37,624,199	36,451,309	23,963,578	14,674,259	13,408,701	14,563,009
22	Sewer Rate Revenue Increase	N/A	N/A	N/A	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
23	Total Operating Revenues	47,835,168	50,124,400	49,423,742	50,715,555	52,105,520	53,531,661	54,994,763	53,708,044	55,175,770	56,682,227	58,228,471
24	Less: Operating Expenses & Transfers	25,339,401	26,634,150	26,689,412	27,705,200	28,301,700	28,913,500	29,638,700	30,327,437	31,454,986	32,423,590	33,453,748
25	Net Revenues	22,495,767	23,490,250	22,734,330	23,010,355	23,803,820	24,618,161	25,356,063	23,180,608	23,720,784	24,258,637	24,774,724
26	Debt Coverage Ratio	1.82	1.88	1.89	1.79	1.81	1.93	3.13	3.44	3.09	3.12	3.12

For the fiscal period ending June 30

Table A-3  
9/27/2020

Table A-4  
City of Scottsdale, AZ  
Wastewater Utility  
Actual, Adopted, Approved & Projected Miscellaneous Revenue and Other Income

Line No.	Account	For the Fiscal Period Ending June 30											
		Actual	Adopted	Approved	Budget	Projected							
		2019	2020	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
<b>Other Rate Revenue</b>													
1	Sewer Late Charge	84,595	90,000	90,000	91,100	92,000	92,900	93,900	94,800	94,800	94,800	94,800	94,800
2	Sewer Account Initiation Fee	106,558	135,800	135,800	110,000	111,100	112,200	113,300	114,500	114,500	114,500	114,500	114,500
3	Sewer O&M User Charge	0	0	0	0	0	0	0	0	0	0	0	0
4	Sewer Other Charges	0	0	0	0	0	0	0	0	0	0	0	0
5	Out Of City Surcharge - Sewer	75,422	49,500	49,500	63,000	0	0	0	0	0	0	0	0
6	Non-Hazardous Liquid Waste	2,278,239	2,180,000	2,180,000	2,316,400	2,362,728	2,409,983	2,458,182	2,507,346	2,557,493	2,608,643	2,660,815	2,714,032
7	Sewer Service Charges	710	0	0	0	0	0	0	0	0	0	0	0
<b>Other Operating Income</b>													
8	Non-Potable Water Service Charges	815,943	1,000,000	1,000,000	1,050,000	1,060,500	1,071,100	1,081,800	1,092,600	1,114,500	1,136,800	1,159,500	1,182,700
9	Interest Earnings	287,283	733,592	733,592	774,001	783,900	800,200	823,700	823,700	823,700	823,700	823,700	823,700
10	Indirect	174,978	221,300	221,300	210,500	214,700	219,000	223,400	227,900	232,500	237,200	241,900	246,700
11	Miscellaneous	186,210	63,200	63,200	75,800	76,700	77,600	78,400	79,300	80,500	81,700	82,900	84,100
12	Stormwater Quality Fees	234,882	332,750	332,750	336,000	339,400	342,800	346,200	349,600	349,600	349,600	349,600	349,600
13	Property Rental	0	0	0	0	0	0	0	0	0	0	0	0
14	Contributions & Donations	0	0	0	0	0	0	0	0	0	0	0	0
<b>Transfers in</b>													
15	Transfer In AWT	2,842,514	2,985,000	2,985,000	2,863,545	2,892,200	2,921,100	2,950,300	2,979,800	2,979,800	2,979,800	2,979,800	2,979,800
16	Transfer In RWDS	0	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000
17	Transfer In Operating	900,000	0	0	0	0	0	0	0	0	0	0	0
18	Transfer In Debt Service	3,875,681	0	0	3,168,720	2,833,600	2,478,700	2,120,400	1,975,000	0	0	0	0
<b>Other Miscellaneous Revenue</b>													
19	SPHX Total Revenue	34,876	34,876	34,876	34,876	34,876	34,876	34,876	34,876	34,876	34,876	34,876	34,876
20	<b>Total Wastewater Miscellaneous Revenue and Other Income</b>	<b>11,897,891</b>	<b>8,726,018</b>	<b>8,726,018</b>	<b>11,993,942</b>	<b>11,701,704</b>	<b>11,460,459</b>	<b>11,224,458</b>	<b>11,179,422</b>	<b>9,282,269</b>	<b>9,361,619</b>	<b>9,442,392</b>	<b>9,524,808</b>



Table A-1  
City of Scottsdale, AZ  
Wastewater Utility  
Actual, Adopted, Approved & Projected Operation and Maintenance Expense

Line No.	Fund	Description	Account Name	Char	CIN	Account Description	Div	Div Name	For the Fiscal Period Ending June 30											
									Inflation Costing	Actual		Adopted		Approved		Projected				
										2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
81	603	Wastewater Expense	3	52911		SCADA SOFTWARE MAINT & LIC	29	WATER RESOURCES	0	0	64,100	84,100	78,700	78,800	80,700	83,100	81,900	87,200	89,033	90,813
82	603	Wastewater Expense	3	52955		SOFTWARE MAINT & LIC (SLS ONLY)	29	WATER RESOURCES	3	10,260	13,318	15,338	18,103	18,600	19,000	19,000	19,000	19,708	20,587	20,999
83	603	Wastewater Expense	3	52950		MAINT - MACHINERY, EQUIP & AUTOS	29	WATER RESOURCES	3	353,603	438,000	438,000	475,000	438,400	444,500	454,300	464,400	473,688	483,182	492,825
84	603	Wastewater Expense	3	52964		SEWER LATERAL MAINT & REPAIRS	29	WATER RESOURCES	3	94,842	20,000	25,000	95,000	97,300	99,300	101,900	103,800	105,876	107,994	110,153
85	603	Wastewater Expense	4	52960		UNIFORM CLEANING	29	WATER RESOURCES	4	11,206	10,000	18,000	12,000	11,300	11,500	12,800	13,100	13,362	13,629	13,902
86	603	Wastewater Expense	3	52990		SMCS MAINTENANCE AND REPAIR	23	CITY TREASURER	0	0	0	0	0	0	0	0	0	0	0	0
87	603	Wastewater Expense	8	54330		IGUARANTEE & BOND PREMIUMS	29	WATER RESOURCES	8	48	0	0	0	0	0	0	0	0	0	0
88	603	Wastewater Expense	1	52645		PROPERTY, LIABILITY & WORKERS COMP	29	WATER RESOURCES	1	173,137	265,961	265,961	211,416	216,900	221,100	225,900	231,200	235,824	240,540	245,311
89	603	Wastewater Expense	8	52681		PROPERTY DAMAGE NON-TOLLEED VEHICLE	29	WATER RESOURCES	8	514	0	0	0	0	0	0	0	0	0	0
90	603	Wastewater Expense	8	52960		MACHINERY & EQUIPMENT RENT	29	WATER RESOURCES	8	44,513	22,500	22,500	40,000	40,800	41,800	43,700	43,700	44,574	45,445	
91	603	Wastewater Expense	8	52960		OTHER RENTALS	29	WATER RESOURCES	8	237	0	0	0	0	0	0	0	0	0	0
92	603	Wastewater Expense	8	52650		CAR ALLOWANCE/LEASE REIMBURSEMENT	29	WATER RESOURCES	8	0	0	0	0	0	0	0	0	0	0	0
93	603	Wastewater Expense	3	52910		FLEET MAINTENANCE & REPAIRS (MMR)	29	WATER RESOURCES	3	0	0	0	0	0	0	0	0	0	0	0
94	603	Wastewater Expense	3	52971		FLEET - MAINTENANCE & REPAIRS (MMR)	29	WATER RESOURCES	3	92,215	77,742	87,426	0	0	0	0	0	0	0	0
95	603	Wastewater Expense	8	52672		FLEET - FUEL	29	WATER RESOURCES	8	36,836	38,451	29,998	0	0	0	0	0	0	0	0
96	603	Wastewater Expense	8	52675		FLEET - REPLACEMENT	29	WATER RESOURCES	8	133,220	137,312	137,312	147,594	156,100	205,200	214,600	224,700	228,184	233,778	
97	603	Wastewater Utilities	8	52711		ELECTRIC	29	WATER RESOURCES	8	4,002,388	4,012,300	4,012,300	4,250,000	4,177,900	4,308,900	4,444,100	4,476,300	5,242,023	5,635,174	
98	603	Wastewater Utilities	8	52712		GAS	29	WATER RESOURCES	8	19,889	25,500	25,500	23,200	23,000	23,400	24,100	24,600	25,000	25,500	
99	603	Wastewater Utilities	8	52713		WATER	29	WATER RESOURCES	8	59,989	87,000	87,000	92,000	98,100	96,200	98,500	102,510	104,500		
100	603	Wastewater Utilities	8	52714		SEWER	29	WATER RESOURCES	8	181,537	155,400	155,400	173,600	177,500	181,500	185,500	189,700	193,484		
101	603	Wastewater Utilities	8	52715		SOLID WASTE	29	WATER RESOURCES	8	21,550	20,500	20,500	20,000	20,400	20,900	21,300	21,900	22,300		
102	603	Wastewater Expense	8	52718		RECYCLING SERVICES	29	WATER RESOURCES	8	0	0	0	0	0	0	0	0	0	0	
103	603	Wastewater Expense	8	52800		SUBSCRIPTIONS & MEMBERSHIPS	29	WATER RESOURCES	8	5,825	4,750	4,750	4,000	4,100	4,200	4,400	4,500	4,586		
104	603	Wastewater Expense	8	52805		CITY MEMBERSHIPS	29	WATER RESOURCES	8	29,028	24,500	24,500	34,500	31,300	36,100	36,900	37,700	38,554		
105	603	Wastewater Expense	8	52820		DAMAGE CLAIMS	29	WATER RESOURCES	8	0	0	0	0	0	0	0	0	0	0	
106	603	Wastewater Expense	8	52824		INTERGOVERNMENTAL PAYMENTS	29	WATER RESOURCES	8	0	0	0	0	0	0	0	0	0	0	
107	603	Wastewater Expense	8	52829		PUBLIC EDUCATION OUTREACH	29	WATER RESOURCES	8	0	0	0	0	0	0	0	0	0	0	
108	603	Wastewater Expense	8	52831		PAPERLESS BILL INCENTIVE	29	WATER RESOURCES	8	98,538	80,000	80,000	80,000	80,800	81,800	83,700	83,700	84,574		
109	603	Wastewater Expense	8	52850		MULTI-CITY WATER RECLAMATION PLANT	29	WATER RESOURCES	8	4,231,817	4,350,000	4,350,000	4,350,000	4,448,700	4,548,200	4,648,400	4,733,300	4,848,570		
110	603	Wastewater Expense	8	52870		LANDFILL CONTRACT	29	WATER RESOURCES	8	1,113	1,000	1,000	2,000	2,000	2,000	2,200	2,244	2,288		
111	603	Wastewater Expense	8	52875		LICENSES & PERMITS	29	WATER RESOURCES	8	11,175	13,000	13,000	13,000	13,300	13,800	14,300	14,484	14,774		
112	603	Wastewater Expense	8	52881		SPECIAL COST WATER CONSERVATION	29	WATER RESOURCES	8	0	0	0	0	0	0	0	0	0		
113	603	Wastewater Expense	2	52890		OTHER CONTRACTUAL SERVICES	29	WATER RESOURCES	2	45,252	43,000	43,000	43,000	44,000	45,000	46,000	47,000	48,000		
114	603	Wastewater Expense	8	52990		W/O CREDIT CONTRACTUAL	23	CITY TREASURER	8	21,857	308,273	308,273	288,776	293,300	302,000	308,700	315,500	321,810		
115	603	Wastewater Expense	8	52993		FLEET EXPY ACCIDENT CHARGE BACKS	29	WATER RESOURCES	8	0	0	0	0	0	0	0	0	0		
116	603	Wastewater Expense	8	53000		Other Division Expense	29	WATER RESOURCES	8	0	0	0	0	0	0	0	0	0		
<b>Account Group 53</b>																				
117	603	Wastewater Expense	4	53020		OFFICE SUPPLIES	29	WATER RESOURCES	4	19,027	21,000	21,000	20,000	20,500	21,000	21,300	21,800	22,246		
118	603	Wastewater Expense	4	53024		RADIOS AND ASSOCIATED EQUIPMENT	29	WATER RESOURCES	4	14,066	34,450	34,450	21,000	21,400	21,900	22,400	22,900			
119	603	Wastewater Expense	4	53025		FURNITURE & MINOR EQUIPMENT	29	WATER RESOURCES	4	13,086	11,300	11,300	5,000	5,100	5,300	5,500	5,610			
120	603	Wastewater Expense	4	53025		FURNITURE & MINOR EQUIPMENT	23	CITY TREASURER	4	8,702	0	0	0	0	0	0	0	0		
121	603	Wastewater Expense	4	53030		EDUCATION & RECREATION SUPPLIES	29	WATER RESOURCES	4	899	2,000	2,000	2,000	2,000	2,100	2,200	2,300			
122	603	Wastewater Expense	4	53040		CHEMICALS & LABORATORY SUPPLIES	29	WATER RESOURCES	4	91,863	94,000	94,000	89,000	91,000	93,100	95,200	97,300			
123	603	Wastewater Expense	4	53041		TREATMENT CHEMICALS	29	WATER RESOURCES	4	0	0	0	0	0	0	0	0	0		
124	603	Wastewater Expense	4	53042		TREATMENT LAB SUPPLIES	29	WATER RESOURCES	4	44,731	45,000	45,000	45,000	45,000	45,000	45,000	45,000			
125	603	Wastewater Expense	4	53044		WATER SAFETY EQUIPMENT	29	WATER RESOURCES	4	18,258	45,000	45,000	58,000	59,300	60,600	62,000	63,400			
126	603	Wastewater Expense	4	53045		BUSINESS MFGS - REFRESHMENTS & SUPPLIES	29	WATER RESOURCES	4	1,320	2,250	2,250	1,700	1,800	1,900	2,000	2,100			
127	603	Wastewater Expense	4	53050		CLOTHING & PERSONAL PROTECT EQUIP	29	WATER RESOURCES	4	26,795	25,000	25,000	19,700	20,100	20,600	21,100	21,500			
128	603	Wastewater Expense	4	53061		TREATMENT CHEMICAL (NON-TAXABLE)	29	WATER RESOURCES	4	1,027,179	1,125,000	1,125,000	1,100,000	1,134,800	1,199,800	1,272,300	1,352,244			
129	603	Wastewater Expense	4	53062		CLEANING CHEMICAL (TAXABLE)	29	WATER RESOURCES	4	313,895	453,000	453,000	355,000	363,000	371,200	379,400	387,600			
130	603	Wastewater Expense	4	53065		SAFETY & INCENTIVE AWARD	29	WATER RESOURCES	4	2,430	3,100	3,100	2,000	2,100	2,200	2,300	2,400			
131	603	Wastewater Expense	4	53060		PHOTOGRAPHIC & DUPLICATING SUPPLIES	29	WATER RESOURCES	4	4,068	7,500	7,500	7,500	7,700	7,900	8,100	8,200			
132	603	Wastewater Expense	4	53070		PURCHASED WATER	29	WATER RESOURCES	4	0	0	0	0	0	0	0	0			
133	603	Wastewater Expense	4	53080		OTHER OPERATING SUPPLIES	29	WATER RESOURCES	4	21,260	102,700	102,700	52,500	53,800	54,800	56,200	57,400			
134	603	Wastewater Expense	4	53700		GAS OIL & LUBRICANTS	29	WATER RESOURCES	4	7,715	8,000	8,000	8,500	8,700	8,900	9,100	9,300			
135	603	Wastewater Expense	4	53720		SMALL TOOLS & EQUIPMENT	29	WATER RESOURCES	4	67,027	88,600	88,600	54,500	55,800	57,000	58,300	59,400			
136	603	Wastewater Expense	4	53730		PAINT	29	WATER RESOURCES	4	291	0	0	0	0	0	0	0			
137	603	Wastewater Expense	4	53750		SERVICE INTERRUPTION MATERIALS	29	WATER RESOURCES	4	1,261	0	0	0	0	0	0	0			
138	603	Wastewater Expense	4	53770		MTRS TO MAINT & REPAIR BLDG & IMPR	29	WATER RESOURCES	4	0	0	0	0	0	0	0	0			
139	603	Wastewater Expense	4	53772		REPLACEMENT OR REPAIR	29	WATER RESOURCES	4	4,746	0	0	0	0	0	0	0			
140	603	Wastewater Expense	4	53780		OTHER MAINTENANCE & REPAIR SUPPLY	29	WATER RESOURCES	4	1,442	0	0	0	0	0	0	0			
141	603	Wastewater Expense	4	53790		MAT TO MAINT & REPAIR MAJOR EQUIP	29	WATER RESOURCES	4	0	0	0	0	0	0	0	0			
142	603	Wastewater Expense	4	53793		MAT TO MAINT AND REPAIR ELIC	29	WATER RESOURCES	4	511,983	414,000	414,000	252,000	258,900	264,100	270,300	276,500			
143	603	Wastewater Expense																		

Table A-5  
 City of Scottsdale, AZ  
 Wastewater Utility  
 Actual, Adopted, Approved & Projected Operation and Maintenance Expenses

Line No.	Fund	Fund Description	Account Name	Char	Obj	Account Description	Dir	Dir Name	For the Fiscal Period Ending June 30												
									Information Coding	Actual	Adopted	Approved	Projected								
										2019	2020	2019	2021	2022	2023	2024	2025	2026	2027	2028	2029
									\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$		
158	603	Wastewater Transfer Out	8		57790	OPERATING TRANSFER OUT	29	WATER RESOURCES	8	0	0	0	0	0	0	0	0	0	0	0	0
159	603	Wastewater Transfer Out	8		57790	OPERATING TRANSFER OUT	29	WATER RESOURCES	8	0	0	0	0	0	0	0	0	0	0	0	0
160	603	Wastewater Franchise	8		57791	TRANSFERS OUT - FRANCHISE FEES	29	WATER RESOURCES	8	2,203,597	2,061,835	2,061,835	2,328,301	2,395,300	2,454,200	2,515,200	2,608,200	2,764,692	2,930,374	3,106,406	3,282,793
161	603	Wastewater #N/A	8		57792	TRANS OUT - IN-LIEU PROP TAX	29	WATER RESOURCES	8	0	0	0	0	0	0	0	0	0	0	0	0
162	603	Wastewater #N/A	8		57800	POST EMPLOY HEALTH INS BEN	29	WATER RESOURCES	8	0	0	0	0	0	0	0	0	0	0	0	0
<b>Account Group Additional Group</b>																					
163	603	Wastewater Citywide Pay D	0		51201	CITYWIDE PAY PROGRAM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	603	Wastewater Savings Plan D	0		51203	VACANCY SAVINGS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	603	Wastewater Leave Accum D	0		51231	VACATION PAYOFF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
166	603	Wastewater Transfer Out D	0		57782	TRANSFER OUT DEBT SVC MPC BONDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
167	603	Wastewater Transfer Out D	0		57795	TRANSFER OUT - CP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
168	603	Wastewater DTP Technology D	0		57799	TRANSFERS OUT-CP TECHNOLOGY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
169	603	Wastewater Franchise	0		57791	TRANSFERS OUT - FRANCHISE FEES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	603	Wastewater Transfer In C D	0		49982	TRANSFER IN - DEBT SVC MPC BONDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	603	Wastewater #N/A	0		0	Total Water Resources Expenses (Bufile)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172	<b>Total</b>									25,987,240	26,634,150	26,488,412	26,836,396	27,205,200	28,161,700	28,911,530	29,618,700	30,605,728	31,618,540	32,674,998	33,793,040
<b>Total (without TRANSFERS OUT - FRANCHISE FEES (#57791))</b>									23,181,643	24,572,315	24,427,577	24,508,095	25,329,900	25,827,500	26,379,300	27,030,500	27,841,027	28,687,988	29,573,190	30,500,348	

Table A.6  
City of Scottsdale, AZ  
Wastewater Utility  
Wastewater Capital Improvement Plan (Initial)

Line No.	Inflation (%)	Approved 2020	For the Fiscal Period Ending June 30										2029	2030			
			2021	2022	2023	2024	2025	2026	2027	2028	2029						
1	Y	0	78,000	81,120	84,365	87,779	91,249	94,899	98,695	102,643	106,748	110,918	115,154	119,466	123,854	128,319	132,862
2	Y	0	728,000	540,800	562,432	584,929	608,376	632,660	657,766	682,705	707,488	732,126	756,620	780,979	805,203	829,292	853,246
3	Y	0	50,000	37,856	39,370	40,945	42,583	44,286	46,058	47,899	49,711	51,594	53,549	55,577	57,679	59,856	62,100
4	Y	0	64,000	540,800	562,432	584,929	608,376	632,660	657,766	682,705	707,488	732,126	756,620	780,979	805,203	829,292	853,246
5	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Y	0	97,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Y	100,000	104,000	108,160	112,508	117,048	121,789	126,732	131,878	137,229	142,786	148,549	154,520	160,700	167,090	173,692	180,508
8	Y	0	31,200	32,448	33,748	35,096	36,500	37,960	39,478	41,057	42,699	44,408	46,186	48,035	50,000	52,000	54,000
9	Y	0	52,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	Y	0	65,400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Y	0	35,150	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Y	0	86,538	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Y	0	93,600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Y	0	23,880	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Y	0	10,400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Y	0	20,800	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Y	0	1,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Y	0	21,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	Y	700,000	1,040,000	1,081,600	1,124,864	1,169,888	1,216,672	1,265,216	1,315,520	1,367,584	1,422,400	1,479,968	1,540,288	1,603,360	1,669,184	1,737,760	
21	Y	0	249,600	345,030	113,924	116,986	328,496	277,757	921,152	957,798	996,318	1,036,714	1,079,086	1,123,434	1,168,758	1,216,058	
22	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Y	50,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Y	50,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Y	50,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Y	50,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Y	50,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	Y	0	17,472	24,152	7,835	28,662	64,610	29,229	13,817	14,370	14,945	15,545	16,160	16,790	17,435	18,095	
29	Y	100,000	52,000	108,160	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	Y	0	182,200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	Y	1,026,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	Y	83,000	41,600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42	Y	75,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	Y	2,400,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	Y	20,000	86,400	96,432	99,432	102,416	105,376	108,312	111,224	114,112	116,976	119,816	122,632	125,424	128,192	130,936	
45	Y	15,000	26,000	27,040	28,120	29,240	30,400	31,600	32,840	34,120	35,440	36,800	38,200	39,640	41,120	42,640	
46	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	Y	0	540,800	562,432	584,929	608,376	632,660	657,766	682,705	707,488	732,126	756,620	780,979	805,203	829,292	853,246	
49	Y	50,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	Y	331,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Y	0	507,072	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	Y	0	0	1,274,563	0	0	0	0	0	0	0	0	0	0	0	0	0
55	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	Y	0	235,149	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	Y	440,000	1,248,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table A-6  
 City of Scottsdale, AZ  
 Wastewater Utility  
 Wastewater Capital Improvement Plan (Inflated)

Line No.	Description	Inflation (Y/N)	For the Fiscal Period Ending June 30										2020 - 2029 Total	
			Approved 2020	Projected 2025					Projected 2025					
			2021	2022	2023	2024	2025	2026	2027	2028	2029			
64	Wastewater System Improvements	Y	0	83,200	97,344	101,238	87,739	91,249	101,226	118,434	121,171	106,748	910,349	
65	Wastewater System Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
66	Wastewater System Improvements	Y	100,000	104,000	0	0	0	0	0	0	0	0	204,000	
67	Wastewater System Improvements	Y	0	1,560,000	1,622,400	1,124,864	0	0	0	0	0	0	4,307,264	
68	Wastewater System Improvements	Y	0	260,000	270,400	0	0	0	0	0	0	0	530,400	
69	Wastewater System Improvements	Y	0	0	0	0	0	0	506,128	0	0	0	506,128	
70	Wastewater System Improvements	Y	0	156,000	162,240	0	0	0	0	0	0	0	318,240	
71	Wastewater System Improvements	Y	0	0	0	0	105,287	304,183	0	0	0	0	409,470	
72	Wastewater System Improvements	Y	0	0	0	0	0	851,657	0	0	0	0	851,657	
73	Wastewater System Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
74	Wastewater System Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
75	Wastewater System Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
76	Wastewater System Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
77	Wastewater System Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
78	Wastewater System Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
79	Wastewater System Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
80	Wastewater System Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
81	Wastewater System Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
82	Wastewater System Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
83	Wastewater System Improvements	Y	300,000	312,000	324,480	0	0	0	316,330	328,983	342,142	355,828	2,729,763	
84	Wastewater System Improvements	Y	70,000	0	0	0	0	0	0	0	0	0	70,000	
85	Wastewater System Improvements	Y	0	0	0	1,124,864	1,169,859	0	0	0	0	0	2,294,723	
86	Wastewater System Improvements	Y	0	520,000	0	0	0	0	0	0	0	0	520,000	
87	Wastewater System Improvements	Y	0	104,000	0	0	0	0	0	0	0	0	104,000	
88	Wastewater System Improvements	Y	0	52,000	0	0	0	0	0	0	0	0	52,000	
89	Wastewater System Improvements	Y	500,000	0	0	0	0	0	0	0	0	0	500,000	
90	Wastewater System Improvements	Y	80,000	0	0	0	0	0	0	0	0	0	80,000	
91	Wastewater System Improvements	Y	0	312,000	0	0	0	0	0	0	0	0	312,000	
92	Wastewater System Improvements	Y	320,000	728,000	1,081,600	1,124,864	1,169,859	1,216,653	1,265,319	1,315,912	1,368,569	1,423,312	11,014,107	
93	Wastewater System Improvements	Y	200,000	492,073	480,077	345,006	333,756	251,317	251,545	225,682	234,710	242,603	3,056,770	
94	Wastewater Technology Master Plan	Y	0	0	0	0	0	0	0	0	0	0	0	
95	Sanitary Sewer Lateral Rehabilitation	Y	60,000	52,000	81,985	56,243	60,462	60,833	82,246	65,797	88,428	71,166	659,159	
96	Sanitary Sewer Lateral Rehabilitation	Y	4,200	3,640	5,739	3,937	4,232	36,349	5,757	4,606	4,790	4,982	78,232	
97	Advance Water Treatment Plant Membranes - Wastewater	Y	0	566,592	589,256	612,826	637,339	662,833	0	0	957,998	996,318	5,023,162	
98	Advance Water Treatment Plant Membranes - Wastewater	Y	0	322,400	335,296	0	266,494	382,759	398,069	299,789	0	494,174	2,498,981	
99	Advance Water Treatment Plant Membranes - Wastewater	Y	0	0	0	0	0	2,379	0	741,501	386,894	0	1,132,774	
100	Master Plan Water Reclamation	Y	0	0	86,528	89,989	0	0	0	118,434	109,486	0	404,437	
101	Master Plan Water Reclamation	Y	845,000	104,000	0	0	0	233,164	470,699	0	0	0	1,150,863	
102	Master Plan Water Reclamation	Y	0	26,000	29,203	30,371	31,586	32,549	31,633	26,319	27,371	28,466	263,499	
103	Wastewater Impact Fees	Y	1,000	1,040	1,082	1,125	1,104	1,217	1,265	1,316	1,369	1,423	11,941	
104	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
105	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
106	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
107	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
108	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
109	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
110	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
111	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
112	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
113	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
114	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
115	Wastewater Treatment Facility Improvements	Y	75,000	0	0	0	0	0	0	0	0	0	75,000	
116	Wastewater Treatment Facility Improvements	Y	0	0	0	0	1,052,873	608,326	0	0	0	0	1,661,199	
117	Wastewater Treatment Facility Improvements	Y	354,000	728,000	0	0	0	0	0	0	0	0	1,082,000	
118	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
119	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
120	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
121	Wastewater Treatment Facility Improvements	Y	0	26,000	27,040	28,122	29,246	0	0	0	0	0	110,408	
122	Wastewater Treatment Facility Improvements	Y	0	26,000	27,040	28,122	29,246	0	0	0	0	0	110,408	
123	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	304,163	0	0	0	0	304,163	
124	Wastewater Treatment Facility Improvements	Y	600,000	0	0	0	0	0	0	0	0	0	600,000	
125	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
126	Wastewater Treatment Facility Improvements	Y	1,154,000	0	0	0	0	0	0	0	0	0	1,154,000	
127	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	
128	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	

Table A-6  
 City of Scottsdale, AZ  
 Wastewater Utility  
 Wastewater Capital Improvement Plan (Inflated)

Line No.	Description	Inflation (Y/N)	For the Fiscal Period Ending June 30										2020 - 2029 Total	
			Approved 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
129	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	608,326	0	0	0	0	0	608,326
130	Wastewater Treatment Facility Improvements	Y	0	520,000	540,800	562,432	0	0	0	0	0	0	0	1,623,232
131	Wastewater Treatment Facility Improvements	Y	0	0	0	0	58,493	0	0	0	0	0	0	58,493
132	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	912,490	0	0	0	0	0	912,490
133	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	0	0	0	0	0	0
134	Wastewater Treatment Facility Improvements	Y	0	1,040,000	1,622,400	0	0	0	0	0	0	0	0	2,662,400
135	Wastewater Treatment Facility Improvements	Y	125,000	0	0	0	0	0	0	0	0	0	0	125,000
136	Wastewater Treatment Facility Improvements	Y	0	520,000	540,800	0	0	0	0	0	0	0	0	1,060,800
137	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	121,665	0	0	0	0	0	121,665
138	Wastewater Treatment Facility Improvements	Y	75,000	0	0	0	0	0	0	0	0	0	0	75,000
139	Wastewater Treatment Facility Improvements	Y	0	208,000	216,320	224,973	0	0	0	0	0	0	0	649,293
140	Wastewater Treatment Facility Improvements	Y	0	52,000	0	0	0	0	0	0	0	0	0	52,000
141	Wastewater Treatment Facility Improvements	Y	0	0	0	0	0	0	442,862	0	0	0	0	442,862
142	Wastewater Treatment Facility Improvements	Y	0	0	540,800	0	0	0	0	0	0	0	0	540,800
143	Wastewater Treatment Facility Improvements	Y	0	0	1,081,600	0	0	0	0	0	0	0	0	1,081,600
144	Wastewater Treatment Facility Improvements	Y	200,000	1,040,000	1,081,600	1,124,864	1,169,859	1,216,653	1,897,979	1,973,898	2,052,854	2,134,968	11,892,673	
145	Wastewater Treatment Facility Improvements	Y	120,000	291,200	392,488	137,796	163,780	250,488	163,859	138,173	143,700	149,448	1,555,931	
146	Downtown Stormwater Pump Station Rehabilitation	Y	109,980	0	0	0	0	0	0	0	0	0	0	109,980
147	Downtown Stormwater Pump Station Rehabilitation	Y	0	0	0	0	0	0	0	0	0	0	0	0
148	Downtown Stormwater Pump Station Rehabilitation	Y	0	0	0	0	0	0	0	0	0	0	0	0
149	Technology Master Plan Identified Wastewater Projects	Y	100,000	0	0	0	0	0	0	0	0	0	0	100,000
150	Technology Master Plan Identified Wastewater Projects	Y	0	0	0	0	0	0	0	0	0	0	0	0
151	Technology Master Plan Identified Wastewater Projects	Y	0	0	0	0	0	0	0	0	0	0	0	0
152	Technology Master Plan Identified Wastewater Projects	Y	0	0	0	0	0	0	0	0	0	0	0	0
153	Technology Master Plan Identified Wastewater Projects	Y	0	0	0	0	0	0	0	0	0	0	0	0
154	Technology Master Plan Identified Wastewater Projects	Y	75,000	0	0	0	0	0	0	0	0	0	0	75,000
155	Technology Master Plan Identified Wastewater Projects	Y	34,000	0	0	0	0	0	0	0	0	0	0	34,000
156	Technology Master Plan Identified Wastewater Projects	Y	97,980	156,000	0	0	0	0	0	0	0	0	0	253,980
157	Technology Master Plan Identified Wastewater Projects	Y	0	0	0	0	0	0	0	0	0	0	0	0
158	Technology Master Plan Identified Wastewater Projects	Y	0	35,360	0	0	0	0	0	0	0	0	0	35,360
159	Technology Master Plan Identified Wastewater Projects	Y	250,000	104,000	0	0	0	0	0	0	0	0	0	354,000
160	Technology Master Plan Identified Wastewater Projects	Y	0	0	27,040	0	0	0	0	0	0	0	0	27,040
161	Technology Master Plan Identified Wastewater Projects	Y	0	0	0	0	0	0	0	0	0	0	0	0
162	Technology Master Plan Identified Wastewater Projects	Y	0	0	0	0	0	0	0	0	0	0	0	0
163	Technology Master Plan Identified Wastewater Projects	Y	155,000	468,000	0	0	0	0	0	0	0	0	0	623,000
164	Technology Master Plan Identified Wastewater Projects	Y	125,000	0	0	0	0	0	0	0	0	0	0	125,000
165	Technology Master Plan Identified Wastewater Projects	Y	0	0	0	0	0	0	0	0	0	0	0	0
166	Technology Master Plan Identified Wastewater Projects	Y	94,000	208,000	216,320	224,973	58,493	238,998	253,064	263,186	273,714	284,662	2,095,410	
167	Technology Master Plan Identified Wastewater Projects	Y	65,169	67,995	17,035	15,748	4,095	41,503	17,714	18,423	19,160	19,926	286,767	
168	Dynamite Road Sewer Interceptor	Y	0	0	43,264	0	0	0	0	0	0	0	0	43,264
169	SROG Regional Wastewater Facilities	Y	3,457,103	4,458,400	4,351,277	6,329,610	9,610,388	21,084,595	21,587,608	11,139,363	8,505,657	5,105,419	95,627,419	
170	SROG Regional Wastewater Facilities	Y	50,000	0	0	0	0	0	0	0	0	0	0	50,000
171	SROG Regional Wastewater Facilities	Y	1,700,000	0	0	0	0	31,712	0	0	0	0	0	1,731,712
172	SROG Regional Wastewater Facilities	Y	0	0	0	0	0	0	0	0	0	0	0	0
173	Jomax Road Sewer Interceptor and Lift Station	Y	89,000	0	0	0	0	0	0	0	0	0	0	89,000
174	<b>Total Capital Improvement Program (Inc. Inflation)</b>		<b>16,525,432</b>	<b>22,356,477</b>	<b>22,193,214</b>	<b>17,352,864</b>	<b>20,589,790</b>	<b>33,650,957</b>	<b>32,038,700</b>	<b>20,943,581</b>	<b>18,948,249</b>	<b>15,920,810</b>	<b>220,520,075</b>	
	Annual Inflation		0.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
	Cumulative Inflation		0.0%	4.0%	8.2%	12.5%	17.0%	21.7%	26.5%	31.6%	36.9%	42.3%		
	<b>Repair and Replacement Reserve Target Calculation</b>													
	Fixed Assets as of June 30, 2019		\$641,347,171											
	Annual Capital Improvement Program, Inflated		16,525,432	22,356,477	22,193,214	17,352,864	20,589,790	33,650,957	32,038,700	20,943,581	18,948,249	15,920,810		
	Cumulative Capital Improvement Program		16,525,432	38,881,909	61,075,123	78,427,987	99,017,778	132,668,735	164,707,435	185,651,016	204,599,265	220,520,075		
	Cumulative Estimated Depreciation Expense @ 2%		130,509	777,618	1,271,502	1,948,560	2,900,356	4,253,375	6,094,149	8,491,020	11,501,985	15,410,401		
	<b>Capital Reserve Requirement</b>		<b>\$16,394,923</b>	<b>\$39,658,527</b>	<b>\$62,346,625</b>	<b>\$80,479,427</b>	<b>\$101,117,422</b>	<b>\$128,415,360</b>	<b>\$160,613,286</b>	<b>\$177,160,036</b>	<b>\$193,097,280</b>	<b>\$205,109,674</b>		

APPENDIX B:  
**COST OF SERVICE**

**Table B-1**  
**City of Scottsdale, AZ**  
**Wastewater Utility**  
**Test Year Revenue Requirement**

<b>Line No</b>	<b>Description</b>	<b>O&amp;M</b>	<b>Capital</b>	<b>Total</b>
1	Operation and Maintenance Expense	\$26,836,396		\$26,836,396
2	Debt Service		\$12,608,947	\$12,608,947
3	Capital		\$15,030,829	\$15,030,829
4	<b>Total Revenue Requirement</b>	<b>\$26,836,396</b>	<b>\$27,639,776</b>	<b>\$54,476,172</b>
	<b>Adjustments</b>			
5	Other Operating Income	(\$2,481,177)		(\$2,481,177)
6	Transfers In		(\$6,932,265)	(\$6,932,265)
7	Other Rate Revenue	(\$2,580,500)		(\$2,580,500)
8	Change in Fund Balance		(\$452,533)	(\$452,533)
9	<b>Total Adjustments</b>	<b>(\$5,061,677)</b>	<b>(\$7,384,798)</b>	<b>(\$12,446,475)</b>
10	<b>Net Revenue Requirement</b>	<b>\$21,774,719</b>	<b>\$20,254,978</b>	<b>\$42,029,697</b>

Table B-2  
City of Scottsdale, AZ  
Wastewater Utility  
Allocation of Assets to Functional Cost Components

Line No	Fixed Asset Allocation	Test Year			Flow	COD	TSS	Billing	Ready to		Total
		Original Cost	CIP	Total					Serve	Indirect	
1	Pumping	\$41,063,456	\$109,980	\$41,173,436	90%	5%	5%	0%	0%	0%	100%
2	Collection	\$378,117,508	\$510,203	\$378,627,710	90%	5%	5%	0%	0%	0%	100%
3	Treatment	\$216,924,806	\$36,460,654	\$253,385,460	45%	33%	23%	0%	0%	0%	100%
4	General	\$5,241,402	\$1,801,072	\$7,042,474	0%	0%	0%	0%	0%	100%	
5	<b>Total</b>	<b>\$641,347,171</b>	<b>\$38,881,909</b>	<b>\$680,229,080</b>	<b>\$491,844,488</b>	<b>\$103,340,332</b>	<b>\$78,001,786</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,042,474</b>	<b>\$680,229,080</b>
6	Percent of Total			100.0%	73.1%	15.4%	11.6%	0.0%	0.0%		
7	Total Indirect				\$5,145,382	\$1,081,084	\$816,008	\$0	\$0	(\$7,042,474)	\$0
8	<b>Total Reallocated</b>				<b>\$496,989,870</b>	<b>\$104,421,416</b>	<b>\$78,817,794</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
9	Percent of Total				73.1%	15.4%	11.6%	0.0%	0.0%	0.0%	

Table B-3  
City of Scottsdale, AZ  
Wastewater Utility  
Functional Allocations

Line No	Allocation Categories	Flow	COD	TSS	Billing	Serve	Indirect	Total
1	Fixed Assets	73.1%	15.4%	11.6%	0.0%	0.0%	0.0%	100.0%
2	Debt/Fixed Assets	73.1%	15.4%	11.6%	0.0%	0.0%	0.0%	100.0%
3	Capital/Fixed Assets	73.1%	15.4%	11.6%	0.0%	0.0%	0.0%	100.0%
4	Flow Only	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
5	COD Only	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
6	TSS Only	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
7	Customer Only	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
8	Conveyance	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
9	Cust/Flow/COD/TSS	38.2%	28.4%	24.3%	9.0%	0.0%	0.0%	100.0%
10	Flow/COD/TSS	34.1%	35.7%	30.2%	0.0%	0.0%	0.0%	100.0%
11	As All Other	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
12	Capital + Fixed Charge	38.5%	8.1%	6.1%	0.0%	47.3%	0.0%	100.0%

Table B-4  
City of Scottsdale, AZ  
Wastewater Utility  
O&M Expense Functional Allocation

Line No	Description	Test Year		Allocation	% Fixed Allocation	Flow	COD	TSS	Billing	Serve	Indirect	Total
		2021										
<b>Account Group 51</b>												
1	FULL-TIME WAGES	\$4,452,538		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
2	FULL-TIME WAGES			Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
3	PART-TIME WAGES	\$66,560		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
4	PART-TIME WAGES			Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
5	OTHER COMPENSATION	\$235,012		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
6	OTHER EMPLOYEE REIMBURSEMENTS	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
7	UNIFORM, CLOTHING & TOOL ALLOWANCES	\$2,330		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
8	ONE-TIME PAYMENT	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
9	MILEAGE REIMBURSEMENT/CAR ALLOWANCE	\$8,344		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
10	OVERTIME - HOLIDAY	\$34,621		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
11	OVERTIME - OTHER	\$314,376		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
12	EXCESS REGULAR WAGES	\$46,148		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
13	RETIREMENT	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
14	HEALTH/DENTAL	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
15	FICA	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
16	FRINGES - OTHER	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
17	VACATION TRADE PAYOFF	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
18	VACATION PAYOFF	\$21,402		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
19	MEDICAL LEAVE PAYOFF	\$37,264		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
20	ARIZONA STATE RETIREMENT SYSTEM	\$620,360		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
21	ARIZONA STATE RETIREMENT SYSTEM			Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
22	ARIZONA STATE RETIREMENT SYSTEM-ACR	\$7,422		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
23	ARIZONA STATE RETIREMENT SYSTEM-ACR			Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
24	HEALTH INSURANCE	\$675,972		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
25	DENTAL INSURANCE	\$25,440		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
26	LIFE INSURANCE	\$6,780		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
27	LONG TERM DISABILITY	\$156		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
28	UNEMPLOYMENT	\$835		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
29	MEDICARE EMPLOYER TAX (FHI)	\$71,780		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
30	MEDICARE EMPLOYER TAX (FHI)			Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
31	SOCIAL SECURITY EMPLOYER TAX (FICA)	\$304,513		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
32	SOCIAL SECURITY EMPLOYER TAX (FICA)			Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
33	VACANCY SAVINGS	(\$148,200)		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
34	VACANCY SAVINGS			Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
35	VACANCY SAVINGS-CONTRA	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
36	VACANCY SAVINGS-CONTRA			Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
37	CIP W/O CREDIT ALLOCATION	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
38	W/O CREDIT - PERSONNEL SERVICES	\$690,412		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
39	W/O CREDIT - PERSONNEL SERVICES			Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
40	CONTRACT WORKER SERVICES	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
41	PAY FOR PERFORMANCE	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
42	LUMP SUM ADJUSTMENT-BUDGET OFFICE	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
43	CITYWIDE PAY PROGRAM	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
44	COMPENSATION OTHER	\$1,012		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
45	COMPENSATION OTHER CATCH-UP	\$0		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%

Draft-For Discussion Purposes Only

Table B-4  
 City of Scottsdale, AZ  
 Wastewater Utility  
 O&M Expense Functional Allocation

Line No	Description	Test Year 2021	Allocation	% Fixed Allocation	Flow	COD	TSS	Billing	Serve	Indirect	Total
46	VACATION PAYOFF		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
47	MEDICAL LEAVE PAYOFF		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
48	VACANCY SAVINGS		Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
<b>Account Group 52</b>											
49	MANHOLE TREATMENT - OTHER	\$15,000	Flow Only	0.0%	100%	0%	0%	0%	0%	0%	100%
50	MANHOLE TREATMENT	\$140,000	Flow Only	0.0%	100%	0%	0%	0%	0%	0%	100%
51	CLOSED CAMERA TELEVISIONS-OTHER	\$250,000	Flow Only	0.0%	100%	0%	0%	0%	0%	0%	100%
52	CLOSED CAMERA TELEVISIONS	\$150,000	Flow Only	0.0%	100%	0%	0%	0%	0%	0%	100%
53	SEWER CLEANING - OTHER	\$40,000	TSS Only	0.0%	0%	0%	100%	0%	0%	0%	100%
54	STORMWATER CLEANING	\$0	Flow Only	0.0%	100%	0%	0%	0%	0%	0%	100%
55	SEWER ASSESSMENT SERVICES	\$0	Flow Only	0.0%	100%	0%	0%	0%	0%	0%	100%
56	CONSULTANTS	\$125,000	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
57	SECURITY	\$85,000	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
58	LABORATORY TESTING	\$16,000	COD Only	0.0%	0%	100%	0%	0%	0%	0%	100%
59	SEWER CLEANING	\$610,000	TSS Only	0.0%	0%	0%	100%	0%	0%	0%	100%
60	CUSTODIAL SERVICES	\$0	Customer Only	0.0%	0%	0%	0%	100%	0%	0%	100%
61	AUDITING AND ACCOUNTING	\$0	Customer Only	0.0%	0%	0%	0%	100%	0%	0%	100%
62	BANKING SERVICES	\$70,000	Customer Only	0.0%	0%	0%	0%	100%	0%	0%	100%
63	COLLECTION AGENCY FEES	\$0	Customer Only	0.0%	0%	0%	0%	100%	0%	0%	100%
64	OTHER PROFESSIONAL SERVICES	\$349,000	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
65	POSTAGE AND SHIPPING	\$4,100	Customer Only	0.0%	0%	0%	0%	100%	0%	0%	100%
66	TELEPHONE/BASE	\$20,410	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
67	CELLULAR PHONES	\$10,050	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
68	SPECIALTY LINES - COMMUNICATIONS	\$23,999	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
69	PC REPLACEMENT	\$18,810	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
70	RWC JT VENTURE ASSESSMENTS	\$43,250	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
71	OVERNIGHT TRAIN/BUSINESS CONF TRAVL	\$19,850	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
72	TUITION REIMBURSEMENT	\$0	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
73	TRAINING/BUSINESS CONFERENCE	\$47,800	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
74	SPONSORED TRAINING	\$58,000	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
75	PRINTING & GRAPHICS SERVICES	\$1,000	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
76	PRINTING & GRAPHICS SERVICES		As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
77	PHOTOCOPY CHARGES	\$11,978	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
78	LANDSCAPING	\$58,000	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
79	MAINTENANCE, OFF EQUIP & FURNITURE	\$0	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
80	SOFTWARE MAINT & LICENSING	\$123,670	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
81	SCADA SOFTWARE MAINT & LIC	\$76,750	Flow/COD/TSS	0.0%	34%	36%	30%	0%	0%	0%	100%
82	SOFTWARE MAINT & LIC (L.S. ONLY)	\$18,102	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
83	MAINT - MACHINERY, EQUIP & AUTOS	\$425,000	Fixed Assets	0.0%	73%	15%	12%	0%	0%	0%	100%
84	SEWER LATERAL MAINT & REPAIRS	\$95,000	Flow Only	0.0%	100%	0%	0%	0%	0%	0%	100%
85	UNIFORM CLEANING	\$12,000	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
86	MISC MAINTENANCE AND REPAIR	\$0	Fixed Assets	0.0%	73%	15%	12%	0%	0%	0%	100%
87	INSURANCE & BOND PREMIUMS	\$0	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
88	PROPERTY, LIABILITY & WORKERS COMP	\$211,416	Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
89	PROPERTY DAMAGE-NON-TOTALED VEHICLE	\$0	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%

Draft-For Discussion Purposes Only

Table B-4  
 City of Scottsdale, AZ  
 Wastewater Utility  
 O&M Expense Functional Allocation

Line No	Description	Test Year		Allocation	% Fixed Allocation	Flow	COD	TSS	Billing	Serve	Indirect	Total
		2021										
90	MACHINERY & EQUIPMENT RENT	\$40,000	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%
91	OTHER RENTALS	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
92	CAR ALLOWANCE/MILEAGE REIMBURSEMNT	\$0	Cust/Flow/COD/TSS		0.0%	38%	28%	24%	9%	0%	0%	100%
93	FLEET MAINTENANCE & OPERATIONS *O7/	\$0	Cust/Flow/COD/TSS		0.0%	38%	28%	24%	9%	0%	0%	100%
94	FLEET - MAINTENANCE & REPAIR (M&R)	\$0	Cust/Flow/COD/TSS		0.0%	38%	28%	24%	9%	0%	0%	100%
95	FLEET - FUEL	\$0	Cust/Flow/COD/TSS		0.0%	38%	28%	24%	9%	0%	0%	100%
96	FLEET - REPLACEMENT	\$187,596	Cust/Flow/COD/TSS		0.0%	38%	28%	24%	9%	0%	0%	100%
97	ELECTRIC	\$4,250,000	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%
98	GAS	\$22,500	Cust/Flow/COD/TSS		0.0%	38%	28%	24%	9%	0%	0%	100%
99	WATER	\$92,000	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
100	SEWER	\$173,600	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
101	SOLID WASTE	\$20,000	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
102	RECYCLING SERVICES	\$0	Cust/Flow/COD/TSS		0.0%	38%	28%	24%	9%	0%	0%	100%
103	SUBSCRIPTIONS & MEMBERSHIPS	\$4,000	Cust/Flow/COD/TSS		0.0%	38%	28%	24%	9%	0%	0%	100%
104	CITY MEMBERSHIPS	\$34,500	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
105	DAMAGE CLAIMS	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
106	INTERGOVERNMENTAL PAYMENTS	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
107	PUBLIC EDUCATION OUTREACH	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
108	PAPERLESS BILL INCENTIVE	\$40,000	Customer Only		0.0%	0%	0%	0%	100%	0%	0%	100%
109	MULTI-CITY WATER RECLAMATION PLANT	\$4,350,000	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%
110	LANDFILL CONTRACT	\$2,000	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%
111	LICENSES & PERMITS	\$13,000	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
112	SPECIAL CONT WATER CONSERVATION	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
113	OTHER CONTRACTUAL SERVICES	\$43,000	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
114	W/O CREDIT CONTRACTUAL	\$288,756	Customer Only		0.0%	0%	0%	0%	100%	0%	0%	100%
115	FLEET DEPT ACCIDENT CHARGE BACKS	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
116	Offset Division Expenses	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
<b>Account Group 53</b>												
117	OFFICE SUPPLIES	\$20,000	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
118	RADIOS AND ASSOCIATED EQUIPMENT	\$21,000	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
119	FURNITURE & MINOR EQUIPMENT	\$5,000	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
120	FURNITURE & MINOR EQUIPMENT	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
121	EDUCATION & RECREATION SUPPLIES	\$2,000	Customer Only		0.0%	0%	0%	0%	100%	0%	0%	100%
122	CHEMICALS & LABORATORY SUPPLIES	\$89,000	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%
123	TREATMENT CHEMICALS	\$0	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%
124	TREATMENT LAB SUPPLIES	\$45,000	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%
125	WATER SAFETY EQUIPMENT	\$58,000	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%
126	BUSINESS MTGS - REFRESHMENTS & SUPPLIES	\$1,750	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
127	CLOTHING & PERSONAL PROTECT EQUIP	\$19,700	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
128	TREATMENT CHEMICAL(NON-TAXABLE)	\$1,100,000	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%
129	CLEANING CHEMICAL(TAXABLE)	\$355,000	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%
130	SAFETY & INCENTIVE AWARD	\$2,000	Customer Only		0.0%	0%	0%	0%	100%	0%	0%	100%
131	PHOTOGRAPHIC & DUPLICATING SUPPLIES	\$7,500	Customer Only		0.0%	0%	0%	0%	100%	0%	0%	100%
132	PURCHASED WATER	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
133	OTHER OPERATING SUPPLIES	\$52,500	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%

Draft- For Discussion Purposes Only

Table B-4  
City of Scottsdale, AZ  
Wastewater Utility  
O&M Expense Functional Allocation

Line No	Description	Test Year		Allocation	% Fixed Allocation	Flow	COD	TSS	Billing	Serve	Indirect	Total
		2021										
134	GAS OIL & LUBRICANTS	\$8,500	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%
135	SMALL TOOLS & EQUIPMENT	\$54,500	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%
136	PAINT	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
137	SERVICE INTERRUPTION MATERIALS	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
138	MTRS TO MAINT & REPAIR BLDG & IMPR	\$0	Fixed Assets		0.0%	73%	15%	12%	0%	0%	0%	100%
139	REPLACEMENT OR REPAIR	\$0	Flow/COD/TSS		0.0%	34%	36%	30%	0%	0%	0%	100%
140	OTHER MAINTENANCE & REPAIR SUPPLY	\$0	Fixed Assets		0.0%	73%	15%	12%	0%	0%	0%	100%
141	MAT TO MAINT & REPAIR MACH, EQUIP	\$0	Fixed Assets		0.0%	73%	15%	12%	0%	0%	0%	100%
142	MAT TO MAINT AND REPAIR ELEC	\$352,000	Fixed Assets		0.0%	73%	15%	12%	0%	0%	0%	100%
143	MAT TO MAINT AND REPAIR MECH SYS	\$660,500	Fixed Assets		0.0%	73%	15%	12%	0%	0%	0%	100%
144	MAINT & REPAIR OPER CNTRL SYS	\$14,000	Fixed Assets		0.0%	73%	15%	12%	0%	0%	0%	100%
145	COMMODITY W/O CREDITS	\$5,341	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
146	Offset Division Expense	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
<b>Account Group 54</b>												
147	CONTRACTUAL CONSTRUCTION-OTHER	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
148	OFFICE EQUIPMENT & FURNITURE	\$37,500	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
149	COMPUTER EQUIPMENT	\$40,000	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
150	OTHER MACHINERY & EQUIPMENT	\$20,000	Capital + Fixed Charge		0.0%	38%	8%	6%	0%	47%	0%	100%
151	MOTOR VEHICLES	\$20,000	Cust/Flow/COD/TSS		0.0%	38%	28%	24%	9%	0%	0%	100%
152	CAPITAL OUTLAYS WORK ORDER CREDITS	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
153	Offset Division Exp	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
<b>Account Group 57</b>												
154	COMPENSATED ABSENCES - VACATION	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
155	COMPENSATED ABSENCES-MED LEAVE	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
156	ACCRUED PAYROLL	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
157	CITYWIDE INDIRECT COST ALLOCATION	\$1,352,090	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
158	OPERATING TRANSFER OUT	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
159	OPERATING TRANSFER OUT	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
160	TRANSFERS OUT - FRANCHISE FEES	\$2,328,301	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
161	TRANS OUT - IN-LIEU PROP TAX	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
162	POST EMPLOY HEALTH INS BEN	\$0	As All Other		0.0%	0%	0%	0%	0%	0%	100%	100%
163	Total O&M Expenses w/o Franchise Fees	\$24,508,095										
164	Total O&M Expenses	\$26,836,396				\$8,323,525	\$6,231,497	\$5,909,217	\$1,129,990	\$9,467	\$5,232,701	
165	Reallocation of "As All Other"			0.0%		2,016,068	1,509,351	1,431,291	273,698	2,293	(5,232,701)	
166	Total Allocated O&M Expense	\$26,836,396				\$10,339,593	\$7,740,848	\$7,340,507	\$1,403,688	\$11,760	\$0	
<b>167 O&amp;M Allocation Percentage</b>					100.0%	38.5%	28.8%	27.4%	5.2%	0.0%	0.0%	

Draft-For Discussion Purposes Only

Table B-5  
 City of Scottsdale, AZ  
 Wastewater Utility  
 Miscellaneous and Other Revenue Functional Allocation

Line No	Account	Test Year 2021	Allocation	% Fixed Allocation	Flow	COD	TSS	Billing	Serve	Indirect	Total
		\$			%	%	%	%	%	%	%
1	Other Rate Revenue										
2	Sewer Late Charge	91,100	Customer Only	0.0%	0%	0%	0%	100%	0%	0%	100%
3	Sewer Account Initiation Fee	110,000	Customer Only	0.0%	0%	0%	0%	100%	0%	0%	100%
4	Sewer O&M User Charge	0	Customer Only	0.0%	0%	0%	0%	100%	0%	0%	100%
5	Sewer Other Charges	0	Customer Only	0.0%	0%	0%	0%	100%	0%	0%	100%
6	Out Of City Surcharge - Sewer	63,000	Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
7	Non-Hazardous Liquid Waste	2,316,400	Flow/COD/TSS	0.0%	34%	36%	30%	0%	0%	0%	100%
8	Sewer Service Charges	0	Customer Only	0.0%	0%	0%	0%	100%	0%	0%	100%
<b>Other Operating Income</b>											
9	Non-Potable Water Service Charges	1,050,000	Cust/Flow/COD/TSS	0.0%	38%	28%	24%	9%	0%	0%	100%
10	Interest Earnings	774,001	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
11	Indirect	210,500	Customer Only	0.0%	0%	0%	0%	100%	0%	0%	100%
12	Miscellaneous	75,800	Customer Only	0.0%	0%	0%	0%	100%	0%	0%	100%
				0.0%							
				0.0%							
				0.0%							
				0.0%							
				0.0%							
13	Stormwater	336,000	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
14	Property Rental	0	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
15	Contributions & Donations	0	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
<b>Other Miscellaneous Revenue</b>											
16	SPHX Total Revenue	34,876	As All Other	0.0%	0%	0%	0%	0%	0%	100%	100%
17	Operating Annual Surplus/(Deficiency)	0	As All Other	0.0%	0%	0%	0%	0%	0%	100%	0.0%
17	<b>Total Other Revenue and Income</b>	<b>5,061,677</b>									
<b>Total Allocated Other Revenue and Income</b>		<b>5,061,677</b>			<b>1,216,242</b>	<b>1,142,943</b>	<b>969,655</b>	<b>587,961</b>	<b>0</b>	<b>1,144,877</b>	
18	Percent Allocation				31.1%	29.2%	24.8%	15.0%	0.0%		
19	Reallocated As All Other Costs				355,506	334,081	283,429	171,860	0	(1,144,877)	
20	<b>Total Reallocated Other Revenue and Income</b>	<b>5,061,677</b>			<b>1,571,748</b>	<b>1,477,024</b>	<b>1,253,084</b>	<b>759,821</b>	<b>0</b>	<b>0</b>	
21	Percent Allocation for Cost of Service				31.1%	29.2%	24.8%	15.0%	0.0%		

Table B-6  
 City of Scottsdale, AZ  
 Wastewater Utility  
 Capital and Transfers Out Functional Allocations

Line No	Account	Test Year 2021	Allocation	Flow	COD	TSS	Billing	Ready to		Total
								Serve	Indirect	
		\$		%	%	%	%	%	%	%
1	Capital and All Other Uses									
2	Debt Service	12,608,947	Debt/Fixed Assets	100%	73%	15%	12%	0%	0%	100%
3	AWT	0	As All Other	0%	0%	0%	0%	0%	100%	100%
4	Transfers to the Capital Fund	15,000,000	Capital + Fixed Charge	100%	38%	8%	6%	0%	47%	100%
5	CIP Technology	30,829	Debt/Fixed Assets	100%	73%	15%	12%	0%	0%	100%
6	Debt Service Fund	0	As All Other	0%	0%	0%	0%	0%	100%	100%
Transfers In - Adjustments										
7	Transfer in AWT	(2,863,545)	Fixed Assets	100%	73%	15%	12%	0%	0%	100%
8	Transfer in RWDS	(900,000)	Fixed Assets	100%	73%	15%	12%	0%	0%	100%
9	Transfer in Operating	0	As All Other	0%	0%	0%	0%	0%	100%	100%
10	Transfer in Debt Service	(3,168,720)	Fixed Assets	100%	73%	15%	12%	0%	0%	100%
11	Total Capital and All Other Uses	20,707,511			9,941,937	2,088,878	1,576,695	0	7,100,000	0
12	Allocation %				73.1%	15.4%	11.6%	0.0%		
13	Change in Fund Balance	(452,533)	1.00		73.1%	15.4%	11.6%	0.0%	0.0%	0
					(330,630)	(69,468)	(52,435)			
14	Total Reallocated and All Other Uses	20,254,978	20,254,978		9,611,307	2,019,410	1,524,261	0	7,100,000	
					47.5%	10.0%	7.5%	0.0%	35.1%	
-----										
15	Revenue Requirement Summary									
16	Operation and Maintenance Expense	\$26,836,396	100%	0.75	\$10,339,593	\$7,740,848	\$7,340,507	\$1,403,688	\$11,760	\$0
17	Capital Expenditures	\$20,254,978	0%	0.5	\$9,611,307	\$2,019,410	\$1,524,261	\$0	\$7,100,000	\$0
18	Operating Revenue Adjustment	(\$5,061,677)	0%	0.5	(\$1,571,748)	(\$1,477,024)	(\$1,253,084)	(\$759,821)	\$0	\$0
19	Net Revenue Requirement	\$42,029,697			\$18,379,152	\$8,283,235	\$7,611,684	\$643,867	\$7,111,760	\$0

Table B-7  
City of Scottsdale, AZ  
Wastewater Rate Study  
Units of Service

Line No	Description	Flow 1,000 gal	Extra Strength			Customer		
			COD mg/l	lbs	TSS mg/l	lbs	Billing bills	Ready to Serve 5/8" Eq. Meter
<b>City and Black Mountain</b>								
1	Single-family Residential	7,748,380	450	29,079,671	225	14,539,836	874,397	1,049,887
2	Multi-family Residential	1,884,292	450	7,071,748	225	3,535,874	36,874	304,210
3	Commercial without dining	840,658	400	2,804,436	200	1,402,218	34,429	217,081
4	Commercial with dining	190,397	1,000	1,587,910	600	952,746	2,650	24,438
5	Hotels, motels without dining	79,065	620	408,829	120	79,128	639	8,934
6	Hotels, motels with dining	240,569	1,000	2,006,343	600	1,203,806	968	15,098
7	Carwashes	58,299	40	19,448	150	72,932	274	2,711
8	Commercial Laundry	6,580	900	49,391	340	18,659	131	670
9	Laundromats	6,175	300	15,450	110	5,665	47	562
10	Metal Platers	160	600	801	300	401	12	12
11	Restaurants; bakeries	357,651	2,200	6,562,178	600	1,789,685	5,425	44,369
12	Service station auto repair	46,901	360	140,817	280	109,524	1,746	9,548
13	Medical Institutes	197,256	500	822,558	100	164,512	1,367	18,645
14	Schools	56,871	260	123,319	100	47,430	1,019	16,556
15	Not Used	0	0	0	0	0	0	0
16	Black Mountain	90,156	387	290,941	158	118,978	12	317
17	<b>Total City and Black Mountain</b>	<b>11,803,410</b>	<b>518</b>	<b>50,983,839</b>	<b>244</b>	<b>24,041,392</b>	<b>959,990</b>	<b>1,713,037</b>
<b>Paradise Valley</b>								
18	Single-family Residential	149,447	450	560,876	225	280,438	16,865	17,021
19	Multi-family Residential	92,473	450	347,050	225	173,525	6,200	6,200
20	Commercial without dining	38,644	400	128,915	200	64,458	804	864
21	Commercial with dining	9,121	1,000	76,071	600	45,642	84	84
22	Hotels, motels without dining	23,539	620	121,716	120	23,558	156	156
23	Hotels, motels with dining	71,928	1,000	599,878	600	359,927	264	264
24	Carwashes	0	40	0	150	0	0	0
25	Commercial Laundry	6,419	900	48,178	340	18,201	12	12
26	Laundromats	2,119	300	5,302	110	1,944	12	12
27	Metal Platers	30	600	148	300	74	12	12
28	Restaurants; bakeries	10,534	2,200	193,270	600	52,710	60	60
29	Service station auto repair	1,823	360	5,473	280	4,257	60	60
30	Medical Institutes	3,126	500	13,035	100	2,607	48	48
31	Schools	9,932	260	21,537	100	8,283	12	12
32	Not Used	0	0	0	0	0	0	0
33	Not Used	0					0	0
34	<b>Total Paradise Valley and Black Mount</b>	<b>419,134</b>	<b>607</b>	<b>2,121,450</b>	<b>296</b>	<b>1,035,624</b>	<b>24,589</b>	<b>24,805</b>
35	<b>Total System Units of Service</b>	<b>12,222,544</b>		<b>53,105,289</b>		<b>25,077,016</b>	<b>984,579</b>	<b>1,737,842</b>

Draft-For Discussion Purposes Only

Table B-8  
City of Scottsdale, AZ  
Wastewater Utility  
Development of Unit Cost of Service

Line No.	Description	Total	Flow	Extra Strength		Customer	
				COD	TSS	Billing	Ready to Serve
Percentage Allocation							
<b>Revenue Requirement Summary-City and Paradise Valley</b>							
1	Operation and Maintenance Expense	\$ 26,836,396	\$10,339,593	\$7,740,848	\$7,340,507	\$1,403,688	\$11,760
2	Capital Expenditures	\$ 20,254,978	\$9,611,307	\$2,019,410	\$1,524,261	\$0	\$7,100,000
3	Operating Revenue Adjustment	\$ (5,061,677)	(\$1,571,748)	(\$1,477,024)	(\$1,253,084)	(\$759,821)	\$0
4	<b>Net Revenue Requirement</b>	<b>\$ 42,029,697</b>	<b>\$ 18,379,152</b>	<b>\$ 8,283,235</b>	<b>\$ 7,611,684</b>	<b>\$ 643,867</b>	<b>\$ 7,111,760</b>
<b>Units of Service</b>							
			<u>Flow</u>	<u>COD</u>	<u>TSS</u>	<u>Billing</u>	<u>Ready to Serve</u>
5	City Units of Service		11,803,410	50,983,839	24,041,392	959,990	1,713,037
6	Paradise Valley Units of Service		419,134	2,121,450	1,035,624	24,589	24,805
7	<b>Total City and Paradise Valley Units of Service</b>		<b>12,222,544</b>	<b>53,105,289</b>	<b>25,077,016</b>	<b>984,579</b>	<b>1,737,842</b>
<b>Unit Cost of Service - Inside City</b>							
8	O&M Allocation		\$0.842	\$0.145	\$0.291	\$1.420	\$0.007
9	Capital Allocation		\$0.782	\$0.038	\$0.060	\$0.000	\$4.077
10	Other Income Adjustments		(\$0.128)	(\$0.028)	(\$0.050)	(\$0.769)	\$0.000
11	<b>Total City Unit Cost of Service</b>		<b>\$1.496</b>	<b>\$0.155</b>	<b>\$0.302</b>	<b>\$0.652</b>	<b>\$4.084</b>
<b>Unit Cost of Service - Outside City and Paradise Valley</b>							
12	O&M Allocation		\$0.968	\$0.167	\$0.335	\$1.633	\$0.008
13	Capital Allocation		\$0.900	\$0.043	\$0.069	\$0.000	\$4.688
14	Other Income Adjustments		(\$0.147)	(\$0.032)	(\$0.057)	(\$0.884)	\$0.000
15	<b>Total Unit Cost of Service</b>		<b>\$1.720</b>	<b>\$0.178</b>	<b>\$0.347</b>	<b>\$0.749</b>	<b>\$4.696</b>

Draft-For Discussion Purposes Only

Table B-9  
City of Scottsdale, AZ  
Wastewater Utility  
Distribution of Costs to Customer Classes - Inside City

Line No.	Description	Total	Volume	Extra Strength		Customer	
				COD	TSS	Billing	Ready to Serve
<b>Unit Costs of Service - City</b>							
1	O&M Unit Cost		\$0.7137	\$0.1172	\$0.2413	\$0.6515	\$0.0068
2	Capital Unit Cost		\$0.7823	\$0.0378	\$0.0604	\$0.0000	\$4.0768
3	<b>Total Unit Cost of Service</b>		<b>\$1.4960</b>	<b>\$0.1550</b>	<b>\$0.3017</b>	<b>\$0.6515</b>	<b>\$4.0836</b>
<b>Single-family Residential</b>							
4	Units		7,748,380	29,079,671	14,539,836	874,397	1,049,887
5	O&M Cost of Service - \$	\$13,023,976	\$5,529,858	\$3,409,547	\$3,507,803	\$569,679	\$7,089
6	Capital Cost of Service - \$	\$12,319,554	\$6,061,828	\$1,099,212	\$878,336	\$0	\$4,280,178
<b>Multi-family Residential</b>							
7	Units		1,884,292	7,071,748	3,535,874	36,874	304,210
8	O&M Cost of Service - \$	\$3,053,055	\$1,344,780	\$829,152	\$853,046	\$24,024	\$2,054
9	Capital Cost of Service - \$	\$3,195,259	\$1,474,147	\$267,312	\$213,598	\$0	\$1,240,201
<b>Commercial without dining</b>							
10	Units		840,658	2,804,436	1,402,218	34,429	217,081
11	O&M Cost of Service - \$	\$1,290,964	\$599,960	\$328,816	\$338,292	\$22,431	\$1,466
12	Capital Cost of Service - \$	\$1,733,384	\$657,676	\$106,008	\$84,707	\$0	\$884,994
<b>Commercial with dining</b>							
13	Units		190,397	1,587,910	952,746	2,650	24,438
14	O&M Cost of Service - \$	\$553,808	\$135,882	\$186,180	\$229,854	\$1,727	\$165
15	Capital Cost of Service - \$	\$366,159	\$148,954	\$60,023	\$57,554	\$0	\$99,627
<b>Hotels, motels without dining</b>							
16	Units		79,065	408,829	79,128	639	8,934
17	O&M Cost of Service - \$	\$123,928	\$56,427	\$47,935	\$19,090	\$416	\$60
18	Capital Cost of Service - \$	\$118,512	\$61,855	\$15,454	\$4,780	\$0	\$36,423
<b>Hotels, motels with dining</b>							
19	Units		240,569	2,006,343	1,203,806	968	15,098
20	O&M Cost of Service - \$	\$698,086	\$171,689	\$235,241	\$290,424	\$631	\$102
21	Capital Cost of Service - \$	\$398,319	\$188,205	\$75,840	\$72,721	\$0	\$61,553
<b>Carwashes</b>							
22	Units		58,299	19,448	72,932	274	2,711
23	O&M Cost of Service - \$	\$61,679	\$41,607	\$2,280	\$17,595	\$179	\$18
24	Capital Cost of Service - \$	\$61,802	\$45,609	\$735	\$4,406	\$0	\$11,052
<b>Commercial Laundry</b>							
25	Units		6,580	49,391	18,659	131	670
26	O&M Cost of Service - \$	\$15,078	\$4,696	\$5,791	\$4,502	\$85	\$5

Table B-9  
City of Scottsdale, AZ  
Wastewater Utility  
Distribution of Costs to Customer Classes - Inside City

Line No.	Description	Total	Volume	Extra Strength		Customer	
				COD	TSS	Billing	Ready to Serve
27	Capital Cost of Service - \$	\$10,873	\$5,148	\$1,867	\$1,127	\$0	\$2,731
	<b>Laundromats</b>						
28	Units		6,175	15,450	5,665	47	562
29	O&M Cost of Service - \$	\$7,619	\$4,407	\$1,811	\$1,367	\$31	\$4
30	Capital Cost of Service - \$	\$8,048	\$4,831	\$584	\$342	\$0	\$2,291
	<b>Metal Platers</b>						
31	Units		160	801	401	12	12
32	O&M Cost of Service - \$	\$313	\$114	\$94	\$97	\$8	\$0
33	Capital Cost of Service - \$	\$229	\$125	\$30	\$24	\$0	\$49
	<b>Restaurants; bakeries</b>						
34	Units		357,651	6,562,178	1,789,685	5,425	44,369
35	O&M Cost of Service - \$	\$1,460,257	\$255,248	\$769,405	\$431,770	\$3,534	\$300
36	Capital Cost of Service - \$	\$816,850	\$279,803	\$248,051	\$108,113	\$0	\$180,883
	<b>Service station auto repair</b>						
37	Units		46,901	140,817	109,524	1,746	9,548
38	O&M Cost of Service - \$	\$77,608	\$33,473	\$16,511	\$26,423	\$1,138	\$64
39	Capital Cost of Service - \$	\$87,557	\$36,693	\$5,323	\$6,616	\$0	\$38,925
	<b>Medical Institutes</b>						
40	Units		197,256	822,558	164,512	1,367	18,645
41	O&M Cost of Service - \$	\$277,927	\$140,778	\$96,444	\$39,689	\$891	\$126
42	Capital Cost of Service - \$	\$271,363	\$154,320	\$31,093	\$9,938	\$0	\$76,012
	<b>Schools</b>						
43	Units		56,871	123,319	47,430	1,019	16,556
44	O&M Cost of Service - \$	\$67,265	\$40,588	\$14,459	\$11,443	\$664	\$112
45	Capital Cost of Service - \$	\$119,513	\$44,492	\$4,661	\$2,865	\$0	\$67,495
	<b>Not Used</b>						
	Units		0	0	0	0	0
	O&M Cost of Service - \$	\$0	\$0	\$0	\$0	\$0	\$0
	Capital Cost of Service - \$	\$0	\$0	\$0	\$0	\$0	\$0
	<b>Black Mountain Average Rate</b>						
46	Units		90,156	290,941	118,978	12	317
47	O&M Cost of Service - \$	\$127,168	\$64,342	\$34,112	\$28,704	\$8	\$2
48	Capital Cost of Service - \$	\$90,008	\$70,532	\$10,998	\$7,187	\$0	\$1,292
49	<b>Total Cost of Service</b>	<b>\$40,436,164</b>	<b>\$17,658,067</b>	<b>\$7,904,968</b>	<b>\$7,252,412</b>	<b>\$625,444</b>	<b>\$6,995,273</b>

Table B-10  
City of Scottsdale, AZ  
Wastewater Utility  
Distribution of Costs to Customer Classes - Outside City and Pleasant Valley

Line No.	Description	Total	Volume	Extra Strength		Customer	
				COD	TSS	Billing	Ready to Serve
<b>Unit Costs of Service</b>							
1	O&M Unit Cost		\$0.82	\$0.13	\$0.28	\$0.75	\$0.01
2	Capital Unit Cost		\$0.90	\$0.04	\$0.07	\$0.00	\$4.69
3	<b>Total Unit Cost of Service</b>		<b>\$1.72</b>	<b>\$0.18</b>	<b>\$0.35</b>	<b>\$0.75</b>	<b>\$4.70</b>
<b>Single-family Residential</b>							
4	Units		149,447	560,876	280,438	16,865	17,021
5	O&M Cost of Service - \$	\$288,856	\$122,656	\$75,626	\$77,806	\$12,636	\$132
6	Capital Cost of Service - \$	\$258,119	\$134,456	\$24,381	\$19,482	\$0	\$79,800
<b>Multi-family Residential</b>							
7	Units		92,473	347,050	173,525	6,200	6,200
8	O&M Cost of Service - \$	\$175,527	\$75,895	\$46,795	\$48,143	\$4,645	\$48
9	Capital Cost of Service - \$	\$139,405	\$83,196	\$15,086	\$12,055	\$0	\$29,068
<b>Commercial without dining</b>							
10	Units		38,644	128,915	64,458	804	864
11	O&M Cost of Service - \$	\$67,591	\$31,716	\$17,382	\$17,883	\$602	\$7
12	Capital Cost of Service - \$	\$48,900	\$34,767	\$5,604	\$4,478	\$0	\$4,051
<b>Commercial with dining</b>							
13	Units		9,121	76,071	45,642	84	84
14	O&M Cost of Service - \$	\$30,470	\$7,486	\$10,257	\$12,663	\$63	\$1
15	Capital Cost of Service - \$	\$15,078	\$8,206	\$3,307	\$3,171	\$0	\$394
<b>Hotels, motels without dining</b>							
16	Units		23,539	121,716	23,558	156	156
17	O&M Cost of Service - \$	\$42,385	\$19,319	\$16,412	\$6,536	\$117	\$1
18	Capital Cost of Service - \$	\$28,837	\$21,178	\$5,291	\$1,637	\$0	\$731
<b>Hotels, motels with dining</b>							
19	Units		71,928	599,878	359,927	264	264
20	O&M Cost of Service - \$	\$239,977	\$59,033	\$80,885	\$99,859	\$198	\$2
21	Capital Cost of Service - \$	\$117,031	\$64,712	\$26,077	\$25,004	\$0	\$1,238
<b>Carwashes</b>							
22	Units		0	0	0	0	0
23	O&M Cost of Service - \$	\$0	\$0	\$0	\$0	\$0	\$0
24	Capital Cost of Service - \$	\$0	\$0	\$0	\$0	\$0	\$0
<b>Commercial Laundry</b>							
25	Units		6,419	48,178	18,201	12	12
26	O&M Cost of Service - \$	\$16,823	\$5,268	\$6,496	\$5,050	\$9	\$0

Table B-10  
City of Scottsdale, AZ  
Wastewater Utility  
Distribution of Costs to Customer Classes - Outside City and Pleasant Valley

Line No.	Description	Total	Volume	Extra Strength		Customer	
				COD	TSS	Billing	Ready to Serve
27	Capital Cost of Service - \$	\$9,190	\$5,775	\$2,094	\$1,264	\$0	\$56
	<b>Laundromats</b>						
28	Units		2,119	5,302	1,944	12	12
29	O&M Cost of Service - \$	\$3,003	\$1,739	\$715	\$539	\$9	\$0
30	Capital Cost of Service - \$	\$2,328	\$1,907	\$230	\$135	\$0	\$56
	<b>Metal Platers</b>						
31	Units		30	148	74	12	12
32	O&M Cost of Service - \$	\$74	\$24	\$20	\$20	\$9	\$0
33	Capital Cost of Service - \$	\$94	\$27	\$6	\$5	\$0	\$56
	<b>Restaurants; bakeries</b>						
34	Units		10,534	193,270	52,710	60	60
35	O&M Cost of Service - \$	\$49,374	\$8,645	\$26,060	\$14,624	\$45	\$0
36	Capital Cost of Service - \$	\$21,821	\$9,477	\$8,401	\$3,662	\$0	\$281
	<b>Service station auto repair</b>						
37	Units		1,823	5,473	4,257	60	60
38	O&M Cost of Service - \$	\$3,460	\$1,496	\$738	\$1,181	\$45	\$0
39	Capital Cost of Service - \$	\$2,455	\$1,640	\$238	\$296	\$0	\$281
	<b>Medical Institutes</b>						
40	Units		3,126	13,035	2,607	48	48
41	O&M Cost of Service - \$	\$5,083	\$2,566	\$1,758	\$723	\$36	\$0
42	Capital Cost of Service - \$	\$3,785	\$2,812	\$567	\$181	\$0	\$225
	<b>Schools</b>						
43	Units		9,932	21,537	8,283	12	12
44	O&M Cost of Service - \$	\$13,363	\$8,152	\$2,904	\$2,298	\$9	\$0
45	Capital Cost of Service - \$	\$10,504	\$8,936	\$936	\$575	\$0	\$56
	<b>Not Used</b>						
46	Units		0	0	0	0	0
47	O&M Cost of Service - \$	\$0	\$0	\$0	\$0	\$0	\$0
48	Capital Cost of Service - \$	\$0	\$0	\$0	\$0	\$0	\$0
	<b>Black Mountain Average Rate</b>						
49	Units		0	0	0	0	0
50	O&M Cost of Service - \$	\$0	\$0	\$0	\$0	\$0	\$0
51	Capital Cost of Service - \$	\$0	\$0	\$0	\$0	\$0	\$0
52	<b>Total Cost of Service</b>	<b>\$1,593,532</b>	<b>\$721,085</b>	<b>\$378,267</b>	<b>\$359,272</b>	<b>\$18,423</b>	<b>\$116,486</b>

**Table B-11**  
**City of Scottsdale, AZ**  
**Wastewater Utility**  
**Comparison of Cost of Service to Revenue Under Existing Rates**

Line No.	Customer Class	Cost of Service	Revenue at Current Rates	Change - \$	Change - %
		\$	\$	\$	%
<b>City and Black Mountain</b>					
1	Single-family Residential	25,343,530	25,490,351	(146,821)	-0.6%
2	Multi-family Residential	6,248,315	6,418,903	(170,589)	-2.7%
3	Commercial without dining	3,024,349	3,229,871	(205,523)	-6.4%
4	Commercial with dining	919,967	789,695	130,272	16.5%
5	Hotels, motels without dining	242,440	271,085	(28,645)	-10.6%
6	Hotels, motels with dining	1,096,405	926,784	169,620	18.3%
7	Carwashes	123,481	166,691	(43,210)	-25.9%
8	Commercial Laundry	25,952	24,137	1,815	7.5%
9	Laundromats	15,668	19,078	(3,410)	-17.9%
10	Metal Platers	541	526	15	2.9%
11	Restaurants; bakeries	2,277,107	1,980,769	296,338	15.0%
12	Service station auto repair	165,165	168,662	(3,496)	-2.1%
13	Medical Institutes	549,290	612,575	(63,285)	-10.3%
14	Schools	186,778	152,414	34,364	22.5%
15	Not Used	0	0	0	0.0%
16	Black Mountain	217,177	252,061	(34,884)	-13.8%
17	<b>Total Inside City</b>	<b>40,436,164</b>	<b>40,503,602</b>	<b>(67,438)</b>	<b>-0.2%</b>
<b>Paradise Valley</b>					
18	Single-family Residential	546,975	538,125	8,850	1.6%
19	Multi-family Residential	314,932	312,901	2,031	0.6%
20	Commercial without dining	116,490	123,036	(6,546)	-5.3%
21	Commercial with dining	45,548	37,882	7,666	20.2%
22	Hotels, motels without dining	71,222	79,852	(8,630)	-10.8%
23	Hotels, motels with dining	357,008	296,666	60,343	20.3%
24	Carwashes	0	0	0	0.0%
25	Commercial Laundry	26,012	23,756	2,256	9.5%
26	Laundromats	5,331	6,593	(1,262)	-19.1%
27	Metal Platers	168	162	6	3.6%
28	Restaurants; bakeries	71,196	60,636	10,560	17.4%
29	Service station auto repair	5,915	5,929	(13)	-0.2%
30	Medical Institutes	8,868	9,883	(1,015)	-10.3%
31	Schools	23,867	30,673	(6,806)	-22.2%
32	Not Used	0	0	0	0.0%
33	Not Used	0	0	0	0.0%
34	<b>Total</b>	<b>1,593,532</b>	<b>1,526,094</b>	<b>67,438</b>	<b>4.4%</b>
35	<b>System Total</b>	<b>42,029,697</b>	<b>42,029,697</b>	<b>0</b>	<b>0.0%</b>

Table B-12  
City of Scottsdale, AZ  
Wastewater Utility  
Development of Monthly Base Fee

Line No	Meter Size	Capacity Ratio	Billing	Equivalent Meter	Base Fee by Meter Size		Base Fee Revenue		Total Base Fee Revenue
					City and BM	Paradise Valley	City and BM	Paradise Valley	
1	5/8"	1.00	\$0.65	\$4.08	\$4.74	\$5.45	202,341	23,409	\$1,085,567
2	3/4"	1.00	\$0.65	\$4.08	\$4.74	\$5.45	234,148	13	\$1,108,776
3	1"	1.00	\$0.65	\$4.08	\$4.74	\$5.45	456,038	1,143	\$2,165,592
4	1.5"	6.00	\$0.65	\$24.50	\$25.15	\$28.93	30,174	12	\$759,308
5	2"	14.00	\$0.65	\$57.17	\$57.82	\$66.49	30,850	12	\$1,784,583
6	3"	18.00	\$0.65	\$73.50	\$74.16	\$85.28	2,808	0	\$208,228
7	4"	26.40	\$0.65	\$107.81	\$108.46	\$124.73	1,930	0	\$209,322
8	6"	50.00	\$0.65	\$204.18	\$204.83	\$235.55	650	0	\$133,139
9	8"	70.00	\$0.65	\$285.85	\$286.50	\$329.48	1,051	0	\$301,112
10									
11	<b>Total</b>						<b>959,990</b>	<b>24,589</b>	<b>\$ 7,755,627</b>

Table B-13  
City of Scottsdale, AZ  
Wastewater Utility  
Test Year Bills by Meter Size

Line No	Customer Class	Meter Size									5/8"	Total Base Fee Revenue
		5/8"	3/4"	1"	1.5"	2"	3"	4"	6"	8"		
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
	Equivalent Meter Ratio	1.00	1.00	1.00	6.00	14.00	18.00	26.40	50.00	70.00	1.00	
	<b>City and Black Mountain</b>											
1	Service Charge, \$ per bill	\$4.74	\$4.74	\$4.74	\$25.15	\$57.82	\$74.16	\$108.46	\$204.83	\$286.50	\$4.74	
2	Single-family Residential	190,673	228,763	438,285	8,631	1,596	1,011	1,000	0	1,000	3,438	4,856,946
3	Multi-family Residential	3,093	2,339	7,528	7,921	14,963	355	289	333	51	2	1,266,279
4	Commercial without dining	4,374	2,744	7,955	9,895	8,274	806	224	127	0	30	908,890
5	Commercial with dining	81	47	416	879	1,055	116	44	12	0	0	101,519
6	Hotels, motels without dining	0	0	23	84	414	60	58	0	0	0	36,900
7	Hotels, motels with dining	0	12	164	64	519	58	56	95	0	0	62,286
8	Carwashes	23	0	22	85	109	35	0	0	0	0	11,249
9	Commercial Laundry	0	12	48	48	23	0	0	0	0	0	2,821
10	Laundromats	0	0	0	12	35	0	0	0	0	0	2,326
11	Metal Platers	0	0	12	0	0	0	0	0	0	0	57
12	Restaurants; bakeries	382	136	905	1,705	2,180	70	35	0	0	12	184,718
13	Service station auto repair	220	95	597	380	454	0	0	0	0	0	40,127
14	Medical Institutes	12	0	36	363	650	152	130	23	0	1	77,028
15	Schools	0	0	47	107	578	145	82	60	0	0	68,270
16	Not Used	0	0	0	0	0	0	0	0	0	0	0
17	Black Mountain	0	0	0	0	0	0	12	0	0	0	1,301
18	<b>Total City and Black Mountain</b>	<b>198,858</b>	<b>234,148</b>	<b>456,038</b>	<b>30,174</b>	<b>30,850</b>	<b>2,808</b>	<b>1,930</b>	<b>650</b>	<b>1,051</b>	<b>3,483</b>	<b>7,620,717</b>
	<b>Paradise Valley</b>											
19	Service Charge, \$ per bill	\$5.45	\$5.45	\$5.45	\$28.93	\$66.49	\$85.28	\$124.73	\$235.55	\$329.48	\$5.45	
20	Single-family Residential	59	13	1,143	0	12	0	0	0	0	15,638	92,568
21	Multi-family Residential	0	0	0	0	0	0	0	0	0	6,200	33,761
22	Commercial without dining	0	0	0	12	0	0	0	0	0	792	4,660
23	Commercial with dining	0	0	0	0	0	0	0	0	0	84	457
24	Hotels, motels without dining	0	0	0	0	0	0	0	0	0	156	849
25	Hotels, motels with dining	0	0	0	0	0	0	0	0	0	264	1,438
26	Carwashes	0	0	0	0	0	0	0	0	0	0	0
27	Commercial Laundry	0	0	0	0	0	0	0	0	0	12	65
28	Laundromats	0	0	0	0	0	0	0	0	0	12	65
29	Metal Platers	0	0	0	0	0	0	0	0	0	12	65
30	Restaurants; bakeries	0	0	0	0	0	0	0	0	0	60	327
31	Service station auto repair	0	0	0	0	0	0	0	0	0	60	327
32	Medical Institutes	0	0	0	0	0	0	0	0	0	48	261
33	Schools	0	0	0	0	0	0	0	0	0	12	65
34	Not Used	0	0	0	0	0	0	0	0	0	0	0
35	Black Mountain	0	0	0	0	0	0	0	0	0	0	0
36	<b>Total Paradise Valley</b>	<b>59</b>	<b>13</b>	<b>1,143</b>	<b>12</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23,350</b>	<b>134,909</b>
37	<b>Total System</b>	<b>198,917</b>	<b>234,161</b>	<b>457,181</b>	<b>30,186</b>	<b>30,862</b>	<b>2,808</b>	<b>1,930</b>	<b>650</b>	<b>1,051</b>	<b>26,833</b>	<b>7,755,627</b>

Draft-For Discussion Purposes Only

Table B-14  
City of Scottsdale, AZ  
Wastewater Utility  
Test Year Volumetric Rates

Line No	Customer Class	Cost of Service	Service Charge Revenue	O&M Revenue	Capital Revenue	Billed Volume	O&M Volume Rate	Capital Volume Rate	O&M Vol Rate Rounded	Capital Vol Rate Rounded
		\$	\$	\$	\$	1,000 gal	\$ per Kgal	\$ per Kgal	\$ per Kgal	\$ per Kgal
<b>City and Black Mountain</b>										
1	Single-family Residential	\$25,343,530	\$4,856,946	\$12,447,208	\$8,039,377	7,748,380	\$1.61	\$1.04	\$1.61	\$1.04
2	Multi-family Residential	\$6,248,315	\$1,266,279	\$3,026,978	\$1,955,058	1,884,292	\$1.61	\$1.04	\$1.61	\$1.04
3	Commercial without dining	\$3,024,349	\$908,890	\$1,267,068	\$848,390	840,658	\$1.51	\$1.01	\$1.51	\$1.01
4	Commercial with dining	\$919,967	\$101,519	\$551,917	\$266,531	190,397	\$2.90	\$1.40	\$2.90	\$1.40
5	Hotels, motels without dining	\$242,440	\$36,900	\$123,452	\$82,089	79,065	\$1.56	\$1.04	\$1.56	\$1.04
6	Hotels, motels with dining	\$1,096,405	\$62,286	\$697,353	\$336,766	240,569	\$2.90	\$1.40	\$2.90	\$1.40
7	Carwashes	\$123,481	\$11,249	\$61,482	\$50,750	58,299	\$1.05	\$0.87	\$1.05	\$0.87
8	Commercial Laundry	\$25,952	\$2,821	\$14,989	\$8,142	6,580	\$2.28	\$1.24	\$2.28	\$1.24
9	Laundromats	\$15,668	\$2,326	\$7,585	\$5,757	6,175	\$1.23	\$0.93	\$1.23	\$0.93
10	Metal Platers	\$541	\$57	\$305	\$180	160	\$1.90	\$1.12	\$1.90	\$1.12
11	Restaurants; bakeries	\$2,277,107	\$184,718	\$1,456,423	\$635,966	357,651	\$4.07	\$1.78	\$4.07	\$1.78
12	Service station auto repair	\$165,165	\$40,127	\$76,406	\$48,632	46,901	\$1.63	\$1.04	\$1.63	\$1.04
13	Medical Institutes	\$549,290	\$77,028	\$276,910	\$195,351	197,256	\$1.40	\$0.99	\$1.40	\$0.99
14	Schools	\$186,778	\$68,270	\$66,489	\$52,019	56,871	\$1.17	\$0.91	\$1.17	\$0.91
15	Not Used	\$0	\$0	\$0	\$0	0	\$0.00	\$0.00	\$0.00	\$0.00
16	Black Mountain	\$217,177	\$1,301	\$127,158	\$88,717	90,156	\$1.41	\$0.98	\$1.41	\$0.98
17	<b>Total City and Black Mtn</b>	<b>\$40,436,164</b>	<b>\$7,620,717</b>	<b>\$20,201,722</b>	<b>\$12,613,725</b>	<b>11,803,410</b>	<b>\$1.71</b>	<b>\$1.07</b>	<b>\$1.71</b>	<b>\$1.07</b>
<b>Paradise Valley</b>										
18	Single-family Residential	\$546,975	\$92,568	\$276,088	\$178,319	149,447	\$1.85	\$1.19	\$1.85	\$1.19
19	Multi-family Residential	\$314,932	\$33,761	\$170,833	\$110,337	92,473	\$1.85	\$1.19	\$1.85	\$1.19
20	Commercial without dining	\$116,490	\$4,660	\$66,982	\$44,849	38,644	\$1.73	\$1.16	\$1.73	\$1.16
21	Commercial with dining	\$45,548	\$457	\$30,406	\$14,684	9,121	\$3.33	\$1.61	\$3.33	\$1.61
22	Hotels, motels without dining	\$71,222	\$849	\$42,267	\$28,105	23,539	\$1.80	\$1.19	\$1.80	\$1.19
23	Hotels, motels with dining	\$357,008	\$1,438	\$239,778	\$115,793	71,928	\$3.33	\$1.61	\$3.33	\$1.61
24	Carwashes	\$0	\$0	\$0	\$0	0	\$0.00	\$0.00	\$0.00	\$0.00
25	Commercial Laundry	\$26,012	\$65	\$16,814	\$9,133	6,419	\$2.62	\$1.42	\$2.62	\$1.42
26	Laundromats	\$5,331	\$65	\$2,993	\$2,272	2,119	\$1.41	\$1.07	\$1.41	\$1.07
27	Metal Platers	\$168	\$65	\$65	\$38	30	\$2.19	\$1.29	\$2.19	\$1.29
28	Restaurants; bakeries	\$71,196	\$327	\$49,329	\$21,540	10,534	\$4.68	\$2.04	\$4.68	\$2.04
29	Service station auto repair	\$5,915	\$327	\$3,415	\$2,174	1,823	\$1.87	\$1.19	\$1.87	\$1.19
30	Medical Institutes	\$8,868	\$261	\$5,047	\$3,560	3,126	\$1.61	\$1.14	\$1.61	\$1.14
31	Schools	\$23,867	\$65	\$13,354	\$10,447	9,932	\$1.34	\$1.05	\$1.34	\$1.05
32	Not Used	\$0	\$0	\$0	\$0	0	\$0.00	\$0.00	\$0.00	\$0.00
33	Black Mountain	\$0	\$0	\$0	\$0	0	\$0.00	\$0.00	\$0.00	\$0.00
34	<b>Total Paradise Valley</b>	<b>\$1,593,532</b>	<b>\$134,909</b>	<b>\$917,370</b>	<b>\$541,253</b>	<b>419,134</b>	<b>\$2.19</b>	<b>\$1.29</b>	<b>\$2.19</b>	<b>\$1.29</b>
35	<b>Total System</b>	<b>\$42,029,697</b>	<b>\$7,755,627</b>	<b>\$21,119,092</b>	<b>\$13,154,978</b>	<b>12,222,544</b>	<b>\$1.73</b>	<b>\$1.08</b>		

Draft-For Discussion Purposes Only

APPENDIX C:  
**EXTRA STRENGTH SURVEY**

Table C-1  
City of Scottsdale  
Sewer Rate Study  
COD Extra Strength Factors

Customer Class	Scottsdale, AZ - 2014 COD	CA State Water Resources Control Board - 1998 COD	East Bay Municipal Utility District - 2019 COD	Ohio Administrative Code - 2018 COD	Fort Collins, CO - 2020 COD	Los Angeles, CA - 2020 COD	Bend, OR - 2012 COD	Tacoma, WA - 2012 COD	Portland, OR - 2019 COD	San Diego, CA - 2006 COD	Orange County, CA - 2017 COD
Single-Family Residential	450	263-375				322.5	720	300-450			328.5
Multi-Family Residential	450					322.5				600	328.5
Commercial Without Dining	400	varies	varies	varies	varies	varies	varies	varies		800	varies
Commercial With Dining	1,000	varies	varies	varies	varies	varies	varies	varies	1650		varies
Hotels/Motels Without Dining	620	465		300-420	465*	465*				600	275*
Hotels/Motels With Dining	1,000	750	840					450-750	750	600	
Car Washes	40	30			225	30	312	300-450		600	199.5
Commercial Laundry	900	675	1,841		894	675	2686.5			1340	
Mortuaries	1,600	1,200				1200				1600	1068
Laundromats	300	225	1,163	300-420	329	225				300	405
Metal Platers	600		258								
Restaurants/Bakeries	2,200	1,500	1,809 / 5,491	600-900	1,230 / 1,032	1500	2130	1,050-1,350	1800 / 3450	850-2,000	403.5
Service Station Auto Repair	360	270				225				600	367.5
Medical Institutes	500	375	517	300-420	347	375		300-450		500-700	329-362
Schools	260	195	452	300-420	495	195	891			600	220

\*dining not specified

Table C-2  
City of Scottsdale  
Sewer Rate Study  
TSS Extra Strength Factors

Customer Class	Scottsdale, AZ - 2014 TSS	CA State Water Resources Control Board - 1998 TSS	East Bay Municipal Utility District - 2019 TSS	Ohio Administrative Code - 2018 TSS	Fort Collins, CO - 2020 TSS	Los Angeles, CA - 2020 TSS	Bend, OR - 2012 TSS	Tacoma, WA - 2012 TSS	Portland, OR - 2019 TSS	San Diego, CA - 2006 TSS	Orange County, CA - 2017 TSS
Single-Family Residential	225	175-250				205	500	150-400			253
Multi-Family Residential	225					205				250	177
Commercial Without Dining	200	varies	varies		varies	varies	varies	varies		250	varies
Commercial With Dining	600	varies	varies		varies	varies	varies	varies	400	400	varies
Hotels/Motels Without Dining	120	120			121*	120*				300	283*
Hotels/Motels With Dining	600	600	680					450	400	110	
Car Washes	150	150			350	150		150-400		150	694 - 3930
Commercial Laundry	340	240	310		367	240	2,319			700	
Mortuaries	800	800				800				850	99
Laundromats	110	110	190		87	110					3825
Metal Platers	300		270								
Restaurants/Bakeries	600	600	940 / 390		905 / 620	600		400 / 700	500 / 900	320-900	960
Service Station Auto Repair	280	280				150				280	99
Medical Institutes	100	100	270		266	100		150-400		200-250	253-297
Schools	100	100	80		112	100				250	200

APPENDIX D:  
**RATE DESIGN**

Table D-1  
 City of Scottsdale, AZ  
 Wastewater Utility  
 Comparison of Current and Proposed Base Fees

Line No	Description	FY21 Existing	FY22 Proposed	Test Year Change - \$	Change - %
Base Fee, \$ per Bill					
Meter Size, Inches					
1	5/8"	\$4.50	\$4.74	\$0.24	5.2%
2	3/4"	\$4.50	\$4.74	\$0.24	5.2%
3	1"	\$4.50	\$4.74	\$0.24	5.2%
4	1.5"	\$27.00	\$25.15	(\$1.85)	-6.8%
5	2"	\$63.00	\$57.82	(\$5.18)	-8.2%
6	3"	\$81.00	\$74.16	(\$6.84)	-8.5%
7	4"	\$119.00	\$108.46	(\$10.54)	-8.9%
8	6"	\$225.00	\$204.83	(\$20.17)	-9.0%
9	8"	\$315.00	\$286.50	(\$28.50)	-9.0%

[1] Outside City and Paradise Valley volume rates are 1.15 times inside City rates.

Table D-2  
 City of Scottsdale, AZ  
 Wastewater Utility  
 Comparison of Current and Proposed O&M and Capital Charges, \$ per 1,000 gallons

Line No	Customer Class	Proposed FY21 Volume Charges			Cost of Service FY21 Volume Charges			Change - \$			Change - %		
		O&M	Capital	Total	O&M	Capital	Total	O&M	Capital	Total	O&M	Capital	Total
1	Single-family Residential	\$1.17	\$1.51	\$2.68	\$1.61	\$1.04	\$2.65	\$0.44	(\$0.47)	(\$0.03)	37.6%	-31.1%	-1.1%
2	Multi-family Residential	\$1.17	\$1.51	\$2.68	\$1.61	\$1.04	\$2.65	\$0.44	(\$0.47)	(\$0.03)	37.6%	-31.1%	-1.1%
3	Commercial without dining	\$1.16	\$1.52	\$2.68	\$1.51	\$1.01	\$2.52	\$0.35	(\$0.51)	(\$0.16)	30.2%	-33.6%	-6.0%
4	Commercial with dining	\$1.72	\$1.85	\$3.57	\$2.90	\$1.40	\$4.30	\$1.18	(\$0.45)	\$0.73	68.6%	-24.3%	20.4%
5	Hotels, motels without dining	\$1.25	\$1.67	\$2.92	\$1.56	\$1.04	\$2.60	\$0.31	(\$0.63)	(\$0.32)	24.8%	-37.7%	-11.0%
6	Hotels, motels with dining	\$1.71	\$1.86	\$3.57	\$2.90	\$1.40	\$4.30	\$1.19	(\$0.46)	\$0.73	69.6%	-24.7%	20.4%
7	Carwashes	\$1.08	\$1.57	\$2.65	\$1.05	\$0.87	\$1.92	(\$0.03)	(\$0.70)	(\$0.73)	-2.8%	-44.6%	-27.5%
8	Commercial Laundry	\$1.48	\$1.73	\$3.21	\$2.28	\$1.24	\$3.52	\$0.80	(\$0.49)	\$0.31	54.1%	-28.3%	9.7%
9	Laundromats	\$1.10	\$1.58	\$2.68	\$1.23	\$0.93	\$2.16	\$0.13	(\$0.65)	(\$0.52)	11.8%	-41.1%	-19.4%
10	Metal Platers	\$1.33	\$1.62	\$2.95	\$1.90	\$1.12	\$3.02	\$0.57	(\$0.50)	\$0.07	42.9%	-30.9%	2.4%
11	Restaurants; bakeries	\$2.43	\$2.55	\$4.98	\$4.07	\$1.78	\$5.85	\$1.64	(\$0.77)	\$0.87	67.5%	-30.2%	17.5%
12	Service station auto repair	\$1.18	\$1.50	\$2.68	\$1.63	\$1.04	\$2.67	\$0.45	(\$0.46)	(\$0.01)	38.1%	-30.7%	-0.4%
13	Medical Institutes	\$1.12	\$1.56	\$2.68	\$1.40	\$0.99	\$2.39	\$0.28	(\$0.57)	(\$0.29)	25.0%	-36.5%	-10.8%
14	Schools	\$1.09	\$1.59	\$2.68	\$1.17	\$0.91	\$2.08	\$0.08	(\$0.68)	(\$0.60)	7.3%	-42.8%	-22.4%