



City of Flagstaff, AZ

# Water, Reclaimed Water, and Wastewater Cost-of-Service Rates and Fees Study – Draft Report

April 19, 2024





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Mr. Shannon Jones  
Director of Water Services  
211 W Aspen Avenue  
Flagstaff, AZ 86001

Re: Water, Reclaimed Water,  
and Wastewater Cost-of-Service  
Rates and Fees Study

Dear Mr. Jones,

Stantec is pleased to provide you with this draft report of findings from the Water, Reclaimed Water, and Wastewater Cost-of-Service Rates and Fees Study completed for the City of Flagstaff, AZ. We appreciate the professional assistance provided by you and all members of City staff who participated in the study.

Key findings and recommendations are provided in the attached report.

If you or others at the City have any questions, please do not hesitate to email me at [Carol.Malesky@stantec.com](mailto:Carol.Malesky@stantec.com). We appreciate the opportunity to be of service to the City and look forward to the possibility of doing so again in the future.

Sincerely,

A handwritten signature in blue ink that reads "Carol F. Malesky". The signature is written in a cursive style and is positioned above the printed name and title.

Carol Malesky  
Senior Principal/Project Manager

Enclosure

# TABLE OF CONTENTS

<b>1. Executive Summary</b>	<b>6</b>
1.1 Introduction	6
1.2 Background and System Information	6
1.3 Objectives	7
1.4 Financial Management Plans	7
1.5 Cost-of-Service Analysis	8
1.6 Rate Design	9
1.7 Review & Development of Capacity Fees	11
1.8 Miscellaneous Service Fees Calculation	11
1.9 Comparative Rate Analysis to Peer Utilities	12
1.10 Summary of Conclusions and Recommendations	13
<b>2. Introduction</b>	<b>15</b>
2.1 Background	15
2.2 Objectives	16
<b>3. Financial Management Plans</b>	<b>17</b>
3.1 Key Assumptions	17
3.1.1 Cost Escalation	19
3.1.2 Customer Growth & Volume Forecast	19
3.1.3 Minimum Reserve Policy	19
3.1.4 Future Borrowing & Capital Funding	20
3.1.5 Debt Service and Coverage	20
3.2 Source Data	20
3.2.1 Beginning Fund Balances	20
3.2.2 Revenues	21
3.2.3 Operating Expenditures	21
3.2.4 Debt Service Payments	21
3.2.5 Capital Improvement Scenarios	22
3.3 Results	23
3.3.1 Water Fund	23
3.3.2 Wastewater Fund	24
3.3.3 Reclaimed Water Fund	24
3.4 Recommendations	25
<b>4. Cost-of-Service Analysis and Rate Design</b>	<b>27</b>
4.1 Background and Objectives	27

4.2	Water Cost-of-Service Results.....	27
4.2.1	Revenue Requirement Allocations to Functions.....	28
4.2.2	Allocations to Base-Extra Capacity .....	29
4.2.3	Allocations to Customer Classes.....	30
4.3	Wastewater Cost-of-Service Results .....	32
4.3.1	Revenue Requirement Allocations to Functions.....	32
4.3.2	Allocations to Customer Classes .....	34
4.4	Water Rate Design Results.....	36
4.4.1	Proposed FY 2025 Water Rate Structure.....	38
4.4.2	Bill Impacts.....	41
4.5	Wastewater Rate Design Results .....	42
4.5.1	Proposed FY 2025 Wastewater Rate Structure .....	43
4.5.2	Bill Impacts.....	46
4.6	Reclaimed Water Rate Design Results .....	48
<b>5.</b>	<b>Review &amp; Development of Capacity Fees.....</b>	<b>49</b>
5.1	Capacity Fees .....	49
5.2	Legal Framework .....	49
5.3	Key Assumptions and Methodology.....	50
5.3.1	Methodology .....	50
5.3.2	Level of Service .....	50
5.3.3	Reclaimed Water .....	52
5.3.4	Major Capital Project Alternatives .....	52
5.4	Source Data .....	52
5.4.1	System Assets .....	52
5.4.2	10-Year Capital Improvement Plan .....	54
5.4.3	System Capacities .....	55
5.4.4	Equivalent Residential Units.....	56
5.5	Scenario Analysis and Results .....	57
5.5.1	Water Fund .....	58
5.5.2	Wastewater Fund.....	59
<b>6.</b>	<b>Miscellaneous Service Fees Update .....</b>	<b>61</b>
<b>7.</b>	<b>Comparative Rate Analysis to Peer Utilities .....</b>	<b>63</b>
<b>8.</b>	<b>Conclusions and Recommendations.....</b>	<b>65</b>
	<b>Appendix A: Supporting Schedules – Water Financial Plan .....</b>	<b>67</b>
	<b>Appendix B: Supporting Schedules – Wastewater Financial Plan .....</b>	<b>68</b>
	<b>Appendix C: Supporting Schedules – Reclaimed Water Financial Plan .....</b>	<b>69</b>

**Appendix D: Water Cost-of-Service Allocations..... 70**  
**Appendix E: Wastewater Cost-of-Service Allocations..... 71**  
**Appendix F: Capacity Fee Summary ..... 72**

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# 1. EXECUTIVE SUMMARY

## 1.1 INTRODUCTION

This Executive Summary presents an overview of the findings of the Cost-of-Service Rates and Fees Study (Study) completed for the Water, Reclaimed Water, and Wastewater Funds of the City of Flagstaff's Water Services Division (hereafter referred to as the "Utility" or "City") by Stantec Consulting Services Inc. (Stantec). The findings of the Study are based on a set of assumptions and costs that are subject to change, which could have a measurable effect on the results. While this Executive Summary presents the findings and recommendations of the Study, the full report and appendices present the detailed analyses prepared to develop the findings. The full report and appendices are intended to support the City's compliance with Arizona Revised Statutes (ARS) 9-511.01 as documentation of the anticipated revenues and expenses for providing water and wastewater services.

## 1.2 BACKGROUND AND SYSTEM INFORMATION

### **Water System Information**

The City's water system has approximately 22,000 water service connections and maintains 450 miles of potable water main with twelve major reservoirs operating on three distinct pressure zones. Water Services operates an eight million gallons per day (MGD) surface water treatment plant obtaining raw water from Upper Lake Mary. The Inner Basin provides seasonal spring flow and a shallow aquifer system that are capable of up to two MGD of production during the summer. Twenty-four active deep wells operate within three major well fields that contribute up to an additional thirteen MGD of potable water. In terms of water resources planning, the City operates well below the groundwater allotment assigned in its 100-year Designation of Adequate Water Supply from the Arizona Department of Water Resources.

### **Wastewater System Information**

The wastewater system consists of two water reclamation plants that serve a combined population of approximately 75,000 residents as well as commercial, institutional, and industrial wastes. The total permitted capacity of the two treatment plants is 10 MGD based on system hydraulics and other factors. The City maintains 285 miles of gravity flow sanitary sewer and operates an industrial waste pretreatment program as well.

### **Reclaimed Water System Information**

Water Services maintains about twenty-five miles of reclaimed water mains that are connected to a two-million-gallon storage tank. Reclaimed water has offset total water demand by approximately 20% per year since the mid 1990's. Many local large water users rely on the City's reclaimed water system for non-potable irrigation needs, and reclaimed water is available from the existing mains down to the residential level for permitted non-potable uses.

## 1.3 OBJECTIVES

The principal objectives or components of the Study are as follows:

**Financial Management Plans** – Develop multi-year financial plans for the City’s water, wastewater, and reclaimed water systems that determine the level of annual revenue required to satisfy projected annual operating, debt service, and capital cost requirements as well as maintain adequate reserves.

**Cost-of-Service Analysis** – Determine the costs of providing water and wastewater services to compare system costs to revenues and allocate the costs of providing the City services to specific system functions for use in developing water and wastewater user rates.

**Rate Design** – Review the City’s existing rate structures and develop modifications, as appropriate, to maintain rates that conform to accepted industry practice and reflect the appropriate recovery of system costs. Assess the ability of the rate structures to achieve the City’s policy objectives, such as fiscal stability, conservation, and affordability to the greatest extent possible.

**Review & Development of Capacity Fees** – Evaluate the cost impacts of new development following directives of Arizona state statute. Through review of existing City assets, system capacities, and planned capital improvements, provide that growth is paying for the costs of growth in a fair and equitable manner by calculating relevant capacity fees for the water system and wastewater system.

**Miscellaneous Service Fees Calculation** – Review miscellaneous service charges assessed by the City, identify the underlying processes and related costs, and determine the full cost recovery for services provided related to these specific fees.

**Comparative Rate Surveys** – Survey peer utility rates to determine how the City’s water, and wastewater rates compare to its peers. Calculate monthly water and wastewater bills to compare cost of services across communities. During this step, it is assumed that utilities likely follow differing asset replacement schedules and deliver different levels of service; therefore, this comparison of bill totals is provided simply as an objective look at peer utility rates and structures.

## 1.4 FINANCIAL MANAGEMENT PLANS

The financial planning analysis evaluated the sufficiency of the City’s revenues to meet all current and projected financial requirements over a 10-year projection period and determined the level of any rate revenue adjustments necessary in each year of the projection period to provide sufficient revenues to fund all of the water, wastewater, and reclaimed water system cost requirements. Stantec relied on financial documents of the water, wastewater, and reclaimed water funds for the analysis. Data and assumptions of the analysis were reviewed and discussed with City staff. Through this process, the recommended financial management plans and associated forecasts of annual water, wastewater, and reclaimed water rate adjustments were developed and are presented in the main sections of this report.

The recommended financial management plans and corresponding plans of water, wastewater, and reclaimed water rate adjustments are based upon both audited and budgeted revenue and expense information, beginning balances, and assumptions as described in the body of this report. Detailed schedules presenting all components of the financial management plans are provided in Appendices A, B, and C to this report. The following findings and conclusions are provided based on the financial planning analysis and a joint work session with City Council and the Water Commission.

- Evaluation of fund balances and the City’s revenues generated from current rates and fees indicate that water rate increases and reclaimed water rate increases of 15.0% in fiscal years (FY) FY 2025-2029 are sufficient to cover revenue requirements within the water fund over the projection period.
- The Wastewater Fund requires 25.0% rate increases in FY 2025 & FY 2026, 15.0% in FY 2027, 10.0% in FY 2028, and 5.0% in FY 2029-FY2033 to maintain reserves and meet revenue requirements.
- Rate increases recommended for FY 2025 are assumed to be effective starting September 1<sup>st</sup>, 2024.

The recommended rate adjustments and effective date for each rate increase for the water, wastewater, and reclaimed water systems are presented in Table 1-1 below. The recommended rate plans maintain industry-recommended reserves for working capital and follow the City’s own guidance as it prepares for large long-term water, wastewater, and reclaimed water projects as well as maintaining adequate debt service coverage. Overall, the recommended rate plan will enable the City to maintain its fiscally responsible nature and allow for flexibility in the future.

**Table 1-1 Recommended Plan of Water, Wastewater, and Reclaimed Water Rate Adjustments**

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
<b>Water</b>	0.0%	15.0%	15.0%	15.0%	15.0%	15.0%	5.0%	5.0%	5.0%	5.0%
<b>Wastewater</b>	0.0%	25.0%	25.0%	15.0%	10.0%	5.0%	5.0%	5.0%	5.0%	5.0%
<b>Reclaimed Water</b>	0.0%	15.0%	15.0%	15.0%	15.0%	15.0%	5.0%	5.0%	5.0%	5.0%

## 1.5 COST-OF-SERVICE ANALYSIS

Stantec allocated the City’s water and wastewater costs in a cost-of-service (COS) analysis to determine the under or over-recovery of revenues generated from each system. The COS analysis evaluated projected FY 2025 annual costs the City will incur to provide its customers both water and wastewater service and determined the portion of system costs that are allocable to system functions. Customer classes require water and wastewater services depending on each class’s usage characteristics. Therefore, Stantec analyzed customer class consumption patterns and requirements to determine the demand each class places on the City’s systems.



Reclaimed Water Fund costs were not allocated across system functions as the current City policy sets reclaimed water rates as a percentage of potable water rates. Council direction as a result of this Study was to schedule reclaimed water costs and rates for further review within the next fiscal year.

The COS analysis provides essential information on costs by customer class and average COS rates for the rate design task.

## 1.6 RATE DESIGN

Stantec examined the City's current water, wastewater, and reclaimed water rate structures to assess how well the City's pricing objectives are being met across the different customer classes and profiles. Through work sessions with City Council and the Water Commission, rate design priorities were established.

The rate structure priorities that guided the rate development process were revenue stability, conservation/demand management, minimizing administrative burden, customer proportionality, and affordability. During the rate and fee structure analysis, Stantec evaluated the sufficiency of each rate component, such as monthly fixed charges by meter size and residential tiered usage rates, in recovering the costs of serving customer types and determined possible adjustments to City's rate structures that may better meet the City's priorities.

Stantec proposed the following changes to the existing water, wastewater, and reclaimed water rates:

### Water Fund

1. Recover 25% of rate revenue through monthly fixed charges.
2. Revisions to the tier price ratios for tiered single family usage rates.
3. Consolidate the Commercial/Schools and Institutional Customer classes into one customer class.

### Wastewater Fund

1. Recover 25% of rate revenue through monthly fixed charges.
2. Consolidate non-residential classes into three distinct classes with like flow and strength characteristics

### Reclaimed Water Fund

1. Mirror the Water Fund changes.

All rates and fees adjustments will be effective September 1<sup>st</sup>, 2024. The proposed rate schedules for FY 2025 are presented below.

**Table 1-2 FY 2025 Proposed Water Monthly Fixed Meter Charges**

Meter Size	Current Fixed Meter Charge (FY 24)	FY 25 Proposed Fixed Charge
3/4"	\$16.64	\$14.33
1"	\$19.60	\$19.86
1.5"	\$26.98	\$33.66
2"	\$35.84	\$50.23
3"	\$56.52	\$102.68
4"	\$86.05	\$144.10
6"	\$159.88	\$364.97
8"	\$248.47	\$447.80

**Table 1-3 FY 2025 Proposed Water Volume Charges**

Customer Class		Current Rate (FY 24)	FY 25 Volume Charge (per 1,000 gallons)
Single Family	<i>Tier One (0 – 3,500 gal)</i>	\$3.44	\$4.39
	<i>Tier Two (3,501 – 6,200 gal)</i>	\$4.45	\$4.72
	<i>Tier Three (6,201 – 11,500 gal)</i>	\$6.86	\$9.43
	<i>Tier Four (11,501+ gal)</i>	\$13.72	\$18.86
Multi-family		\$4.42	\$4.97
Commercial/Schools		\$4.69	\$5.88
Landscape		\$4.69	\$10.51
Manufacturing		\$4.63	\$5.56
Institutional		\$4.30	\$5.88
Hydrant		\$7.17	\$7.60
Standpipe		\$9.56	\$7.55

**Table 1-4 FY 2025 Proposed Wastewater Monthly Fixed Meter Charges**

Meter Size	ERU Factor	FY 25 Proposed Fixed Charges
3/4"	1.00	\$10.39
1"	1.67	\$17.32
1.5"	3.33	\$34.63
2"	5.33	\$55.41
3"	11.67	\$121.22
4"	16.67	\$173.17
6"	33.33	\$346.33
8"	53.33	\$554.13

**Table 1-5 FY 2025 Proposed Wastewater Volume Charges**

Consolidated Class	Customer Class	Current Rate (FY 24)	FY 25 Consolidated Volume Charge
Residential	Residential	\$5.35	\$5.50
Non-Residential A	Car Washes	\$5.38	\$4.45
	Laundromats	\$5.53	
	Commercial	\$5.68	
	Institutional	\$4.91	
	Manufacturing	\$6.09	
	Hotels & Motels	\$7.58	
Non-Residential B	Restaurants	\$9.09	\$7.05
	Industrial Laundries	\$8.36	
Non-Residential C	Pet Food Manufacturers	\$13.34	\$29.96
	Ice Cream Cone Manufacturing	\$16.48	

## 1.7 REVIEW & DEVELOPMENT OF CAPACITY FEES

The capacity fee analysis and Study accomplish multiple policy strategies including the implementation of fees that are legal, proportional, and reasonable.

The City's current water and wastewater capacity fees were developed in accordance with the Arizona Revised Statutes (ARS) 9-511.01 given that the Utility provides service to customers outside of its municipal boundaries. Stantec developed new capacity fees in the Study under the same guidelines as well as industry-accepted approaches promoted by the American Water Works Association (AWWA) and Water Environment Federation (WEF). Proposed capacity fees are presented below for a single family residential unit. Further details on the analysis and approaches directed by City Council and the Water Commission are described in Section 5 of the report.

**Table 1-3 Current and Proposed Capacity Fees**

	Current FY 2024 (3/4" Meter)	Proposed FY 2025 (3/4" Meter)
Water Capacity Fee	\$5,728	\$8,266
Wastewater Capacity Fee	\$3,723	\$4,086

## 1.8 MISCELLANEOUS SERVICE FEES CALCULATION

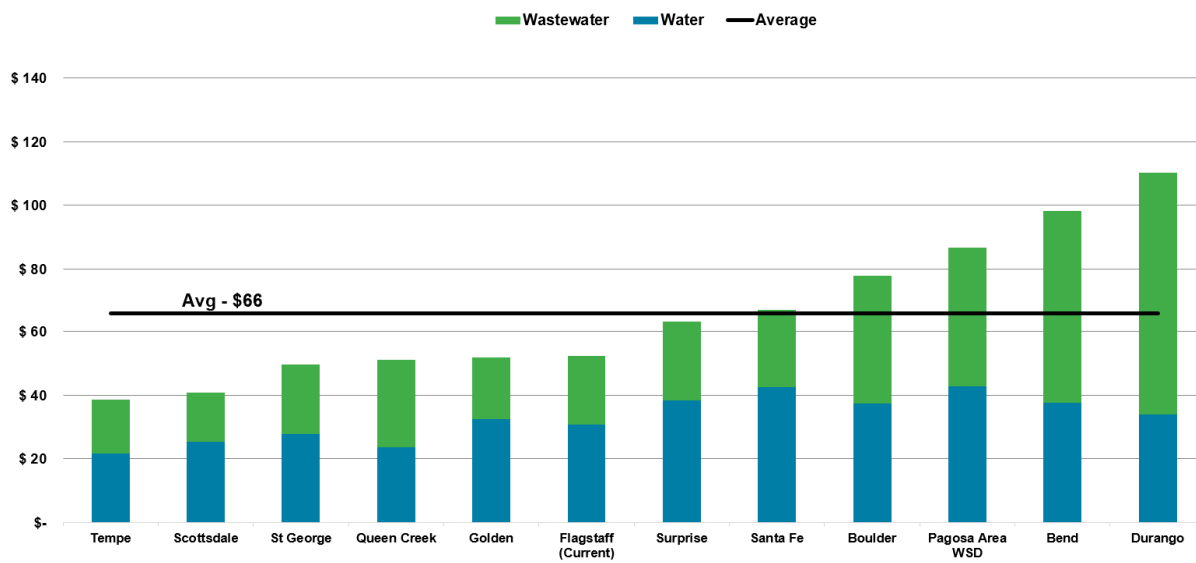
Stantec updated the Utility miscellaneous fees in conjunction with City Staff in several steps. Stantec conducted interviews with City staff to identify activities and costs associated with each fee, then populated Stantec's proprietary cost computation template with information from the interviews. To assist with background for some assumptions, Stantec used information from its recently completed fee studies. Finally, an analysis of the cost recovery and financial implications of the updated fees was conducted to propose fees that cover corresponding costs based on City objectives and policies. Updated miscellaneous service fees are presented in Section 6 of the full report.

## 1.9 COMPARATIVE RATE ANALYSIS TO PEER UTILITIES

Stantec completed a rate survey for local and other peer utilities that captures the water and wastewater volumetric rates and monthly fixed fees as well as rate structure of each utility. These utilities were selected based on a number of factors, such as size, population served, university location, and mountain area service. A list of peer utilities includes:

- Town of Queen Creek, AZ
- City of Scottsdale, AZ
- City of Surprise, AZ
- City of Tempe, AZ
- City of Boulder, CO
- City of Durango, CO
- City of Golden, CO
- Pagosa Area Water & Sanitation District, CO
- City of Santa Fe, NM
- City of Bend, OR
- City of St. George, UT

The graph below presents the comparison of total monthly water and wastewater bills for each community as of 2023 with an assumed 4,000 gallons of usage. The average monthly bill at this usage level for all communities is \$66. Given the survey results, the City's current water and wastewater rates show below-average water and wastewater bills.

**Figure 1-1 Monthly Bill Comparison at 4,000 Gallons**

## 1.10 SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

A summary of Study recommendations based on the development of the financial analysis for the City's water, wastewater, and reclaimed water utilities is presented below.

- Increase water, wastewater, and reclaimed water rate revenues by 15.0%, 25.0%, and 15.0% respectively, for FY 2025. Rate increases recommended in FY 2025 will be effective starting September 1<sup>st</sup>, 2024;
- In subsequent years, annually evaluate rate adjustment based on actual operating results. This Study projects 15.0% increases from FY 2026 through FY 2029 for the Water Fund. The Wastewater Fund is projected to require 25.0% rate revenue increases in FY 2026, 15.00% in FY 2027, 10.0% in FY 2028, and 5.00% in FY 2029 to fund CIP, maintain its reserves and meet total revenue requirements. The reclaimed water fund will need 15.0% increases from FY 2026-2029;
- Recover 25% of water rate revenue through monthly fixed charges;
- Recover 25% of wastewater rate revenue through new monthly fixed charges;
- Consolidate the Commercial/Schools and Institutional water customer classes into one customer class;
- Consolidated non-residential wastewater customer classes into three new non-residential classes;
- Implement a water capacity fee of \$8,266 per ERU and a wastewater capacity fee of \$4,086 per ERU;

- Evaluate Water Services performance annually to assess rate revenue needs and update financial planning models;
- Review water and wastewater usage and rate structures continually to ensure fairness and proportionality across customer classes; and,
- Review capacity fees every 3-5 years or when changes to the growth-related CIP are expected.

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## 2. INTRODUCTION

Stantec has completed a comprehensive Cost-of-Service Rates and Fees Study (Study) for the water, wastewater, and reclaimed water systems of the City of Flagstaff (hereafter referred to as “City” or “Utility”). This report presents the objectives, approach, methodologies, source data, assumptions, as well as the findings and recommendations of the Study.

The last rate study conducted by the Utility was published in 2016. The last rate increases for the Water Fund and Wastewater Fund were implemented in 2020. The last rate increase implemented for the Reclaimed Water Fund was in 2023.

The Study aims to accomplish multiple policy strategies including:

- 1) implement rates and fees that are legal, proportional, and equitable;
- 2) develop long-term financial plans that recover the funding needs of the Utility;
- 3) establish fees that cover the costs of service and meet the Utility’s regulatory requirements; and
- 4) use forward-thinking and new opportunities to provide rates and pricing strategies that can help achieve long-term goals of the Utility.

This draft report and appendices are developed in support of the City’s compliance with Arizona Revised Statutes (ARS) 9-511.01 as documentation of the anticipated revenues and expenses for providing water and wastewater services.

### 2.1 BACKGROUND

#### **Water System Information**

The City’s water system has approximately 22,000 water service connections and maintains 450 miles of potable water main with twelve major reservoirs operating on three distinct pressure zones. Water Services operates an eight million gallons per day (MGD) surface water treatment plant obtaining raw water from Upper Lake Mary. The Inner Basin provides seasonal spring flow and a shallow aquifer system that are capable of up to two MGD of production during the summer. Twenty-four active deep wells operate within three major well fields that contribute up to an additional thirteen MGD of potable water. In terms of water resources planning, the City operates well below the groundwater allotment assigned in its 100-year Designation of Adequate Water Supply from the Arizona Department of Water Resources.

#### **Wastewater System Information**

The wastewater system consists of two water reclamation plants that serve a combined population of approximately 75,000 residents as well as commercial, institutional, and industrial wastes. The total permitted capacity of the two treatment plants is 10 MGD based on system hydraulics and other factors.

The City maintains 285 miles of gravity flow sanitary sewer and operates an industrial waste pretreatment program as well.

### **Reclaimed Water System Information**

Water Services maintains about twenty-five miles of reclaimed water mains that are connected to a two-million-gallon storage tank. Reclaimed water has offset total water demand by approximately 20% per year since the mid 1990's. Many local large water users rely on the City's reclaimed water system for non-potable irrigation needs, and reclaimed water is available from the existing mains down to the residential level for permitted non-potable uses.

## **2.2 OBJECTIVES**

The principal objectives or components of the Study are as follows:

**Financial Management Plans** – Develop multi-year financial plans for the City's water, wastewater, and reclaimed water systems that determine the level of annual revenue required to satisfy projected annual operating, debt service, and capital cost requirements as well as maintain adequate reserves.

**Cost-of-Service Analysis** – Determine the costs of providing water and wastewater services to compare system costs to revenues and allocate the costs of providing the City services to specific system functions for use in developing water and wastewater user rates.

**Rate Design** – Review the City's existing rate structures and develop modifications, as appropriate, to maintain rates that conform to accepted industry practice and reflect the appropriate recovery of system costs. Assess the ability of the rate structures to achieve the City's policy objectives, such as fiscal stability, conservation, and affordability to the greatest extent possible.

**Review & Development of Capacity Fees** – Evaluate the cost impacts of new development following directives of Arizona state statute. Through review of existing City assets, system capacities, and planned capital improvements, provide that growth is paying for the costs of growth in a fair and equitable manner by calculating relevant capacity fees for the water system and wastewater system.

**Miscellaneous Service Fees Calculation** – Review miscellaneous service charges assessed by the City, identify the underlying processes and related costs, and determine the full cost recovery for services provided related to these specific fees.

**Comparative Rate Surveys** – Survey peer utility rates to determine how the City's water, and wastewater rates compare to its peers. Calculate monthly water and wastewater bills to compare cost of services across communities. During this step, it is assumed that utilities likely follow differing asset replacement schedules and deliver different levels of service; therefore, this comparison of bill totals is provided simply as an objective look at peer utility rates and structures.



## 3. FINANCIAL MANAGEMENT PLANS

The analysis of the City's enterprise fund financial management plans (Analysis) presents corresponding forecasts of water, wastewater, and reclaimed water rate revenue adjustments developed in the first technical task of the Study. The following subsections present the key assumptions, source data, scenario analysis results, and recommendations of the financial plans developed for the Utility during the Study, while Appendices A, B, and C include detailed supporting schedules for the recommended financial management plans.

### 3.1 KEY ASSUMPTIONS

To initiate the Analysis, Stantec obtained the Utility's ending fund balances as of June 30, 2022, and historical budgets to evaluate the operations of the Utility. Stantec also obtained the Utility's multi-year capital improvement program (CIP), including annual renewal and replacement requirements comprising annual operating capital expenses. Stantec documented the Utility's current debt service obligations and covenants (promises made to lenders relative to net income coverage requirements) and required reserves. Stantec also discussed with City and Utility staff other assumptions or policies that would affect the financial performance of the Utility, such as billed volumes and customer growth, debt coverage targets, levels of operating and debt reserves, interest earnings, and escalation rates for operating expense categories. Table 3-1 below details the key financial assumptions and adjustments used to complete the Analysis.

**Table 3-1 Key Financial Assumptions and Adjustments**

<b>Assumption</b>	<b>Details</b>
Growth	1.00% annually*
Reserve Targets	90 days O&M
Debt Service Coverage	Target: 1.25x Minimum: 1.20x
Base Operating Budget	“Balanced” O&M budget adjusted to reflect average spending rate, carry-forwards, one-time requests, and operating capital
Cost Escalation Factors	Default inflation factor at 3.5% Chemicals, Utilities, Equipment Maintenance at 6.00%
CIP Escalation	Approved CIP, Informed CIP, and Unfunded CIP adjusted for 4% annual cost escalation beginning in FY2025
Funding Sources	Rate revenues, fund balances, debt, grant funding, and capacity fees
Grant Funding	\$21.9M in Water; \$3.2M in Reclaimed Water
Major Projects	Water – Water Supply Security Projects Wastewater – Wildcat Hill Wastewater Treatment Plant Design & Expansion

\*Reclaimed Water Fund assumes 0% annual growth

This information was entered into Stantec’s proprietary Financial Analysis and Management System (FAMS), and the model produced a 10-year projection of the sufficiency of the Utility’s revenues to meet its current and projected financial requirements. Using FAMS’ graphical outputs, Stantec determined the levels of rate revenue increases necessary in each year of the projection period to generate sufficient revenues to fund the Utility’s cost requirements for each fund. Stantec used the information from the FAMS models to generate multiple rate plans for each enterprise fund, which accommodate three unique CIP funding scenarios for each fund.

Throughout the Analysis, Stantec reviewed the financial management plans with City and Utility staff during weekly interactive working sessions to examine the sensitivity of various inputs and assumptions upon the key financial indicators. The evaluation process resulted in multiple scenarios and rate revenue

adjustment plans that will allow the Utility to fund its cost requirements throughout the projection period and meet its financial performance targets for the ten-year projection period of FY 2024 to FY 2033<sup>1</sup>.

### 3.1.1 Cost Escalation

Annual cost escalation factors for the various types of operating and maintenance expenses were developed based upon a review of historical trends, industry experience, and detailed discussions with City staff. The specific escalation factors assumed for the various categories of expenses can be found on Schedule 5 of Appendices A, B, and C. A CPI-based escalation factor of 3.5% annually was utilized for most operating and maintenance expenses, with the exception of chemicals, utilities, and equipment maintenance which were escalated at 6.00% annually and additional staffing which was escalated at 2.0% annually.

### 3.1.2 Customer Growth & Volume Forecast

New connection and sales projections were based upon a review of historical growth data. Additionally, we considered local environmental and economic conditions as well as discussions with staff regarding the anticipated number of new service connections to the City based on a recent population study.

Schedule 1 in Appendices A, B, & C provide summaries of projected customers and billed volume by system over the projection period.

### 3.1.3 Minimum Reserve Policy

Reserve balances for the City's systems are funds set aside for a specific cash flow requirements, financial needs, projects, tasks, or legal covenants. These balances are maintained in order to meet short-term cash flow requirements, and at the same time minimize the risk associated with meeting the financial obligations and continued operational and capital needs under adverse conditions. The level of reserves maintained by utilities is an important component and consideration of developing a utility system multi-year financial management plan.

Many utilities, rating agencies, and the investment community as a whole place a significant emphasis on having sufficient reserves available for potentially adverse conditions. The rationale related to the maintenance of adequate reserves is twofold. First, it helps to provide adequate funds available to meet financial obligations during unusual periods (i.e. when revenues are unusually low and/or expenditures are unusually high). Second, it provides funds that can be used for emergency repairs or replacements to the system that can occur because of natural disasters or unanticipated system failures.

Stantec has recommended that the water, wastewater, and reclaimed water enterprise funds hold a working capital reserve equal to 3 months of operations and maintenance (O&M) expenses each. Financial policies

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<sup>1</sup> The Analysis begins with FY 2022 data upon which future projections in the ten-year projection period are based.

should articulate how these balances are established, their use, and how to determine the adequacy of the reserve fund balances. The overall targeted levels of operating reserves are consistent with 1) our industry experience for similar systems, 2) the findings of reserve studies conducted by the American Water Works Association (AWWA), and 3) a healthy level of reserves for a municipal City system per the evaluation criteria published by the municipal city rating agencies (Fitch, Moody's, and Standard & Poor's).

It is important to note that once reserve targets are established, they should be reviewed annually during the budgeting process to monitor current levels and assure conformance with stated policies and practices. Decisions can be made to maintain, increase, or spend down the reserve balances, as appropriate, depending upon the impact of such decisions to the upcoming budget period.

### **3.1.4 Future Borrowing & Capital Funding**

It is anticipated that the City will need to issue new debt during the projection period to assist in the funding of the CIP. This analysis assumed that revenue bonds would be utilized with 20-year terms at interest rates of 4.00% in both water and wastewater funds. Schedule 11 of Appendices A and B presents a summary of the capital funding plan including sources and uses, by year, for major capital projects.

### **3.1.5 Debt Service and Coverage**

One of the most important covenants the City makes relative to the issuance of debt is that its annual net revenues will be at least 1.20 times greater than its debt service requirements. These debt service coverage requirements represent the City's minimum requirements. Should the City be unable to meet these requirements, it could be found in technical default. This would result in the City facing a potential downgrade in its credit rating, which would affect the interest rate and terms of any future financing initiatives.

As a policy decision, utilities often measure revenue sufficiency and set rates based upon a higher debt service coverage level to comply with these types of covenants in the event future projections of revenue and expenses do not occur as predicted (due to extended drought conditions, unanticipated capital requirements or operating cost increases, natural disasters, etc.). As a general guide, the financial management plan reports annual debt service coverage in relation to 1.25 times annual debt service.

## **3.2 SOURCE DATA**

The following subsections present key source data relied upon to develop the Analysis.

### **3.2.1 Beginning Fund Balances**

The FY 2022 financial statements provided by City and Utility staff were used to establish the beginning FY 2023 balances for each of the Utility's funds as of July 1, 2022.

### 3.2.2 Revenues

The revenues utilized in the Analysis reflect an evaluation of multiple years of historical budget results, FY 2023 estimates, and the proposed FY 2024 budgets for all three enterprise funds. Revenues consist of rate revenues, capacity fees, interest income, and other miscellaneous revenues<sup>2</sup>. Rate revenue projections are based on FY 2023 and FY 2024 budgets, adjusted annually to reflect assumed customer growth and changes in demand. Capacity fee revenues for water and wastewater are projected based on assumed customer growth and current fees. Task 3 of the Study includes updated capacity fees for water and wastewater based on current Utility assets, debt, capacity-related projects, and level of service. Capacity fee revenue projections in the Analysis could change as a result. Projections of all other revenues reflect the amounts in the FY 2023 and FY 2024 budgets, with the exception of interest income, which was calculated annually based on projected fund balances and assumed interest rates. The water fund is the only enterprise fund expected to obtain federal grant funding in FY 2024, FY 2025, and FY 2027-2030. Stantec used annual grant funding amounts provided by City and Utility staff in this Analysis.

### 3.2.3 Operating Expenditures

The Utility's operating expenditures include all operating and maintenance expenses, transfers, and minor capital outlay. The Analysis based operating and maintenance expenditure projections on the individual expense categories and amounts in the FY 2023 year-end estimates and FY 2024 base budget, adjusted annually thereafter based upon assumed cost escalation factors that were reviewed with City and Utility staff. The projections of individual expense line items were reviewed with City and Utility staff to determine which expenses reflect continuing expenses, one-time expenses, and carry forwards to appropriately estimate future operating expenses to the Utility. The Utility expects to add an average of one full time equivalent (FTE) per year from FY 2025-FY 2033 for the water fund, and one FTE per year from FY 2025-FY2028 for the wastewater fund. The base budgets were then adjusted downward by 10% to reflect historical actual spending patterns compared to budgeted expenses, and projected vacancies or decreases in personnel costs.

### 3.2.4 Debt Service Payments

The annual debt service schedules for existing outstanding debt for the water fund include:

- WIFA loan #920173-10
- WIFA loan #720011-10
- STIFEL Bond refunding 2018

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<sup>2</sup> Capacity fee revenue only generated from new water and wastewater customers. Reclaimed water fund does not generate capacity fee revenue as the water and wastewater fees both contain components of reclaimed water capacity, project costs, and assets.

- Revenue Obligation Bonds 2019
- Utility System Revenue Refunding Obligation Series 2022
- Future issues expected by City and Utility staff and confirmed by the Analysis with annual debt service starting in FY 2024.

The annual debt service schedules for existing outstanding debt for the wastewater fund include:

- Revenue Bonds Series 2017
- Revenue Bonds Series 2019
- Solar Project debt issuance
- Annual debt service payments for future issues starting in FY 2024.

The reclaimed water fund does not currently have any existing outstanding debt, though it is expected to use debt financing for capital improvement projects in the future.

### 3.2.5 Capital Improvement Scenarios

Utility staff provided CIP levels and funding sources for each enterprise fund from FY 2023 to FY 2033. Stantec worked with City and Utility staff to create three CIP funding levels for each fund using the source data provided, resulting in various rate plan options. Table 2 below summarizes the annual average and total funding for each CIP funding level for each enterprise fund escalated by 4% per year starting in FY 2025.

**Table 3-2 Capital Improvement Program Levels (\$M)**

Fund		Approved CIP <sup>1</sup>	Approved + Informed CIP <sup>2</sup>	Approved + Informed + Unfunded CIP <sup>3</sup>
Water	<i>Annual Average</i>	\$13.1	\$19.7	\$20.8
	<i>Total CIP Funding FY24 – FY33</i>	\$130.7	\$196.9	\$207.9
Wastewater	<i>Annual Average</i>	\$8.7	\$10.0	\$12.5
	<i>Total CIP Funding FY24 – FY33</i>	\$86.7	\$99.5	\$124.6
Reclaimed	<i>Annual Average</i>	\$0.5	\$3.3	\$6.9
	<i>Total CIP Funding FY24 – FY33</i>	\$5.2	\$32.8	\$68.6

<sup>1</sup> Conforms to anticipated revenues projected by Utility (partial CIP list).

<sup>2</sup> From complete CIP list informed by Master Plan recommended projects (e.g., Water Infrastructure Master Plan, Sewer Master Plan).

<sup>3</sup> Needed projects without an identified funding source.

### 3.3 RESULTS

Due to the multiple possibilities of CIP funding levels for each fund, Stantec analyzed multiple CIP funding scenarios with Utility staff. Ultimately, the rate plan presented to and accepted by City Council and the Water Commission funds the entire CIP including Approved, Informed, and Unfunded projects from the table above, but defers some larger project further into the future, leading to estimated CIP costs greater than the Approved, Informed, and Unfunded projects combined as presented in Table 3-2. The chosen CIP funding scenario was developed as a result of feedback received during Council Retreat and to comply with the reclaimed water rate cap policy.

The sections below detail the results for each enterprise fund.

#### 3.3.1 Water Fund

The 5-year financial outlook of the water fund as projected by Stantec for the Analysis differs from the City's Balanced 5-year Financial Plan in the following ways:

- The Analysis uses a base operating budget adjusted to reflect average spending levels, carry-forwards, one-time requests, and operating capital.
- The Analysis applied 4% annual cost escalation to the approved CIP starting in FY 2025.
- FY 2023 ending cash balances exclude funds restricted for capacity improvements.

At existing rates, executing the approved CIP, and using the base operating budget, the Analysis projects the water fund would exhaust cash reserves in FY 2026 due to an approximate \$5 million average annual funding gap. To improve the outlook, Stantec ran multiple scenarios of rate adjustments to fund as much CIP as possible. Using the source data for the water fund's CIP provided by the Utility, Stantec adjusted assumptions on annual capital execution and evaluated each scenario based on the rate increases needed to fund differing levels of CIP over time. Table 3-3 below displays the proposed CIP funding and rate plan under the financial plan's 5-year forecast.

**Table 3-3 Water Fund Proposed CIP Funding and Rate Plan: FY24-FY29**

Scenarios	FY24-FY33 CIP Funding Level (\$M)	FY24	FY25	FY26	FY27	FY28	FY29	FY30- FY33 Annual
<b>Proposed Rate Plan</b>	<b>\$215</b>	0.0%	15.0%	15.0%	15.0%	15.0%	15.0%	<b>5.0%</b>

### 3.3.2 Wastewater Fund

The 5-year financial outlook of the wastewater fund as projected by Stantec for the Analysis differs from the City's Balanced 5-year Financial Plan in the following ways:

- The Analysis uses a base operating budget adjusted to reflect average spending levels, carry-forwards, one-time requests, and operating capital.
- The Analysis applied 4% annual cost escalation to the approved CIP starting in FY 2025.
- FY 2023 ending cash balances exclude funds restricted for capacity improvements.

At existing rates, executing the approved CIP, and using the base operating budget, the Analysis projects the wastewater fund would exhaust cash reserves in FY 2025 due to an approximate \$9 million average annual funding gap. To improve the outlook, Stantec ran multiple scenarios of rate adjustments to fund as much CIP as possible. Using the source data for the wastewater fund's CIP provided by the Utility, Stantec adjusted assumptions on annual capital execution and evaluated each scenario based on the rate increases needed to fund differing levels of CIP over time. Table 3-4 below details the proposed CIP funding and rate plan under the financial plan's 5-year forecast.

**Table 3-4 Wastewater Fund Proposed CIP Funding and Rate Plan: FY24-FY29**

Scenarios	FY24-FY33 CIP Funding Level (\$M)	FY24	FY25	FY26	FY27	FY28	FY29	FY30- FY33 Annual
<b>Proposed Rate Plan</b>	<b>\$144</b>	0.0%	25.0%	25.0%	15.0%	10.0%	5.0%	<b>5.0%</b>

### 3.3.3 Reclaimed Water Fund

The 5-year financial outlook of the reclaimed water fund as projected by Stantec for the Analysis differs from the City's Balanced 5-year Financial Plan in the following ways:

- The Analysis uses a base operating budget adjusted to reflect average spending levels, carry-forwards, one-time requests, and operating capital.
- The Analysis applied 4% annual cost escalation to the approved CIP starting in FY 2025.

At existing rates, executing the approved CIP, and using the base operating budget, the Analysis projects the reclaimed water fund would exhaust cash reserves in FY 2029 due to an approximate average annual \$500K funding gap. To improve the outlook, Stantec ran the above defined scenarios of rate adjustments to fund as much CIP as possible. Using the source data for the reclaimed water fund's CIP provided by the Utility, Stantec adjusted assumptions on annual capital execution and evaluated each scenario based



on the rate increases needed to fund differing levels of CIP over time. Table 3-5 below details the proposed CIP funding and rate plan under the financial plan's 5-year forecast.

**Table 3-5 Reclaimed Water Fund Proposed CIP Funding and Rate Plan: FY24-FY29**

Scenarios	FY24-FY33 CIP Funding Level (\$M)	FY24	FY25	FY26	FY27	FY28	FY29	FY30- FY33 Annual
<b>Proposed Rate Plan<sup>1</sup></b>	<b>\$11</b>	0.0%	15.0%	15.0%	15.0%	15.0%	15.0%	<b>5.0%</b>

<sup>1</sup> Alternative option reflects current reclaimed water pricing policy keeping rates capped at 35% of potable water rates.

### 3.4 RECOMMENDATIONS

After meeting with the Water Commission and City Council for separate and joint sessions, Stantec agrees with the recommendation for the Utility to pursue the alternative full funding option for each enterprise fund. This option allows for each fund to recover sufficient revenues to complete its needed capital programs as well as fund-based budget O&M needs and maintain target reserve levels. The FY 2025 rate increases are proposed to be effective September 1, 2024.

**Table 3-6: Recommended FY 2025 - 2029 Rate Revenue Adjustment Plans**

	FY 2025	FY 2026	FY 2027	FY 2028	FY2029
<b>Water Plan</b>	15%	15%	15%	15%	15%
<b>Wastewater Plan</b>	25%	25%	15%	10%	5%
<b>Reclaimed Water Plan</b>	15%	15%	15%	15%	15%

Throughout the Analysis, Stantec worked closely with City and Utility Staff to manage the objectives and prepare alternative approaches for presentation to the City Council and Water Commission. As a result of this task, the following recommendations are made:

- Revisit the financial management plans annually;
- Use FY 2025 revenue requirements for developing cost allocations and rate designs as detailed in the subsequent section of this report.

DRAFT

## 4. COST-OF-SERVICE ANALYSIS AND RATE DESIGN

### 4.1 BACKGROUND AND OBJECTIVES

Following the calculation of revenue requirements for FY 2025 – FY2029 in the long-term financial planning models, the cost-of-service (COS) analysis and rate design evaluation was completed. This section outlines the steps completed in the COS analysis and presents the rates resulting from the rate design analysis to better achieve the City's priorities.

The following steps form the foundation for development and recommendation of legal, proportional, and reasonable rates:

- Determine the revenue requirements for a specified annual period referred to as a test year. Revenue requirements are defined as the revenue the Utility must recover from the rates charged to customers that meet the operating and capital expenditures anticipated for the test year. The revenue requirements were described in more detail in the financial planning results section. For purposes of evaluating alternative rates and rate structures, FY 2025 is set as the test year.
- Allocate the revenue requirements to functions and customer classes. Following cost allocation guidelines from AWWA and WEF, revenue requirements are allocated to functions of the water and wastewater systems as well as to specific customer classes based on how various classes actually use the system functions. Demand characteristics of customer classes and allocations of costs to customer classes are summarized in this section.
- Determine rates for service. Rates are based on the allocated costs of service for each customer class, meaning that recommended rates for a given class reflect the cost of serving that class. In this Study, Stantec recommends several changes to the water and wastewater rate structures based on Council direction. Proposed rates are presented for FY 2025 through FY 2029. The effective date for the rate adjustment is September 1, 2024.

### 4.2 WATER COST-OF-SERVICE RESULTS

The financial planning analysis for the Water Fund evaluated the sufficiency of the Utility's revenues to meet all current and projected financial requirements over a 10-year projection period. More importantly to this Study, it determined the level of rate revenue adjustments necessary in each year of the projection period to provide sufficient revenues to fund the water system cost requirements. This section focuses on the Water Fund revenue requirements, cost allocations, and cost-of-service results.

### 4.2.1 Revenue Requirement Allocations to Functions

For Fiscal Year (FY) 2024, operating, debt service, and capital expenditures totaled \$23.2 million. The Financial Planning Analysis and COS revealed that, by drawing down reserves \$5.3 million and collecting non-rate revenues of \$2.7 million, the Utility has a rate revenue requirement of \$15.2 million for FY 2024. For FY 2025, total operating, debt, and capital expenditures, are anticipated to be \$24.6 million. Under the assumption that the Water Fund will reduce reserves by \$5.0 million and collect non-rate revenues of \$2.6 million, rate revenue requirements are projected to be \$17.0 million for FY 2025, a 12% increase from FY 2024. Since FY 2025 rates are not anticipated to go into effect until September 2024, a 12% rate revenue increase will be accomplished through a 15% rate increase, distributed among customer classes based on cost-of-service results. Table 4-1 below displays FY 2024 and 2025 rate revenue requirements, summarizing total expenditures by type and uses of reserves and non-rate revenues.

**Table 4-1 FY 2024 and FY 2025 Rate Revenue Requirements - Water**

<b>Water Fund</b>	<b>FY 2024 (millions)</b>	<b>FY 2025 (millions)</b>
<b>Operations &amp; Maintenance</b>	\$11.8	\$15.6
<b>Debt Service</b>	\$1.8	\$1.8
<b>Capital</b>	\$9.6	\$7.2
<b>Total Expenditures</b>	<b>\$23.2</b>	<b>\$24.6</b>
<b>Use of Reserves</b>	(\$5.3)	(\$5.0)
<b>Non-Rate Revenue</b>	(\$2.7)	(\$2.6)
<b>Rate Revenue</b>	<b>\$15.2</b>	<b>\$17.0</b>

In conjunction with Utility Staff, Stantec allocated the City's water costs that determine the rate revenue requirements in COS analysis to determine the under or over-recovery of revenues generated from each customer class based on existing rates, accounts, and usage. The COS analysis evaluated projected FY 2025 annual costs the Utility will incur to provide its customers water service and fund the full capital improvement program (CIP). The analysis determined the portion of system costs that are allocable to water resources, water production, transmission/distribution, administration, meters/services, and direct fire protection functions. After reviewing functional allocations with Utility staff, the resulting distribution of costs across functions was determined. Table 4-2 presents the functional allocation of the FY 2025 rate revenue requirement.

**Table 4-2 Functional Allocation of FY 2025 Rate Revenue Requirement**

<b>Water Function</b>	<b>Water Resources</b>	<b>Water Production</b>	<b>Transmission/Distribution</b>	<b>Administration</b>	<b>Meters/Services</b>	<b>Fire Protection</b>	<b>Total</b>
Millions of Dollars	\$4.2	\$5.0	\$6.3	\$0.5	\$0.9	\$0.1	<b>17.0</b>
Percent of Total	24.6%	29.6%	37.1%	2.8%	5.3%	0.6%	<b>100%</b>

### 4.2.2 Allocations to Base-Extra Capacity

Customer classes require water service depending on each class's usage characteristics, which vary across customer class in terms of both total volume and peaking factors. Stantec analyzed customer class billable usage for FY 2023 as well as peaking behaviors on a base-extra capacity basis. Under the base-extra capacity method of cost allocation, costs are separated into four primary cost components: base costs, extra capacity costs, customer costs, and direct fire protection costs (AWWA Manual M1).<sup>3</sup> Each functional cost in section 4.2.1 above was allocated in the COS across average day usage, max day usage, max hour usage, fire protection, and customer costs so that functional costs can be allocated across customer classes based on usage characteristics and peaking behaviors. Table 4-3 below displays the percentage distribution of each functional cost category across the base-extra capacity components.

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<sup>3</sup> American Water Works Association, Manual M1, Principles of Water Rates, Fees, and Charges, 7<sup>th</sup> ed

**Table 4-3 Percent Allocation of FY 2025 Costs Across Functions**

Water Function	Base Capacity – Average Day	Extra Capacity – Max Day	Extra Capacity – Peak Hour	Fire Protection	Customer
Water Resources	100%	0%	0%	0%	0%
Water Production	67%	33%	0%	0%	0%
Transmission/Distribution	52%	25%	23%	0%	0%
Administration	0%	0%	0%	0%	100%
Meters/Services	0%	0%	0%	0%	100%
Fire Protection	0%	0%	0%	100%	0%

### 4.2.3 Allocations to Customer Classes

In order to allocate the functionalized costs for FY 2025 across customer classes, the Analysis requires summarizing FY 2023 billable units and estimating FY 2024 billable units. Table 4-4 presents the analysis of billable customer units for FY 2023, with projected consumption for FY 2024 used in the COS analysis. The adjustment in FY 2024 usage was calculated to recover budgeted revenue in FY 2024 based on FY 2023 billable units.

**Table 4-4 FY 2023 and 2024 Billable Units – Water**

Customer Class	2023 Usage (KGAL)	2024 Usage (KGAL)	% Increase in Usage	Max Day Peaking Factor	Max Hour Peaking Factor	ERUs
Single Family	744,542	755,553	1.48%	214%	321%	16,348
Multi Family	550,670	558,814	1.48%	123%	247%	3,541
Commercial	616,305	625,420	1.48%	159%	238%	2,450
Landscape	75,873	76,995	1.48%	363%	544%	444
Manufacturing	63,721	64,663	1.48%	137%	206%	73
Institutional	162,456	164,859	1.48%	183%	274%	61
Hydrant	606	606	0.00%	NA	NA	0
Standpipe	28,600	28,600	0.00%	NA	NA	0
<b>Total</b>	<b>2,242,773</b>	<b>2,275,510</b>	<b>1.46%</b>	<b>NA</b>	<b>NA</b>	<b>22,918</b>

The resulting COS outcome based on FY 2025 cost allocations and estimated customer billable units are presented in the charts below. Figure 4-1 displays the Residential and Multi Family COS results, while Figure 4-2 shows the COS for all other customer classes.

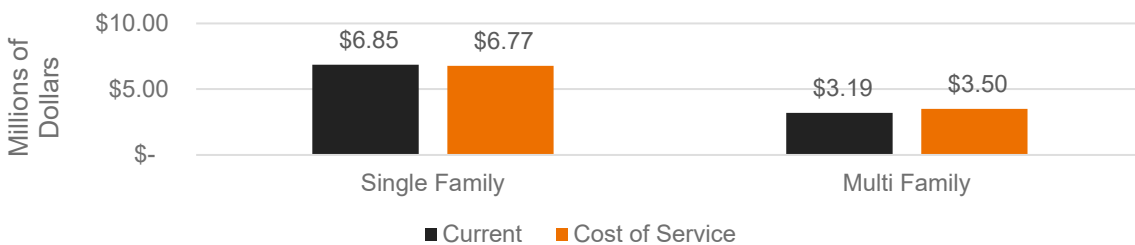


Figure 4-1: Residential and Multi Family COS Results

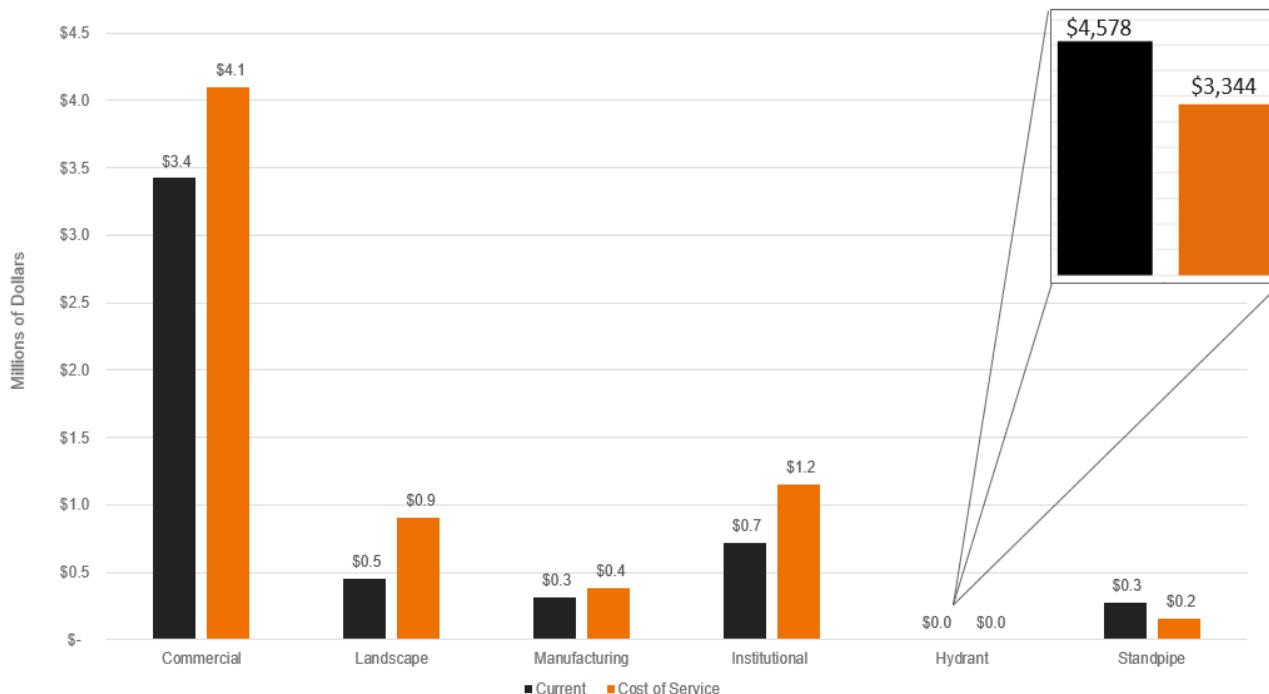


Figure 4-2: All Other Classes COS Results

### 4.3 WASTEWATER COST-OF-SERVICE RESULTS

The financial planning analysis for the Wastewater Fund evaluated the sufficiency of the Utility’s revenues to meet all current and projected financial requirements over a 10-year projection period. It also determined the level of rate revenue adjustments necessary in each year of the projection period to provide sufficient revenues to fund the wastewater system cost requirements. This section focuses on the Wastewater Fund revenue requirements, cost allocations, and cost-of-service results.

#### 4.3.1 Revenue Requirement Allocations to Functions

For the Wastewater Fund in FY 2024, operating, debt service, and capital expenditures total \$19.2 million. Drawing down reserves by \$7.7 million and collecting non-rate revenues of \$0.9 million leads to a rate revenue requirement of \$10.6 million for FY 2024. For FY 2025, total operating, debt, and capital expenditures, are anticipated to be \$17.3 million. Drawing down reserves by \$3.7 million and collecting



non-rate revenues of \$0.6 million results in a rate revenue requirement of \$13.0 million for FY 2025, a 22% increase from FY 2024. Since FY 2025 rates are not anticipated to go into effect until September 2024, a 22% rate revenue increase will be accomplished through a 25% rate increase, distributed among customer classes based on cost-of-service results. Table 4-5 below displays FY 2024 and 2025 rate revenue requirements, breaking down total expenditures by type and uses of reserves and non-rate revenues.

**Table 4-5 FY 2024 and FY 2025 Rate Revenue Requirements - Wastewater**

<b>Water Fund</b>	<b>FY 2024 (millions)</b>	<b>FY 2025 (millions)</b>
<b>Operations &amp; Maintenance</b>	\$8.3	\$8.7
<b>Debt Service</b>	\$2.6	\$3.1
<b>Capital</b>	\$8.3	\$5.5
<b>Total Expenditures</b>	<b>\$19.2</b>	<b>\$17.3</b>
<b>Use of Reserves</b>	(\$7.7)	(\$3.7)
<b>Non-Rate Revenue</b>	(\$0.9)	(\$0.6)
<b>Rate Revenue</b>	<b>\$10.6</b>	<b>\$13.0</b>

In conjunction with Utility Staff, Stantec allocated the City's wastewater costs that determine the rate revenue requirements in a COS analysis to determine the under or over-recovery of revenues generated from each customer class. The COS analysis evaluated projected FY 2025 annual costs the Utility will incur to provide its customers wastewater service and fund the full capital improvement program (CIP). The analysis determined the portion of system costs that are allocable to wastewater treatment, collection, interceptors, and administration functions. After reviewing functional allocations with Utility staff, the resulting distribution of costs across functions were determined. Table 4-6 presents the functional allocation of the FY 2025 rate revenue requirement.

**Table 4-6 Functional Allocation of FY 2025 Rate Revenue Requirement**

Wastewater Function	Treatment	Collection	Interceptors	Administration	Total
Millions of Dollars	\$6.8	\$2.8	\$1.7	\$1.7	<b>\$13.0</b>
Percent of Total	52.4%	21.8%	12.8%	13.0%	<b>100%</b>

Functionalizing the rate revenue requirement for FY 2025 allows for the Analysis to distribute costs to customer classes based on billable units in terms of flow, strength/loadings, and bills or ERUs. In order to distribute costs based on billable units, each functional cost category must be further broken down into flow components, strength/loading components in terms of biochemical oxygen demand (BOD) and total suspended solids (TSS), and customer components. Table 4-7 below displays the percentage allocation of functional costs across flow, BOD, TSS, and customers. Treatment costs were allocated across flow, BOD, and TSS based on data provided by Utility staff regarding functionalized Net Plant Investment values. All collection and interceptor costs were allocated to flow, and all administrative costs were allocated to customers.

**Table 4-7 Percent Allocation of FY 2025 Costs Across Flow, Loadings, and Customers**

Wastewater Function	Flow	BOD	TSS	Customer
Treatment	53.2%	28.0%	18.8%	0%
Collection	100%	0%	0%	0%
Interceptors	100%	0%	0%	0%
Administration	0%	0%	0%	100%

### 4.3.2 Allocations to Customer Classes

In order to allocate the functionalized costs for FY 2025 across customer classes, the Analysis required summarizing FY 2023 billable units and estimating FY 2024 billable units. Table 4-8 presents the analysis of billable customer units for FY 2023, with projected consumption for FY 2024 used in the COS analysis. The adjustment in FY 2024 usage was calculated to recover budgeted revenue in FY 2024 based on FY 2023 billable units. The BOD and TSS concentration assumptions were applied based on a variety of data sources. The Residential and Multifamily concentration assumptions were applied at the concentration surcharge thresholds based on Flagstaff City Code. The concentration assumptions for

Hotels & Motels, Restaurants, Industrial Laundries, and Institutional customers were taken from the California Revenue Program Guidelines. All other customer class assumptions were provided by Utility staff from Flagstaff City Code.

**Table 4-8 Percent Allocation of FY 2025 Costs Across Flow, Loadings, and Customers<sup>2</sup>**

Customer Class	2023 Billable Volume (KGAL)	2024 Billable Volume (KGAL)	% Increase in Usage	BOD Concentration (MG/L)	TSS Concentration (MG/L)	ERUs
Residential & Multifamily	1,115,798	1,169,861	4.85%	300	350	253,988
Car Washes	24,570	25,761	4.85%	20	150	437
Laundromats	7,893	8,275	4.85%	150	110	267
Commercial	270,276	283,371	4.85%	200	175	37,833
Institutional	105,650	110,769	4.85%	130	100	2,488
Hotels & Motels	143,353	150,299	4.85%	310	120	5,601
Restaurants	64,844	67,986	4.85%	1,000	600	3,550
Industrial Laundries	9,342	9,795	4.85%	670	680	120
Manufacturing	19,425	20,367	4.85%	200	175	1,050
Pet Food Manufacturing	4,692	4,920	4.85%	701	527	296
Ice Cream Cone Manufacturing	1,312	1,375	4.85%	9,700	100	120
<b>Total</b>	<b>1,767,155</b>	<b>1,852,778</b>	<b>4.85%</b>	<b>NA</b>	<b>NA</b>	<b>305,750</b>

The resulting COS outcome based on FY 2025 cost allocations and estimated customer billable units are presented in the chart below. Figure 4-3 displays the COS results for residential customer classes while Figure 4-4 displays the COS results for all other customer classes.

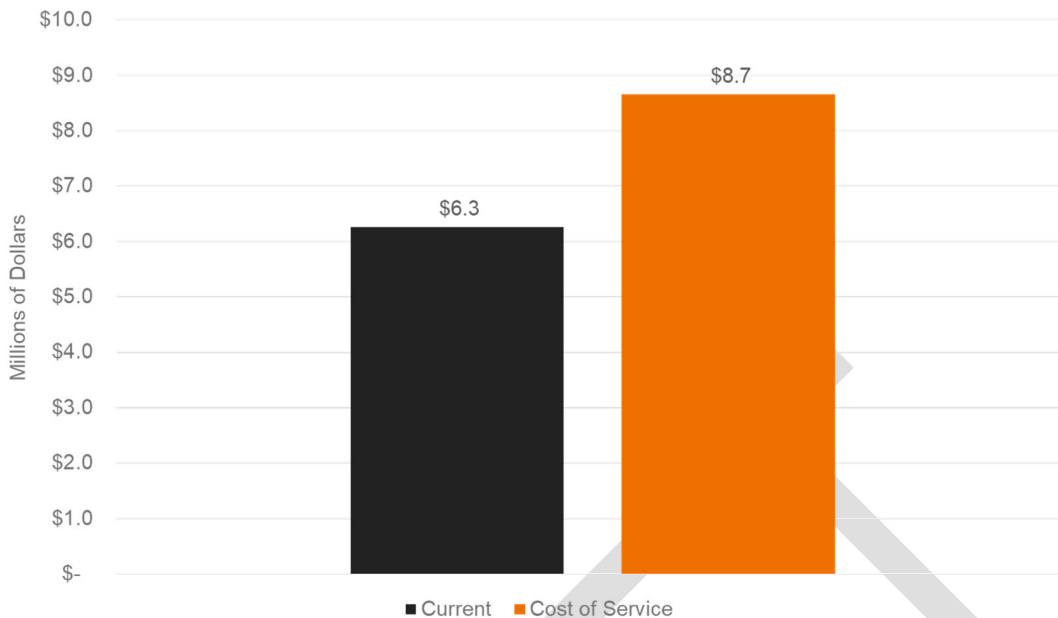


Figure 4-3: FY 25 Wastewater COS Results for Residential Customers

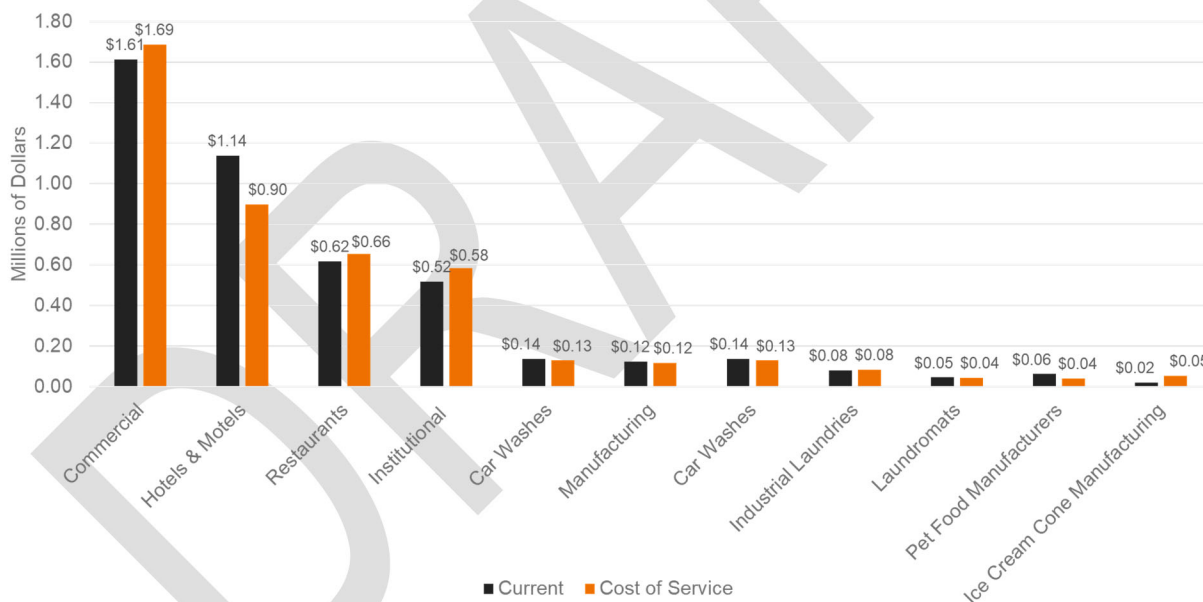


Figure 4-4: FY 25 Wastewater COS Results by Customer Class

### 4.4 WATER RATE DESIGN RESULTS

Stantec and Utility staff used the COS results to create rates that recover necessary costs for the Water Fund while also accomplishing the strategies and priorities set forth by the City of Flagstaff. These priorities include:

- Revenue stability

- Conservation/demand management
- Administrative burden
- Proportionality (or equity) between classes and within a class
- Affordability

Currently, the Utility collects 29% of rate revenue through fixed charges (policy minimum for the Water Fund is 25%) and the remaining rate revenue through volume charges. The Single Family customer class has tiered volume rates reflecting an inclining block structure, while all other classes have just one volumetric rate per 1,000 gallons. The current water rate schedule is presented in Figure 4-5.

<b>CITY OF FLAGSTAFF WATER &amp; SEWER RATES</b>				
Effective January 1, 2024 (**Subject to Change**)				
<b>MONTHLY FIXED CHARGE</b>				
Meter Size:		Customer Class	Inside City Rate	Outside City Rate
3/4"		All	\$16.64	\$18.30
1"		All	\$19.60	\$21.56
1 1/2"		All	\$26.98	\$29.68
2"		All	\$35.84	\$39.42
3"		All	\$56.52	\$62.17
4"		All	\$86.05	\$94.66
6"		All	\$159.88	\$175.87
8"		All	\$248.47	\$273.32
10"		All	\$351.83	\$387.01
<b>WATER RATES</b>				
POTABLE WATER: (per 1,000 gallons)		Customer Class	Water Rate	Outside City Rate
Single Family	Tier 1 (0 - 3,500 gallons)	R1 or R4	\$3.44	\$3.78
	Tier 2 (3,501 - 6,200 gallons)		\$4.45	\$4.90
	Tier 3 (6,201 - 11,500 gallons)		\$6.86	\$7.55
	Tier 4 (11,501+ gallons)		\$13.72	\$15.09
Multi-Family Units	R2 or R3	\$4.42	\$4.86	
Commercial/Schools	C	\$4.69	\$5.16	
Institutional	NA	\$4.30		
Manufacturing	MN	\$4.63	\$5.09	
Landscaping/Lawn Meters	LM	\$4.69	\$5.16	
Hydrant Meter	HM	\$7.17	\$7.89	
Standpipe	SP	\$9.56		

**Figure 4-5: Current Water Rate Structure**

The sections below detail the resulting rates from the Analysis for water based on the COS results and the priorities listed above.

#### 4.4.1 Proposed FY 2025 Water Rate Structure

Stantec and Utility staff worked through multiple City Council and Water Commission sessions to arrive at the proposed FY 2025 Water Rate Structure. Currently, the Utility collects 29% of its rate revenue through fixed charges. Recovering 29% of rate revenue through fixed charges can be beneficial to the Utility by protecting against potential changes in demand and helping to boost bond ratings. However, the City of Flagstaff's priorities include encouraging conservation and demand management, as well as maintaining affordability. Revenue stability is also a priority for Flagstaff, and the Utility maintains a best practice policy to collect a minimum of 25% of rate revenue through fixed charges. Adhering to this policy, Stantec used rate design principles and the COS results to produce a rate plan which recovers 25% of rate revenue through fixed charges. This rate structure is designed to achieve 25% of fixed rate revenue recovery for revenue stability, while also addressing conservation and affordability goals by increasing volumetric rates while reducing the monthly fixed charge paid by customers with a standard ¾" meter.

Table 4-9 presents the current and proposed fixed rates, while Table 4-10 presents the current and proposed volumetric rates for FY 2025. All rates represent the inside-City rates. Outside-City rates include a 10% surcharge.

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**Table 4-9 Current and Proposed Fixed Charges (Inside City)**

<b>Meter Size</b>	<b>Current Rate (FY24)</b>	<b>FY 25 Fixed Charge (25% Cost Recovery)</b>
¾"	\$16.64	\$14.33
1"	\$19.60	\$19.86
1 ½"	\$26.98	\$33.66
2"	\$35.84	\$50.23
3"	\$56.52	\$102.68
4"	\$86.05	\$144.10
6"	\$159.88	\$364.97
8"	\$248.47	\$447.80
10"	\$351.83	\$1,165.64
<b>Annual Cost Recovery (millions)</b>		<b>\$4.3</b>

**Table 4-10 Current and Proposed Volume Charges (Inside City)**

Customer Class		Tier Price Ratio	Current Rate (FY 24)	FY 25 Volume Charge (per 1,000 gallons) (75% Cost Recovery)
Single Family	Tier One	0.93	\$3.44	\$4.39
	Tier Two	1.00	\$4.45	\$4.72
	Tier Three	2.00	\$6.86	\$9.43
	Tier Four	4.00	\$13.72	\$18.86
Multi-family			\$4.42	\$4.97
Commercial/Schools			\$4.69	\$5.88
Landscape			\$4.69	\$10.51
Manufacturing			\$4.63	\$5.56
Institutional			\$4.30	\$5.88
Hydrant			\$7.17	\$7.60
Standpipe			\$9.56	\$7.55
<b>Annual Cost Recovery (millions)</b>				<b>\$12.7</b>

Figure 4-6 below shows the five-year rate plan under Option 3 Revised.



MONTHLY FIXED CHARGE							
		Current Fixed Charge	September 1st, 2024 - December 31st, 2025	January 1st, 2026 - December 31st, 2026	January 1st, 2027 - December 31st, 2027	January 1st, 2028 - December 31st, 2028	January 1st, 2029 - December 31st, 2029
Meter Size:	Inside City Limits	Inside City Limits	Inside City Limits	Inside City Limits	Inside City Limits	Inside City Limits	Inside City Limits
0.75	\$16.64	\$14.33	\$16.48	\$18.96	\$21.80	\$25.07	
1	\$19.60	\$19.86	\$22.83	\$26.26	\$30.20	\$34.73	
1.5	\$26.98	\$33.66	\$38.71	\$44.52	\$51.19	\$58.87	
2	\$35.84	\$50.23	\$57.76	\$66.42	\$76.39	\$87.85	
3	\$56.52	\$102.68	\$118.09	\$135.80	\$156.17	\$179.59	
4	\$86.05	\$144.10	\$165.71	\$190.57	\$219.15	\$252.03	
6	\$159.88	\$364.97	\$419.72	\$482.67	\$555.08	\$638.34	
8	\$248.47	\$447.80	\$514.97	\$592.21	\$681.05	\$783.20	
10	\$351.83	\$1,165.64	\$1,340.48	\$1,541.55	\$1,772.79	\$2,038.71	

WATER RATES							
		Current Volume Charge	September 1st, 2024 - December 31st, 2025	January 1st, 2026 - December 31st, 2026	January 1st, 2027 - December 31st, 2027	January 1st, 2028 - December 31st, 2028	January 1st, 2029 - December 31st, 2029
POTABLE WATER: (per 1,000 gallons)		Inside City Limits	Inside City Limits	Inside City Limits	Inside City Limits	Inside City Limits	Inside City Limits
Single Family	Tier 1 (0 - 3,500 gallons)	\$3.44	\$4.39	\$ 5.04	\$ 5.80	\$ 6.67	\$ 7.67
	Tier 2 (3,501 - 6,200 gallons)	\$4.45	\$4.72	\$ 5.42	\$ 6.24	\$ 7.17	\$ 8.25
	Tier 3 (6,201 - 11,500 gallons)	\$6.86	\$9.43	\$ 10.85	\$ 12.47	\$ 14.34	\$ 16.50
	Tier 4 (11,501+ gallons)	\$13.72	\$18.86	\$ 21.69	\$ 24.95	\$ 28.69	\$ 32.99
Multi-Family		\$4.42	\$4.97	\$ 5.72	\$ 6.57	\$ 7.56	\$ 8.69
Commercial/Schools		\$4.69	\$5.88	\$ 6.76	\$ 7.78	\$ 8.94	\$ 10.29
Institutional		\$4.30	\$5.88	\$ 6.76	\$ 7.78	\$ 8.94	\$ 10.29
Manufacturing		\$4.63	\$5.56	\$ 6.39	\$ 7.35	\$ 8.45	\$ 9.72
Landscaping/Lawn Meters		\$4.69	\$10.51	\$ 12.09	\$ 13.90	\$ 15.99	\$ 18.39
Hydrant Meter		\$7.17	\$7.60	\$ 8.74	\$ 10.05	\$ 11.56	\$ 13.29
Standpipe**		\$9.56	\$7.55	\$ 8.68	\$ 9.98	\$ 11.48	\$ 13.20

Figure 4-6: Five Year Water Rates Under Option 3 Revised

#### 4.4.2 Bill Impacts

Under the proposed FY 2025 rate structure, Stantec calculated bill impacts for typical customers from various customer classes. Using the billing data provided by the Utility, Stantec determined representative customer characteristics for each customer class. Table 4-11 below presents the typical bill impacts resulting from the FY 2025 rate increase effective September 1, 2024 as well as the proposed 15% FY 2026 rate increase effective January 1, 2026. Proposed rate increases from 2026 through 2029 are 15% annually.

**Table 4-11 Bill Impacts Under Proposed Rate Plan – FY24 to FY26**

Customer Class	Rep. Meter Size	Avg. Bill Volume (kgals)	Avg. FY 2024 Water Bill	Effective Date 9/1/2024			Effective Date 1/1/2026 (15% Rate Increase)	
				Total Bill*	\$ Change	% Change	Total Bill*	\$ Change
				Single Family	¾"	4	\$30.91	\$32.04
Multi-family	1"	9	\$59.38	\$64.59	\$5.21	8.8%	\$74.28	\$9.69
Commercial/ Schools	1"	40	\$207.20	\$255.08	\$47.88	23.1%	\$293.34	\$38.26
Landscape	1"	24	\$132.16	\$272.10	\$139.94	105.9%	\$312.92	\$40.82
Manufacturing	1.5"	73	\$364.97	\$439.54	\$74.57	20.4%	\$505.47	\$65.93
Institutional	8"	2,165	\$9,557.97	\$13,179.22	\$3,621.25	37.9%	\$15,156.10	\$1,976.88

## 4.5 WASTEWATER RATE DESIGN RESULTS

Stantec and Utility staff used the COS results to create rates that recover necessary costs for the Wastewater Fund while also accomplishing the strategies and priorities set forth by the City of Flagstaff. These priorities include:

- Revenue stability
- Conservation/demand management
- Administrative burden
- Proportionality (or equity) between classes and within a class
- Affordability

Currently, the Utility collects all of the wastewater rate revenue through volumetric charges and does not charge a fixed fee for wastewater services. Residential customers are billed based on winter quarter

average (WQA) water usage, while non-residential customers are charged based on billable water flows. Figure 4-7 shows the current wastewater rate schedule as of January 1, 2024.

SEWER RATES			
SEWER: (per 1,000 gallons)	Customer Class	Inside City Rate	Outside City Rate
<b>Residential</b>			
*Single- and Multi-Family	R1 - R4	\$5.35	\$5.89
<b>Non-Residential</b>			
Car Washes	CW	\$5.38	\$5.92
Laundromats	L	\$5.53	\$6.08
Commercial	C	\$5.68	\$6.25
Hotels & Motels	H	\$7.58	\$8.34
Restaurants	RF	\$9.09	\$10.00
Industrial Laundries	IL	\$8.36	\$9.20
Manufacturing	MN	\$6.09	\$6.70
Pet Food Manufacturers	PF	\$13.34	\$14.67
Soft Drink Bottling	SD	\$10.57	\$11.63
Ice Cream Cone Manufacturing	IC	\$16.48	\$18.13
NAU	NA	\$4.91	\$5.40

\*Residential usage based on WQA (usage billed in winter months of December, January, February, March)

**Figure 4-7: Current Wastewater Rate Schedule**

The sections below detail the resulting rate structure from the Analysis for wastewater based on the COS results and the priorities listed above.

#### 4.5.1 Proposed FY 2025 Wastewater Rate Structure

The proposed wastewater rate plan was calculated to recover 25% of FY 2025 revenue requirements from a monthly fixed charge by meter size. The charge was determined by evaluating the total number of connections to the wastewater system, identifying the water meter size associated with those connections, and determining an ERU total using factors from the AWWA manuals on flow rates for different meter sizes. These ERUs represent the potential usage of the wastewater system.

The remaining 75% of revenue requirements is recovered through the same sewer rate structure as currently in place – uniform volume rates per 1,000 gallons of billed sewer flow by class. These rates have been adjusted for the costs of service by class. Table 4-12 shows the proposed fixed charge per ERU, while Table 4-13 presents the proposed volumetric rates under the proposed rate structure for FY 2025. All rates represent the inside-City rates. Outside-City rates include a 10% surcharge.

**Table 4-12 Proposed Wastewater Fixed Charges (Inside City)**

Meter Size	ERU Factor	FY 25 Fixed Charge (25% Cost Recovery)
¾"	1.00	\$10.39
1"	1.67	\$17.32
1 ½"	3.33	\$34.63
2"	5.33	\$55.41
3"	11.67	\$121.22
4"	16.67	\$173.17
6"	33.33	\$346.33
8"	53.33	\$554.13

The priority of administrative burden and complexity of the rate structure was addressed by consolidation of the non-residential customer classes. The City has maintained individual customer classes for non-residential type customers with rates that reflect a combination of flows and strengths for many years. To simplify the current structure, Stantec proposes a consolidation of non-residential customers into classes with like flow and strength characteristics. While variations in flows and strengths exist, the three non-residential classes present a range of loadings (flows and strengths) for each class that can be used to evaluate where a new customer belongs in the consolidated structure. As new customers are added, it is important to assign the customer to the correct class.

The remaining revenue requirements after applying a fixed charge to recover 25% of rate revenue will be recovered through a uniform volume rate for residential customers and for three non-residential classes:

- Non-residential A
- Non-residential B
- Non-residential C

The non-residential classes' rates are calculated to recover the total costs of service for customers in the consolidated classes. Therefore, the volume rates per 1,000 gallons of billed flows are based on the COS results. New non-residential customers can be assumed to fall under the Non-residential A classification unless they are a higher strength industrial manufacturer.

Table 4-13 below presents the proposed volumetric rates for FY 2025. All rates represent the inside-City rates. Outside-City rates include a 10% surcharge.

**Table 4-13 Proposed Wastewater Volume Charges (Inside City)**

Consolidated Class	Customer Class	Current Rate (FY 24)	FY 25 Consolidated Volume Charge (75% Cost Recovery)
Residential	Residential	\$5.35	\$5.50
Non-Residential A	Car Washes	\$5.38	\$4.45
	Laundromats	\$5.53	
	Commercial	\$5.68	
	Institutional	\$4.91	
	Manufacturing	\$6.09	
	Hotels & Motels	\$7.58	
Non-Residential B	Restaurants	\$9.09	\$7.05
	Industrial Laundries	\$8.36	
	Pet Food Manufacturers	\$13.34	
Non-Residential C	Ice Cream Cone Manufacturing	\$16.48	\$29.96

Figure 4-6 below shows the five-year rate plan for the proposed Wastewater Fund rates.

<b>SEWER RATES - Proposed (Fixed Charge)</b>					
	September 1st, 2024 - December 31st, 2025	January 1st, 2026 - December 31st, 2026	January 1st, 2027 - December 31st, 2027	January 1st, 2028 - December 31st, 2028	January 1st, 2029 - December 31st, 2029
Meter Charge	Inside City Limits	Inside City Limits	Inside City Limits	Inside City Limits	Inside City Limits
0.75	\$10.39	\$12.99	\$14.94	\$16.43	\$17.25
1	\$17.32	\$21.65	\$24.90	\$27.39	\$28.76
1.5	\$34.63	\$43.29	\$49.78	\$54.76	\$57.50
2	\$55.41	\$69.26	\$79.65	\$87.62	\$92.00
3	\$121.22	\$151.53	\$174.25	\$191.68	\$201.26
4	\$173.17	\$216.46	\$248.93	\$273.83	\$287.52
6	\$346.33	\$432.91	\$497.85	\$547.63	\$575.02
8	\$554.13	\$692.66	\$796.56	\$876.22	\$920.03

<b>SEWER RATES - Proposed (Volume)</b>					
	September 1st, 2024 - December 31st, 2025	January 1st, 2026 - December 31st, 2026	January 1st, 2027 - December 31st, 2027	January 1st, 2028 - December 31st, 2028	January 1st, 2029 - December 31st, 2029
SEWER: (per 1,000 gallons)	Inside City Limits	Inside City Limits	Inside City Limits	Inside City Limits	Inside City Limits
<b>Residential</b>					
Residential	\$5.50	\$6.88	\$7.91	\$8.70	\$9.13
<b>Non-Residential</b>					
Non-Residential A	\$4.45	\$5.56	\$6.40	\$7.04	\$7.39
Non-Residential B	\$7.05	\$8.81	\$10.13	\$11.15	\$11.71
Non-Residential C	\$29.96	\$37.45	\$43.07	\$47.37	\$49.74

\*Residential usage based on WQA (usage billed in winter months of December, January, February, March)

**Figure 4-8 Five-Year Wastewater Rates Under Proposed Rate Plan**

**4.5.2 Bill Impacts**

Under the proposed FY 2025 rate structure, customers will see an effect on their current monthly bills due to the revenue requirements for FY 2025, the adjustment for COS results, and the new rate structure. The table below presents average monthly bill impacts for each customer class for each of the rate options. Average bill impacts in this table means all monthly bills for 12 months for each customer class were averaged to calculate a change in those monthly bills as a result of the rate structure. These may not represent typical bills for the class due to variations in usage and meter size for each class.

**Table 4-14 Potential Bill Impacts for Typical Customer Attributes (Inside City)**

Customer Class	Number of Accounts	Common Meter Size	Common Bill Volume (kgals)	Average FY 2023 Bill	Average FY 25 Bill Impact Under Proposed Rate Structure
Residential	21,080	¾"	4.88	\$26.13	\$12.23
Car Washes	13	1 ½"	160.59	\$863.97	(\$119.54)
Laundromats	6	2"	157.85	\$872.92	(\$114.92)
Commercial	1,402	1"	17.60	\$99.96	\$2.73
Institutional	8	4"	9,559	\$46,932.24	(\$1,793.00)
Manufacturing	27	1 ½"	61.74	\$375.99	(\$67.03)
Hotels & Motels	97	2"	126.75	\$960.76	(\$350.09)
Restaurants	132	1"	40.86	\$371.41	(\$60.00)
Industrial Laundries	1	3"	778.52	\$6,508.40	(\$896.64)
Pet Food Manufacturers	1	3"	391.04	\$5,216.47	(\$2,230.00)
Ice Cream Cone Manufacturing	1	3"	109.3	\$1,801.23	\$1,595.00

### 4.6 RECLAIMED WATER RATE DESIGN RESULTS

The Utility has established reclaimed water rates for various customer classes as a percentage of potable water rates per 1,000 gallons. The fixed charges for reclaimed water are the same as for potable water. The proposed water rate structure for FY 2025 will be implemented and the reclaimed water rates will reflect customer classes respective percentage of potable rates. Council direction was to evaluate more fully the reclaimed water rates within the next year. Figure 4-8 presents the current and proposed reclaimed water fixed and volume rates through FY 2029.

<b>MONTHLY FIXED CHARGE</b>							
		<b>Current Fixed Charge</b>	<b>September 1st, 2024 - December 31st, 2025</b>	<b>January 1st, 2026 - December 31st, 2026</b>	<b>January 1st, 2027 - December 31st, 2027</b>	<b>January 1st, 2028 - December 31st, 2028</b>	<b>January 1st, 2029 - December 31st, 2029</b>
<b>Meter Size:</b>			<b>Inside City Limits</b>	<b>Inside City Limits</b>	<b>Inside City Limits</b>	<b>Inside City Limits</b>	<b>Inside City Limits</b>
0.75		\$16.64	\$14.33	\$16.48	\$18.96	\$21.80	\$25.07
1		\$19.60	\$19.86	\$22.83	\$26.26	\$30.20	\$34.73
1.5		\$26.98	\$33.66	\$38.71	\$44.52	\$51.19	\$58.87
2		\$35.84	\$50.23	\$57.76	\$66.42	\$76.39	\$87.85
3		\$56.52	\$102.68	\$118.09	\$135.80	\$156.17	\$179.59
4		\$86.05	\$144.10	\$165.71	\$190.57	\$219.15	\$252.03
6		\$159.88	\$364.97	\$419.72	\$482.67	\$555.08	\$638.34
8		\$248.47	\$447.80	\$514.97	\$592.21	\$681.05	\$783.20
10		\$351.83	\$1,165.64	\$1,340.48	\$1,541.55	\$1,772.79	\$2,038.71

<b>RECLAIMED WATER: (per 1,000 gallons)</b>								
		<b>Current Volume Charge</b>	<b>September 1st, 2024 - December 31st, 2025</b>	<b>January 1st, 2026 - December 31st, 2026</b>	<b>January 1st, 2027 - December 31st, 2027</b>	<b>January 1st, 2028 - December 31st, 2028</b>	<b>January 1st, 2029 - December 31st, 2029</b>	<b>Percent of Potable Water Rate</b>
<b>RECLAIMED WATER: (per 1,000 gallons)</b>			<b>Inside City Limits</b>	<b>Inside City Limits</b>	<b>Inside City Limits</b>	<b>Inside City Limits</b>	<b>Inside City Limits</b>	<b>Inside City Limits</b>
Private Residential	Tier 1 (0 - 3,500 gallons)	\$1.63	\$1.96	\$2.19	\$2.45	\$2.76	\$3.11	35%
	Tier 2 (3,501 - 6,200 gallons)	\$1.98	\$2.07	\$2.32	\$2.61	\$2.93	\$3.31	
	Tier 3 (6,201 - 11,500 gallons)	\$2.82	\$3.72	\$4.22	\$4.79	\$5.44	\$6.20	
	Tier 4 (11,501+ gallons)	\$5.23	\$7.03	\$8.02	\$9.15	\$10.46	\$11.97	
Commercial (no main Ext):		\$2.07	\$2.48	\$2.79	\$3.15	\$3.55	\$4.02	35%
Commercial (w/ main Ext):		\$4.43	\$5.32	\$5.98	\$6.74	\$7.62	\$8.62	75%
Manufacturing (no main Ext):		\$2.04	\$2.37	\$2.66	\$2.99	\$3.38	\$3.82	35%
Manufacturing (w/ main Ext):		\$4.38	\$5.07	\$5.70	\$6.42	\$7.24	\$8.19	75%
NAU (no main Ext):		\$1.93	\$2.48	\$2.79	\$3.15	\$3.55	\$4.02	35%
NAU (w/ main Ext):		\$4.13	\$5.32	\$5.98	\$6.74	\$7.62	\$8.62	75%
Hydrant Meter		\$4.19	\$4.40	\$4.97	\$5.63	\$6.38	\$7.25	50%
Standpipe		\$4.78	\$3.77	\$4.34	\$4.99	\$5.74	\$6.60	50%
Off Peak/Golf Course:*		\$1.80	\$2.16	\$2.43	\$2.74	\$3.09	\$3.50	87%

\*Rate is 87% of the Commercial (no main extension) reclaimed water rate

Figure 4-8: Reclaimed Water Proposed Rates



## 5. REVIEW & DEVELOPMENT OF CAPACITY FEES

This section presents the objectives, approach, methodologies, source data, assumptions, as well as the findings and recommendations of the review and development of the City's water and wastewater capacity fees.

### 5.1 CAPACITY FEES

A capacity fee is a one-time charge paid by a new connection to recover a portion or all of the cost of constructing capacity in water and sewer system infrastructure. The fees are also assessed to existing customers requiring additional water and sewer system capacity. In general, capacity fees are based on the costs of utility infrastructure including, but not limited to, water supply facilities, treatment facilities, transmission mains, wastewater conveyance, and effluent disposal facilities. The infrastructure costs included in capacity fees are large, system-level components and do not include local collection or distribution system improvements or assets less than the City's capitalization policy (assets valued less than \$5,000). Capacity fees serve as the mechanism by which growth can "pay its own way" and minimize the extent to which existing customers must bear the cost of facilities that will be used to serve new customers.

The 2016 capacity fee study notes that all components of the current Flagstaff water and wastewater capacity fees were calculated using the incremental approach with the exception of the wastewater treatment component, which is calculated under the combined approach. Stantec calculated new water and wastewater capacity fees using the combined approach for all components as directed by City Council and the Water Commission. The key assumptions and methodology used in the Analysis are detailed in the sections below.

The City currently charges water and wastewater system capacity fees. The table below summarizes the existing capacity fee for a ¾" customer for each system.

**Table 5-1 Existing ¾" Capacity Fees**

System	Existing Capacity Fees
Water	\$5,728
Wastewater	\$3,723

### 5.2 LEGAL FRAMEWORK

Flagstaff's current water and wastewater capacity fees were developed in accordance with the Arizona Revised Statutes (ARS) 9-511.01 since the Utility provides service to customers outside of its municipal boundaries. ARS 9-463.05 applies to service areas within the boundaries of a municipality, while ARS 9-511.01 applies to both inside and outside city customers. Stantec developed new capacity fees in the Analysis under the same guidelines.

## 5.3 KEY ASSUMPTIONS AND METHODOLOGY

The following subsections detail key assumptions and methodology used to develop the Analysis.

### 5.3.1 Methodology

There are three industry recommended approaches to calculating capacity fees: the buy-in method, the incremental method, and the combined method. Each method includes a dollar valuation in terms of net system value or expansion-related capital costs, a capacity level, and a level of service per equivalent connection to calculate the fee. Each method provides information as to the value of a unit of capacity. It is up to the objectives and policies of the Utility's decision makers as to the preferred methodology for the Utility.

The buy-in method considers only existing infrastructure values and capacity, such that the capacity fee calculated under this method reflects the cost of buying into the current system's capacity and asset values and therefore historical investments made in the system. The fee is calculated by dividing the net system value by the existing capacities for water and wastewater and then multiplying the unit-capacity costs by the estimated level of service (LOS) to get a fee per equivalent residential unit (ERU). The asset valuation calculation can be the original cost, book value (original cost less depreciation), replacement cost new (RCN), or replacement cost new less depreciation (RCNLD). This approach excludes donated or contributed assets.

The incremental method uses total future expansion-related capital project costs as the numerator and added capacity from future expansion-related capital projects as the denominator in the unit-capacity cost calculation. The calculated cost per unit of new incremental capacity is multiplied by the estimated level of service to determine the capacity fee per ERU.

The combined method is a hybrid of both existing asset valuation as well as future expansion-related capital costs, and also combines both existing capacity and incremental capacity to calculate capacity fees per ERU. Given direction from City Council and Water Commission, Stantec and the Utility elected to follow the combined method to calculate new water and wastewater capacity fees. This approach captures both the existing value and capacity of the current systems as well as future expansion related capital costs and added capacities related to those capital projects.

### 5.3.2 Level of Service

Capacity fees are typically assessed on a "Service Unit" which represents a unit of measure of system capacity, typically defined as an ERU. Expressing the system capacities in terms of ERUs allows for unit pricing of capacity which is essential for the determination of capacity fees. ERUs are associated with a specific level of service (LOS) used by the local government for system engineering and planning purposes. The City's current levels of service (design standards) in City Code have not been updated since the 1980s. Since the City Code assumptions have not been updated recently, Stantec calculated an alternative LOS based on actual production data from 2020-2022 and the most recent census data available.

The Utility's design standards for a water ERU includes the following assumptions:

- 3.5 people per household (pph)
- 100 gallons of water use per capita per day (gpcd)
- 75 gpcd of wastewater usage
- 2.5 maximum day peaking factor for water
- 1.6 maximum day peaking factor for wastewater
- No loadings factor accounted for in design standards LOS for wastewater

Using actual water and wastewater production and usage data for the last three years, the LOS for one ERU for the Utility is calculated and presented in the capacity fee calculations as Actual Use LOS. Actual Use LOS includes the following assumptions:

- 2.4 pph
- 93 gpcd of water use
- 67 gpcd of wastewater use
- 1.5 maximum day peaking factor for water
- 1.6 maximum day peaking factor for wastewater
- 0.67 pounds per day (PPD) per capita of loadings for wastewater

Table 5-2 below displays the resulting LOS options under the Design Standards and Actual Use.

**Table 5-2 LOS Assumptions for Capacity Fee Development**

LOS Type	Water Fund		Wastewater Fund
	<i>Flow (Gallons Per Day)</i>	<i>Flow (Gallons Per Day)</i>	<i>Loadings (Pounds Per Day)</i>
<b>Design Standards (City Code)</b>	875 GPD	420 GPD	N/A
<b>Actual Use</b>	335 GPD	257 GPD	0.67 PPD

### 5.3.3 Reclaimed Water

The Utility does not charge reclaimed water capacity fees because reclaimed water supply is limited and allocated to existing reclaimed water customers. Reclaimed water distribution system investments, however, benefit existing water supply, and therefore are included in the water system capacity fee calculations.

The value of reclaimed water treatment provided at the Utility's wastewater treatment plants is included in the wastewater system capacity fee calculations.

### 5.3.4 Major Capital Project Alternatives

The Utility is currently reviewing the need for major projects such as future water supply projects and a wastewater treatment plant expansion. While specific details are still being developed and funding sources are uncertain, it is understood that growth is driving a large portion of these costs. Including these future costs as capacity fee options for consideration by the Water Commission and City Council was recommended by the City Manager.

Given that the major capital project needs are still under review, the Analysis includes four total options for water, and eight different options for wastewater (detailed in below sections) for capacity fees based on different LOS assumptions and capital improvement plan (CIP) alternatives.

## 5.4 SOURCE DATA

The following subsections present key source data relied upon to develop the Analysis.

### 5.4.1 System Assets

The Utility's water and wastewater system asset data were provided by the Utility and used in the Analysis to value existing water and wastewater infrastructure. Each water system asset was allocated across system functions including:

- water resources,
- production,
- storage,
- distribution, and
- reclaimed water distribution.

Each wastewater system asset was allocated across system functions including:

- treatment,
- interceptors,

- collection,
- reclaimed water treatment, and
- loadings (strength of wastewater).

Asset values were estimated in terms of RCNLD and excluded contributed or donated assets. Administrative assets were split across functions based on the distribution of non-administrative assets for each system. The net asset functional values were then used to inform the buy-in method and combined method of calculating capacity fees. Tables 2 and 3 below summarize the water and wastewater system asset values by function.

**Table 5-3 Water Fixed Asset Allocation by Function (Millions of Dollars)**

<b>Water</b>	<b>RCNLD Value</b>	<b>Contributed or Excluded Assets</b>	<b>Net RCNLD Value</b>	<b>Net Allocated Admin Asset Value</b>	<b>Net Asset Functional Value</b>
<b>Water Resources</b>	\$37.03	(\$6.36)	\$30.67	\$5.04	<b>\$35.71</b>
<b>Production</b>	\$16.63	(\$0.73)	\$15.90	\$2.61	<b>\$18.51</b>
<b>Storage</b>	\$11.67	(\$0.00)	\$11.67	\$1.92	<b>\$13.59</b>
<b>Distribution</b>	\$171.62	(\$74.51)	\$97.11	\$15.95	<b>\$113.06</b>
<b>Reclaimed Water (Distribution)</b>	\$16.57	(\$0.01)	\$16.55	\$2.72	<b>\$19.27</b>
<b>Total Water</b>	<b>\$253.52</b>	<b>(\$81.62)</b>	<b>\$171.90</b>	<b>\$28.24</b>	<b>\$200.14</b>

**Table 5-4 Wastewater Fixed Asset Allocation by Function (Millions of Dollars)**

<b>Wastewater</b>	<b>RCNLD Value</b>	<b>Contributed or Excluded Assets</b>	<b>Net RCNLD Value</b>	<b>Net Allocated Admin Asset Value</b>	<b>Net Asset Functional Value</b>
<b>Treatment</b>	\$20.39	(\$0.71)	\$19.68	\$3.23	<b>\$22.91</b>
<b>Interceptors</b>	\$62.50	(\$26.62)	\$35.88	\$5.89	<b>\$41.77</b>
<b>Collection</b>	\$65.56	(\$29.13)	\$36.43	\$5.98	<b>\$42.41</b>
<b>Reclaimed Water (Treatment)</b>	\$20.38	(\$0.00)	\$20.38	\$3.35	<b>\$23.73</b>
<b>Loadings</b>	\$9.99	(\$0.00)	\$9.99	\$1.64	<b>\$11.64</b>
<b>Total Wastewater</b>	<b>\$178.82</b>	<b>(\$56.46)</b>	<b>\$122.36</b>	<b>\$20.10</b>	<b>\$142.46</b>

#### 5.4.2 10-Year Capital Improvement Plan

The Utility's water and wastewater 10-year CIPs were functionalized, and costs were allocated as expansion-related or non-expansion related. The expansion-related costs were then summarized by function to inform the incremental and combined methods of calculating capacity fees. Tables 4 and 5 below summarize the water and wastewater expansion-related CIPs by function.

**Table 5-5 Water Expansion-Related Capital Improvement Plan by Function**

<b>Water</b>	<b>CIP Costs (Millions of Dollars)</b>	<b>Percent of Total</b>
<b>Water Resources</b>	\$25.71	8.6%
<b>Production</b>	\$16.19	5.4%
<b>Storage</b>	\$2.62	0.9%
<b>Distribution</b>	\$16.00	5.3%
<b>Reclaimed Water (Distribution)</b>	\$9.93	3.3%
<b>Future Water Supply*</b>	\$230.00	76.6%
<b>Total Water</b>	<b>\$300.45</b>	<b>100%</b>

\*Future water supply project is under review and varies across options. This table reflects the CIP including the future water supply costs.

**Table 5-6 Wastewater Expansion-Related Capital Improvement Plan by Function**

<b>Water</b>	<b>CIP Cost (Millions of Dollars)</b>	<b>Percent of Total</b>
<b>Treatment</b>	\$0.02	0.0%
<b>Interceptors</b>	\$6.30	3.9%
<b>Collection</b>	\$1.18	0.7%
<b>Reclaimed Water (Treatment)</b>	\$0.00	0.0%
<b>Loadings</b>	\$92.00	57.2%
<b>Treatment Plant Expansion*</b>	\$122.50	76.2%
<b>Total Water</b>	<b>\$160.75</b>	<b>100%</b>

\*Treatment plant expansion project is under review and varies across options. This table reflects the CIP including the wastewater treatment plant expansion costs.

### 5.4.3 System Capacities

The City's water and wastewater systems comprise numerous functional components such as water production, wastewater treatment, and transmission/conveyance. Each of the functional components has

a physical or regulatory permitted capacity. While treatment, supply, and disposal capacities are readily available and generally accepted to be the physical or regulatory permitted capacity of such facilities, transmission and interceptor system capacities are more difficult to quantify. Stantec obtained the system capacities through reviews and discussions with City staff and references to the City's system master plans.

The expansion related capital improvement projects identified in the City's CIP will add capacity to the City's water and wastewater systems. Incremental increases in capacity for the water and wastewater system projects were obtained from discussions with City Staff.

For some systems, it is common to define the capacity for all functional components (including the transmission and interceptor facilities) based on the system's total treatment capacity. This approach was followed for the determination of the interceptor system capacities for the City's wastewater system. The rationale behind this decision is that even if the wastewater interceptors are larger than the wastewater treatment capacity, the only capacity the system can offer to its users is its total treatment capacity. Table 6 below shows the existing and incremental capacities for the water and wastewater systems used in the combined method calculation for capacity fees.

**Table 5-7 Water and Wastewater System Capacities**

Capacity	Water Volume	Wastewater Volume	Wastewater Loadings
<b>Existing &amp; Incremental Capacity</b>	86.01 MGD	60.89 MGD	39,810 PPD
<b>Future Water Supply</b>	19.53 MGD	N/A	N/A
<b>Wastewater Treatment Plant Expansion</b>	N/A	9.00 MGD	16,200 PPD
<b>Total Existing &amp; Incremental Capacity</b>	105.54 MGD	69.89 MGD	56,010 PPD

#### 5.4.4 Equivalent Residential Units

The units of service related to the provision of water and wastewater capacity are often calculated as ERUs. Specifically, the total system capacity (treatment capacity in million gallons per day for each system) divided by the level of service in gallons per day (GPD) is equal to the total number of ERUs Flagstaff can serve within the water and wastewater systems.

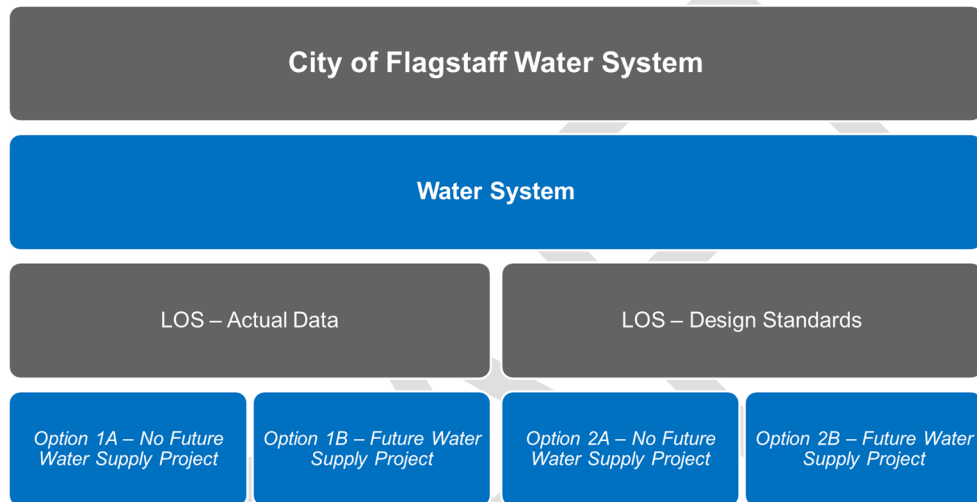




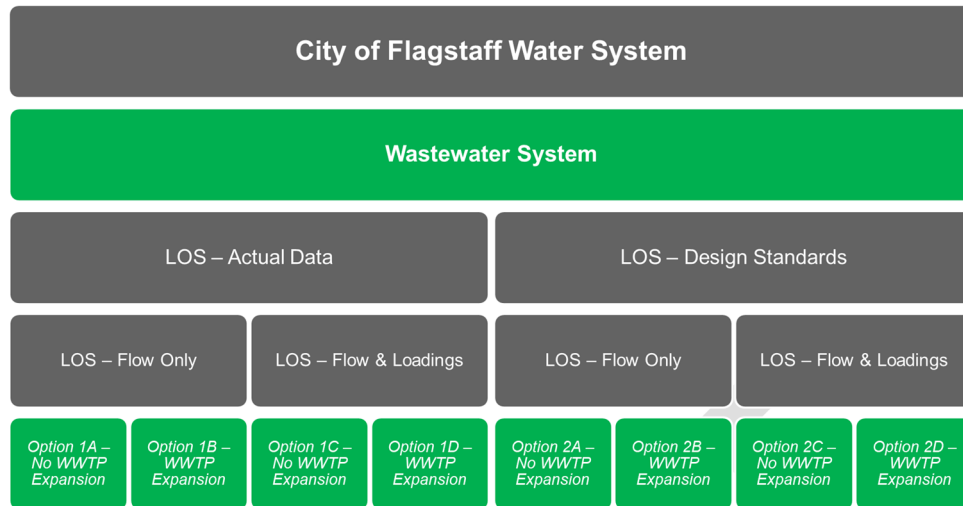
This calculation allows for the determination of a capacity fee per ERU. The per ERU capacity fee can then be scaled based on the potential demand on the utility system for each new customer joining the system.

## 5.5 SCENARIO ANALYSIS AND RESULTS

Due to the multiple possibilities of CIP funding levels for each fund, and multiple distinct potential LOS assumptions, Stantec created four capacity fee options for water and eight capacity fee options for wastewater. Figures 5-1 and 5-2 below is a flow chart depicting the various options and their distinctions for water and wastewater capacity fees.



**Figure 5-5-1: Water Scenarios**



**Figure 5-5-2: Wastewater Scenarios**

### 5.5.1 Water Fund

After Stantec and Utility staff presented the options to Flagstaff City Council, option 1B was selected, which uses an LOS based on actual data and includes costs for future water supply. Once the selection was made, Utility staff provided updated data regarding the 10-year CIP, which changed the calculated fee under option 1B. Table 5-8 below presents option 1B before and after the CIP update for a  $\frac{3}{4}$ " meter and a 2" meter.

**Table 5-8 Water Capacity Fee Options**

LOS – Actual Data	$\frac{3}{4}$ " Meter		2" Meter	
	Existing Fee	Calculated Fee	Existing Fee	Calculated Fee
1B: Future Water Supply	\$5,728	\$8,146	\$30,530	\$43,418
<b>1B After CIP Update</b>	<b>\$5,728</b>	<b>\$8,266</b>	<b>\$30,530</b>	<b>\$44,058</b>

Under option 1B after the CIP update, the following schedule of capacity fees by meter size in Table 8 would apply for new or upsized water connections.

**Table 5-9 Proposed FY25 Capacity Fees by Meter Size After CIP Update**

Meter Size	Existing Fee	Option 1B
¾"	\$5,728	\$8,266
1"	\$9,566	\$13,804
1 ½"	\$19,074	\$27,526
2"	\$30,530	\$44,058
3"	\$57,279	\$82,660
4"	\$95,484	\$137,795
6"	\$190,910	\$275,506
8"	\$305,468	\$440,827
10"	\$439,157	\$633,756

### 5.5.2 Wastewater Fund

After Stantec and Utility staff presented the options to Flagstaff City Council, option 1D was selected. No CIP updates were made to the wastewater fund after option 1D was selected. Table 5-10 below shows proposed FY25 wastewater capacity fees for a ¾" and 2" meter.

**Table 5-10 Proposed FY25 Wastewater Capacity Fees for ¾" Meter and 2" Meter**

Level of Service (LOS) Scenario	¾" Residential Meter		2" Commercial Meter	
	Existing Fee	Calculated Fee	Existing Fee	Calculated Fee
1D: WWTP Expansion	\$3,723	\$4,086	\$19,845	\$21,780

Under option 1D, the following schedule of capacity fees by meter size in Table 5-11 would apply for new wastewater connections.

**Table 5-11 Proposed FY25 Wastewater Capacity Fees Schedule**

<b>Meter Size</b>	<b>Existing Fee</b>	<b>Option 1D</b>
¾"	\$3,723	\$4,086
1"	\$6,218	\$6,823
1 ½"	\$12,399	\$13,605
2"	\$19,845	\$21,777
3"	\$37,233	\$40,857
4"	\$72,068	\$68,108
6"	\$124,099	\$136,176
8"	\$198,566	\$217,889
10"	\$285,468	\$313,249

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## 6. MISCELLANEOUS SERVICE FEES UPDATE

Miscellaneous service fees are fees for services provided by Water Services staff or Customer Service staff that are not for day-to-day consumption of water or use of wastewater services. These fees typically include meter installation fees, turn on/turn off fees, late fees, permit fees, and scavenger waste charges. Water Services' miscellaneous service fees are found in City Code Sections 7-02-001 and 7-03-001.

Stantec updated the Utility miscellaneous fees in conjunction with City Staff in several steps. Stantec conducted interviews with City staff to identify activities and costs associated with each fee, then populated Stantec's proprietary cost computation template with information from the interviews. To assist with background for some assumptions, Stantec used information from its recently completed fee studies. Finally, an analysis of the cost recovery and financial implications of the updated fees was conducted to propose fees that cover corresponding costs based on City objectives and policies.

The following tables present the miscellaneous fee update.

**Table 5-12 Water Meter Installation Fees**

Meter Size	Current Fee	Proposed Fee	Change
3/4"	\$210	\$806	\$596
1"	\$390	\$972	\$582
1 1/2"	\$790	\$1,466	\$676
2"	\$940	\$1,703	\$763

**Table 5-13 Service Charges**

Fee Description	Current Fee	Proposed Fee	Change
Water Service Establishment Fee (Next Business Day)	\$24	\$45	\$21
Water Service Establishment Fee (Same Day Surcharge)	\$65	\$20	\$20 surcharge added to \$45 = \$65
Collection / Non-Payment	\$24	\$45	\$21
Existing Meter Testing Rate – Accuracy Test	\$74	\$74	No Change
Backflow Prevention Permit Fee	\$87	\$87	No Change
Backflow Compliance Fee	\$87	\$87	No Change
Malicious Damage	\$150	\$150	No Change

**Table 5-14 Wastewater Miscellaneous Fees**

Fee Description	Current Fee	Proposed Fee	Change (% Cost Recovery)
Industrial Pretreatment Discharge Fee (5-year permit)	\$1,250	\$1,950	\$700
Scavenger Wastes – Septage (per 100 gallons)	\$8	\$11	\$3
Scavenger Wastes – Restaurant Grease (per 100 gallons)	\$11	\$11	No Change
Scavenger Wastes – Mud Sump (per 100 gallons)	\$25	\$31	\$6
After Hours Fee for Scavenger Wastes Dumping	\$35	\$146	\$111
Scavenger Wastes Permit	\$24	\$45	\$21

**Table 5-15 Wastewater Surcharge Rates for High Strength Waste**

Fee Description	Current Fee	Proposed Fee	Change (% Cost Recovery)
BOD over 300 mg/L (per pound)	\$0.273	\$0.421	\$0.148
TSS over 350 mg/L (per pound)	\$0.1343	\$0.292	\$0.1577
<b>Higher Surcharge Rates:</b>			
BOD 400mg/L to 500 mg/L	Doubled	*	Same surcharge for all high strength
BOD above 501 mg/L	Tripled	*	Same surcharge for all high strength
TSS 450 mg/L to 550 mg/L	Doubled	*	Same surcharge for all high strength
TSS 551 mg/L	Tripled	*	Same surcharge for all high strength

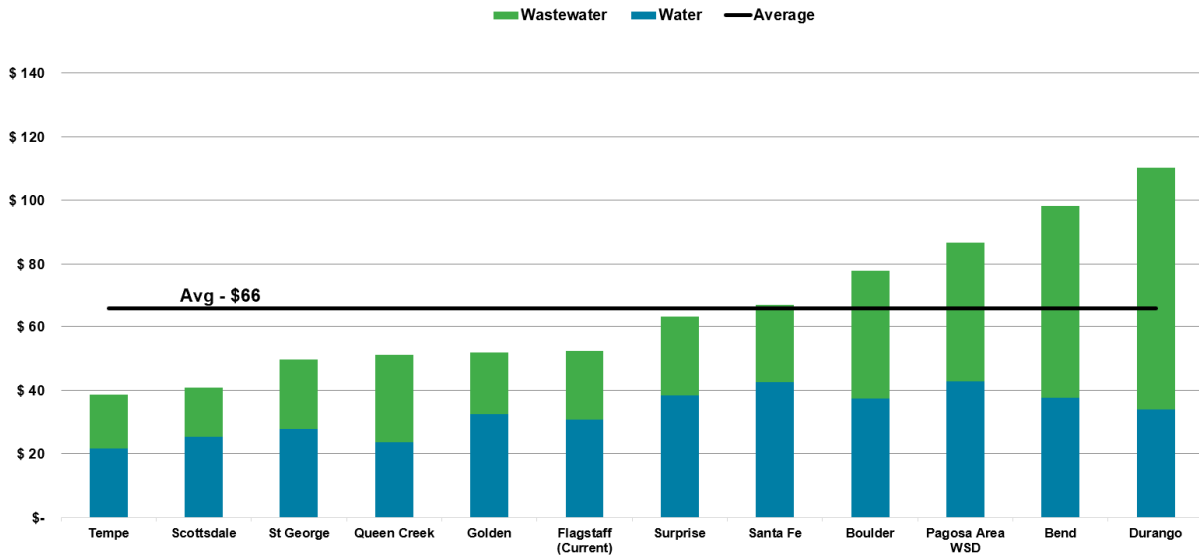
## 7. COMPARATIVE RATE ANALYSIS TO PEER UTILITIES

Stantec completed a rate survey for local and other peer utilities that captures the water and wastewater volumetric rates and monthly fixed fees as well as rate structure of each utility. These utilities were selected based on a number of factors, such as size, population served, university location, and mountain area service. A list of peer utilities includes:

- Town of Queen Creek, AZ
- City of Scottsdale, AZ
- City of Surprise, AZ
- City of Tempe, AZ
- City of Boulder, CO
- City of Durango, CO
- City of Golden, CO
- Pagosa Area Water & Sanitation District, CO
- City of Santa Fe, NM
- City of Bend, OR
- City of St. George, UT

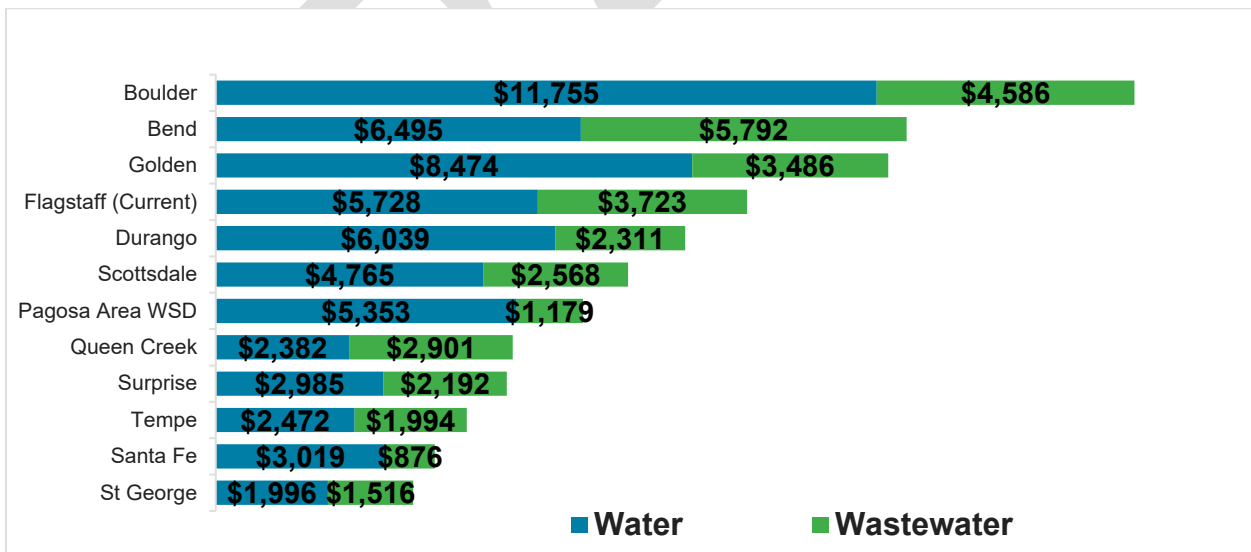
The graph below presents the comparison of total monthly water and wastewater bills for each community as of 2023 with an assumed 4,000 gallons of usage. The average monthly bill at this usage level for all communities is \$66. Given the survey results, the City's current water and wastewater rates show below-average water and wastewater bills.

**Figure 7-1 Monthly Bill Comparison at 4,000 Gallons**



Stantec also compared the City’s water and wastewater capacity fees with corresponding fees for the utilities listed above. The City’s current water and wastewater capacity fees fall within the average range for all the surveyed utilities. The graph below presents the capacity fee survey results for fees in place in 2023.

**Figure 7-2 Water and Wastewater Capacity Fee Comparisons**





## 8. CONCLUSIONS AND RECOMMENDATIONS

A summary of Study recommendations based on the development of the financial analysis for the City's water, wastewater, and reclaimed water utilities is presented below.

- Increase water, wastewater, and reclaimed water rate revenues by 15.0%, 25.0%, and 15.0% respectively, for FY 2025. Rate increases recommended in FY 2025 will be effective starting September 1<sup>st</sup>, 2024;
- In subsequent years, annually evaluate rate adjustment based on actual operating results. This Study projects 15.0% increases from FY 2026 through FY 2029 for the Water Fund. The Wastewater Fund is projected to require 25.0% rate revenue increases in FY 2026, 15.00% in FY 2027, 10.0% in FY 2028, and 5.00% in FY 2029 to fund CIP, maintain its reserves and meet total revenue requirements. The reclaimed water fund will need 15.0% increases from FY 2026-2029;
- Recover 25% of water rate revenue through monthly fixed charges;
- Recover 25% of wastewater rate revenue through new monthly fixed charges;
- Consolidate the Commercial/Schools and Institutional water customer classes into one customer class;
- Consolidated non-residential wastewater customer classes into three new non-residential classes;
- Implement a water capacity fee of \$8,266 per ERU and a wastewater capacity fee of \$4,086 per ERU;
- Evaluate Water Services performance annually to assess rate revenue needs and update financial planning models;
- Review water and wastewater usage and rate structures continually to ensure fairness and proportionality across customer classes; and,
- Review capacity fees every 3-5 years or when changes to the growth-related CIP are expected.

**Disclaimer**

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*Additionally, the purpose of this document is to summarize Stantec’s analysis and findings related to this project, and it is not intended to address all aspects that may surround the subject area. Therefore, this document may have limitations, assumptions, or reliances on data that are not readily apparent on the face of it. Moreover, the reader should understand that Stantec was called on to provide judgments on a variety of critical factors which are incapable of precise measurement. As such, the use of this document and its findings by the City of Englewood should only occur after consultation with Stantec, and any use of this document and findings by any other person is done so entirely at their own risk.*

## APPENDIX A: SUPPORTING SCHEDULES – WATER FINANCIAL PLAN

### Supporting Schedules for the Water Financial Plan

- Schedule 1 Assumptions
- Schedule 2 Beginning Balances
- Schedule 3 Projection of Cash Inflows
- Schedule 4 Projected of Cash Outflows
- Schedule 5 Cost Escalation Factors
- Schedule 6 CIP
- Schedule 7 FAMS Control Panel
- Schedule 8 Pro Forma
- Schedule 9 Capital Projects Funding Summary
- Schedule 10 Funding Summary by Fund
- Schedule 11 Long-Term Borrowing

## APPENDIX B: SUPPORTING SCHEDULES – WASTEWATER FINANCIAL PLAN

### Supporting Schedules for the Wastewater Financial Plan

- Schedule 1 Assumptions
- Schedule 2 Beginning Balances
- Schedule 3 Projection of Cash Inflows
- Schedule 4 Projected of Cash Outflows
- Schedule 5 Cost Escalation Factors
- Schedule 6 CIP
- Schedule 7 FAMS Control Panel
- Schedule 8 Pro Forma
- Schedule 9 Capital Projects Funding Summary
- Schedule 10 Funding Summary by Fund
- Schedule 11 Long-Term Borrowing

## APPENDIX C: SUPPORTING SCHEDULES – RECLAIMED WATER FINANCIAL PLAN

### Supporting Schedules for the Reclaimed Water Financial Plan

- Schedule 12 Assumptions
- Schedule 13 Beginning Balances
- Schedule 14 Projection of Cash Inflows
- Schedule 15 Projected of Cash Outflows
- Schedule 16 Cost Escalation Factors
- Schedule 17 CIP
- Schedule 18 FAMS Control Panel
- Schedule 19 Pro Forma
- Schedule 20 Capital Projects Funding Summary
- Schedule 21 Funding Summary by Fund
- Schedule 22 Long-Term Borrowing

## APPENDIX D: WATER COST-OF-SERVICE ALLOCATIONS

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## APPENDIX E: WASTEWATER COST-OF-SERVICE ALLOCATIONS

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## APPENDIX F: CAPACITY FEE SUMMARY

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