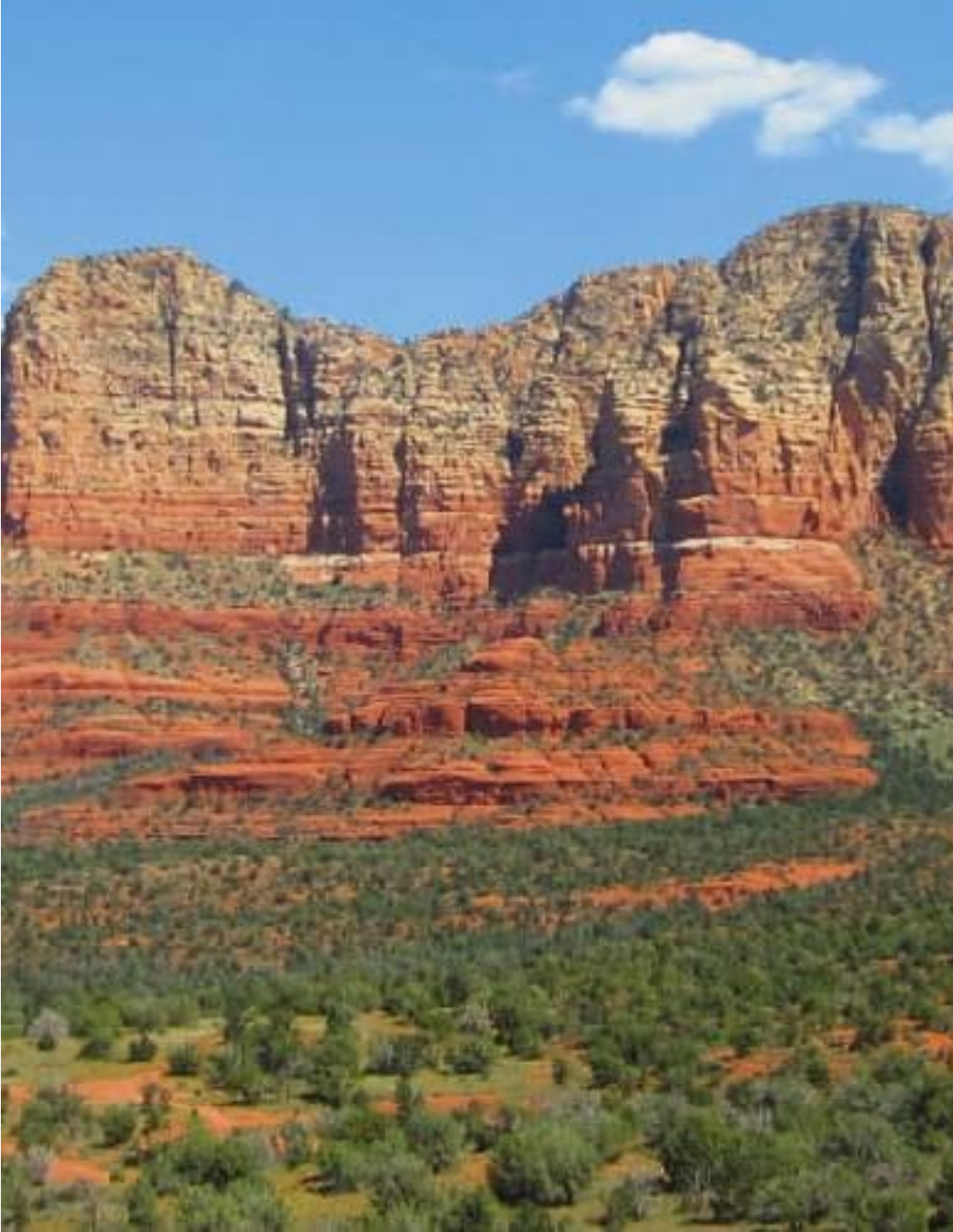


City of Flagstaff, AZ

Water, Reclaimed Water, & Wastewater Cost-of-Service Study – Introduction to Rate Design

*City Council Meeting
February 6, 2024*

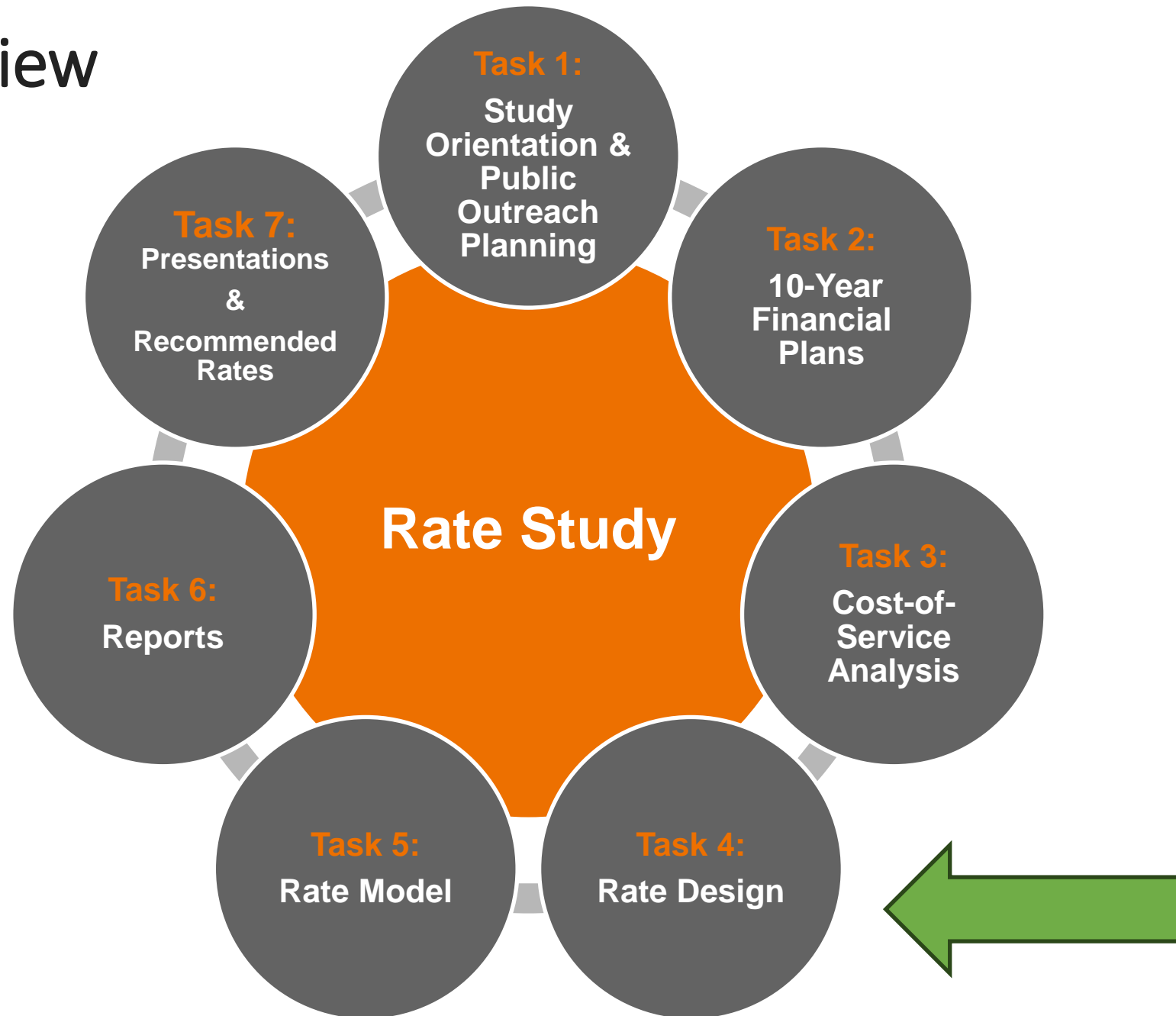


Agenda

1. Overview of Scope
2. Rate Design Objectives
 1. Elements of rate design
 2. Draft options
3. Discussion & Guidance



Scope Overview





Rate Design: Overview

Task 4

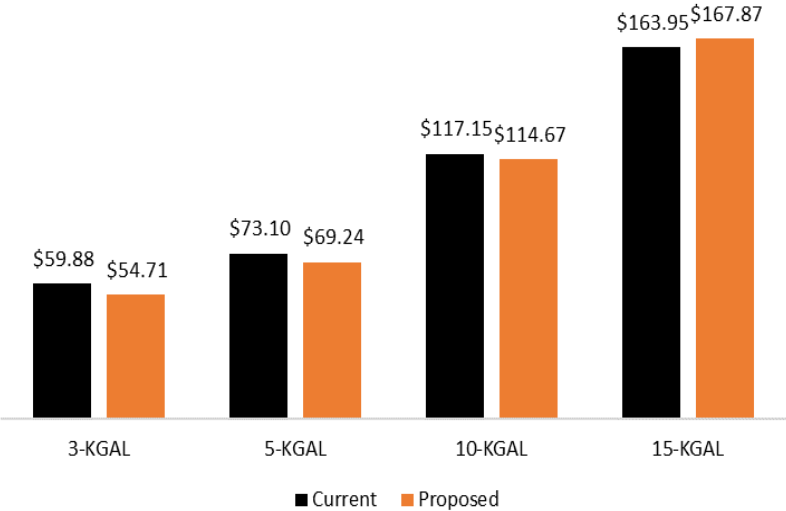
Develop alternatives and recommendations for adjustments to current rate structures.

Approach



Outcomes / Benefits

- Assessment of existing structures & challenges
- Comparison of adjustments with goals of study
- Clear path for future enhancements
- Clarity of customer impacts of all options





Financial Plan

Financial plan is designed to ensure **revenues equal revenue requirements** over-time in order to provide **structural balance** (a self-supporting utility)

Revenue requirements of the water and sewer system consist of:

- Operating and maintenance expenses
- Existing debt service
- Capital improvement plan (cash funded or borrowing)

Revenues of the system are generated from:

- User rates (metered water use)
- Miscellaneous other income (ex: interest income)



Cost Allocations

Allocations of revenue requirements to **function** and **customer class** based on test year revenue requirements (year for which we are determining rates), system characteristics, and customer usage characteristics.

Functional Allocations of the water and wastewater system costs tell us:

- O&M, debt service, and cash-funded CIP recovered through base and volumetric charges
- Peaking-related costs
- Flow vs. loadings-related costs

Customer Characteristics for each system are generated from:

- Average, max-day, peak hour usage (from metered water use)
- Number of accounts and equivalent meters by water meter size
- Residential sewer flows based on winter quarter average (WQA) water use
- Non-residential sewer flows based on actual water use or contract-based (process water)
- Loadings assumptions for BOD & TSS based on industry data and sampling



Rate Design Focus for Today

Strategy 4: Fresh Approach for Rates and Pricing Strategies

- Goals for Water Rate Structure
 - Investigate tiered commercial rates
 - Seasonal rates
 - Determine level of revenue to collect from meter charges vs volume charges
 - Simplify non-residential rates by class
- Goals for Wastewater Rate Structure
 - Grouping customer classes by wastewater loadings
 - Consider monthly base charge
 - Simplify non-residential rates
- Estimate bill impacts to different customers



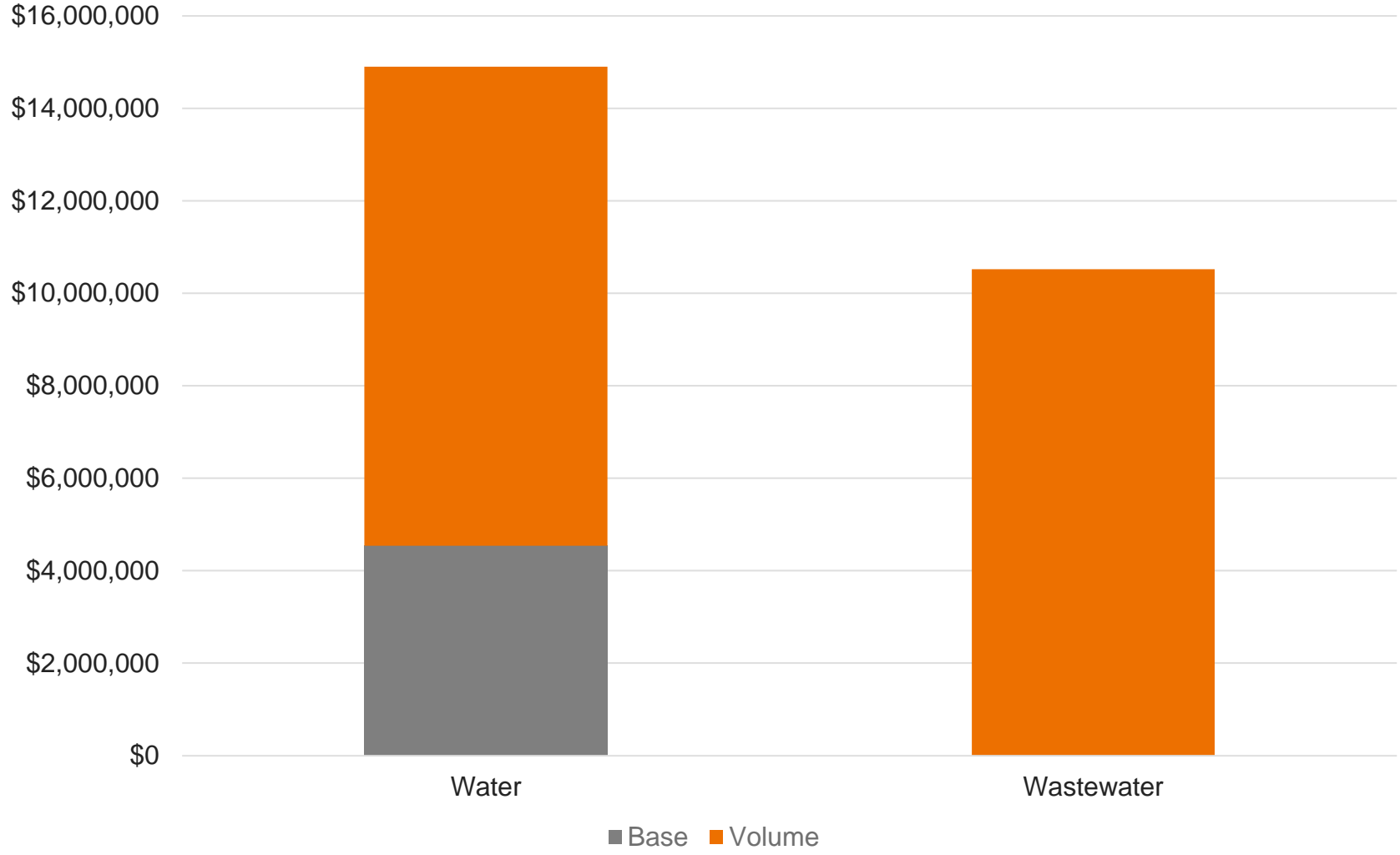
Elements of Rates

Charge Type

Base Charge

Volume Charge

FY23 Water & Wastewater Revenue





Elements of Rates - Base Charge

Charge Type	How is it Applied	Rationale	
Base Charge	Fixed amount per meter	Many of Utilities' costs are fixed (ex: debt)	Fixed revenues protect the utility from changes in demand
		Bond rating agencies measure fixed cost recovery	Industry best practice



Elements of Rates - Volume Charge

Charge Type

Volume Charge

How is it Applied

Based on use in Kgals

Rationale

Convey conservation messaging

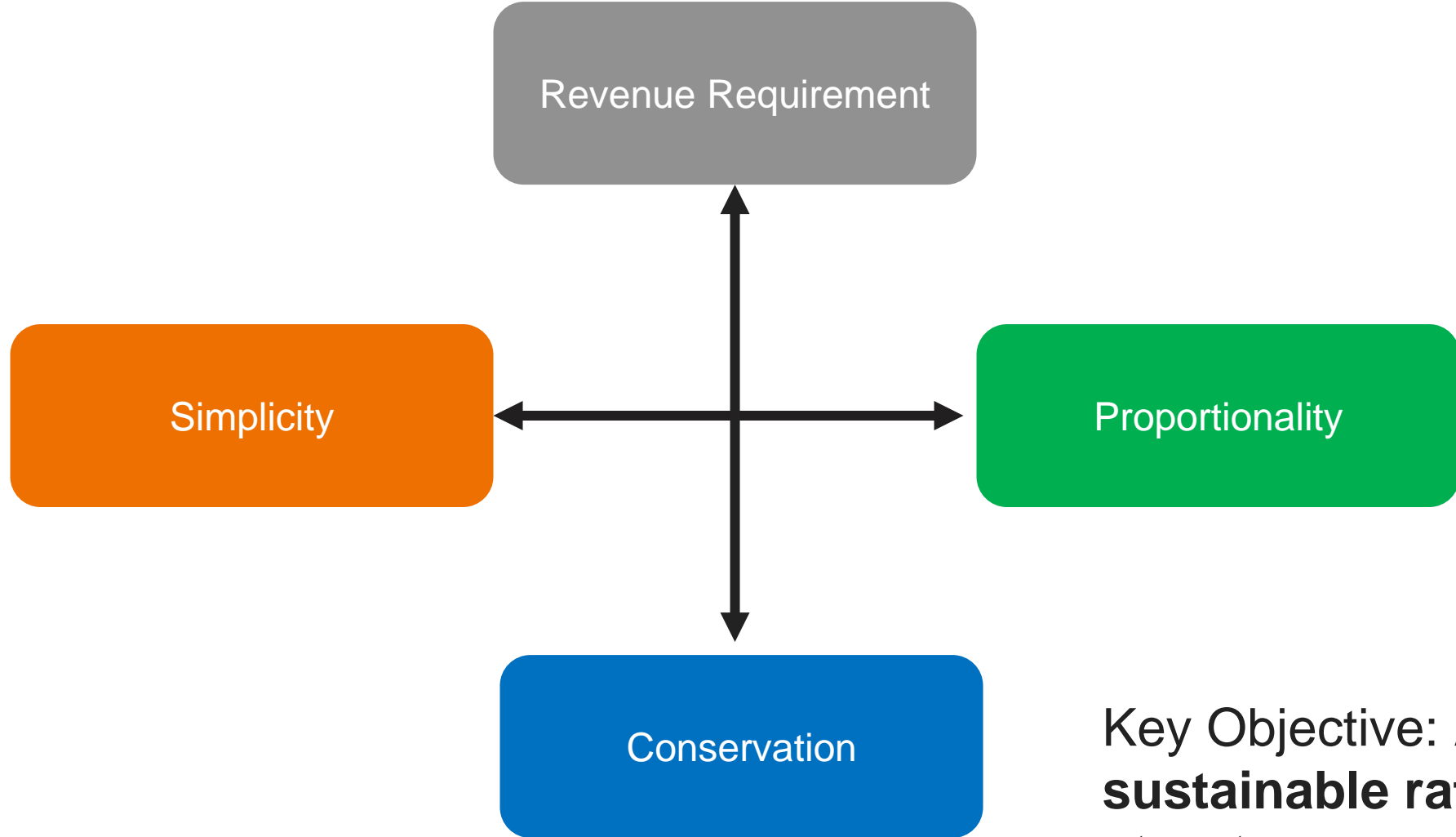
Encouraged by regulation

Allows customers to control their bill

Key measure of system utilization



Balancing Objectives



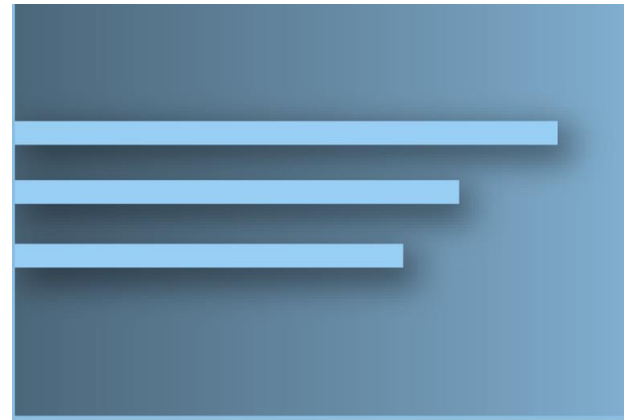
Key Objective: A sustainable rate structure



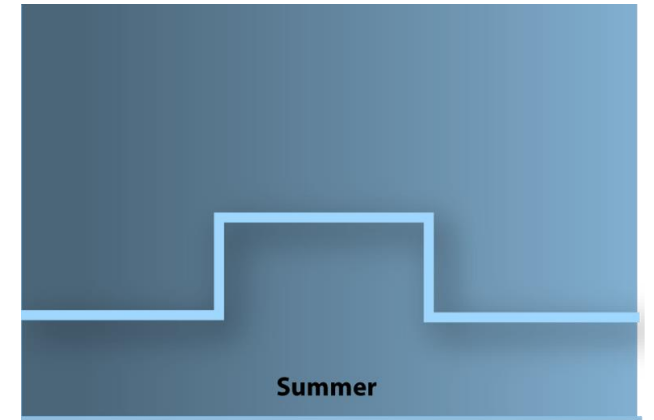
Traditional Water Rate Designs



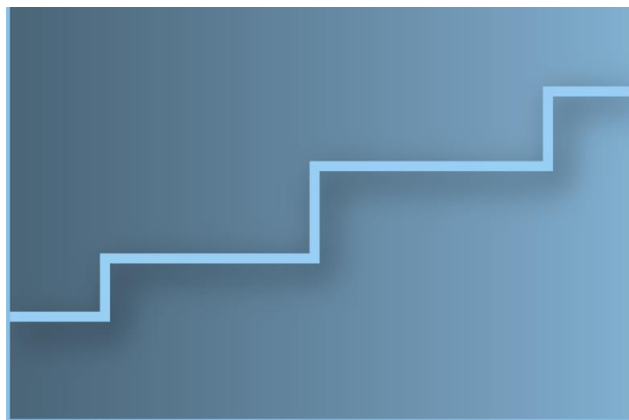
Flat Rate



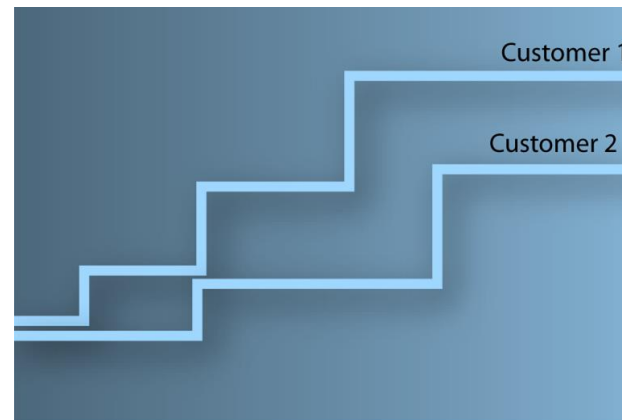
Uniform Rate (by Class)



Seasonal Rate



Inclining Block/Tier



Water Budget-Based Rates



CITY OF FLAGSTAFF WATER & SEWER RATES

Effective January 1, 2023 (**Subject to Change**)

MONTHLY FIXED CHARGE

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

WATER RATES

POTABLE WATER: (per 1,000 gallons)		Customer Class	Water Rate	Outside City Rate	Water Energy	*WRIP FEE
Single Family	Tier 1 (0 - 3,500 gallons)	R1 or R4	\$3.44	\$3.78	\$1.24	\$0.53
	Tier 2 (3,501 - 6,200 gallons)		\$4.45	\$4.90	\$1.24	\$0.53
	Tier 3 (6,201 - 11,500 gallons)		\$6.86	\$7.55	\$1.24	\$0.53
	Tier 4 (11,501+ gallons)		\$13.72	\$15.09	\$1.24	\$0.53
Multi-Family Units		R2 or R3	\$4.42	\$4.86	\$1.24	\$0.53
Commercial/Schools		C	\$4.69	\$5.16	\$1.24	\$0.53
Northern Arizona University		NA	\$4.30		\$1.24	\$0.53
Manufacturing		MN	\$4.63	\$5.09	\$1.24	\$0.53
Landscaping/Lawn Meters		LM	\$4.69	\$5.16	\$1.24	\$0.53
Hydrant Meter		HM	\$7.17	\$7.89	\$1.24	\$0.53
Standpipe**		SP	\$10.19			

**Includes sales tax and environmental fee

*Effective 7/1/22

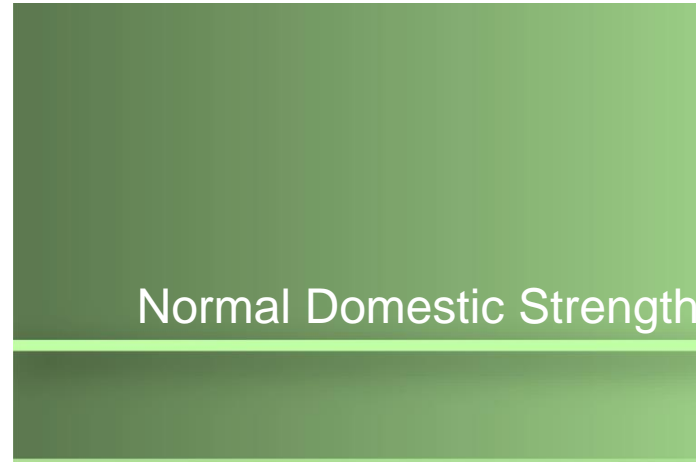
Outside City 10% surcharge



Traditional Wastewater Rate Designs



Flat Rate



Surcharge Rate

- > Domestic BOD = surcharge per pound
- > Domestic TSS = surcharge per pound



Quality/Quantity Rate



SEWER RATES			
SEWER: (per 1,000 gallons)	Customer Class	Inside City Rate	Outside City Rate
Residential			
*Single- and Multi-Family	R1 - R4	\$5.35	\$5.89
Non-Residential			
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)

Surcharge rates for BOD & TSS over residential amount – 7-02-001-0041

- BOD over 300 mg/L = \$0.273/pound
- TSS over 350 mg/L = \$0.1343/pound

Higher surcharge rates – 7-02-001-0041 D

- BOD 400mg/L to 500 mg/L = fee is doubled
- BOD above 501 mg/L = fee is tripled
- TSS 450 mg/L to 550 mg/L = fee is doubled
- TSS 551 mg/L = fee is tripled

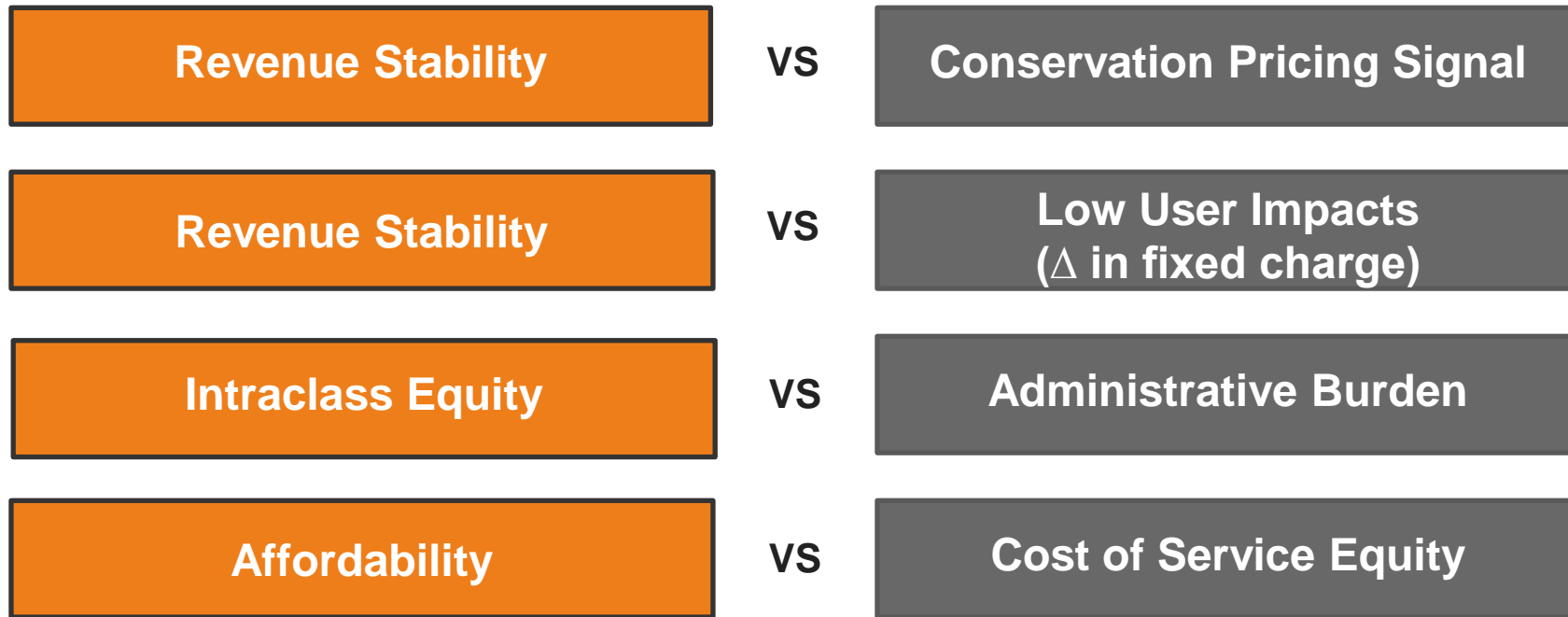


Pricing Objectives

Category	Pricing Criteria
Revenue	Revenue Sufficiency
	Revenue Stability
Legal	Legal Defensibility
Equity	Interclass Equity
	Intraclass Equity
	Intergenerational Equity
Customer Impact	Affordability
	Conservation/ Demand Management
	Bill Stability
Administration	Administrative Burden



Balancing Competing Objectives





Options Evaluation Examples

Evaluation Criteria	Option 1	Option 2	Option 3
Revenue stability			
Conservation			
Administrative burden			
Interclass equity – Res vs. Non-Res			
Intraclass equity – Low vs. High users - A			
Intraclass equity – Low vs. High users - B			

Same or improved from current
 Small difference from current

Less than current
 Much less than current

Worse than current



Discussion & Guidance

Next Steps/Action Items