



NORTH TAHOE PUBLIC UTILITY DISTRICT

DATE: March 14, 2023

ITEM: G-1

FROM: Office of the General Manager

SUBJECT: Water and Sewer Utilities Cost of Service Study Workshop

RECOMMENDATION:

Receive a presentation from Shawn Korn of HDR Engineering and provide discussion and feedback on the District's Cost of Service Study. No action by the Board of Directors is agendized for this item.

DISCUSSION:

At the November 14, 2017 meeting, the Board authorized staff to issue a Request for Proposals (RFP) for a Cost of Service Study on behalf of the District. The results of which ranked HDR Engineering (HDR) highest based on the review of the proposals, pricing, and reference checks. At the April 10, 2018 meeting, the Board authorized the General Manager to negotiate and execute an agreement for Cost of Service Study with HDR.

The Board, District Staff, and HDR worked diligently across multiple public meetings to analyze the District's cost of service as well as its existing water and sewer rates. A major outcome of this effort was the development of proposed rate structures for both water and sewer that would be implemented over five years and in compliance with the State of California Proposition 218.

The effort included HDR attendance at public meetings, the development of an online webinar communicating the Cost of Service Study process and outcomes, as well as the design of the outreach materials.

Upon completion of the Study, the Board approved the implementation of a new five-year rate structure at the November 12, 2019 Public Hearing, with an effective date beginning January 1, 2020 and running through June 30, 2024.

With the District nearing the end of the current five-year rate period, it is now time to undertake a new Cost of Service Study to assess the District's utility rates relative to its projected costs over the next five-year period. This next step in the District's on-going "rate maintenance" effort is consistent with industry best practices, Board discussion during the previous Cost of Service Study, and the priorities established for the Fiscal Year 22/23 Operating Budget and the District's new five-year Strategic Plan. Further,

the priorities established by the Board of Directors in the District's five-year Capital Improvement Plan are dependent on the ability of utility rate revenue to fund them.

At the September 13, 2022 meeting, the Board of Directors authorized a contract with HDR to execute the Cost of Service Study for the next five-year period. Since that time, staff has been working with HDR on the data gathering phase of the project. This workshop serves as the kick-off of the study effort with the Board of Directors.

STRATEGIC PLAN ALIGNMENT:

Goal 3: Enhance District governance and partnerships – Objective B: Ensure financial sustainability of the District – Tactic 2: Complete and implement new Five-year Rate Structure – Activity a: Engage a consultant to conduct a cost-of-service study; and – Activity b: Assemble internal support team with an identified sponsor; and – Activity c: Staff recommendation presented to Board for consideration and adoption in compliance with California Proposition 218 requirements.

ATTACHMENTS: Cost of Service Study PowerPoint Presentation

REVIEW TRACKING:

Approved By: 
Bradley A. Johnson, P.E.
General Manager/CEO



North Tahoe Public Utility District Overview of the Sewer and Water Cost of Service Study

March 14, 2023

Overview of the Presentation

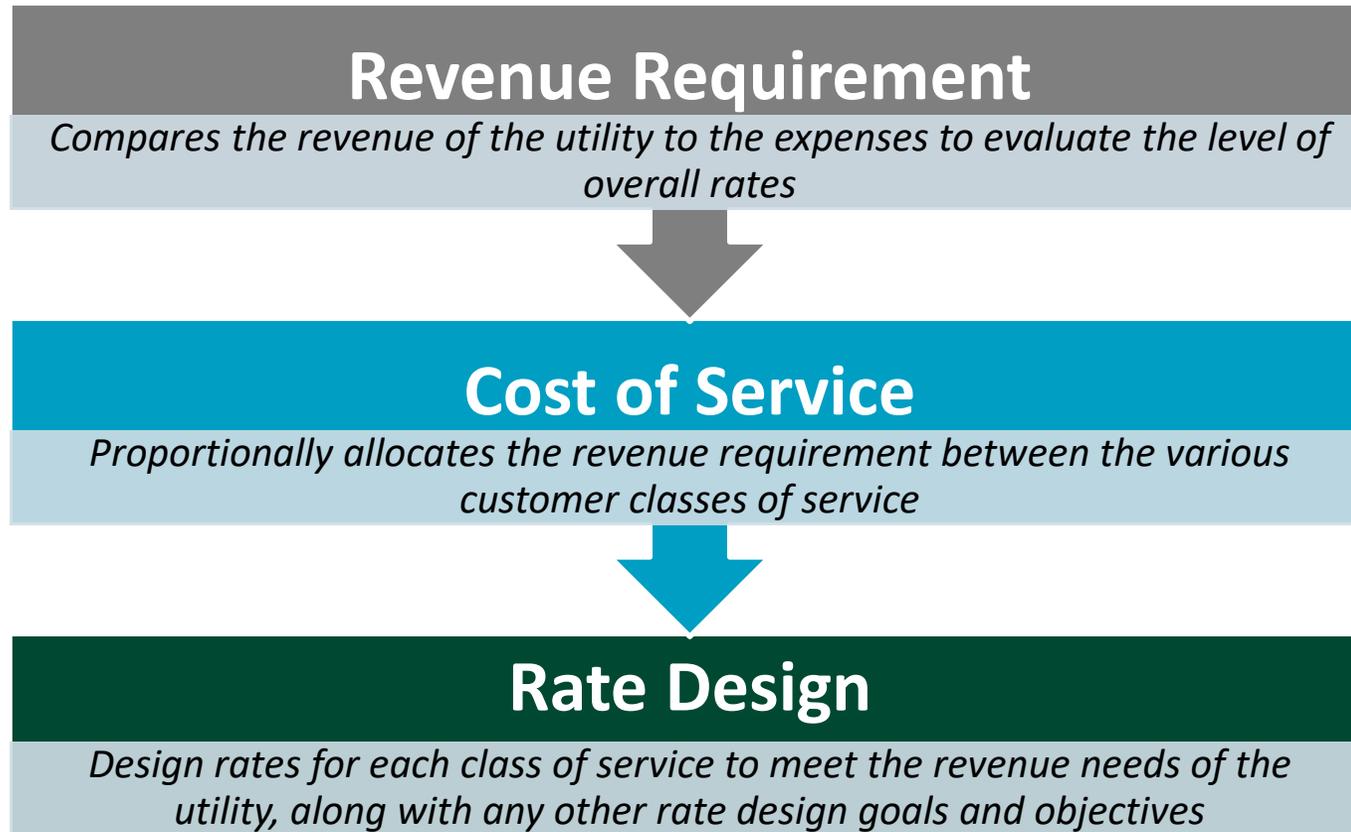
- Review the Purpose of the Cost of Service Study
- Overview of Setting Cost Based Rates
- Prior Study Outcomes
- Current Study Goals and Objectives
- Study Schedule



Purpose of the Study

- Develop an analysis to financially sustain the District's water and sewer infrastructure
 - Proposed rates for the next five-year rate setting period
- Reflect prudent financial planning criteria
 - Maintain target debt service coverage (DSC) ratio
 - Adequate rate funding of capital infrastructure
 - Meet target reserve balances
- Meet the intent of the requirements laid out in Proposition 218
 - Develop proportional and cost-based rates
 - Provide administrative record
- Develop the analyses using generally accepted methodologies and the District's system and customer characteristics

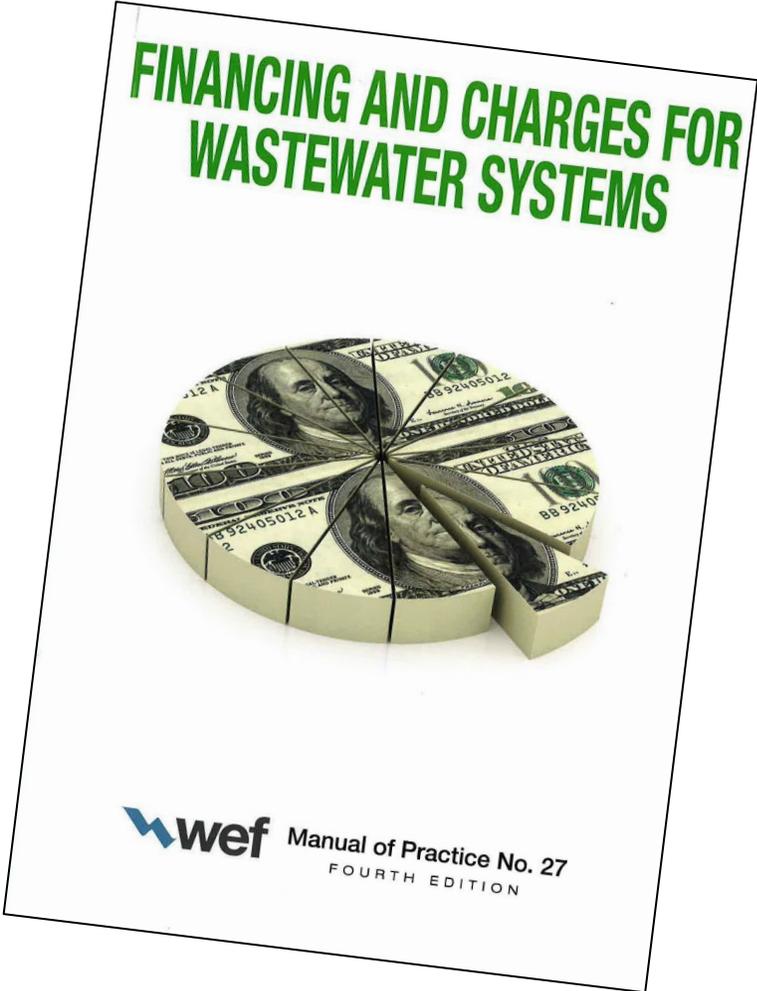
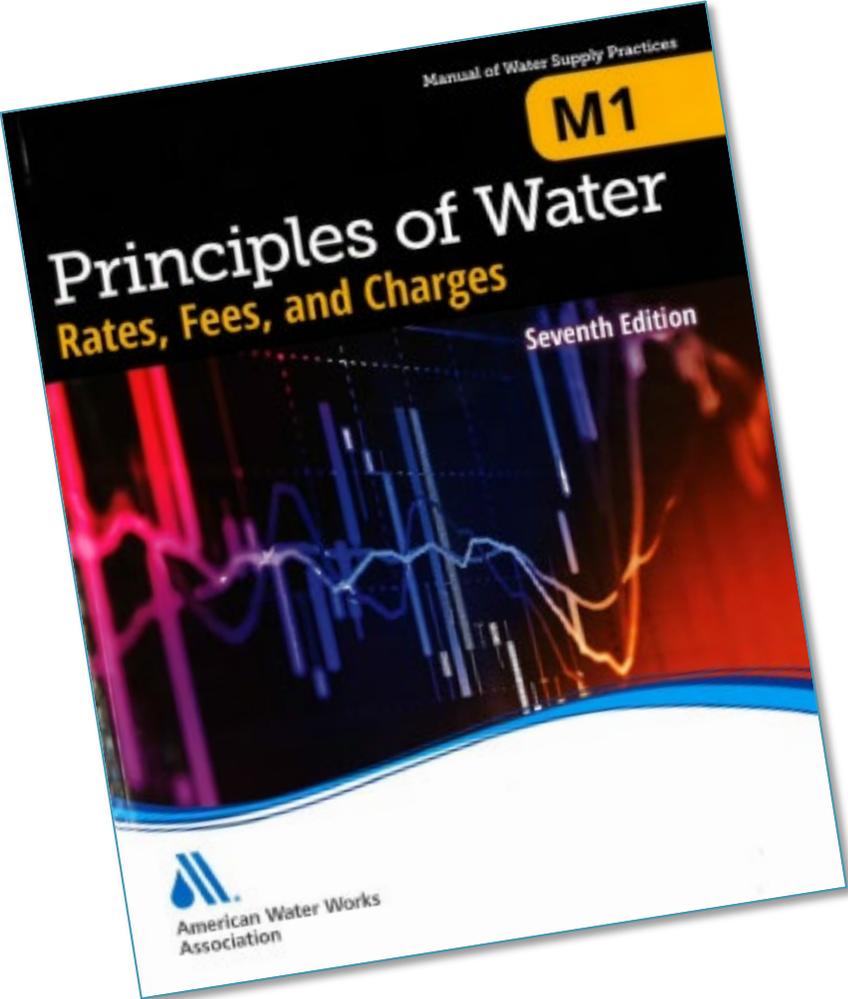
Developing Cost-Based Rates



Proposition 218 – Setting Cost-Based Rates

- Proposition 218 is a California constitutional amendment designed to protect taxpayers by limiting the methods by which local governments can create or increase taxes, fees and charges without taxpayer consent
- Proposition 218 is not prescriptive in defining a “cost-based” rate
- In part, Proposition 218 requires
 - Fees shall not exceed the **reasonable cost** of providing the service
 - Fees shall not exceed the **proportional cost** of providing the service
- Cost of service analysis results (unit costs) are the foundation of the proposed rates
 - Nexus between cost to provide service (expenses) and rates (fixed and variable) charged to customers (revenues)

Defining Generally Accepted



Overview of the Revenue Requirement

Compares utility revenues to expenses

- Determines if revenue (rate) adjustments are necessary

Uses prudent financial planning criteria

- Adequate funding of renewal and replacements
- Maintaining sufficient ending reserve balances

Reviews a specific time period

- Typically a five-to-ten-year period

Utility is analyzed on a “stand-alone basis”

- No transfer of funds from other District funds
- Rates need to support operations and capital

Utilizes the “cash basis” methodology

- Generally accepted method for municipal utilities

Revenue Requirement Best Practices & Policy Discussion

Meeting Debt Service Coverage Ratios

- DSC Target of >2.0 X

Prudent Funding of Annual R&R

- Equal or greater than annual depreciation expense

Meet Ending Reserve Fund Targets

- O&M = 90 days Minimum
- Capital = Target Average Annual Capital

Levels of Service

- R&R funding
- Additional programs/practices

Proper use of Connection Fees

- Growth related projects or growth related debt service

Overview of the Cost of Service

What is cost of service?

- Analysis to proportionally allocate the revenue requirement to the various customer classes of service

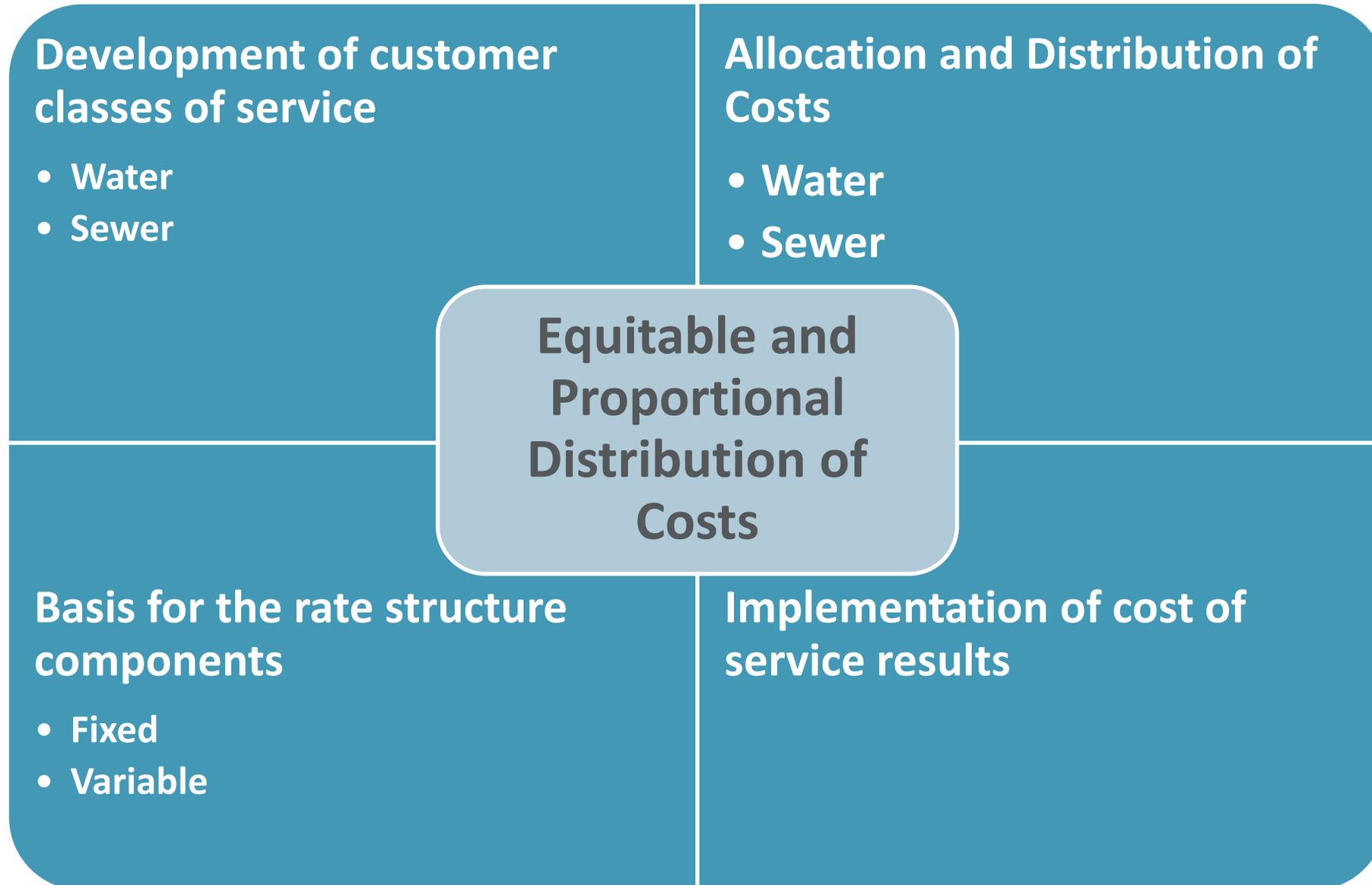
Why cost of service

- Generally accepted as “fair and equitable”
- Avoids subsidies
- Revenues reflect costs
- Meets the intent of **Proposition 218**

Objectives of Cost of Service

- Determine if subsidies exist
- Develop average *unit costs*

Cost of Service – Policy Discussion



Summary of the Cost of Service

Identifies the customer classes of service, or rate schedules for cost of service purposes

Reflects customer usage and facility requirements

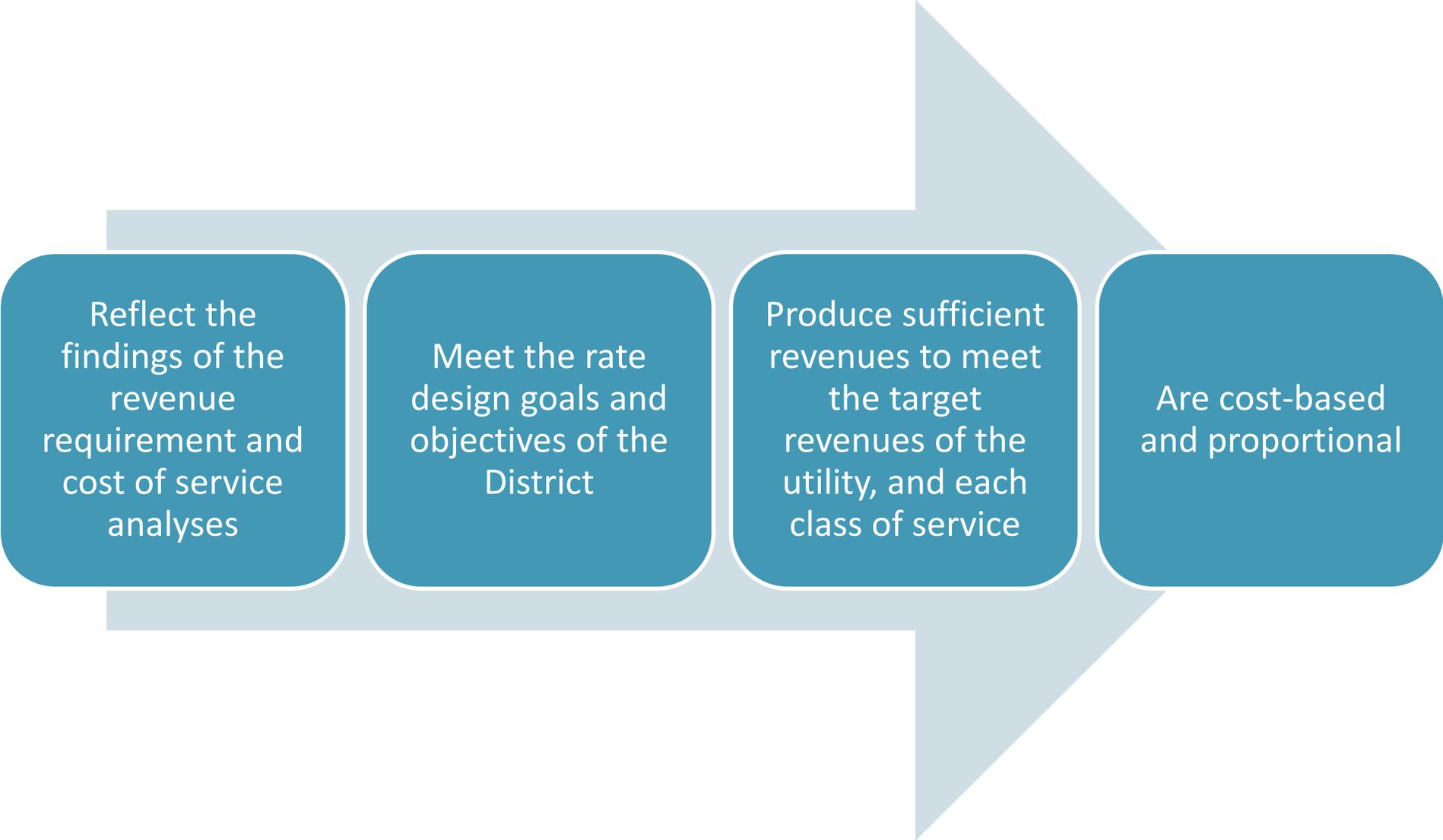
Results in equitable and proportional rates

Provides the District with information for rate structure policy decisions

Results in unit cost which are the basis for the proposed rates

District reviews periodically to establish rate structure/cost relationships

Overview of Rate Design



Rate Design – Cost Structure

- Fixed

- Does not vary with sales
- Debt service, salaries, etc.
- Typically 80 - 95% of costs

- Variable

- Varies with sales
- Power, chemicals, etc.
- Typically 5 - 20% of costs

Rate Design – Goals and Objectives

Revenue Sufficiency and Stability

Easy to Understand (customer)

Easy to Administer (District)

Affordability

Efficient Use of the Resource

Equitable and non-discriminating (cost-based)

Legally Defendable

Current Sewer Rates

	FY 2022-23	FY 2023-24	
Residential			
Base Rate	\$31.13	\$34.67	<i>Per EDU</i>
System Replacement Rate	15.48	15.81	<i>Per EDU</i>
State/Federal Mandate Fee	1.34	1.37	<i>Per EDU</i>
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Total Residential	\$47.95	\$51.86	
Non-Residential			
Base Rate	See Non-Residential Table		<i>Per EDU</i>
System Replacement Rate	See Non-Residential Table		<i>Per EDU</i>
State/Federal Mandate Fee	1.34	1.37	<i>Per EDU</i>
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Total Non-Residential			

Current Sewer Rates (Cont'd)

Base Charge by Customer Class			
	Unit	FY 2022-23	FY 2023-24
Motel w/o kitchen	<i>Per Living Unit/month</i>	\$10.06	\$11.20
Motel w/kitchen	<i>Per Living Unit/month</i>	13.11	14.60
Campsite w/sewer	<i># of Sites/month</i>	20.09	22.37
Campsite w/o sewer	<i># of Sites/month</i>	17.57	19.56
Other Business	<i># of Fixture Units/month</i>	4.00	4.45
Markets	<i># of Fixture Units/month</i>	7.05	7.85
Laundries	<i># of 10 lb Machines/month</i>	16.45	18.32
Restaurants & Bars			
Inside Seating	<i># of Seats/month</i>	3.08	3.43
Outside Seating	<i># of Seats/month</i>	1.02	1.13
Theatres	<i># of Seats/month</i>	0.39	0.44
Churches	<i># of Seats/month</i>	0.39	0.44
Barber Shops	<i># of Service Chairs/month</i>	10.59	11.79
Beauty Shops	<i># of Service Chairs/month</i>	17.57	19.56
Schools	<i># of seats/month</i>	0.07	0.07
Marina Boat Pumping Facility	<i>Per</i>	34.80	38.76
Swimming Pools	<i>Per Pool/month</i>	8.00	8.91
Snack Bars	<i># of fixture units/month</i>	3.08	3.43
Motel Res / Stock Coop / Studio	<i>Living Units/month</i>	26.61	29.64
Animal Shelter	<i>Per Account/month</i>	110.15	122.66
Service Stations	<i># of service bays/month</i>	53.75	59.85

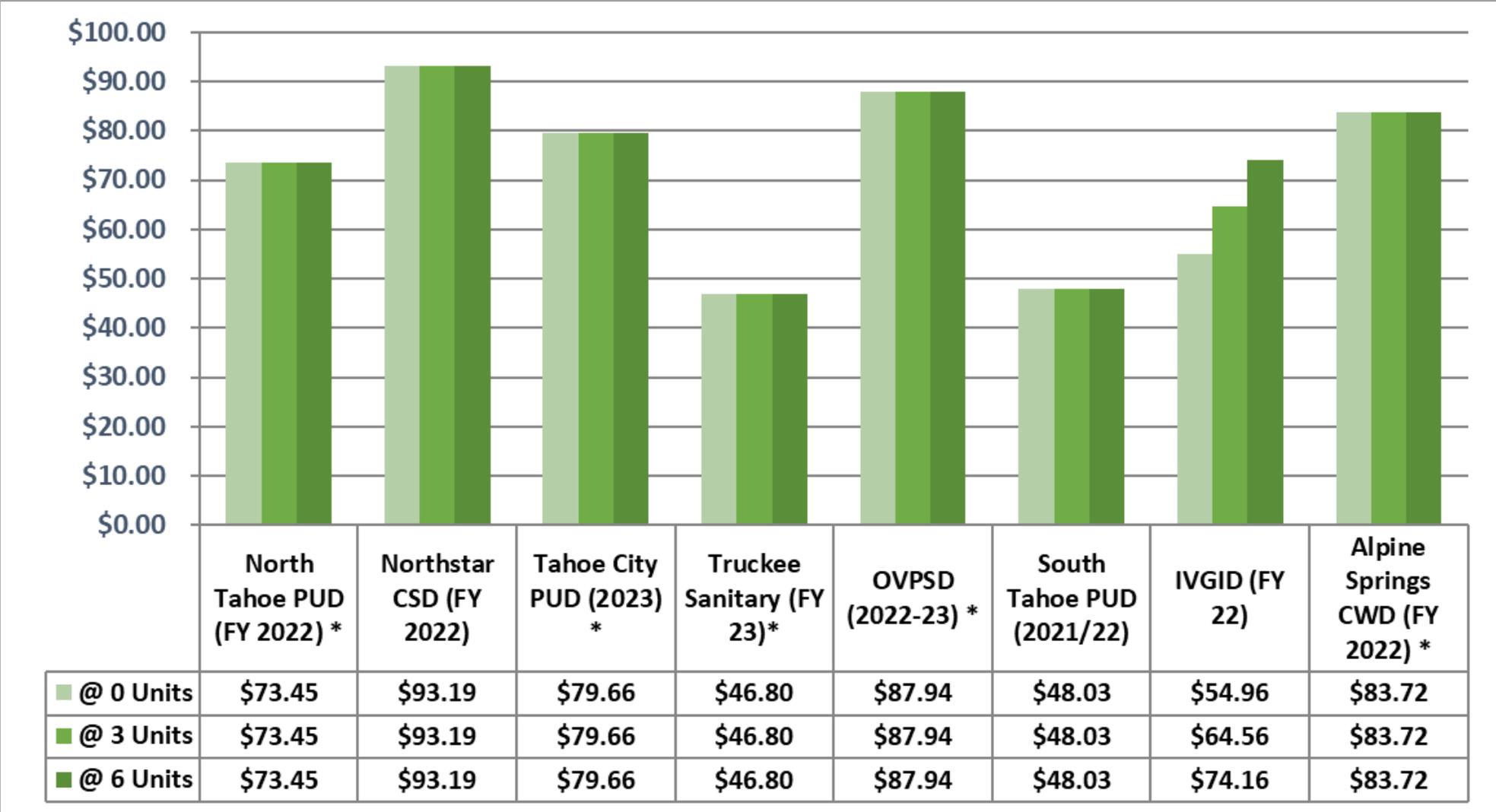
* rates do not include State and Federal mandate fee which is added to the above rate

System Replacement Fee by Customer Class			
	Unit	FY 2022-23	FY 2023-24
Motel w/o kitchen	<i>Per Living Unit/month</i>	\$5.00	\$5.11
Motel w/kitchen	<i>Per Living Unit/month</i>	6.52	6.66
Campsite w/sewer	<i># of Sites/month</i>	9.99	10.20
Campsite w/o sewer	<i># of Sites/month</i>	8.73	8.92
Other Business	<i># of Fixture Units/month</i>	1.99	2.03
Markets	<i># of Fixture Units/month</i>	3.50	3.58
Laundries	<i># of 10 lb Machines/month</i>	8.18	8.36
Restaurants & Bars			
Inside Seating	<i># of Seats/month</i>	1.53	1.56
Outside Seating	<i># of Seats/month</i>	0.51	0.52
Theatres	<i># of Seats/month</i>	0.20	0.20
Churches	<i># of Seats/month</i>	0.20	0.20
Barber Shops	<i># of Service Chairs/month</i>	5.26	5.38
Beauty Shops	<i># of Service Chairs/month</i>	8.73	8.92
Schools	<i># of seats/month</i>	0.03	0.03
Marina Boat Pumping Facility	<i>Per</i>	17.30	17.68
Swimming Pools	<i>Per Pool/month</i>	3.98	4.06
Snack Bars	<i># of fixture units/month</i>	1.53	1.56
Motel Res / Stock Coop / Studio	<i>Living Units/month</i>	13.23	13.51
Animal Shelter	<i>Per Account/month</i>	54.76	55.94
Service Stations	<i># of service bays/month</i>	26.72	27.30

* System Replacement Fee is charged per Billing Unit

Sewer Utility

Local Residential Bill Comparison



Current Water Rates

	FY 2022-23	FY 2023-24
Single Family		
Fixed (\$/month)		
Base	\$34.85	\$35.55
System Replacement	29.96	30.58
State/Federal Mandate	1.62	1.67
0 -8,000 gallons	\$2.83	\$2.89
> 8,000 - 20,000 gallons	3.04	3.10
> 20,000 gallons	3.32	3.39

	FY 2022-23	FY 2023-24
Multi-Residential		
Fixed (\$/month)		
Base		
3/4"	\$67.71	\$69.06
1"	118.53	120.90
1 1/2"	304.82	310.92
2"	460.58	469.79
3"	812.82	829.08
4"	1,266.70	1,292.04
6"	2,257.00	2,302.14
8"	6,319.60	6,445.99
System Replacement		
3/4"	\$29.96	\$30.58
1"	47.08	48.05
1 1/2"	121.06	123.57
2"	182.93	186.71
3"	322.82	329.49
4"	503.09	513.49
6"	998.69	1,019.34
8"	2,796.32	2,854.14
Dwelling Unit Fee	\$0.00	\$0.00
State/Federal Mandate	\$1.62	\$1.67
Variable (\$/1,000 gallons)		
Tier 1	\$2.78	\$2.84
Tier 2	2.90	2.96
Tier 3	3.17	3.23
* Tiers vary by meter size		

Tiers For Multi-Residential and Commercial Classes

Meter Size	Tier 1	Tier 2	Tier 3
3/4"	0 - 6,000 Gal	6,000 - 41,000 Gal	41,000 Gal & Greater
1"	0 - 11,000 Gal	11,000 - 46,000 Gal	46,000 Gal & Greater
1 1/2"	0 - 27,000 Gal	27,000 - 116,000 Gal	116,000 Gal & Greater
2"	0 - 41,000 Gal	41,000 - 134,000 Gal	134,000 Gal & Greater
3"	0 - 72,000 Gal	72,000 - 161,000 Gal	161,000 Gal & Greater
4"	0 - 112,000 Gal	112,000 - 261,000 Gal	261,000 Gal & Greater
6"	0 - 200,000 Gal	200,000 - 460,000 Gal	460,000 Gal & Greater
8"	0 - 560,000 Gal	560,000 - 1,288,000 Gal	1,288,000 Gal & Greater

Current Water Rates (Cont'd)

	FY 2022-23	FY 2023-24
Commercial/Industrial		
Fixed (\$/month)		
Base		
3/4"	\$51.42	\$52.45
1"	90.02	91.82
1 1/2"	231.49	236.12
2"	349.78	356.78
3"	617.29	629.64
4"	961.98	981.22
6"	1,714.06	1,748.34
8"	4,799.36	4,895.35
System Replacement		
3/4"	\$29.96	\$30.58
1"	47.08	48.05
1 1/2"	121.06	123.57
2"	182.93	186.71
3"	322.82	329.49
4"	503.09	513.49
6"	998.69	1,019.36
8"	2,796.32	2,854.14
State/Federal Mandate	\$1.62	\$1.67
Variable (\$/1,000 gallons)		
Tier 1	\$2.79	\$2.85
Tier 2	2.99	3.05
Tier 3	3.13	3.19

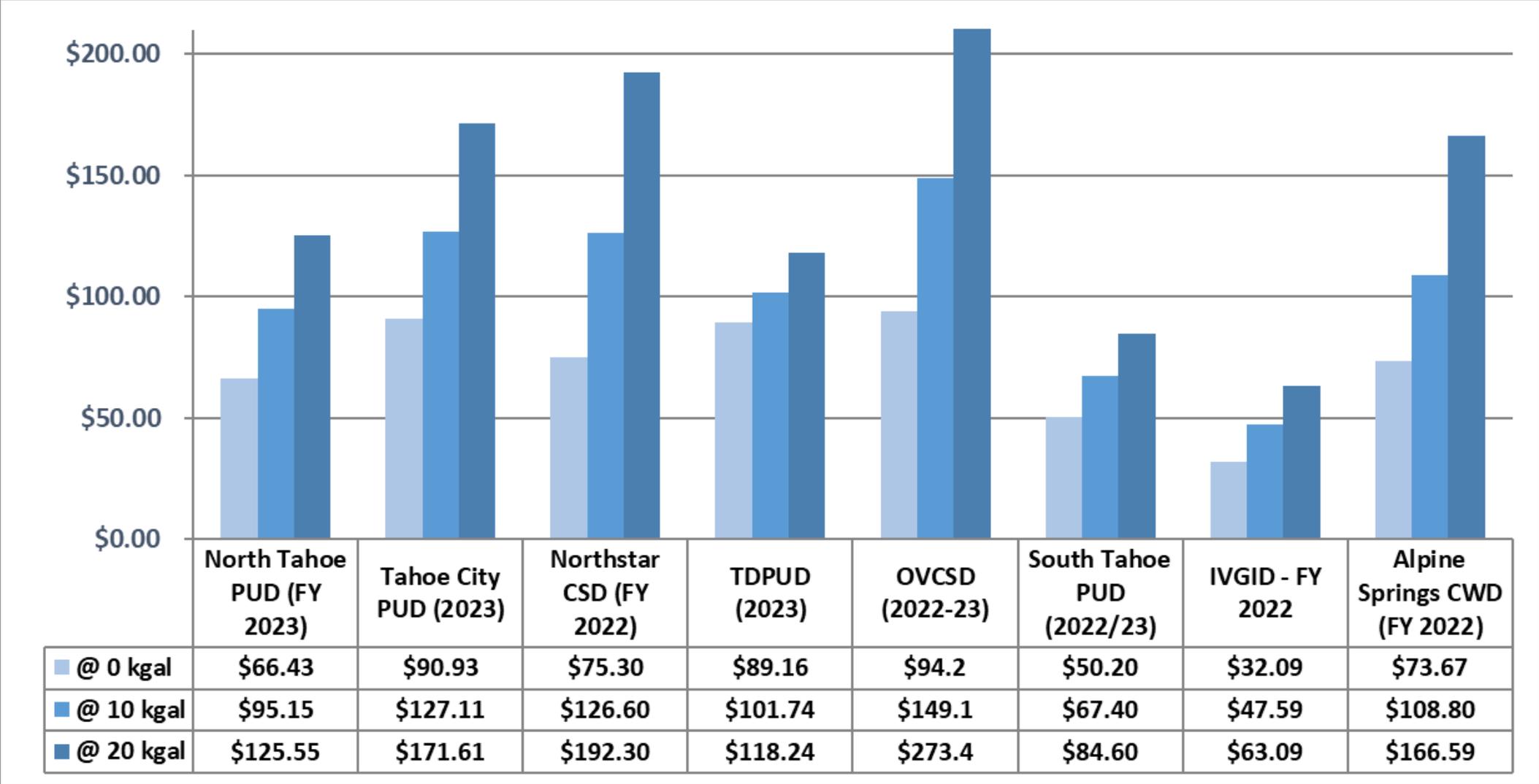
* Tiers vary by meter size

	FY 2022-23	FY 2023-24
Common Meter (Irrigation)		
Fixed (\$/month)		
Base		
3/4"	\$18.54	\$18.91
1"	32.46	33.11
1 1/2"	83.48	85.15
2"	126.14	128.66
3"	222.60	227.05
4"	346.90	353.84
6"	618.11	630.47
8"	1,730.69	1,765.31
System Replcement		
3/4"	\$30.61	\$31.22
1"	53.58	54.65
1 1/2"	137.78	140.54
2"	208.19	212.35
3"	367.41	374.76
4"	572.57	584.02
6"	1,020.20	1,040.60
8"	2,856.56	2,913.69
State/Federal Mandate	\$1.62	\$1.67
Variable (\$/1,000 gallons)		
Tier 1 - 0 - 41,000 gallons	\$3.25	\$3.32
Tier 2 > 41,000 gallons	3.62	3.69

* Tiers vary by meter size

Water Utility

Local Residential Bill Comparison



Prior Study Outcomes

- Established the Administrative and Parks funding through property tax
 - Transitioned sewer O&M funding away from property tax funding
- Updated the water and sewer rate structure to cost-based levels
 - Specific tiered rate structure for residential customers
- Updated the water and sewer connection fees to cost-based levels
 - Simplified the rate structure on a per EDU basis

Study Goals and Objectives

- Review and update capital funding analysis
- Review general and administrative expense allocation
- Review fixed/variable revenue through rates
- Update the sewer and water rates

Study Opportunities

- Evaluate alternatives for cluster meters (HOAs)
- Revise current non-residential sewer rate (EDU basis) to a meter size basis (like water)
- Revise current non-residential sewer connection fee (EDU basis) to a meter size basis (like water)
- Develop flat, unmetered, water rates for future potential use

Next Steps

- Gain Board feedback and input
- Develop draft technical analyses
- Review draft analysis with District staff
- Present preliminary results and key issues to Board
 - Gain feedback and policy input
- Finalize cost of service study technical analysis
 - Targeting November 2023 public hearing

Board Discussion

