IMPROVING YOUR WATER AND WASTEWATER SYSTEMS

Public Workshop – April 25, 2024

Who Are We?

Purpose Today

Learn More and Provide Input on Your Water, Wastewater and Recycled Water Systems

- Overview – Water / Wastewater / Recycled Water
- Ongoing and Future Needs
- Rate Scenarios
- Public Participation Process
- Questions

How Did We Get Here?

- Jan 18 – Board workshop to discuss infrastructure needs of systems

  3 Water 10-Year Capital Plan Scenarios

  2 Sewer 10-Year Capital Plan Scenarios

  Scenarios ranged from $132M to $175M

  - Baseline, Midrange, Enhanced

- Feb 1 – Rate Study Workshop

  Consultant presented to the Board the rate increases necessary to fund the CIP scenarios

How Did We Get Here?

- Feb 29 – Public Evening Meeting

  Presented to the public the 5 Capital Plan Scenarios and the rate increases necessary to fund them.

- March 19 - Budget workshop

  Board chose the lowest cost capital plans for both water and sewer and directed staff to issue a Prop 218 Notice with the proposed rate increases.

How Did We Get Here?

- April 1 – Issued the Prop 218 Notice

  Notice included proposed rates for Baseline Capital Plans, date and time of tonight's meeting, and date and time of the public hearing (5/16 @ 2:00) when the Board votes on proposed rates.

- April 25 – Tonight's Public Meeting

  Presentation on Baseline Capital Plans and the proposed rate increases to fund them.

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Our Systems

STPUD manages and maintains the following systems for South Lake Tahoe:

- Water Production and Distribution
- Sewer Collection
- Wastewater Treatment
- Recycled Water

Water System

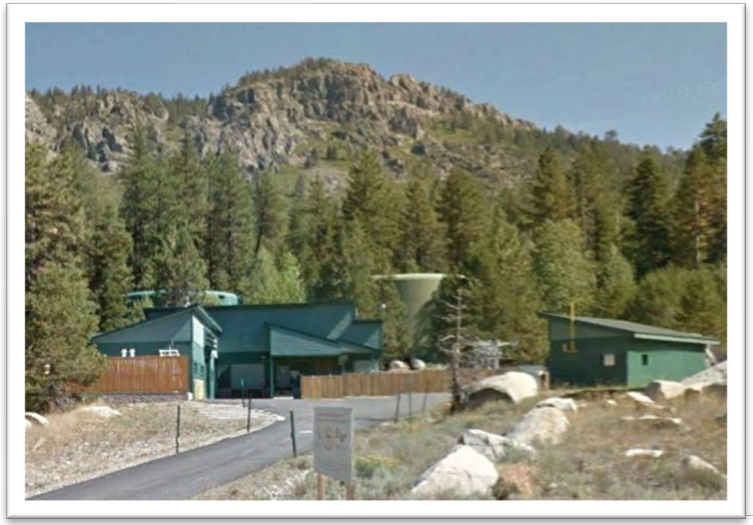
- 14,200 Connections
- 253 miles Waterlines
- 31 Pressure Zones
- 11 Active Wells / 100% Groundwater
- 15 Booster Stations
- 19 PRV Stations
- 19 Storage Tanks

Wastewater System

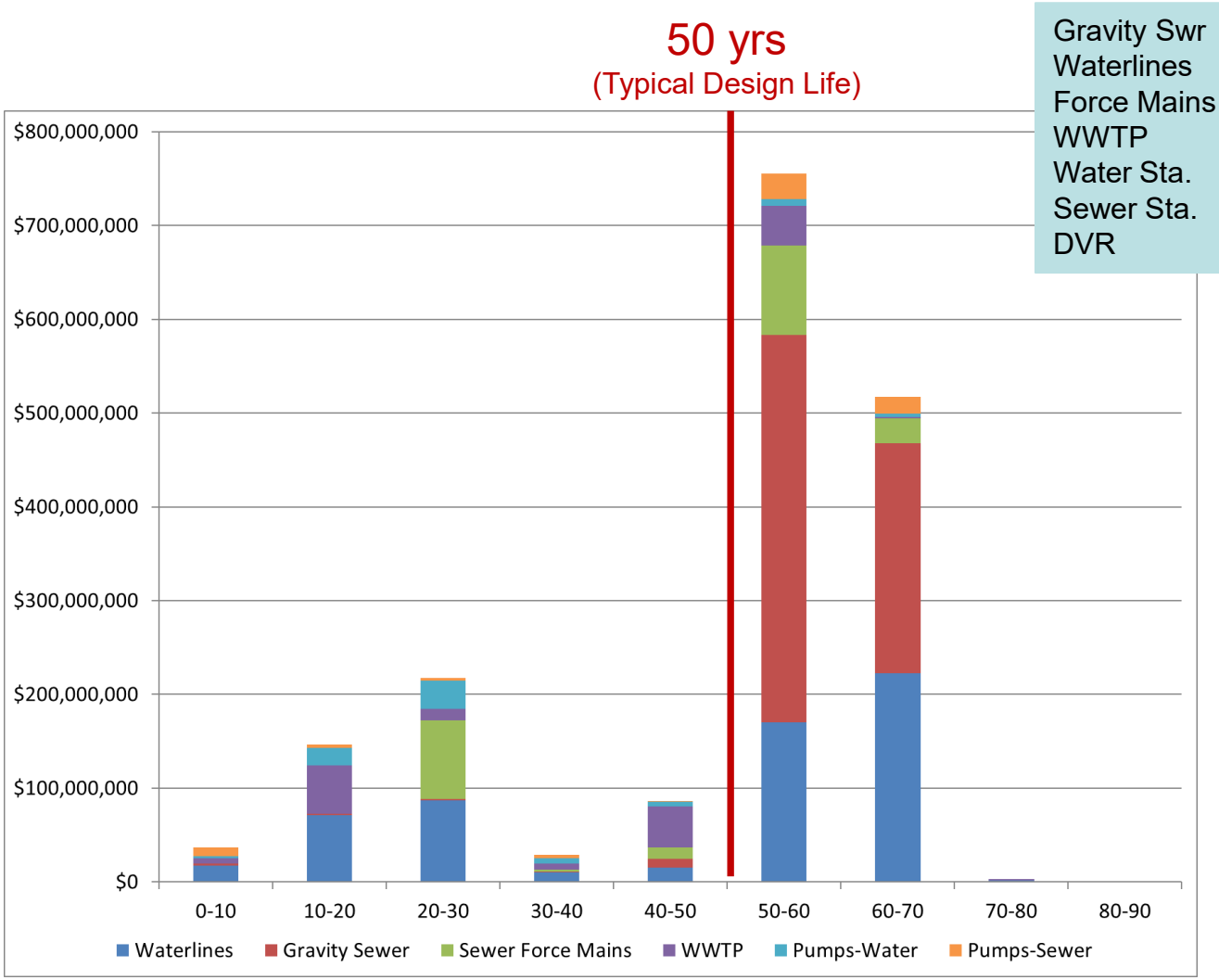
- 18,300 Connections
- 312 miles Gravity Sewers
- 39 Pump Stations
- 19 miles Force Mains
- Treatment Plant
  - 3.5 MGD Average Flow
  - 7.7 MGD Rated Flow
  - 18 MGD Peak Flow

Recycled Water System

- 26 miles Export Pipeline
- Luther Pass Pump Station
- Diamond Valley Ranch (DVR)
  - Two Dams, Two Reservoirs
  - Ditch Conveyance System
  - 3,000 acres Utilized
    - Pasture Irrigation / Grazing
    - Alfalfa Production
  - Hydroelectric Energy Recovery



Total System Value: $2.2B



Gravity Swr	$837M
Waterlines	$597M
Force Mains	$244M
WWTP	$164M
Water Sta.	$74M
Sewer Sta.	$64M
DVR	$220M

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Ongoing and Future Needs

Ten-Year Capital Plan for next 5-Year Budget Cycle

Next 5 Years…

- *120 projects and programs*

Years 6 to 10…

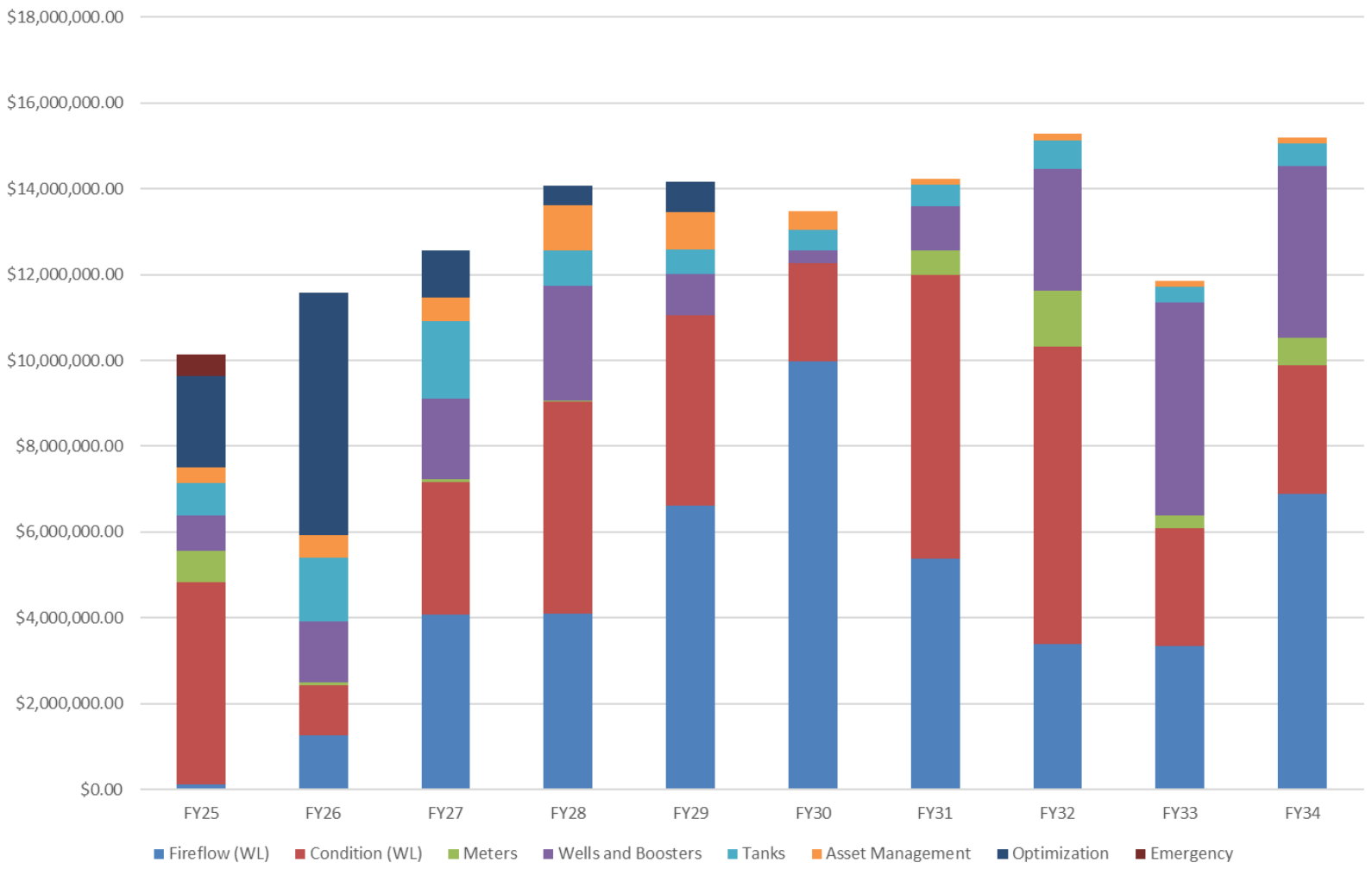
- *Additional 37 projects and programs*

Water CIP Projects

- Return to Pre-2010 Waterline Replacement Rate
  - Complete ALL **Fire Projects**
  - Replace **Worst Condition WLs** id'd by Baseform
- Implement routine **Wells Assessment** Program
- Implement routine **Tank Mgmt Program**
- Rehabilitate **High Priority Water Stations**
- Prioritize **Outside Funded** Projects
- Prioritize **Cooperative** Projects (ie., City/Co)
- Address **O&M/Access** concerns, as needed
- Implement **Asset Mgmt/Efficiency Programs**

South Tahoe Public Utility District
Water Fund - Engineering CIP
FY25-FY34

Ten-Year Cost: $132.6M



Ongoing and Future Needs

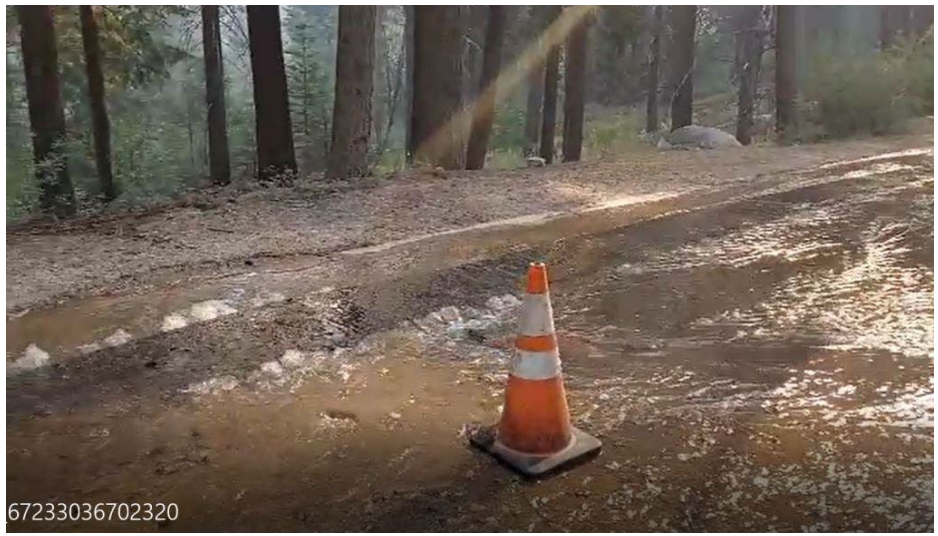
Waterline Replacements

Goal: Finish fire security projects and return to Pre-2010 Replacement Rate

- 2 miles new main on Pioneer
- 15 miles undersized mains
- 16 miles poor condition mains

Value: $85M (*$9M increase)*

Funding: State-Subsidized Low—Interest Loans (pending)
Grants (pending)
Rates



Ongoing and Future Needs

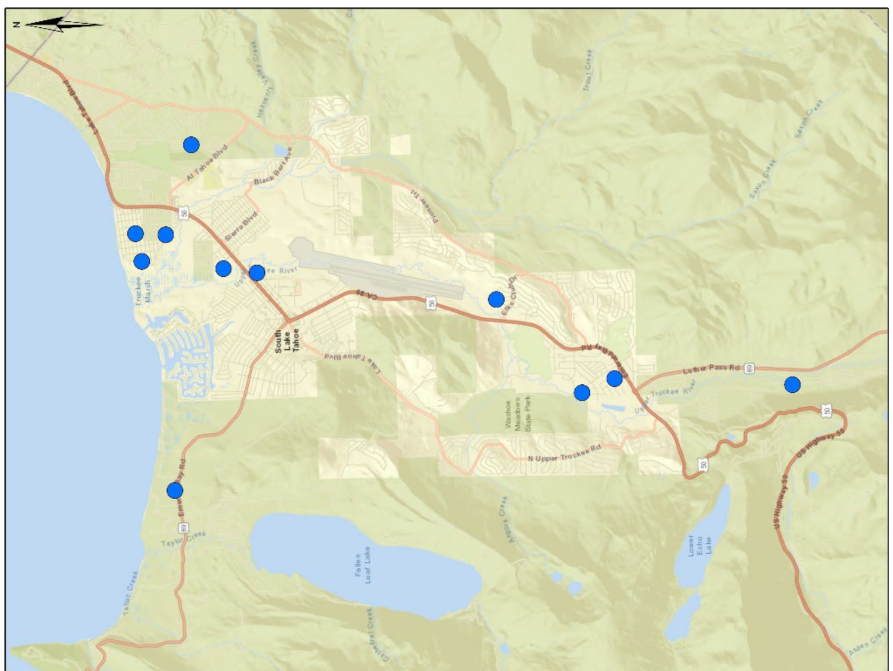
Wells Asset Management

Goal: Implement routine well inspection and rehabilitation program

- Inspect and perform maintenance on one well per year

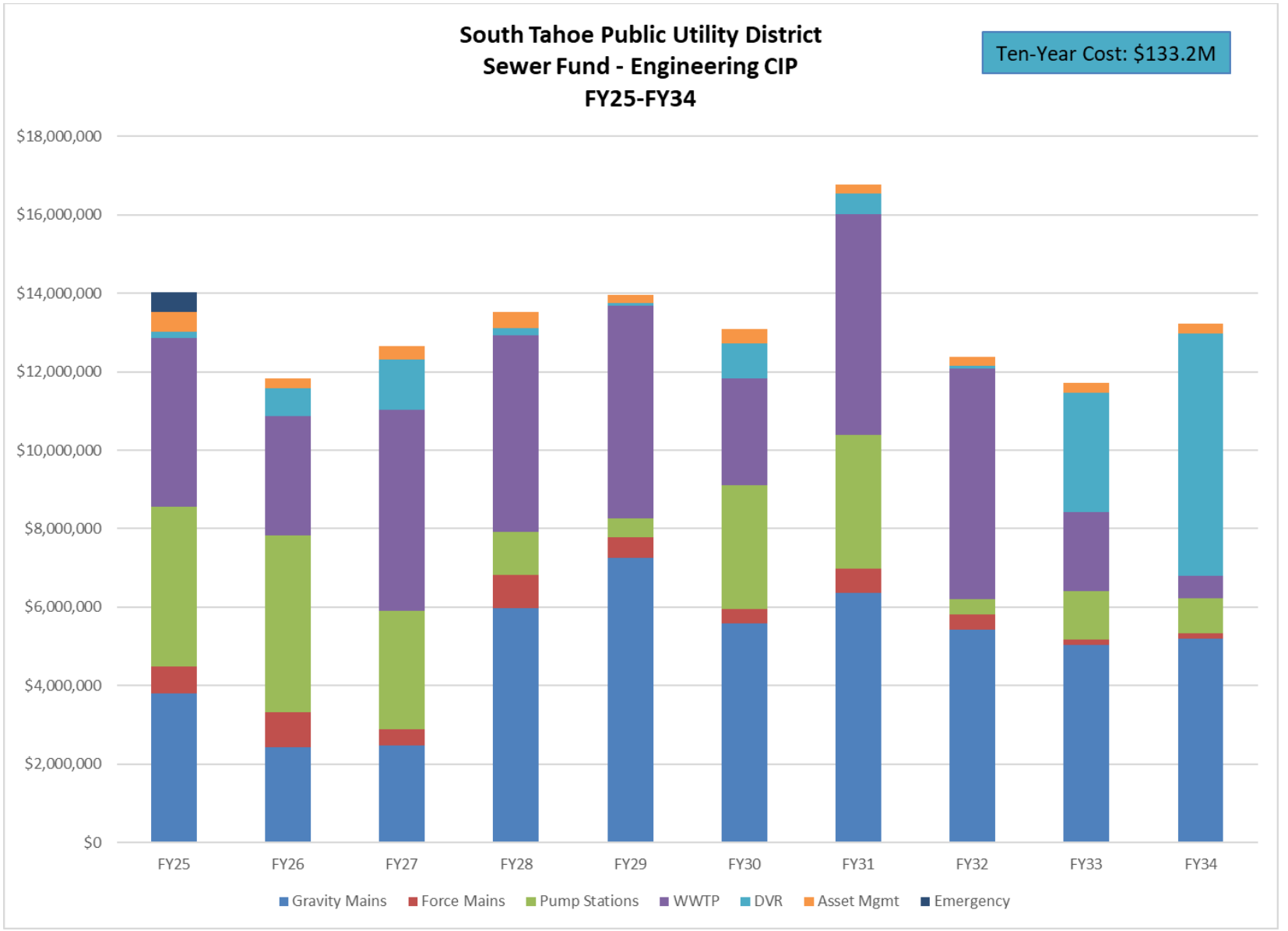
Value: $4M (*new this year)*

Funding: Rates



Sewer CIP Projects

- Fund **Gravity Sewer Program** based on CCTV
- Develop/implement **Force Main AM Program**
- Rehab ALL "**Stations of Concern**" id'd by Pumps
- Address ALL priority concerns at **DVR & WWTP**
- Prioritize **Outside Funded** Projects
- Prioritize **Cooperative Projects** (ie., City/Co)
- Address **O&M and Access** concerns, as needed
- Focus on **Controlling Infiltration and Inflow**
- Rollout **Asset Mgmt/Efficiency Programs** as assets demand and resources allow


South Tahoe Public Utility District
Sewer Fund - Engineering CIP
FY25-FY34
Ten-Year Cost: $133.2M
$18,000,000
$16,000,000
$14,000,000
$12,000,000
$10,000,000
$8,000,000
$6,000,000
$4,000,000
$2,000,000
$0
FY25
FY26
FY27
FY28
FY29
FY30
FY31
FY32
FY33
FY34
Gravity Mains
Force Mains
Pump Stations
WWTP
DVR
Asset Mgmt
Emergency

Ongoing and Future Needs

Sewer Collection System

Goal: Find and reduce groundwater and storm water entering the system, to reduce pumping costs and protect against emergency spills

- Establish ongoing program valued at $1.1M per year to repair highest risk pipes and manholes

Value: $11M (*$5.6M new this year)*

Funding: Rates

Ongoing and Future Needs

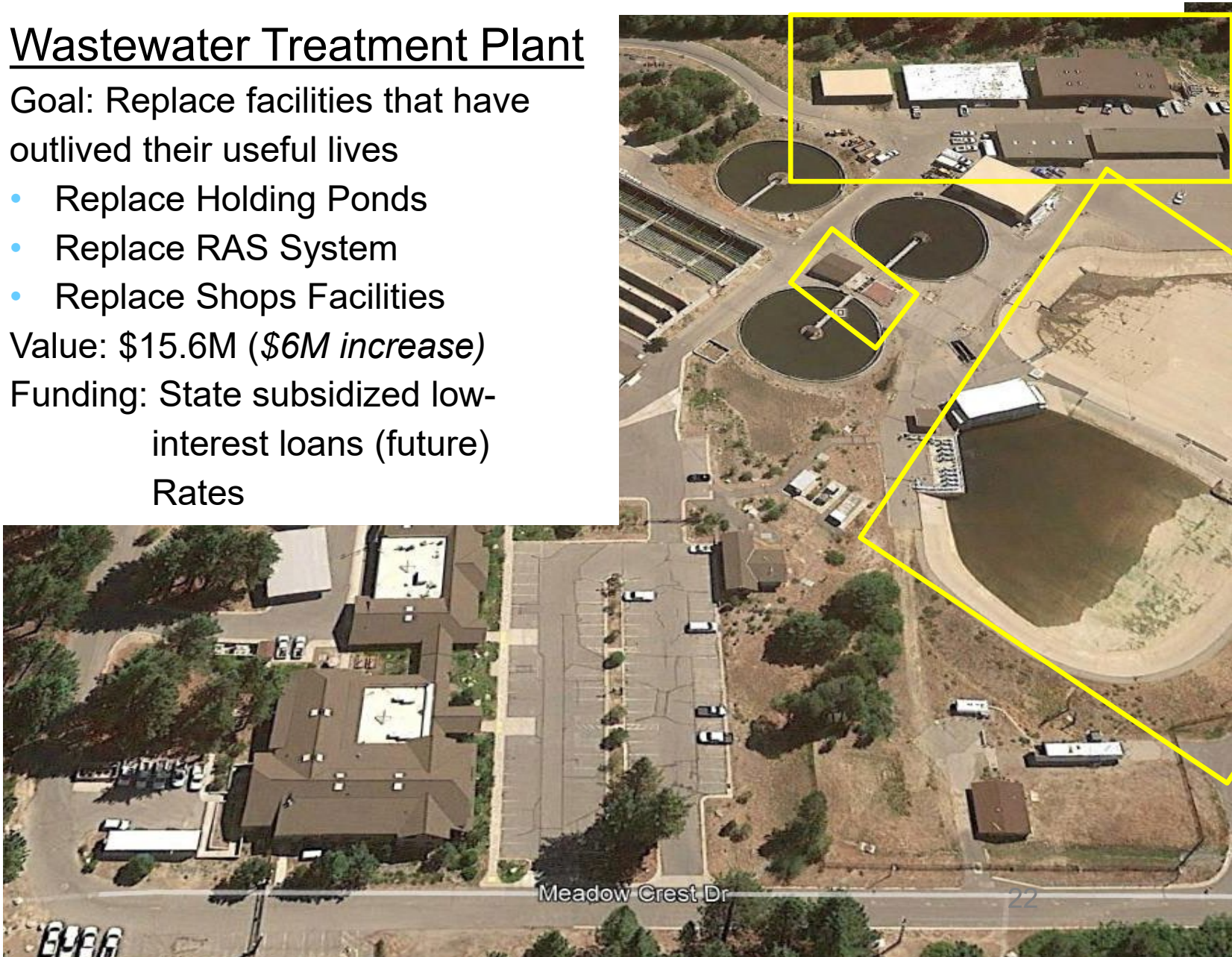
Wastewater Treatment Plant

Goal: Replace facilities that have outlived their useful lives

- Replace Holding Ponds
- Replace RAS System
- Replace Shops Facilities

Value: $15.6M (*$6M increase)*

Funding: State subsidized low-interest loans (future)
Rates



Ongoing and Future Needs

Recycled Water System

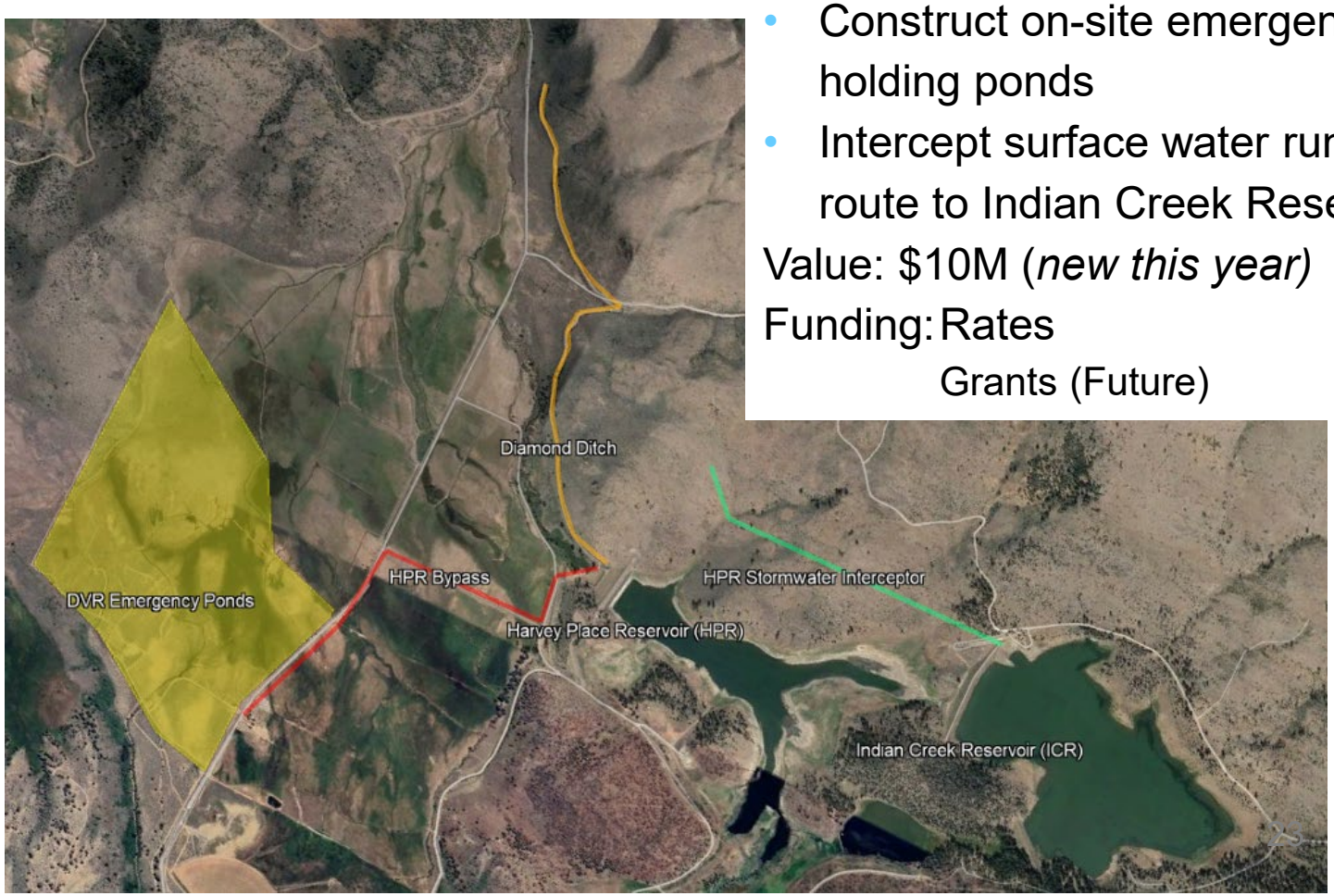
Goal: Comply with regulatory requirement prohibiting winter releases from Harvey Place Reservoir

- Construct on-site emergency holding ponds
- Intercept surface water runoff and route to Indian Creek Reservoir

Value: $10M (*new this year)*

Funding: Rates

Grants (Future)



Emergency Responses

- Tamarack Fire (2021)
- Alpine County Flash Floods (2021)
- Caldor Fire (2021)
- Winter Storms (2023)

Construction Climate

- Construction Challenges
  - Materials Availability
  - Contractor Availability
- Price Escalation (source: ENR BCI)
  - Historically 3% per year
  - April 2019 to April 2024, 36%

Revenues must increase at least as much as price escalation to not lose ground

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April 18, 2024

South Tahoe PUD

Rate Study Update

Water & Sewer Cost of Service Study

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Overview of the Presentation

Review the water and sewer rate study

- Revenue Requirement
- Cost of Service
- Rate Design

Discuss findings and conclusions next steps

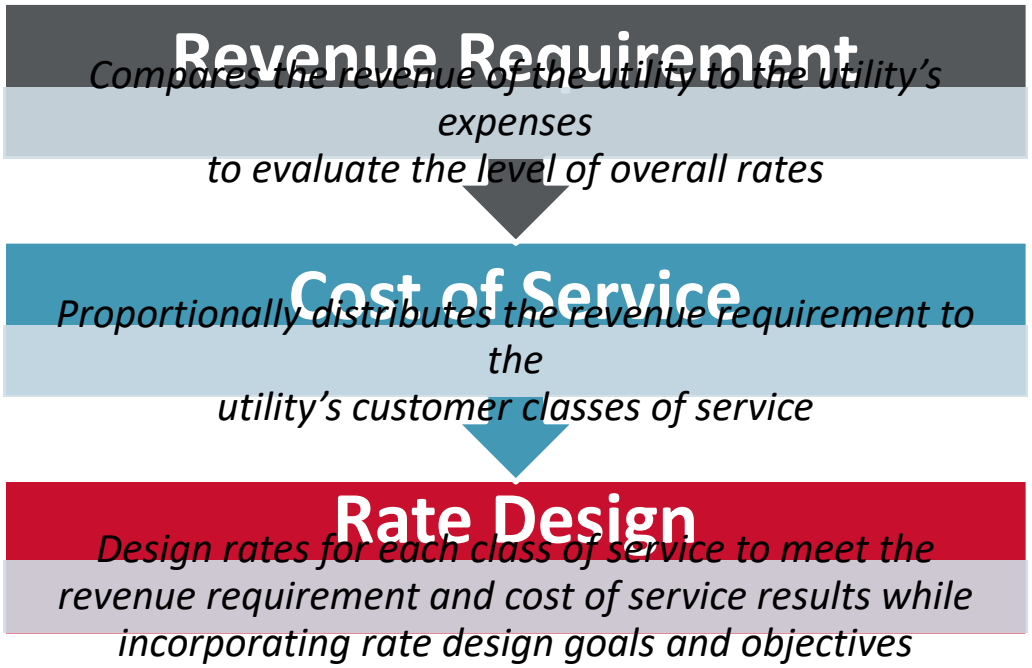
Purpose of a Rate Study

- Provide an adequate level of rate revenue to operate and maintain the District's water and sewer systems
- Develop cost-based water and sewer rates
  - Meet requirements of Proposition 218
- Reflect prudent financial planning criteria
  - Maintain target debt service coverage (DSC) ratio
  - Prudent rate funding of capital (Pay-Go)
  - Meet target reserve balances (i.e., Council Policy)
- Develop the study using generally accepted methodologies tailored to the District's system and customer characteristics
  - Water = AWWA M1 Manual
  - Sewer = WEF MOP #27

Proposition 218 – Setting Cost-Based Rates

- A 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
  - Based on industry standard approaches (AWWA M1 Manual and WEF MOP #27) tailored to the District's system and customer characteristics
  - Nexus between cost to provide service (expenses) and rates (fixed / variable) charged (revenues)

Developing Cost-Based Rates

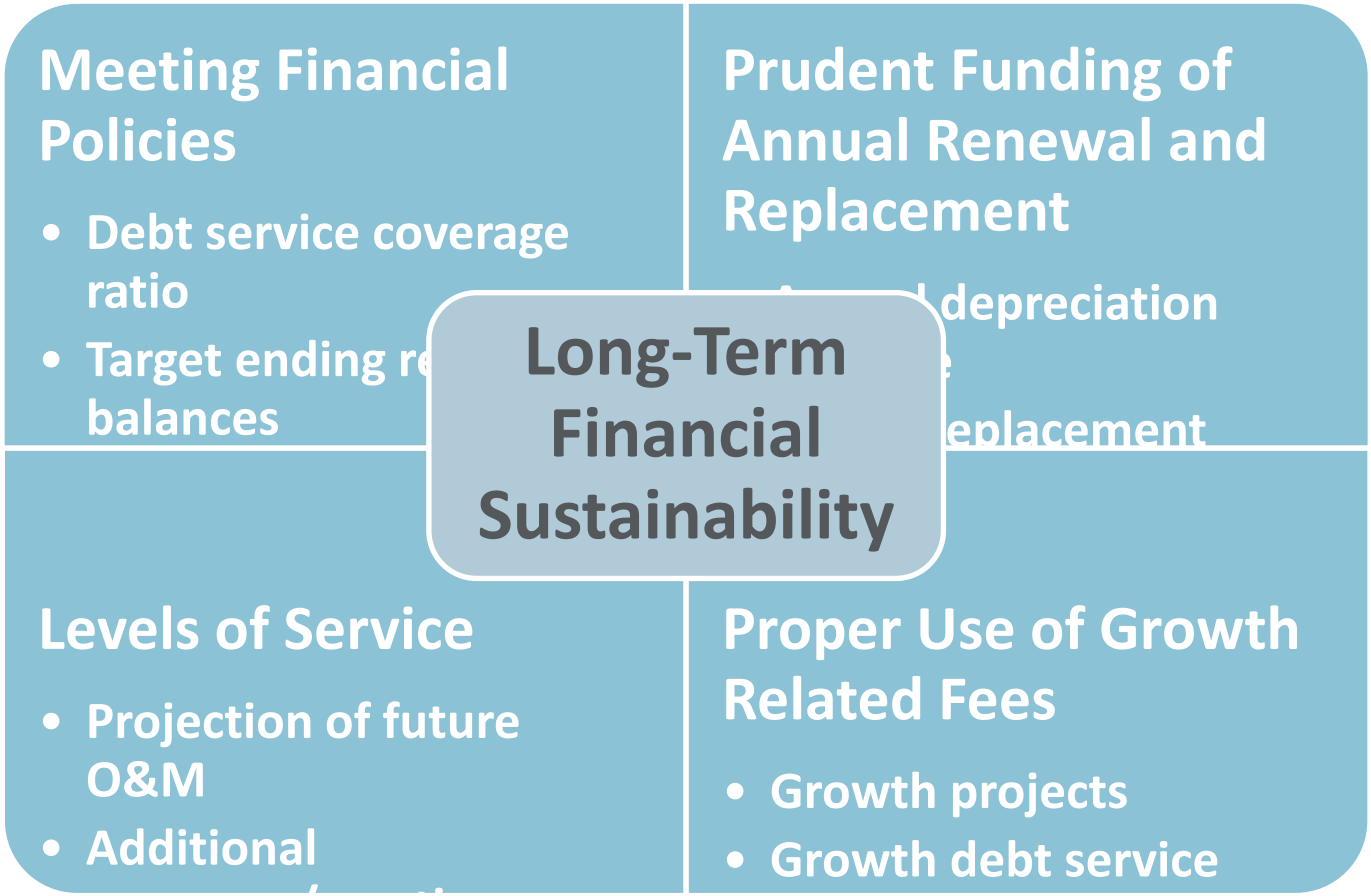


Revenue Requirement

Overview of the Revenue Requirement

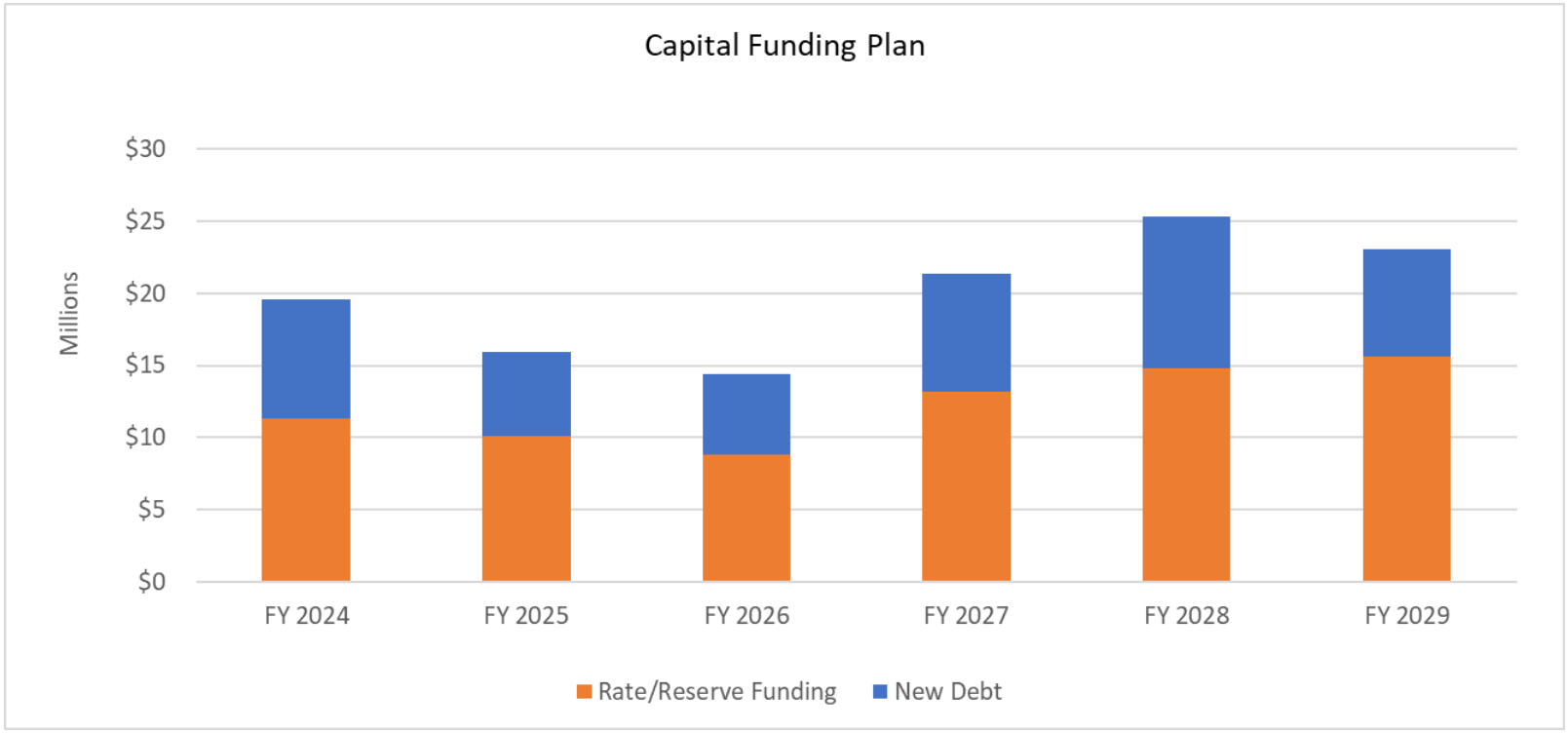
Compares utility revenues to expenses	• Determines the level of revenue (rate) adjustment necessary
Uses prudent financial planning criteria	• Adequate funding of renewal and replacements • Maintaining sufficient ending reserve balances
Reviews a specific time period	• Typically a five-to-ten-year period
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 – Policy Overview



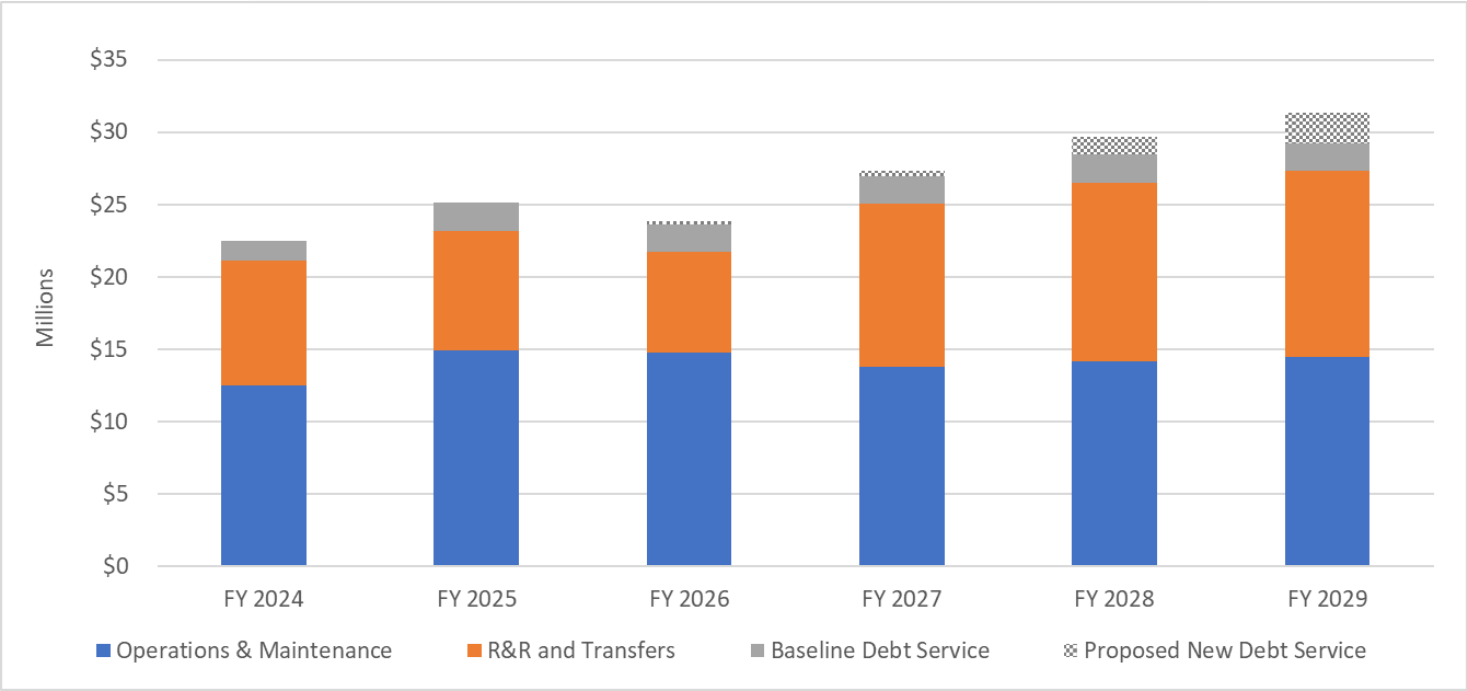
Water Utility
Revenue Requirement

Water Revenue Requirement
Capital Funding Plan



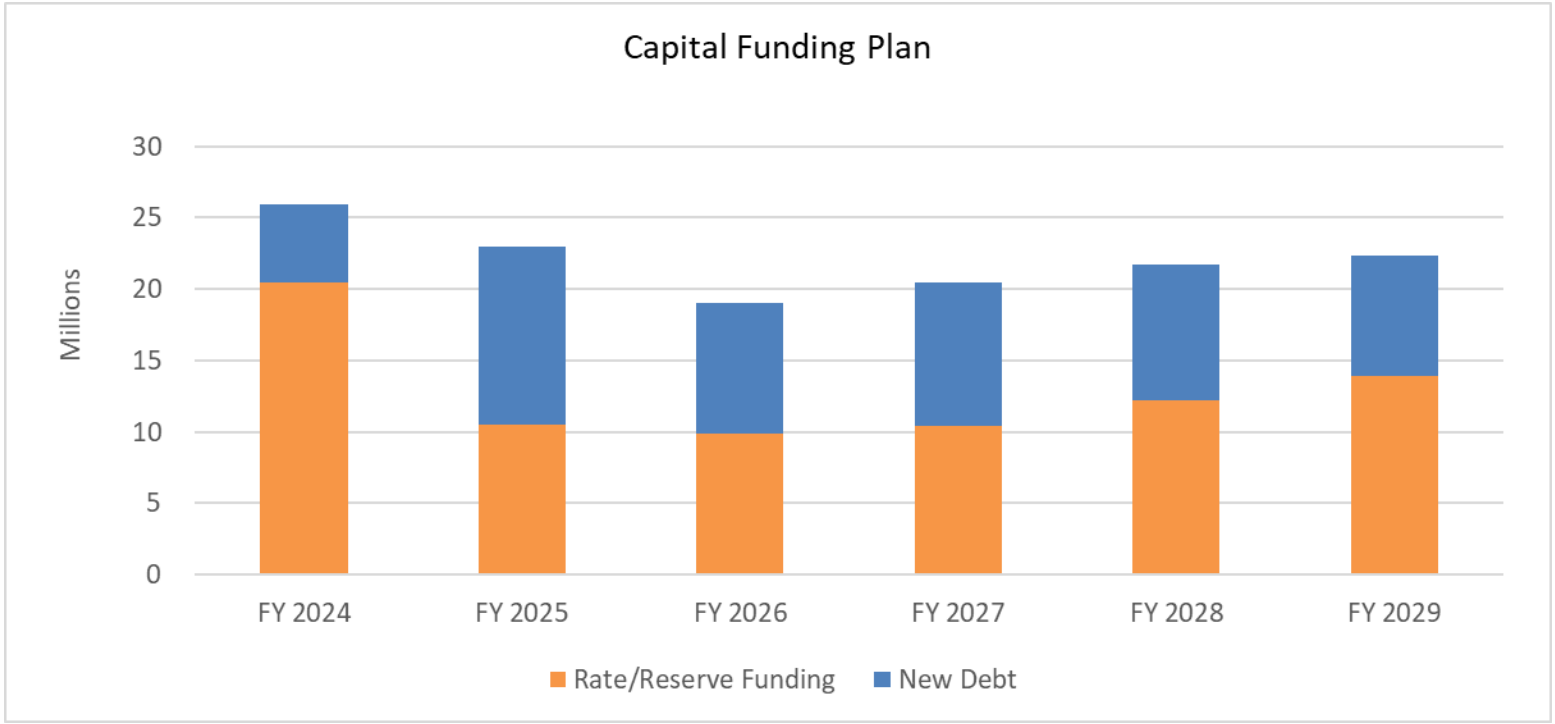
Water Revenue Requirement

FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
N/A	9.5%	9.5%	9.5%	9.5%	9.5%



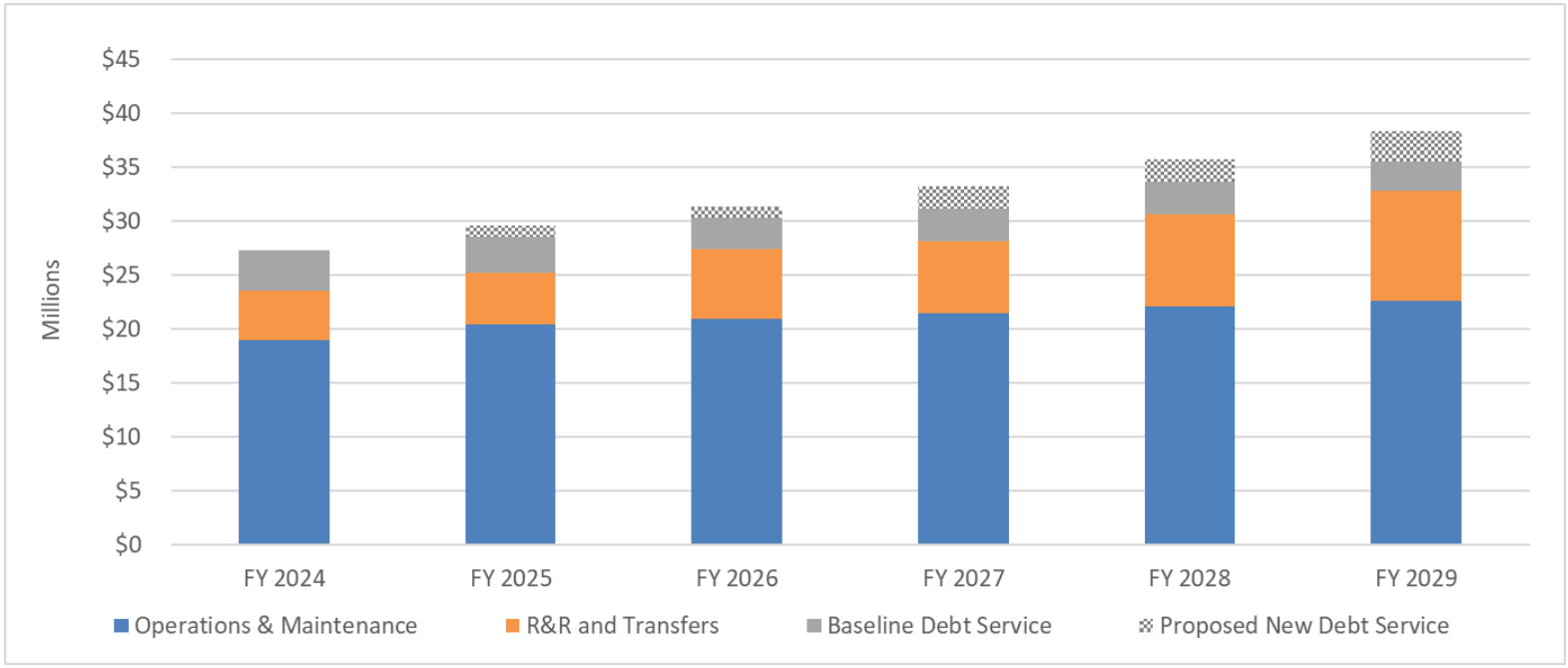
Sewer Utility
Revenue Requirement

Sewer Revenue Requirement
Capital Funding Plan



Sewer Revenue Requirement

FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
N/A	13.5%	9.5%	9.5%	9.5%	9.5%



Cost of Service

Overview of the Cost of Service

What is cost of service?

- Analysis to proportionally distribute the revenue requirement to the customer classes of service

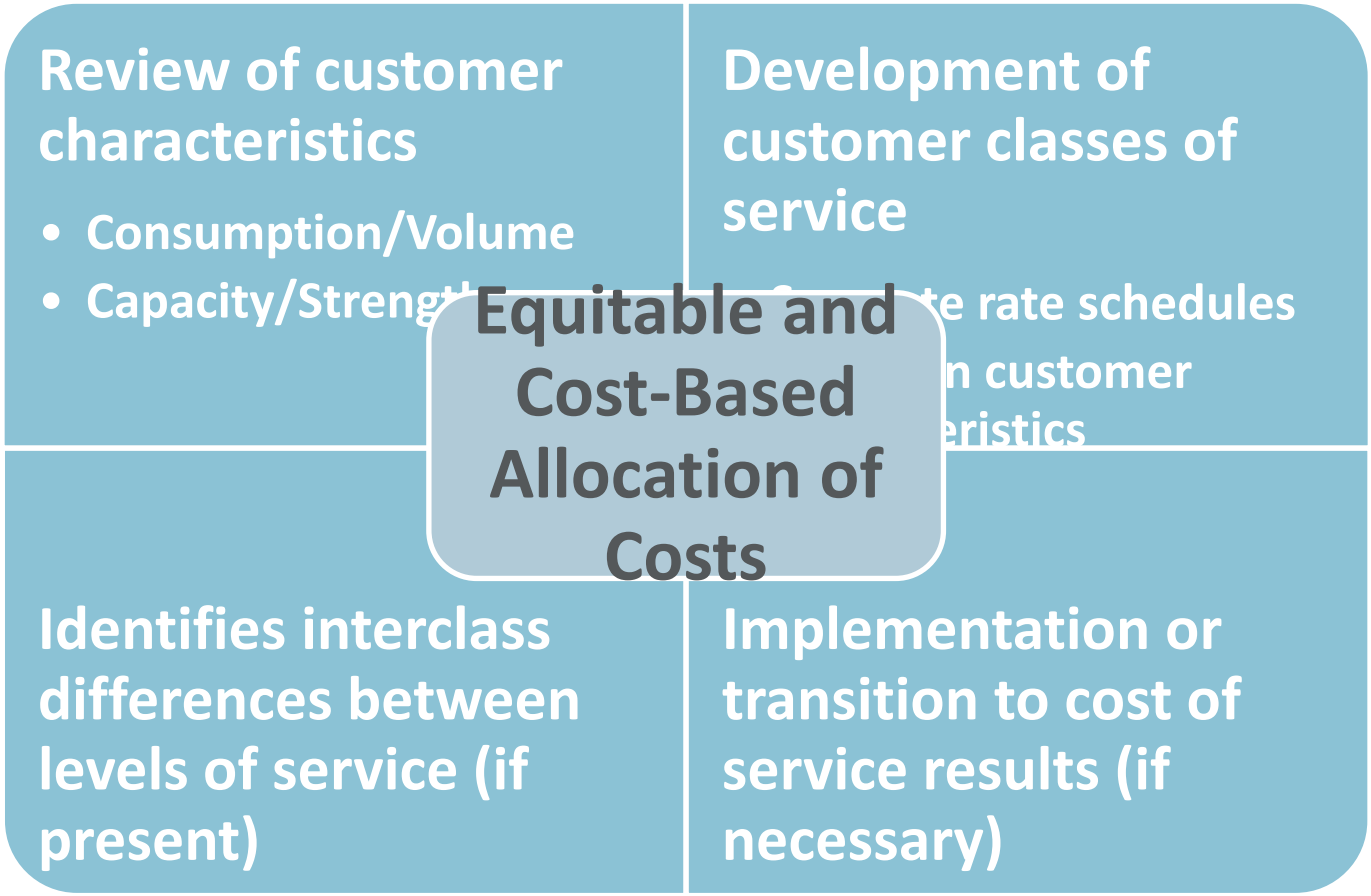
Why cost of service

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

Objectives of Cost of Service

- Determine if subsidies exist
- Develop average unit costs

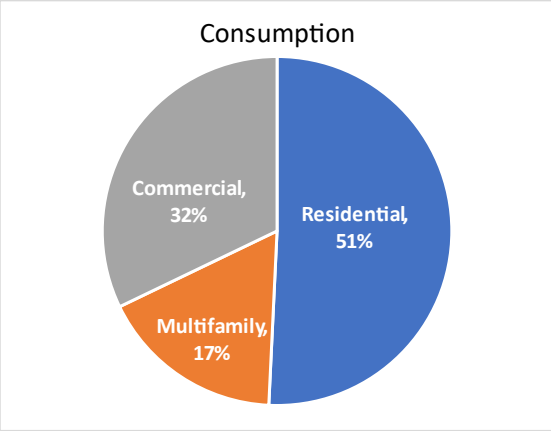
Cost of Service – Policy Overview



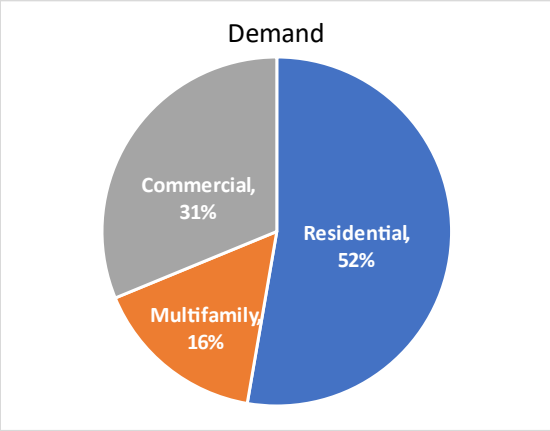
Water Utility Cost of Service

Water Cost of Service

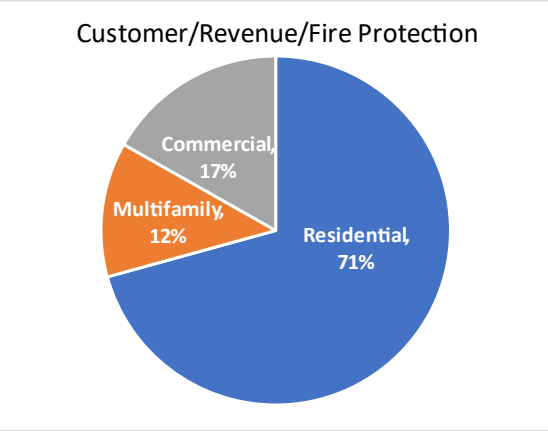
Allocation Factors



12% of Costs
Based on Customer Consumption

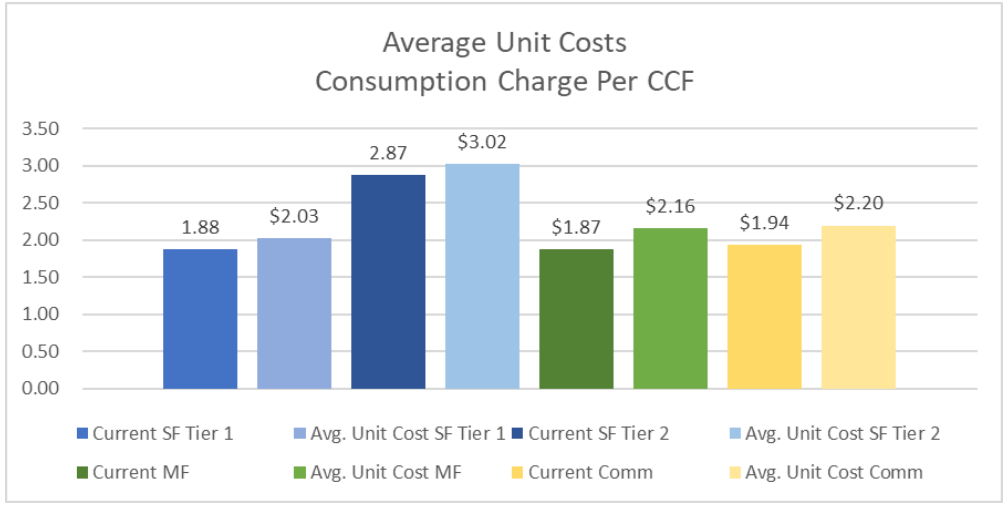


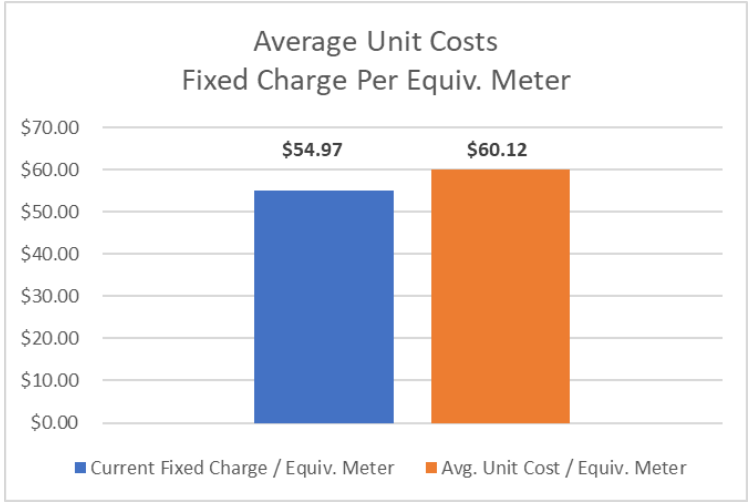
12% of Costs
Based on Customer Demand



76% of Costs
Based on % of Revenue,# of Customers, Fire Protection Needs

Water Cost of Service



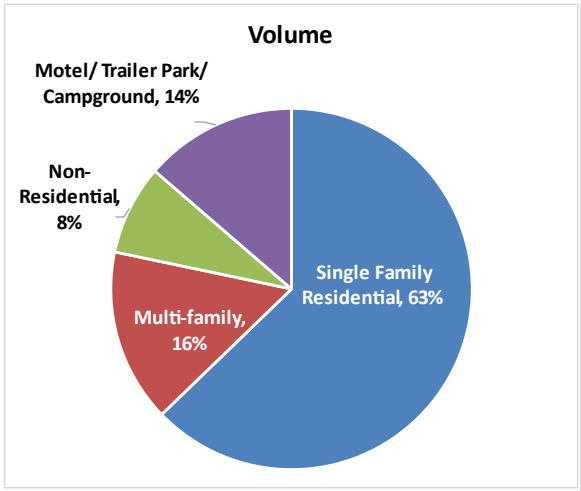


- Unit costs are used to develop rate designs for each class of service
- Provides the cost basis for the fixed and consumption charge for each customer class of service
- Cost of service results support the basis for meeting the requirements of Proposition 218

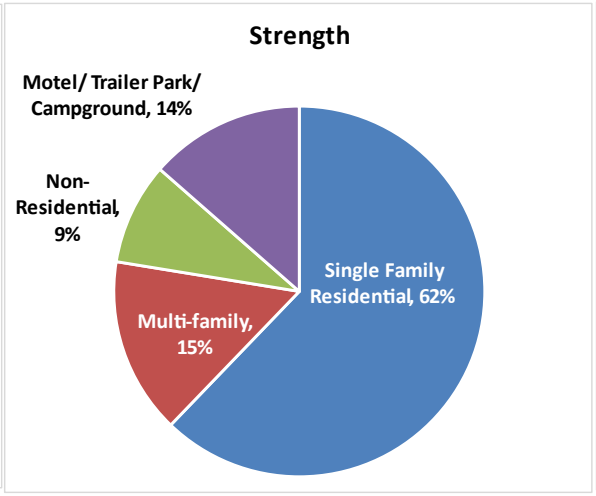
Sewer Utility
Cost of Service

Sewer Cost of Service

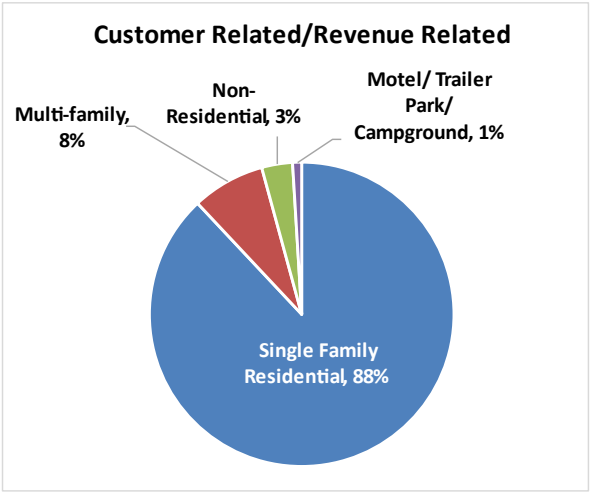
Allocation Factors



57% of Costs
Based on Customer Volume

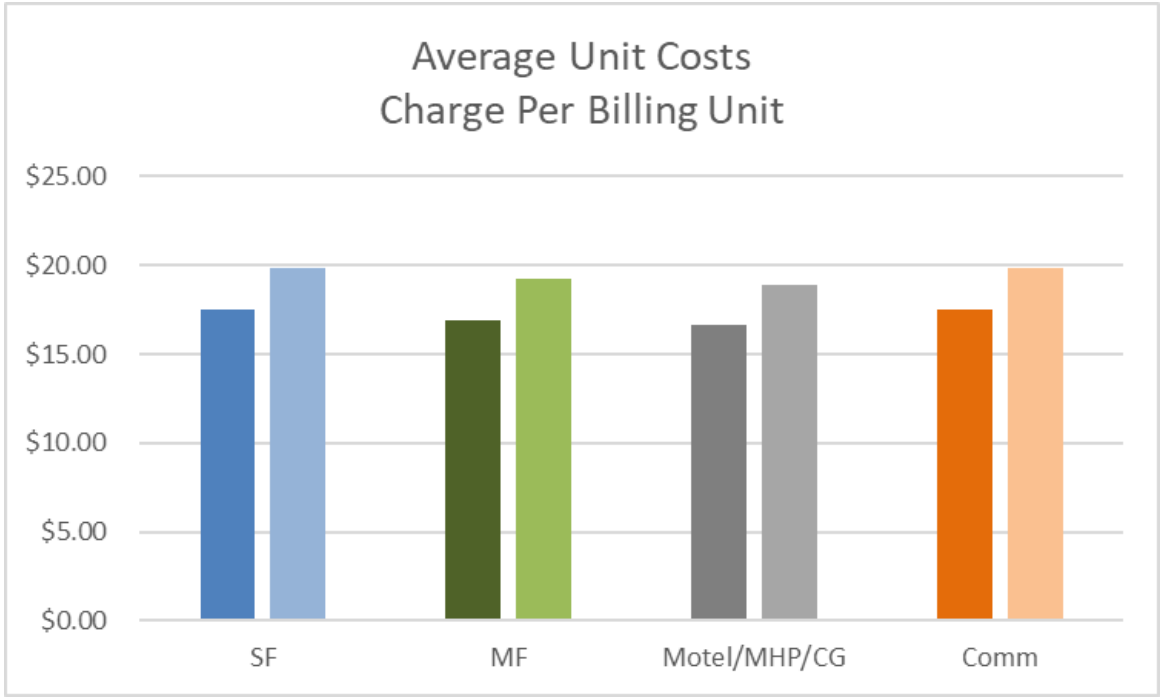


39% of Costs
Based on Customer Wastewater Strength



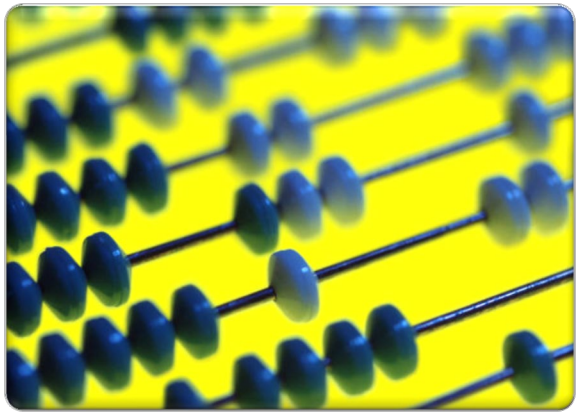
4% of Costs
Based on # of Customers and Revenue

Sewer Cost of Service



- Billing Unit costs are used to develop rate designs for each class of service
- Billing Units are based on an Equivalent Residential Unit or (ERU)
- Cost of service results support the basis for meeting the requirements of Proposition 218

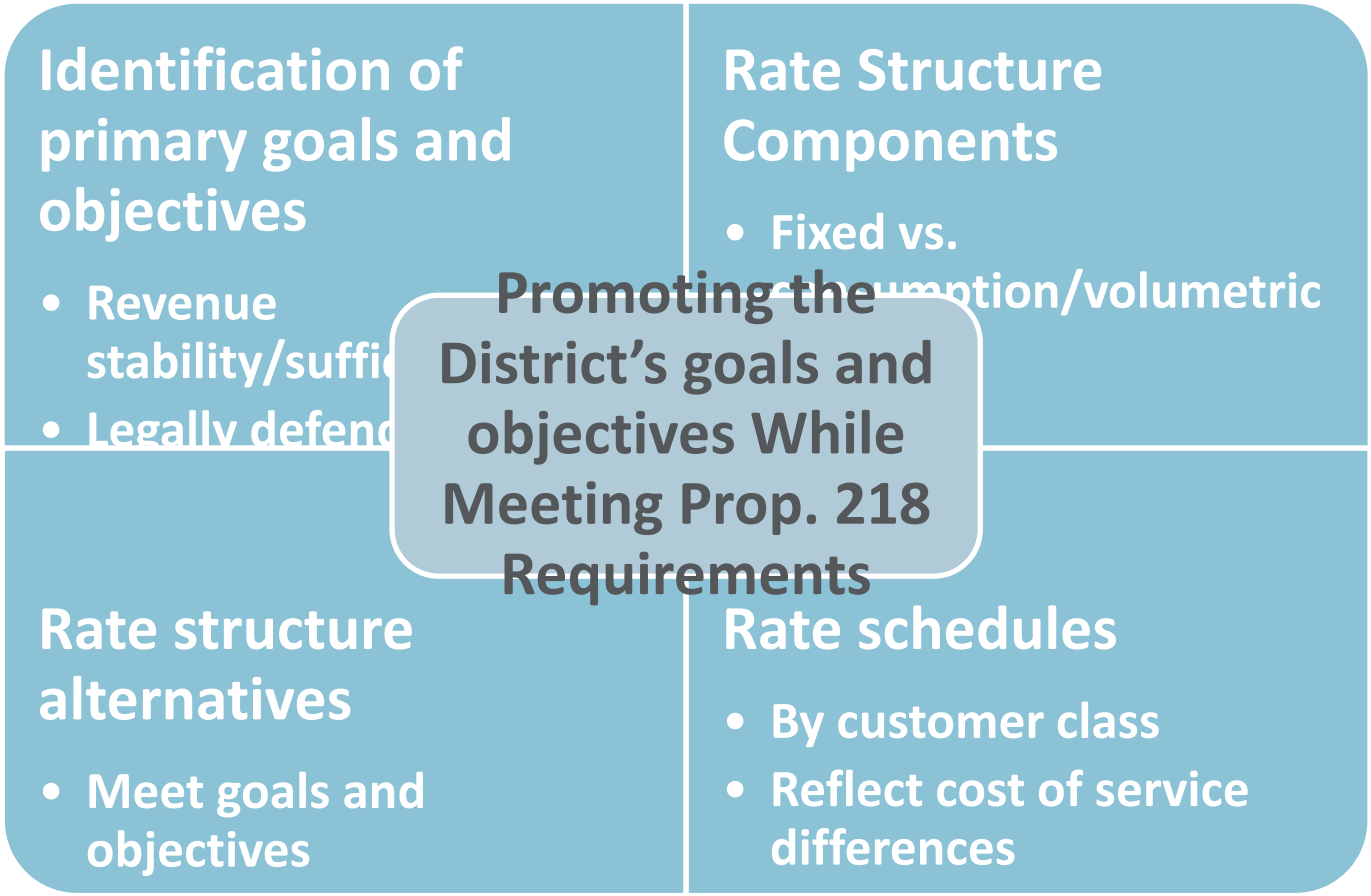
Rate Design



Typical Rate Setting 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

Rate Structure – Policy Overview



Water Utility Rate Design

Water Rate Design – Fixed Charges

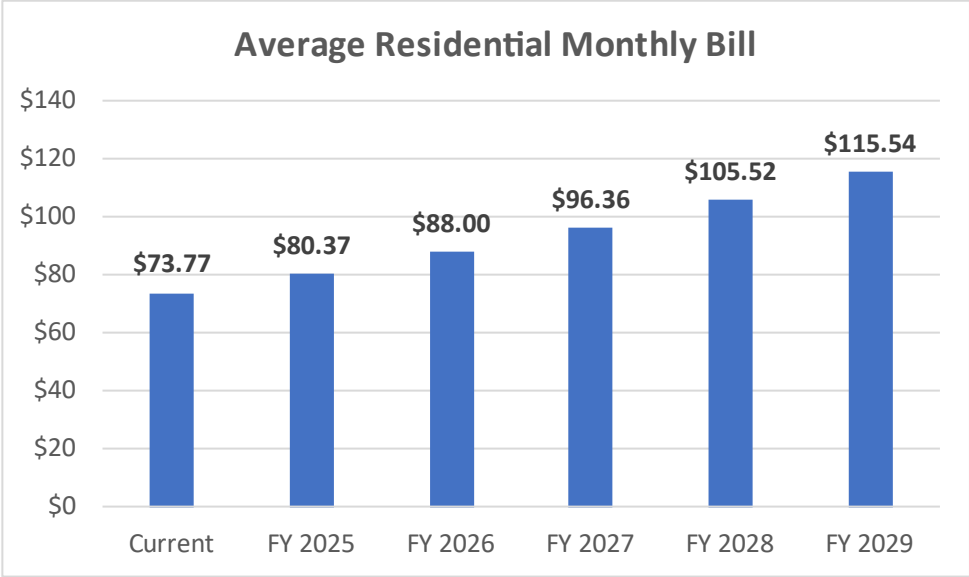
	Current	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
$/Month						
3/4"	$54.97	$60.12	$65.83	$72.08	$78.93	$86.43
1"	91.75	100.34	109.87	120.31	131.74	144.25
1.5"	183.00	200.13	219.14	239.96	262.76	287.72
2"	292.89	320.31	350.74	384.06	420.54	460.49
3"	549.55	600.99	658.09	720.61	789.06	864.02
4"	916.06	1,001.81	1,096.98	1,201.20	1,315.31	1,440.27
6"	1,831.51	2,002.96	2,193.24	2,401.59	2,629.75	2,879.57
8"	2,930.56	3,204.89	3,509.35	3,842.74	4,207.80	4,607.54
10"	4,213.11	4,607.50	5,045.21	5,524.50	6,049.33	6,624.02
Unmetered Single Family	$69.70	$75.98	$83.20	$91.11	$99.76	$109.24
Unmetered Duplex	115.74	126.17	138.15	151.29	165.66	181.39
Unmetered Triplex	157.24	171.41	187.69	205.54	225.05	246.43
Unmetered Four-Plex	203.43	221.76	242.83	265.92	291.16	318.83
Add'l Multi-Family Unit	34.09	37.16	40.69	44.56	48.79	53.43
Unmetered Comm. 3/4" Service	100.92	110.01	120.46	131.92	144.44	158.17
Unmetered Comm. 1" Service	152.24	168.14	184.11	201.62	220.76	241.73

Water Rate Design – Consumption Charges

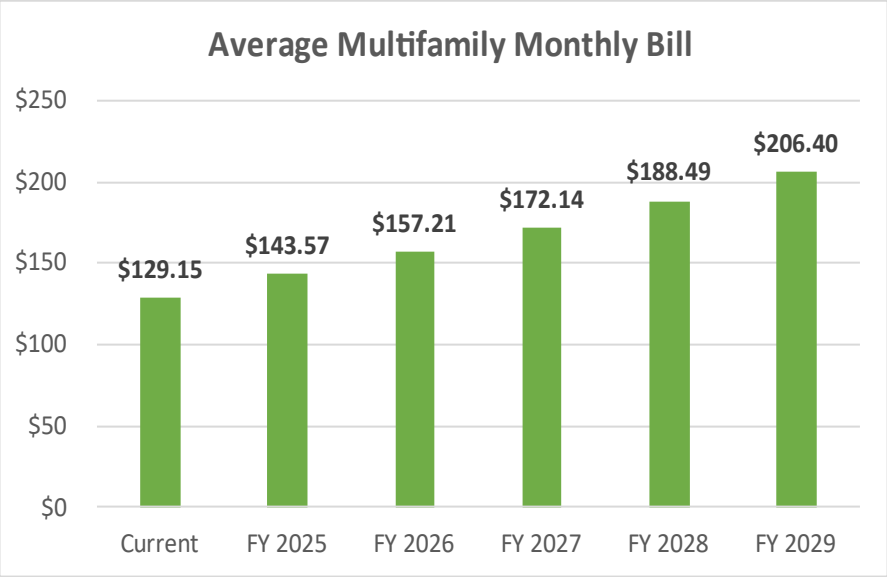
	Current	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
$/CCF						
Residential						
0 - 15 CCF	$1.88	$2.03	$2.22	$2.43	$2.66	$2.91
15 + CCF	$2.87	$3.02	$3.31	$3.63	$3.97	$4.35
Multi-Family						
All Consumption	$1.87	$2.16	$2.37	$2.59	$2.84	$3.11
Commercial						
All Consumption	$1.94	$2.20	$2.41	$2.63	$2.88	$3.16

Water Rate Design

Residential – ¾” Meter with 10 CCF Consumption

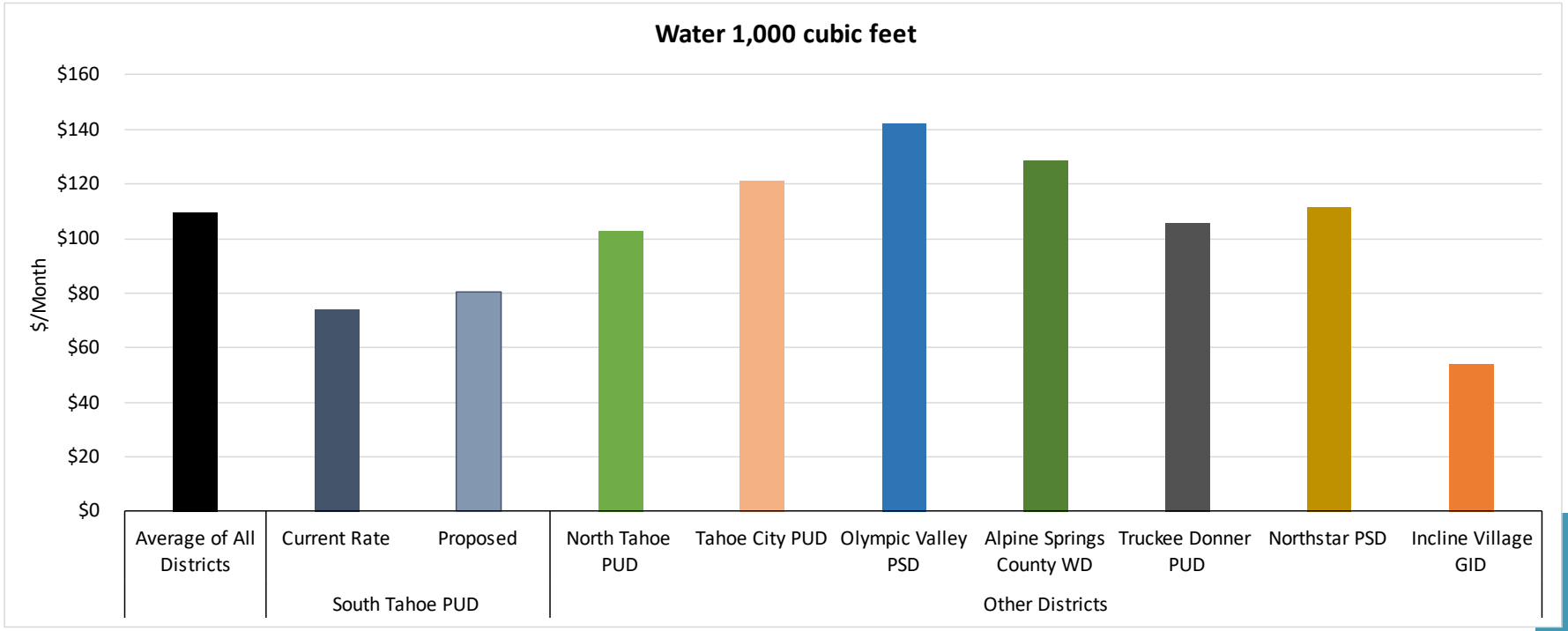


Multifamily – 1” Meter with 20 CCF Consumption



Water Rate Design

Local Bill Comparison



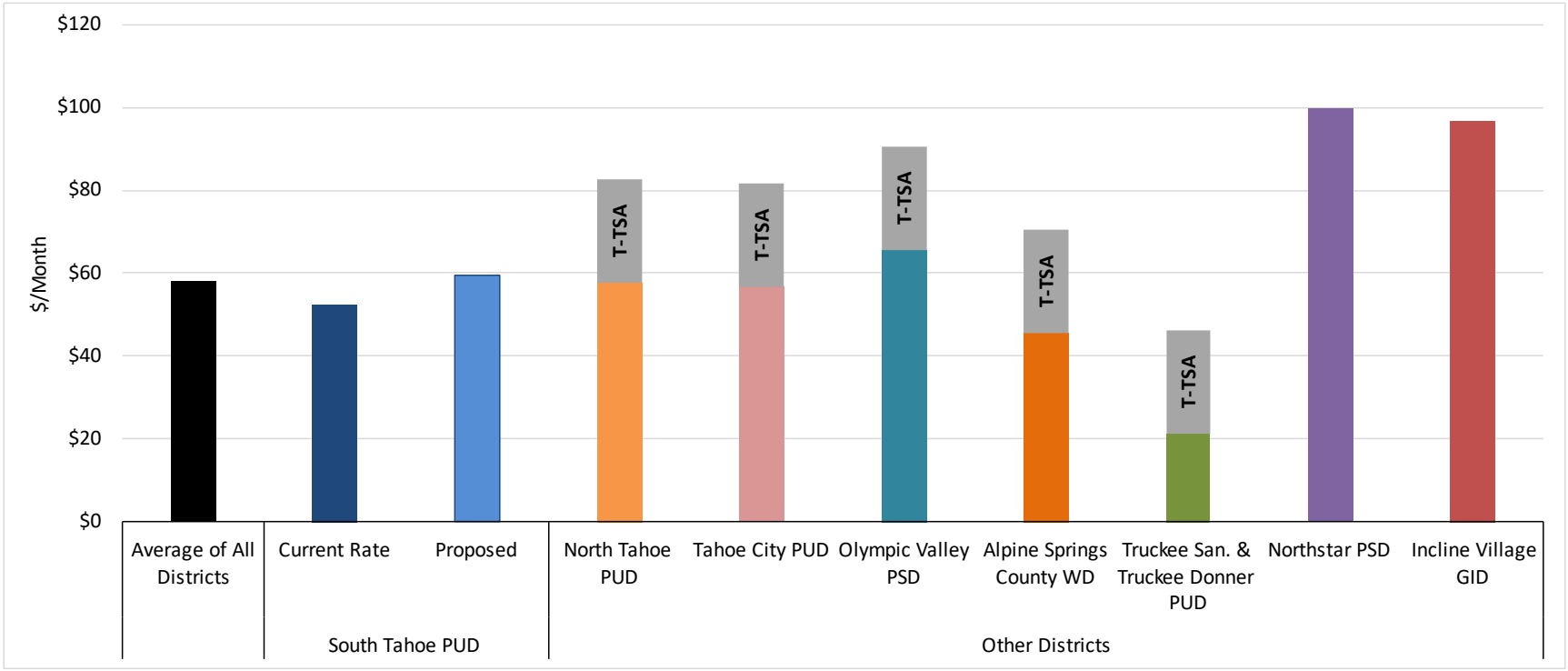
Sewer Utility

Sewer Rates

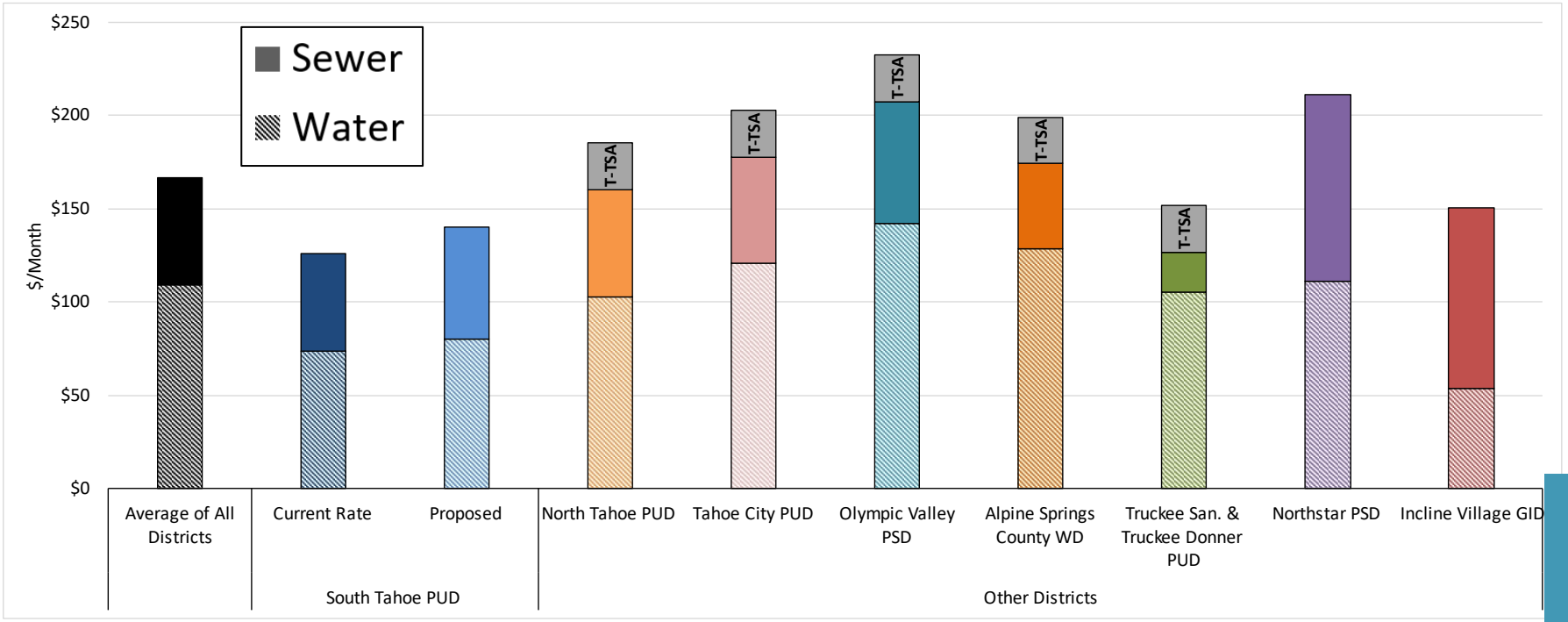
	Current	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
$/Billing Unit/Month						
Single Family Residential	$17.53	$19.86	$21.75	$23.81	$26.07	$28.55
Multi-family	16.93	19.20	21.03	23.02	25.21	27.61
Motel/ Hotel/ Timeshare *	16.64	NA	NA	NA	NA	NA
Trailer/Mobile Home Park/Campground *	16.62	NA	NA	NA	NA	NA
Motel/ Trailer Park/ Campground *	NA	18.89	20.69	22.65	24.80	27.16
Non-Residential	17.53	19.86	21.75	23.81	26.07	28.55

*Motel/Hotel Timeshare and Trailer/Mobile Home Park/ Campgrounds have been combined

Sewer Utility Local Bill Comparison



Combined Residential Water & Sewer Local Utility Bill Comparison



Next Steps

- Board will hold Proposition 218 public hearing
- Customers may submit a protest letter to the District Prior to the end of the public hearing
- If no majority protest, the District Board may adopt/implement the proposed rates

Purpose Today

Learn More and Provide Input on Your Water, Wastewater and Recycled Water Systems

- Overview: Water / Wastewater / Recycled Water
- Recent Investments and Improvements
- Ongoing and Future Needs
- Rate Scenarios
- Public Participation Process
- Questions

Next Steps

- **Public Meeting (6pm): 4/25**
- **Public Hearing on Rates: 5/16**

- **If approved by a majority of the Board, new rates will be effective July 1, 2024**

Purpose Today

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