



IMPROVING YOUR WATER AND WASTEWATER SYSTEMS



Public Workshop – February 29, 2024



Who Are We?





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

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

- 14,000 Connections
- 253 miles Waterlines
- 31 Pressure Zones
- 11 Active Wells / 100% Groundwater
- 15 Booster Stations
- 19 PRV Stations
- 19 Storage Tanks



Wastewater System

- 17,800 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





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Investments and Improvements

In 2019, the Board began a series of annual rate increases for 5 years.

Expected to fund...

- *\$74 million*
- *59 facilities*

Actually helped fund...

- *\$68 million*
- *57 facilities*

Amid unprecedented challenges

Investments and Improvements

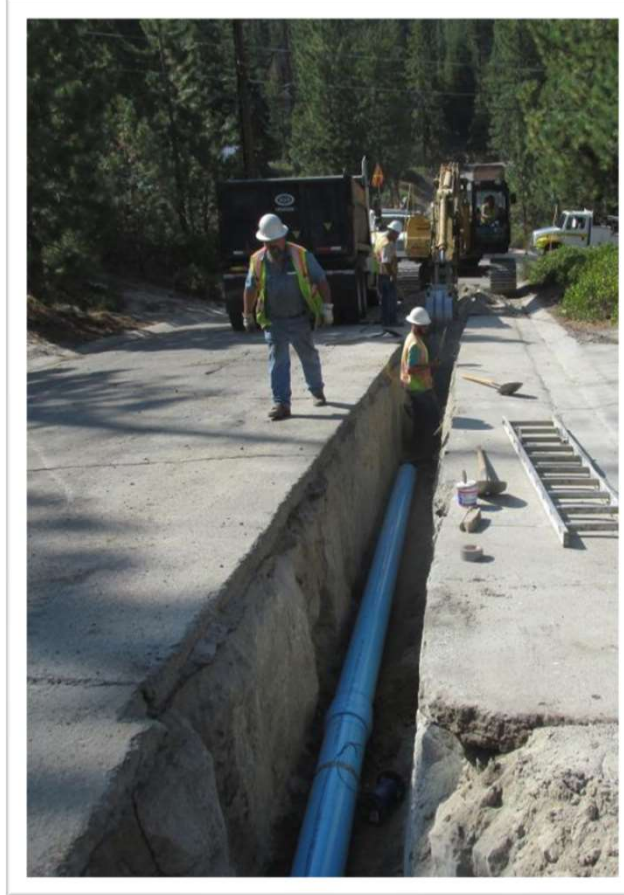
Fire Fighting Capabilities

Goal: Community-wide access to Fire Flow

- Fire flows: >500 gpm
- Spacing: 500 to 1000 feet
- Pipe Size: 6" and up
- 120 Fire Hydrant installations since 2019
- 6 miles of waterline upsized

Cost to date: >\$10M

Funding: \$9M State subsidized low-interest loan
\$1M Grant from LTRA Fire Partnership
\$300K Grant from City (COVID Relief)



Investments and Improvements

Water Backup Power

- Goal: Sufficient water supply during extended power outages
- Backup batteries with capacity to run for 7 days installed at 11 Tank Sites
- Cost to date: \$900K
- Funding: \$635K FEMA Grant + Rates



Investments and Improvements

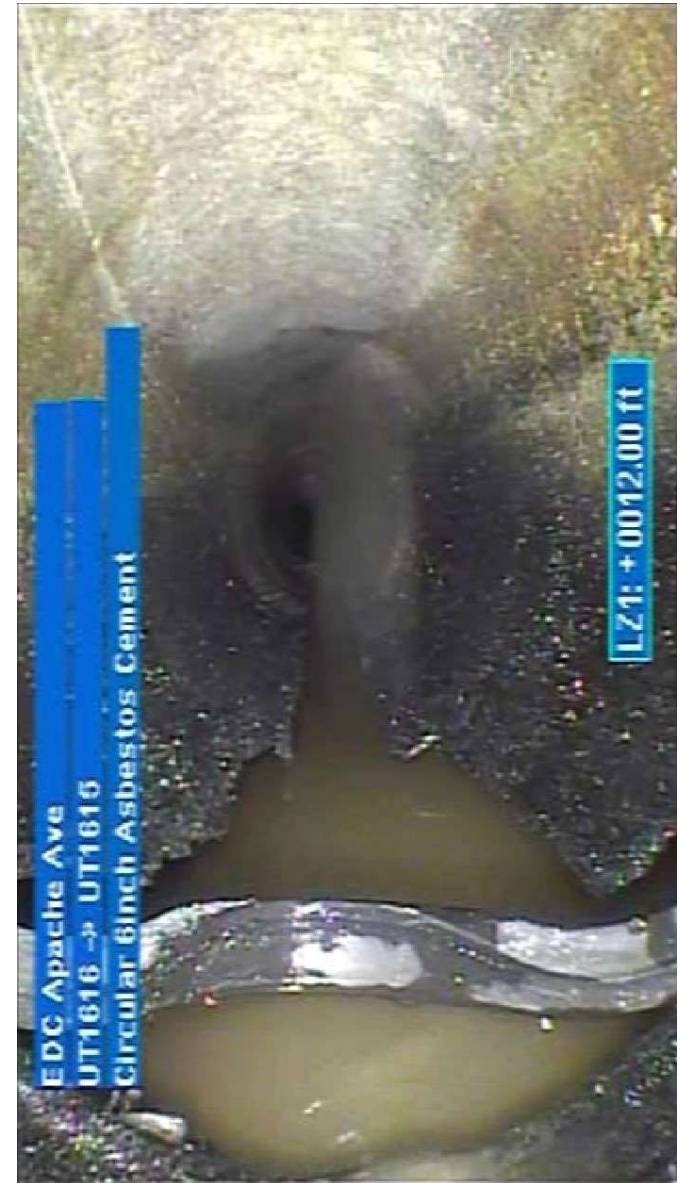
Sewer Main Replacement

Goal: Replace or rehab sewer mains as condition demands

- Replace ½-mile of poor condition sewer main on Apache Ave

Cost to date: \$1.6M

Funding: Rates



Investments and Improvements

Sewer Pump Station Rehabs

Goal: Maintain reliability of highest priority sewer stations

- Upgrade electrical, mechanical and structural at Tahoe Keys and Upper Truckee Pump Stations

Costs to date: \$9.6M

Funding: \$11M State subsidized low-interest Loans



Investments and Improvements

Wastewater Treatment Plant

- Goal: Maintain reliability of WWTP to meet regulatory requirements
- All 3 Secondary Clarifiers repaired
- Costs to date: \$6M
- Funding: \$5.3M State subsidized low-interest loan + Rates



Emergency Responses

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





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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*



Ongoing and Future Needs

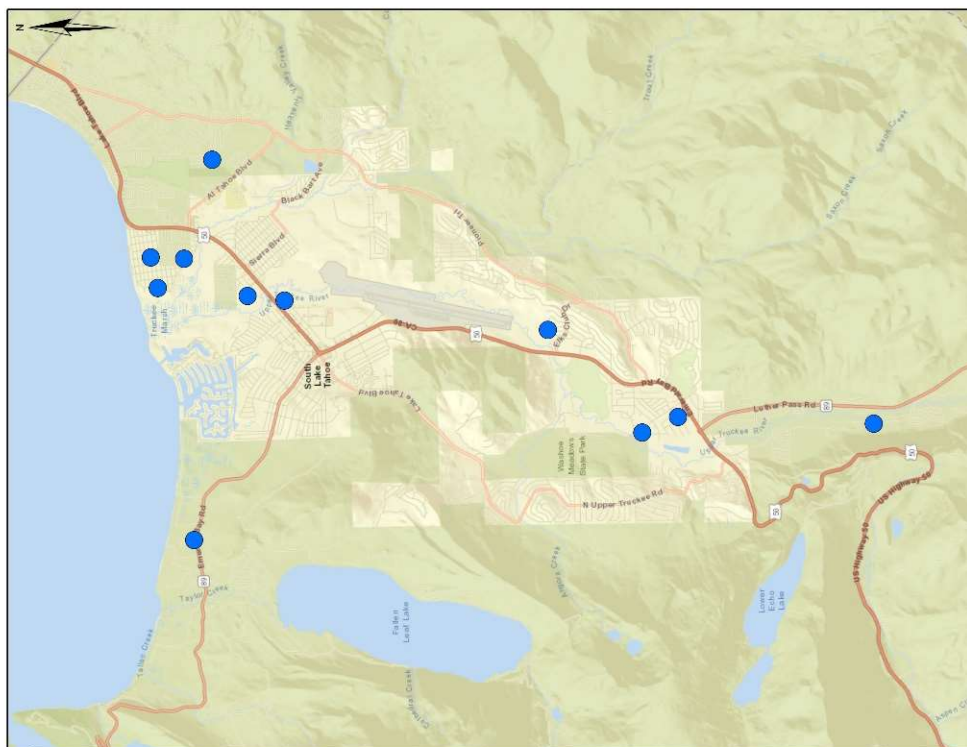
Wells Asset Management

Goal: Implement routine well inspection and rehabilitation program

- Inspect and perform maintenance on one well per year

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

Funding: Rates





Ongoing and Future Needs

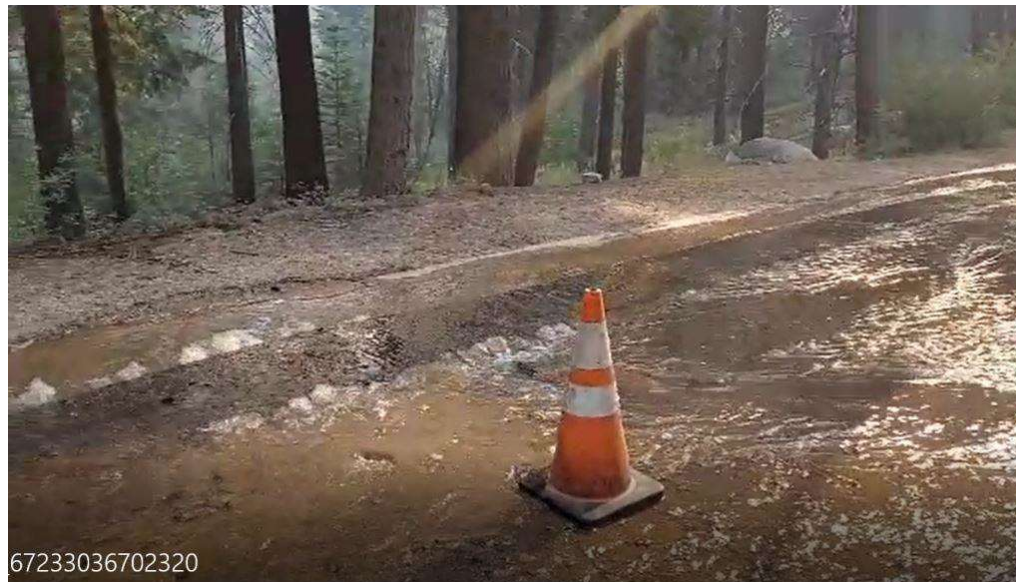
Waterline Replacements

Goal: Finish fire security projects and maintain current leak rate

- 2 miles new main on Pioneer
- 10 miles undersized mains
- 28 miles poor condition mains

Value: \$121M (\$45M increase)

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



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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

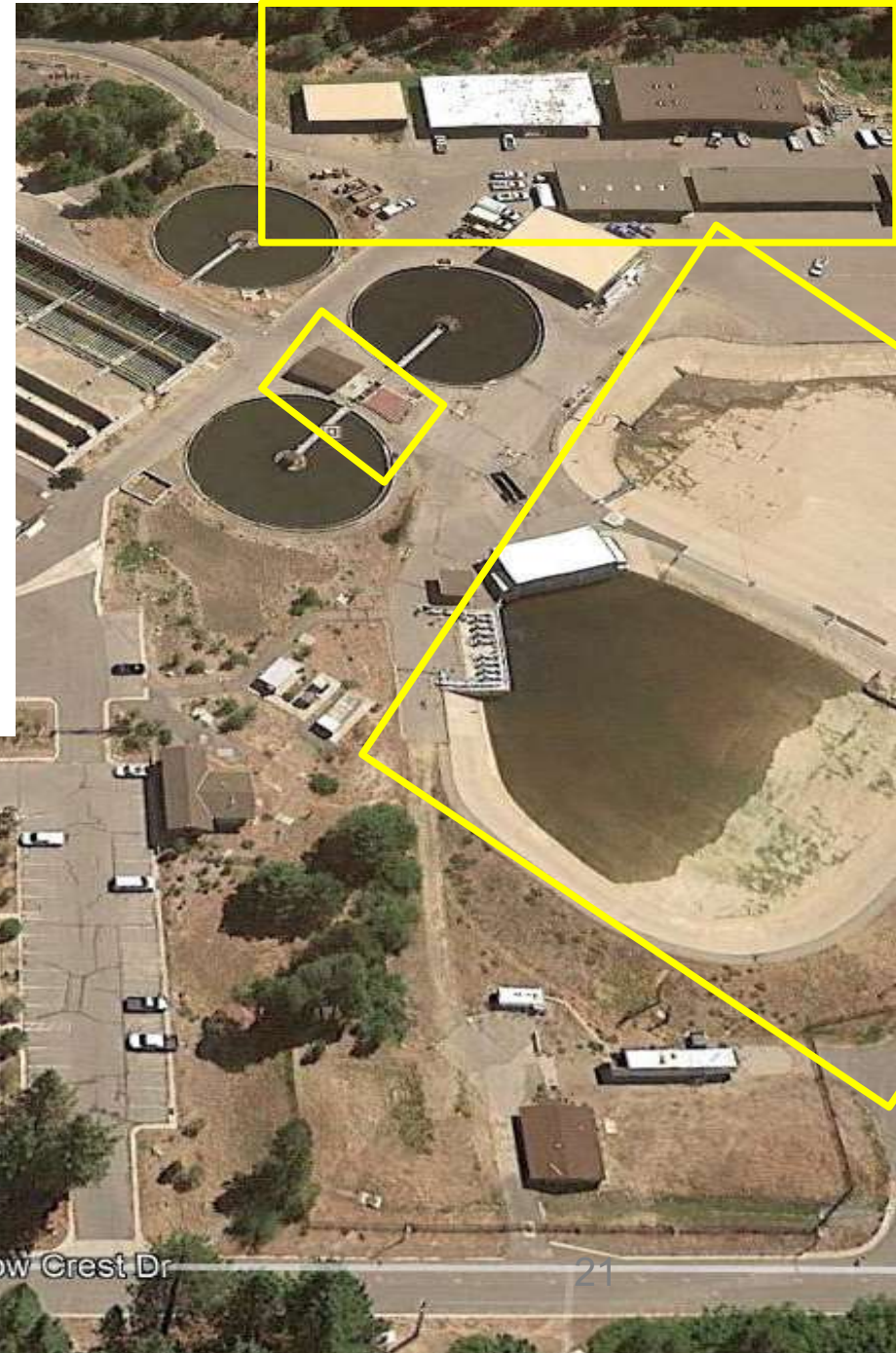
Wastewater Treatment Plant

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

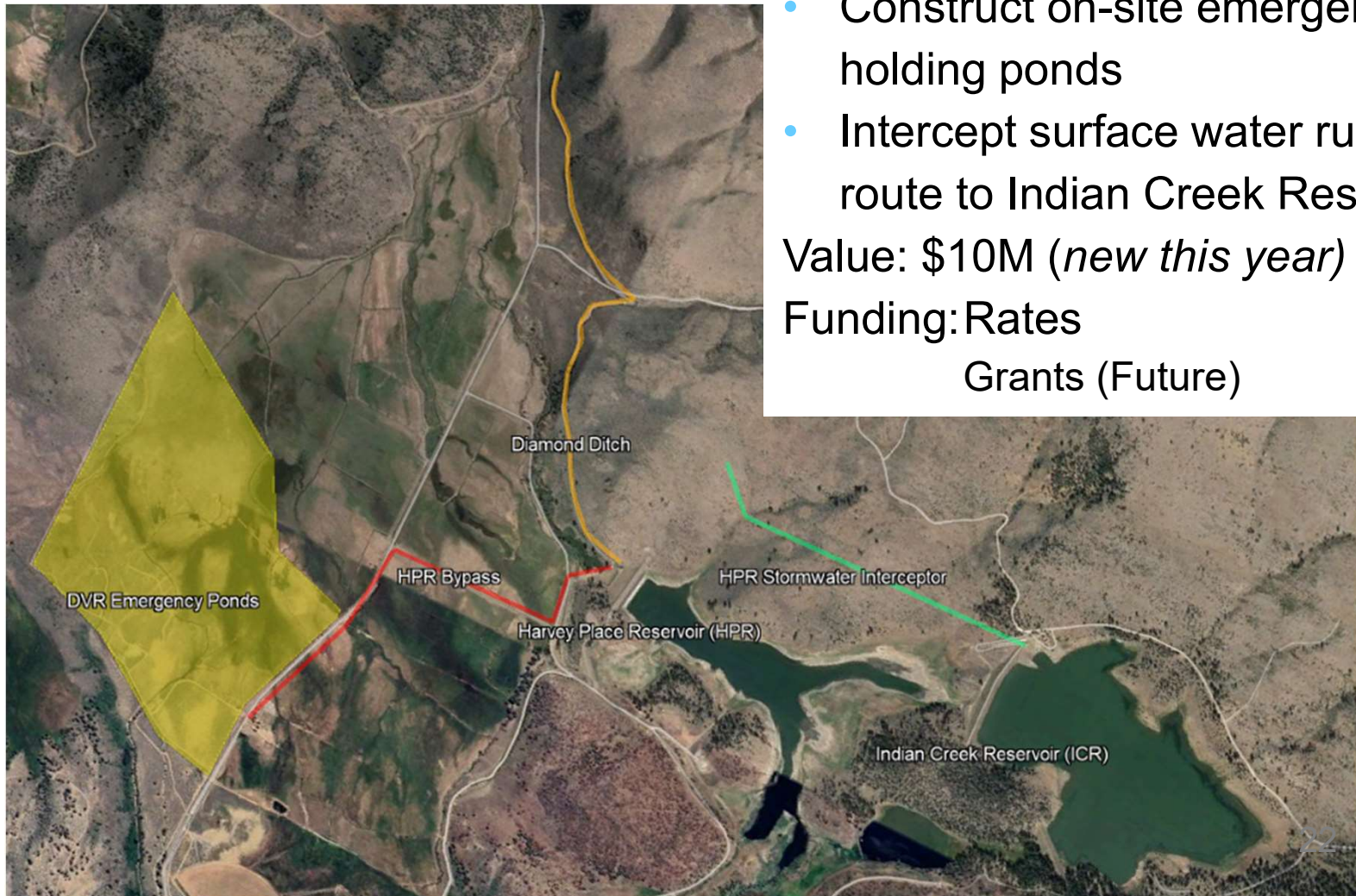
Goal: Comply with regulatory requirement prohibiting winter releases from Harvey Place Reservoir

- 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)





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Overview of the Capital Funding Analysis Alternatives and Preliminary Revenue Requirement Analysis

February 29, 2024



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Purpose of the Presentation

Receive input on preferred capital funding analyses

Overview of the water and sewer rate setting process

Summary of rate impacts for each capital funding analysis

Overview of cost of service and rate design

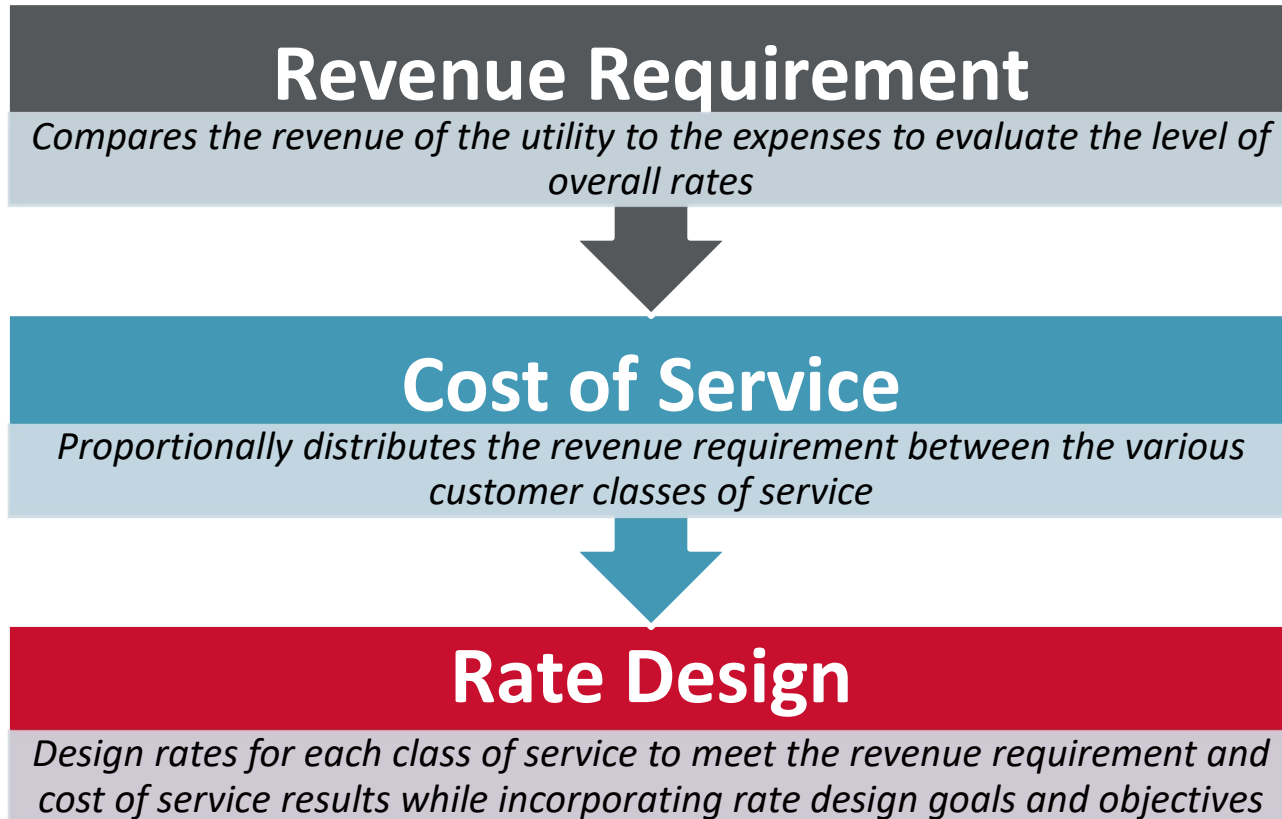
Next steps



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



Capital Funding Alternatives



Capital Alternative Scenario Analyses

- Alternative capital plans were developed for both Water and Sewer

- **Water**

1. **Baseline Capital**

- Total Capital: \$115.8 M
- Total Debt: \$50.5 M

2. **Identified Capital Needs**

- Total Capital: \$175.3 M
- Total Debt: \$50.5 M

3. **Identified Capital Needs Less Accelerated Water Line**

- Total Capital: \$133.7 M
- Total Debt: \$50.5 M

- **Sewer**

1. **Baseline Capital**

- Total Capital: \$109.8 M
- Total Debt: \$65.9 M

2. **Identified Capital Needs**

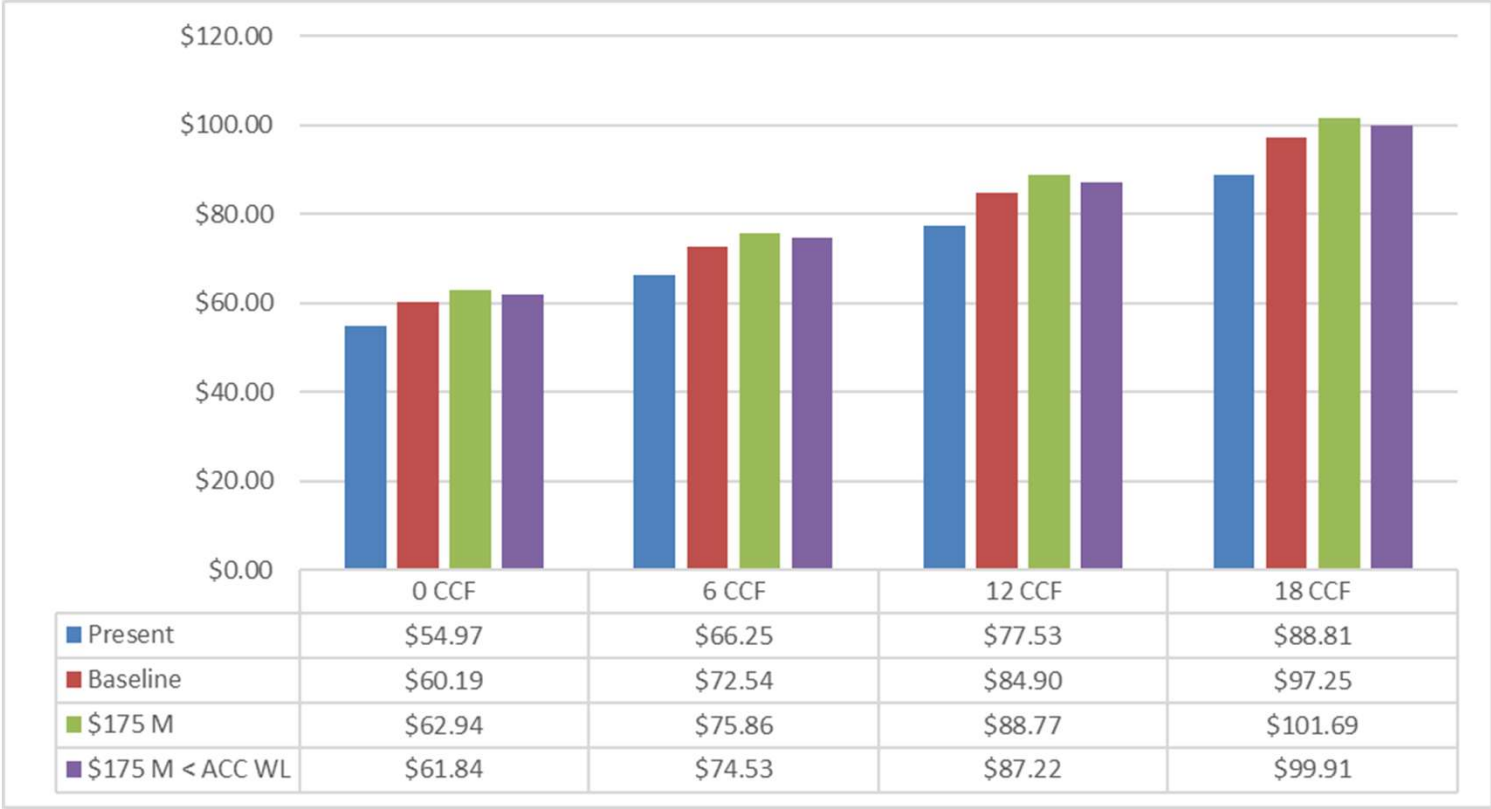
- Total Capital: \$132.3 M
- Total Debt: \$65.9 M

Summary of the Water Alternative Capital Funding Analyses

	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Average Monthly Bill Impact @ 6 CCF					
Baseline Capital	\$6.29	\$6.89	\$7.55	\$8.26	\$4.76
\$175 M Capital	\$9.61	\$11.00	\$12.59	\$14.42	\$16.51
\$175 < Acc. WL Capital	\$8.28	\$9.32	\$10.48	\$4.72	\$4.95

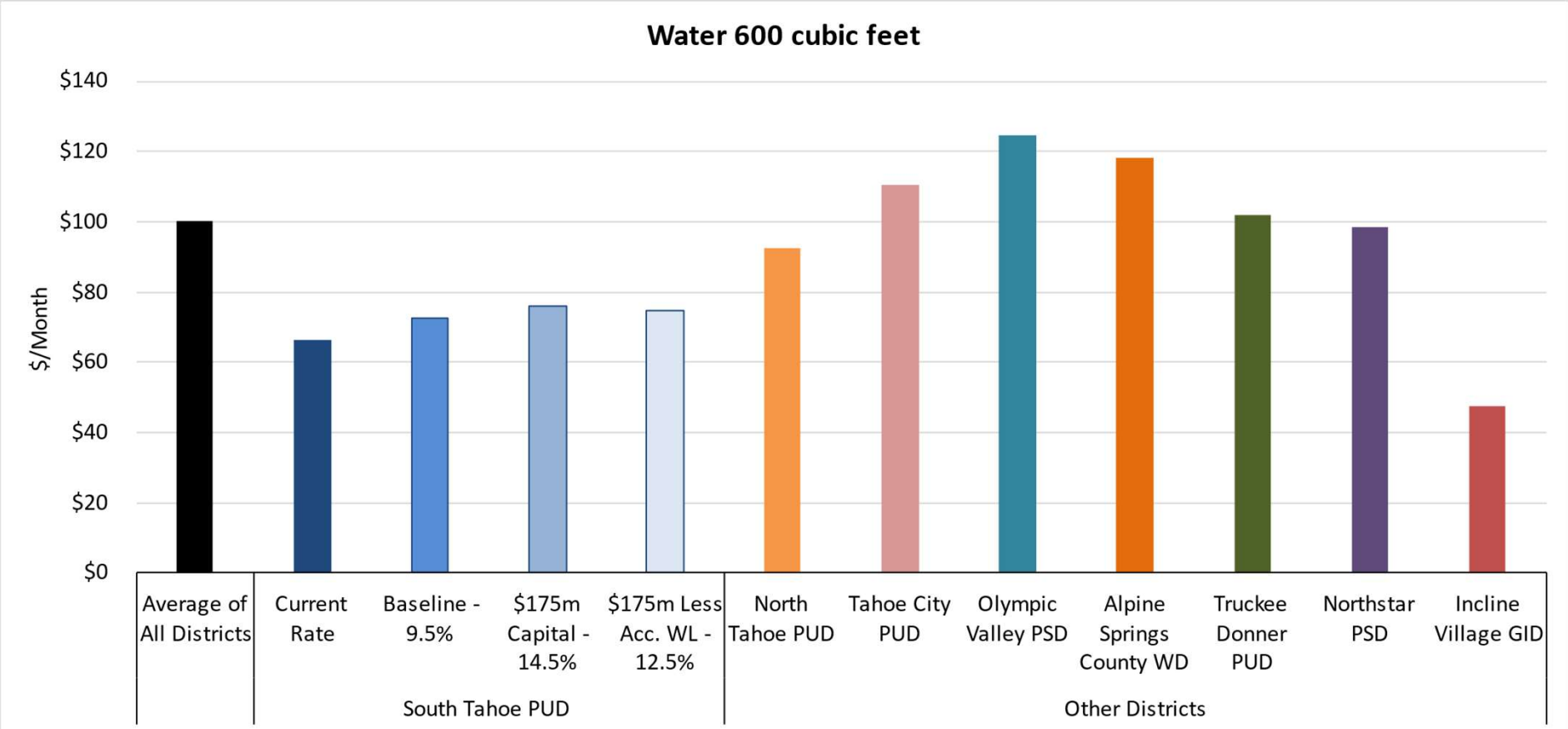
Average monthly bill impacts prior to cost of service and rate design

Water Alternative Bill Comparisons



Average monthly bill impacts prior to cost of service and rate design

Monthly Water Utility Local Bill Comparison

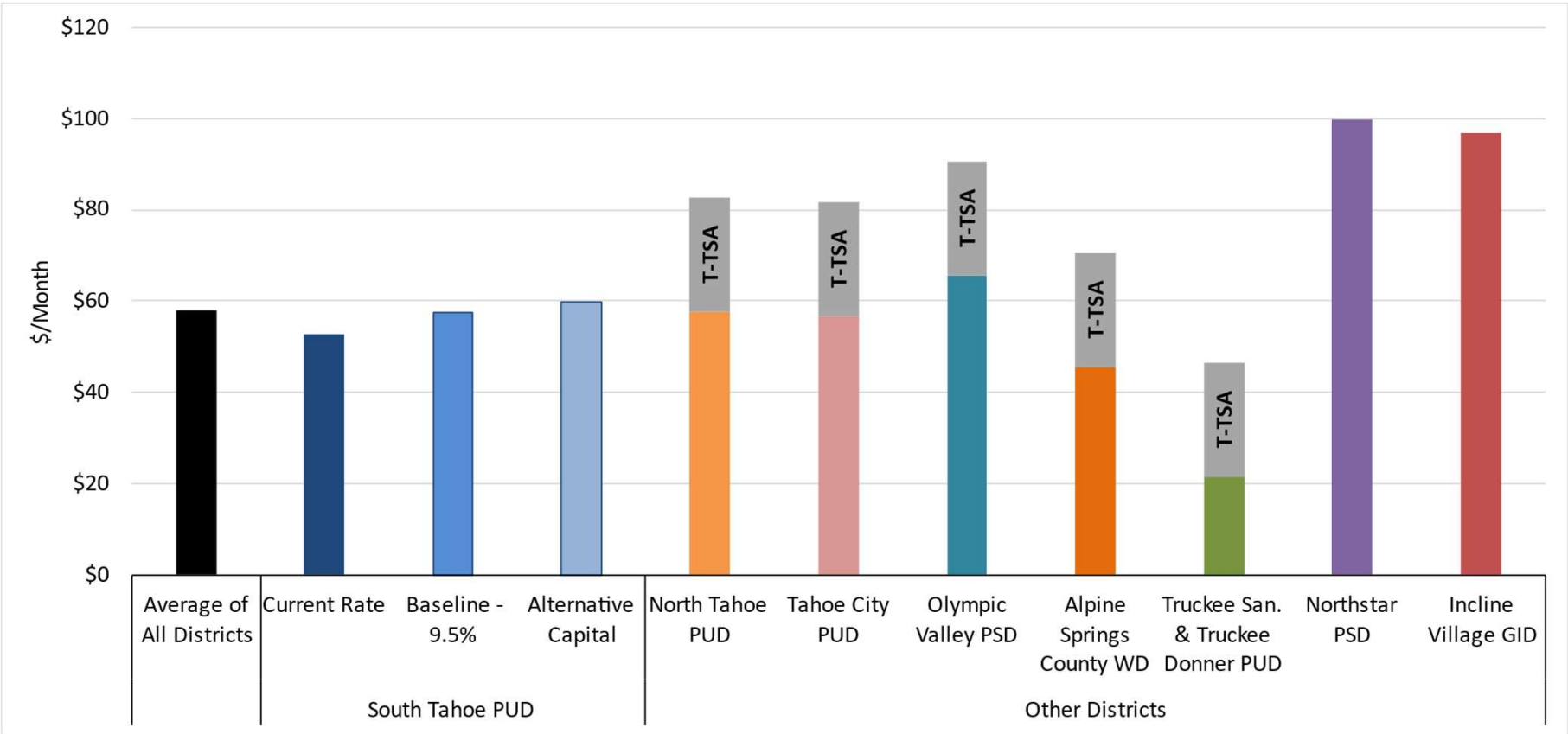


Summary of the Sewer Alternative Capital Funding Analyses

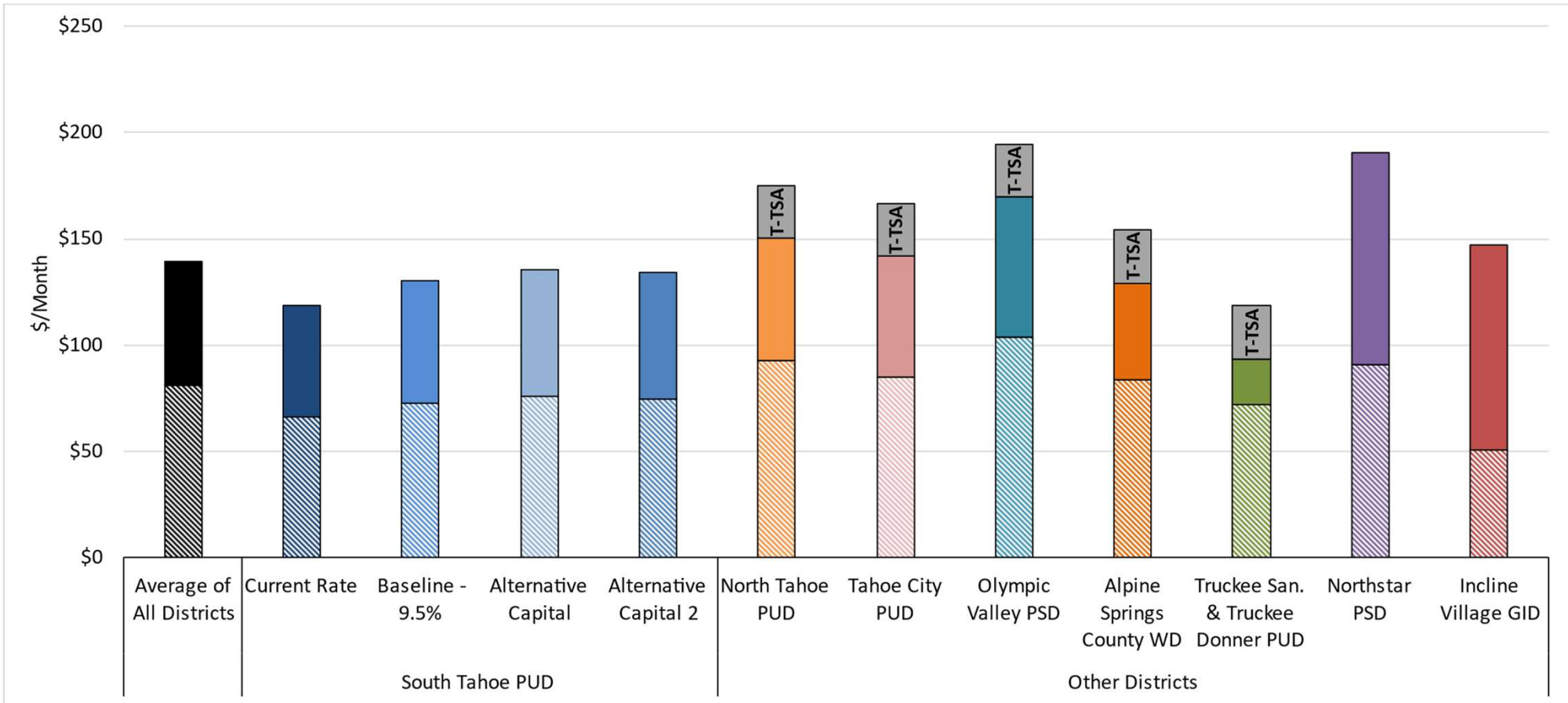
	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Average Monthly Bill Impact					
Baseline Capital	\$4.56	\$5.00	\$5.47	\$5.99	\$6.56
\$132 M Capital	\$6.48	\$7.36	\$8.35	\$9.48	\$10.76

Average monthly bill impacts prior to cost of service and rate design

Sewer Utility Local Bill Comparison



Total Water and Sewer Utility Local Bill Comparison



Cost of Service



Cost of Service – Policy Discussion

Review of customer characteristics

- Consumption/Volume
- Capacity/Strength

Development of customer classes of service

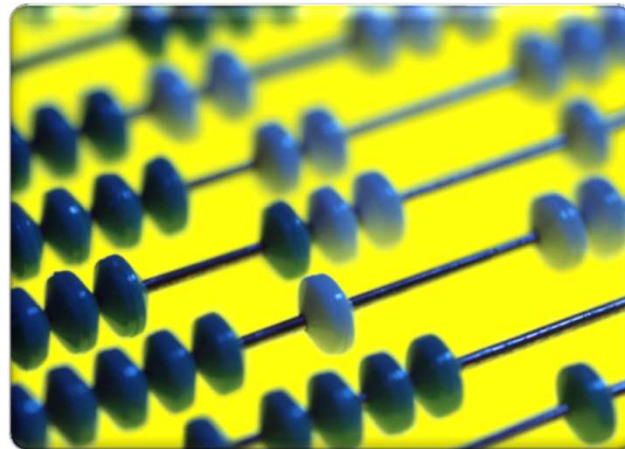
- Separate rate schedules
- Based on customer characteristics

**Proportional and
Cost-Based
Allocation of Costs**

Identifies interclass differences between levels of service (if present)

Implementation or transition to cost of service results (if necessary)

Rate Design



Rate Structure – Policy Discussion

Identification of primary goals and objectives

- Revenue stability/sufficiency
- Legally defensible
- Cost-based
- Etc.

Rate Structure Components

- Fixed vs. consumption/volumetric charges

Promoting the District's goals and objectives While Meeting Prop. 218 Requirements

Rate structure alternatives

- Meet goals and objectives

Rate schedules

- By customer class
- Reflect cost of service differences

FY 2023 Water Rates

Non-Metered Water Service	
Customer Type	Monthly Service Charge
Single Family Dwelling	\$69.70
Duplex	\$115.74
Triplex	\$157.24
Four-Plex	\$203.43
Each Additional Unit	\$34.09
Business 3/4" Service	\$100.92
Business 1" Service	\$152.24

Metered Water Service	
Connection Size	Monthly Base Charge
3/4" Metered	\$54.97
1" Metered	\$91.75
1-1/2" Metered	\$183.00
2" Metered	\$292.89
3" Metered	\$549.55
4" Metered	\$916.06
6" Metered	\$1,831.51
8" Metered	\$2,930.56
10" Metered	\$4,213.11

Metered Water Service	
Consumption	Rate Per 100 Cubic Feet of Water
Single Family - Tier 1 (1 - 15 CCF)	\$1.88
Single Family - Tier 2 (ABOVE 15 CCF)	\$2.87
Multi Family	\$1.87
Commercial	\$1.94

*100 Cubic Feet (CCF) = 748 Gallons

FY 2023 Sewer Rates

Type of Connection	Per Sewer Unit
Single Family Dwelling	\$17.53
Multi-Family Residences	\$16.93
Motels / Hotels / Timeshares	\$16.64
Trailer / Mobile Home Parks / Campgrounds	\$16.62
Non-Residential	\$17.53

Next Steps

- Receive Board direction on preferred capital scenario
 - Necessary to move rate studies forward
- Develop draft final rate study results for Board review and discussion
 - Finalize cost of service analysis
 - Develop rate structure alternatives



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Next Steps

- **Public Meeting:** 2/29
- **Board Budget Workshop:** 3/19
- **Customer Notice:** by 4/02
- **Public Meeting (6pm):** 4/25
- **Public Hearing on Rates:** 5/16



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