


**South Tahoe PUD**  
**Rate Study Update**  
 Water & Sewer Cost of Service Study  
 March 13, 2019

**HDR** | 

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## Purpose of the Presentation

Overview of cost based rate setting approach

Review Revenue Requirement results

- Multiple scenarios were explored

Review Cost of Service results

- Basis for proposed rates

Review preliminary proposed water and sewer rates

- Rate designs are based on 5% annual adjustment for both water and sewer

Gain feedback from the Board to move finalize the rate study analyses

- Rate Transition Plan
- Proposed Rates

Next steps

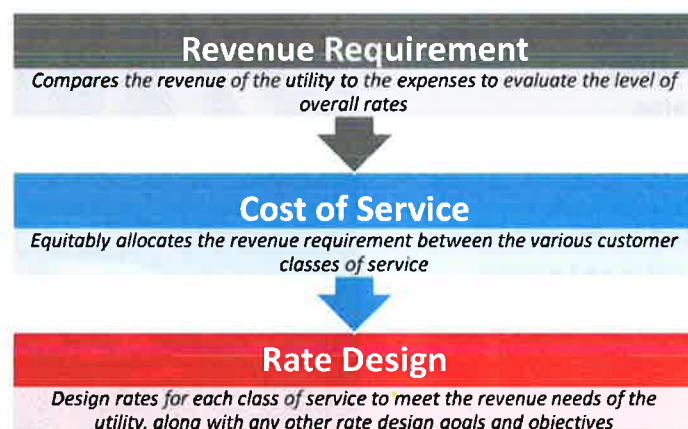


## Proposition 218 – Setting Cost-Based Rates

- 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
  - Nexus between cost (fixed / variable) to provide service (expenses) and rates (fixed / variable) charged (revenues)

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## Developing Cost-Based Rates



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## 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

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## Revenue Requirement – Policy Discussion

### Meeting Financial Policies

- Debt service coverage ratio
- Target ending reserve balances
- Methodology and approach
- Use of long-term debt

### Prudent Funding of Annual Renewal and Replacement

- Annual depreciation expense
- Future replacement needs

### Long-Term Financial Sustainability

### Levels of Service

- Projection of future O&M
- Additional programs/practices
- Capital infrastructure needs

### Proper Use of Growth Related Fees

- Growth projects
- Growth debt service payments

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## Overview of the Cost of Service

### What is cost of service?

- Analysis to equitably allocate the revenue requirement to the customer classes of service

### Why cost of service

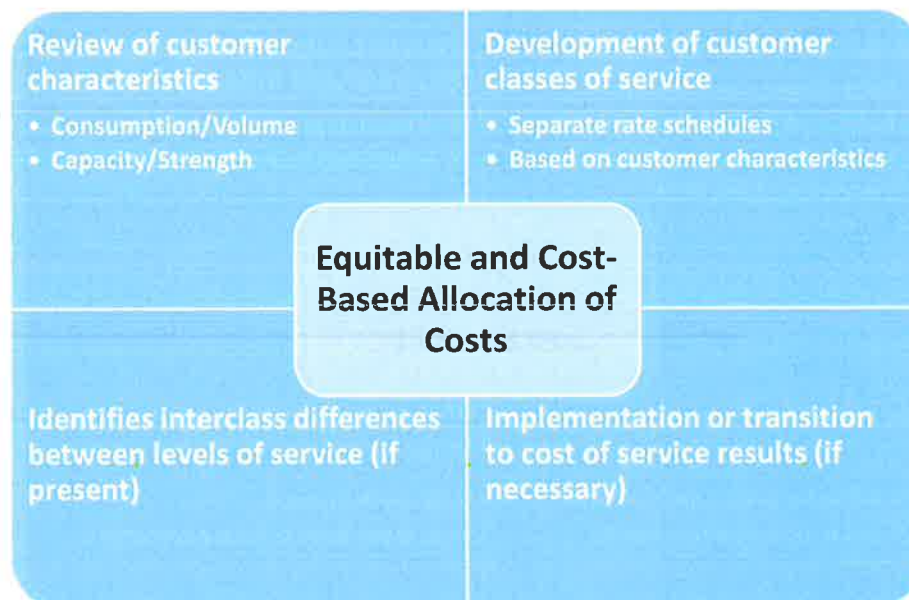
- Generally accepted as “fair and equitable”
- Avoids subsidies
- Revenues reflect costs
- Meets the proportionality requirements of Proposition 218

### Objectives of Cost of Service

- Determine if subsidies exist
- Develop average unit costs

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## Cost of Service – Policy Discussion



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## 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

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## 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

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## Water Utility Rate Study Results



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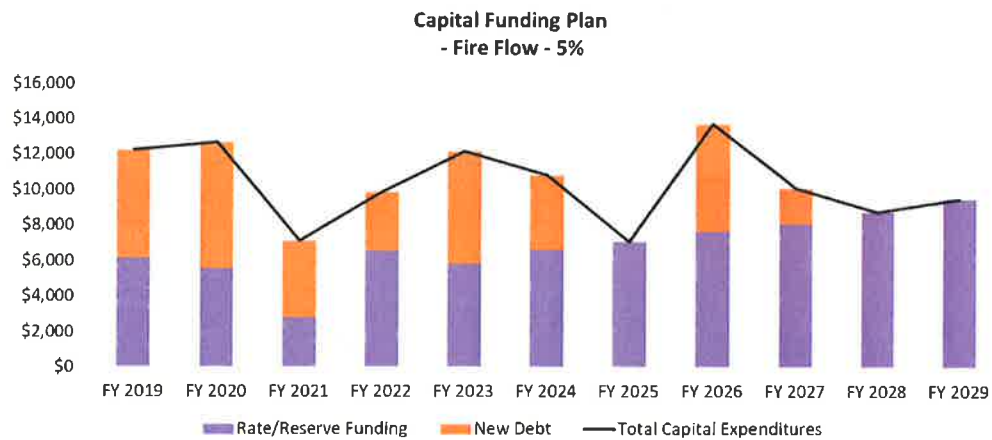
Revenue  
Requirement



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## Water Capital Funding Plan

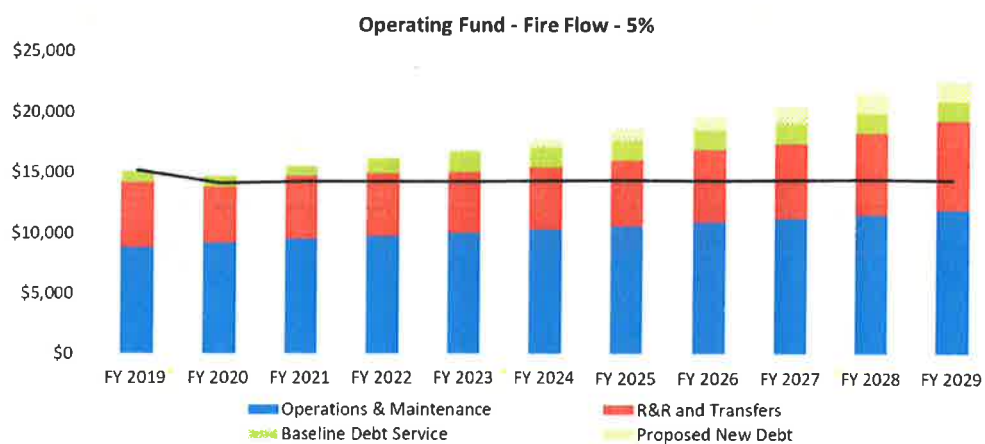
### 5.0% Annual Adjustment



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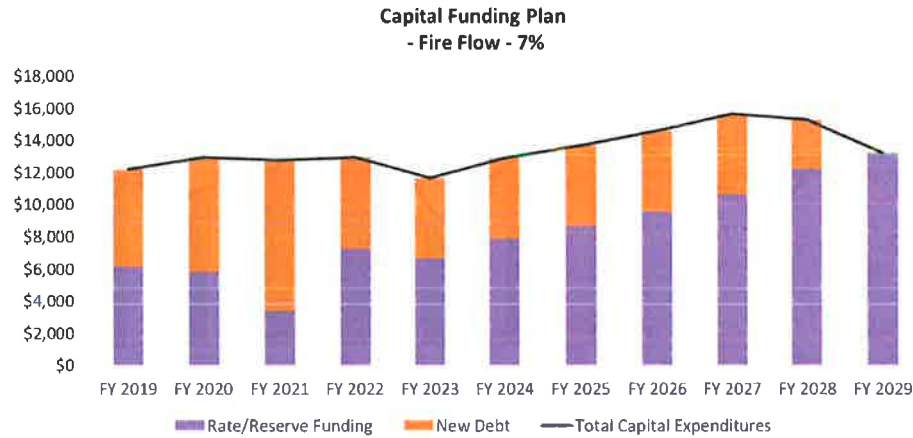
## Water Revenue Requirement

### 5.0% Annual Adjustments



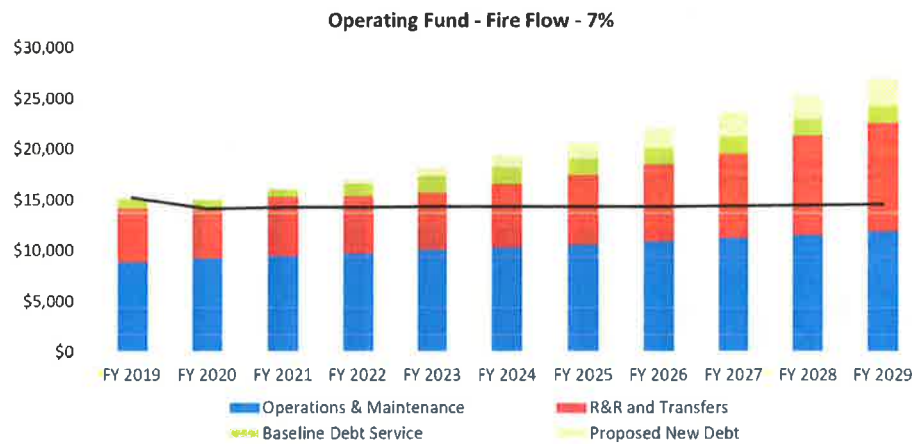
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## Water Capital Funding Plan 7.0% Annual Adjustment



15

## Water Revenue Requirement 7.0% Annual Adjustments

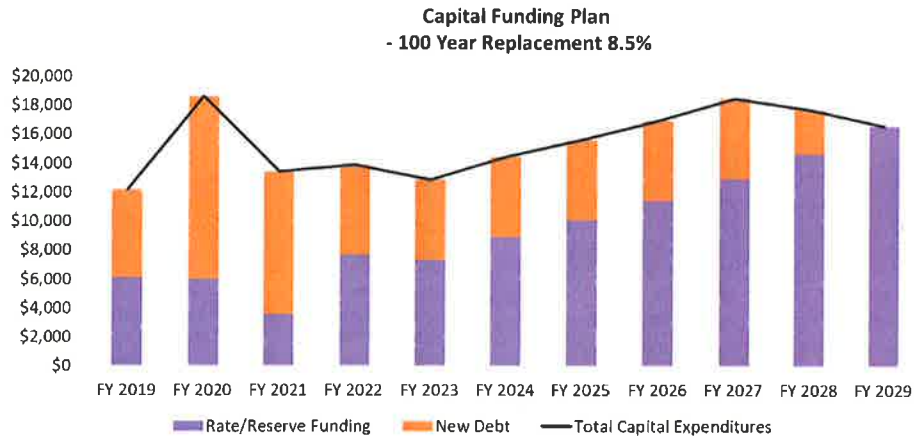


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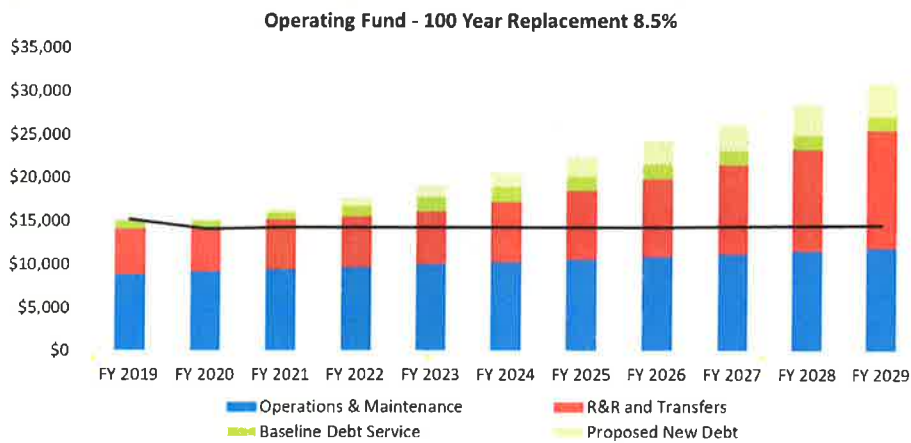
## Water Capital Funding Plan

### 8.5% Annual Adjustment

17  
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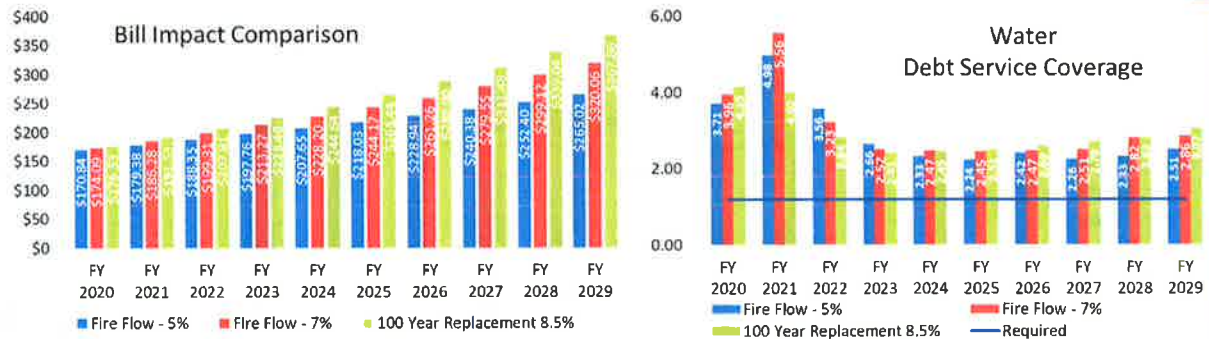
## Water Revenue Requirement

### 8.5% Annual Adjustments



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## Water Revenue Requirement Alternative Summary

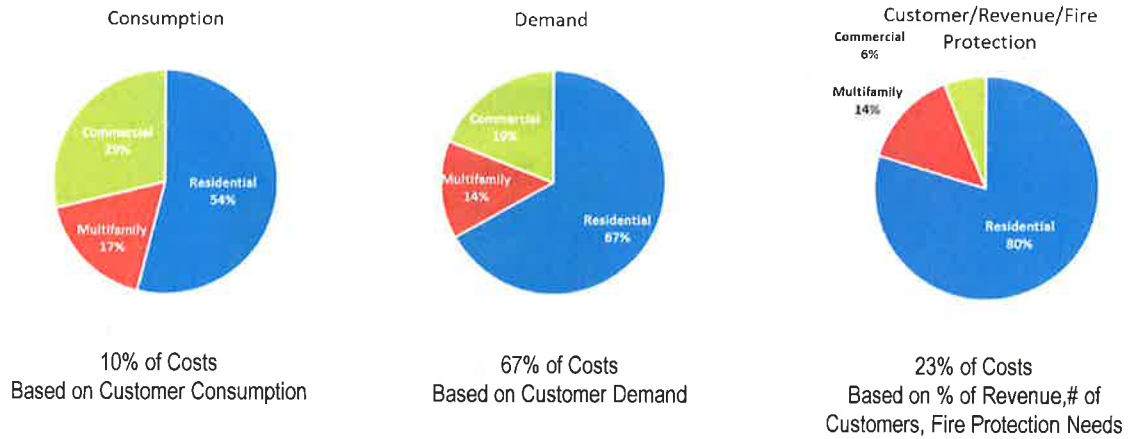


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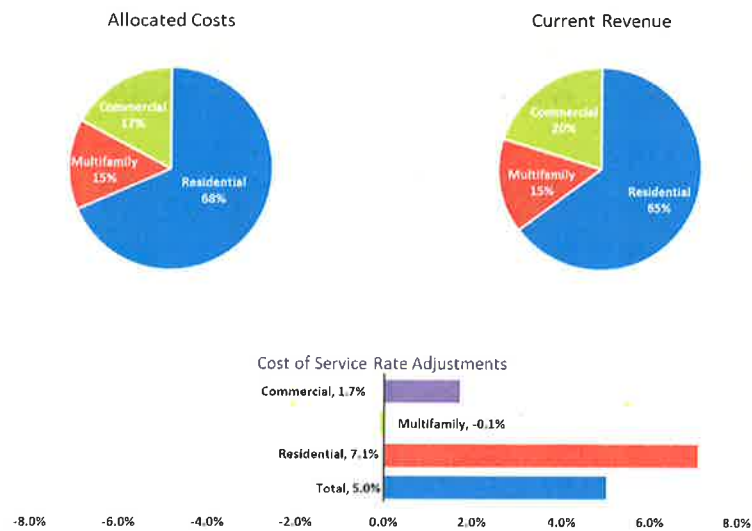
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## Water Utility Allocation Factors



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## Water Utility Allocated Costs Versus Current Rate Revenue



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## Rate Design

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## Water Utility

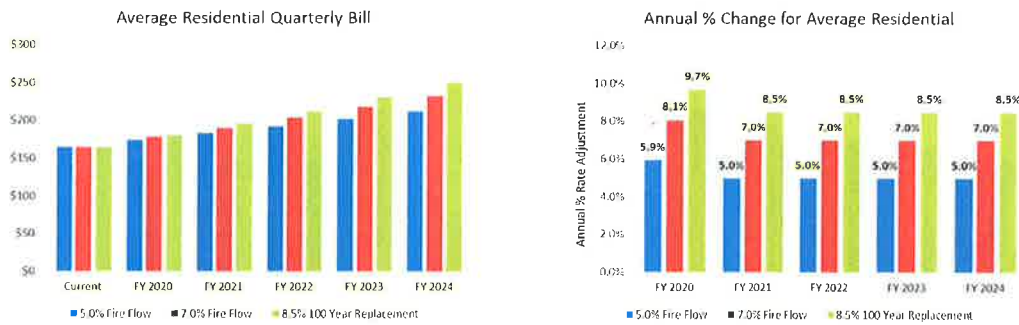
### Residential Rate Design – 5% Fire Flow

	Current	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>Residential</b>						
<b>Fixed Charge (\$/Quarter)</b>						
3/4"	\$140.90	\$140.06	\$147.06	\$154.42	\$162.14	\$170.24
1"	235.20	233.80	245.49	257.76	270.65	284.18
1 1/2"	469.10	466.30	489.61	514.10	539.80	566.79
2"	750.80	746.32	783.63	822.82	863.96	907.15
3"	1,408.70	1,400.29	1,470.31	1,543.82	1,621.01	1,702.06
Unmetered	165.20	186.22	195.53	205.31	215.58	226.36
<b>Commodity Charge (\$/CCF)</b>						
Tier 1, 0 - 45 CCF	\$1.09	\$1.57	\$1.65	\$1.73	\$1.82	\$1.91
Tier 2, 45 + CCF	1.64	2.40	2.52	2.64	2.77	2.91

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## Water Rates

### Residential – 3/4" Meter With 22 CCF Consumption



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## Water Utility

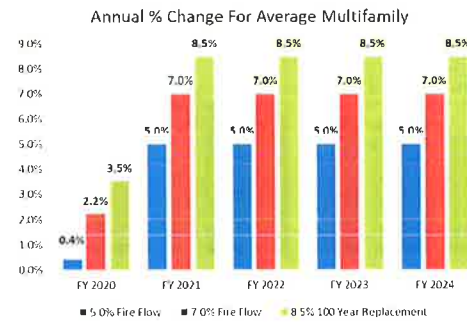
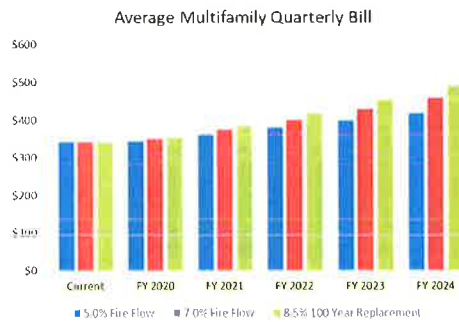
### Multi-Family Rate Design – 5% Fire Flow

	Current	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>Multi-Family</b>						
<b>Fixed Charge (\$/Quarter)</b>						
5/8" & 3/4"	\$140.90	\$140.06	\$147.06	\$154.42	\$162.14	\$170.24
1"	235.20	233.80	245.49	257.76	270.65	284.18
1 1/2"	469.10	466.30	489.61	514.10	539.80	566.79
2"	750.80	746.32	783.63	822.82	863.96	907.15
3"	1,408.70	1,400.29	1,470.31	1,543.82	1,621.01	1,702.06
4"	2,348.20	2,334.18	2,450.89	2,573.44	2,702.11	2,837.22
6"	4,694.90	4,666.88	4,900.22	5,145.23	5,402.49	5,672.62
8"	7,512.20	7,467.36	7,840.73	8,232.76	8,644.40	9,076.62
10"	10,799.90	10,735.44	11,272.21	11,835.82	12,427.61	13,048.99
<b>Unmetered (\$/Quarter)</b>						
Duplex	\$293.70	\$291.95	\$306.54	\$321.87	\$337.97	\$354.86
Triplex	399.00	396.62	416.45	437.27	459.14	482.09
Four-Plex	516.20	513.12	538.77	565.71	594.00	623.70
Additional Units	86.50	85.98	90.28	94.80	99.54	104.51
<b>Commodity Charge (\$/CCF)</b>						
	\$1.53	\$1.57	\$1.65	\$1.73	\$1.82	\$1.91

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## Water Rates

### Multifamily – 1" Meter With 70 CCF Consumption



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## Water Utility

### Commercial Rate Design – 5% Fire Flow

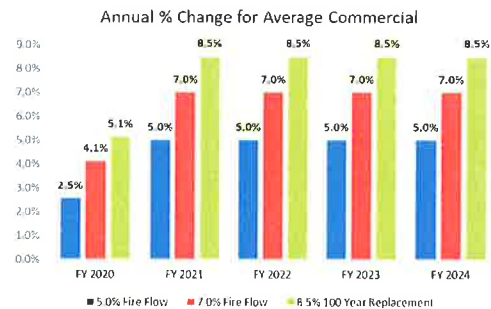
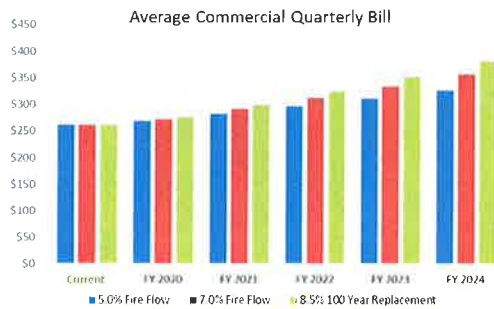
	Current	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
<b>Commercial</b>						
<b>Fixed Charge (\$/Quarter)</b>						
5/8" & 3/4"	\$140.90	\$140.06	\$147.06	\$154.42	\$162.14	\$170.24
1"	235.20	233.80	245.49	257.76	270.65	284.18
1 1/2"	469.10	466.30	489.61	514.10	539.80	566.79
2"	750.80	746.32	783.63	822.82	863.96	907.15
3"	1,408.70	1,400.29	1,470.31	1,543.82	1,621.01	1,702.06
4"	2,348.20	2,334.18	2,450.89	2,573.44	2,702.11	2,837.22
6"	4,694.90	4,666.88	4,900.22	5,145.23	5,402.49	5,672.62
8"	7,512.20	7,487.36	7,840.73	8,232.78	8,644.40	9,076.62
10"	10,799.90	10,735.44	11,272.21	11,835.82	12,427.61	13,048.99
<b>Commodity Charge (\$/CCF)</b>	\$1.52	\$1.61	\$1.69	\$1.78	\$1.87	\$1.96

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## Water Rates

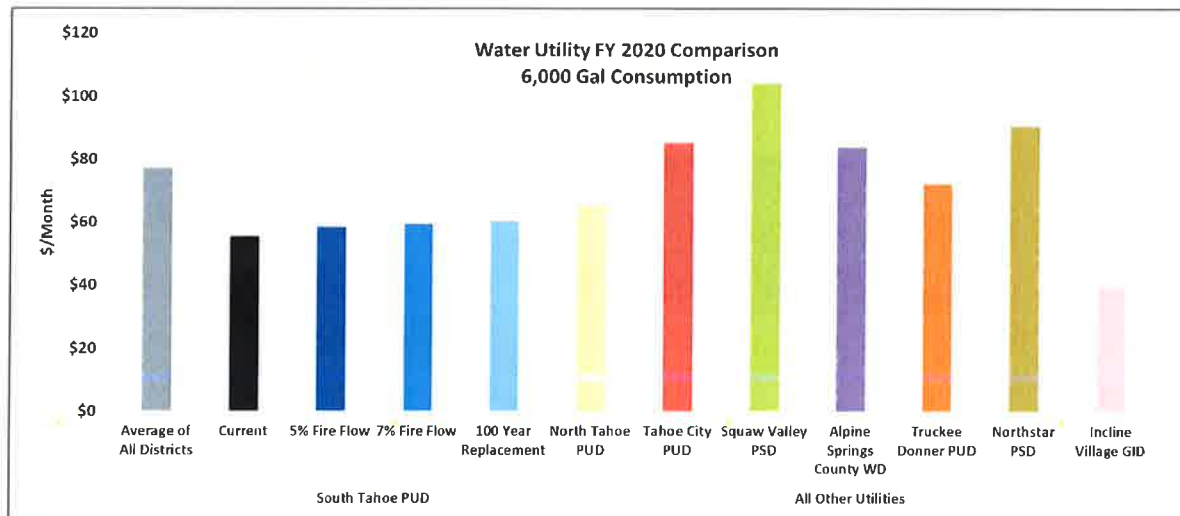
### Commercial – 1" Meter With 80 CCF Consumption



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## Water Utility

### Local Bill Comparison



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## Sewer Utility Rate Study Results



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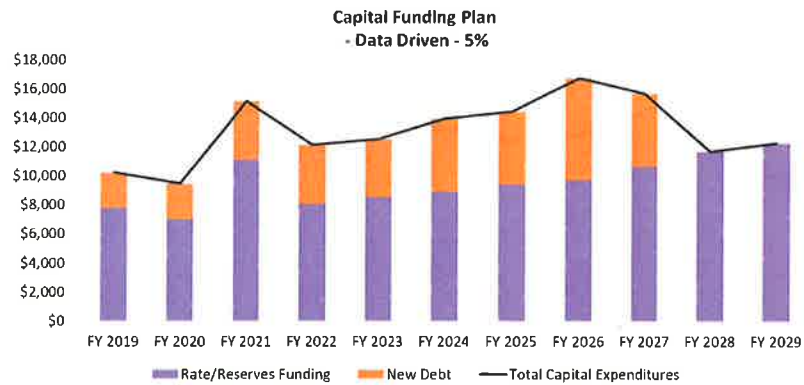
Revenue  
Requirement



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## Sewer Capital Funding Plan

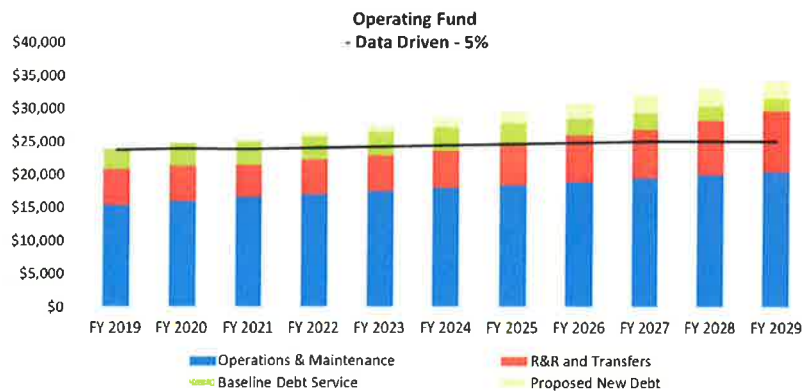
### Data Driven 5%



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## Sewer Revenue Requirement

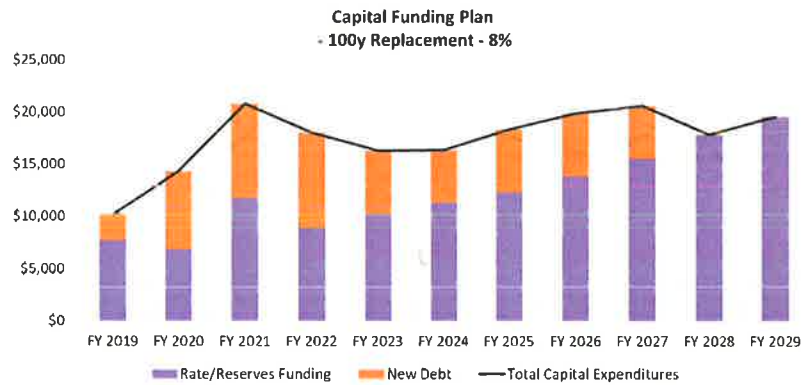
### Data Driven 5%



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## Sewer Capital Funding Plan

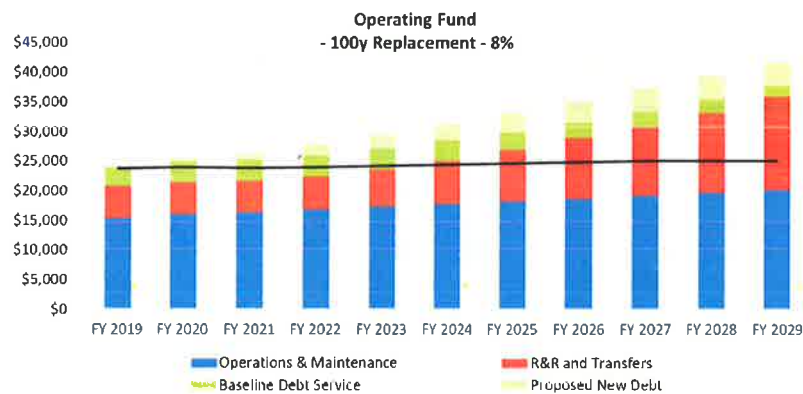
### 100 Year Replacement 8%



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## Sewer Revenue Requirement

### 100 Year Replacement 8%



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## Sewer Revenue Requirement Alternative Summary



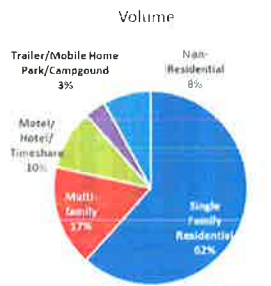
• Based on average Residential Quarterly Bill With Across the Board Adjustments prior to Cost of Service adjustments.

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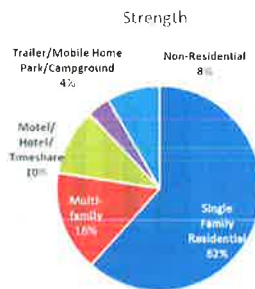


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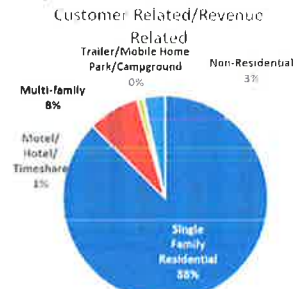
## Sewer Utility Allocation Factors



64% of Costs  
Based on Customer Volume



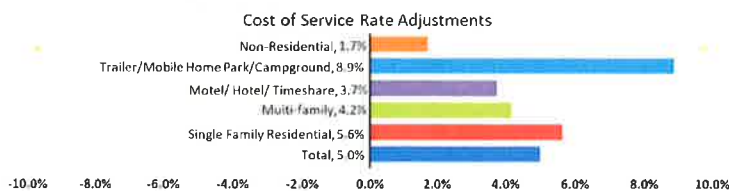
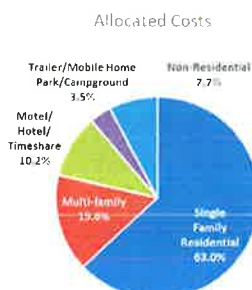
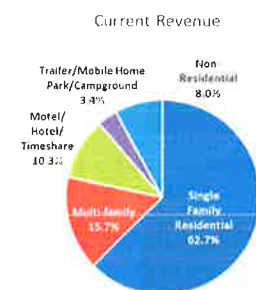
32% of Costs  
Based on Customer Wastewater  
Strength



4% of Costs  
Based on # of Customers and  
Revenue

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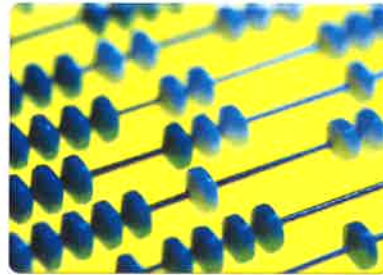
## Sewer Utility Allocated Costs Versus Current Rate Revenue



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## Rate Design



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## Sewer Rates

### Data Driven 5% overall Adjustment

		Current	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Single Family Residential	\$/Billing Unit/Quarter	\$42.09	\$44.46	\$46.68	\$49.02	\$51.47	\$54.04
Multi-family	\$/Billing Unit/Quarter	41.22	42.94	45.09	47.34	49.71	52.20
Motel/ Hotel/ Timeshare	\$/Billing Unit/Quarter	40.69	42.21	44.32	46.54	48.86	51.31
Trailer/Mobile Home Park/Campground	\$/Billing Unit/Quarter	38.73	42.16	44.27	46.48	48.81	51.25
Non-Residential	\$/Billing Unit/Quarter	43.72	44.46	46.68	49.01	51.47	54.04

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## Sewer Rates

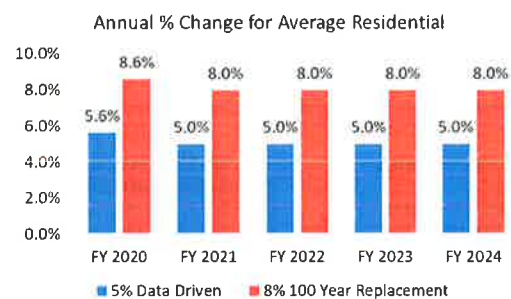
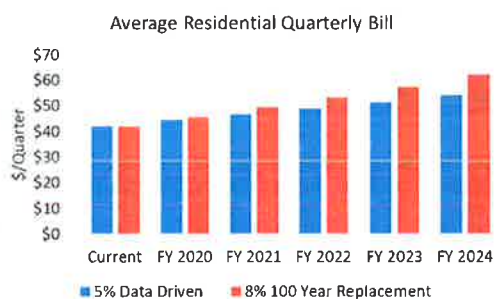
100 Year Replacement 8.0% overall Adjustment

		Current	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Single Family Residential	\$/Billing Unit/Quarter	\$42.09	\$45.71	\$49.37	\$53.32	\$57.58	\$62.19
Multi-family	\$/Billing Unit/Quarter	11.22	11.20	17.73	51.55	55.68	60.13
Motel/ Hotel/ Timeshare	\$/Billing Unit/Quarter	40.69	43.47	46.94	50.70	54.75	59.13
Trailer/Mobile Home Park/Campground	\$/Billing Unit/Quarter	38.73	43.42	46.89	50.64	54.70	59.07
Non-Residential	\$/Billing Unit/Quarter	43.72	45.71	49.37	53.32	57.58	62.19

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## Sewer Rates

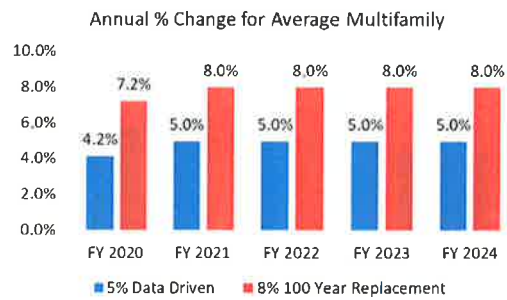
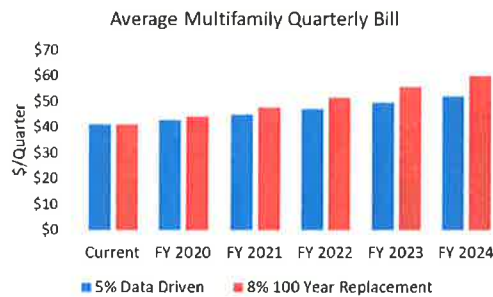
### Residential



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## Sewer Rates

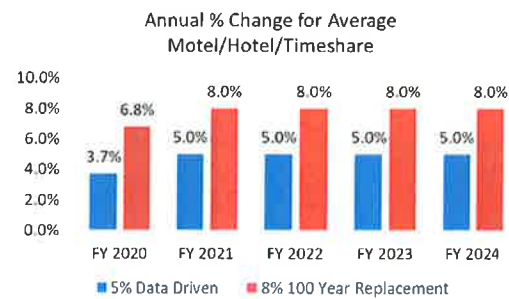
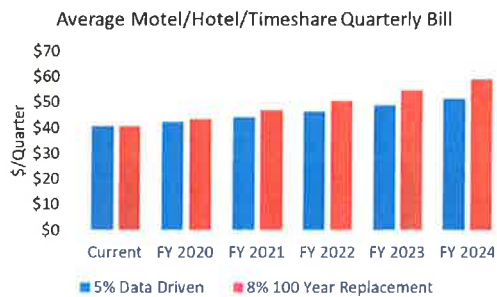
### Multifamily



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## Sewer Rates

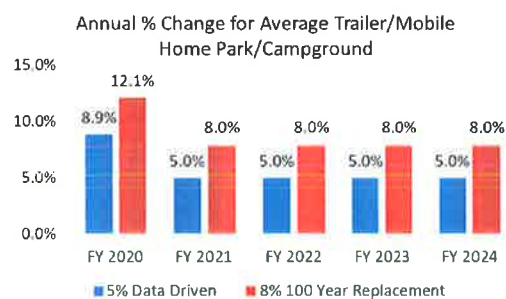
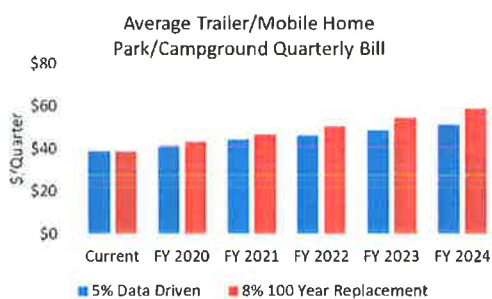
### Hotel/Motel/Timeshare



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## Sewer Rates

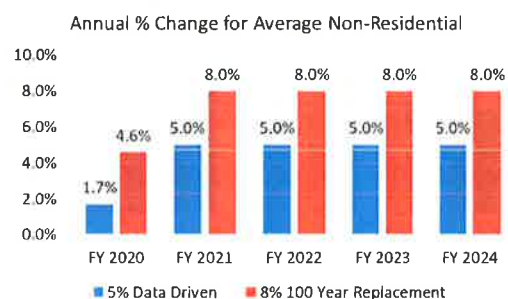
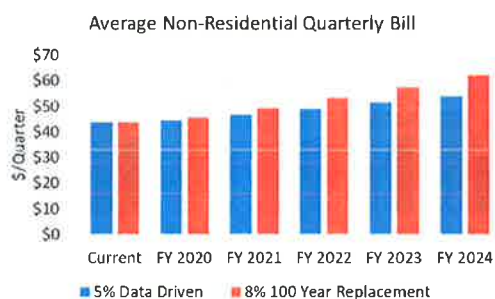
### Trailer/Mobile Home Park/Campground



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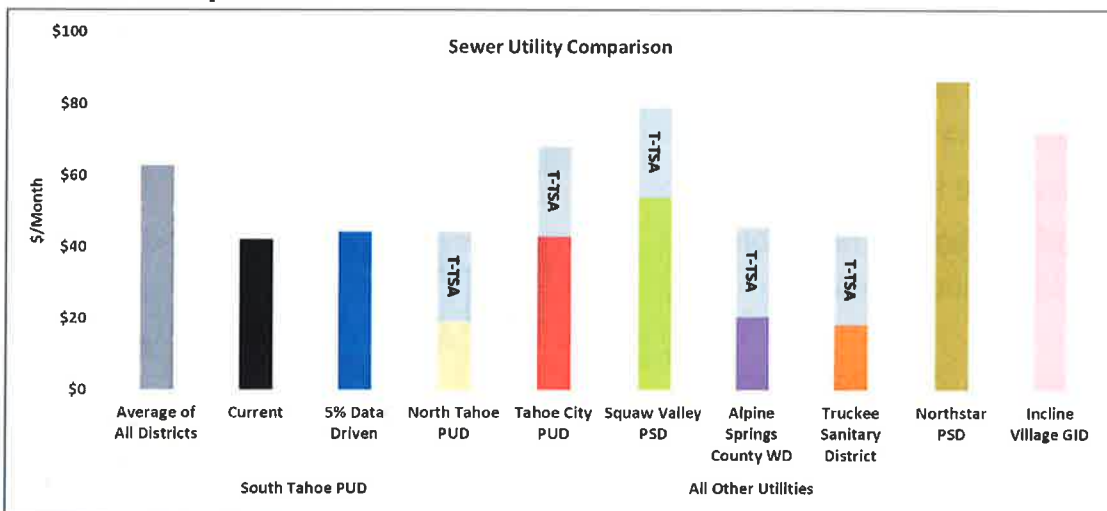
## Sewer Rates

### Non-Residential



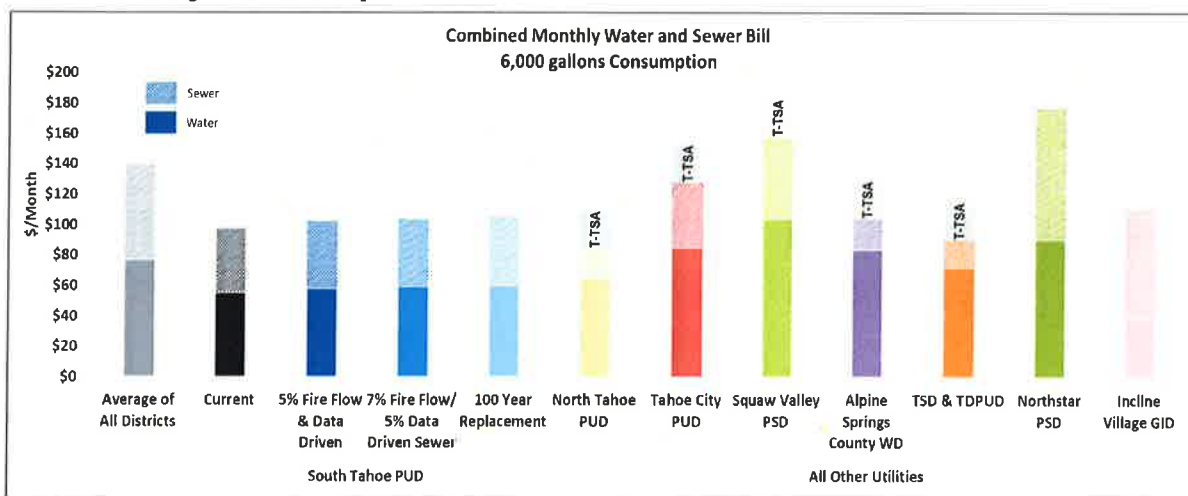
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## Sewer Utility Local Bill Comparison



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## Combined Residential Water & Sewer Local Utility Bill Comparison



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## Next Steps

- Gain Board input/direction on preferred capital (revenue) scenario
  - Necessary to move rate studies forward
- Develop final rate study results
- Gain Board feedback to move forward with rate setting/implementation process
- Start Proposition 218 public noticing
- Set public hearing date



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## Discussion



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