



Tahoe City Public Utility District Water and Sewer Rate Study

Draft Study Results and Recommendations

August 6, 2019

HDR



Purpose of the Presentation

Review prior Board input and direction



Review updated revenue and rate projections



Gain Board feedback and direction on the study



Next Steps...



Purpose of the Study

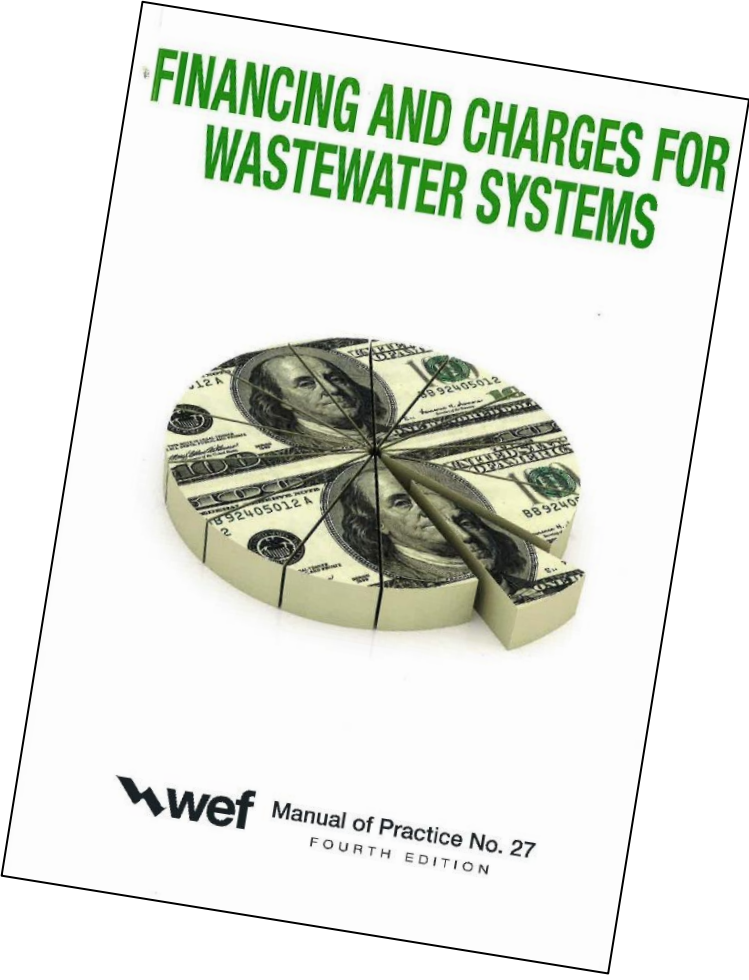
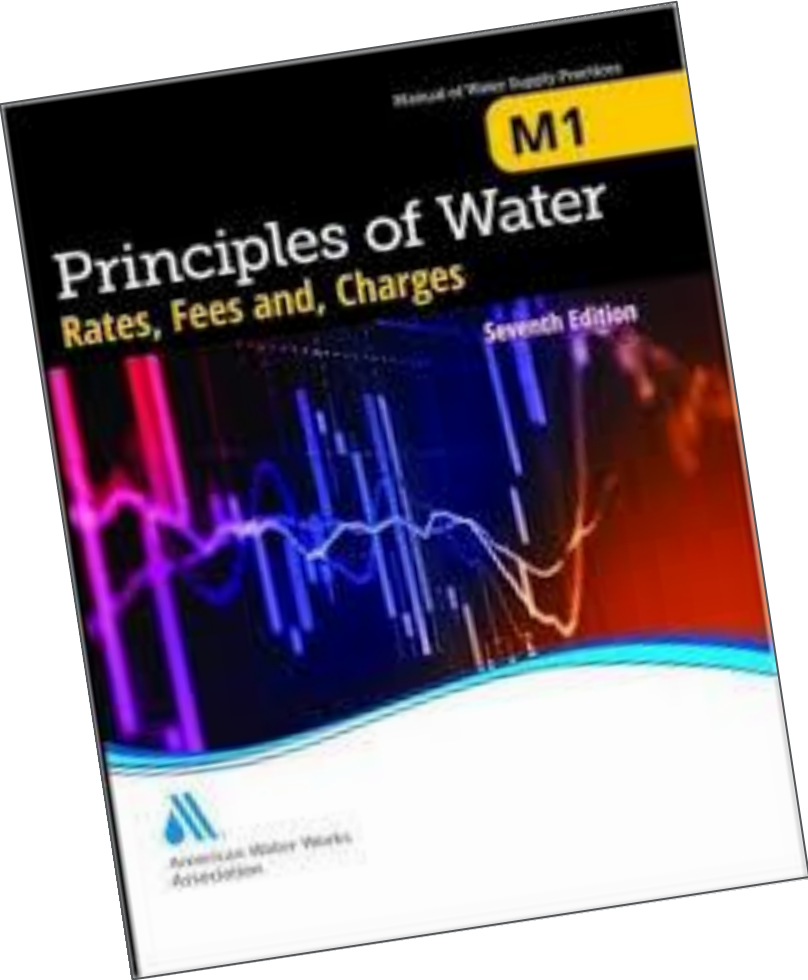
- Provide sufficient revenues to operate and maintain the District's water and sewer infrastructure
- Develop equitable and cost-based rates
 - Meet the intent of Proposition 218
- Establish the administrative record for the study
- Reflect prudent financial planning criteria (LTFP)
 - Maintain target debt service coverage (DSC) ratio
 - Prudent rate funding of capital
 - Meet target reserve balances
- Develop the study using generally accepted methodologies tailored to the District's system and customer characteristics



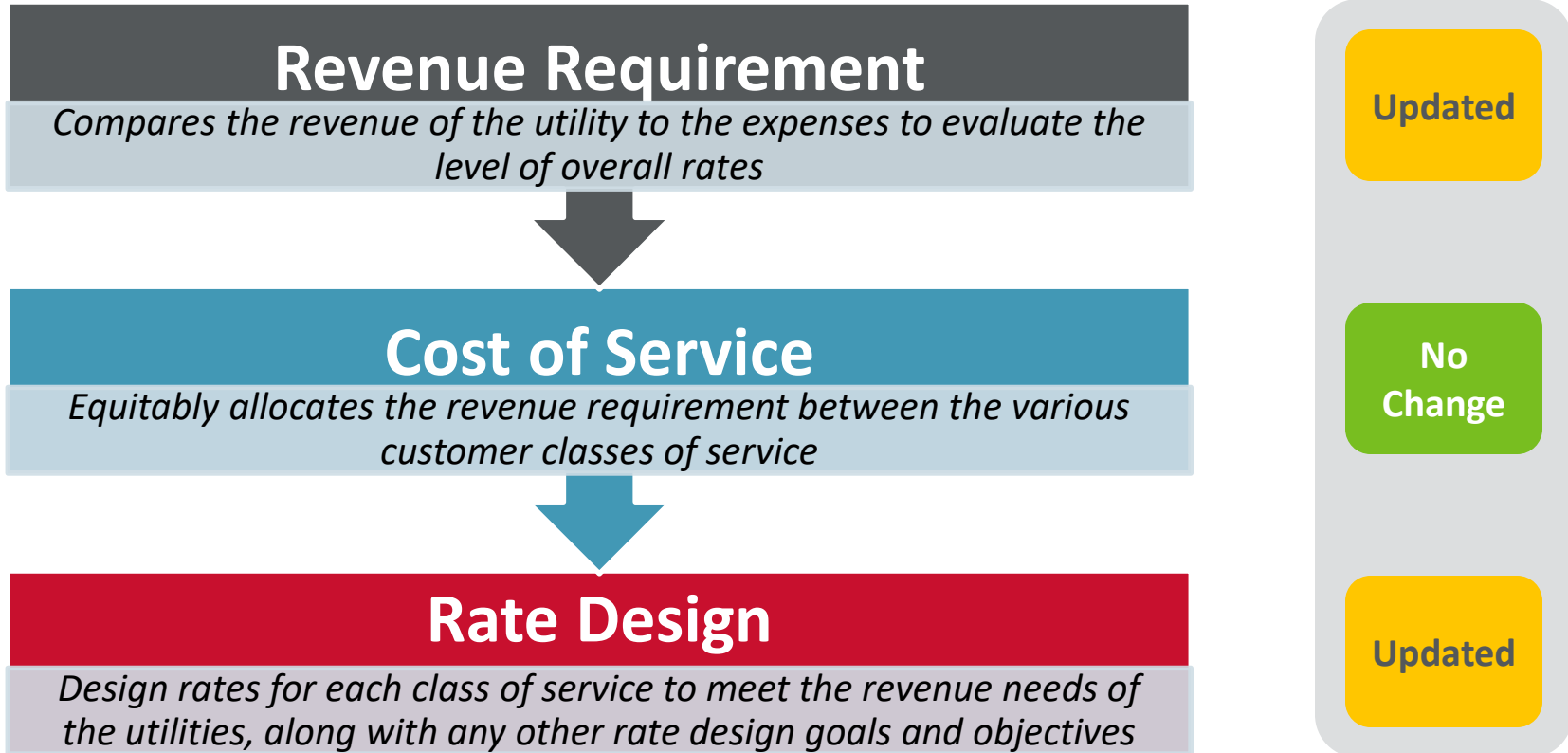
Proposition 218 Requirements

- Provides the requirement for setting and implementing property related rates and fees
 - California constitution Article XIII D
- Requires a cost basis for establishing the level of the rates
 - “Fees shall not exceed the **reasonable cost** of providing the service”
 - “Fees shall not exceed the **proportional cost** of providing the service attributable to the parcel which it is imposed”
- Requires a customer notification process and protest hearing
- If no majority protest:
 - Board may implement the proposed rates
 - The proposed rates are the maximum rates that can be charged for the time period specified
 - Rate levels will be reviewed during budgeting process
 - Board action necessary to reduce rates lower than noticed levels

What is “Generally Accepted”?



Developing Cost-Based Water & Sewer Rates



Water and Sewer Revenue Requirement Overview

Compares utility revenues to expenses

- Determines the level of revenue (rate) adjustment necessary

Uses prudent financial planning criteria

- Adequate funding of renewal and replacements
- Meeting target ending reserve balances

Reviews a specific time period

- Ten year period for the District's study
- Rate study focus is next 5-year period

Utilities is analyzed on a "stand-alone basis"

- No transfer of funds between water and sewer
- Rates need to support operations and capital

Utilizes the "cash basis" methodology

- Generally accepted method for municipal utilities

Overview of the Water and Sewer 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

Prior Board Input and Direction (07-22-19 Meeting)

- Target level of capital funding from rate revenues
 - Water = \$2.5 M / Yr
 - Sewer = \$1.5 M / Yr
- Transition for Tahoe Cedars / Madden Creek Water Customers
 - Over 7-year time period
 - Adjust annually by equal \$ amounts (instead of equal percentage)
 - Tahoe Cedars and Madden on a single Transition Rate (Not Board Direction)
 - No 2020 Water Rate increase for Madden Creek to equalize
- WLTRWTP Debt Service Funding Alternatives
 - Step in one year (2021) to funding 50% from Water Rates
 - Transition 'smoothly' to fund 50% by 2024
- Large Meter Commercial Transition Alternative
 - Cannot implement (legal / defensibility)



Sewer Utility Rate Study



Overview of the Sewer Revenue Requirement

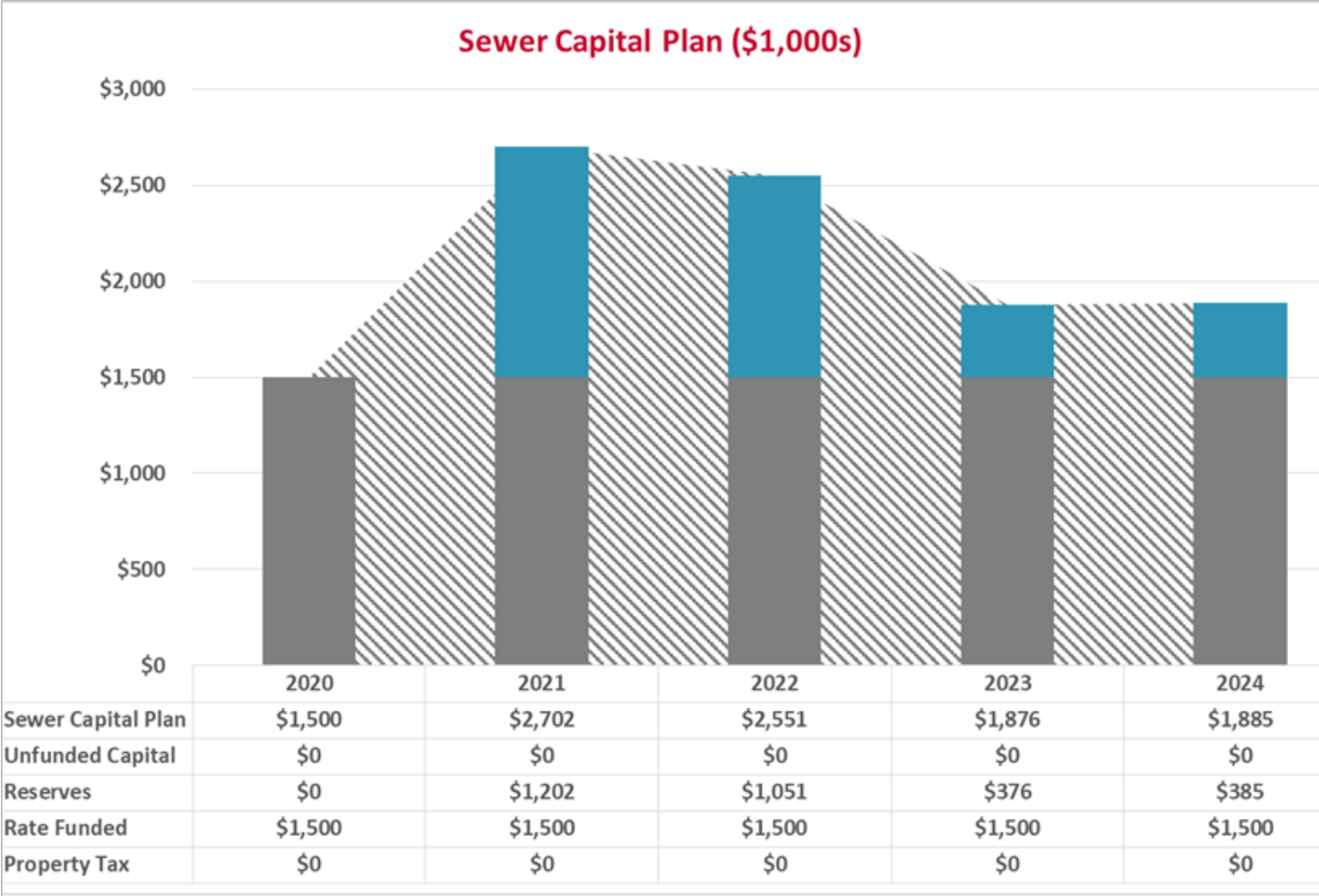
- Revenues were calculated based on current rate levels and customer characteristics
 - Assumed zero growth on the system
- O&M expenses start with 2019 adopted budget
 - Projected based on for a 10-year period (2020 – 2029)
- Developed a capital funding plan
 - Board adopted 5-year plan
- Study reflects recently reviewed financial policies related to rate setting (LTFP)
- **Target is \$1.5 million in rate funded capital per year**

Overview of the Sewer Capital Plan For Rate Study

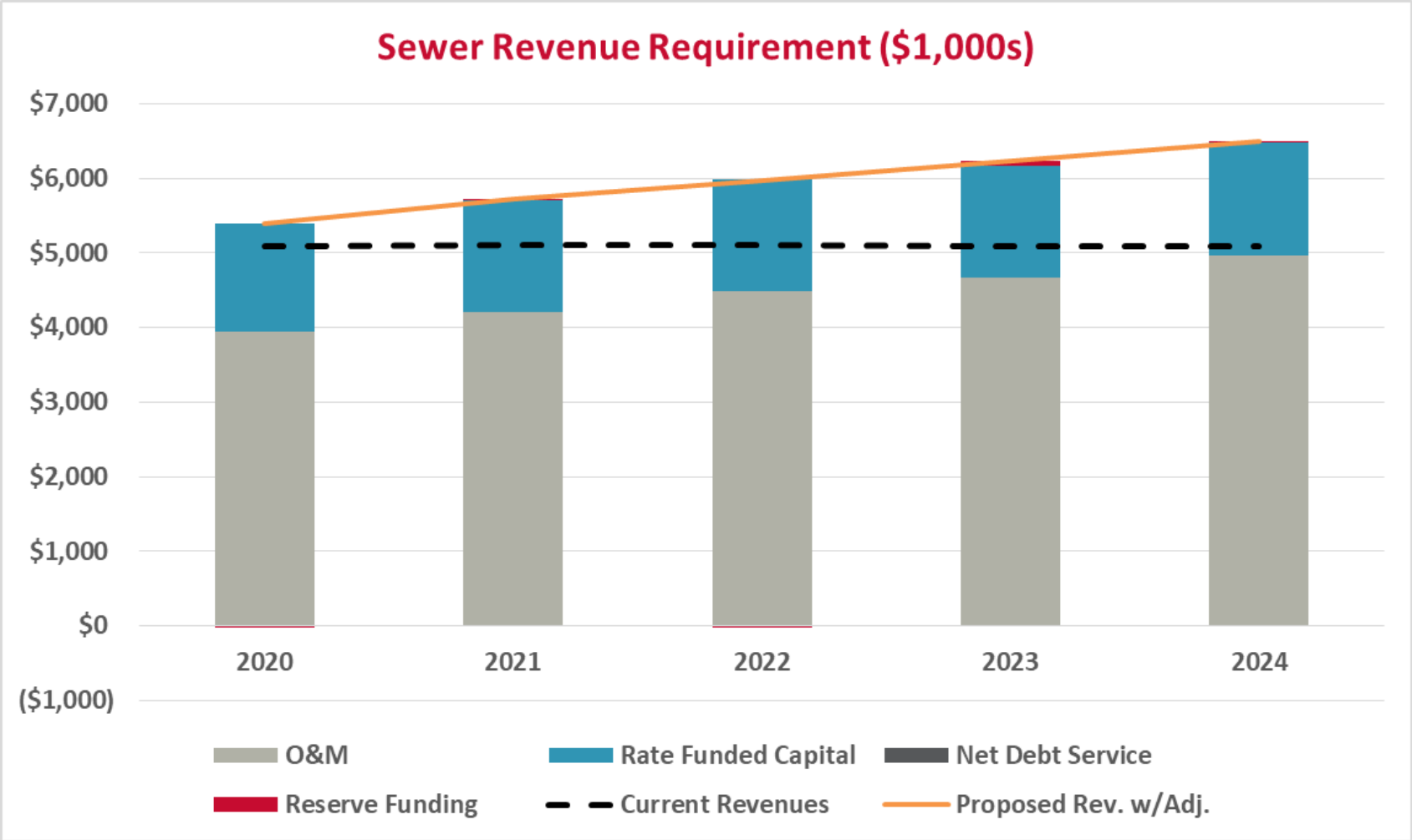
	2020	2021	2022	2023	2024
Capital Projects	\$1,249,117	\$2,701,721	\$2,550,749	\$1,875,548	\$1,885,108
Line Replace / Slipline / Manhole Rehab / Laterals					
Dollar/Edgewater Lakefront SLR					
McKinney Sewer Pump Station Modifications					
Emergency Bypass Facilities					
Satellite Pump Station Overflow Wet Wells					
Projects as Defined by Future Sewer Master Plan					
Metering Manholes					
West Shore H2S Control Facilities					
Operational Projects & Vehicles					

**Total 2020-2024
Sewer Capital
Total = \$10,262,333**

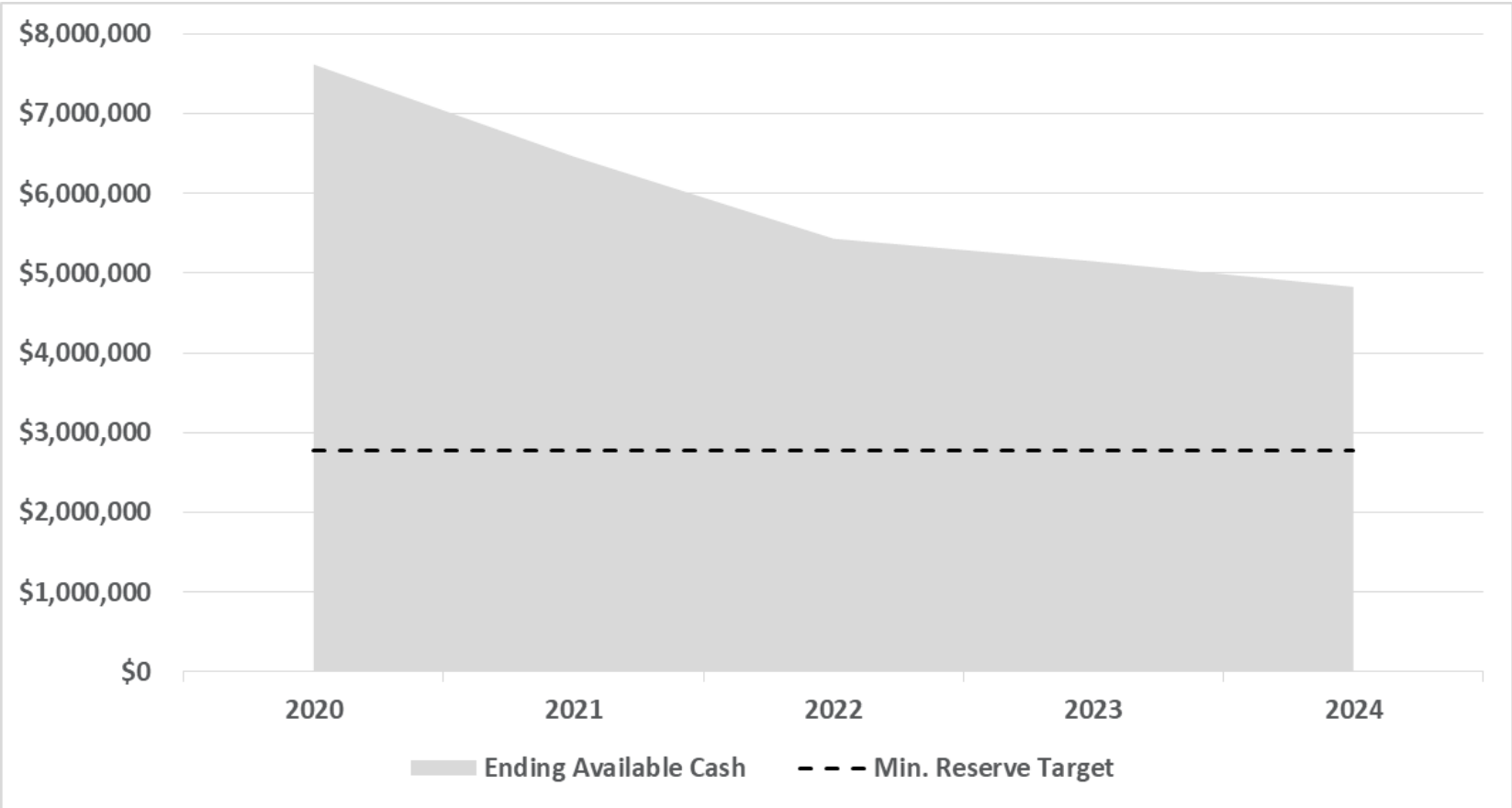
Overview of the Sewer Capital Funding Plan



Summary of the Sewer Revenue Requirement



Summary of the Sewer Cash Available and Minimum Reserves



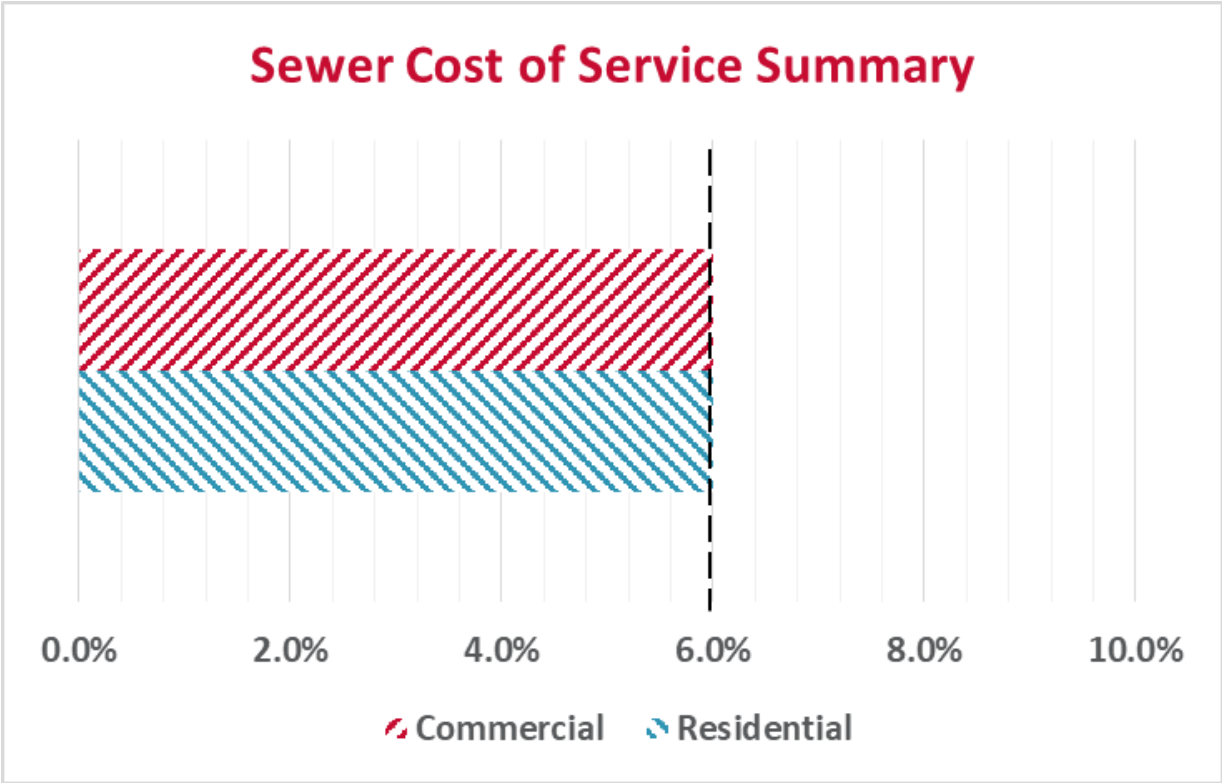
Sewer Revenue Requirement Summary

- Revenue (Rate) adjustments are necessary

	2019	2020	2021	2022	2023	2024
Avg Residential Customer Bill / Mo / EDU	\$44.14	\$46.79	\$49.60	\$51.83	\$54.16	\$56.60
Rate Increase	-	6.0%	6.0%	4.5%	4.5%	4.5%

- Reflects the need to prudently fund O&M and capital needs for both utilities
 - Prior and future sewer rate “rollbacks” results in reduced capital funding
 - Alternative results in minimum reserves, deferred future capital, and reduced capital funding from rates
- Reflects overall financial policy goals
- Overall change in revenue may not equal change in customer bill
 - Cost of service (proportional allocation) will provide bill impact

Summary of the 2020 Sewer Cost of Service Analysis



Additional / (Decreased) Revenue Generation

- Residential: \$248,000
 - Commercial: \$50,000
- System Total: \$298,000**

To avoid legal challenges to rates the District must implement cost-based rates as developed in the cost of service analysis

Sewer Cost of Service - Unit Costs (2020)

	Cost \$ / EDU
Cost of Service	\$46.79
Present Rates	\$44.14

To avoid legal challenges to rates the District must implement cost-based rates as developed in the cost of service analysis

Overview of the Sewer Rate Designs

- Maintained the current customer classes of service
 - Residential
 - Commercial – by customer type
- Maintained the current rate structures
 - Charged per EDU

Present and Proposed Sewer Rates

	<i>Present</i>	<i>Proposed Rates</i>				
	<i>Rates</i>	2020	2021	2022	2023	2024
Base Charge						
Residential	\$44.14	\$46.79	\$49.60	\$51.83	\$54.16	\$56.60
<i>Non-Residential Rates</i>						
Motel W/O Kitchen	\$17.96	\$19.04	\$20.18	\$21.39	\$22.35	\$23.36
Motel W/Kitchen	19.14	20.29	21.51	22.80	23.83	24.90
Seating - Per 1/2 Seat	1.23	1.30	1.38	1.46	1.53	1.60
Seating - Per Seat	2.46	2.61	2.76	2.93	3.06	3.20
Laundry - Per Machine	8.98	9.52	10.09	10.70	11.18	11.68
Hotel W/Kitchen	17.96	19.04	20.18	21.39	22.35	23.36
Hotel W/O Kitchen	11.33	12.01	12.73	13.49	14.10	14.73
Campsite W/Sewer	22.26	23.60	25.01	26.51	27.70	28.95
Campsite W/O Sewer	19.14	20.29	21.51	22.80	23.83	24.90
Snackbar	66.34	70.32	74.54	79.01	82.57	86.29
Service Station	66.34	70.32	74.54	79.01	82.57	86.29
Beauty / Barber Shop (Per Chair)	23.92	25.36	26.88	28.49	29.77	31.11
Theatre	132.61	140.57	149.01	157.95	165.06	172.49
Boat Pump	66.34	70.32	74.54	79.01	82.57	86.29
Standby Sewer Service	8.69	9.21	9.76	10.35	10.82	11.31
Food Service Estab Lic	29.40	31.17	33.03	35.01	36.59	38.24
Backwash (Pool/Spa Filters)	22.26	23.60	25.01	26.51	27.70	28.95
Unclassified Sewer	44.14	46.79	49.60	52.58	54.95	57.42
Unclassified Sewer W/O Kitchen	17.96	19.04	20.18	21.39	22.35	23.36
.5 Sewer Unit (1-10 Fixtures)	22.26	23.60	25.01	26.51	27.70	28.95
1.0 Sewer Unit (11-20 Fixtures)	44.14	46.79	49.60	52.58	54.95	57.42
Comm'Cl Non-Rest < 1,000 Sq Ft	44.14	46.79	49.60	52.58	54.95	57.42
Comm'Cl Non-Rest > 1,000 Sq Ft	22.26	23.60	25.01	26.51	27.70	28.95
Pro-Rated Sewer Charge	1.21	1.28	1.36	1.44	1.50	1.57

Water Utility Rate Revenue Requirement



Overview of the Water Revenue Requirement

- Study includes recently acquired systems
 - Timberland, Tahoe Cedars, and Madden Creek
- Revenues were calculated based on current rate levels and customer characteristics
 - Projected based on minimal growth on the system (0.5% annually)
- O&M expenses start with 2019 adopted budget
 - Projected based on a 10-year period (2020 – 2029)
- Developed a capital funding plan
 - Committee reviewed capital plan
 - Does not fully reflect total capital needs
 - Results in additional funding needs
- Study reflects recently reviewed financial policies related to rate setting (LTFP)
- **Water Rate funded capital of \$2.5 million per year**
- **Developed two additional alternatives**
 - **Step in year of occurrence (2021) to fund 50% of WTP debt service with water rates**
 - **Smooth transition to fund, by 2024, 50% of WTP debt service with water rates**

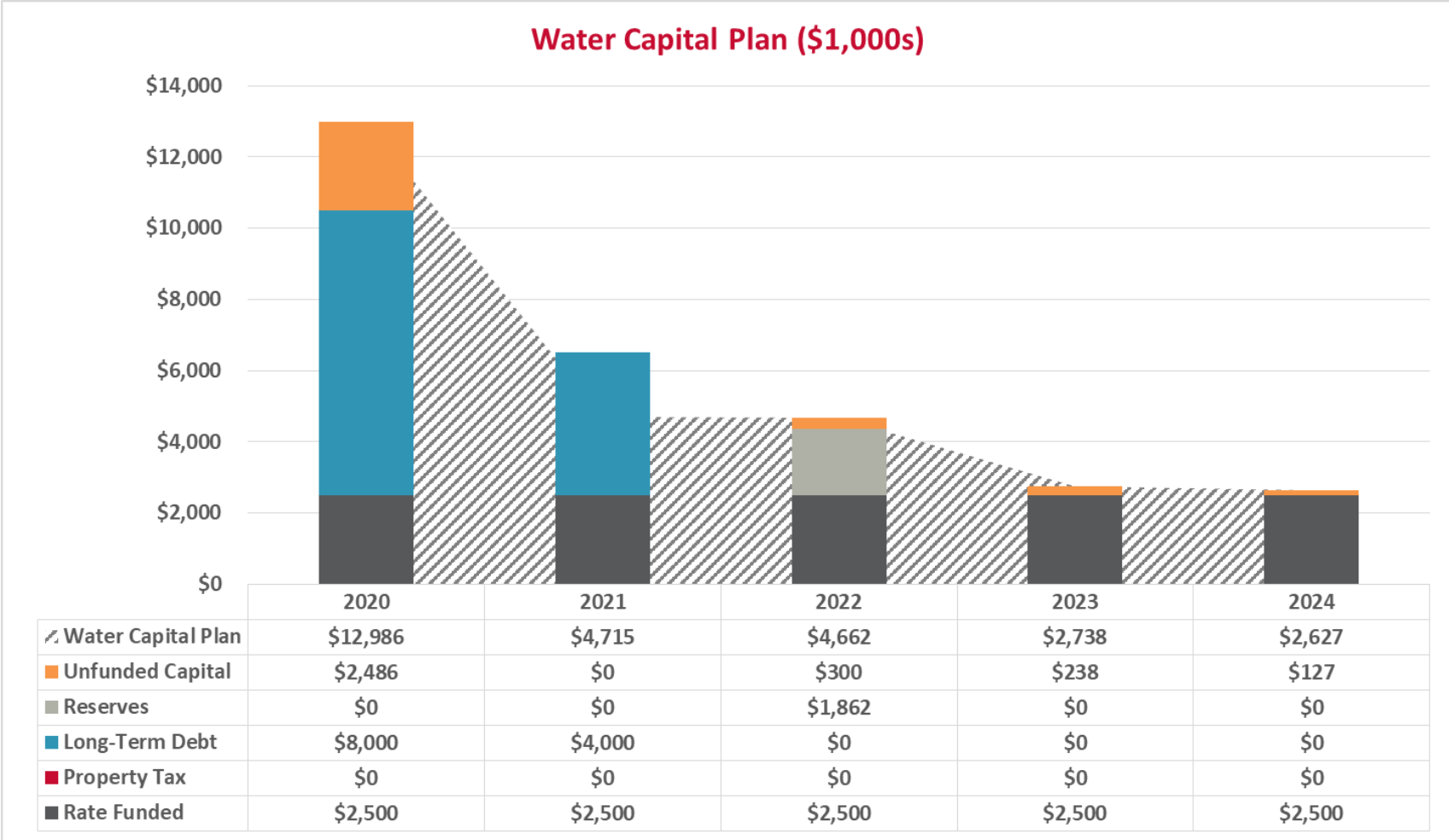
Overview of the Water Capital Plan For Rate Study

	2020	2021	2022	2023	2024
Capital Plan	\$12,985,630	\$4,715,168	\$4,661,669	\$2,738,154	\$2,626,540
Public Projects Relocations/Upgrades (EIP)					
West Lake Tahoe Regional Water Treatment Plant					
Madden Creek Water System Interconnection and Dist. Improvements					
Timberland Water System Metering and Distribution Improvements					
Tahoe Cedars & Madden Creek Water System Distribution Improvements					
West Shore Storage Augmentation Project					
Lower Meeks Bay PRV					
The Drive WLR					
Rubicon Tank No. 1 Water Feed Line Replacement					
Highlands Easements Svc Line Repl (Polybutylene)					
Smart Meter Replacement Program					
TC Main Emergency Water Supply Project					
Moana Circle WLR					
Dardanelles WLR					
Water System Master Metering					
Operational Projects					

**Total 2020-2024
Water Capital
Total = \$27,727,161**

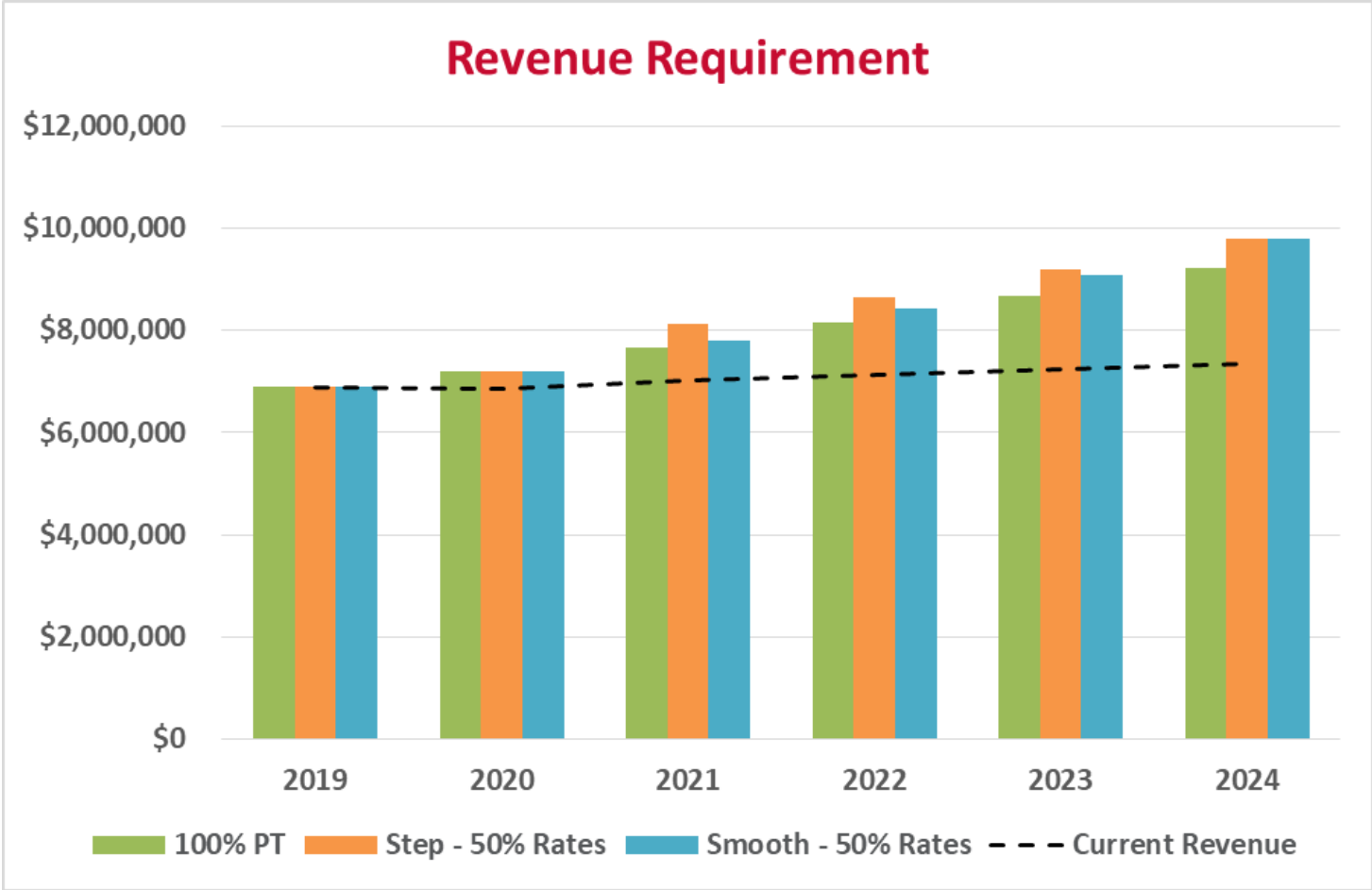
- Water capital plan for Rate Study represents a scaled back capital plan and does not include Rubicon Water System Transmission Improvement, Tahoe City Main Source & Augmentation and the full system replacement for Tahoe Cedars and Madden Creek.
- The WLTRWTP Project will be financed with a SRF - Low Interest Loan with annual payment of approx. \$740,000 for 20 years paid by property tax.

Overview of the Water Capital Funding Plan

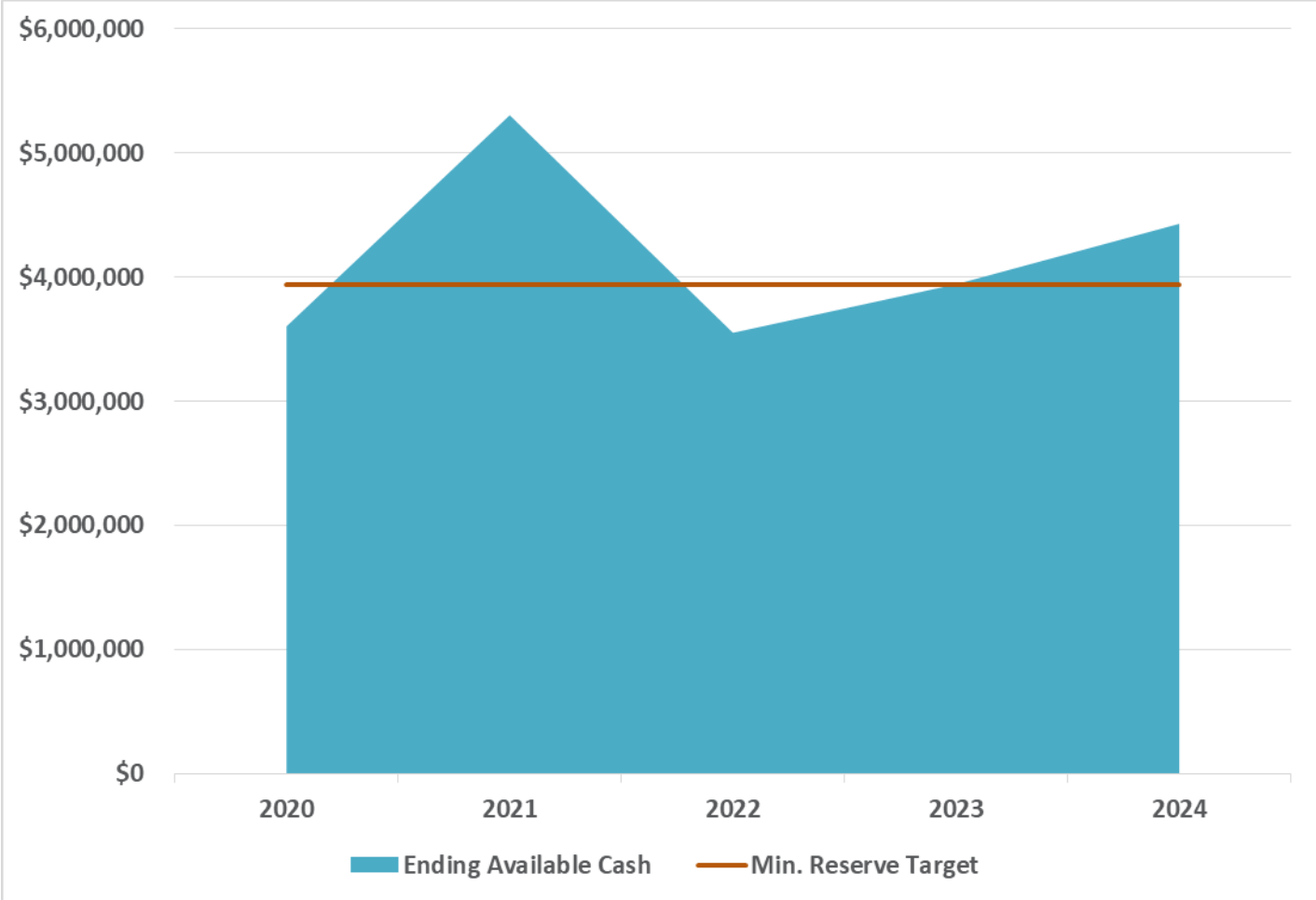


Summary of the Water Revenue Requirement

100 % PT / Step 50% Rates / Smooth 50% Rates



Summary of the Water Cash Available and Minimum



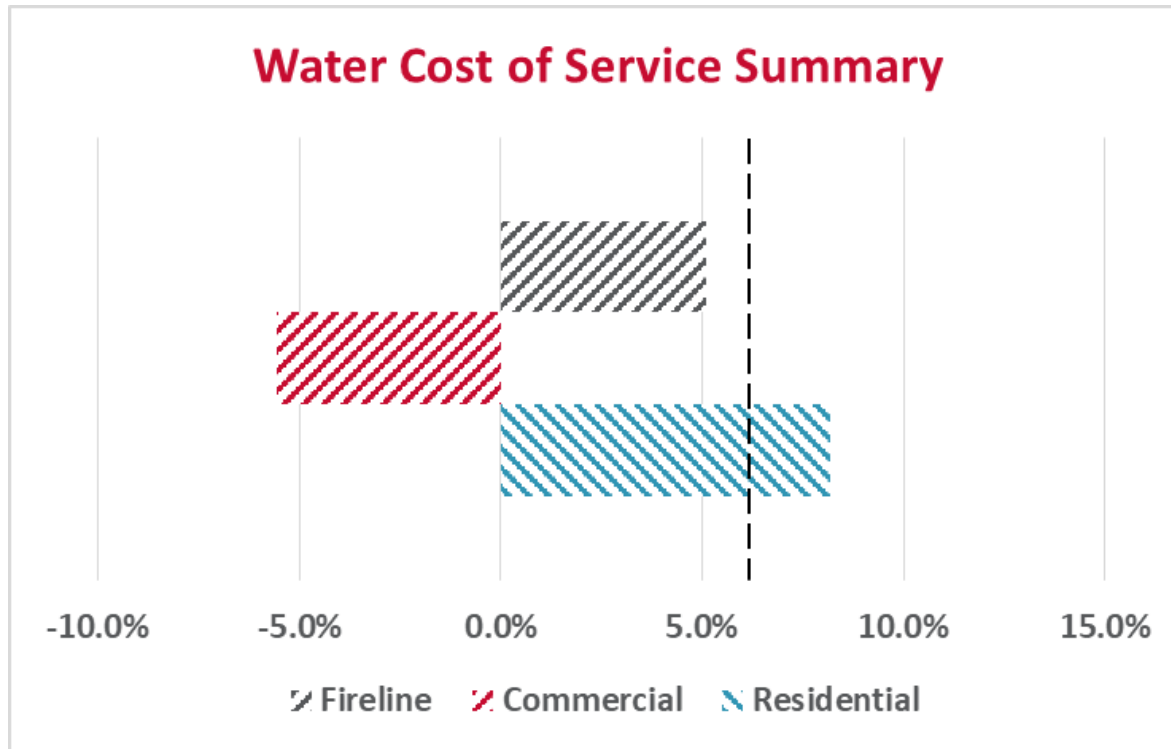
Water Revenue Requirement Summary

- Water Revenue (Rate) adjustments are necessary

	2019	2020	2021	2022	2023	2024
Avg. Bill – 100% PT	\$90.58	\$97.13	\$98.56	\$101.52	\$105.56	\$109.79
<i>Rate Increase</i>		7.2%	1.5%	3.0%	4.0%	4.0%
Avg. Bill – Step 50% PT	\$90.58	\$97.13	\$102.97	\$107.11	\$111.39	\$115.87
<i>Rate Increase</i>		7.2%	6.0%	4.0%	4.0%	4.0%
Avg. Bill – Smooth 50% PT	\$90.58	\$97.13	\$100.51	\$105.04	\$110.29	\$115.81
<i>Rate Increase</i>		7.2%	3.5%	4.5%	5.0%	5.0%

- Reflects the need to prudently fund O&M and capital needs
 - Current plan includes capital needs as identified on the system
 - Unfunded capital improvements remain even with revenue adjustments
- Reflects overall financial policy goals
 - Need to fund water minimum targets, in addition to revenue adjustments
- Overall change in revenue may not equal change in customer bill
 - Cost of service (proportional allocation) will provide bill impact
 - Transition of acquired system customers will also provide economies of scale in out years (2021-2024)

Summary of the 2020 Water Cost of Service Analysis



Additional / (Decreased) Revenue Generation

- Residential: \$374,000
 - Commercial: ~~-\$47,000~~
 - Fireline: \$12,000
- System Total: \$339,000**

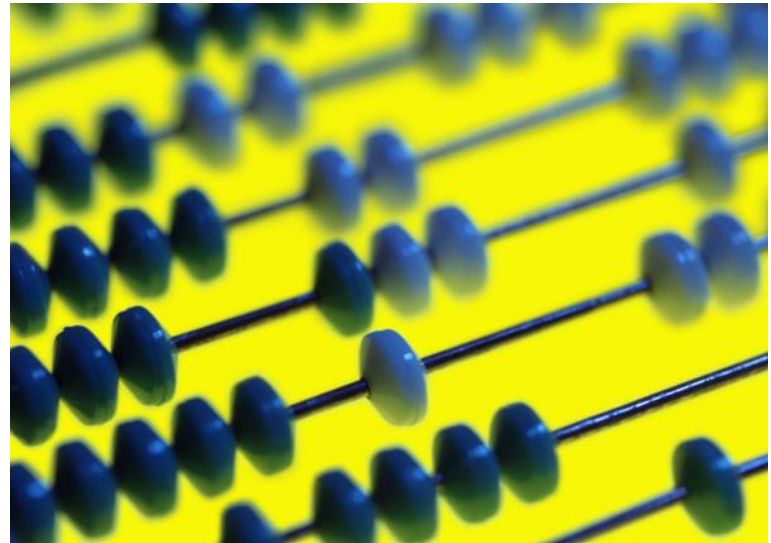
To avoid legal challenges to rates the District must implement cost-based rates as developed in the cost of service analysis

Water Cost of Service - Unit Costs (2020)

	Res – Tier 1	Res – Tier 2	Res – Tier 3	Res – Tier 4	Commercial	Fireline
Cost of Service						
Variable (\$/1,000)	\$2.97	\$3.88	\$5.59	\$11.05	\$4.20	\$0.00
Fixed (\$/month)	\$79.31					\$29.70
Present Rates						
Variable (\$/1,000)	\$2.68	\$3.64	\$5.32	\$8.25	\$6.74	\$0.00
Fixed (\$/month)	\$74.50				\$89.50	\$28.13

To avoid legal challenges to rates the District must implement cost-based rates as developed in the cost of service analysis

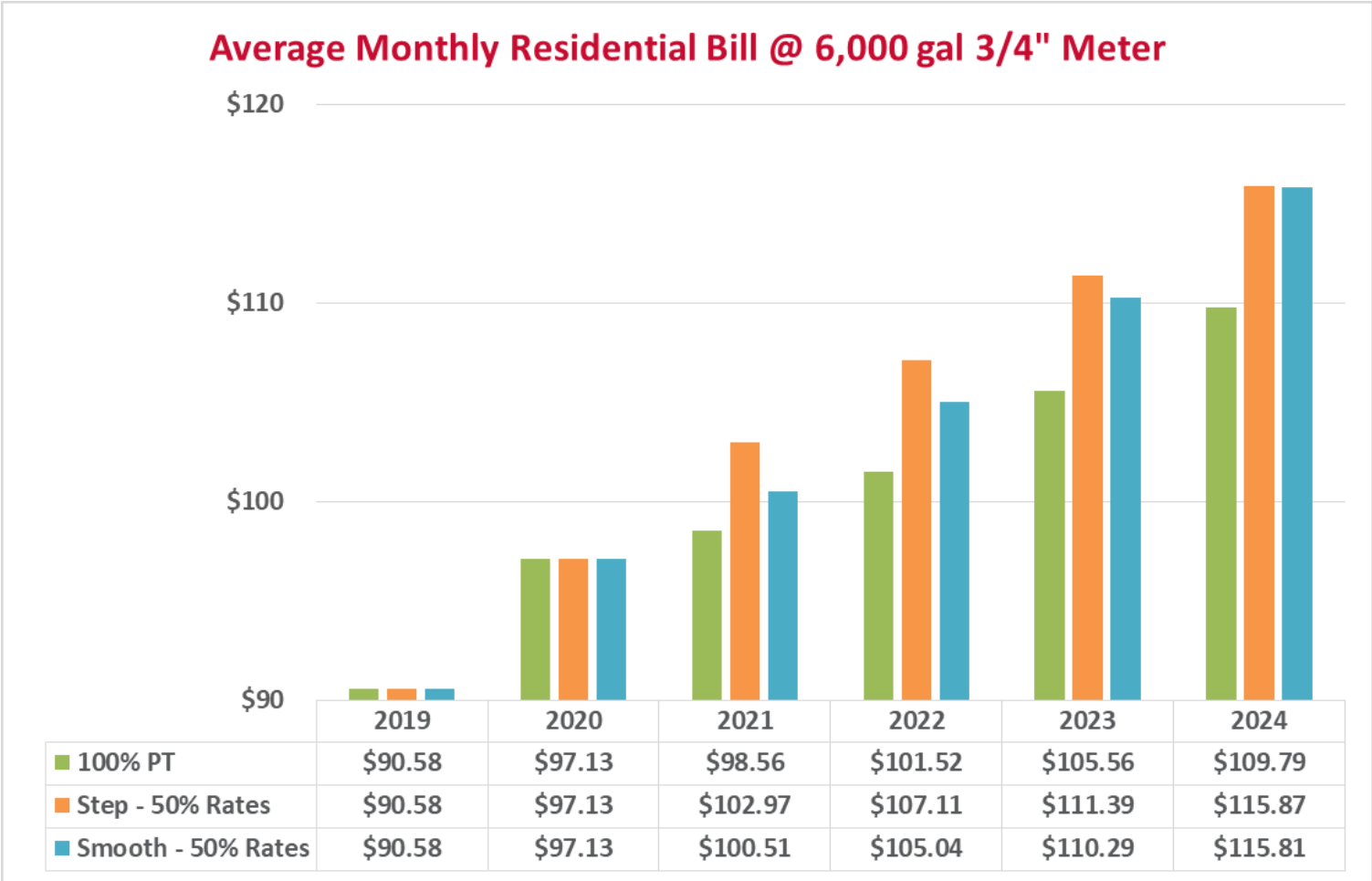
Rate Design



Overview of the Water Rate Designs

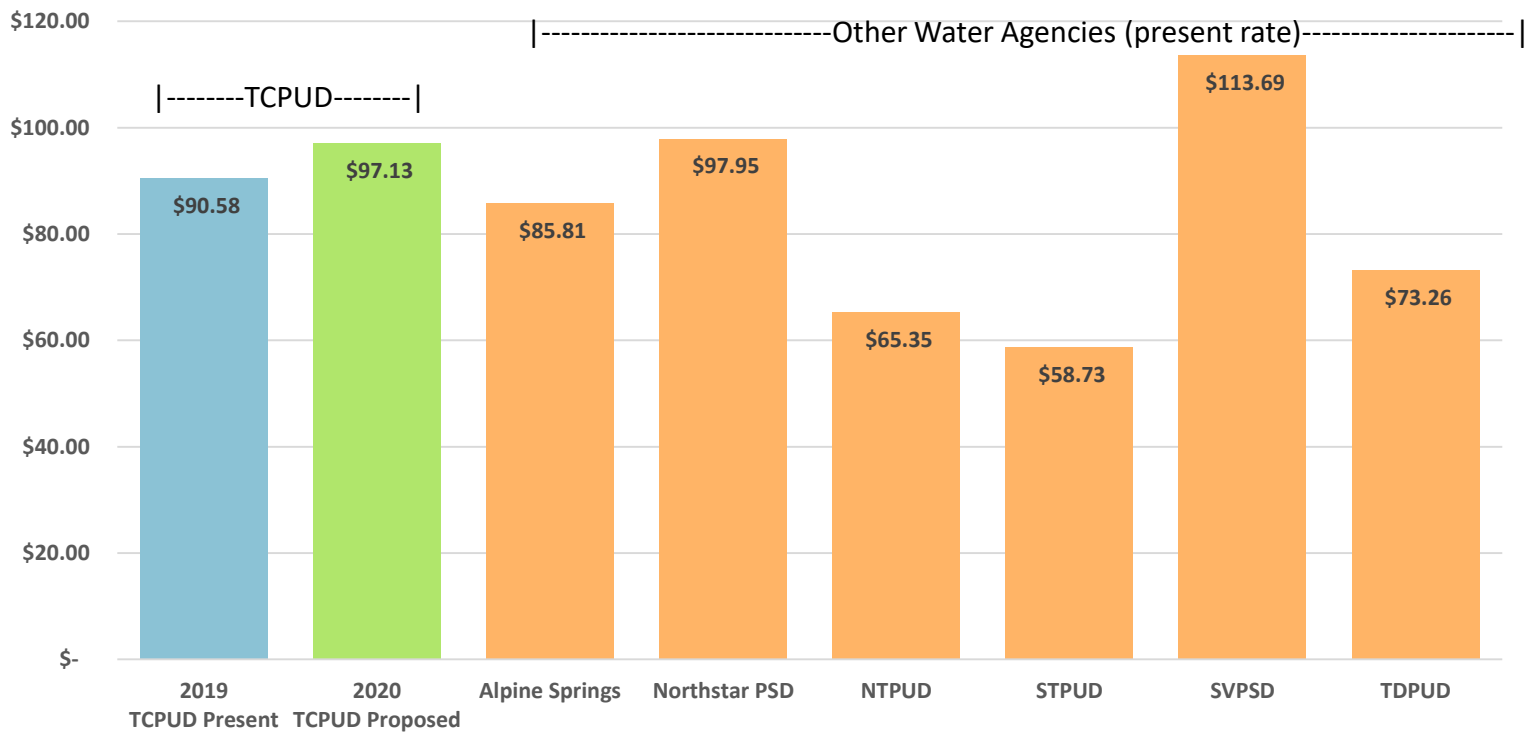
- Maintained the current customer classes of service
 - Residential, commercial, fireline
- Maintained the current rate structures
 - No changes to the tier sizes
 - Tier pricing is based on cost of service unit costs
 - Fixed (meter charge) is based on cost of service unit costs
 - All customer charged the same meter rate by meter size
- Timberland customers are billed at proposed system rates
- Madden Creek and Tahoe Cedars customers transition to system rates by 2024
 - Revised Transition Rate Structure so both Tahoe Cedars and Madden Creek are on a single rate transition plan
- Developed two additional alternatives
 - Step in year of occurrence (2021) to fund 50% of WTP debt service with water rates
 - Smooth transition to fund, by 2024, 50% of WTP debt service with water rates

Average Residential Customer Bill Impact Comparison

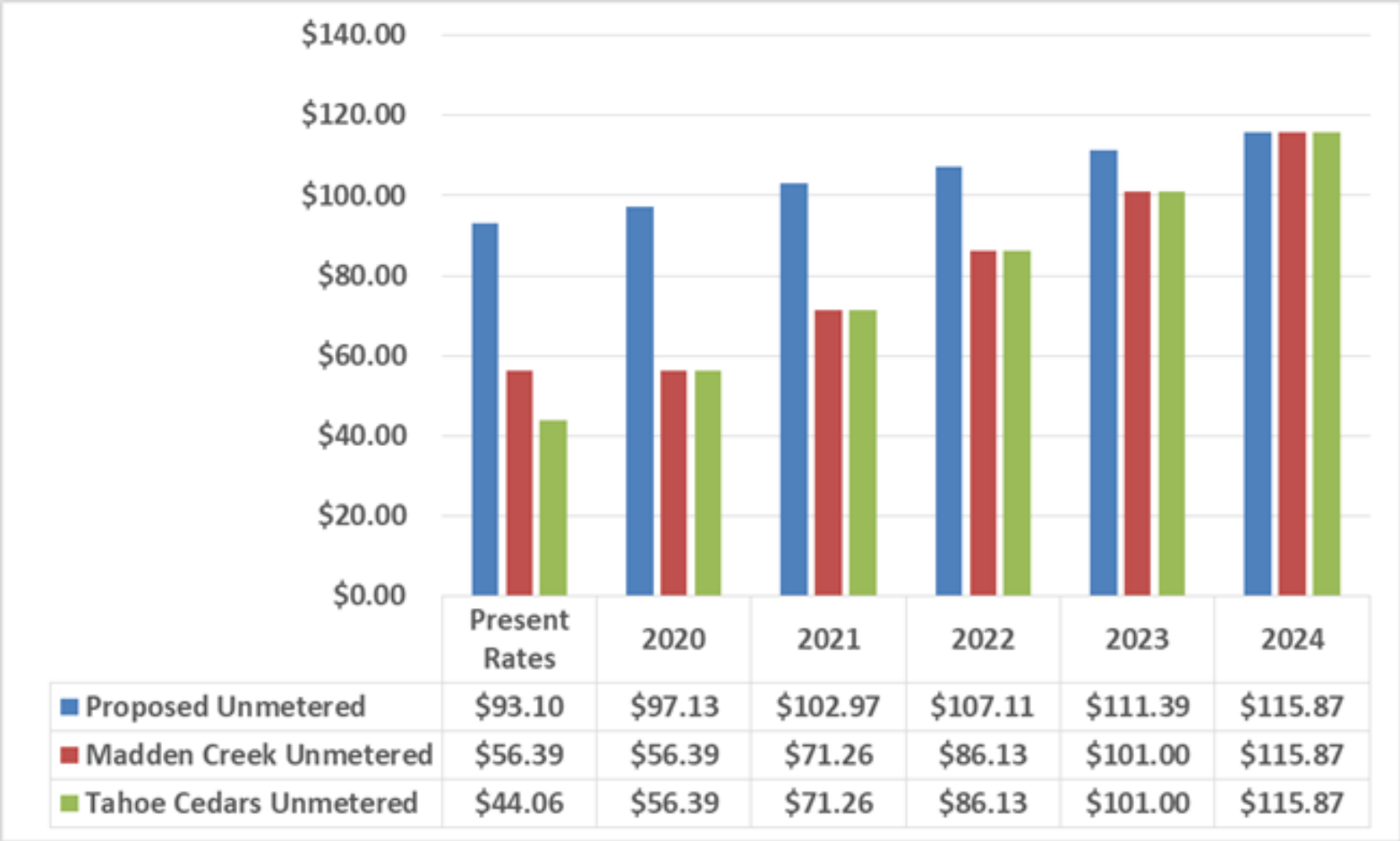


Residential Water Bills Comparison to Other Water Agencies

TCPUD Residential Average Monthly Bill Comparison
(based on 6,000 gallons avg. monthly consumption)



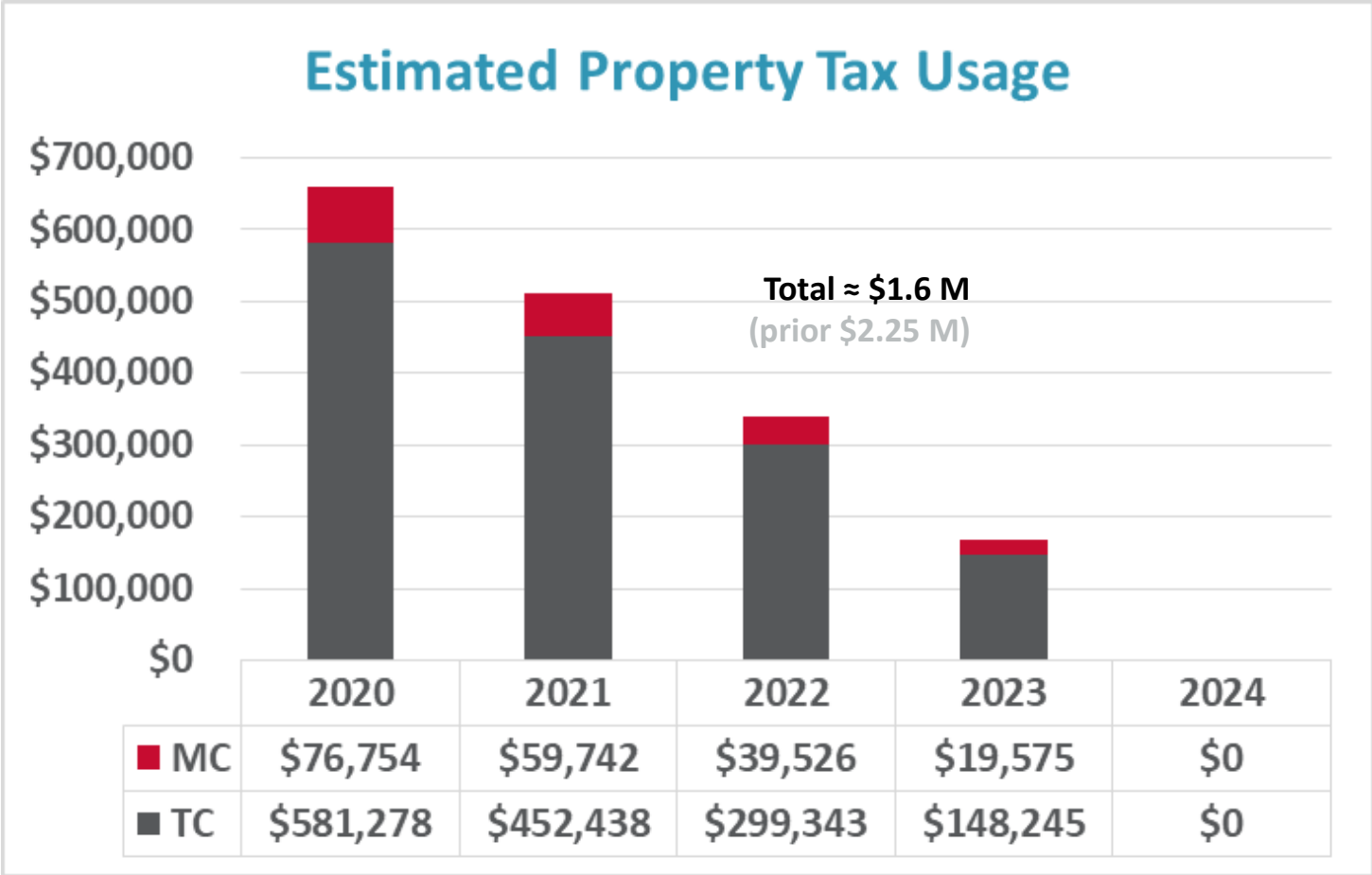
Tahoe Cedars / Madden Creek Unmetered Bill Impact Single Rate Transition Plan



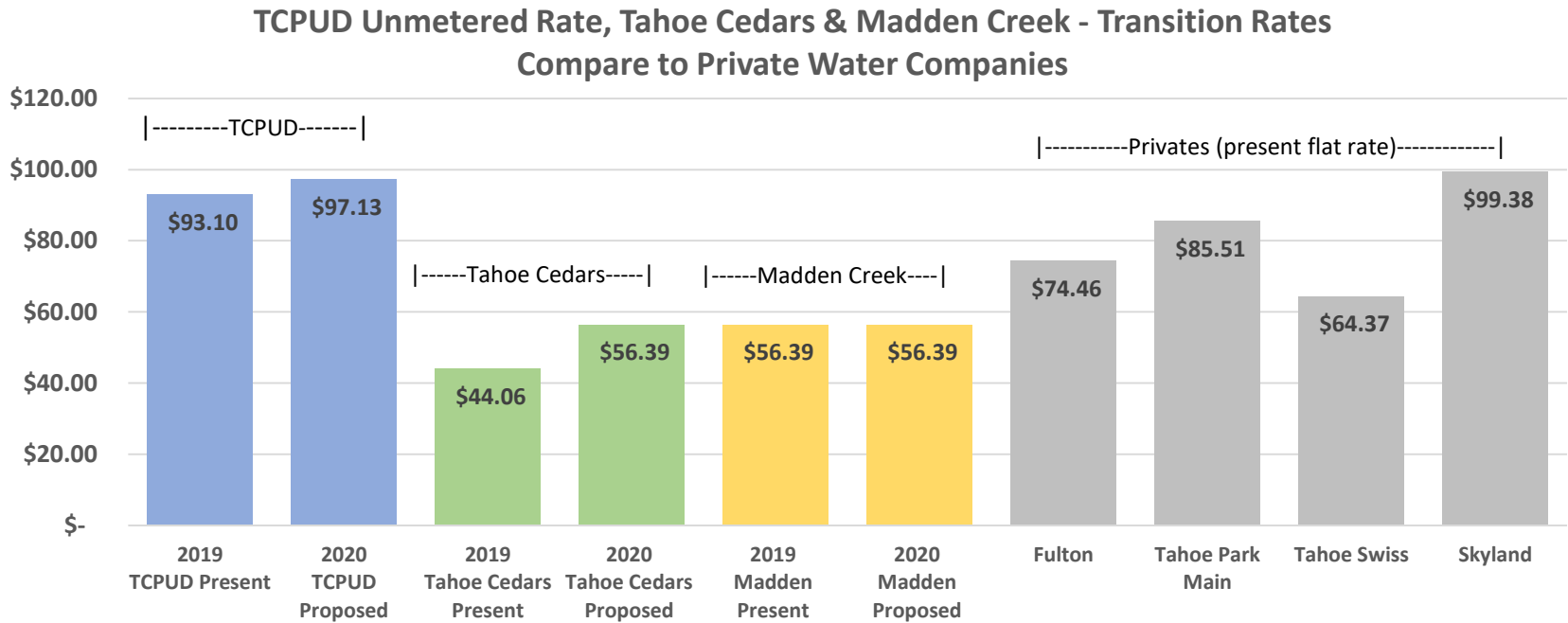
* Metered rate will also be transitioned for Tahoe Cedars and Madden Creek customers

** New connections will pay current TCPUD adopted rates

Property Tax Usage for Tahoe Cedars / Madden Creek Single Rate Transition Plan



Compare TCPUD, Tahoe Cedars, and Madden Creek Unmetered Rate To Private Water Companies



General Fund Property Tax Review



General Fund – Available Property Tax Revenue

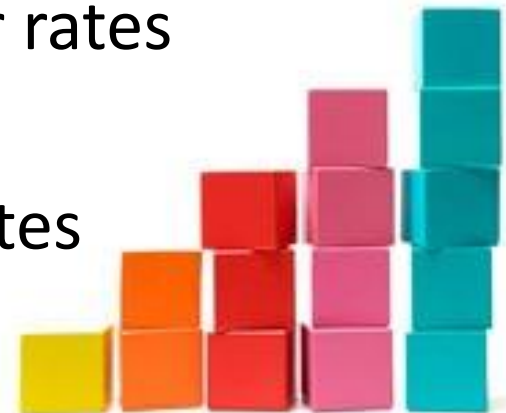
- District (Board) has the authority to utilize property tax revenues at their discretion
- Historically property tax revenues have funded, and are expected to continue to fund:
 - Parks, recreation, and golf course/WSP property O&M expenses
 - Annual debt service (water and sewer)
- Study has identified unfunded capital improvements for the water utility based on target revenue adjustments
- Study has assumed property tax revenues will fund
 - WTP annual debt service
 - Transition recently acquired customers (systems) to District rate levels
- Further Board direction is necessary to confirm the use of property tax revenues for these purposes during the LTFP update

General Fund – Available Property Tax Revenue for 5 Year Period

Property Tax Revenue & Uses	2020	2021	2022	2023	2024	Total Cumulative
Property Tax Revenue Placer/ El Dorado County	\$ 7,724,751	\$ 7,879,246	\$ 8,036,831	\$ 8,197,567	\$ 8,361,518	\$ 40,199,913
Parks, Rec, Golf, WSP Operational Expenses	(3,293,327)	(3,486,411)	(3,689,039)	(4,022,786)	(4,238,479)	(18,730,042)
Current Debt Service	(162,996)	(139,703)	(139,703)	(139,703)	(139,704)	(721,809)
Future Debt Service for WLTRWTP (@ 50% of Total)	-	(367,564)	(367,564)	(367,564)	(367,564)	(1,470,256)
Tahoe Cedars/Madden Wtr Rate Transition (Transfer to Wtr Revenue)	(658,032)	(512,180)	(338,869)	(167,820)	-	(1,676,901)
Annual Net Property Tax Revenue Available for Other Uses	\$ 3,610,396	\$ 3,373,388	\$ 3,501,656	\$ 3,499,694	\$ 3,615,771	\$ 17,600,905
					General Fund Cash Available (1/1/2020 Estimated)	10,551,311
					Cumulative Amount Available for Capital and Reserves	28,152,216
Designated Capital Plans						
Parks and Recreation Capital Plan including Vehicles	(2,250,865)	(1,309,000)	(1,125,000)	(1,175,000)	(1,200,000)	(7,059,865)
Gov. & Admin. Capital Plan	-	(40,000)	(12,000)	(95,000)	(50,000)	(197,000)
Administrative Facilities Master Plan Capital Projects	(500,000)	(3,000,000)	(2,500,000)	-	-	(6,000,000)
Unfunded Water Capital Projects:						
Madden Creek Water System Replacement						(5,508,014)
Tahoe Cedars Water System Replacement						(22,026,225)
Rubicon Water System Transmission Improv.						(5,051,875)
Tahoe City Main Water Source Augmentation						(8,872,500)
Other Capital/Reserves:						
Water Company Acquisition Reserve Account	(1,000,000)	(1,000,000)				(2,000,000)
Tahoe City Golf Course Clubhouse/Site (TPCUD Share)						TBD
Recreation Center						Unknown
						Total General Fund Surplus/(Deficit) for 5-Year Period
						\$ (28,563,263)

Next Steps

- Gain direction from the Board on the study results
- Finalize the water and sewer technical analyses
- Present findings and recommendations
- August 16th Board Meeting – Approve rate structure as proposed, Initiate Prop. 218 process and set public hearing date
- Conduct Public outreach meetings
- October Board Meeting – Hold Public Hearing, Adopt Comprehensive Rate Study, Approve 5 year rates
 - *(if no majority protest)*
- November Board Meeting – Adopt 2020 rates



Board Direction

- Establish the funding approach for the Water Treatment Plant annual debt service
 - 100% property tax
 - Stepped increase to 50% from water rates in year of occurrence (2021)
 - Smooth transition to 50% from water rates by 2024
- Single Water Rate Transition Plan for Tahoe Cedars and Madden Creek
- Level of rate funded capital
 - Sewer - \$1.5 M/year
 - Water - \$2.5 M/year
- Proposed Water Rate Schedule – Based on Above Direction

Discussion



Debt Service - 100% Property Tax

Present and Proposed Residential & Commercial Water Rates

	<i>Present Rates</i>		<i>Proposed</i>				
	<i>Res</i>	<i>Com</i>	2020	2021	2022	2023	2024
Base Charge							
3/4"	\$74.50	\$89.50	\$79.31	\$80.50	\$82.92	\$86.24	\$89.69
1"	112.25	143.25	132.45	134.44	138.48	144.02	149.78
1 1/4"	145.00	173.75	198.28	201.25	207.30	215.60	224.23
1 1/2"	172.25	208.75	264.10	268.07	276.12	287.18	298.67
2"	232.00	279.50	422.72	429.07	441.96	459.66	478.05
3"	350.75	418.75	793.10	805.00	829.20	862.40	896.90
4"	462.00	553.75	1,322.10	1,341.94	1,382.28	1,437.62	1,495.13
6"	693.50	829.75	2,643.40	2,683.07	2,763.72	2,874.38	2,989.37
8"	--	1,110.50	4,229.60	4,293.06	4,422.12	4,599.18	4,783.17
Unmetered	\$93.10	--	\$97.13	\$98.56	\$101.52	\$105.56	\$109.79
Consumption							
<i>Residential</i>							
0 - 8,000 gal	\$2.68	--	\$2.97	\$3.01	\$3.10	\$3.22	\$3.35
8,000 - 20,000 gal	3.64	--	3.88	3.93	4.05	4.21	4.38
20,000 - 40,000 gal	5.32	--	5.59	5.67	5.83	6.06	6.31
40,000 + gal	8.25	--	11.05	11.20	11.53	11.98	12.46
<i>Commercial</i>							
All Usage	--	\$6.74	\$4.20	\$4.26	\$4.39	\$4.57	\$4.75

Debt Service - 100% Property Tax

Proposed Rates - Madden Creek / Tahoe Cedars

	<i>Present Rates</i>		<i>Proposed</i>				
	TC	MC	2020	2021	2022	2023	2024
Unmetered	--	--	\$56.39	\$69.74	\$83.09	\$96.44	\$109.79
Year Round SFR	\$44.06	\$56.39	--	--	--	--	--
Seasonal SFR	40.97	41.90	--	--	--	--	--
Yr Round SFR +2nd Unit	71.99	88.71	--	--	--	--	--
Yr Round SFR +2 Unit	99.92	--	--	--	--	--	--
Base Charge							
3/4"	\$35.28	\$26.61	\$46.05	\$56.96	\$67.87	\$78.79	\$89.69
1"	54.88	44.36	76.90	95.13	113.35	131.58	149.78
1 1/4"	--	--	115.12	142.40	169.68	196.97	224.23
1 1/2"	--	53.23	153.34	189.69	226.00	262.37	298.67
2"	105.93	70.97	245.43	303.61	361.74	419.95	478.05
3"	--	--	460.47	569.62	678.70	787.89	896.90
4"	248.01	212.92	767.61	949.56	1,131.40	1,313.41	1,495.13
6"	--	--	1,534.76	1,898.54	2,262.10	2,626.03	2,989.37
8"	--	--	2,455.71	3,037.77	3,619.51	4,201.81	4,783.17
Consumption							
All Usage	\$2.66	\$2.56	--	--	--	--	--
0 - 8,000 gal	--	--	\$1.72	\$2.13	\$2.54	\$2.94	\$3.35
8,000 - 20,000 gal	--	--	2.25	2.78	3.31	3.85	4.38
20,000 - 40,000 gal	--	--	3.25	4.01	4.77	5.54	6.31
40,000 + gal	--	--	6.42	7.93	9.44	10.94	12.46

Debt Service - 100% Property Tax

Present and Proposed Fire Service Charges

		<i>Present Rates</i>	<i>Proposed</i>				
			2020	2021	2022	2023	2024
3/4"	<i>3/4" Domestic or Commercial Service</i>	\$74.50	\$79.31	\$80.50	\$82.92	\$86.24	\$89.69
	<i>3/4" Private Fire Protection Service</i>	\$28.13	\$29.70	\$31.48	\$33.37	\$35.37	\$37.49
<i>CFS - 3/4"</i>		\$102.63	\$109.01	\$111.98	\$116.29	\$121.61	\$127.18
1"	<i>3/4" Domestic or Commercial Service</i>	\$74.50	\$79.31	\$80.50	\$82.92	\$86.24	\$89.69
	<i>1" Private Fire Protection</i>	\$37.50	\$39.60	\$41.97	\$44.49	\$47.16	\$49.99
<i>CFS - 1"</i>		\$112.00	\$118.91	\$122.47	\$127.41	\$133.40	\$139.68
1.5"	<i>1" Domestic or Commercial Service</i>	\$112.25	\$132.45	\$134.44	\$138.48	\$144.02	\$149.78
	<i>1.5" Private Fire Protection</i>	\$56.25	\$70.40	\$74.61	\$79.09	\$83.84	\$88.87
<i>CFS - 1.5"</i>		\$168.50	\$202.85	\$209.05	\$217.57	\$227.86	\$238.65
2"	<i>1" Domestic or Commercial Service</i>	\$112.25	\$132.45	\$134.44	\$138.48	\$144.02	\$149.78
	<i>2" Private Fire Protection</i>	\$75.00	\$93.87	\$99.48	\$105.45	\$111.79	\$118.49
<i>CFS - 2"</i>		\$187.25	\$226.32	\$233.92	\$243.93	\$255.81	\$268.27
> 2"	<i>Service Classification Size Determined by District</i>	TBD	TBD	TBD	TBD	TBD	TBD

Debt Service - 50% Water Rate – Step Alternative

Present and Proposed Residential and Commercial Water Rates

	<i>Present Rates</i>		<i>Proposed</i>				
	<i>Res</i>	<i>Com</i>	2020	2021	2022	2023	2024
Base Charge							
3/4"	\$74.50	\$89.50	\$79.31	\$84.07	\$87.43	\$90.93	\$94.57
1"	112.25	143.25	132.45	140.40	146.01	151.85	157.93
1 1/4"	145.00	173.75	198.28	210.17	218.58	227.33	236.42
1 1/2"	172.25	208.75	264.10	279.95	291.14	302.80	314.92
2"	232.00	279.50	422.72	448.09	466.00	484.66	504.06
3"	350.75	418.75	793.10	840.70	874.30	909.30	945.70
4"	462.00	553.75	1,322.10	1,401.45	1,457.46	1,515.80	1,576.48
6"	693.50	829.75	2,643.40	2,802.05	2,914.04	3,030.70	3,152.02
8"	--	1,110.50	4,229.60	4,483.45	4,662.64	4,849.30	5,043.42
Unmetered	\$93.10	--	\$97.13	\$102.97	\$107.11	\$111.39	\$115.87
Consumption							
<i>Residential</i>							
0 - 8,000 gal	\$2.68	--	\$2.97	\$3.15	\$3.28	\$3.41	\$3.55
8,000 - 20,000 gal	3.64	--	3.88	4.12	4.28	4.45	4.64
20,000 - 40,000 gal	5.32	--	5.59	5.93	6.17	6.42	6.68
40,000 + gal	8.25	--	11.05	11.72	12.20	12.69	13.21
<i>Commercial</i>							
All Usage	--	\$6.74	\$4.20	\$4.45	\$4.63	\$4.82	\$5.01

Debt Service - 50% Water Rate – Step Alternative

Proposed Metered Rates - Madden Creek / Tahoe Cedars

	<i>Present Rates</i>		<i>Proposed</i>				
	<i>TC</i>	<i>MC</i>	<i>2020</i>	<i>2021</i>	<i>2022</i>	<i>2023</i>	<i>2024</i>
Unmetered	--	--	\$56.39	\$71.26	\$86.13	\$101.00	\$115.87
Year Round SFR	\$44.06	\$56.39	--	--	--	--	--
Seasonal SFR	40.97	41.90	--	--	--	--	--
Yr Round SFR +2nd Unit	71.99	88.71	--	--	--	--	--
Yr Round SFR +2 Unit	99.92	--	--	--	--	--	--
Base Charge							
3/4"	\$35.28	\$26.61	\$46.05	\$58.18	\$70.30	\$82.45	\$94.57
1"	54.88	44.36	76.90	97.16	117.41	137.68	157.93
1 1/4"	--	--	115.12	145.44	175.76	206.12	236.42
1 1/2"	--	53.23	153.34	193.73	234.11	274.55	314.92
2"	105.93	70.97	245.43	310.08	374.71	439.44	504.06
3"	--	--	460.47	581.76	703.02	824.46	945.70
4"	248.01	212.92	767.61	969.80	1,171.94	1,374.38	1,576.48
6"	--	--	1,534.76	1,939.02	2,343.18	2,747.94	3,152.02
8"	--	--	2,455.71	3,102.55	3,749.23	4,396.86	5,043.42
Consumption							
All Usage	\$2.66	\$2.56	--	--	--	--	--
0 - 8,000 gal	--	--	\$1.72	\$2.18	\$2.64	\$3.09	\$3.55
8,000 - 20,000 gal	--	--	2.25	2.85	3.44	4.03	4.64
20,000 - 40,000 gal	--	--	3.25	4.10	4.96	5.82	6.68
40,000 + gal	--	--	6.42	8.11	9.81	11.51	13.21

Debt Service - 50% Water Rate – Step Alternative

Present and Proposed Fire Service Charges

		<i>Present Rates</i>	<i>Proposed</i>				
			2020	2021	2022	2023	2024
3/4"	<i>3/4" Domestic or Commercial Service</i>	\$74.50	\$79.31	\$84.07	\$87.43	\$90.93	\$94.57
	<i>3/4" Private Fire Protection Service</i>	\$28.13	\$29.70	\$33.41	\$35.41	\$37.53	\$39.78
<i>CFS - 3/4"</i>		\$102.63	\$109.01	\$117.48	\$122.84	\$128.46	\$134.35
1"	<i>3/4" Domestic or Commercial Service</i>	\$74.50	\$79.31	\$84.07	\$87.43	\$90.93	\$94.57
	<i>1" Private Fire Protection</i>	\$37.50	\$39.60	\$44.55	\$47.21	\$50.04	\$53.04
<i>CFS - 1"</i>		\$112.00	\$118.91	\$128.62	\$134.64	\$140.97	\$147.61
1.5"	<i>1" Domestic or Commercial Service</i>	\$112.25	\$132.45	\$140.40	\$146.01	\$151.85	\$157.93
	<i>1.5" Private Fire Protection</i>	\$56.25	\$70.40	\$79.20	\$83.93	\$88.96	\$94.29
<i>CFS - 1.5"</i>		\$168.50	\$202.85	\$219.60	\$229.94	\$240.81	\$252.22
2"	<i>1" Domestic or Commercial Service</i>	\$112.25	\$132.45	\$140.40	\$146.01	\$151.85	\$157.93
	<i>2" Private Fire Protection</i>	\$75.00	\$93.87	\$105.60	\$111.91	\$118.61	\$125.72
<i>CFS - 2"</i>		\$187.25	\$226.32	\$246.00	\$257.92	\$270.46	\$283.65
>2"	<i>Service Classification Size Determined by District</i>	TBD	TBD	TBD	TBD	TBD	TBD

Debt Service - 50% Water Rate – Smooth Alternative

Present and Proposed Residential and Commercial Water Rates

	<i>Present Rates</i>		<i>Proposed</i>				
	<i>Res</i>	<i>Com</i>	2020	2021	2022	2023	2024
Base Charge							
3/4"	\$74.50	\$89.50	\$79.31	\$82.09	\$85.78	\$90.07	\$94.57
1"	112.25	143.25	132.45	137.09	143.25	150.42	157.93
1 1/4"	145.00	173.75	198.28	205.23	214.45	225.17	236.42
1 1/2"	172.25	208.75	264.10	273.36	285.65	299.93	314.92
2"	232.00	279.50	422.72	437.54	457.21	480.07	504.06
3"	350.75	418.75	793.10	820.90	857.80	900.70	945.70
4"	462.00	553.75	1,322.10	1,368.44	1,429.95	1,501.47	1,576.48
6"	693.50	829.75	2,643.40	2,736.06	2,859.05	3,002.03	3,152.02
8"	--	1,110.50	4,229.60	4,377.86	4,574.65	4,803.43	5,043.42
Unmetered	\$93.10	--	\$97.13	\$100.51	\$105.04	\$110.29	\$115.81
Consumption							
<i>Residential</i>							
0 - 8,000 gal	\$2.68	--	\$2.97	\$3.07	\$3.21	\$3.37	\$3.54
8,000 - 20,000 gal	3.64	--	3.88	4.01	4.19	4.40	4.62
20,000 - 40,000 gal	5.32	--	5.59	5.78	6.04	6.34	6.66
40,000 + gal	8.25	--	11.05	11.42	11.94	12.54	13.17
<i>Commercial</i>							
All Usage	--	\$6.74	\$4.20	\$4.35	\$4.55	\$4.78	\$5.02

Debt Service - 50% Water Rate – Smooth Alternative

Proposed Metered Rates - Madden Creek / Tahoe Cedars

	<i>Present Rates</i>		<i>Proposed</i>				
	TC	MC	2020	2021	2022	2023	2024
Unmetered	--	--	\$56.39	\$71.25	\$86.10	\$100.96	\$115.81
Year Round SFR	\$44.06	\$56.39	--	--	--	--	--
Seasonal SFR	40.97	41.90	--	--	--	--	--
Yr Round SFR +2nd Unit	71.99	88.71	--	--	--	--	--
Yr Round SFR +2 Unit	99.92	--	--	--	--	--	--
Base Charge							
3/4"	\$35.28	\$26.61	\$46.05	\$58.19	\$70.31	\$82.45	\$94.57
1"	54.88	44.36	76.90	97.18	117.42	137.69	157.93
1 1/4"	--	--	115.12	145.49	175.78	206.12	236.42
1 1/2"	--	53.23	153.34	193.78	234.15	274.56	314.92
2"	105.93	70.97	245.43	310.17	374.78	439.46	504.06
3"	--	--	460.47	581.94	703.14	824.50	945.70
4"	248.01	212.92	767.61	970.09	1,172.13	1,374.45	1,576.48
6"	--	--	1,534.76	1,939.59	2,343.56	2,748.06	3,152.02
8"	--	--	2,455.71	3,103.46	3,749.84	4,397.06	5,043.42
Consumption							
All Usage	\$2.66	\$2.56	--	--	--	--	--
0 - 8,000 gal	--	--	\$1.72	\$2.18	\$2.63	\$3.08	\$3.54
8,000 - 20,000 gal	--	--	2.25	2.84	3.43	4.03	4.62
20,000 - 40,000 gal	--	--	3.25	4.10	4.95	5.80	6.66
40,000 + gal	--	--	6.42	8.10	9.79	11.48	13.17

Debt Service - 50% Water Rate – Smooth Alternative

Present and Proposed Fire Service Charges

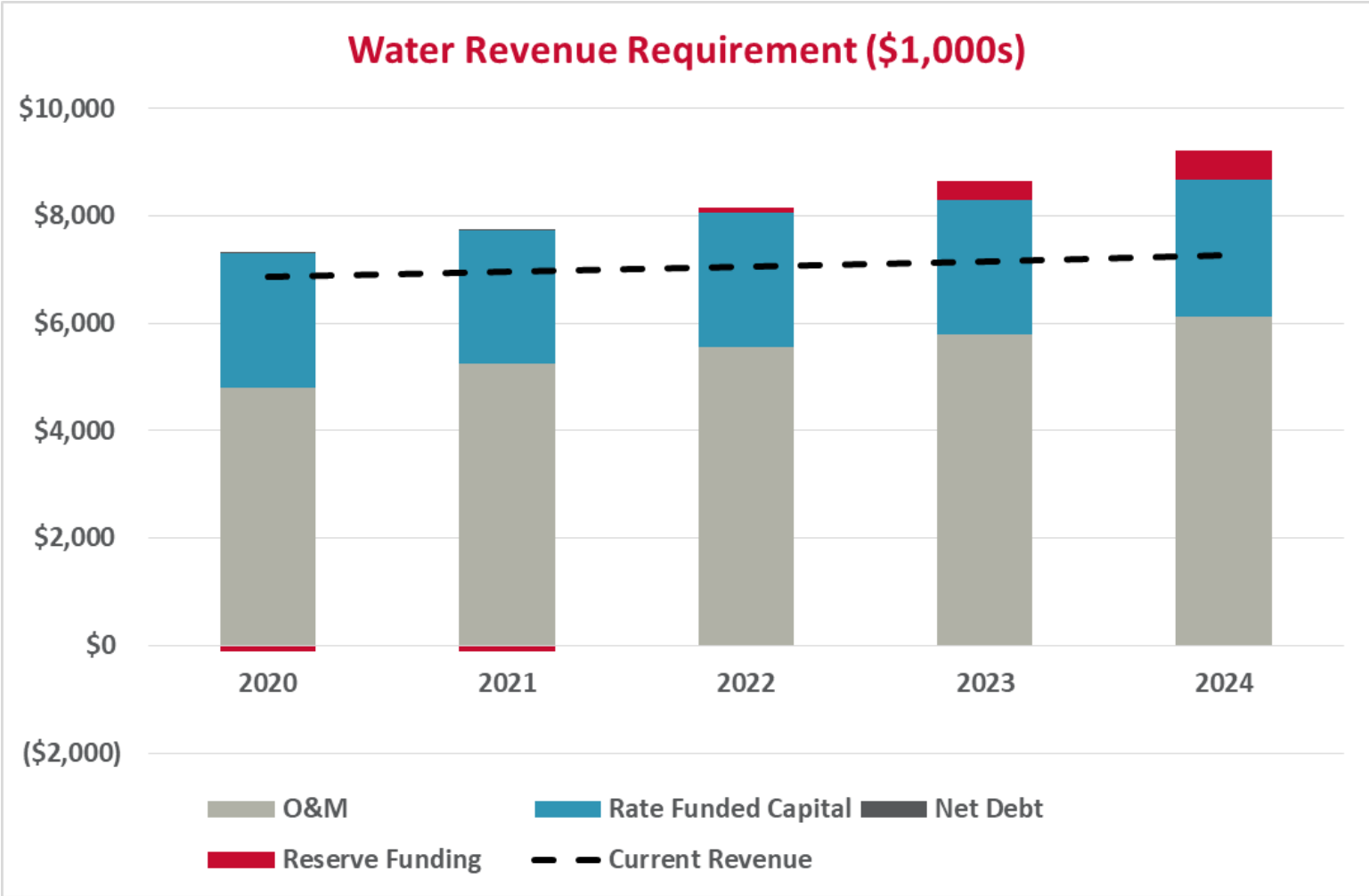
		<i>Present Rates</i>	<i>Proposed</i>				
			2020	2021	2022	2023	2024
3/4"	3/4" Domestic or Commercial Service	\$74.50	\$79.31	\$82.09	\$85.78	\$90.07	\$94.57
	3/4" Private Fire Protection Service	\$28.13	\$29.70	\$32.08	\$34.49	\$37.08	\$39.86
<i>CFS - 3/4"</i>		\$102.63	\$109.01	\$114.17	\$120.27	\$127.15	\$134.43
1"	3/4" Domestic or Commercial Service	\$74.50	\$79.31	\$82.09	\$85.78	\$90.07	\$94.57
	1" Private Fire Protection	\$37.50	\$39.60	\$42.77	\$45.99	\$49.44	\$53.15
<i>CFS - 1"</i>		\$112.00	\$118.91	\$124.86	\$131.77	\$139.51	\$147.72
1.5"	1" Domestic or Commercial Service	\$112.25	\$132.45	\$137.09	\$143.25	\$150.42	\$157.93
	1.5" Private Fire Protection	\$56.25	\$70.40	\$76.04	\$81.76	\$87.89	\$94.49
<i>CFS - 1.5"</i>		\$168.50	\$202.85	\$213.13	\$225.01	\$238.31	\$252.42
2"	1" Domestic or Commercial Service	\$112.25	\$132.45	\$137.09	\$143.25	\$150.42	\$157.93
	2" Private Fire Protection	\$75.00	\$93.87	\$101.39	\$109.01	\$117.19	\$125.99
<i>CFS - 2"</i>		\$187.25	\$226.32	\$238.48	\$252.26	\$267.61	\$283.92
> 2"	<i>Service Classification Size Determined by District</i>	TBD	TBD	TBD	TBD	TBD	TBD

Alternative Commercial Fixed Charge Transition 100% PT

	<i>Present Rates</i>	<i>Proposed</i>				
		2020	2021	2022	2023	2024
Base Charge						
3/4"	\$89.50	\$92.78	\$92.78	\$92.78	\$92.78	\$89.69
1"	143.25	152.16	154.94	154.94	154.94	149.78
1 1/4"	173.75	200.40	210.61	219.89	227.31	224.23
1 1/2"	208.75	269.06	279.27	290.40	299.68	298.67
2"	279.50	417.51	445.34	473.18	491.73	478.05
3"	418.75	695.85	732.96	788.63	858.22	896.90
4"	553.75	1,066.97	1,182.95	1,298.92	1,414.90	1,495.13
6"	829.75	2,164.56	2,303.73	2,489.29	2,739.79	2,989.37
8"	1,110.50	3,092.36	3,463.48	3,927.38	4,391.28	4,783.17
Consumption						
All Usage	\$6.74	\$4.20	\$4.26	\$4.39	\$4.57	\$4.75

NOT RECOMMENDED

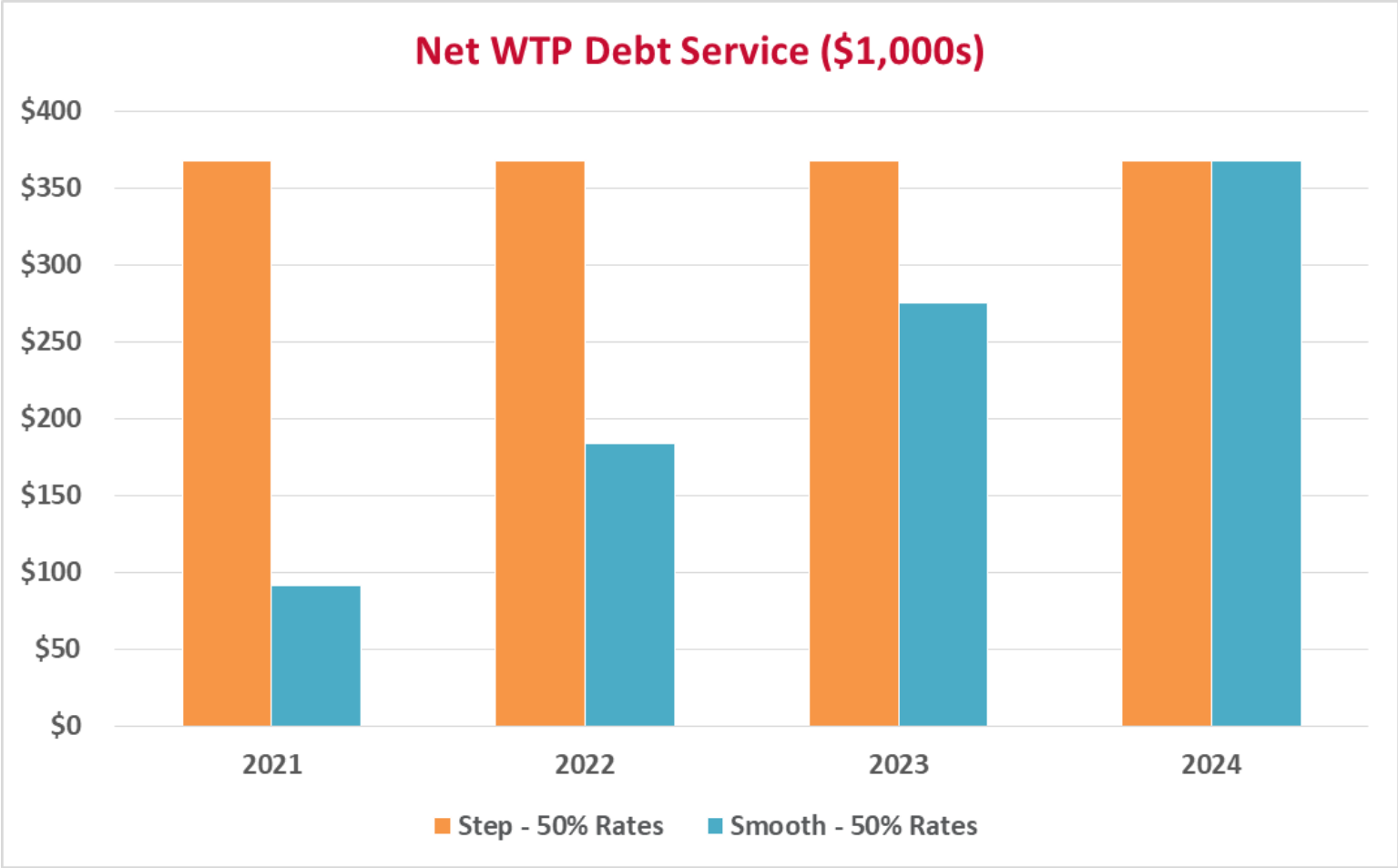
Summary of the Water Revenue Requirement WTP Debt Service Paid 100% PT



Summary of the Water and Sewer Cost of Service

- Cost differences exist for the water cost of service
 - Need to reflect recent legal decisions
 - Calculation of rates by tier and fixed charge
- Sewer cost of service is based on EDU calculation
 - Applied to commercial customers based on relationship of billing unit (seats, fixture unit, etc.) to 1 EDU
- Proposed rates are based on the unit costs as developed in the cost of service analysis
 - Meet the requirement of Proposition 218

Annual Net WTP Debt Service



Present and Proposed Year 1 (2020) Residential Water Rates

