

East Valley Water District

*Water and Wastewater
Cost of Service Rate Study*

February 24, 2021



Study Goals

Main Objectives



Develop a Long-term Financial Plan for Both Water and Wastewater Enterprises



Account for New Capital Improvements and SNRC Operations



Reconstruct Wastewater Rates to Reflect the District's Characteristics and Transition from San Bernardino Treatment Rates



Ensure Rates are Equitable and Meet Industry Standards while Complying with Proposition 218



Support the District through Rate Adoption and Prepare Report

Water Enterprise

Financial Plan and Cost of Service Rates

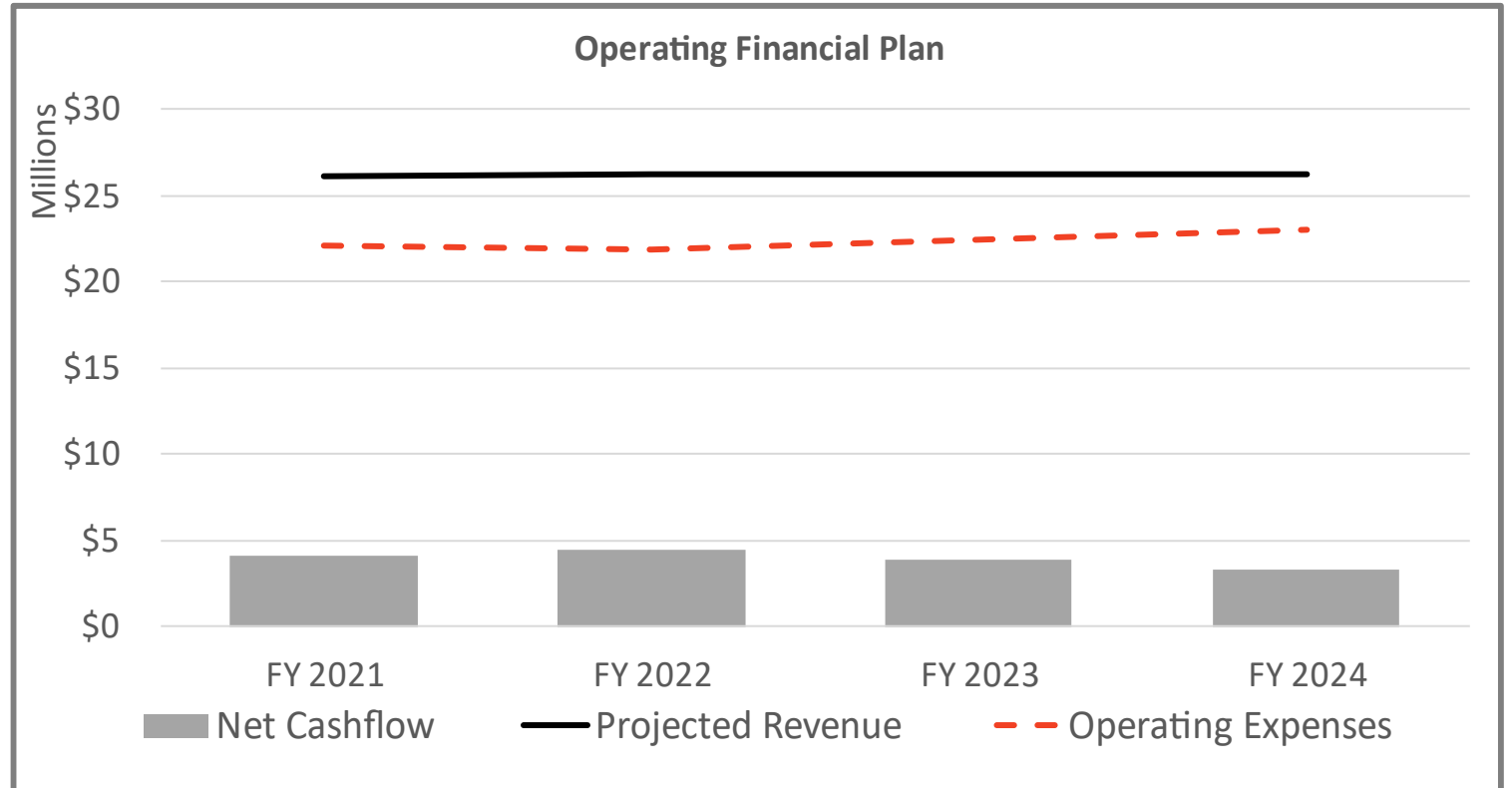


District's Current Financial Position

Water Enterprise

Financial Plan Metrics

- Generate Positive Annual Operating Net Income
- Comply with Debt Covenants
- Sufficiently Fund Capital Needs
- Meet Reserve Targets



District's Financial Position

Current Rates

Results From Review

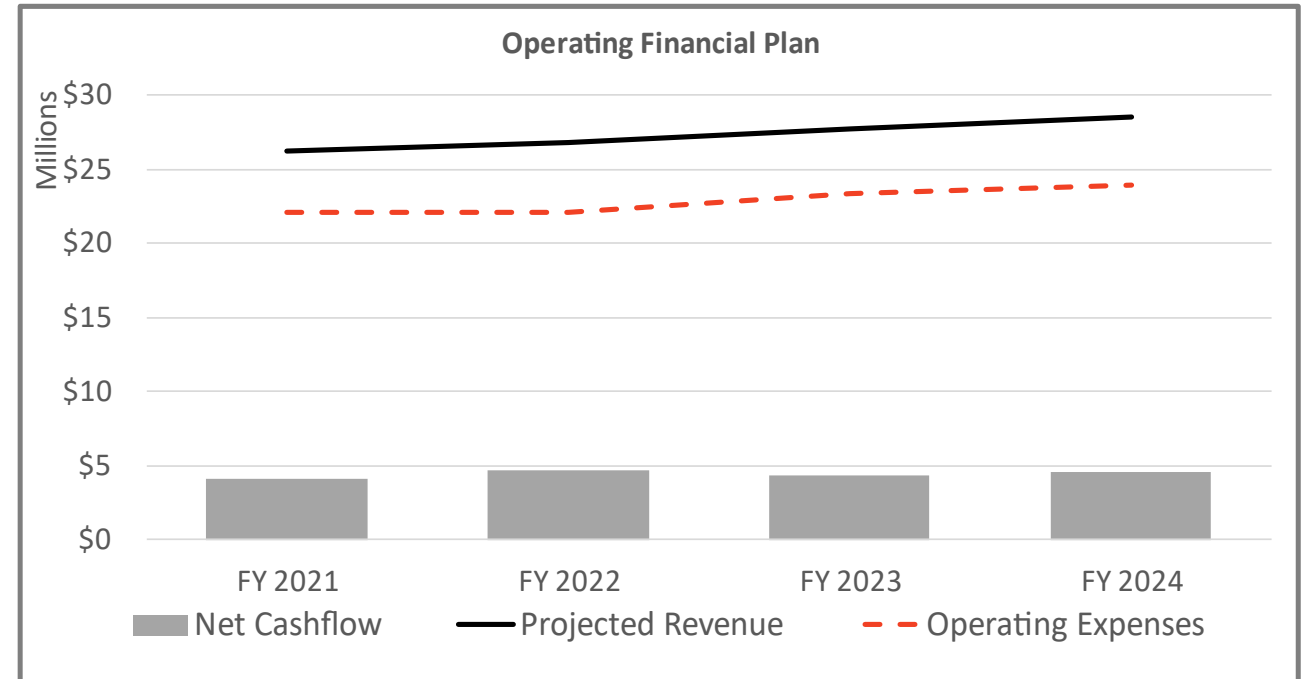
- District is Currently in a Strong Financial Position
- Upcoming Capital Improvements Include Ongoing Reinvestment, Plant 134 Rehabilitation and Construction of the Eastside Surface Water Treatment Plant (ESWTP)
 - Plant 134 and ESWTP improvement cost is \$18M over next 3 years
- Note: Reserves Would be Depleted Maintaining Current Capital Improvement Plan Without Adjusting Water Rates

Proposed Financial Plan

10-Year Planning Period

Proposed Financial Plan

- Positive Annual Operating Net Income ✓
- Comply with Debt Covenants ✓
- Level Adjustments to Reduce Impact ✓
- Sufficiently Fund Capital Needs ✓
- Meet Reserve Targets ✓



FY 2022: Plant 134 Improvements – SRF Loan
FY 2023 & 24: Eastside SWTP – SRF Loan

Rate Design

Structure

- Maintain Current Budget-Based Rate Structure
 - Adjust baseline Indoor Water Budget (IWB) to reflect 55 Gallons Per Capita Per Day (GPCD)
 - Proactive signaling tool between District and customers reflecting upcoming State Mandates
- Cost of Service Recalibration
 - Incorporate recent usage trends
 - Update cost allocations to ensure rates reflect the cost of delivering water
 - Tiered costs updated to reflect proportionate share based on demand
- Fixed / Variable Recovery
 - Maintain current revenue recovery split (~35% Fixed / 65% Variable)

FY 2022 Revenue Requirements

Water Enterprise

	FY 2022
Revenue Requirements	Total
Total Water Supply Costs	\$3,204,000
Operating Expenses	
Board of Directors	\$185,000
General Administration	\$938,000
Human Resources	\$1,109,000
Public Affairs	\$1,194,000
Conservation	\$640,000
Finance	\$917,000
Information Technology	\$730,000
Customer Service	\$1,138,000
Meter Service	\$299,000
Engineering	\$1,111,000
Water Production - Admin	\$617,000
Water Production - Source of Supply	\$625,000
Water Production - Pumping	\$217,000
Water Production - Transmission & Distribution	\$461,000
Water Treatment	\$622,000
Water Quality - Source of Supply	\$284,000
Water Quality - Transmission & Distribution	\$210,000
Field Maintenance Administration	\$402,000
Water Maintenance	\$2,556,000
Facilities Maintenance - Admin	\$611,000
Facilities Maintenance - Source of Supply	\$55,000
Facilities Maintenance - Pumping	\$45,000
Facilities Maintenance - Treatment	\$138,000
Fleet Maintenance	\$462,000
Total Operating Expenses	\$15,566,000
Total Debt Service	\$3,316,735
Total Revenue Offsets	(\$522,000)
Adjustments	
Capital / Reserve Funding	\$4,720,265
Adjustment for Mid-Year Increase	\$515,000
Total Adjustments	\$5,235,265
Revenue Requirement from Rates	\$26,800,000

Water Supply - \$3.2M

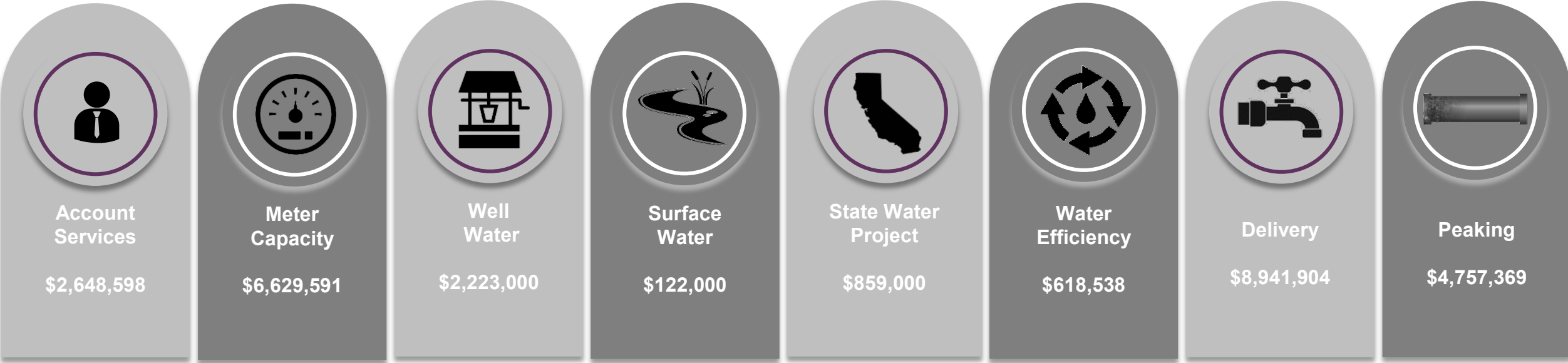
O&M / Debt - \$18.9M

Revenue Offsets - (\$0.5M)

Rate Revenue - \$26.8M

Cost of Service

Cost Components for Rate Development



Fixed Components

34.6%

Variable Components

65.4%

Similar to Current Split

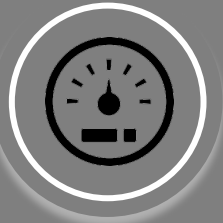
Cost of Service

Cost Components with Units of Service



\$2,648,598

Units of Service
Total Bills
256,320



\$6,629,591

Units of Service
Total MEs
323,344



\$2,223,000

Units of Service
GW Supply
5,529,703



\$122,000

Units of Service
Water Sales
7,181,432



\$859,000

Units of Service
State Water
1,651,729



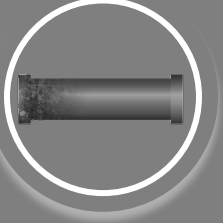
\$618,538

Units of Service
Tier 2 & 3 Usage
3,495,238



\$8,941,904

Units of Service
Water Sales
7,181,432



\$4,757,369

Units of Service
Weighted Peak
16,368,444

Fixed Charges

Fixed Charge Components

Meter Size	Number of Meters	Customer Service Charge [A]	Capacity Ratios	Meter Service Charge [B]	Proposed Charge [A + B]	Current Charge	Change (\$)
5/8"	4,202	\$10.34	0.67	\$13.67	\$24.01	\$23.06	\$0.95
3/4"	12,327	\$10.34	1.00	\$20.51	\$30.85	\$29.27	\$1.58
1"	4,175	\$10.34	1.67	\$34.18	\$44.52	\$41.71	\$2.81
1 1/2"	262	\$10.34	3.33	\$68.35	\$78.69	\$72.81	\$5.88
2"	287	\$10.34	5.33	\$109.36	\$119.70	\$110.13	\$9.57
3"	62	\$10.34	10.67	\$218.71	\$229.05	\$228.30	\$0.75
4"	22	\$10.34	16.67	\$341.73	\$352.07	\$402.44	-\$50.37
6"	12	\$10.34	33.33	\$683.45	\$693.79	\$819.14	-\$125.35
8"	11	\$10.34	93.33	\$1,913.64	\$1,923.98	\$1,503.28	\$420.70

Majority of accounts

Water Supplies

Groundwater, State Water Project, Surface Water

	Projected Usage	Groundwater	SWP	Water Supply Costs
Effective Rate (\$/CCF)		\$0.40	\$0.52	
Available Supply		5,529,703	1,651,729	
Tier 1	3,686,194	3,636,194	-	\$0.41
Tier 2	2,409,300	1,843,509	565,791	\$0.43
Tier 3	1,085,938	-	1,085,938	\$0.53

Rounded up to penny

Blended rate based on water supply mix to support demand

*CCF: One-hundred Cubic Feet

Variable Charges

Variable Rate Components

Tiers	Projected Usage (ccf)	Supply	Surface Water	Water Efficiency	Delivery	Peaking	Water Supply Costs	Current Rate	Change (\$)
Tier 1	3,686,194	\$0.41	\$0.02	-	\$1.25	\$0.30	\$1.98	\$1.83	\$0.15
Tier 2	2,409,300	\$0.43	\$0.02	\$0.18	\$1.25	\$0.66	\$2.54	\$2.61	(\$0.07)
Tier 3	1,085,938	\$0.53	\$0.02	\$0.18	\$1.25	\$1.95	\$3.93	\$3.64	\$0.29

Proposed Water Charges

FY 2022 – FY 2024

Fixed Meter Charges (\$/Month)

Meter Size	Existing	FY 2022	FY 2023	FY 2024
5/8"	\$23.06	\$24.01	\$24.74	\$25.49
3/4"	\$29.27	\$30.85	\$31.78	\$32.74
1"	\$41.71	\$44.52	\$45.86	\$47.24
1 1/2"	\$72.81	\$78.69	\$81.06	\$83.50
2"	\$110.13	\$119.70	\$123.30	\$127.00
3"	\$228.30	\$229.05	\$235.93	\$243.01
4"	\$402.44	\$352.07	\$362.64	\$373.52
6"	\$819.14	\$693.79	\$714.61	\$736.05
8"	\$1,503.28	\$1,923.98	\$1,981.70	\$2,041.16

Variable Rates (\$/ccf)

Tiered Rates	Existing	FY 2022	FY 2023	FY 2024
Tier 1	\$1.83	\$1.98	\$2.04	\$2.11
Tier 2	\$2.61	\$2.54	\$2.62	\$2.70
Tier 3	\$3.64	\$3.93	\$4.05	\$4.18

Wastewater Enterprise

Financial Plan and Cost of Service Rates

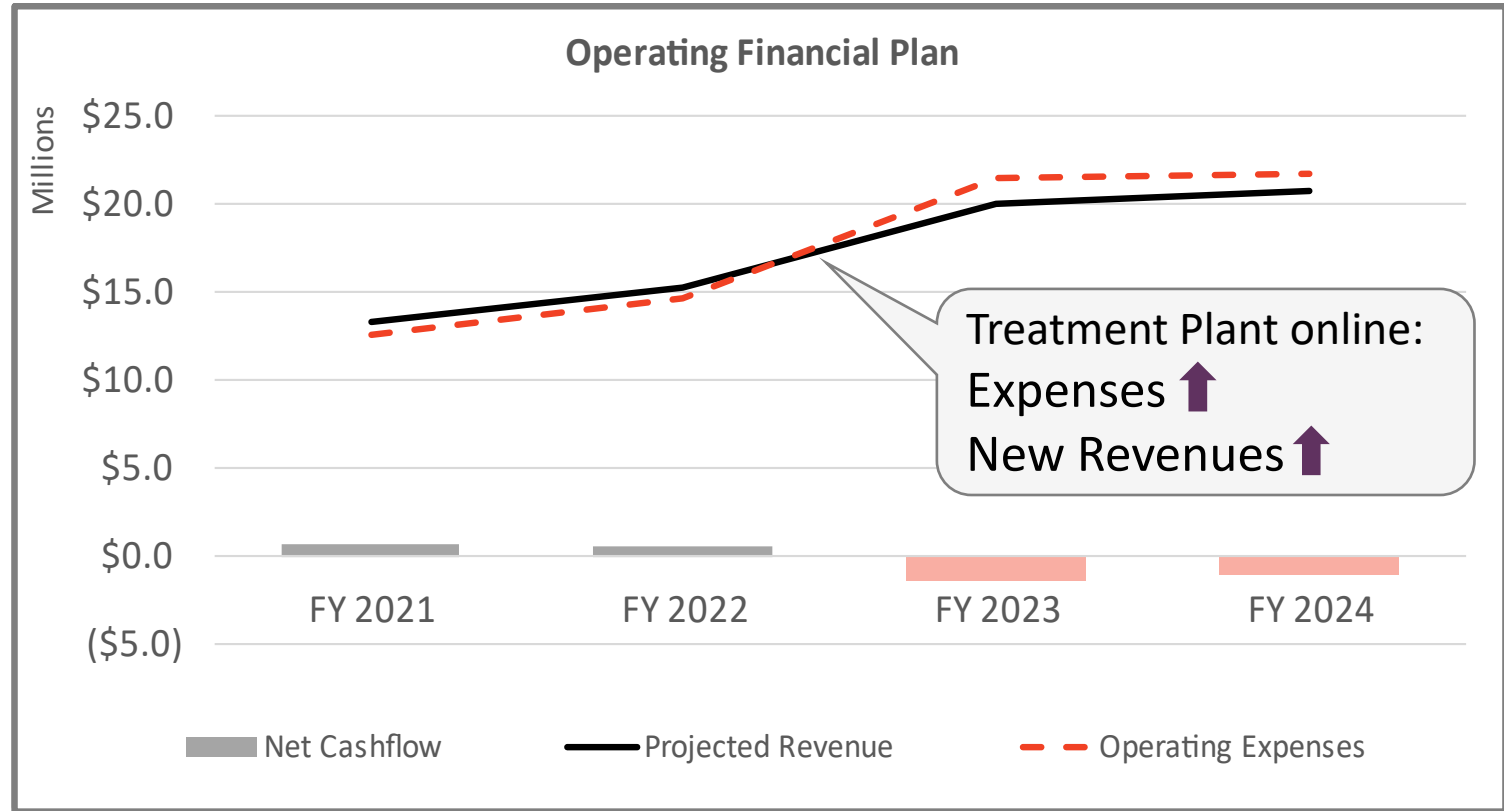


Current Financial Position

Sewer Enterprise

Financial Plan Metrics

- Generate Positive Annual Operating Net Income
- Comply with Debt Covenants
- Sufficiently Fund Capital Needs
- Meet Reserve Targets



\$500,000 for Collection R&R
\$500,000 for Treatment Plant

Financial Position Outlook

Current Position

Results from Review

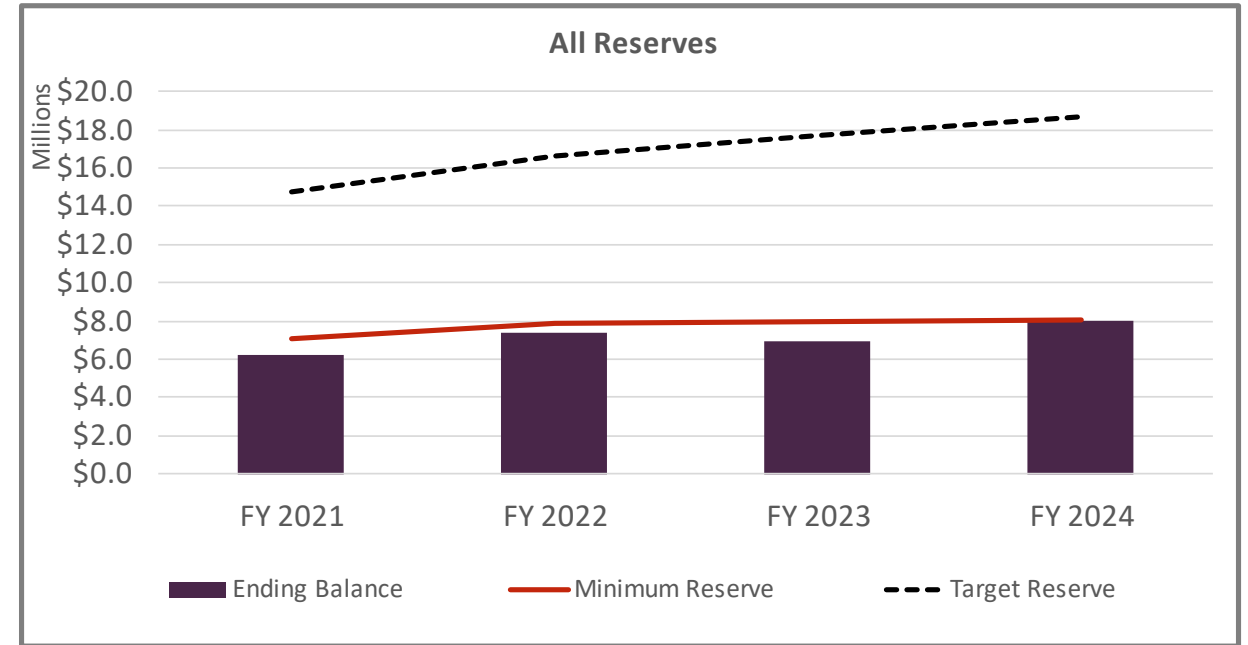
- New Capital Improvement Plan Includes:
 - Increased reinvestment in the collection system from \$200,000 up to ~\$500,000
 - Set aside funding for Treatment Plant of \$500,000 annually
- SNRC Treatment Plant Generates New Revenue
 - New revenue streams include Onsite Power Offsets and Hauler Tipping Fees
 - Recycled water revenue and GW basin replenishment credits
- Note: Reserves are Currently Healthy, but Would be Depleted by Increased System Reinvestment Without Adjusting Water Rates

Proposed Financial Plan

5-Year Planning Period

Proposed Financial Plan

- Positive Annual Operating Net Income ✓
- Adjust Revenue Starting as Early as FY 2022 Prior to SNRC Opening ✓
- Fund Capital Needs While Maintaining Prudent Reserves ✓
- Meet Reserve Targets by FY 2024 ✓



FY 2022 Revenue Requirements with SNRC

Wastewater Enterprise

	FY 2022
Revenue Requirements	Total
Treatment Costs	
Labor & Benefits	\$1,964,000
Power Costs	\$3,829,000
Solids / Residual Disposal	\$949,000
Labatory Services	\$100,000
Repairs & Maintenance	\$771,000
Automation Control / Commun.	\$115,000
Permits / Licenses	\$125,000
Insurance	\$250,000
Chemicals / Materials / Supplies	\$909,000
Disconnect / Settlement JPA	\$700,000
Other Operating Expenses	\$557,000
Total Treatment Costs	\$10,269,000
District O&M	
Board of Directors	\$79,000
General Administration	\$700,000
Human Resources	\$252,000
Public Affairs	\$438,000
Finance	\$393,000
Information Technology	\$269,000
Customer Service	\$410,000
Engineering	\$476,000
Field Maintenance Administration	\$45,000
Wastewater Maintenance	\$826,000
Facilities Maintenance	\$204,000
Fleet Maintenance	\$51,000
Total District O&M	\$4,143,000
Total Debt Service	\$270,145
Revenue Offsets	
Other Operating Charge	(\$195,000)
Interest Income	(\$35,000)
LRP Revenue	(\$519,000)
Onsite Power Offsets	(\$736,000)
Other Operating Charges	(\$170,000)
Investment Income	(\$26,000)
Tipping Fees	(\$541,000)
Total Revenue Offsets	(\$2,222,000)
Adjustments	
Capital / Reserve Funding	\$2,146,855
Total Adjustments	\$2,146,855
Revenue Required from Rates	\$14,607,000

Treatment Plant - \$10.27M

Collection / Debt - \$4.4M

Revenue Offsets - \$2.2M

Rate Revenue - \$14.6M

Cost of Service

Cost Components for Rate Development

Biological
Oxygen
Demand
(BOD)

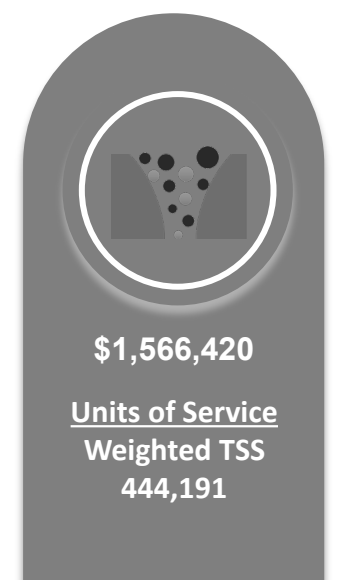
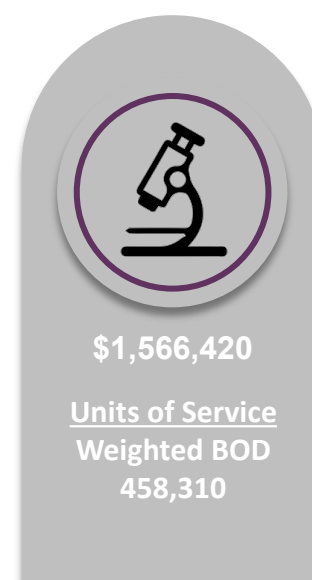
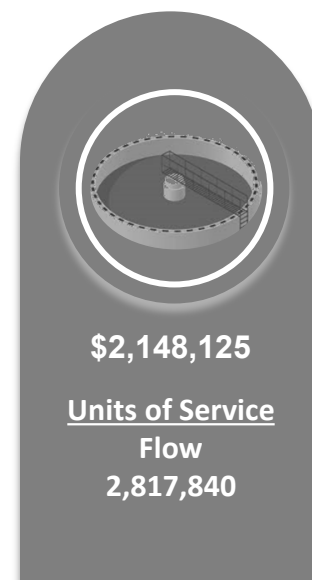
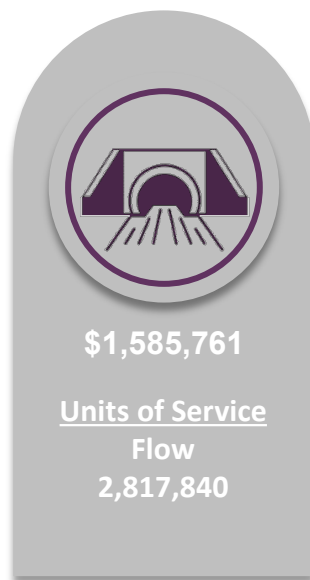
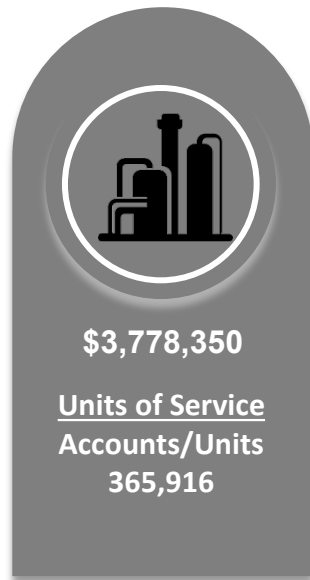
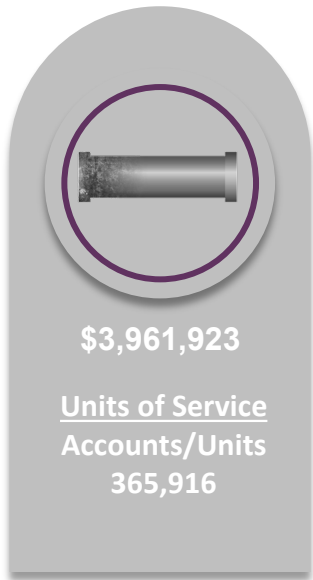
Total
Suspended
Solids
(TSS)

Collection
Fixed

Treatment
Fixed

Collection
Variable

Treatment
Flow



Adjustments to Rate Design

Wastewater Rate Structure

Restructuring

- Multi-Family Residential (MFR) Customers Should be Charged per Dwelling Unit and not per Master Account for Fixed Charges
 - Flows from SFR and MFR are similar and can be projected on a per capita basis (just like indoor water budgets)
- San Bernardino Treatment Rates Include 13 Different Customer Classes
 - Restructuring includes 4 Non-Residential customer classes for Treatment
 - Patton State Hospital – currently charged based on actual flow and loading factors
 - Low Strength, Medium Strength, and High Strength
 - Provides more flexibility for the District to assign future users / customers based on strength characteristics as opposed to a specific land use

Fixed Charges

Collection and Treatment

Collection Fixed Component - Unit Rate

Revenue Requirement	\$3,778,350
÷ Annual Dwelling Units	365,916
Monthly Unit Rate	\$10.33

Treatment Fixed Component - Unit Rate

Revenue Requirement	\$3,961,923
÷ Annual Dwelling Units	365,916
Monthly Unit Rate	\$10.83

Variable Components

Collection Variable

Customer Class	Projected Flow (ccf)	% Allocation	Revenue Requirement
Single-Family	1,605,561	56.98%	\$903,542
Multi-Family	711,661	25.26%	\$400,492
Patton State Hospital	100,341	3.56%	\$56,467
Non-Res - Low Strength	243,090	8.63%	\$136,801
Non-Res - Med Strength	49,678	1.76%	\$27,956
Non-Res - High Strength	107,510	3.82%	\$60,502
Total	2,817,840	100%	\$1,585,761

Variable Components

Treatment Variable - Flow

Customer Class	Projected Flow (ccf)	% Allocation	Revenue Requirement
Single-Family	1,605,561	56.98%	\$1,223,968
Multi-Family	711,661	25.26%	\$542,521
Patton State Hospital	100,341	3.56%	\$76,493
Non-Res - Low Strength	243,090	8.63%	\$185,315
Non-Res - Med Strength	49,678	1.76%	\$37,871
Non-Res - High Strength	107,510	3.82%	\$81,958
Total	2,817,840	100%	\$2,148,125

Variable Components

Treatment - Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS)

Customer Class	Weighted BOD	% Allocation	Revenue Requirement
Single-Family	240,208	52.41%	\$820,988
Multi-Family	106,472	23.23%	\$363,901
Patton State Hospital	14,468	3.16%	\$49,448
Non-Res - Low Strength	27,277	5.95%	\$93,226
Non-Res - Med Strength	9,569	2.09%	\$32,705
Non-Res - High Strength	60,317	13.16%	\$206,152
Total	458,310	100%	\$1,566,420

Customer Class	Weighted TSS	% Allocation	Revenue Requirement
Single-Family	240,208	54.08%	\$847,083
Multi-Family	106,472	23.97%	\$375,467
Patton State Hospital	15,200	3.42%	\$53,601
Non-Res - Low Strength	27,277	6.14%	\$96,189
Non-Res - Med Strength	6,782	1.53%	\$23,916
Non-Res - High Strength	48,254	10.86%	\$170,164
Total	444,191	100%	\$1,566,420

Proposed Wastewater Rates

Residential

Customer Class	Annual Dwelling Units [A]	Collection (Fixed + Variable) [B]	Treatment (Fixed + Flow + BOD + TSS) [C]	Proposed Collection Charge [D] = B / A	Proposed Treatment Charge [E] = C / A	Total Proposed Residential Charge [F] = D + E
Residential						
Single-Family	230,748	\$3,286,184	\$5,390,443	\$14.25	\$23.37	\$37.62
Multi-Family	127,848	\$1,720,616	\$2,666,151	\$13.46	\$20.86	\$34.32

SFR Current = \$36.91
Difference = +\$0.71

Proposed Wastewater Rates

Non-Residential

Customer Class	# of Bills [A]	Collection Fixed [B]	Treatment Fixed [C]	Proposed Collection Fixed [D] = B / A	Proposed Treatment Fixed [E] = C / A	Proposed Fixed Charge [F] = D + E
Non-Residential				<i>Monthly</i>	<i>Monthly</i>	<i>Monthly</i>
Patton State Hospital	12	\$124	\$130	\$10.33	\$10.83	\$21.16
Non-Res - Low Strength	5,628	\$58,113	\$60,937	\$10.33	\$10.83	\$21.16
Non-Res - Med Strength	852	\$8,798	\$9,225	\$10.33	\$10.83	\$21.16
Non-Res - High Strength	828	\$8,550	\$8,965	\$10.33	\$10.83	\$21.16

Customer Class	Water Usage (ccf) [A]	Collection Variable [B]	Treatment Variable (Flow + BOD + TSS) [C]	Proposed Collection Variable Rate [D] = B / A	Proposed Treatment Variable Rate [E] = C / A	Total Proposed Variable Rate [F] = D + E
Non-Residential				<i>Per CCF</i>	<i>Per CCF</i>	<i>Per CCF</i>
Patton State Hospital	100,341	\$56,467	\$179,542	\$0.57	\$1.79	\$2.36
Non-Res - Low Strength	394,185	\$136,801	\$374,730	\$0.35	\$0.96	\$1.31
Non-Res - Med Strength	62,097	\$27,956	\$94,492	\$0.46	\$1.53	\$1.99
Non-Res - High Strength	134,387	\$60,502	\$458,274	\$0.46	\$3.42	\$3.88

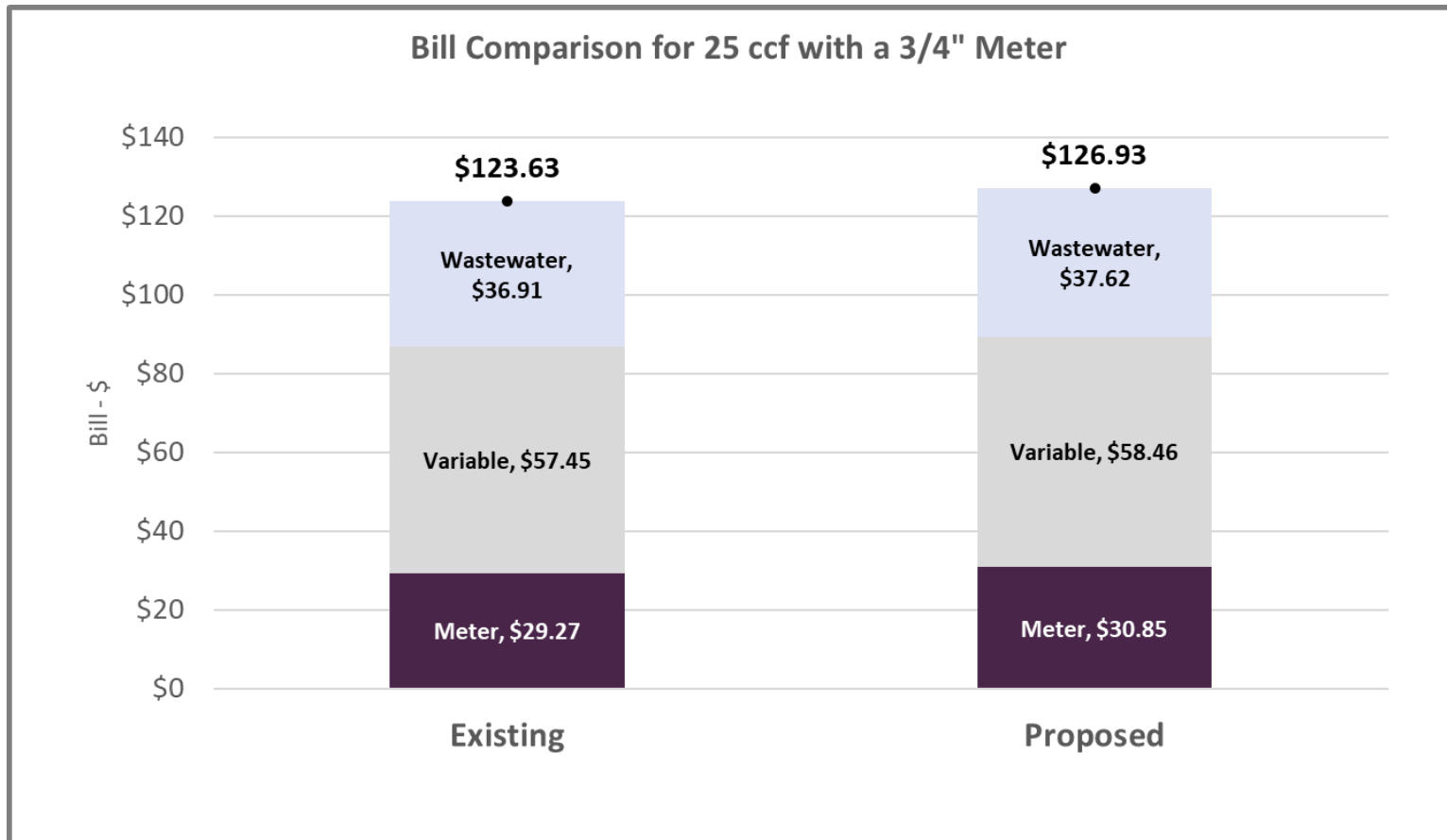
Proposed Wastewater Charges

FY 2022 – FY 2024

Wastewater Rates				
Customer Class	Existing	FY 2022	FY 2023	FY 2024
Fixed Charges				
Single-Family Residential	\$36.91	\$37.62	\$40.26	\$43.09
Multi-Family Residential	\$21.32	\$34.32	\$36.74	\$39.32
Non-Residential / Commercial	\$7.42	\$21.16	\$294.26	\$314.87
Non-Residential Flow Rates (per ccf)				
Patton State Hospital	<i>Varied by Month</i>	\$2.36	\$2.53	\$2.72
Low Strength	\$1.33	\$1.31	\$1.41	\$1.52
Medium Strength	\$2.55	\$1.99	\$2.14	\$2.30
High Strength	\$3.28	\$3.88	\$4.16	\$4.46

SAMPLE FY 2022 Monthly Bill

Single-Family Residential within Total Water Budget



Habib Isaac

IB Consulting

Principal | Managing Partner

Phone: 951-595-9354 | Email: hisaac@IBConsultingInc.com

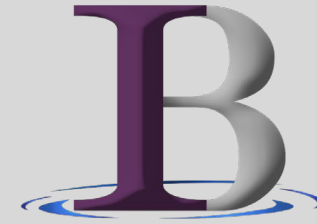
Andrea Boehling

IB Consulting

Principal | Managing Partner

Phone: 615-870-9371 | Email: aboehling@IBConsultingInc.com

Thank You



C O N S U L T I N G