



# **WATER MASTER PLAN UPDATE & REVENUE DISCUSSION**

# Water Master Plan Update

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Supply & Demand



Discussed Aug. 2021

2

Storage & Conveyance



Brief Summary Today

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Implementation Plan

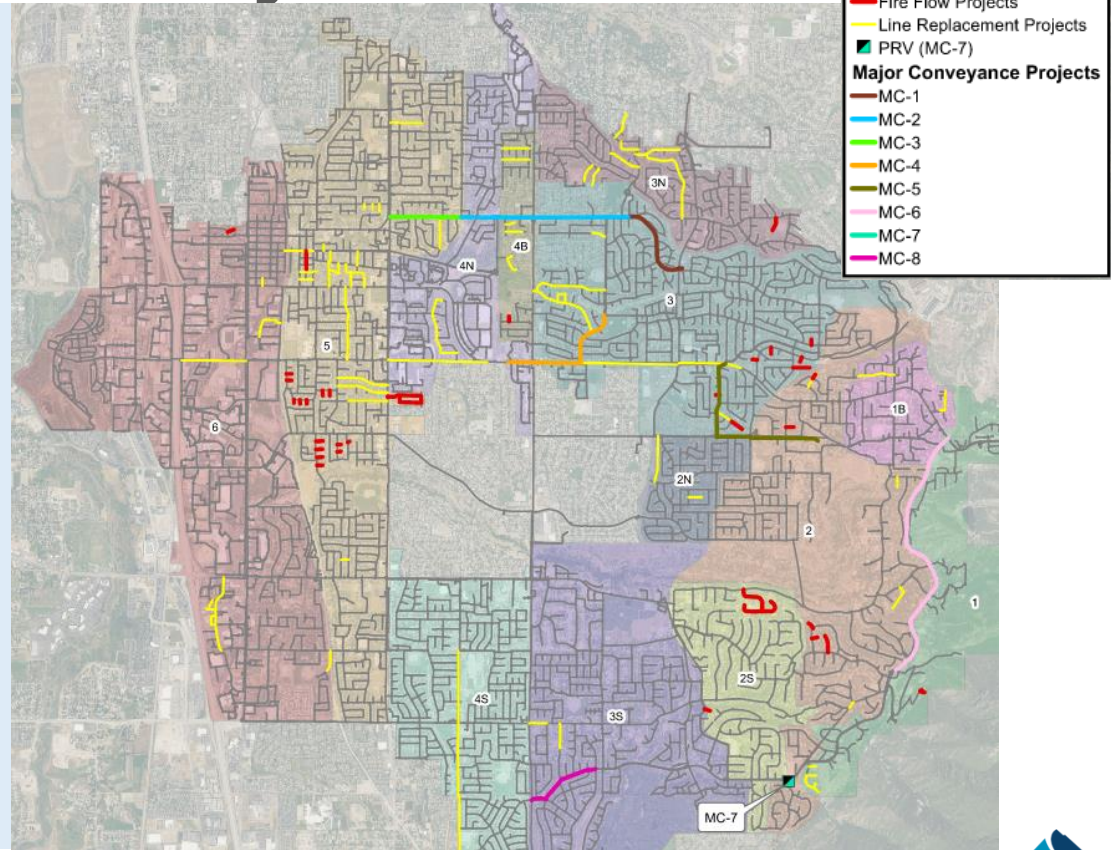


Today's Focus

# Storage & Conveyance

## Takeaways:

- Minor Improvements Needed
  - 8 conveyance projects
  - 34 fire flow projects
  - 65 priority pipeline replacement projects



# Implementation

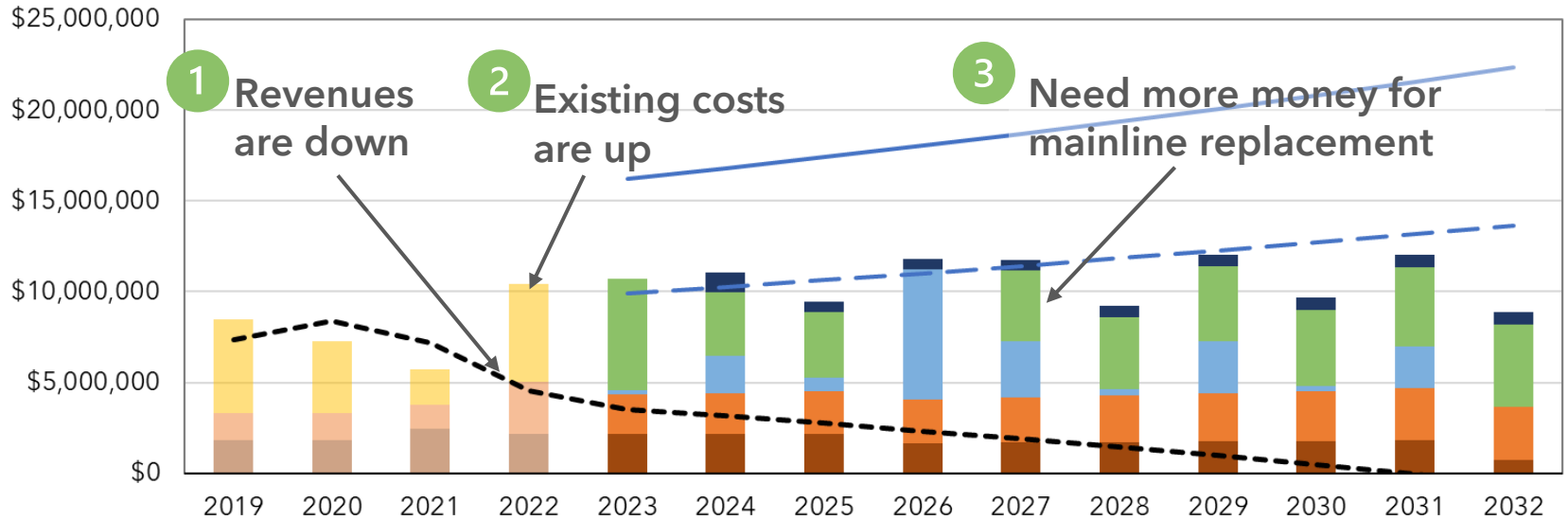
## Recommended Water Infrastructure Renewal Budget

System Component	Replacement Value (million \$)	Minimum Estimated Service Life (years)	Maximum Estimated Service Life (years)	Average Annual Investment HIGH	Average Annual Investment LOW
Booster Stations	\$32.1	40	60	\$803,000	\$535,000
Tanks	\$112.1	80	120	\$1,401,000	\$934,000
Wells	\$62.5	80	120	\$781,000	\$521,000
Pipe	\$793.8	60	100	\$13,230,000	\$7,938,000
<b>Total</b>	<b>\$1,000.5</b>			<b>\$16,215,000</b>	<b>\$9,928,000</b>

**Takeaway: Annual investment ranges from \$9.9M to \$16.2M**

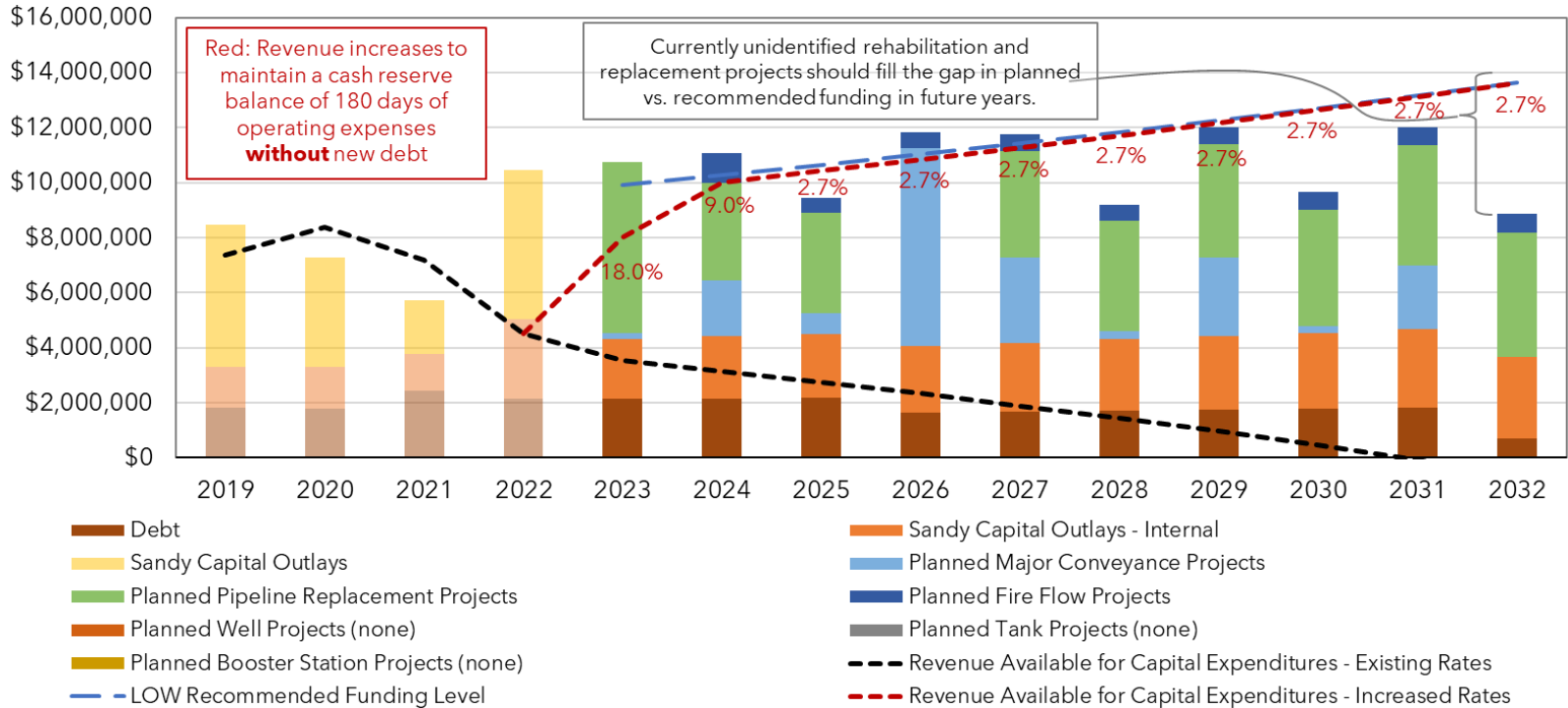
# Implementation

## Available Revenue for Capital Expenses (Excluding MWDSLs)



# Possible Revenue Increase Strategy

## Available Revenue for Capital Expenses (Excluding MWDSLs)



# Revenue vs. Rate Increases

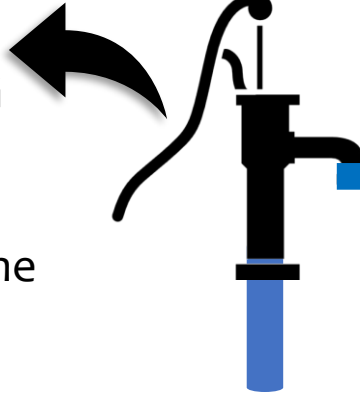
Year	Needed Revenue Increase	Correlated Rate Increase Accounting for Conservation
2022	---	---
2023	18.0%	20.0%
2024	9.0%	10.0%
2025	2.7%	3.0%
2026	2.7%	3.0%
2027	2.7%	3.0%

# Cost-of-Service Base vs Volume

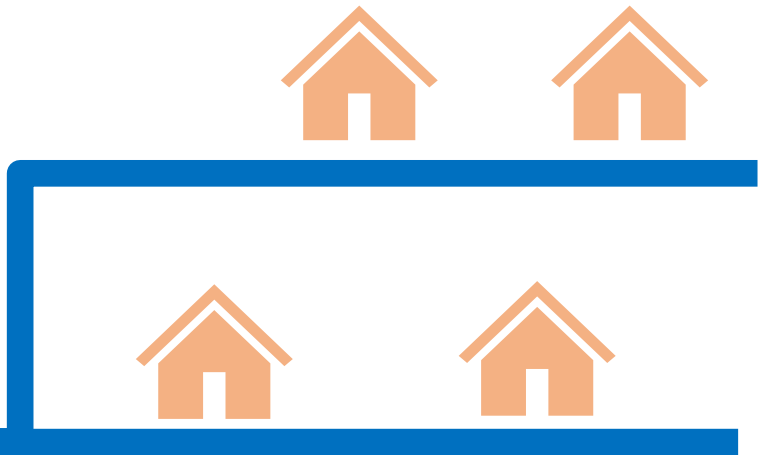


**BILLING**  
100% Base  
0% Volume

**WELL  
PUMPING  
POWER**  
0% Base  
100% Volume



**CONVEYANCE PIPELINES**  
20% - 30% Base  
70% - 80% Volume





# Increase Options

	Total Needed Rate Revenue (2023)	Base Rate Revenue	Volume Sales Revenue	% Base	% Volume
Existing Rates with 20% Uniform Increase	\$25,662,711	\$5,598,885	\$20,063,826	21.8%	78.2%
Cost of Service - Min. Base Rate	\$25,662,711	\$4,868,468	\$20,794,243	19.0%	81.0%
Cost of Service - Max. Base Rate	\$25,662,711	\$8,296,279	\$17,366,431	32.3%	67.7%

	¾-inch Meter Base Rate	Tier 1 Volume Rate	\$ Increase in Base Rate	% Increase in Volume Rate
Existing Rates	\$14.43	\$1.64	-	-
Cost of Service Range - Min. Base	\$14.85	\$2.05	\$0.42	24.8%
Existing Rates with 20% Uniform Increase	\$17.32	\$1.97	\$2.89	20.0%
Cost of Service Range - Max. Base	\$26.43	\$1.68	\$12.00	2.4%



Reasonable Cost-of-Service Range  
(2023 Rates)

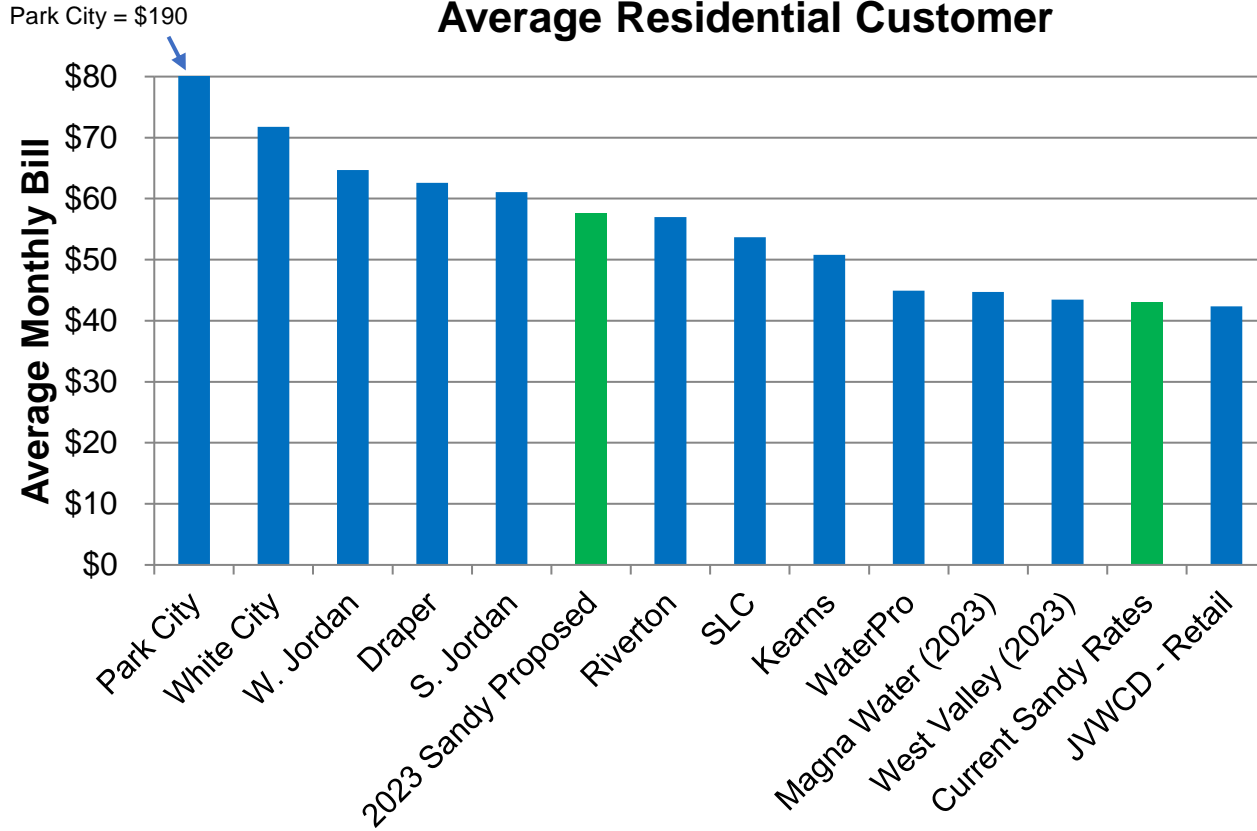
# Potential Rate Increases

Year	Base Rate (\$/ERU)	Volume Rate					Projected Revenue Increase
		Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	
2021*	\$14.43	\$1.64	\$2.53	\$2.98	\$3.42	---	---
2022	\$14.43	\$1.64	\$2.31	\$2.98	\$3.82	\$5.08	---
2023	\$26.43	\$1.68	\$2.37	\$3.05	\$3.91	\$5.20	18.0%
2024	\$29.07	\$1.85	\$2.60	\$3.36	\$4.30	\$5.72	9.0%
2025	\$29.95	\$1.90	\$2.68	\$3.46	\$4.43	\$5.89	2.7%
2026	\$30.84	\$1.96	\$2.76	\$3.56	\$4.56	\$6.07	2.7%
2027	\$31.77	\$2.02	\$2.84	\$3.67	\$4.70	\$6.25	2.7%

\* Tier volume allotments were also adjusted in 2021

# Rate Comparison

## Comparison of Average Monthly Water Rates, Average Residential Customer



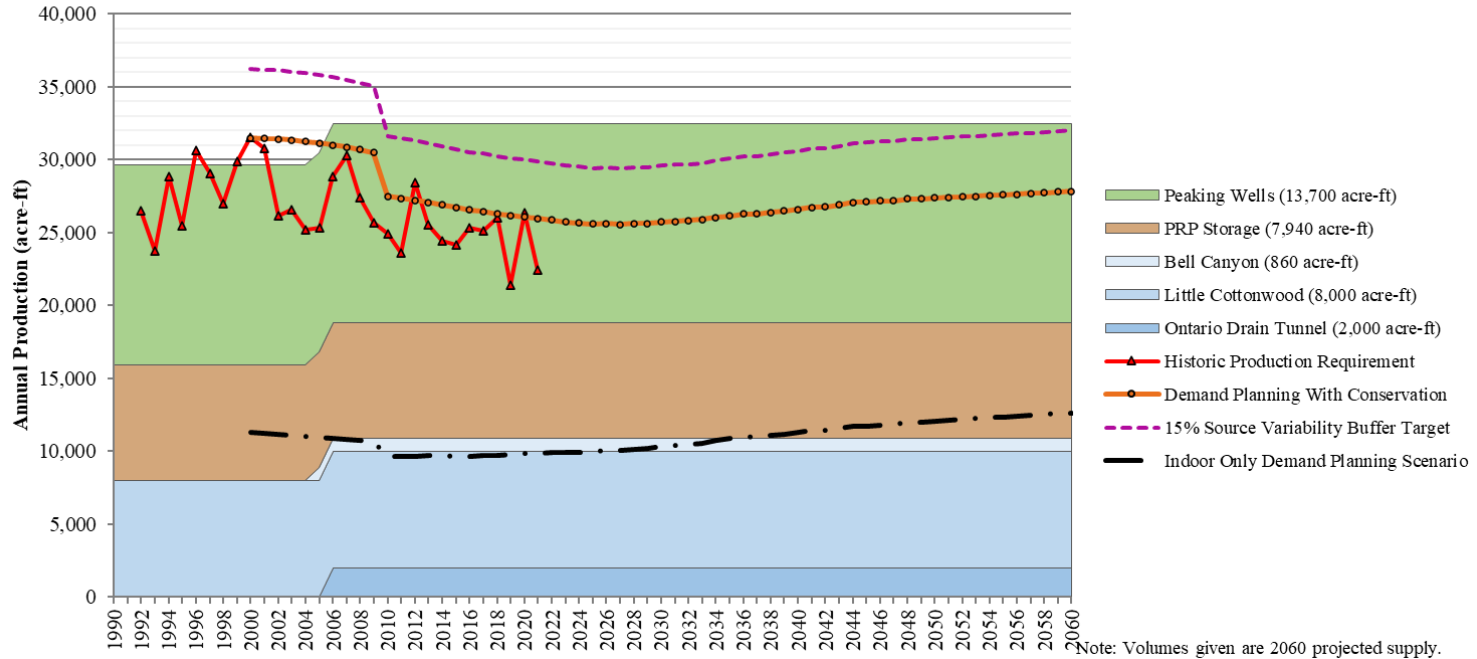
Water Provider	Base Rate
Park City	\$55.24
White City	\$53.00
S. Jordan	\$30.00
Sandy Proposed	\$26.43
Riverton	\$25.36
WaterPro	\$21.67
Magna	\$21.08
W. Jordan	\$20.40
Draper	\$20.25
Sandy Existing	\$14.43
WVC	\$14.04
Kearns	\$12.08
SLC	\$11.53
JWCD	\$3.00



**THE END**

# Supply & Demand

Projected Sandy City Annual Production Requirements vs. Supply (Dry Year)  
with Supply Buffer and Indoor-Only Demand

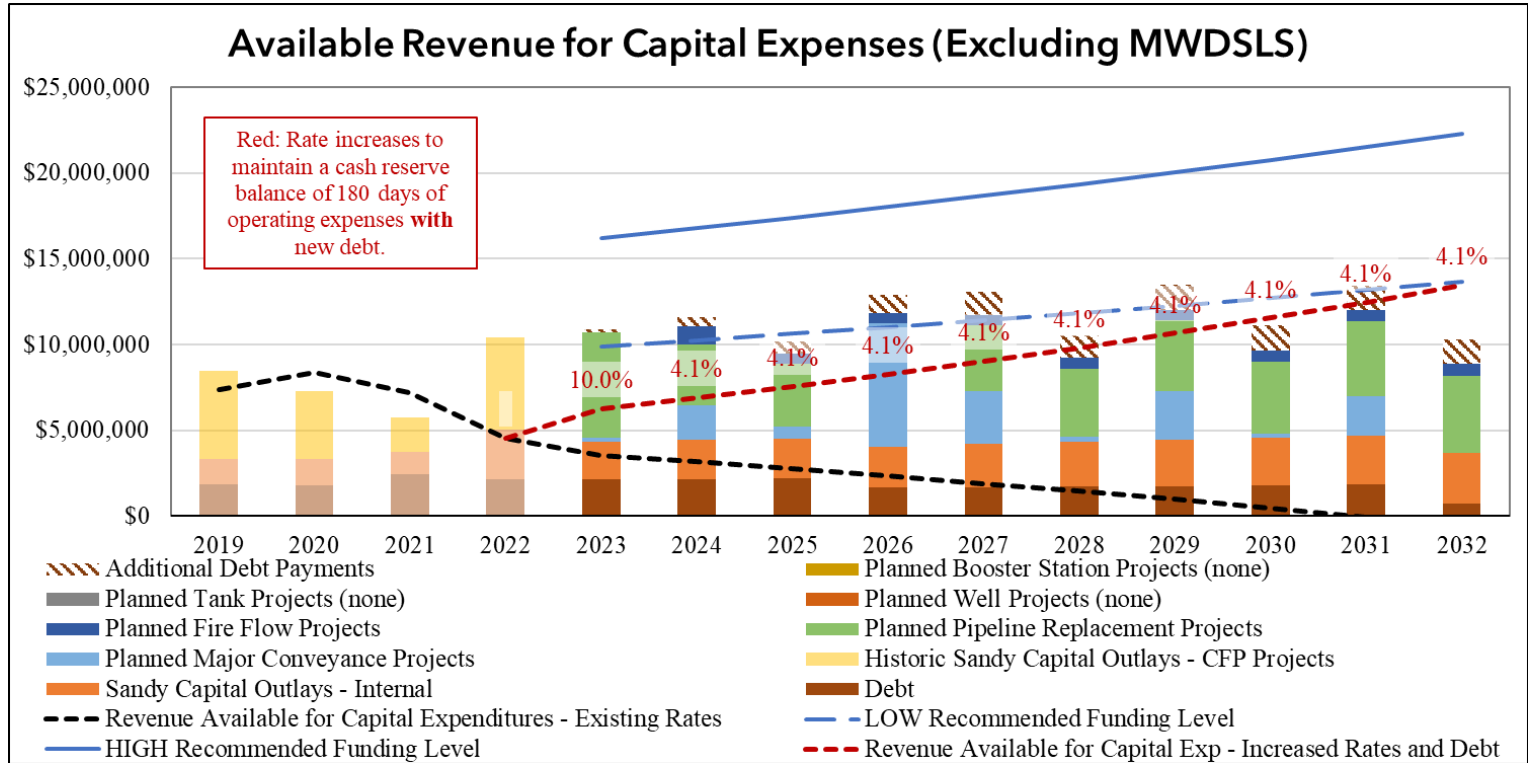


**Takeaway: Existing supplies are sufficient with conservation**

# Summary of Revenue Increases

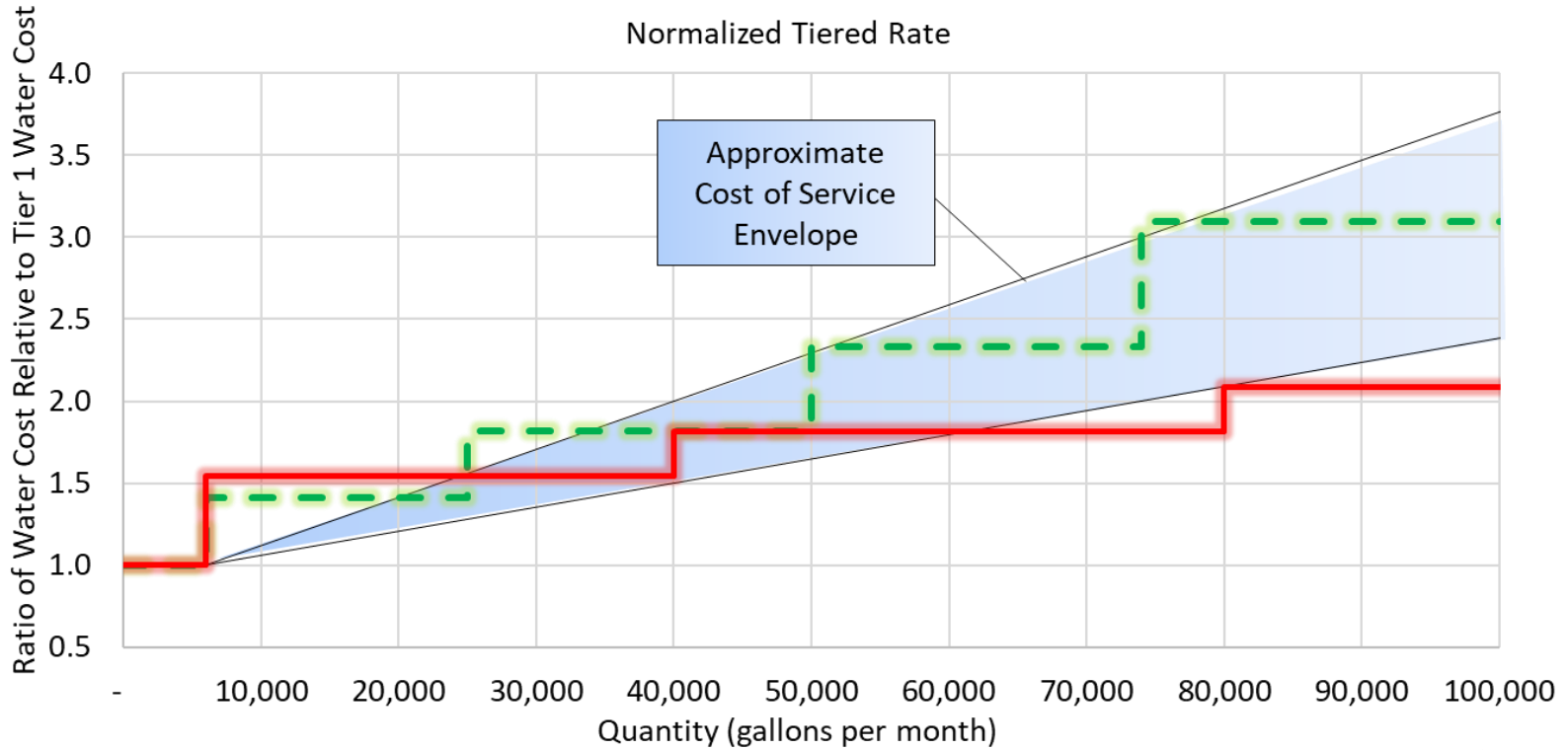
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# Possible Revenue Increase Strategy



# Tiered Rate Cost-of-Service

Normalized Tiered Rate



— Typical Cost of Service Envelope

- - Scenario D

— Sandy (Existing)