



# ARIZONA WATER PROFESSIONALS



Operational Overview and Budget Discussion

April 18, 2019



## Mission

Provide valuable services that protect public health and the environment, bolster the local economy, and are an integral part of the vibrant lifestyle enjoyed in Mesa

## Service

170 square mile service area with a growing population of over 496,000

## Connections

Water System – 157,000 residential and commercial connections

Wastewater Collection System – 127,000 residential and commercial connections

# Water Resources

Community Safety  
and Sustainable  
Economy

# Accomplishments

- Continue to meet over 100 state and federal water quality standards
- Opening and dedication of Signal Butte Water Treatment Plant – increasing Mesa’s water treatment capacity by 24 MGD
- AZ Water Association 2019 Water Treatment Project of the Year – Signal Butte Water Treatment Plant
- Water and Wastes Digest 2018 Project of the Year – Signal Butte Water Treatment Plant
- PRSA Copper Anvil Award of Merit – Digital Water Quality Consumer Confidence Report
- MARCOM Platinum Award – Digital Water Quality Consumer Confidence Report
- \$44,200 grant from SRPMIC for Know Your H2O Water Education Program
- Know Your H2O Water Bar eliminated over 30k water bottles from plastic waste at community events



## Operational Efficiencies

- Recruiting and retaining highly qualified staff
- Succession planning
- Technology

## Water Commodity

- Increasing costs
- Update on the Colorado River System

## Infrastructure

- Rehabilitation of distribution and collection system
- Capacity expansion
- Reliability

# Top Challenges

# Measuring Success - Water

## Water meter read error rate

- Target: Meter readers collectively will not exceed 4.0 errors per 10,000 reads per month
- Average: 5.7 errors per 10,000 reads per month

## % of Groundwater pumped

- Target: 10.00% per month
- Average: 11.75% per month

## # of Leaks and breaks per 100 miles of pipe

- Target: 1.0 per month
- Average: 1.6 per month



# Measuring Success - Wastewater

## # of miles of sewer lines cleaned

- Target: 26.0 per month
- Average: 19.8 per month

## # of miles sewer lines inspected

- Target: 20.0 per quarter
- Average: 60.5 per quarter

## # of Sanitary Sewer Overflows (SSO's)

- Target: 0.0 per quarter
- Average: 0.5 per quarter



# Advanced Metering Infrastructure (AMI)



TIMELY REPLACEMENT OF  
INACCURATE METERS  
IMPROVES REVENUE STABILITY



ADVANCED ANALYTICS HELP  
IMPROVE SYSTEM  
MANAGEMENT

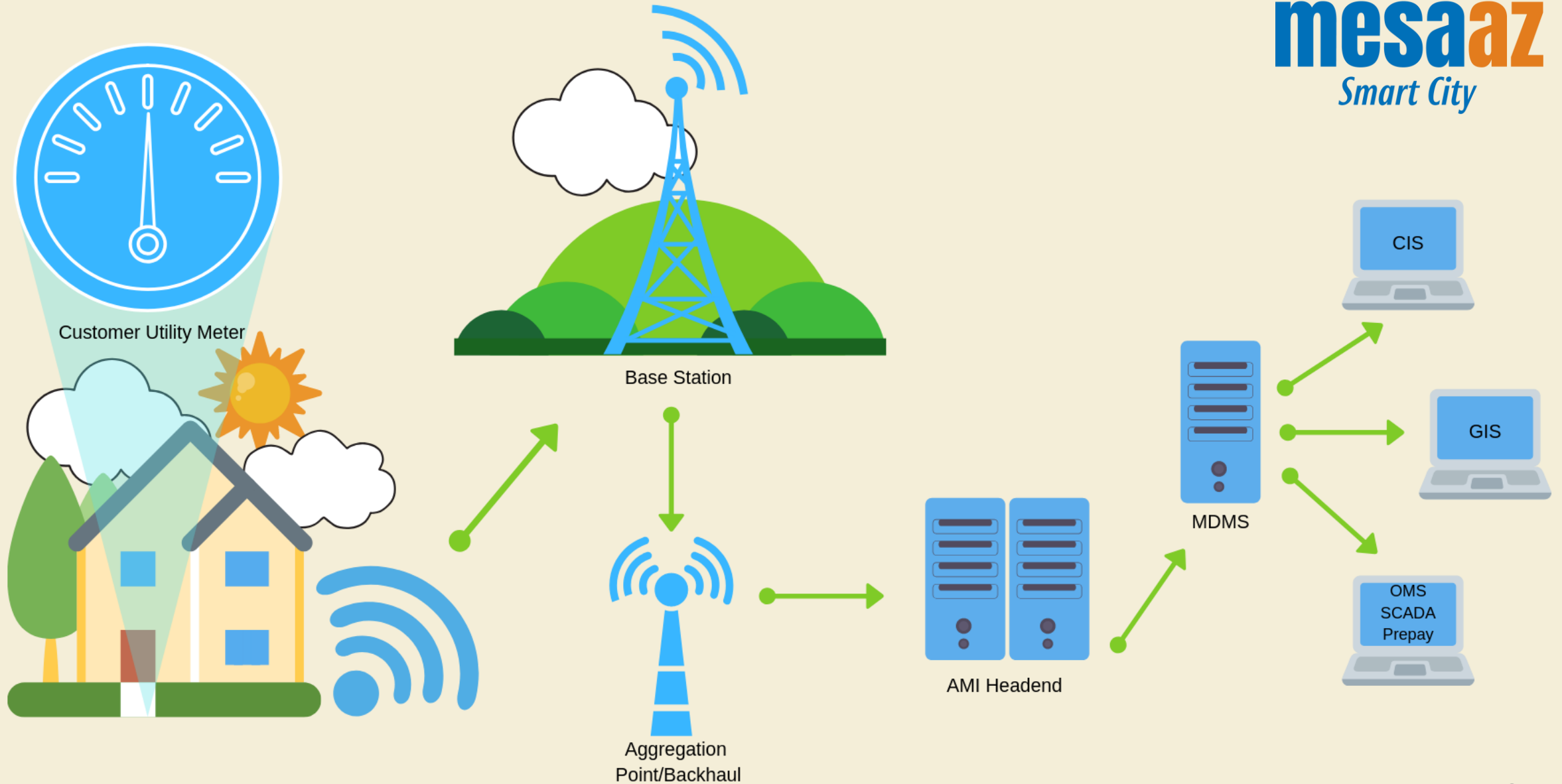


REDUCED WATER LEAKAGE  
WITH EARLY DETECTION



IMPROVES CUSTOMER  
EXPERIENCE AND  
ENGAGEMENT

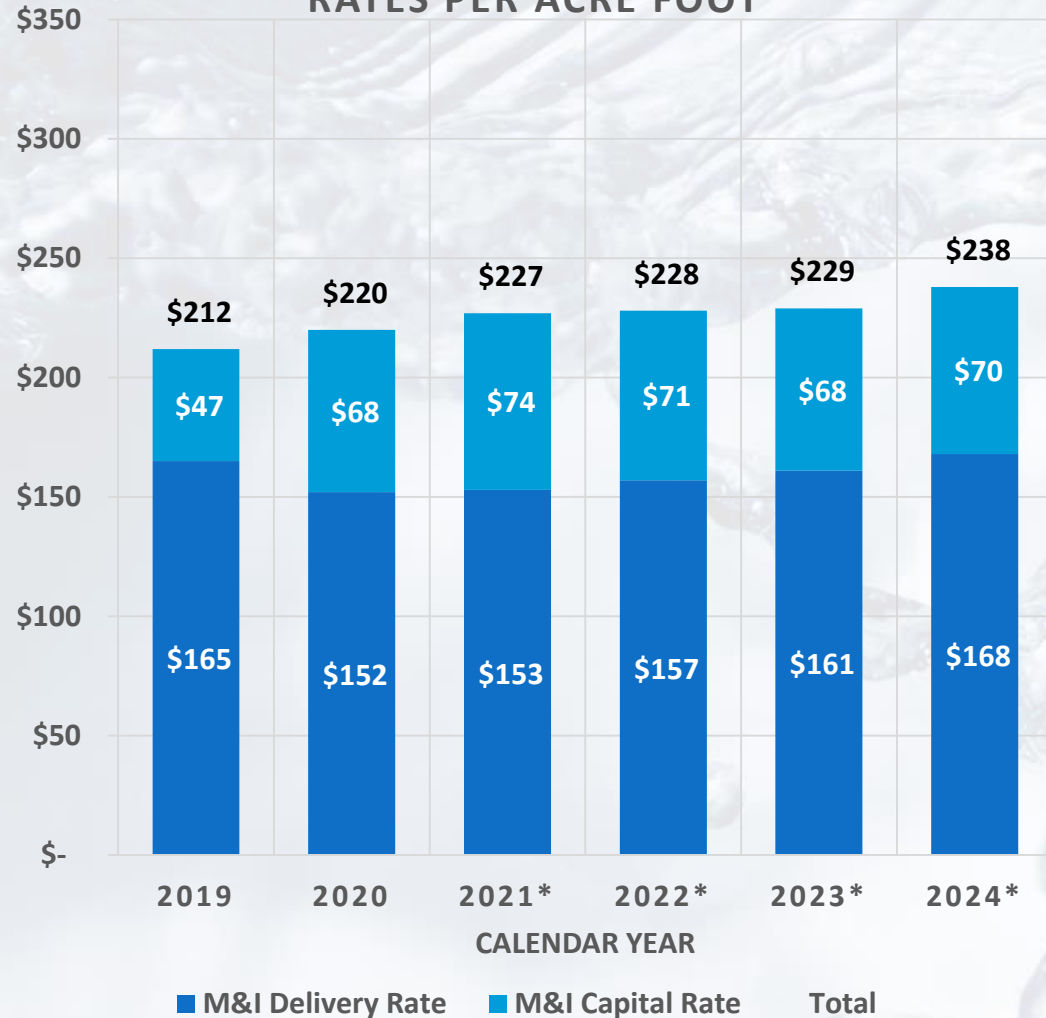
# Advanced Metering Infrastructure (AMI)



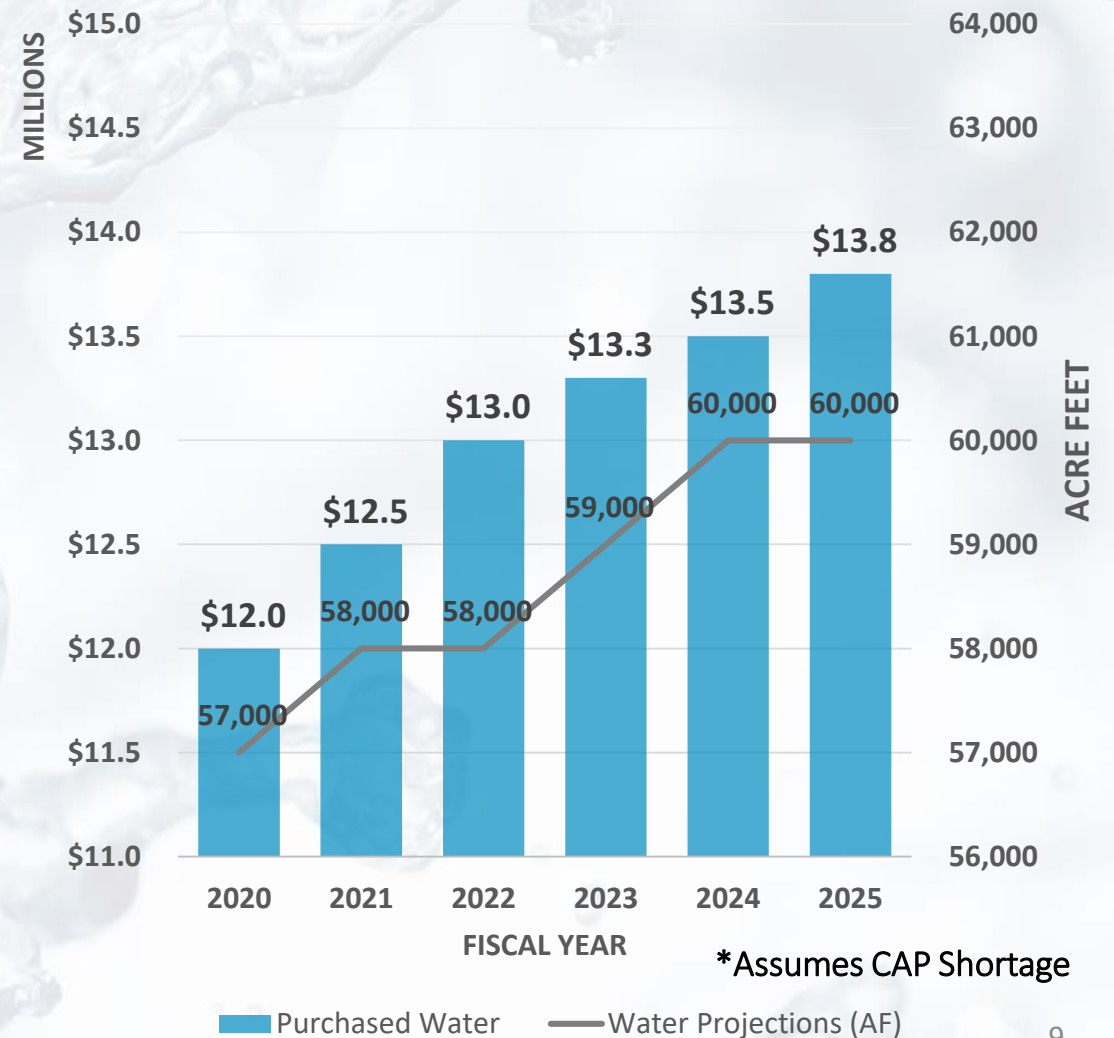


# Water Commodity Costs – Central Arizona Project

MUNICIPAL & INDUSTRIAL (M&I) WATER RATES PER ACRE FOOT



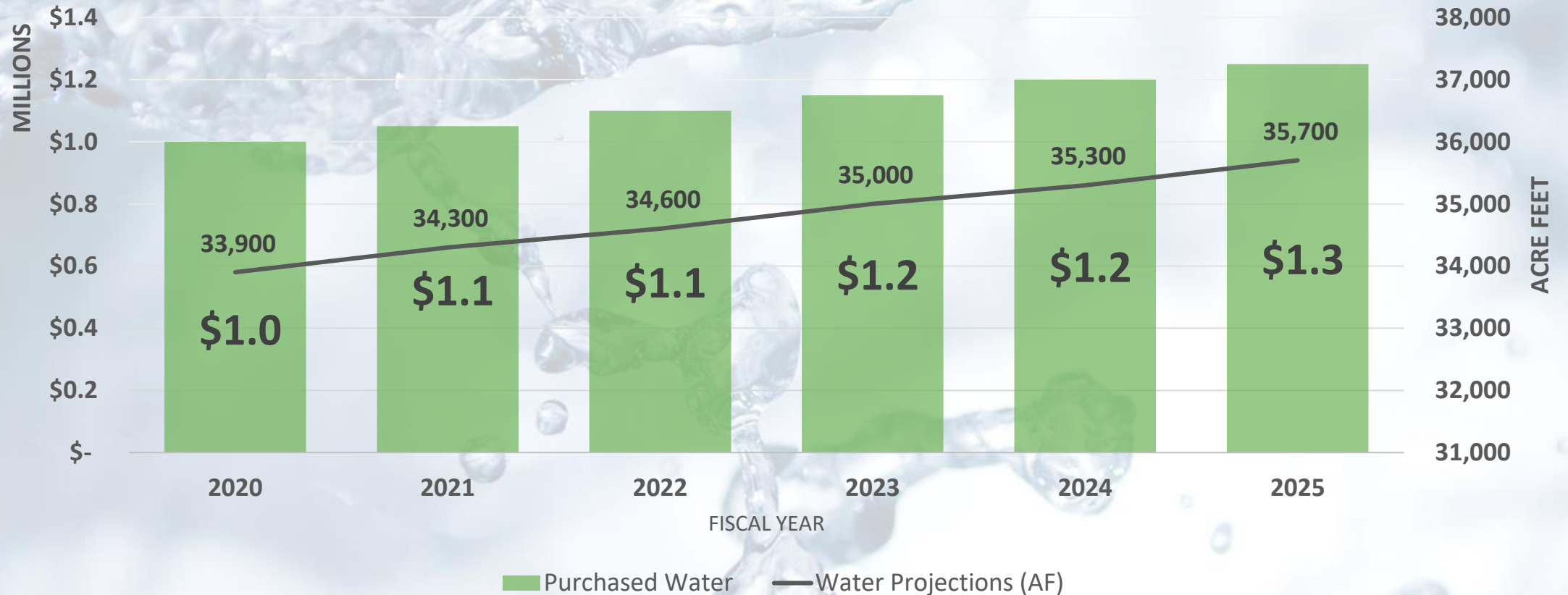
MESA COST BASED ON CAP FLOW PROJECTIONS



\*Assumes CAP Shortage

# Water Commodity Costs - SRP

## MESA COST BASED ON SALT RIVER PROJECT (SRP) FLOW PROJECTIONS

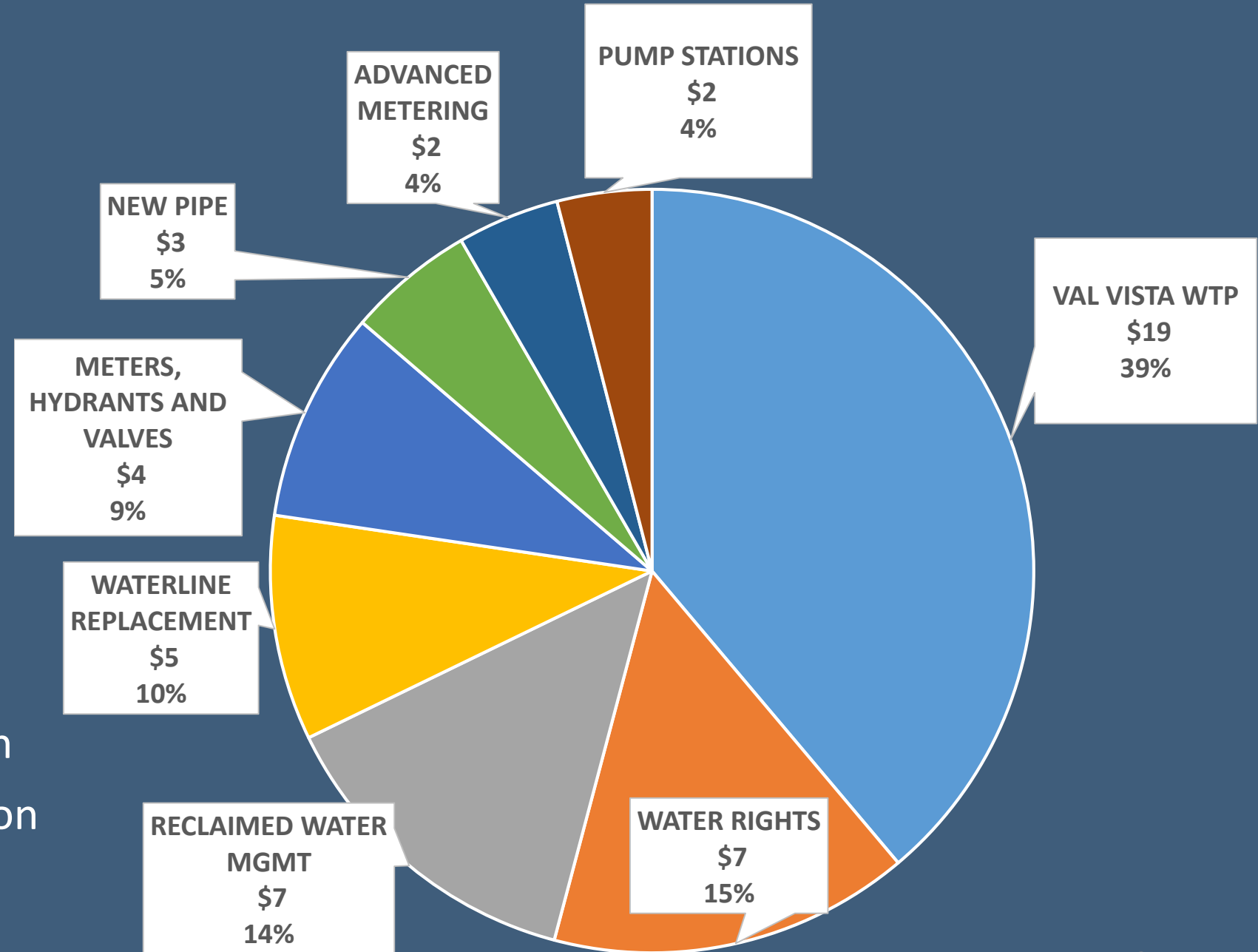




# Update on Colorado River System

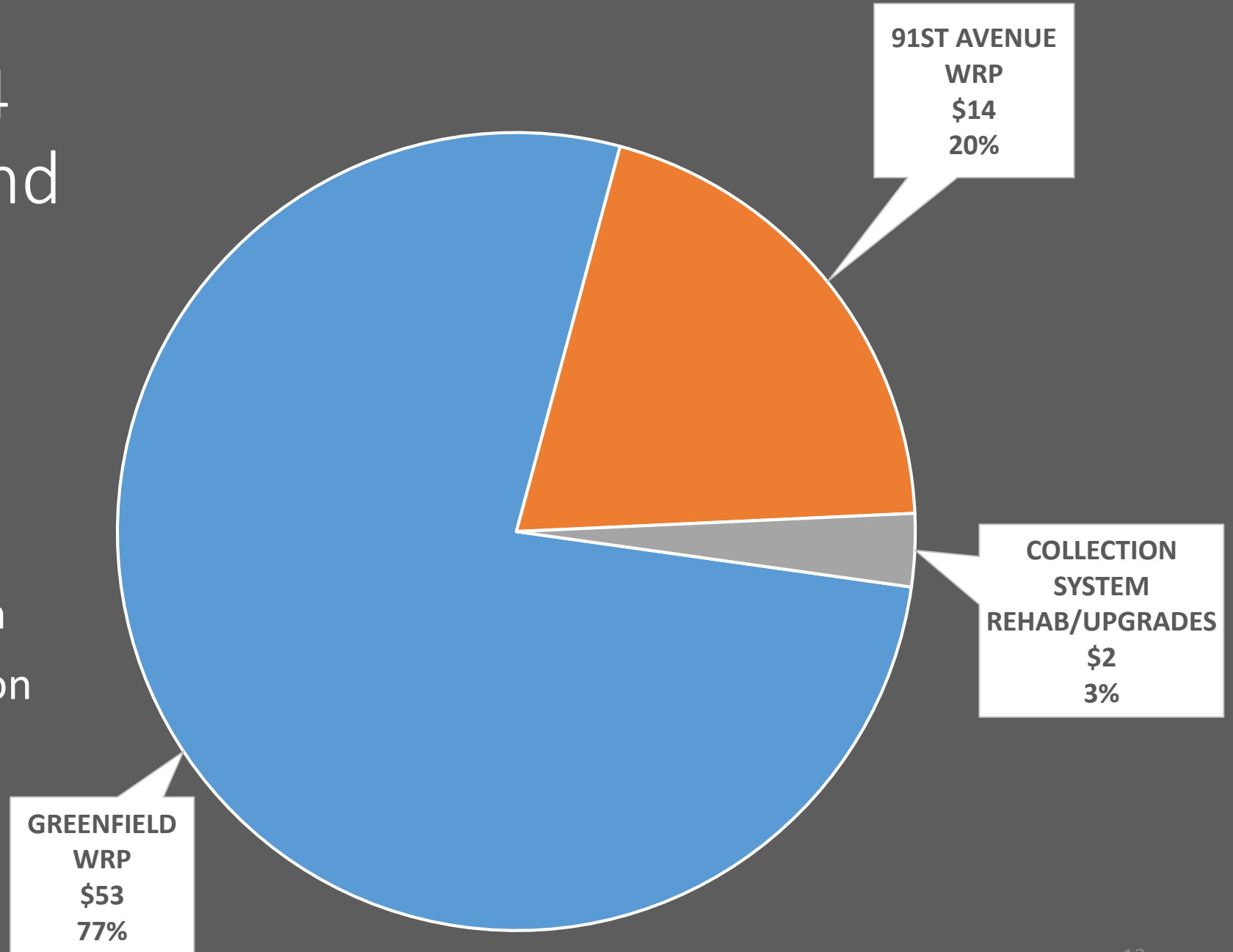
# Remaining 2014 Water Bond Authorization (millions)

Authorization: \$316 million  
Current CIP Plan: \$49 million



# Remaining 2014 Wastewater Bond Authorization (millions)

Authorization: \$178 million  
Current CIP Plan: \$69 million





Headworks



Digesters

# Greenfield Water Reclamation Expansion – Phase III



Secondary Clarifiers



Aeration Basins

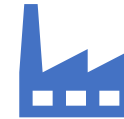
# Future Capital Needs



Infrastructure Replacement



Reclaimed Water Management – GRIC Exchange



Signal Butte Water Treatment Plant Expansion Phase II



Collection System Rehabilitation



Water Reclamation Plants Expansion and Rehabilitation

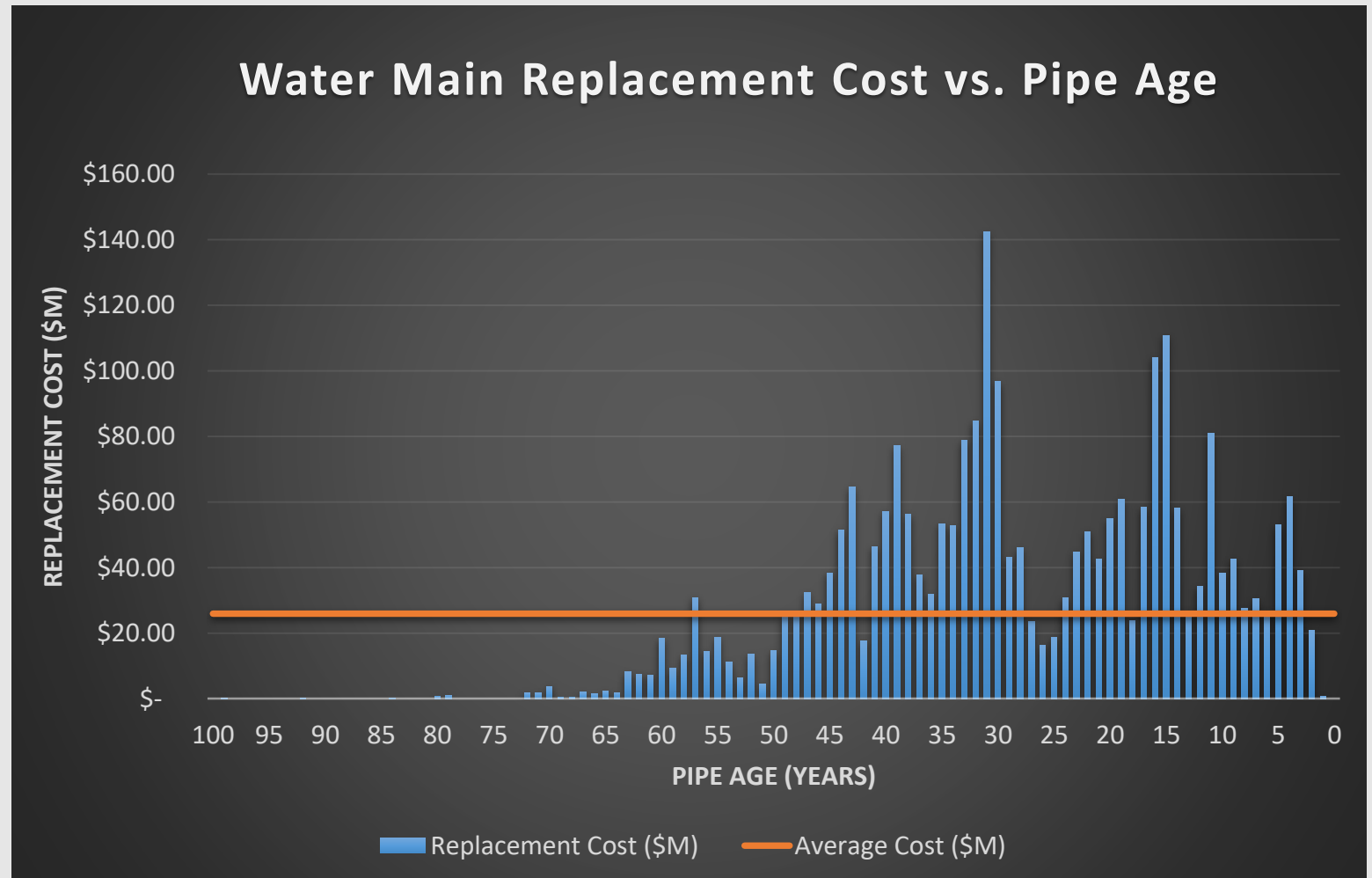


Advanced Metering Infrastructure (AMI)

# Water Main Replacement and Rehabilitation Program

## Water Lifecycle Program

- Replace infrastructure to avoid service disruption
- Need \$26M annually for 50-year service life
- Risks and Concerns:
  - Averaged \$3.6M per year for replacement over last three fiscal years
  - Remaining 2014 Bond Dollars for Replacement: Less than \$10M

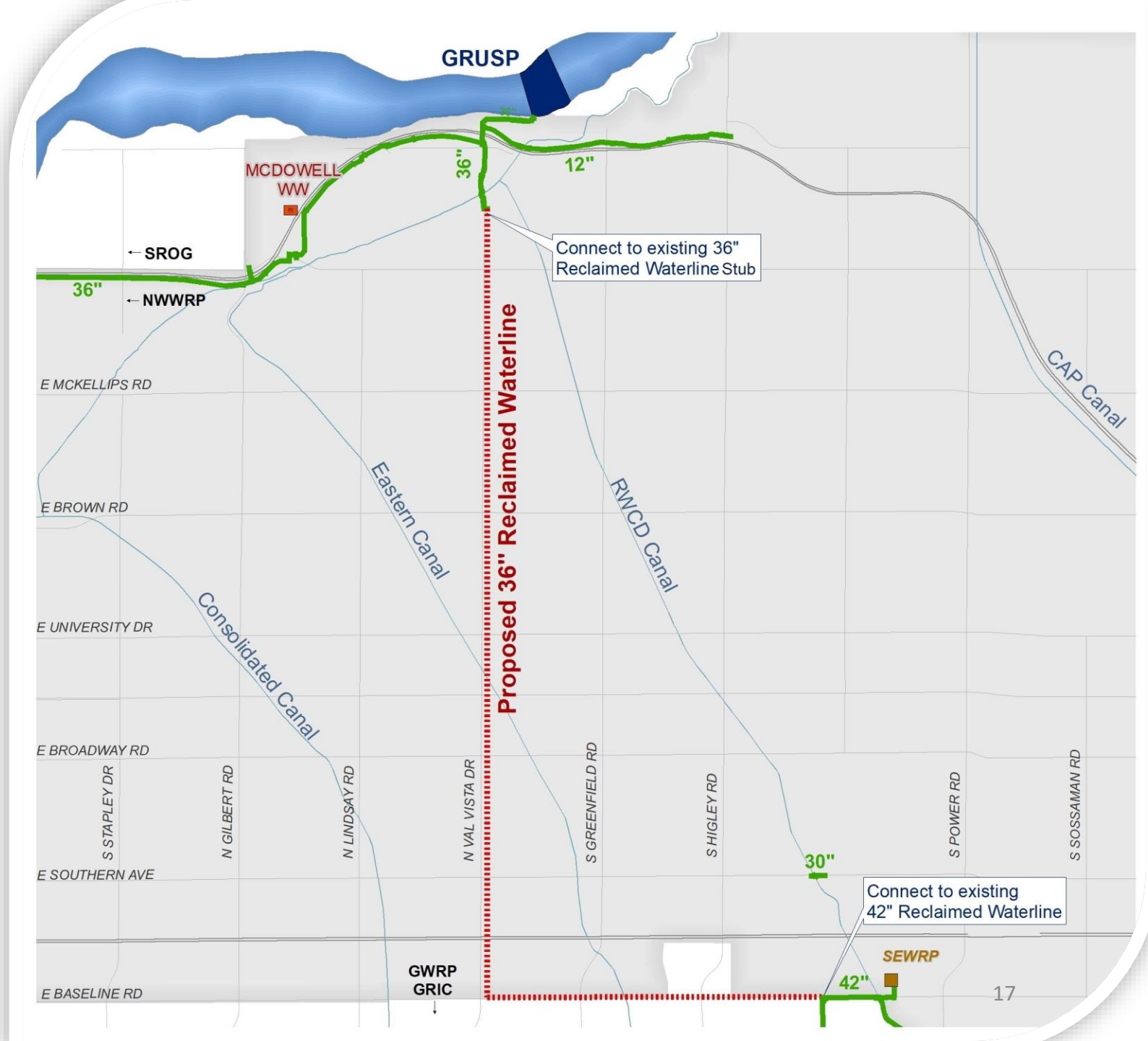




# Reclaimed Water Management (GRIC Exchange)

## Water Customer Service Demand Southeast Mesa

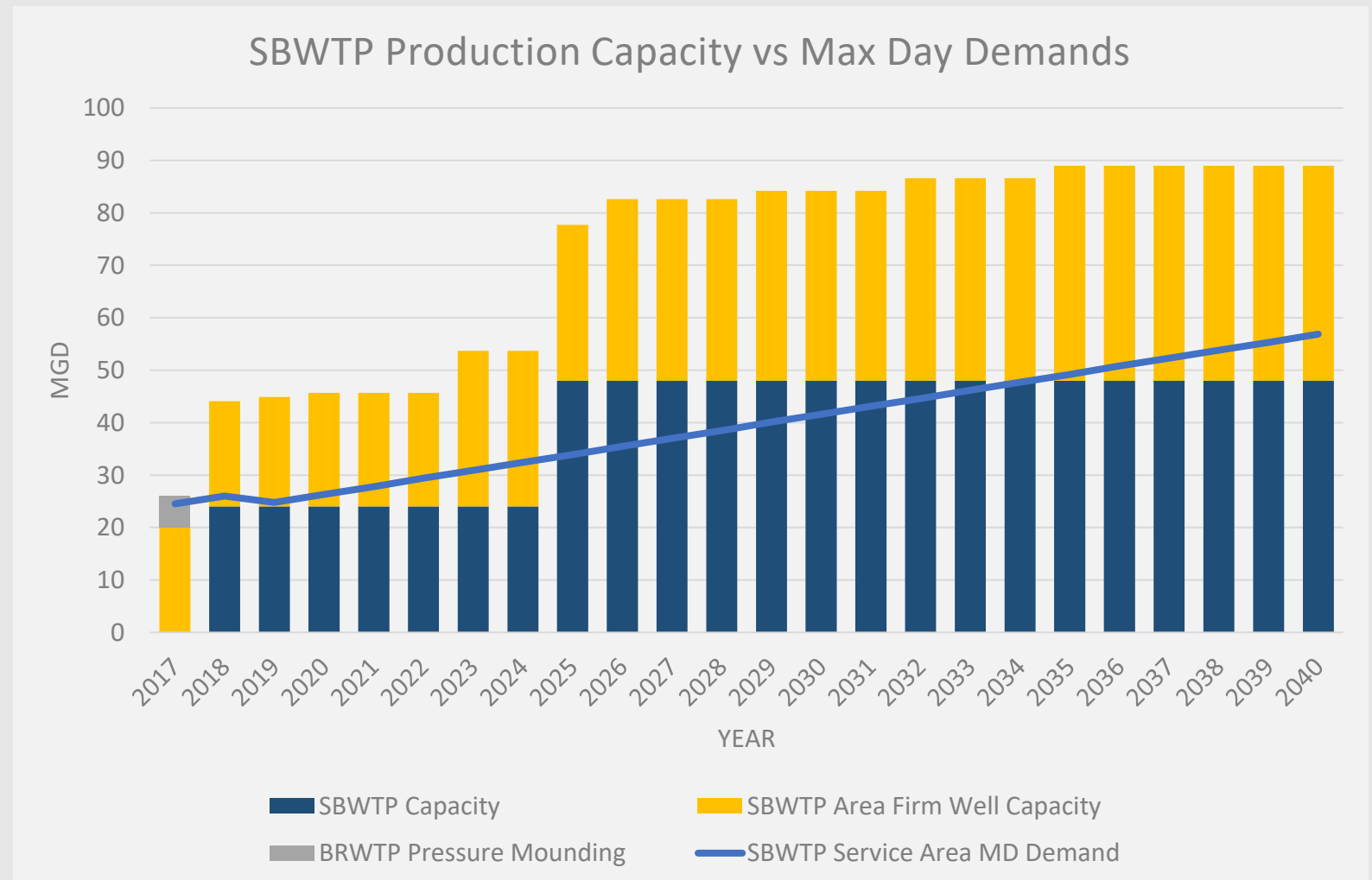
- Total Projected Cost: \$66M
  - \$2M (Alignment Study)
  - \$5M (Design – if approved)
  - \$59M (Construction)
- Project Timeline:
  - Alignment Study: 2019
  - Design Initiation: 2021
  - Projected Start: 2022
  - Projected Completion: 2024
- Significant Issues:
  - Obtaining right-of-way
  - Lengthy construction
  - Traffic restrictions



# Signal Butte Water Treatment Plant Expansion Phase II

## Water Customer Service Demand Southeast Mesa

- Increase SBWTP Capacity to 48MGD
- Based on existing development trend, demand could be higher
- Projected Cost: \$90M
- Project Initiation: 2021
- Projected Completion: 2025



# Collection System Rehabilitation

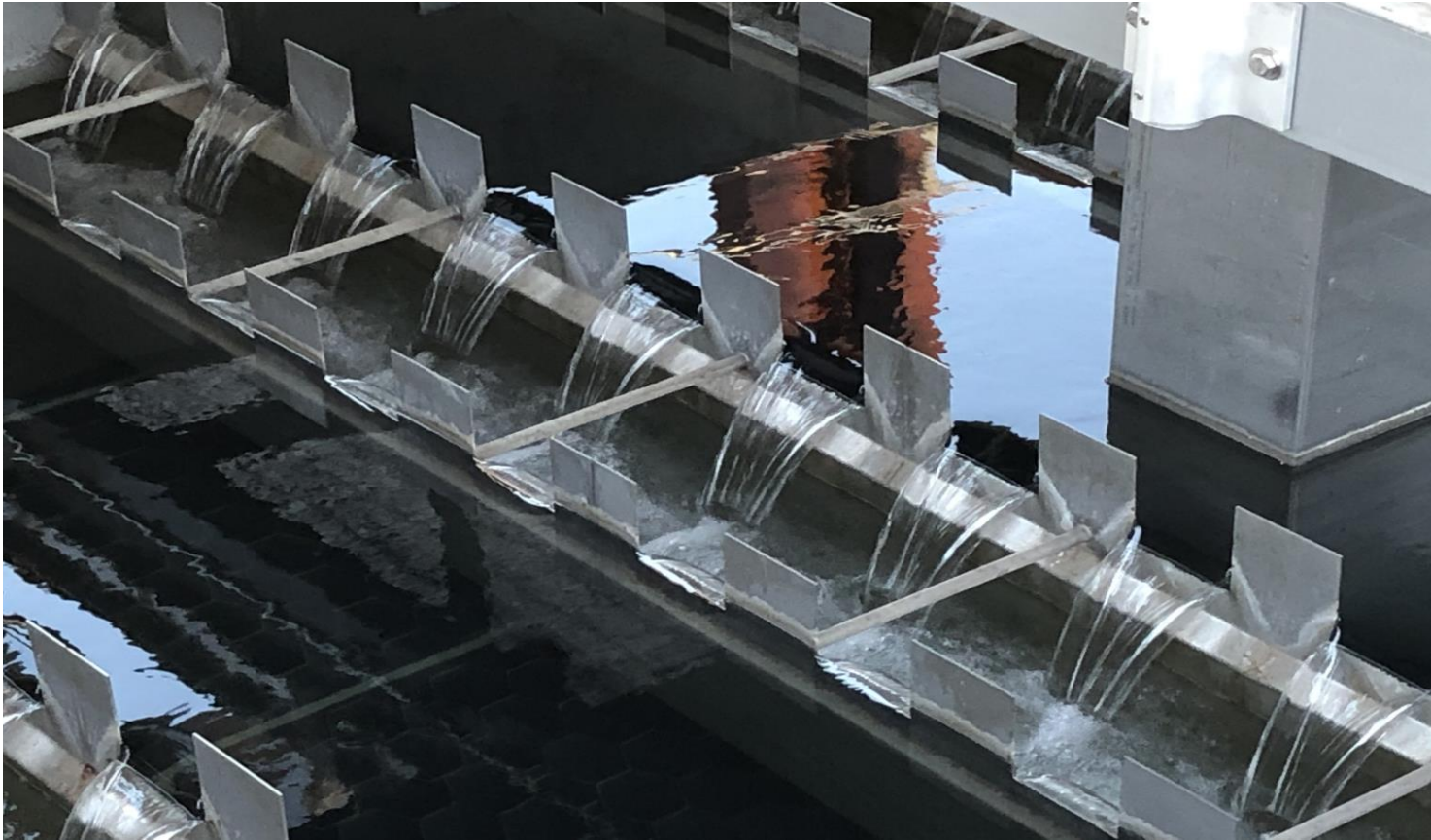
- Sewer Line Rehab
- Address aging sewer mains at the end of their useful life
- Annual, ongoing program
- Correct structural deficiencies which could block or overflow sewers
- Manhole Rehabilitation Program
- Proposed expansion of regional sewer interceptors



# Water Reclamation Plant Rehabilitation/Improvements

- 91<sup>st</sup> Ave/SROG Joint Venture
- Northwest Water Reclamation Plant
- Southeast Water Reclamation Plant
- Greenfield Water Reclamation Plant





## Water Significant Budget Changes FY19/20

- Increased Debt Service Costs **+\$3.9M**
- Water Commodity **+\$1.0M (CAP/SRP)**
- Val Vista WTP Obligation **+\$600k**
- Chemicals **+\$200k**

# Water Proposed Budget FY19/20

## Ongoing Cost:

- 2 FTE Field Workers II - Water Distribution **\$159k**

## One-time Cost:

- 2 Vehicles - Water Distribution Positions **\$102k**





## Wastewater Significant Budget Changes FY 19/20

- Increased Debt Service Costs **+\$600k**
- 91st Avenue WRP Obligation **+\$450k**
- Greenfield WRP Joint Venture Obligations **-\$375k (Mesa share)**

# Wastewater Proposed Budget FY19/20

## One-time Cost:

- Aeration Basin Mixers  
Overhaul - Greenfield  
Joint Venture **\$250k**
- Mesa's Cost Share **\$105k**





# Financial Overview



## WATER

	FY 17/18 Actuals	FY 18/19 Revised Budget	FY 18/19 Projected	FY 19/20 Proposed Budget
<b>Sources of Funding</b>				
Residential Rate Related Revenues	\$94,175,245	\$97,851,546	\$87,493,383	\$91,059,668
Non-Residential Rate Related Revenues	\$48,573,656	\$49,218,563	\$58,919,400	\$61,019,599
Other Revenues	\$6,655,818	\$4,407,900	\$4,393,923	\$4,426,023
<b>Total Sources</b>	<b>\$149,404,720</b>	<b>\$151,478,009</b>	<b>\$150,806,706</b>	<b>\$156,505,290</b>
<b>Uses of Funding</b>				
Operating Expenditures	\$43,219,565	\$52,692,786	\$51,160,062	\$55,381,652
Project Costs	\$111,757	\$542,255	\$535,772	\$74,600
General Fund Transfer	\$54,965,073	\$55,951,500	\$55,951,500	\$57,090,063
Debt Service Transfer	\$32,215,854	\$36,297,812	\$31,617,463	\$40,159,224
Lifecycle/ Infrastructure Transfers	\$2,975,380	\$2,948,324	\$3,016,134	\$3,126,956
Capital Transfer	\$1,080,000	\$187,340	\$187,340	\$257,752
Economic Investment Fund Transfer	\$2,813,482	\$6,310,840	\$5,592,628	\$1,400,288
<b>Total Uses</b>	<b>\$137,381,112</b>	<b>\$154,930,857</b>	<b>\$148,060,899</b>	<b>\$157,490,535</b>
<b>Net Sources and Uses</b>	<b>\$12,023,608</b>	<b>(\$3,452,848)</b>	<b>\$2,745,807</b>	<b>(\$985,245)</b>

# Financial Overview



## WASTEWATER

	FY 17/18 Actuals	FY 18/19 Revised Budget	FY 18/19 Projected	FY 19/20 Proposed Budget
<b>Sources of Funding</b>				
Residential Rate Related Revenues	\$43,593,435	\$45,572,684	\$46,296,273	\$46,762,462
Non-Residential Rate Related Revenues	\$36,589,563	\$36,688,094	\$36,967,686	\$38,355,790
Other Revenues	\$2,560,615	\$2,773,004	\$2,651,396	\$2,773,000
<b>Total Sources</b>	<b>\$82,743,613</b>	<b>\$85,033,782</b>	<b>\$85,915,355</b>	<b>\$87,891,252</b>
<b>Uses of Funding</b>				
Operating Expenditures	\$24,738,532	\$27,418,510	\$26,841,052	\$27,376,811
Project Costs	\$119,537	\$525,342	\$525,342	\$44,200
General Fund Transfer	\$15,470,049	\$15,747,681	\$15,747,681	\$16,068,132
Debt Service Transfer	\$37,583,902	\$39,780,589	\$35,755,192	\$40,377,555
Lifecycle/ Infrastructure Transfers	\$1,652,790	\$1,707,208	\$1,718,307	\$1,757,825
Capital Transfer	\$239,000	\$199,787	\$199,787	\$250,905
Economic Investment Fund Transfer	\$560,108	\$1,120,215	\$1,120,215	\$0
<b>Total Uses</b>	<b>\$80,363,917</b>	<b>\$86,499,332</b>	<b>\$81,907,576</b>	<b>\$85,875,428</b>
<b>Net Sources and Uses</b>	<b>\$2,379,695</b>	<b>(\$1,465,550)</b>	<b>\$4,007,779</b>	<b>\$2,015,824</b>



Questions?