Cost of Service Analysis – Reserve Targets

January 26, 2023

Overview of Presentation

- Cost of Service Analysis – Review of Revenue Requirement
- Reserve Replenishment Targets
  - Industry guidance
  - Agency specific analysis
  - Credit ratings benchmarks
- Recap and Next Steps

Cost of Service Analysis:
Revenue Requirement Recap

Your Water

- Locally Sourced*
  - **75%** comes from Marin reservoirs
  - **25%** is imported from Sonoma County
- 7 local reservoirs provide storage before water is treated
- 3 water treatment plants operate around the clock
- A network of over 900 miles of pipelines and 100 pump stations
- Over 60,000 service connections
  - 190,000 customers served

*based on long term averages

Financial Planning Overview

- Budget Overview
  - Total budget of $116 million in FY 2022-23 (all funds)
    - Operating Budget = $92.2 million
      - $9.6 million is for debt service
    - Capital Budget = $23.9 million
      - Primarily funded by Capital Maintenance Fee (CMF) revenues
- Expenditures are 95% fixed
  - Very little correlation to water use
- Revenues are 54% variable
  - Highly correlated with water use

Cost of Service Analysis: Step by Step Approach

Policy & Rate Structure Review → Demand Projections → Revenue Requirement → Rate Design

- ✓ Baseline budget
- ○ **Reserve replenishment**
- ○ **Enhanced capital investments**

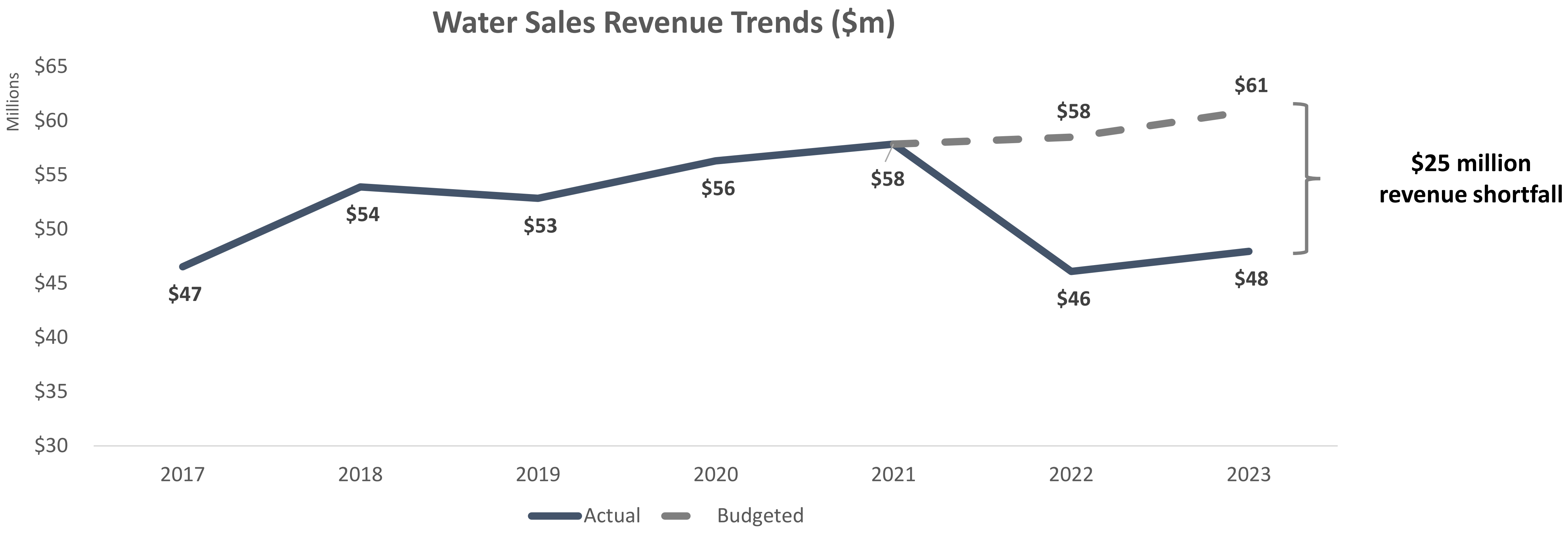
Financial Forecasting

Key Assumptions (Operating and Capital Funds)	Annual Fiscal Impact
Customer demand will remain well below long term averages	$12 to $15 million
Reserves have been utilized and need to be replenished	$5 to $8 million
Inflation will continue to impact core expenditure areas	$3 to $5 million
Purchased water from Sonoma County will exceed the contractual minimum	$2 to $4 million
Implementation of the Water Supply Roadmap will continue for the next four years	$1 to $2 million
Debt service may be utilized to address critical infrastructure needs ($50-$75M in net proceeds)	$3 to $5 million
Total Annual Fiscal Impact:	**$26 to $39 million**

Water Sales Revenue Reduction

Over the past two years, water sales revenues have decreased due to conservation

- Net revenue loss to the District of $25 million over 2 years
- Backfilled by use of drought reserves and will need to be replenished in the next rate cycle



Reserve Target Considerations

- Prior to 2021, District Reserves were well-funded
- Reserves were utilized over past 2 years to offset revenue losses stemming from the drought
- The District is considering rate-revenue target of $5-8m annually to replenish reserves to pre-drought levels over next 4 years
- There will be opportunity for further analysis, discussion and policy refinement
    - Industry standards vs agency specific factors

Reserve Level Targets:
Industry Standards and Risk Analysis

Reserve Level Targets – Board Policy #46

Discretionary Reserve Fund	Minimum Balance (per policy)	Policy Target (FY 2023)	Actual Balance (6/30/21)	Actual Balance (6/30/22)	Projected Balance (6/30/23)
Capital Reserve	Annual budget for capital expenditures	$18.9M	$21.1M	$10.8M	$1.9M
Unrestricted Reserve	Six months of the annual operating budget	$46.1M	$32.6M	$27.4M	$24.2M
Rate Stabilization	No minimum: created in 2012 to backfill revenue losses for Debt Coverage Requirements	n/a	$9.4M	$1.9M	$1.9M
Total		$65.0M	$63.1M	$40.1M	$28.0M

Are these the right targets?

Operating Reserve Targets: Industry Standards

Organization	Target Balance
Government Finance Officers Association (GFOA)	No less than 45 days of expenses
International City/County Management Association	One to two months of expenses
Water Environment Federation (WEF)	One to three months of expenses

- Industry Best Practices: Minimum of 2 months of operating budget*
  - Guidance recommends adjustments for agency specific factors:
    - Budget structure
    - Revenue volatility
    - Asset condition
    - Credit rating objectives

** AWWA Cash Reserve Policy Guidelines, 2018*

Reserve Targets: Agency Specific Considerations

Industry Best Practices* are to provide sufficient funds for:

- Structural budget risk
  - Baseline expense levels for contingency, water purchases and replacement
  - Revenue volatility
    - Drought rates may be used to mitigate reserve requirement
- Unanticipated expenditures
  - Uncertainty: 4 year rate cycle, drought, inflation
  - Unplanned infrastructure repairs
- Strategic or accelerated infrastructure replacements
  - May include grant matching funds
- Emergency replacement for catastrophic events
  - Fire, flood, earthquake

** AWWA Cash Reserve Policy Guidelines, 2018*

Reserve Planning: MMWD Agency-Specific Analysis by Component

	Low	Medium	High	Note
Budget Structure				
Industry Minimum Standard	$8,250,000	$16,625,000	$25,000,000	1-3 Months of Operating Budget (AWWA minimum)
Operating Budget Contingency	$0	$2,500,000	$5,000,000	0-5% of Operating budget
Dedicated Replacement Funds	$0	$1,000,000	$2,000,000	Emergency replacement for vehicles and technology
Budget for Water Purchases	$0	$2,000,000	$4,000,000	Reserve for typical costs above the minimum contract
Revenue Volatility				
Rate Structure Risk	$6,000,000	$9,000,000	$12,000,000	Revenue shortfalls under 5-10% conservation scenario
Drought Reserve	$6,000,000	$9,000,000	$12,000,000	Add'l revenue shortfalls (11-20% conservation scenario)
Asset Condition				
Deferred Maintenance	$5,000,000	$7,500,000	$10,000,000	Unanticipated infrastructure repairs (25-50% of CIP)
Grant Matching Funds	$6,250,000	$9,375,000	$12,500,000	25% local match for $25-$50m grant award
Natural Disaster Risk				
Wildfire, Flood Earthquake	$5,000,000	$12,500,000	$20,000,000	Response, mitigation, insurance deductibles, FEMA match
Total	**$36,500,000**	**$69,500,000**	**$102,500,000**	

- High level analysis shows a range of $36 million to $102 million for MMWD reserve targets
  - Middle of range is $69.5 million, which is about equal to current policy and FY 2021 funding levels

Reserve Targets – Credit Ratings Implications

- MMWD was upgraded to AA/Stable in 2019
  - Primarily due to addition of Capital Maintenance Fee (fixed revenue source)
  - Financial metrics were "expected to remain well above bond covenant minimums"
- Credit ratings agencies use formulas to evaluate agencies creditworthiness
  - Primary factors* are:
    - Size and health of system (30%)
    - Financial strength of operations (40%)
    - Strength of rate management and regulatory compliance (20%)
    - Legal provisions (10%)
- Financial Strength includes the following metrics
    - Annual Debt Service Coverage: Operating surplus divided by annual debt service
    - Days of Cash on Hand: Unrestricted reserves divided by annual O&M
    - Debt to Operating Revenue: Operating Revenue divided by annual debt service

** Moody's US Municipal Utility Revenue Debt Methodology (2022)*

Reserve Targets – Credit Ratings Metrics

EXHIBIT 1

US Municipal Utility Revenue Debt Scorecard Overview

Factor	Factor Weighting	Sub-factor	Sub-factor Weighting
System Characteristics	30%	Asset Condition (Remaining Useful Life)	10%
		System Size (O&M)	7.5%
		Service Area Wealth (Median Family Income)	12.5%
Financial Strength	40%	Annual Debt Service Coverage	15%
		Days Cash on Hand	15%
		Debt to Operating Revenues	10%
Management	20%	Rate Management	10%
		Regulatory Compliance and Capital Planning	10%
Legal Provisions	10%	Rate Covenant	5%
		Debt Service Reserve Requirement	5%
Total	100%	Total	100%

** Moody's US Municipal Utility Revenue Debt Methodology (2022)*

Reserve Targets – Financial Strength Credit Rating Factors

Factor: Financial Strength (40%)

EXHIBIT 3

Financial Strength (40%)	Aaa	Aa	A	Baa	Ba	B and Below
Annual Debt Service Coverage (15%)	> 2.00x	2.00x ≥ n > 1.70x	1.70x ≥ n > 1.25x	1.25x ≥ n > 1.00x	1.00x ≥ n > 0.70x	≤ 0.70x
Days Cash on Hand (15%)	> 250 Days	250 Days ≥ n > 150 Days	150 Days ≥ n > 35 Days	35 Days ≥ n > 15 Days	15 Days ≥ n > 7 Days	≤ 7 Days
Debt to Operating Revenues (10%)	< 2.00x	2.00x < n ≤ 4.00x	4.00x < n ≤ 7.00x	7.00x < n ≤ 8.00x	8.00x < n ≤ 9.00x	≥ 9.00x

Source: Moody's Investors Service

** Moody's US Municipal Utility Revenue Debt Methodology (2022)*

Financial Strength: MMWD vs Benchmarks

- MMWD has fallen below typical Aa benchmarks in certain financial areas

Moody's Factor	Benchmark for Aa rating	MMWD (Projected 2023)
Debt Service Coverage	>1.7x	TBD – Policy is 1.5x
Days of Cash on Hand	>150 days	111
Debt to Operating Revenue	<4.0	8.0

AWWA Benchmark*	75th Percentile	Median	25th Percentile	MMWD (Proj. 2023)
Days of Cash on Hand	485	292	191	111

** AWWA Utility Benchmarking (2017)*

MMWD Agency-Specific Reserve Planning: Cash on Hand Metric

	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Current: $0 Annual Reserve Replenishment							
Total Unrestricted Reserve	63.1	40.1	28.0	28.0	28.0	28.0	28.0
Operating Budget	87.5	88.7	92.2	99.2	104.2	109.2	114.2
Cash on Hand (Days)	***263***	***165***	***111***	***103***	***98***	***94***	***89***
Scenario 1: $5m Annual Reserve Replenishment							
Unrestricted Reserves	63.1	40.1	28.0	33.0	38.0	43.0	48.0
Cash on Hand (Days)	***263***	***165***	***111***	***121***	***133***	***144***	***153***
Scenario 2: $8m Annual Reserve Replenishment							
Unrestricted Reserves	63.1	40.1	28.0	36.0	44.0	52.0	60.0
Cash on Hand (Days)	***263***	***165***	***111***	***132***	***154***	***174***	***192***

- Replenishing the reserves by $5m per year will return MMWD to AA rating benchmarks by 2027
- Replenishing the reserves by $8m per year will return MMWD to the AA rating benchmarks by 2025
- In both scenarios, unrestricted reserves would remain below 2021 levels
- Due to annual cost increases, the operating budget will continue to grow over the next 4 years
  - Maintaining a steady cash on hand ratio would require a $2 million annual reserve contribution

Recap and Next Steps

- The District had well funded reserves in 2021
- Over the past 2 years, reserves have been depleted
  - Served as a drought reserve to offset water sales losses
- Reserve levels have fallen below industry benchmarks and need to be replenished
  - Prepare for future uncertainty
  - Maintain current credit rating
  - Facilitate strategic investments
- In order to return to industry benchmark levels, MMWD should consider a reserve replenishment target of $5m to $8 million per year for the next 4 years
  - Reserve levels and ratemaking process will impact future cost of borrowing