

# MT. CRESTED BUTTE

## Water and Sanitation District

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Water and Wastewater Rate and Tap Fee Study – Phase 2

August 30, 2018

Presented by Andrew Rheem



## AGENDA

- Project and financial planning overview
- Wastewater and water financial plans for 2018 through 2022
  - › Capital needs
  - › Proposed annual rate revenue increases and typical monthly residential bills
  - › Projected financial results
- Tap fees
- Meridian Lake Park (MLP) surcharge
- Water rates
- Wastewater rates
- Discussion and next steps





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3

## PROJECT OVERVIEW

- Update the financial plans for the water and wastewater systems for 2018 through 2022
  - › Review MLP surcharge and MLP "indebtedness"
- Evaluate water and wastewater tap fees
- Conduct cost of service analysis for both water and wastewater systems
- Design alternative water and wastewater rate structures
- MCB utilities face extensive capital needs over the 5-year planning period
  - › Capital project costs estimates have increased since Phase 1 based on recent District projects



4

## FINANCIAL PLANNING OVERVIEW

- Separate water and wastewater fund financial plans
- Project expenses from 2018 through 2022
  - › Operations and maintenance (O&M) expenses
  - › Capital expenses and external capital funding
  - › Debt service
- Project rate revenues under existing rates
- Project tap fee and miscellaneous non-rate revenues
- **Propose annual rate revenue adjustments as needed to:**
  - › Fund O&M, cash-funded capital, and debt service costs
  - › Exceed debt service coverage (DSC) ratio requirements
  - › Exceed cash reserve targets



5

## UTILITY FINANCIAL PLANNING

- Debt service coverage ratio:
 
$$\frac{\text{Revenues} - \text{O\&M expenses}}{\text{Annual debt service}}$$
  - › Existing legal requirement = 100% annual debt service
  - › Financial planning target = 150% annual debt service repaid through user charges
- No formal cash reserve policy in place
- Recommend end-of-year cash reserve targets
  - › Operating fund reserve – 90 days or 25% O&M
  - › Capital fund reserve – 2% of net assets
    - Increases as additional capital is built



6

## FINANCIAL PLANNING FUND STRUCTURE

Evaluate rate setting as separate water and wastewater funds even though District is a combined legal entity

Financial planning separates each utility into a total fund and three subfunds

- Operating Fund: Primary Fund
- Tap Fee Fund: Growth-related funding and requirements
- Capital Fund: All capital cash inflows and outflows from other sub-funds



7

## FINANCIAL PLAN

Projects utility's finances through 2022

- O&M expenses
- Debt service
- Capital projects and funding
- Reserves
- Non-rate revenues and property tax-based revenues

Factors influencing financial plan

- Customer accounts and demand for services
- Growth and redevelopment
- Inflation and additional costs of operations
- Tap fee revenues
- Capital funding decisions

Identifies annual revenues necessary to support annual requirements



8

## GROWTH, INFLATION AND CAPITAL FUNDING ASSUMPTIONS

- SFD Growth
  - › 2017: 20 (16 through August)
  - › 2018 through 2022: 15
- O&M and capital project Inflation: 3% annually
- No conservation is assumed
- Capital funding
  - › Mix of cash and debt funding



# Water Fund Financial Plan



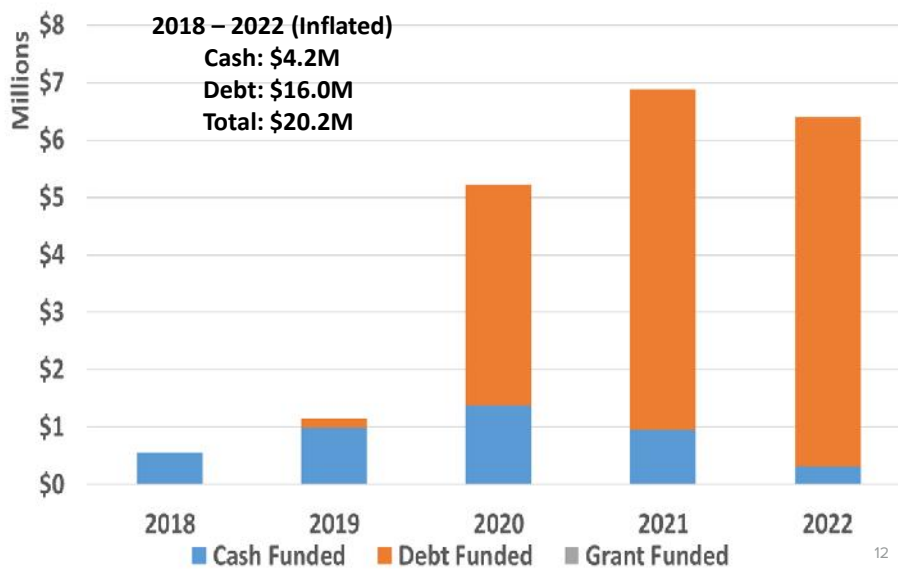
## MAJOR WATER CIP PROJECTS (in inflated dollars)

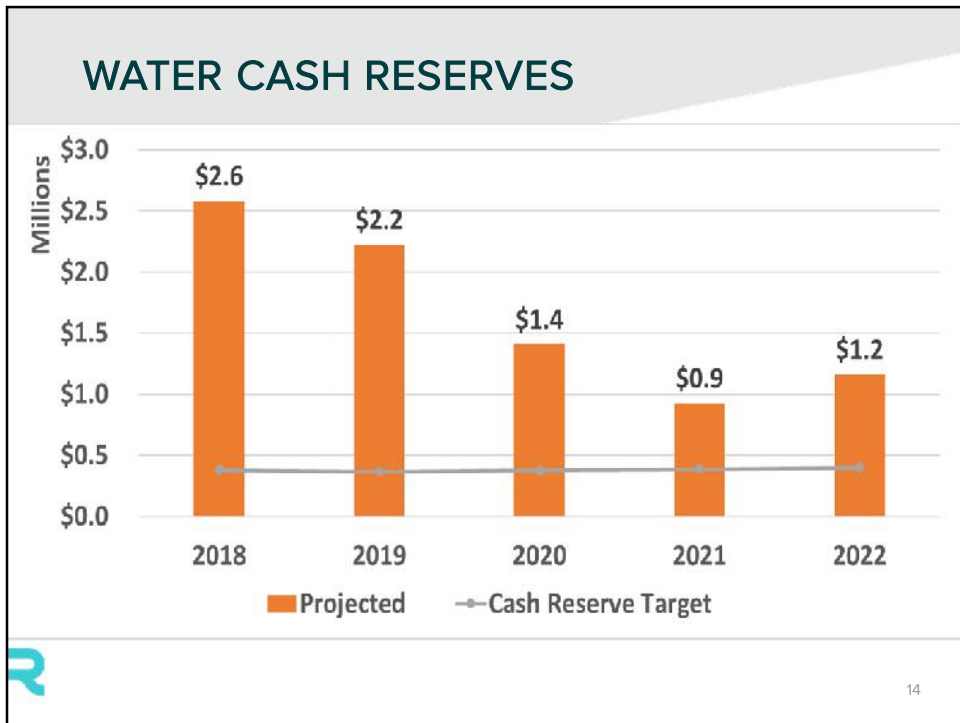
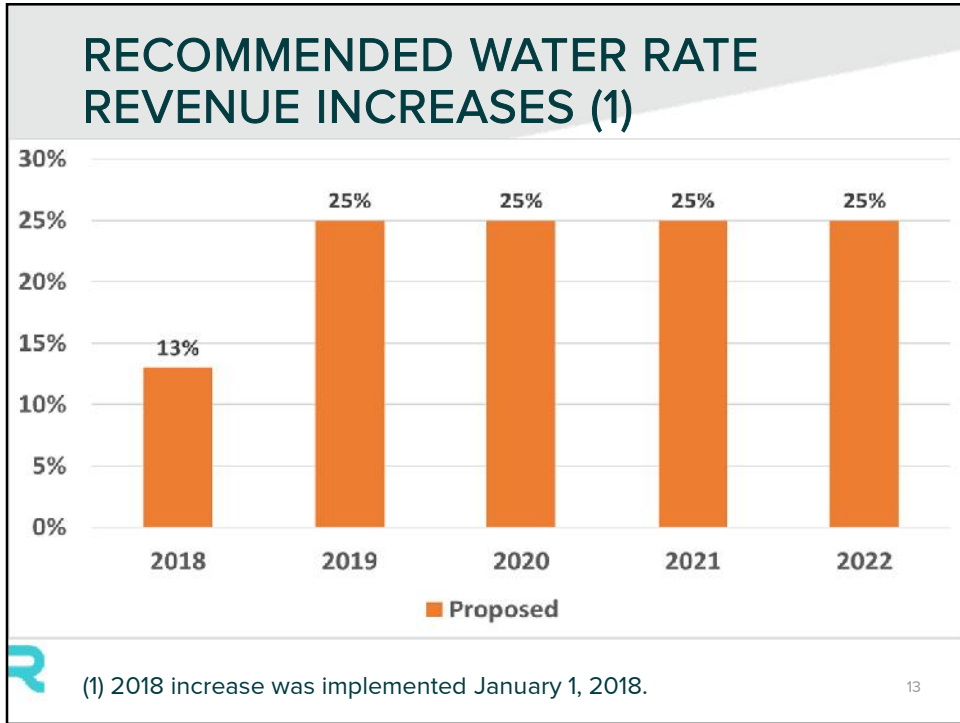
- East River Pump Station, \$2.55 million (2019 – 2020)
- East River Raw Water Line, \$1.46 million (2019 – 2020)
- East River Water Diversion, \$0.40 million (2018 – 2019)
- MCB WTP Optimization and Expansion, \$12.38 million (2019 – 2022)
- Paradise Road Water Line Replacement, \$0.61 million (2020)
- MLP Water Tank Replacement, \$0.73 million (2021)

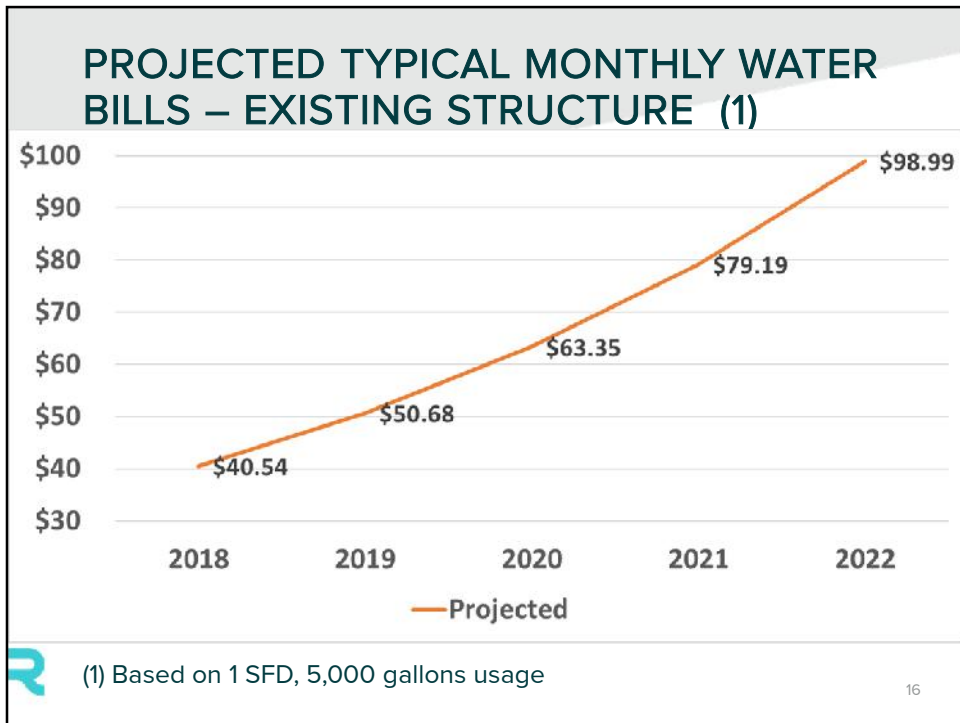
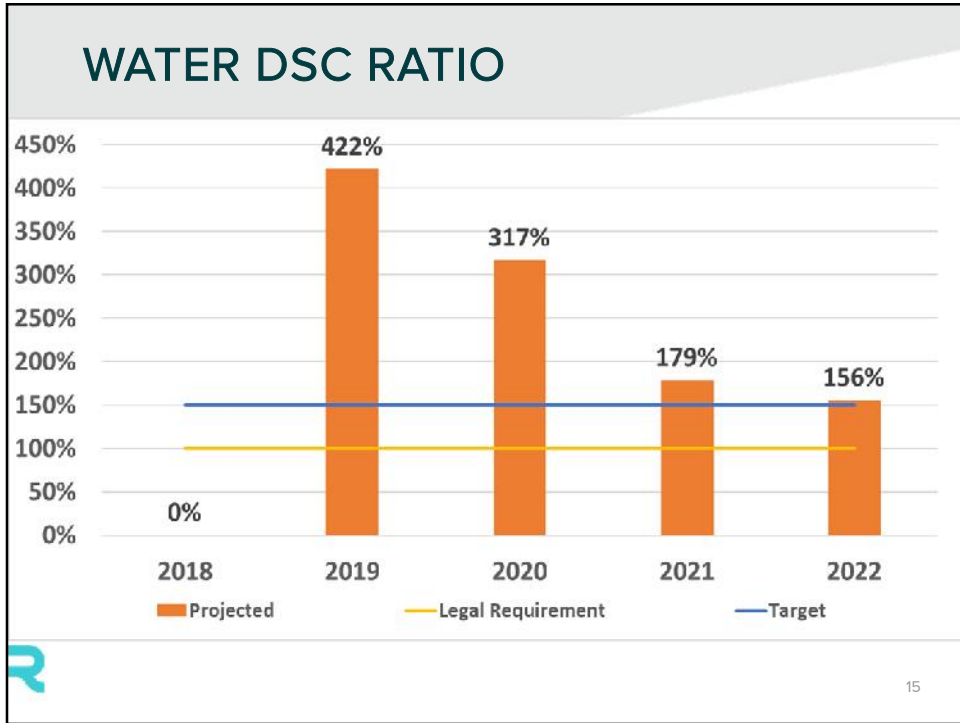


11

## WATER CIP FINANCING (Inflated \$'s)









# Wastewater Fund Financial Plan



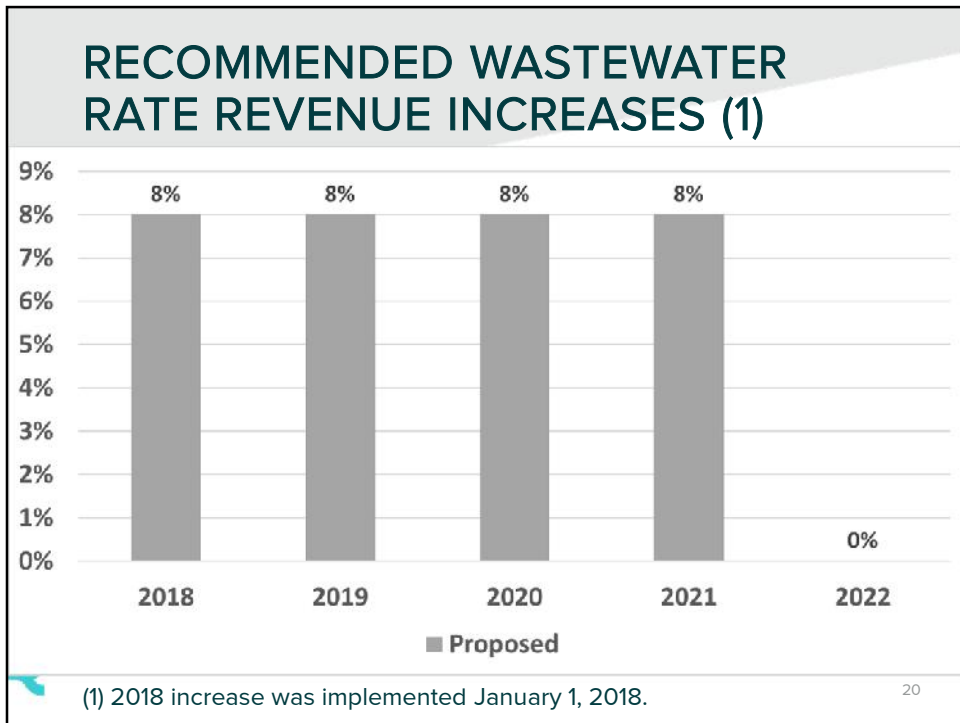
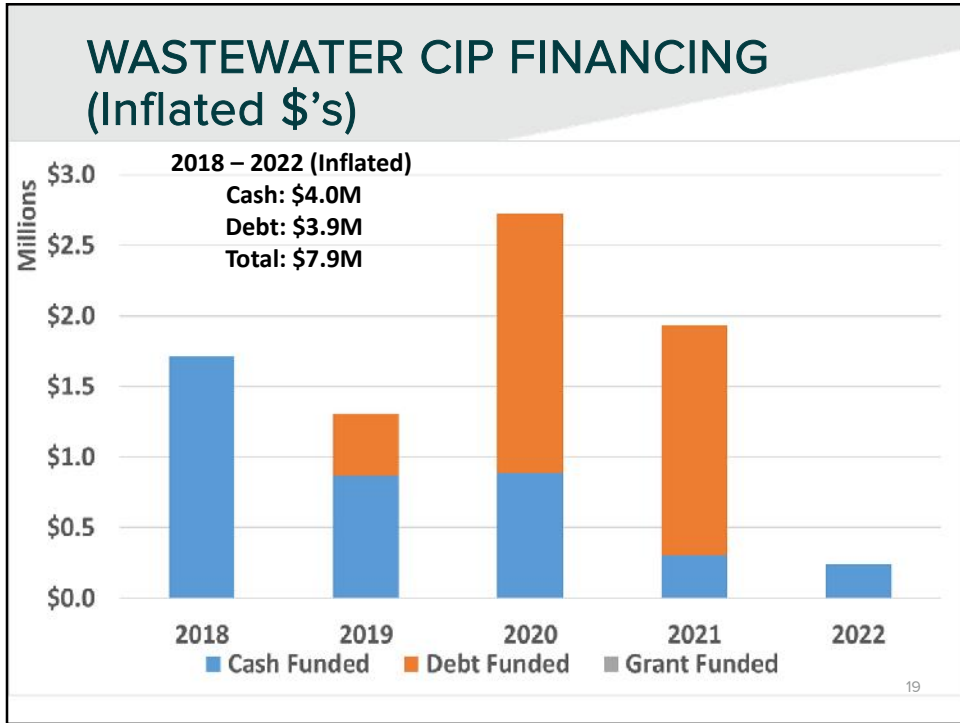
17

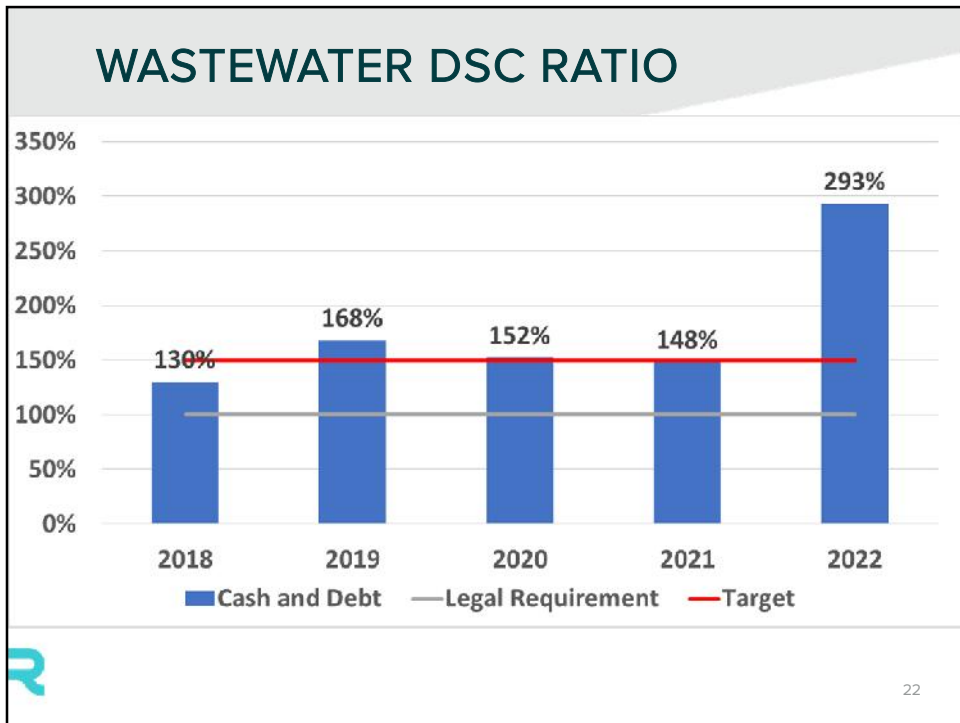
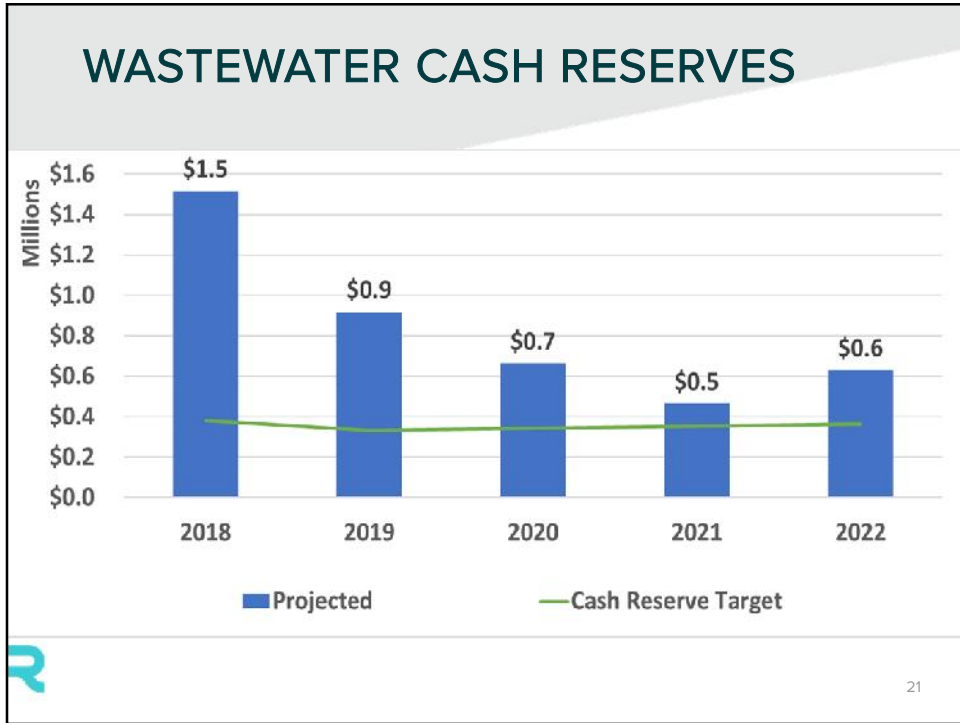
## MAJOR WASTEWATER CIP PROJECTS (in inflated dollars)

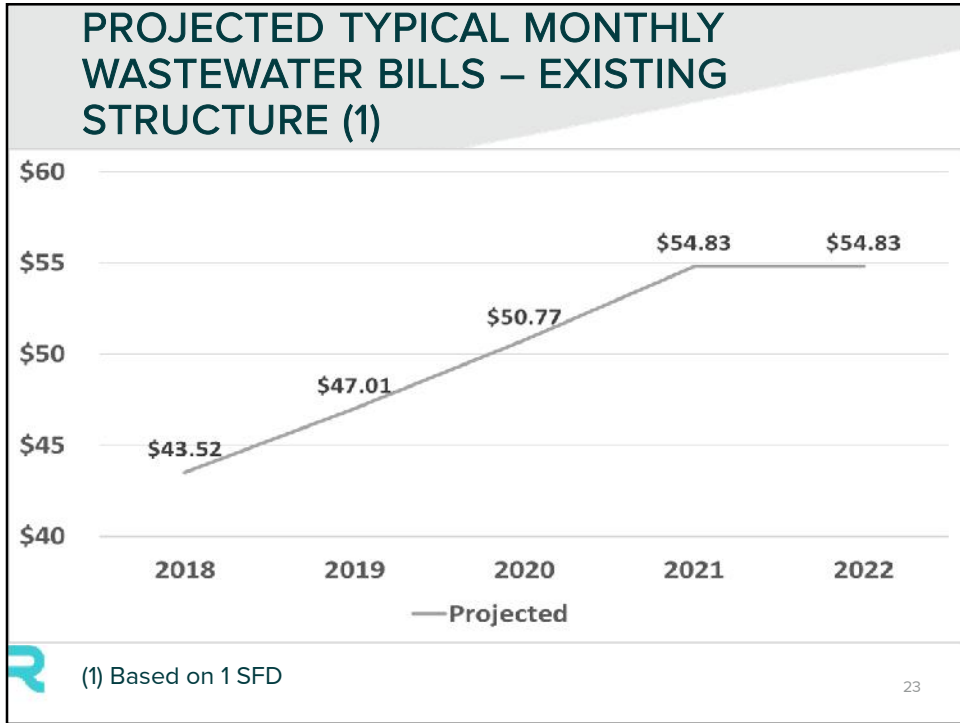
- MCB WWTP Optimization and Expansion - \$3.26 million (2018 – 2020)
- Collection System Rehabilitation – Hunter Ridge - \$1.63 million (2021)
- WWTP Process Building Roof - \$0.57 million (2018)



18







# Meridian Lake Park

24

## MLP Surcharge

- MLP lot owners pay a MLP surcharge of \$36.25 per month to repay ratepayers for previously funded capital
- Raftelis's analysis shows that MLP residents will repay District near the end of the Study Period
  - › Assuming no new MLP capital
- Raftelis identifies has two options:
  - › Continue with current surcharge payments and reconsider in 2022 with knowledge of MLP capital needs beyond the current CIP
  - › Assess a one-time fee of \$4,109 per lot in 2019 to eliminate indebtedness at once
    - Maintain the existing surcharge



25

## Tap Fees



26

## Tap Fees

- Tap fees are a one-time fee used to offset the costs of serving new development
- Raftelis analyzed the District's water and wastewater tap fees
- Raftelis recommends maintaining current tap fee levels
- The financial plan assumes current tap fees are maintained



27

## Cost of Service



28

## Cost of Service

- Cost of service (COS) analysis helps guide how costs are recovered from customers
- Results of COS can inform how rates are designed (e.g., what costs are recovered through fixed vs. variable rates)
- This COS analysis uses a 2019 test-year



29

## Water Rates



30

## EXISTING WATER RATE STRUCTURE - 2018 AND 2019

Description	Volume (gallons)	Annual Volume Use (%)	2018 Amount	2019 Amount	Assessment
Monthly Min. Charge	N/A	N/A	\$40.54	\$50.68	\$ / SFD
<b>Volume Rate</b>					
Tier 1	0 to 11,000	78.4%	\$0.00	\$0.00	\$ / 1,000 gal.
Tier 2	11,001 to 20,000	9.0%	3.33	4.16	\$ / 1,000 gal.
Tier 3	20,001 to 30,000	5.4%	3.66	4.58	\$ / 1,000 gal.
Tier 4	30,001 to 40,000	2.8%	4.00	5.00	\$ / 1,000 gal.
Tier 5	Over 40,000	4.4%	4.33	5.39	\$ / 1,000 gal.



31

## DESIGNING WATER RATES TO PROMOTE CONSERVATION

- Increasing block rates can be used to promote conservation
- Rate design can influence effectiveness of conservation
  - › Fixed vs. variable cost recovery
  - › Number of tiers
  - › Tier widths / breakpoints
  - › Rate multiplier
- Steeper rate multipliers increase conservation signals
- Increased conservation pricing will reduce revenue stability



32



## ALTERNATIVE WATER RATE STRUCTURE – 2019

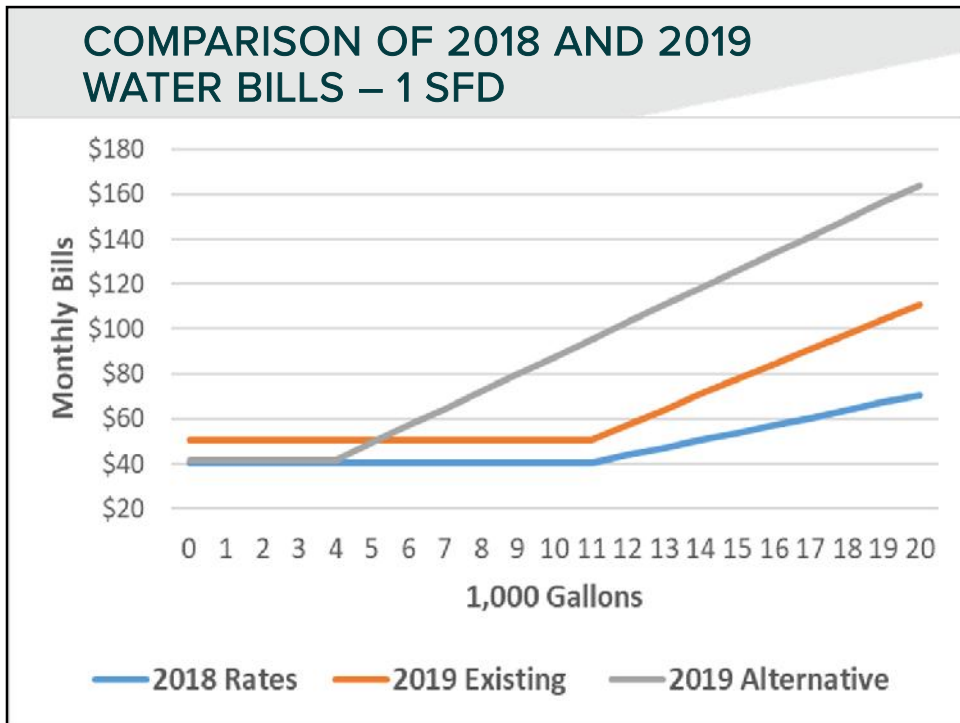
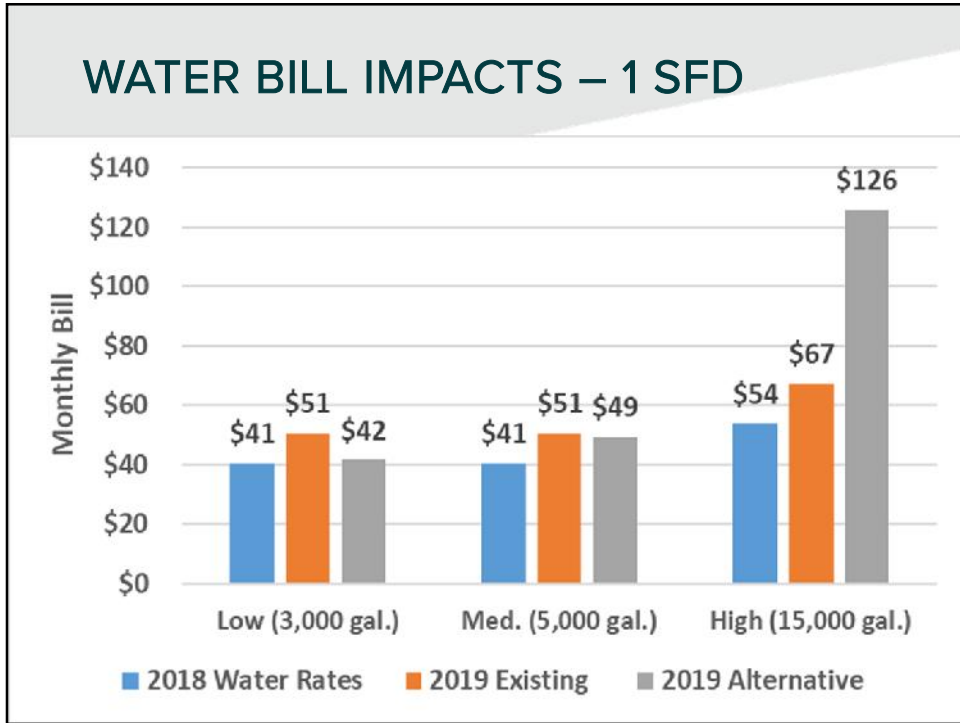
Description	Volume (gallons)	Annual Volume Use (%)	2019 Amount	Assessment
Monthly Min. Charge	N/A	N/A	41.67	\$ / SFD
<b>Volume Rate</b>				
Tier 1	0 to 4,000	59.2%	0.00	\$ / 1,000 gal.
Tier 2	4,001 to 20,000	30.2%	7.65	\$ / 1,000 gal.
Tier 3	20,001 to 40,000	6.7%	11.48	\$ / 1,000 gal.
Tier 4	Over 40,000	3.9%	15.30	\$ / 1,000 gal.

33

## REVENUE BY RATE STRUCTURE COMPARED

Description	Existing Rate Structure		Alternative Rate Structure	
	Volume (gallons)	Percent of Revenue	Volume (gallons)	Percent of Revenue
Monthly Min. Charge	N/A	93.6%	N/A	76.6%
Tier 1	0 to 11,000	0.0%	0 to 4,000	0.0%
Tier 2	11,001 to 20,000	2.4%	4,001 to 20,000	14.7%
Tier 3	20,001 to 30,000	1.6%	20,001 to 40,000	4.9%
Tier 4	30,001 to 40,000	0.9%	Over 40,000	3.8%
Tier 5	Over 40,000	1.5%	N/A	N/A

34



# Wastewater Rates

37

## WASTEWATER RATE STRUCTURE DESIGN CONSIDERATIONS

- Current rates are charged per SFD and have no volume component
- Volume rate can improve equity between lower and higher-volume dischargers
- A wastewater volume rate may have a slight water conservation effect
- Provides customers with more ability to influence their bill
- Volume rates would be charged according to an Average Winter Consumption (AWC), an average of water use between December and March

38

## EXISTING AND ALTERNATIVE 2019 RATE STRUCTURES

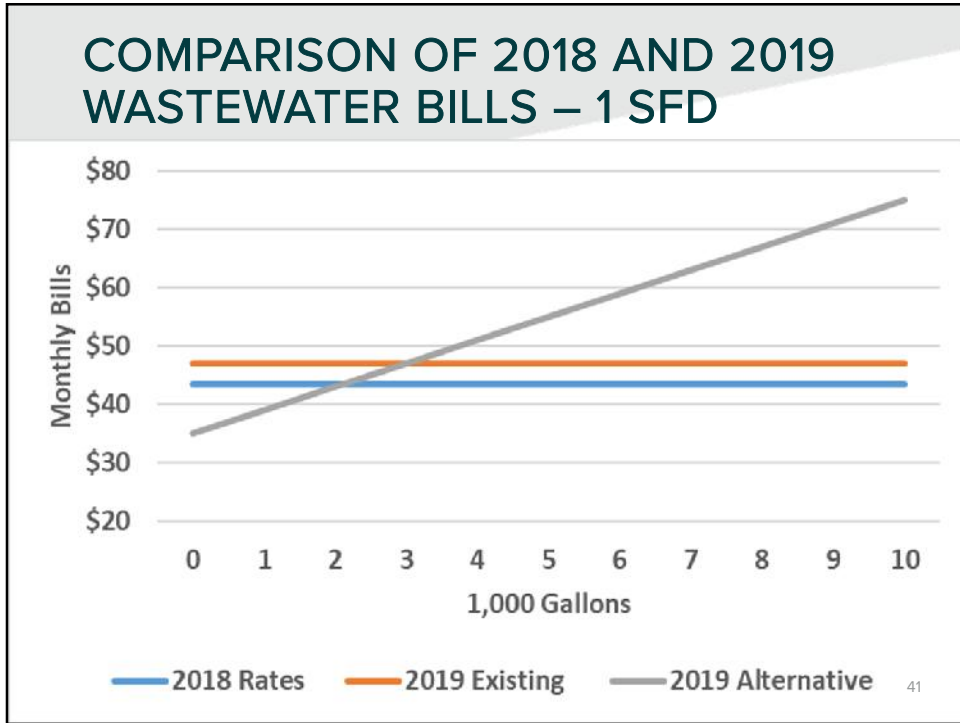
Description	Existing Rate Structure		Alternative Rate Structure	
	Amount	Percent of Revenue	Amount	Percent of Revenue
Monthly Min. Charge	\$47.00 / SFD	100%	\$35.00 / SFD	76%
Volume Rate (1)	N/A	0%	\$4.00 / 1,000 gal.	24%

(1) Based on December to March AWC



## WASTEWATER BILL IMPACTS – 1 SFD





# Discussion

42

# Thank you!

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