

McKinleyville Community Services District

Water and Wastewater Rate Study

September 5, 2018



Issues Driving the Rate Study

- Fiscally responsible to regularly develop a financial plan and complete a comprehensive rate study
- Utility financial needs
 - Increasing operating costs
 - Current and anticipated debt service needs
 - Ongoing capital expenditures
 - Reserves for future capital projects
- Enterprise self sufficiency – Water vs. Sewer, vs. other District operations and services

Rate Study Objectives

Primary goals and objectives of the water and wastewater rate study include:

- Full cost recovery of utility expenditures
- Financial sufficiency and stability, 5-year financial plan
- Cost-based rate structure, compliant with Prop 218
- Equity among customer classes
- Administrative efficiency
- Consistency with industry standards

Projected Operating Results

Existing Water Summary

Description	Existing Rates	Projected For Fiscal Year Ending June 30:				
		2019	2020	2021	2022	2023
Revenues:						
User Rate Revenues	\$ 3,301,951	\$ 3,309,788	\$ 3,388,683	\$ 3,474,574	\$ 3,562,649	\$ 3,654,076
Other Revenues	295,758	295,758	310,243	325,393	341,442	358,222
Total Revenues	\$ 3,597,709	\$ 3,605,546	\$ 3,698,926	\$ 3,799,967	\$ 3,904,090	\$ 4,012,297
Percentage Rate Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%
System Expenditures:						
O&M Costs	\$ 2,459,940	\$ 2,459,940	\$ 2,577,596	\$ 2,693,922	\$ 2,821,799	\$ 2,957,276
Debt Service (P&I)	263,724	263,724	486,928	686,122	740,245	812,927
R&R Transfer	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Total Operating & Non-Operating	\$ 3,723,664	\$ 3,723,664	\$ 4,064,524	\$ 4,380,044	\$ 4,562,043	\$ 4,770,203
Revenue Excess (Deficiency)	\$ (125,955)	\$ (118,118)	\$ (365,598)	\$ (580,076)	\$ (657,953)	\$ (757,906)
Debt Service Coverage	4.31	4.34	2.30	1.61	1.46	1.30

Projected Operating Results

Existing Wastewater Summary

Description	Existing Rates	Projected For Fiscal Year Ending June 30:				
		2019	2020	2021	2022	2023
Revenues:						
User Rate Revenues	\$ 3,303,500	\$ 3,303,390	\$ 3,348,770	\$ 3,394,720	\$ 3,443,480	\$ 3,492,970
Other Revenues	196,164	196,164	203,226	210,542	218,122	225,974
Total Revenues	\$ 3,499,664	\$ 3,499,554	\$ 3,551,996	\$ 3,605,262	\$ 3,661,602	\$ 3,718,944
Percentage Rate Adjustment		0.00%	0.00%	0.00%	0.00%	0.00%
System Expenditures:						
O&M Costs	\$ 1,858,870	\$ 1,858,870	\$ 1,935,682	\$ 2,009,794	\$ 2,087,439	\$ 2,171,401
Debt Service (P&I)	947,439	947,439	1,233,749	1,266,129	1,262,129	1,256,023
R&R Transfer	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Total Operating & Non-Operating	\$ 3,806,309	\$ 3,806,309	\$ 4,169,431	\$ 4,275,923	\$ 4,349,568	\$ 4,427,424
Revenue Excess (Deficiency)	\$ (306,645)	\$ (306,755)	\$ (617,435)	\$ (670,661)	\$ (687,966)	\$ (708,480)
Debt Service Coverage	1.73	1.73	1.31	1.26	1.25	1.23

Proposed Structural Changes - Water

- Monthly base charges
 - Increment by meter size in accordance with AWWA meter equivalency factors
 - Utilize a 5-year phasing approach to mitigate rate increase impacts
- Volumetric Rates
 - Maintain two-tiered conservation structure

Proposed Structural Changes - Wastewater

- Monthly base charges
 - Increment by meter size in accordance with AWWA meter equivalency factors
- Volumetric rates
 - No structural revisions
 - Maintain rates based on land use class

Base Charge ERU Factors

Meter Size	AWWA Factors ⁽¹⁾	CSD's Existing Factors	
		Water	Wastewater
5/8"	1.00	1.00	1.00
3/4"	1.50	1.31	1.00
1.0"	2.50	1.92	1.00
1.5"	5.00	3.46	1.00
2.0"	8.00	5.31	1.00
3.0"	16.00	9.62	1.00
4.0"	25.00	15.78	1.00
6.0"	50.00	31.17	1.00
8.0"	80.00	49.64	1.00

(1) Meter-size equivalency factors established by the AWWA and identified in AWWA Standards C700, M1 and M22, as well as WEF Manual of Practice No. 27.

Proposed Meter Factor Phasing Approach - Water

Meter Size	Existing Factors	Phasing Implementation				
		Year 1	Year 2	Year 3	Year 4	Year 5
5/8"	1.00	1.00	1.00	1.00	1.00	1.00
3/4"	1.31	1.35	1.39	1.43	1.47	1.50
1.0"	1.92	2.04	2.16	2.28	2.40	2.50
1.5"	3.46	3.77	4.08	4.39	4.70	5.00
2.0"	5.31	5.85	6.39	6.93	7.47	8.00
3.0"	9.62	10.90	12.18	13.46	14.74	16.00
4.0"	15.78	17.64	19.50	21.36	23.22	25.00
6.0"	31.17	34.94	38.71	42.48	46.25	50.00
8.0"	49.64	55.72	61.80	67.88	73.96	80.00

Proposed Plan Water & Wastewater



Projected Operating Results

Water Summary

Description	Existing Rates	Projected For Fiscal Year Ending June 30:				
		2019	2020	2021	2022	2023
Revenues:						
User Rate Revenues	\$ 3,301,951	\$ 3,394,078	\$ 3,650,743	\$ 3,917,744	\$ 4,190,549	\$ 4,434,226
Other Revenues	295,758	295,758	310,243	325,393	341,442	358,222
Total Revenues	\$ 3,597,709	\$ 3,689,836	\$ 3,960,986	\$ 4,243,137	\$ 4,531,990	\$ 4,792,447
Percentage Rate Adjustment		7.00%	7.00%	6.00%	6.00%	3.00%
System Expenditures:						
O&M Costs	\$ 2,459,940	\$ 2,459,940	\$ 2,577,596	\$ 2,693,922	\$ 2,821,799	\$ 2,957,276
Debt Service (P&I)	263,724	263,724	486,928	686,122	740,245	812,927
R&R Transfer	960,000	960,000	890,000	860,000	960,000	1,000,000
Total Operating & Non-Operating	\$ 3,683,664	\$ 3,683,664	\$ 3,954,524	\$ 4,240,044	\$ 4,522,043	\$ 4,770,203
Revenue Excess (Deficiency)	\$ (85,955)	\$ 6,172	\$ 6,462	\$ 3,094	\$ 9,947	\$ 22,244
Debt Service Coverage	4.31	4.66	2.84	2.26	2.31	2.26

Projected Operating Results

Wastewater Summary

Description	Existing Rates	Projected For Fiscal Year Ending June 30:				
		2019	2020	2021	2022	2023
Revenues:						
User Rate Revenues	\$ 3,303,500	\$ 3,419,690	\$ 3,835,860	\$ 4,004,460	\$ 4,181,750	\$ 4,371,210
Other Revenues	196,164	196,164	203,226	210,542	218,122	225,974
Total Revenues	\$ 3,499,664	\$ 3,615,854	\$ 4,039,086	\$ 4,215,002	\$ 4,399,872	\$ 4,597,184
Percentage Rate Adjustment		7.00%	7.00%	3.00%	3.00%	3.00%
System Expenditures:						
O&M Costs	\$ 1,858,870	\$ 1,858,870	\$ 1,935,682	\$ 2,009,794	\$ 2,087,439	\$ 2,171,401
Debt Service (P&I)	947,439	947,439	1,233,749	1,266,129	1,262,129	1,256,023
R&R Transfer	800,000	800,000	860,000	930,000	1,000,000	1,000,000
Total Operating & Non-Operating	\$ 3,606,309	\$ 3,606,309	\$ 4,029,431	\$ 4,205,923	\$ 4,349,568	\$ 4,427,424
Revenue Excess (Deficiency)	\$ (106,645)	\$ 9,545	\$ 9,655	\$ 9,079	\$ 50,304	\$ 169,760
Debt Service Coverage	1.73	1.85	1.70	1.74	1.83	1.93

Proposed Water Rates – FY 2019 –

Description	Proposed Rates	
	Water	
Monthly Base Charge:		
5/8 Inch	\$	16.47
3/4 Inch	\$	22.23
1.0 Inch	\$	33.60
1.5 Inch	\$	62.09
2.0 Inch	\$	96.35
3.0 Inch	\$	179.52
4.0 Inch	\$	290.53
6.0 Inch	\$	575.46
8.0 Inch	\$	917.71

Volumetric Per 100 CF:

Block 1 - 0 to 8 CCF / Month	\$	1.57
Block 2 - All Over 8 CCF / Month	\$	3.93

The proposed base charges represent the first year of a 5-year phase-in plan

Proposed Wastewater Rates – FY 2019

Description	Proposed Rates	
	Wastewater	
Monthly Base Charge:		
All Customers	\$	30.47
Volumetric Per 100 CF:		
2 sewer Units/Commercial	\$	3.06
Apartment/Multi Unit (Each)	\$	2.55
Bakery	\$	10.43
Barber/Beauty Shop	\$	2.63
Car Wash	\$	1.58
Church & Residence	\$	4.39
Churches	\$	3.06
Coast Guard Station/Airport	\$	3.06
Coming Attractions	\$	2.63
Dialysis Clinic	\$	2.98
Fire Station/School	\$	2.12
Gas Stations (No Market)	\$	3.29
Laundromats	\$	2.32

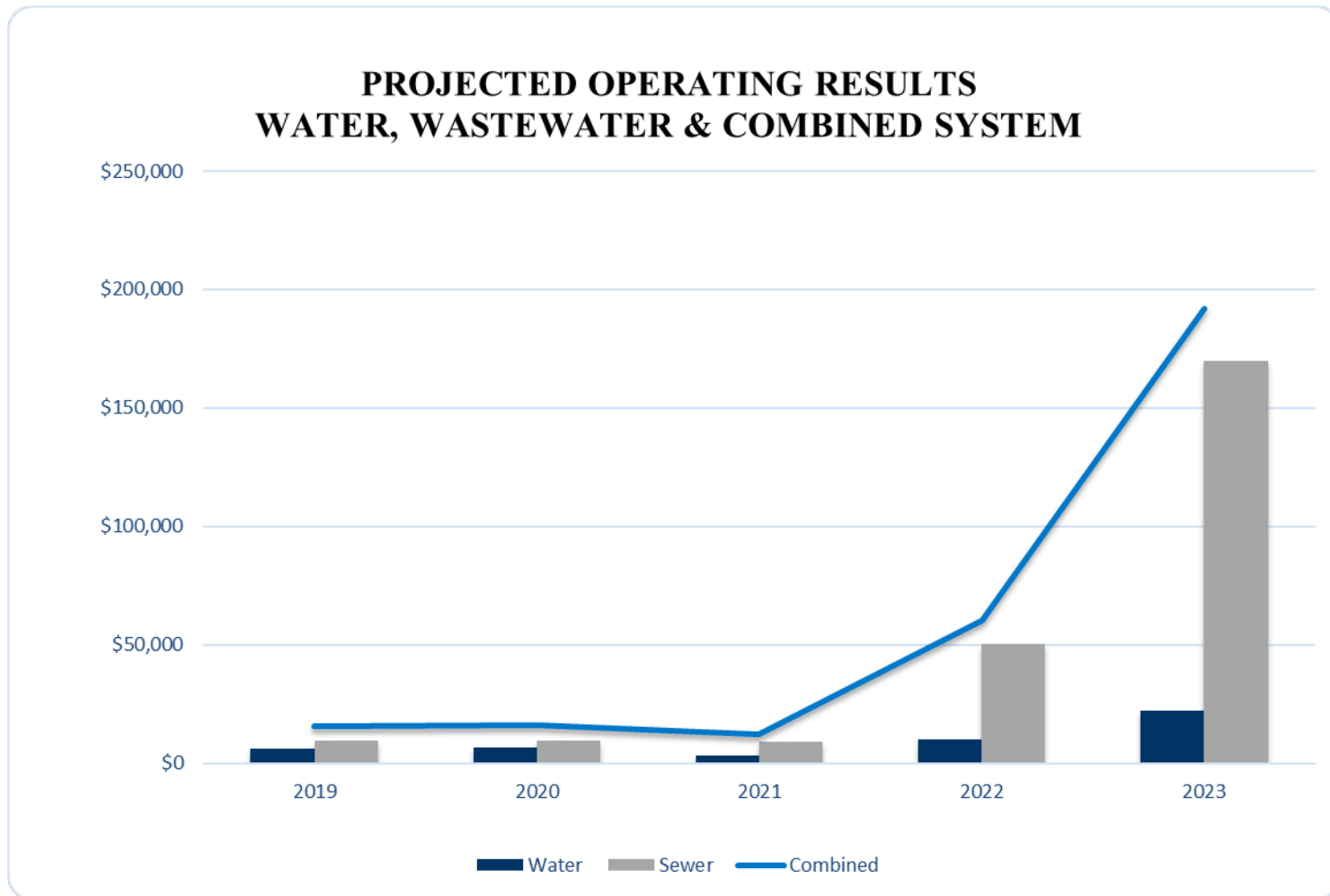
Proposed Wastewater Rates – FY 2019 Cont.

Description	Proposed Rates	
	Wastewater	

Volumetric Per 100 CF:

Market	\$	10.00
Metered Septage Vault	\$	4.39
Moblle Homes (Each)	\$	2.55
Motels/Hotels	\$	6.96
Office Building/Post Office	\$	2.63
Restaurant/Tavern	\$	10.43
Retail/Banks/Theater/Other	\$	3.06
Round Table/Market	\$	8.52
Sewer Only Accounts	\$	0.00
Sewer Units - Commercial	\$	3.29
Single Family Residential	\$	2.55
Two Sewer Units/Business	\$	3.06
Two Sewer Units/Daycare	\$	2.96
Brewery	\$	5.10

Projected Operating Results Proposed Rates



Customer Impact Analysis

Water

Description	Monthly Usage	Monthly Charges		\$ Amount Difference
		Existing	Proposed	
Residential:				
Customer 1	0	\$ 15.39	\$ 16.47	\$ 1.08
Customer 2	200	\$ 21.13	\$ 22.77	\$ 1.64
Customer 3	400	\$ 26.87	\$ 29.07	\$ 2.20
Customer 4	600	\$ 32.61	\$ 35.37	\$ 2.76
Customer 5	800	\$ 38.35	\$ 41.67	\$ 3.32
Customer 6	1,000	\$ 48.47	\$ 52.69	\$ 4.22
Customer 7	1,200	\$ 58.59	\$ 63.71	\$ 5.12
Customer 8	1,400	\$ 68.71	\$ 74.73	\$ 6.02
Customer 9	1,600	\$ 78.83	\$ 85.75	\$ 6.92
Customer 10	1,800	\$ 88.95	\$ 96.77	\$ 7.82
Customer 11	2,000	\$ 99.07	\$ 107.79	\$ 8.72
Customer 12	2,200	\$ 109.19	\$ 118.81	\$ 9.62
Customer 13	2,400	\$ 119.31	\$ 129.83	\$ 10.52
Customer 14	2,600	\$ 129.43	\$ 140.85	\$ 11.42
Customer 15	2,800	\$ 139.55	\$ 151.87	\$ 12.32

Customer Impact Analysis

Wastewater

Description	Monthly Flow (CF)	Monthly Charges		\$ Amount Difference
		Existing	Proposed	
Residential:				
Customer 1	0	\$ 28.48	\$ 30.47	\$ 1.99
Customer 2	200	\$ 33.24	\$ 35.57	\$ 2.33
Customer 3	400	\$ 38.00	\$ 40.67	\$ 2.67
Customer 4	600	\$ 42.76	\$ 45.77	\$ 3.01
Customer 5	800	\$ 47.52	\$ 50.87	\$ 3.35
Customer 6	1,000	\$ 52.28	\$ 55.97	\$ 3.69
Customer 7	1,200	\$ 57.04	\$ 61.07	\$ 4.03
Customer 8	1,400	\$ 61.80	\$ 66.17	\$ 4.37
Customer 9	1,600	\$ 66.56	\$ 71.27	\$ 4.71
Customer 10	1,800	\$ 71.32	\$ 76.37	\$ 5.05
Customer 11	2,000	\$ 76.08	\$ 81.47	\$ 5.39
Customer 12	2,200	\$ 80.84	\$ 86.57	\$ 5.73
Customer 13	2,400	\$ 85.60	\$ 91.67	\$ 6.07
Customer 14	2,600	\$ 90.36	\$ 96.77	\$ 6.41
Customer 15	2,800	\$ 95.12	\$ 101.87	\$ 6.75

Customer Impact Analysis

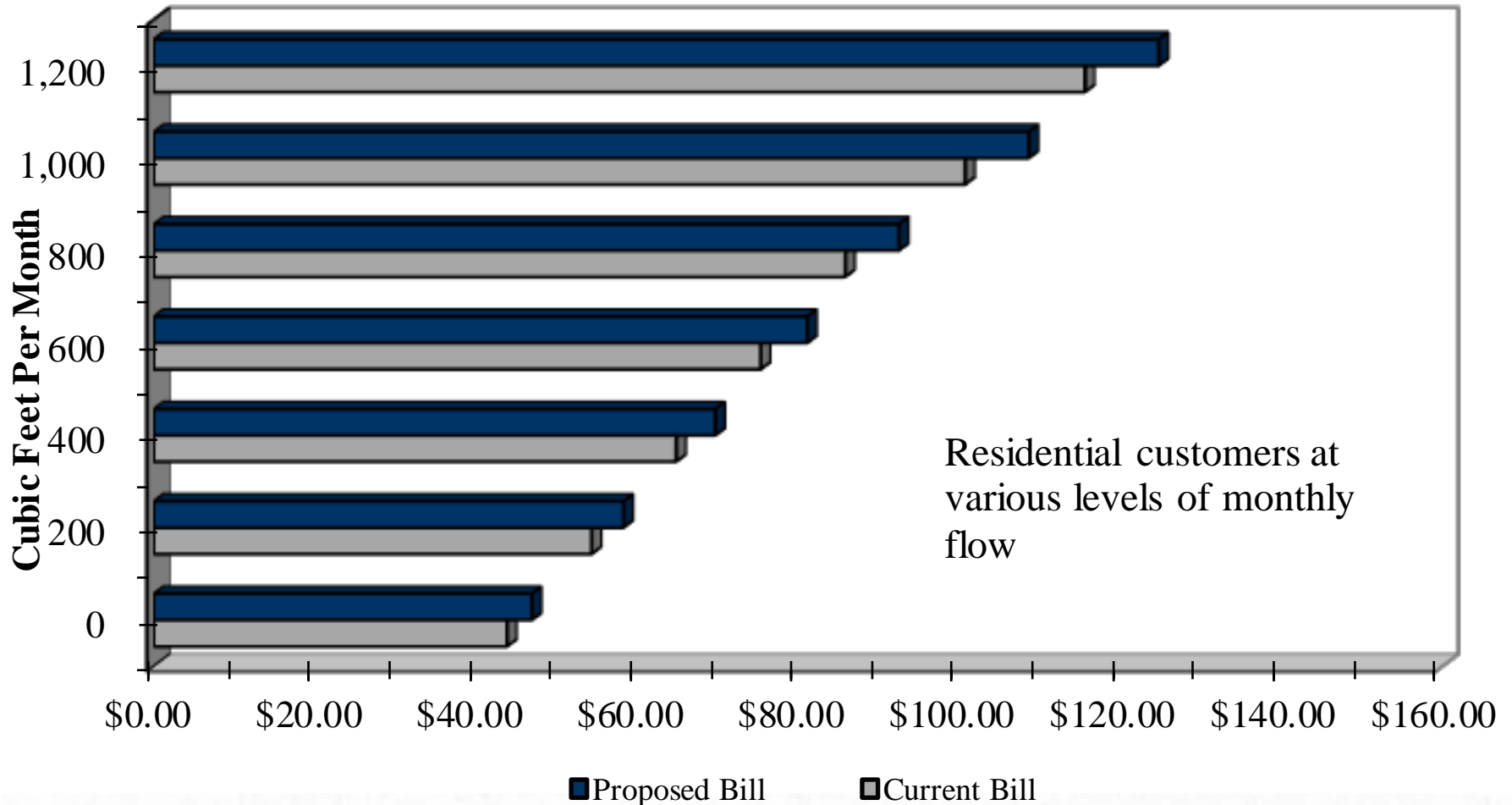
Combined Water/Wastewater

Description	Monthly Usage	Monthly Charges		\$ Amount Difference
		Existing	Proposed	
Residential:				
Customer 1	0	\$ 43.87	\$ 46.94	\$ 3.07
Customer 2	200	\$ 54.37	\$ 58.34	\$ 3.97
Customer 3	400	\$ 64.87	\$ 69.74	\$ 4.87
Customer 4	600	\$ 75.37	\$ 81.14	\$ 5.77
Customer 5	800	\$ 85.87	\$ 92.54	\$ 6.67
Customer 6	1,000	\$ 100.75	\$ 108.66	\$ 7.91
Customer 7	1,200	\$ 115.63	\$ 124.78	\$ 9.15
Customer 8	1,400	\$ 130.51	\$ 140.90	\$ 10.39
Customer 9	1,600	\$ 145.39	\$ 157.02	\$ 11.63
Customer 10	1,800	\$ 160.27	\$ 173.14	\$ 12.87
Customer 11	2,000	\$ 175.15	\$ 189.26	\$ 14.11
Customer 12	2,200	\$ 190.03	\$ 205.38	\$ 15.35
Customer 13	2,400	\$ 204.91	\$ 221.50	\$ 16.59
Customer 14	2,600	\$ 219.79	\$ 237.62	\$ 17.83
Customer 15	2,800	\$ 234.67	\$ 253.74	\$ 19.07

Customer Impact Analysis – Illustration

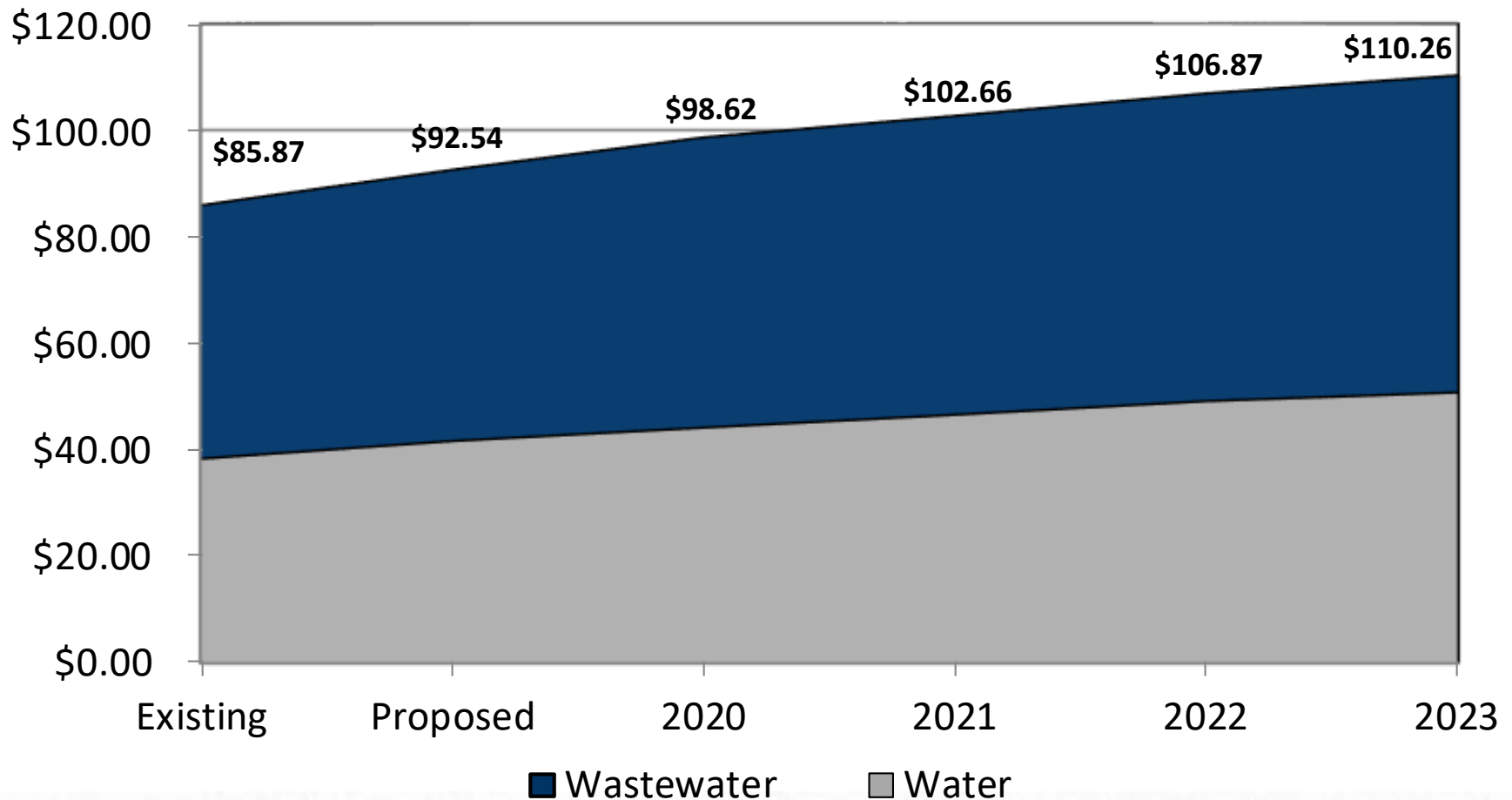
Water/Wastewater

TYPICAL BILL COMPARISON COMBINED WATER AND WASTEWATER BILL



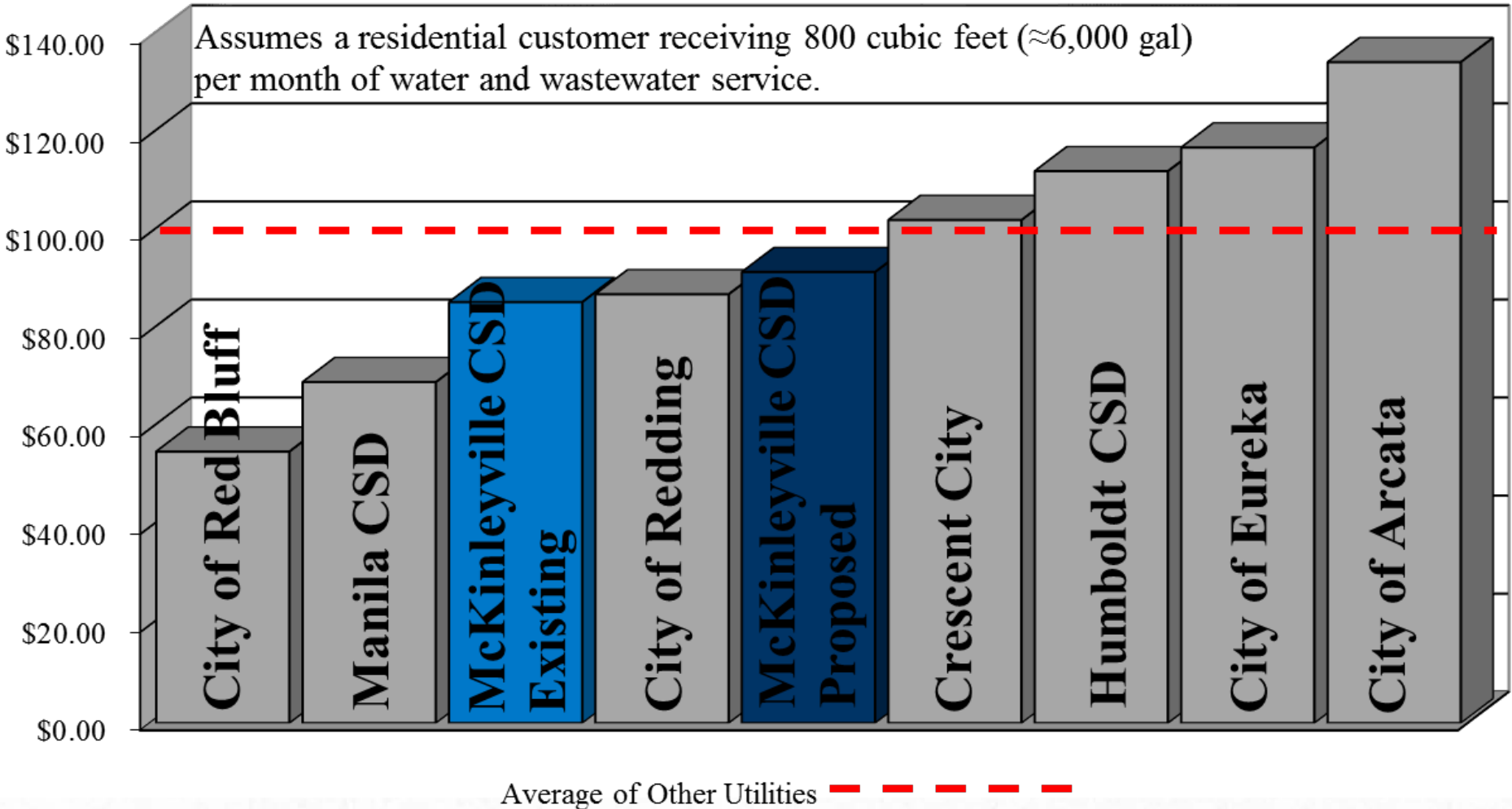
Graph of Projected Rate Path – Typical Bill

PROJECTED 5-YEAR RATE PATH COMBINED WATER & WASTEWATER 800 CUBIC FEET (≈6,000 GAL) PER MONTH



Neighboring Utility Comparison – 800 CF Residential Customer

Assumes a residential customer receiving 800 cubic feet ($\approx 6,000$ gal) per month of water and wastewater service.

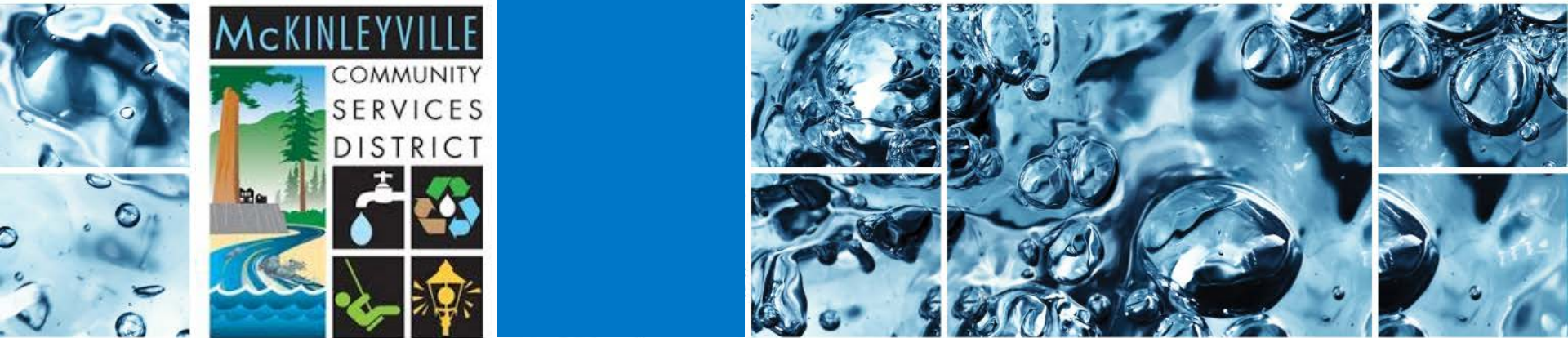


Conclusions

- Proposed rates would generate sufficient revenue to meet ongoing operating, maintenance and capital improvement needs
- Based on discussions and District Staff direction, the mid-option is recommended to balance MCSD financial goals with limiting customer impact
- Proposed rates are equitable, consistent with industry standards, and Proposition 218 compliant
- Consider annual financial analysis updates to adapt assumptions and update funding requirements
- Board has discretion when implementing approved annual increases in future years

Appendix

Additional Supporting Information



Existing Rate Structure - Water

Two component rate structure as follows:

- **Base Charge**

- Minimum amount per metered connection
- Same for commercial and residential
- Based on meter size

- **Volumetric Charges**

- Inclining block structure (two tiers)
- Same rates for commercial and residential
- Charged per 100 cubic feet of metered/billable flow

Existing Rate Structure - Wastewater

- Monthly base charges
 - Uniform charge for all customers
 - Same charge regardless of connection size
- Volumetric charges
 - Charge based on land use class
 - Different rates based on customer land use class

Existing Rates – Water

Description	Existing Rates	
	Water	
Monthly Base Charge:		
5/8 Inch	\$	15.39
3/4 Inch	\$	20.13
1.0 Inch	\$	29.60
1.5 Inch	\$	53.29
2.0 Inch	\$	81.72
3.0 Inch	\$	148.05
4.0 Inch	\$	242.81
6.0 Inch	\$	479.70
8.0 Inch	\$	763.98
Volumetric Per 100 CF:		
Block 1 - 0 to 8 CCF / Month	\$	1.47
Block 2 - All Over 8 CCF / Month	\$	3.66
Pass-through Charge (P/HCF)	\$	1.40

Existing Rates – Wastewater

Description	Existing Rates	
	Wastewater	
Monthly Base Charge:		
All Customers	\$	28.48
Volumetric Per 100 CF:		
2 sewer Units/Commercial	\$	2.98
Apartment/Multi Unit (Each)	\$	2.38
Bakery	\$	9.20
Barber/Beauty Shop	\$	2.46
Car Wash	\$	1.79
Church & Residence	\$	4.51
Churches	\$	2.98
Coast Guard Station/Airport	\$	2.98
Coming Attractions	\$	2.46
Dialysis Clinic	\$	2.70
Fire Station/School	\$	2.09
Gas Stations (No Market)	\$	3.30
Laundromats	\$	2.25

Existing Rates – Wastewater Continued

Description	Existing Rates Wastewater	
Volumetric Per 100 CF:		
Market	\$	9.24
Metered Septage Vault	\$	4.58
Mobile Homes (Each)	\$	2.38
Motels/Hotels	\$	6.64
Office Building/Post Office	\$	2.46
Restaurant/Tavern	\$	9.20
Retail/Banks/Theater/Other	\$	2.98
Round Table/Market	\$	7.94
Sewer Only Accounts	\$	0.00
Sewer Units - Commercial	\$	3.30
Single Family Residential	\$	2.38
Two Sewer Units/Business	\$	2.98
Two Sewer Units/Daycare	\$	2.89