



City of McKinney

2016 Water and Wastewater

Rate Study and Financial Forecast

City Council Briefing

August 2016

Facts about Water and WW Rates in the 21st Century



- ◆ Average utility has been increasing rates 5-6% per year; trend expected to continue
- ◆ Rate adjustments are primarily due to reasons beyond a utility's control – inflation, system replacement, etc.
- ◆ 30-40% of utilities currently charge rates that do not cover their costs
- ◆ General rule: a utility can have low rates or high quality service but NOT both!

City of McKinney

Current Water Rate Structure



Water Monthly Rates

Residential Rates

Minimum Charge	\$	13.74
Volume Rate (per 1,000 Gallons)		
0 - 20,000		3.79
20,001 - 40,000		4.73
40,001 - Above		5.68

Residential Outside Rates*

Minimum Charge	\$	15.80
Volume Rate (per 1,000 Gallons)		
0 - 20,000		4.36
20,001 - 40,000		5.44
40,001 - Above		6.53

Commercial Rates

Minimum Charge - Meter Size		
3/4" Meter	\$	13.74
1" Meter		24.07
1 1/2" Meter		41.25
2" Meter		57.77
3" Meter		101.79
4" Meter		151.30
6" Meter		282.01
8" Meter		557.11
Volume Rate (per 1,000 Gallons)		
0 - Above		3.79

* 15% multiplier applied to all Outside City customer rates.

Water Monthly Rates

Municipal Rates

Volume Rate (per 1,000 Gallons)		
0 - Above	\$	2.84

Irrigation Rates

Minimum Charge - Meter Size		
3/4" Meter	\$	13.74
1" Meter		24.07
1 1/2" Meter		41.25
2" Meter		57.77
3" Meter		101.79
4" Meter		151.30
6" Meter		282.01
8" Meter		557.11

Volume Rate (per 1,000 Gallons)		
0 - 20,000		3.79
20,001 - 40,000		4.73
40,001 - Above		5.68

Commercial Outside Rates*

Minimum Charge - Meter Size		
3/4" Meter	\$	15.80
1" Meter		15.80
1 1/2" Meter		27.68
2" Meter		47.44
3" Meter		66.44
4" Meter		117.06
6" Meter		174.00
8" Meter		324.31
Volume Rate (per 1,000 Gallons)		
0 - Above		4.36

City of McKinney

Current Wastewater Rate Structure

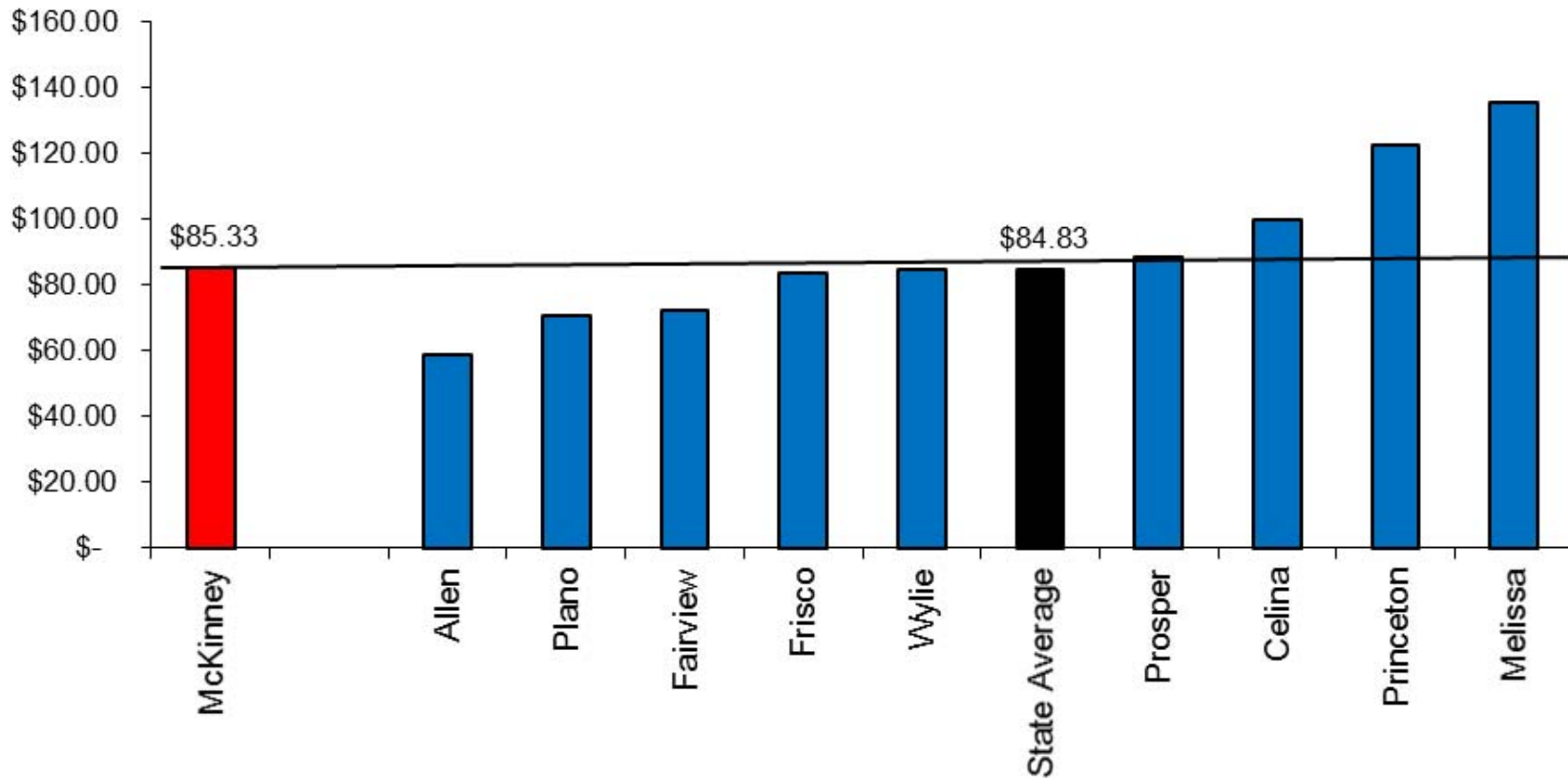


Wastewater Monthly Rate		
<u>Residential Rates</u>		
Minimum Charge	\$	13.99
Volume Rate (per 1,000 Gallons)		
0 - Above Gallons		3.94
<u>Residential Outside Rates*</u>		
Minimum Charge	\$	16.09
Volume Rate (per 1,000 Gallons)		
0 - Above Gallons	\$	4.53
<u>Commercial Rates</u>		
Minimum Charge - Meter Size		
3/4" Meter	\$	13.99
1" Meter		22.94
1 1/2" Meter		37.86
2" Meter		49.25
3" Meter		77.29
4" Meter		109.52
6" Meter		187.17
8" Meter		366.26
Volume Rate (per 1,000 Gallons)		
0 - Above Gallons		3.94

Wastewater Monthly Rate		
<u>Commercial Outside Rates*</u>		
Minimum Charge - Meter Size		
3/4" Meter	\$	16.09
1" Meter		16.09
1 1/2" Meter		26.38
2" Meter		43.54
3" Meter		56.64
4" Meter		88.88
6" Meter		125.95
8" Meter		215.25
Volume Rate (per 1,000 Gallons)		
0 - Above		4.53
<u>Municipal Rates</u>		
Volume Rate (per 1,000 Gallons)		
0 - Above	\$	2.95

* 15% multiplier applied to all Outside City customer rates.

Monthly Residential Charge Comparison 10,000 Gal W, 5,000 Gal WW



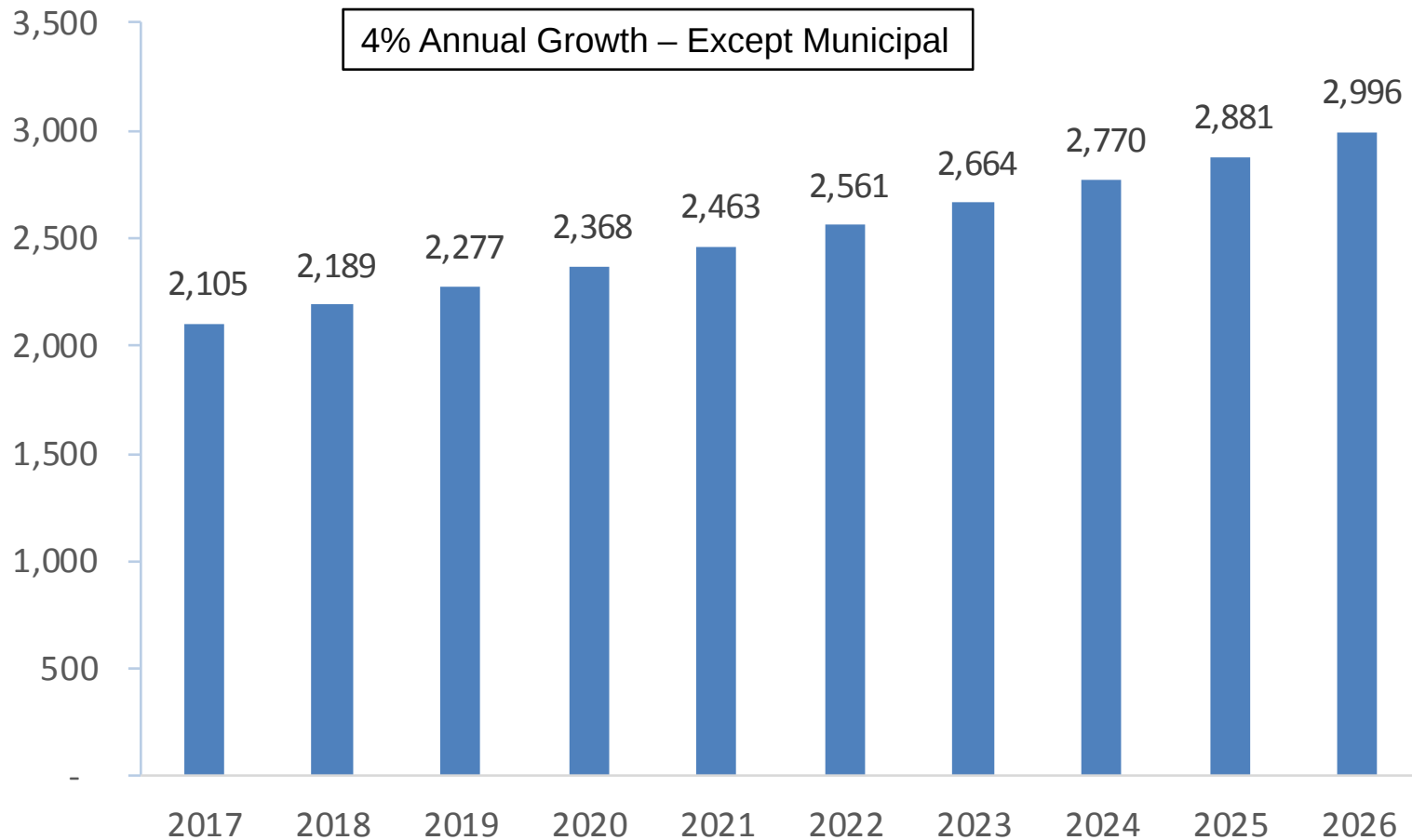
Test Year 2017

Water and Wastewater Accounts

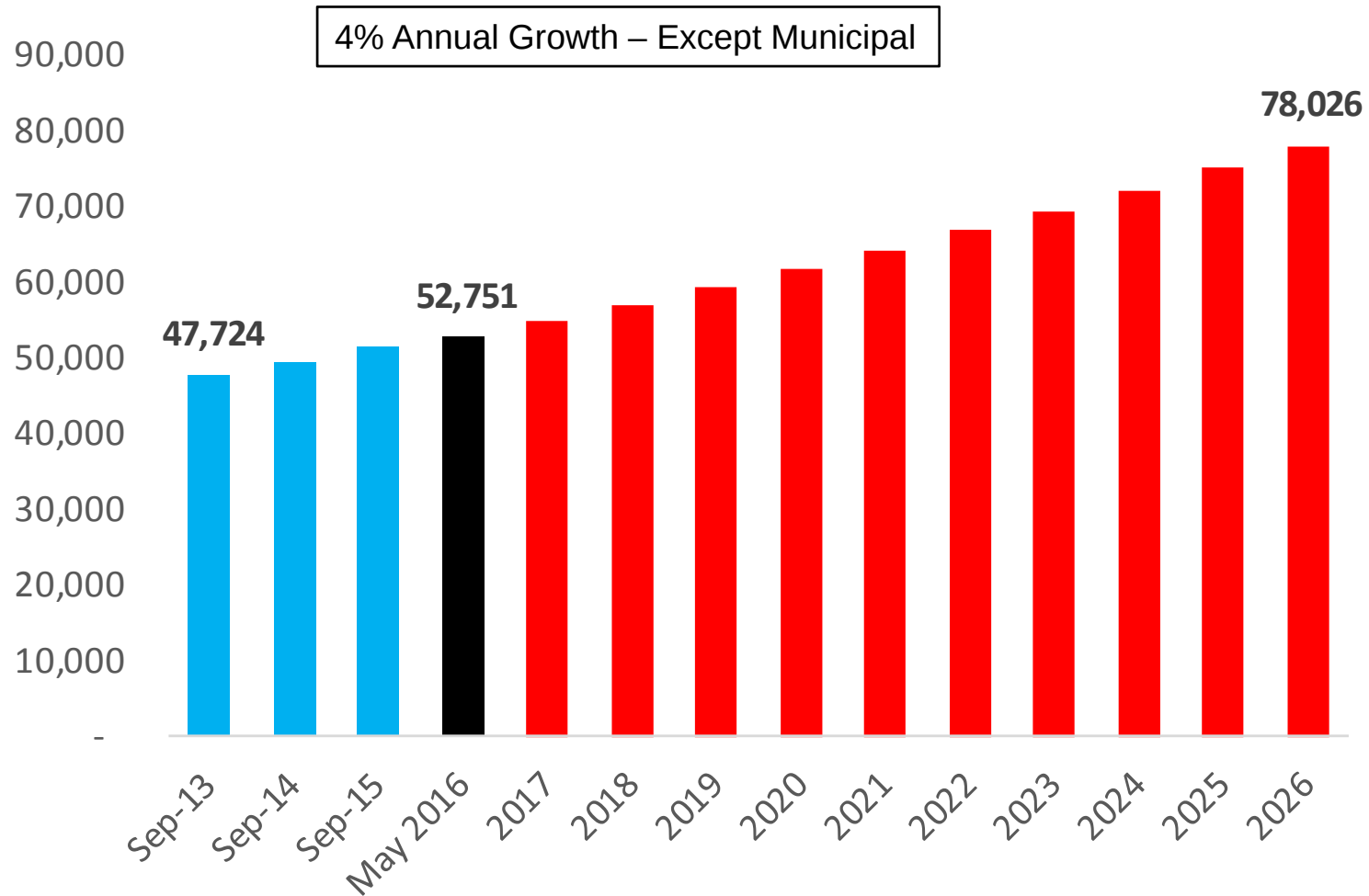


WATER Customers		WASTEWATER Customers	
Residential - Inside	48,640	Residential - Inside	48,521
Residential - Outside	1,069	Residential - Outside	448
Commercial - Inside	3,030	Commercial - Inside	2,697
Commercial - Outside	38	Commercial - Outside	2
Municipal	121	Municipal	43
Irrigation	1,958		
Total	54,856	Total	51,711

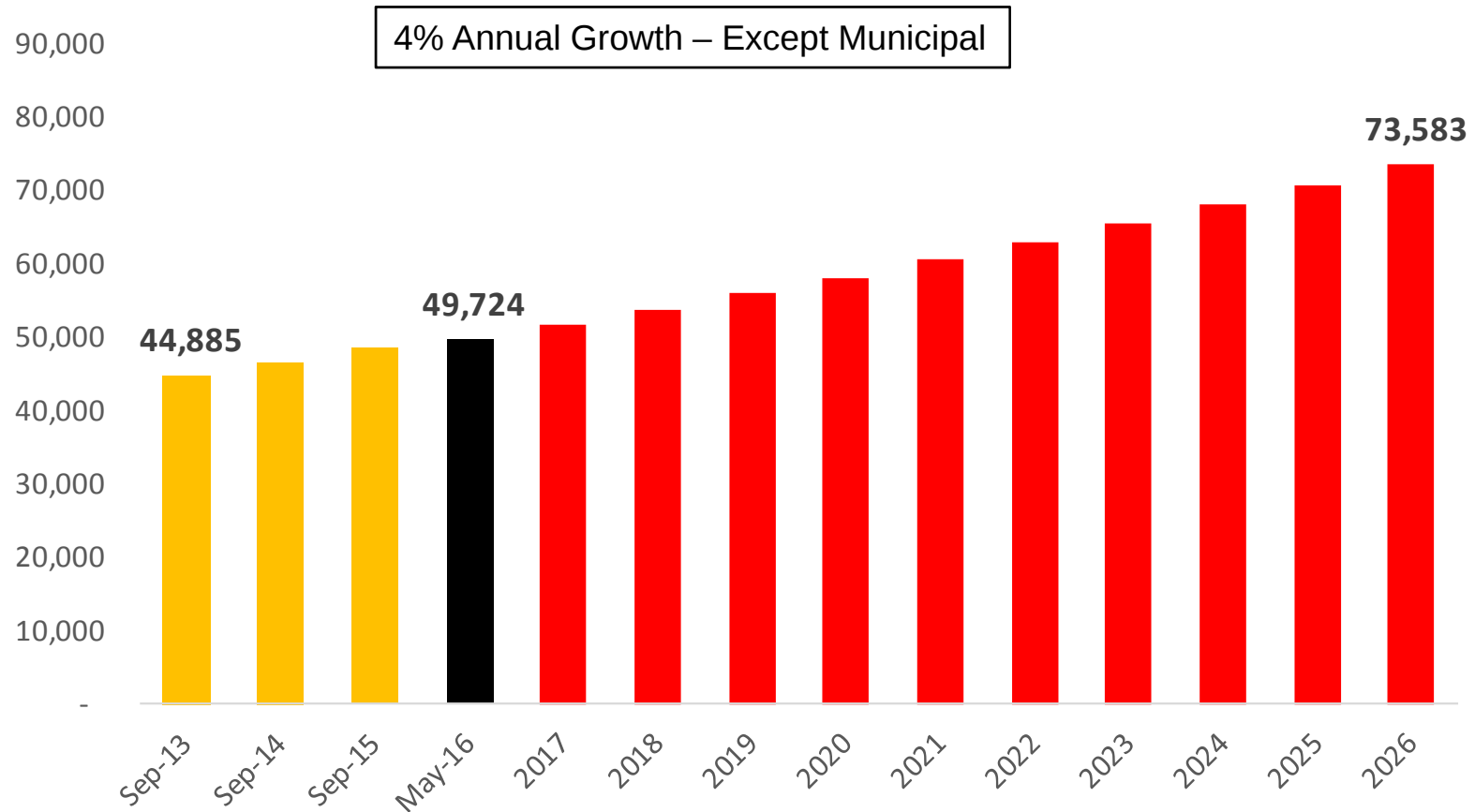
Forecast Annual New Water Accounts



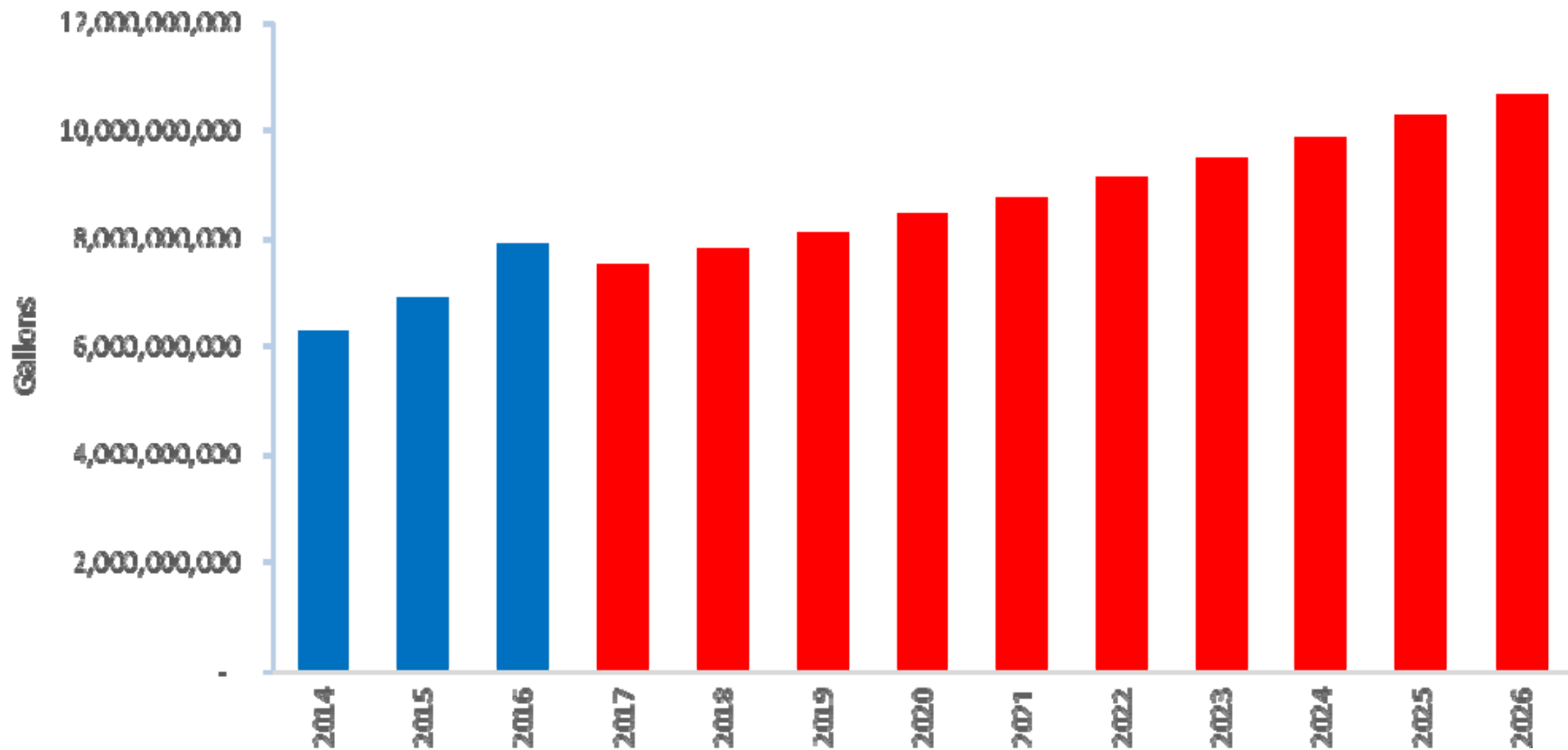
Actual and Forecast Total Water Accounts



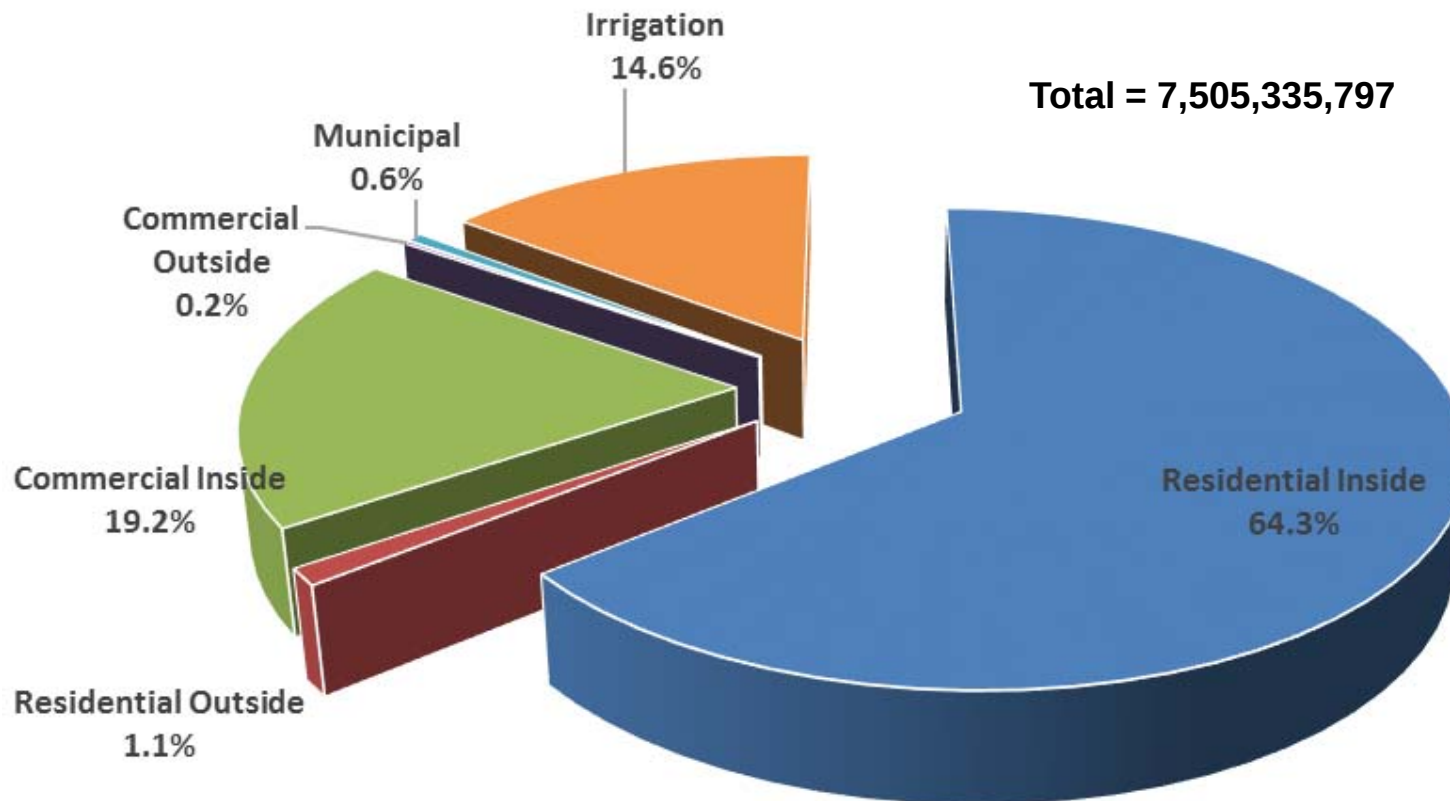
Actual and Forecast Total Wastewater Accounts



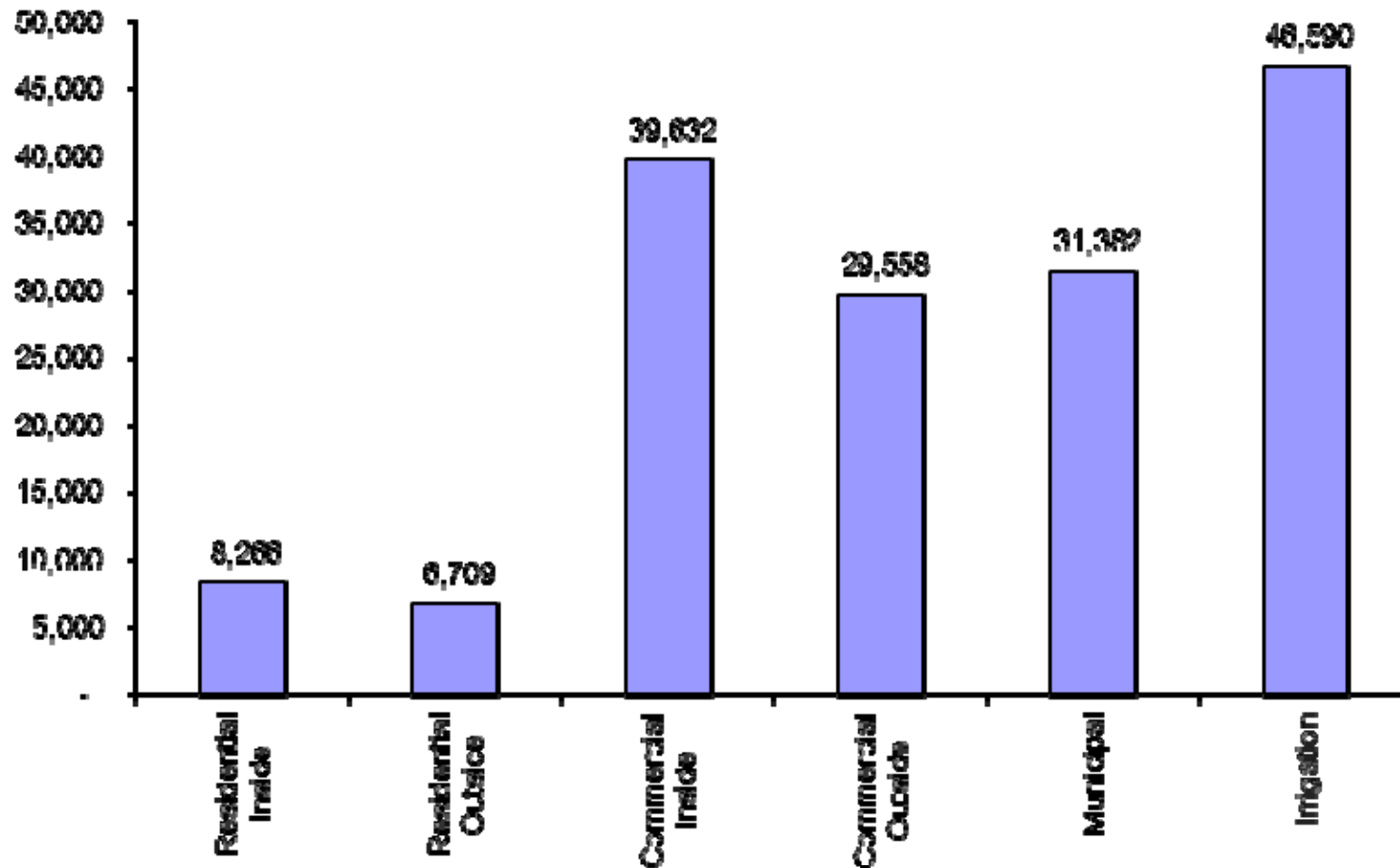
Actual and Forecast Water Consumption



Test Year 2017 Water Consumption By Rate Class



Test Year Average Monthly Consumption/Account



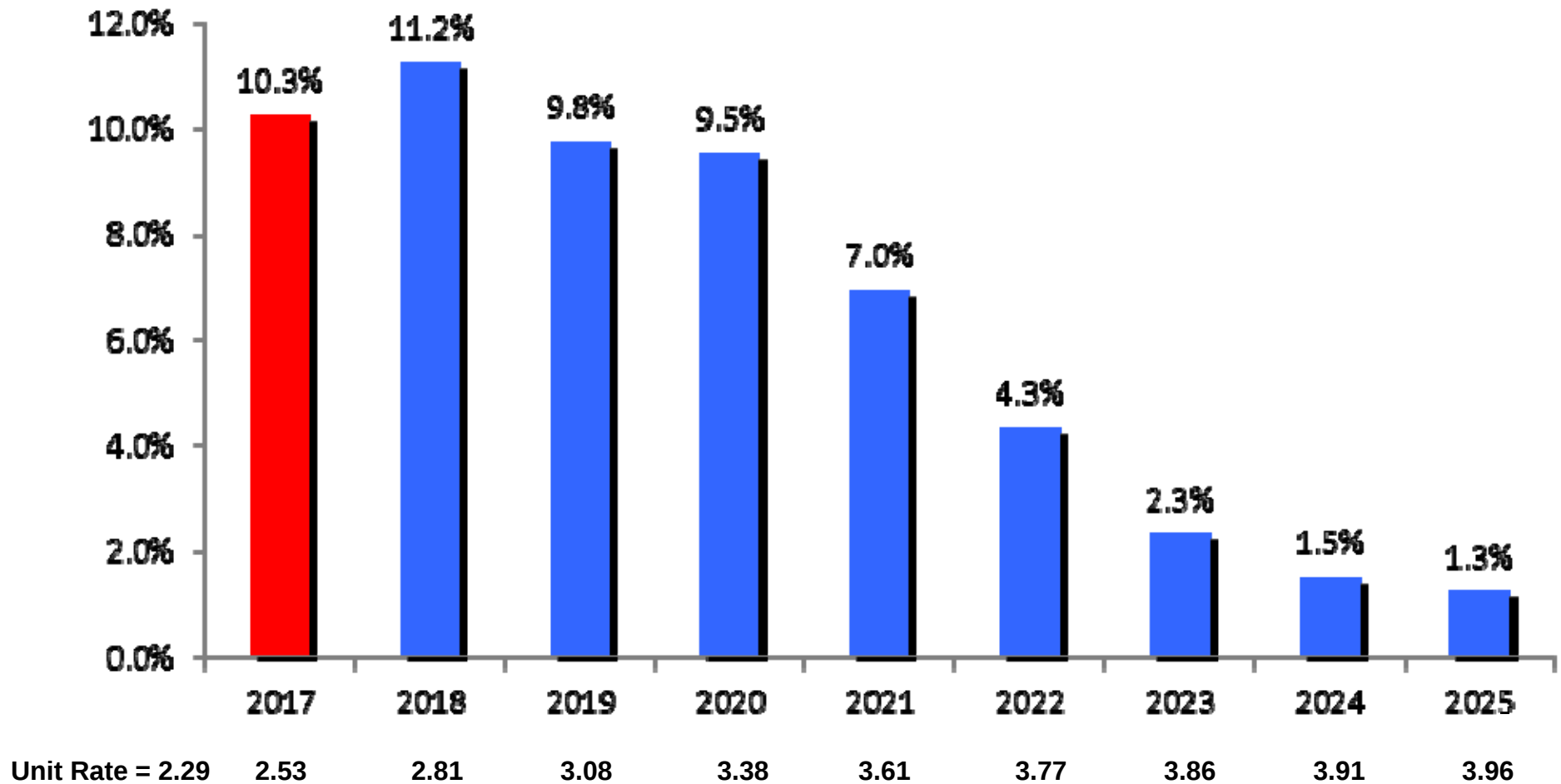
Key Assumptions Driving Forecast Financial and Rate Plan



- ◆ Most personnel and operating expenses increase 3-5% per year
- ◆ Budget costs are allocated to water and wastewater utilities in the manner displayed on following pages
- ◆ Biggest impacts on rate plan:
 - ❖ NTMWD cost increases
 - ❖ CIP/Debt Service



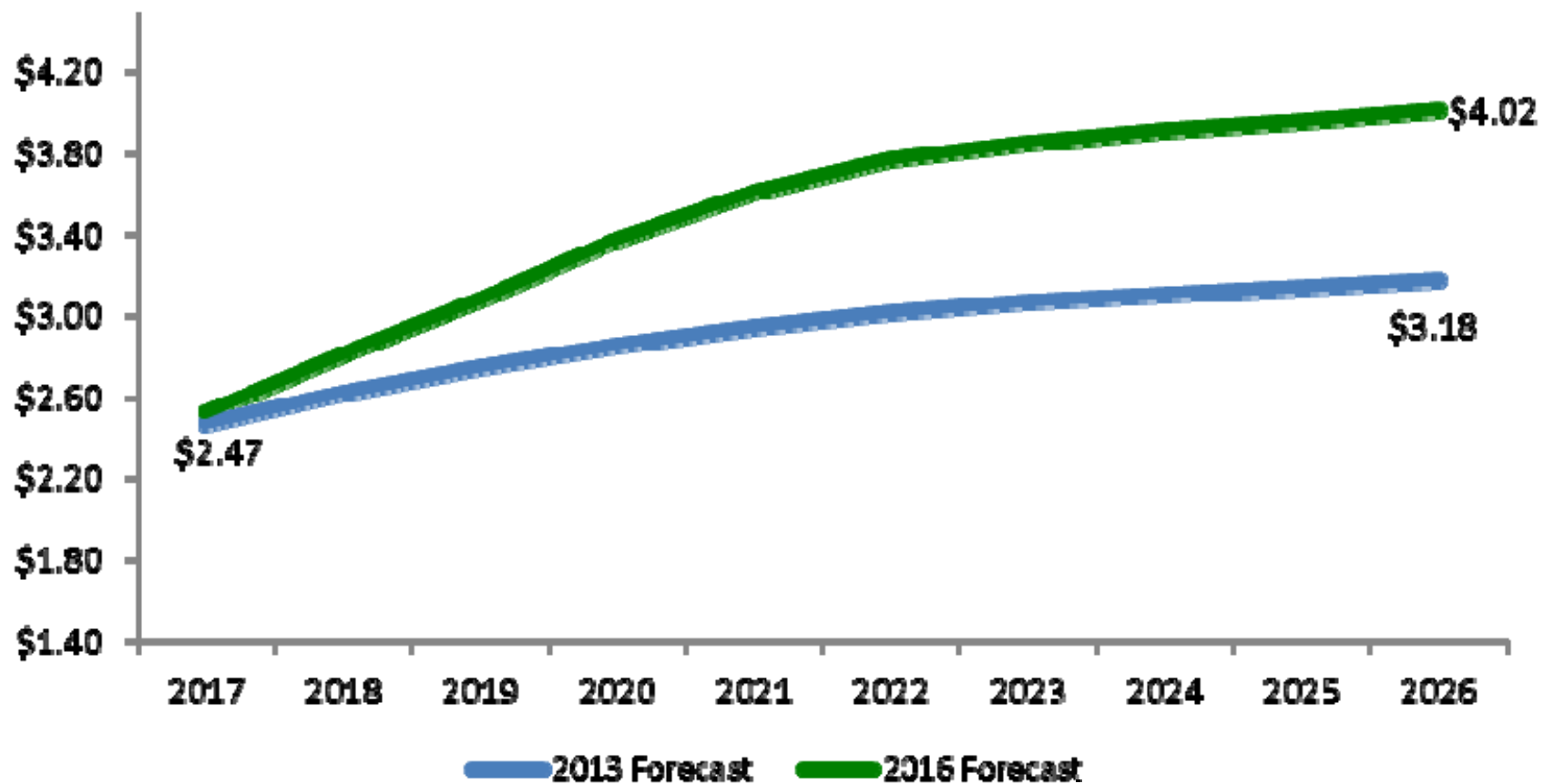
NTMWD Forecast Water Rate Increases



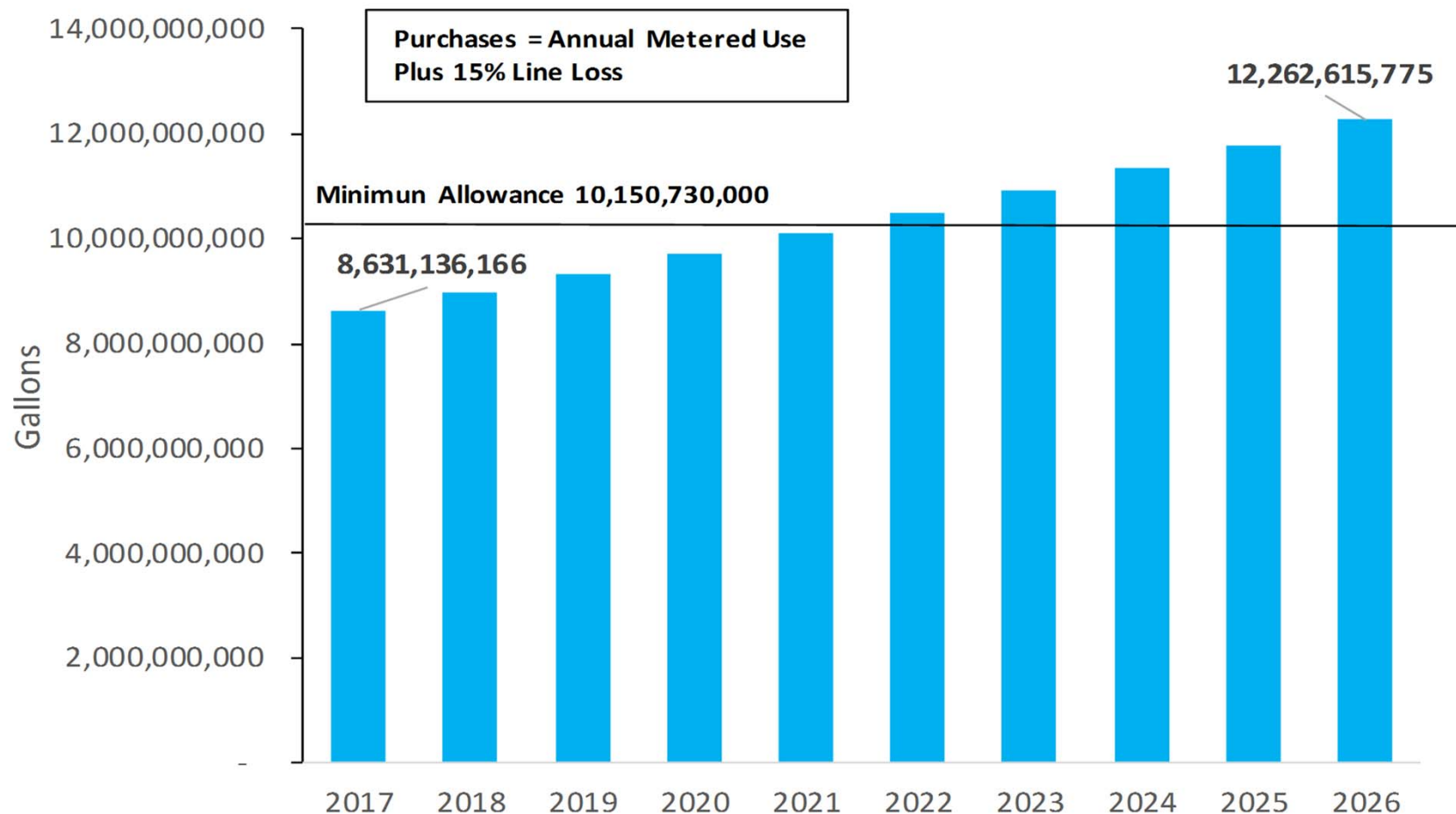
NTMWD 2013 and 2016 Rate Forecasts



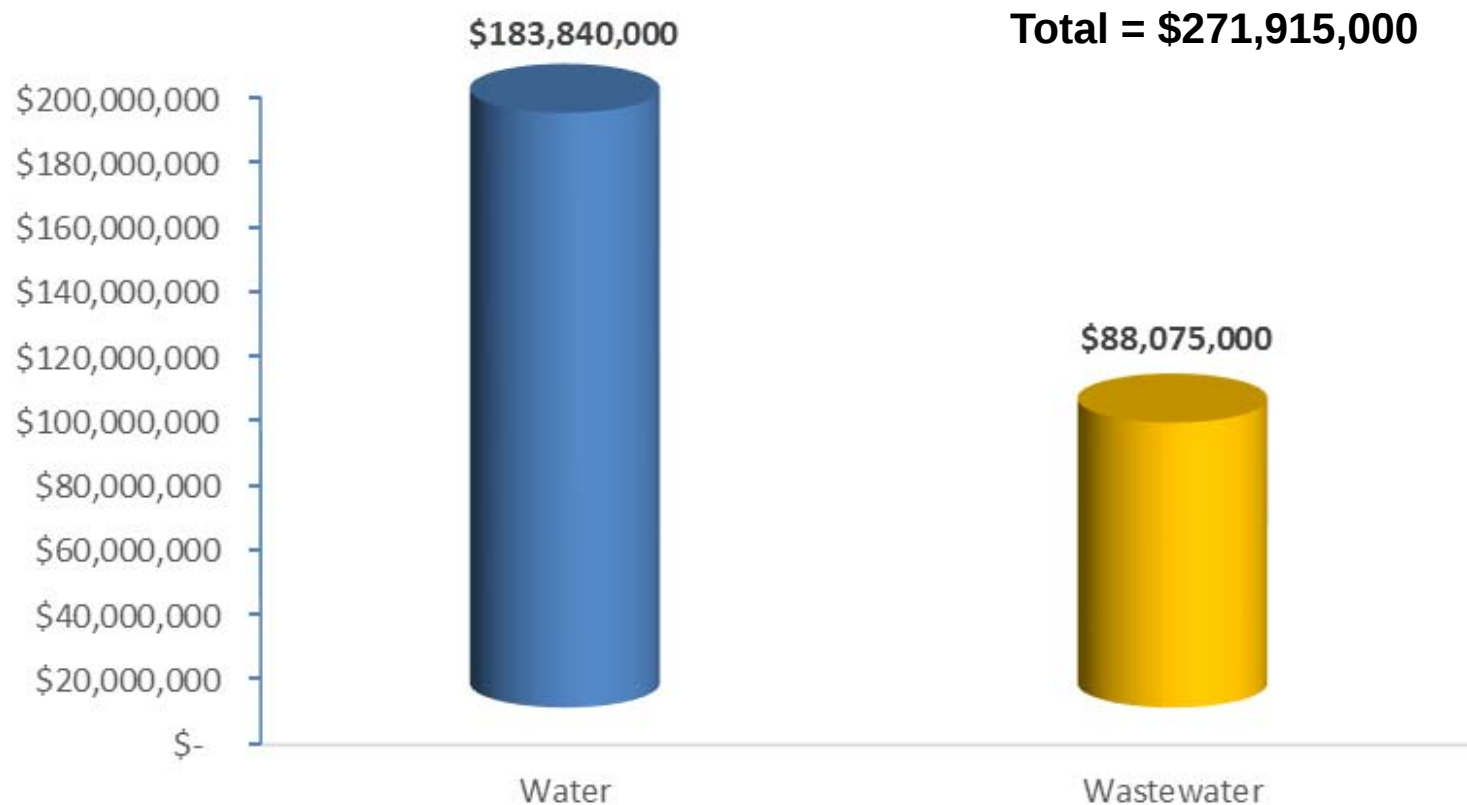
Rate/1,000 Gal



NTMWD Forecast Water Purchases



Forecast Water/Wastewater Capital Improvement Plan



Forecast Water/Wastewater Capital Improvement Plan



WATER PROJECTS

STOREBRIDGE WATER LINE FM US380 TO FM1461 920PP	\$ 11,800,000
SUBSTANDARD MAINS (UMBRELLA)	10,900,000
BLOOMDALE PUMP STATION SITE DEVELOPMENT	22,000,000
DEVELOPMENT CATALYST (WATER)	6,000,000
CUSTER RD UTILITY RELOCATIONS (ST9115)	7,600,000
SUBSTANDARD WATER MAINS-STREET REPLACEMENTS	5,320,000
FM 546 WATER LINE	5,000,000
ESTIMATED FUTURE WATER PROJECTS	75,000,000
OTHER MISC. PROJECTS	32,720,000
IMPACT FEE FUNDED PROJECTS	<u>7,500,000</u>
TOTAL WATER PROJECTS	\$ 183,840,000

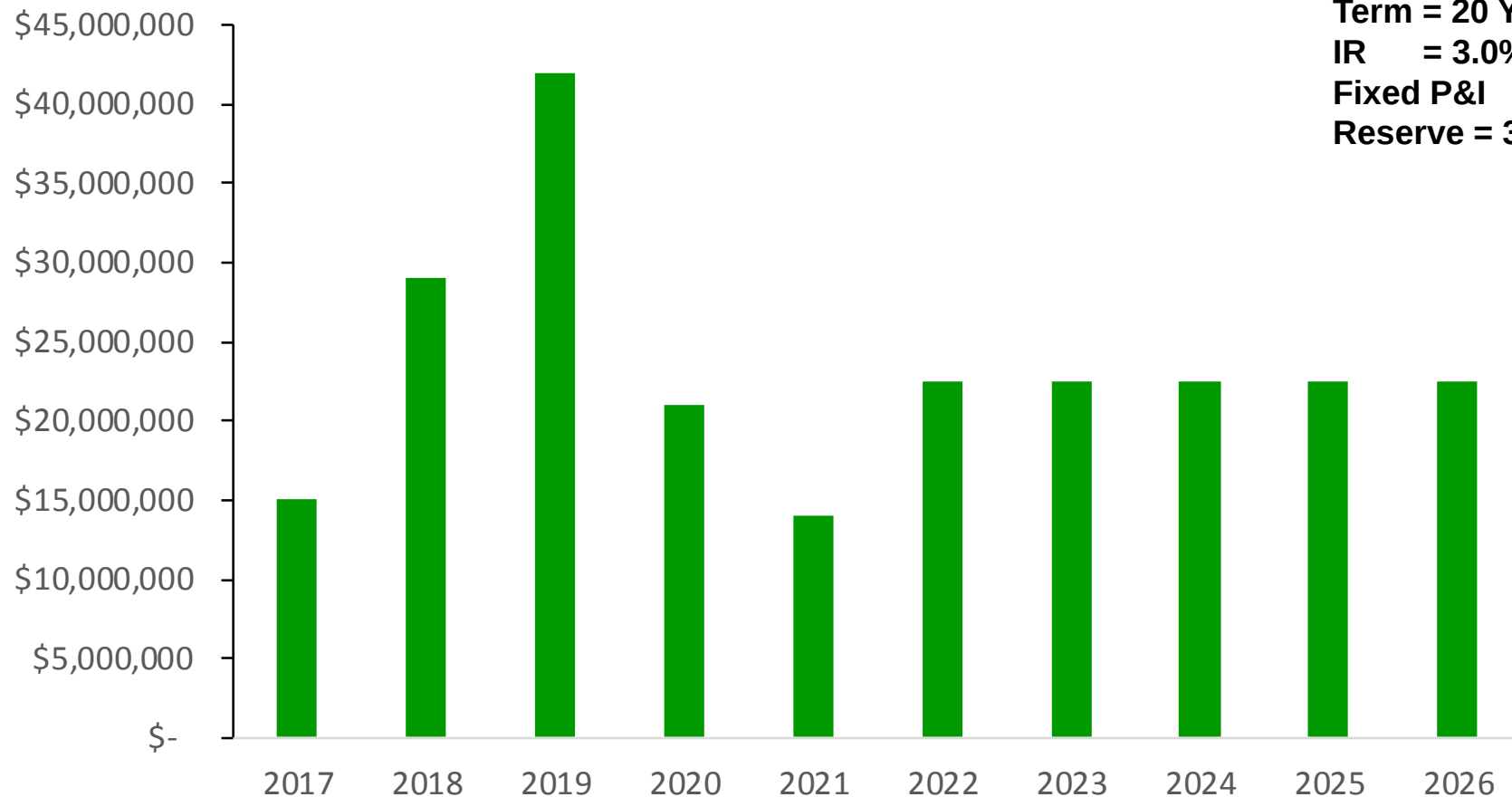
WASTEWATER PROJECTS

SUBSTANDARD MAINS	\$ 11,310,000
HONEY CREEK SS TRU7NK MAIN TO MH-HC124	16,000,000
DEVELOPMENT CATALYST (SANITARY SEWER)	6,000,000
SUBSTANDARD WW MAINS-REPLACEMENTS	4,245,000
ESTIMATED FUTURE SEWER PROJECTS	37,500,000
OTHER MISC. PROJECTS	10,420,000
IMPACT FEE FUNDED PROJECTS	2,600,000
TOTAL WASTEWATER PROJECTS	\$ 88,075,000

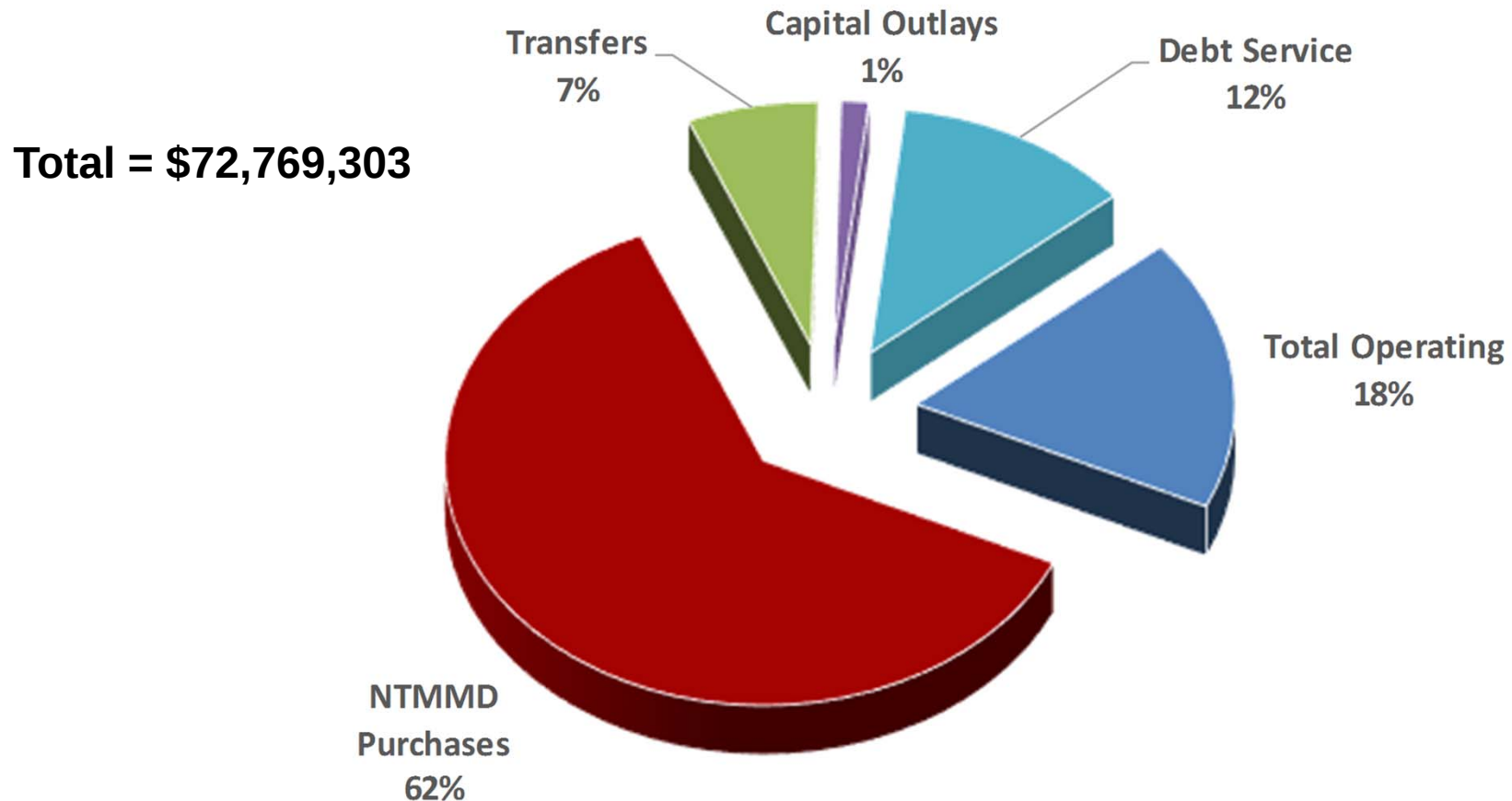
Long-Term Financing Forecast W/WW Bond Issues



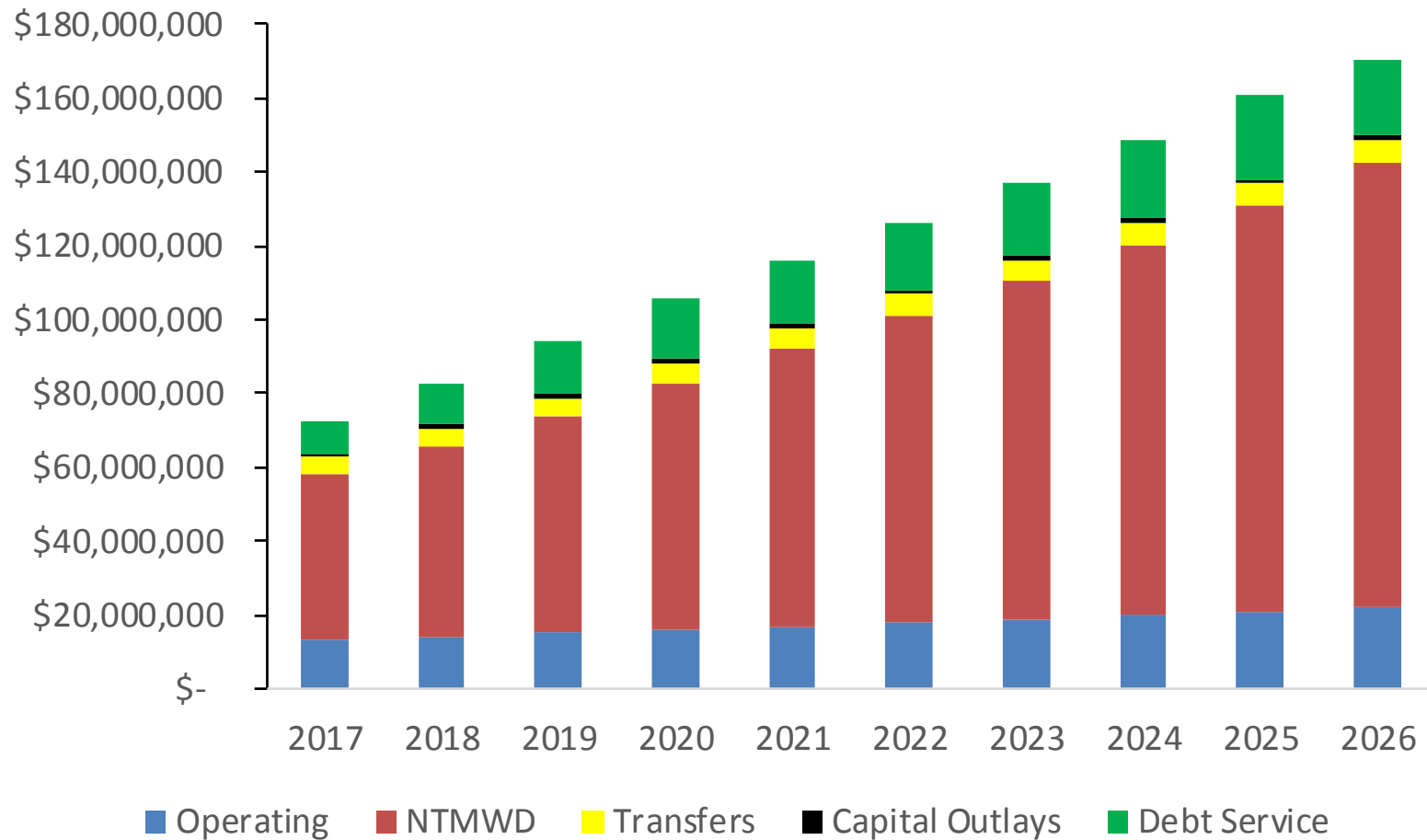
Term = 20 Years
IR = 3.0%
Fixed P&I
Reserve = 3 Years



Water and Wastewater Test Year Cost of Service



Forecast Cost of Service 2017 -- 2026



Forecast Cost of Service



	2017	2018	2019	2020	2021
Water					
Total Operating	\$ 9,369,905	\$ 9,946,636	\$ 10,443,001	\$ 11,095,985	\$ 11,795,134
NTMWD Purchases	26,598,000	30,760,055	35,125,522	40,000,945	44,513,051
Transfers	2,951,246	3,039,783	3,130,977	3,224,906	3,321,653
Capital Outlays	104,481	107,616	110,844	114,170	117,595
Debt Service	<u>7,105,736</u>	<u>8,590,274</u>	<u>10,917,070</u>	<u>12,059,352</u>	<u>12,352,884</u>
Total	\$ 46,129,368	\$ 52,444,364	\$ 59,727,414	\$ 66,495,357	\$ 72,100,317
Wastewater					
Total Operating	\$ 4,261,478	\$ 4,459,822	\$ 4,747,541	\$ 4,973,495	\$ 5,212,924
NTMWD Purchases	17,846,400	20,416,282	23,356,226	26,719,523	30,567,134
Transfers	1,893,716	1,950,528	2,009,043	2,069,315	2,131,394
Capital Outlays	922,799	950,483	978,997	1,008,367	1,038,618
Debt Service	<u>1,715,542</u>	<u>2,405,714</u>	<u>3,349,221</u>	<u>4,438,683</u>	<u>4,784,094</u>
Total	\$ 26,639,935	\$ 30,182,828	\$ 34,441,028	\$ 39,209,383	\$ 43,734,165

Rate Plan Required For Utility Self Sufficiency



			<i>Effective</i>					
Current			Oct. 2016	Oct. 2017	Oct. 2018	Oct. 2019	Oct. 2020	
WATER Rates - Residential								
Minimum Charge -- 3/4"	\$	13.74	\$ 14.30	\$ 15.45	\$ 16.70	\$ 18.05	\$ 18.95	
Volume Charge Per 1,000 Gallons								
-	20,000	3.79	4.08	4.41	4.76	5.14	5.40	
20,001	40,000	4.73	5.10	5.50	5.94	6.42	6.74	
40,001	Above	5.68	6.12	6.61	7.14	7.71	8.10	
WASTEWATER Rates - Res								
Minimum Charge		13.99	15.25	16.60	18.10	19.75	21.25	
Volume Charge Per 1,000 Gallons		3.94	4.29	4.68	5.10	5.56	5.98	

Rate Plan Required For Utility Self Sufficiency



		Effective				
	Current	Oct. 2016	Oct. 2017	Oct. 2018	Oct. 2019	Oct. 2020
WATER -- Commercial						
Minimum Charge						
3/4"	\$ 13.74	\$ 14.30	\$ 15.45	\$ 16.70	\$ 18.05	\$ 18.95
1"	24.07	25.05	27.05	29.20	31.55	33.15
1 1/2"	41.25	42.90	46.35	50.05	54.05	56.75
2"	57.77	60.10	64.90	70.10	75.70	79.50
3"	101.79	105.85	114.30	123.45	133.35	140.00
4"	151.30	157.35	169.95	183.55	198.25	208.15
6"	282.01	293.30	316.75	342.10	369.45	387.90
8"	557.11	579.40	625.75	675.80	729.85	766.35
Volume Charge -- per 1,000 Gal	3.79	4.08	4.41	4.76	5.14	5.40
WASTEWATER -- Commercial						
Minimum Charge						
3/4"	13.99	15.25	16.60	18.10	19.75	21.25
1"	22.94	25.00	27.25	29.70	32.35	34.80
1 1/2"	37.86	41.25	44.95	49.00	53.40	57.40
2"	49.25	53.70	58.55	63.80	69.55	74.75
3"	77.29	84.25	91.85	100.10	109.10	117.30
4"	109.52	119.40	130.15	141.85	154.60	166.20
6"	187.17	204.00	222.35	242.35	264.15	283.95
8"	366.26	399.20	435.15	474.30	517.00	555.75
Volume Charge -- per 1,000 Gal	3.94	4.29	4.68	5.10	5.56	5.98

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Rate Plan Required For Utility Self Sufficiency



			Effective				
Current			Oct. 2016	Oct. 2017	Oct. 2018	Oct. 2019	Oct. 2020
WATER -- Irrigation							
Minimum Charge							
3/4"		\$ 13.74	\$ 14.29	\$ 15.58	\$ 16.98	\$ 18.51	\$ 19.43
1"		24.07	25.03	27.29	29.74	32.42	34.04
1 1/2"		41.25	42.90	46.76	50.97	55.56	58.33
2"		57.77	60.08	65.49	71.38	77.81	81.70
3"		101.79	105.86	115.39	125.77	137.09	143.95
4"		151.30	157.35	171.51	186.95	203.78	213.96
6"		282.01	293.29	319.69	348.46	379.82	398.81
8"		557.11	579.39	631.54	688.38	750.33	787.85
Volume Charge -- per 1,000 Gal							
-	20,000	3.79	3.94	4.30	4.68	5.10	5.36
20,001	40,000	4.73	4.92	5.36	5.84	6.37	6.69
40,001	Above	5.68	5.91	6.44	7.02	7.65	8.03

Rate Plan Required For Utility Self Sufficiency



		Current	Effective				
			Oct. 2016	Oct. 2017	Oct. 2018	Oct. 2019	Oct. 2020
WATER -- Irrigation							
Minimum Charge							
3/4"		\$ 13.74	\$ 14.30	\$ 15.45	\$ 16.70	\$ 18.05	\$ 18.95
1"		24.07	25.05	27.05	29.20	31.55	33.15
1 1/2"		41.25	42.90	46.35	50.05	54.05	56.75
2"		57.77	60.10	64.90	70.10	75.70	79.50
3"		101.79	105.85	114.30	123.45	133.35	140.00
4"		151.30	157.35	169.95	183.55	198.25	208.15
6"		282.01	293.30	316.75	342.10	369.45	387.90
8"		557.11	579.40	625.75	675.80	729.85	766.35
Volume Charge -- per 1,000 Gal							
-	20,000	3.79	4.08	4.41	4.76	5.14	5.40
20,001	40,000	4.73	5.10	5.50	5.94	6.42	6.74
40,001	Above	5.68	6.12	6.61	7.14	7.71	8.10

Rate Plan Impact on Ratepayers



		Effective					
		Current	Oct. 2016	Oct. 2017	Oct. 2018	Oct. 2019	Oct. 2020
Residential Monthly Bill -- 3/4" Meter							
5,000 Gal W	Total	\$ 66.38	\$ 71.44	\$ 77.51	\$ 84.13	\$ 91.33	\$ 97.10
5,000 Gal WW	Increase -- \$		5.06	6.07	6.62	7.20	5.77
	Increase -- %		7.6%	8.5%	8.5%	8.6%	6.3%
10,000 Gal W	Total	\$ 97.15	\$ 104.74	\$ 113.60	\$ 123.25	\$ 133.74	\$ 142.05
8,000 Gal WW	Increase -- \$		7.59	8.86	9.65	10.48	8.31
	Increase -- %		7.8%	8.5%	8.5%	8.5%	6.2%
30,000 Gal W	Total	\$ 182.35	\$ 196.55	\$ 212.75	\$ 230.33	\$ 249.38	\$ 263.47
8,000 Gal WW	Increase -- \$		14.20	16.20	17.58	19.05	14.09
	Increase -- %		7.8%	8.2%	8.3%	8.3%	5.7%

Rate Plan Impact on Ratepayers



			Effective				
		Current	Oct. 2016	Oct. 2017	Oct. 2018	Oct. 2019	Oct. 2020
Commercial Monthly Bill -- 2" Meter							
40,000 Gal W	Total	\$ 416.22	\$ 448.93	\$ 487.11	\$ 528.53	\$ 573.49	\$ 609.46
40,000 Gal WW	Increase -- \$		32.71	38.18	41.42	44.96	35.97
	Increase -- %		7.9%	8.5%	8.5%	8.5%	6.3%
80,000 Gal W	Total	\$ 725.42	\$ 784.07	\$ 850.77	\$ 923.15	\$ 1,001.73	\$ 1,064.67
80,000 Gal WW	Increase -- \$		58.65	66.71	72.38	78.57	62.95
	Increase -- %		8.1%	8.5%	8.5%	8.5%	6.3%

Presentation Summary

Benefits of Proposed Rate Plan



- ◆ Will contribute towards utility operating on a stand-alone basis and independent of general fund assistance
- ◆ Will cover estimated increased cost of NTMWD purchases
- ◆ Will result in financially-healthy utility that has ability to fund operations and capital needs
- ◆ Will allow capital investment into system to improve quality of service and provide a well-functioning system for future generations
- ◆ Will encourage economic development opportunities for McKinney