

Water & Wastewater Rate Adjustment

Board of Public Utilities & *County Council*

FY 2020 thru FY 2022

September thru November 2019 Meetings



Water & Wastewater Financial Model Revisions

- Revised the timing of planned CIP projects to better stabilize the annual cash flow and cash balances of the various funds and sub-funds: WW Fund with WC & WT expenses split out; W Fund with DW & WP & NP expenses split out and with DW and WP (+NP) split out into separate sub-funds for accounting purposes.
- Kept the DW sub-fund free of debt service by maintaining all DW CIP projects as cash funded.
- FY 2016 & FY 2017 Meter Change Outs Completed by In-House Staff (Not Outside Contractor). Use of 2 Limited Term FTEs. LT FTEs Assigned to Meter Change Outs but Available to Assist During Emergencies. Potential for LT FTEs to Transition to Permanent FTE in DPU or Other County Departments in the Future.

Water Consumption by Category

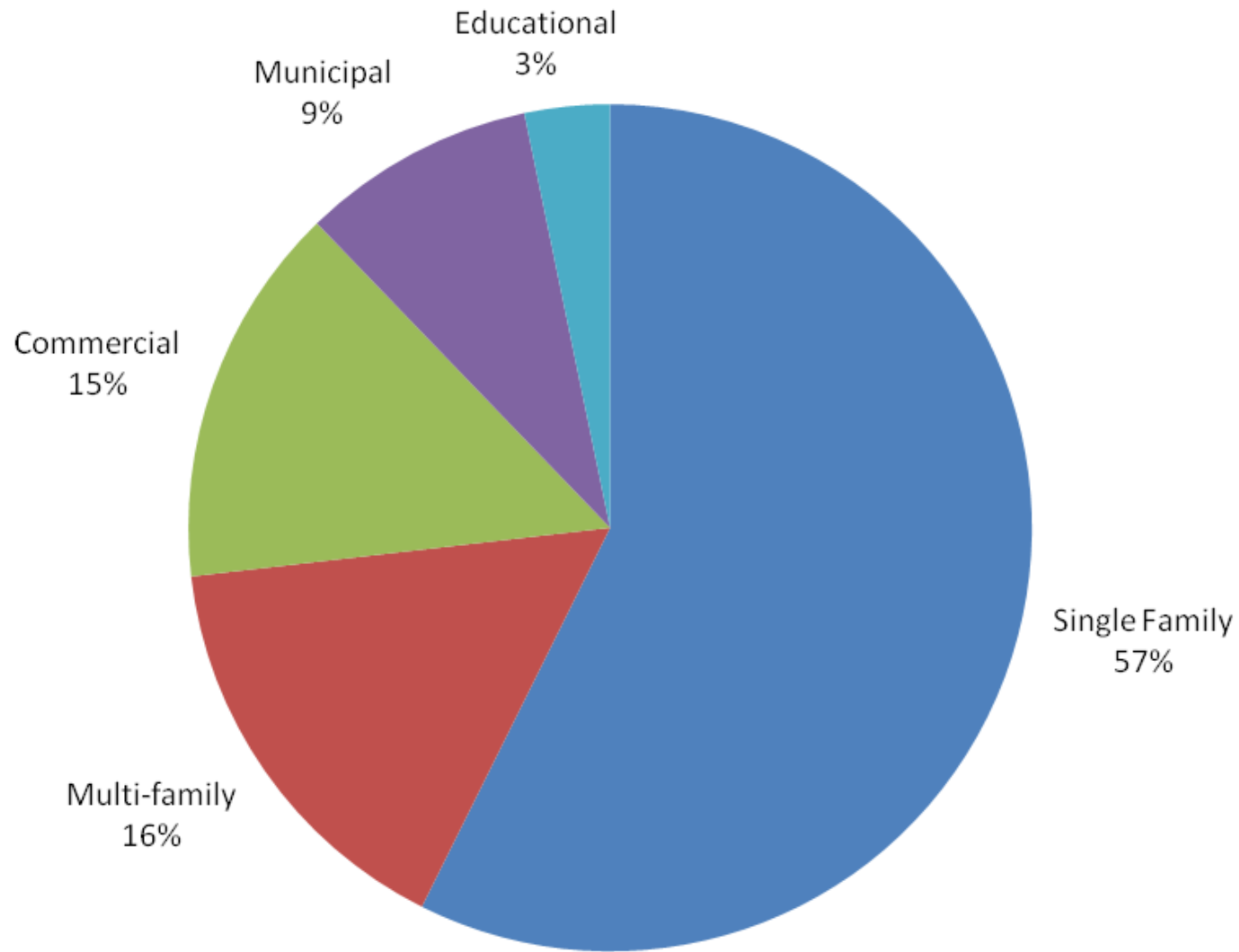


FIG 1 - Budget vs Actual Water Sales w/ Precip. & Temp.

Budgeted versus Actual Water Sales with Precipitation & Temperature Variables

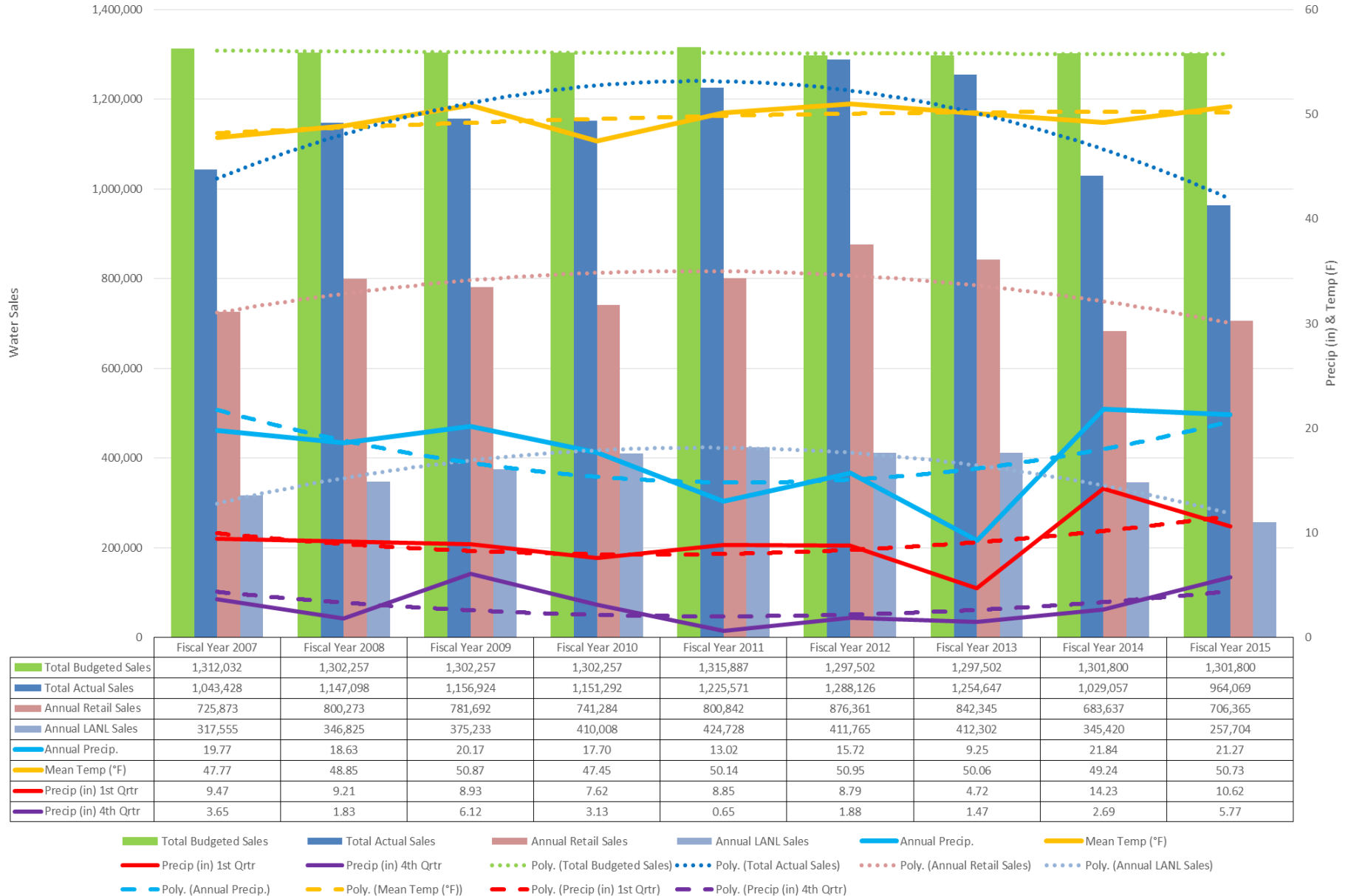


FIG 4 - AWWA / System R & R – WP & DW

System Renewal & Replacement AWWA National Standard Percentages

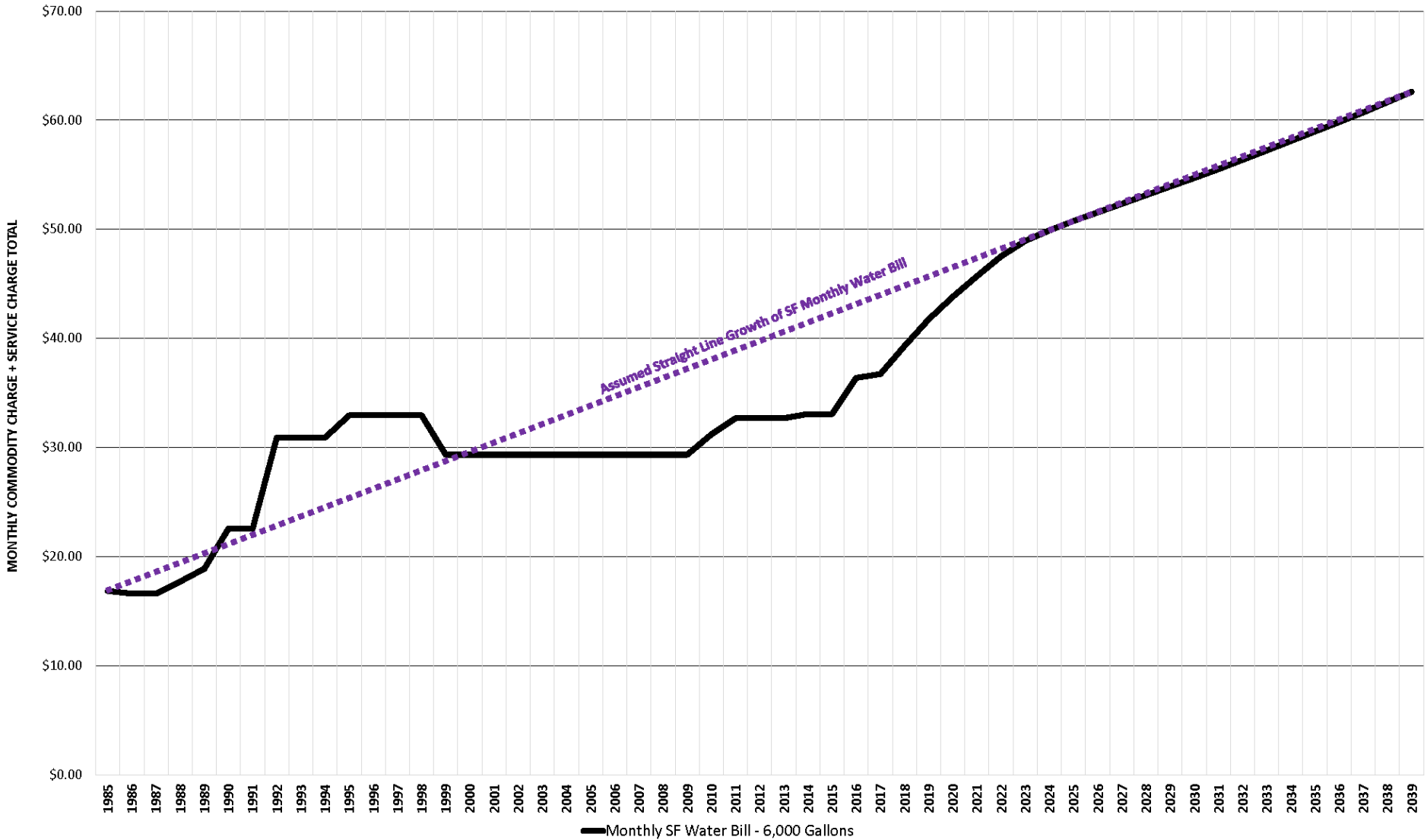
Asset Class	System Repair & Replacement Percentage			Present Worth Value of the GWS Group System	Annual Repair & Replacement National Standard (PWV) X (System R&R %)		
	Bottom Quartile	Median	Top Quartile		Bottom Quartile	Median	Top Quartile
Water Supply	0.8%	1.5%	3.7%				
Water Treatment Facilities	0.7%	1.9%	5.0%				
Water Pump Station	0.6%	2.6%	5.5%				
Water Transmission and Distribution	1.0%	2.4%	4.5%				
Wastewater Collection	1.3%	2.5%	5.2%				
Wastewater Pump Stations	0.7%	2.1%	5.9%		Future & Historic CIP Costs		
Wastewater Treatment	1.1%	2.2%	4.4%				
					\$750,000 (F) & \$1,500,000 (H)		
Water Production	0.775%	2.1%	4.675%	\$39,939,696	\$309,533	\$838,734	\$1,867,181
Water Distribution	1.0%	2.4%	4.5%	\$17,117,013	\$171,170	\$410,808	\$770,266
					\$500,000 (F) & \$750,000 (H)		
Wastewater Collection	1.0%	2.3%	5.55%	\$19,989,785	\$199,898	\$459,765	\$1,109,433
Wastewater Treatment	1.10%	2.20%	4.40%	\$13,326,524	\$146,592	\$293,184	\$586,367

DPU Financial Policy for Cash Reserves

In Each Utilities Sub Fund:

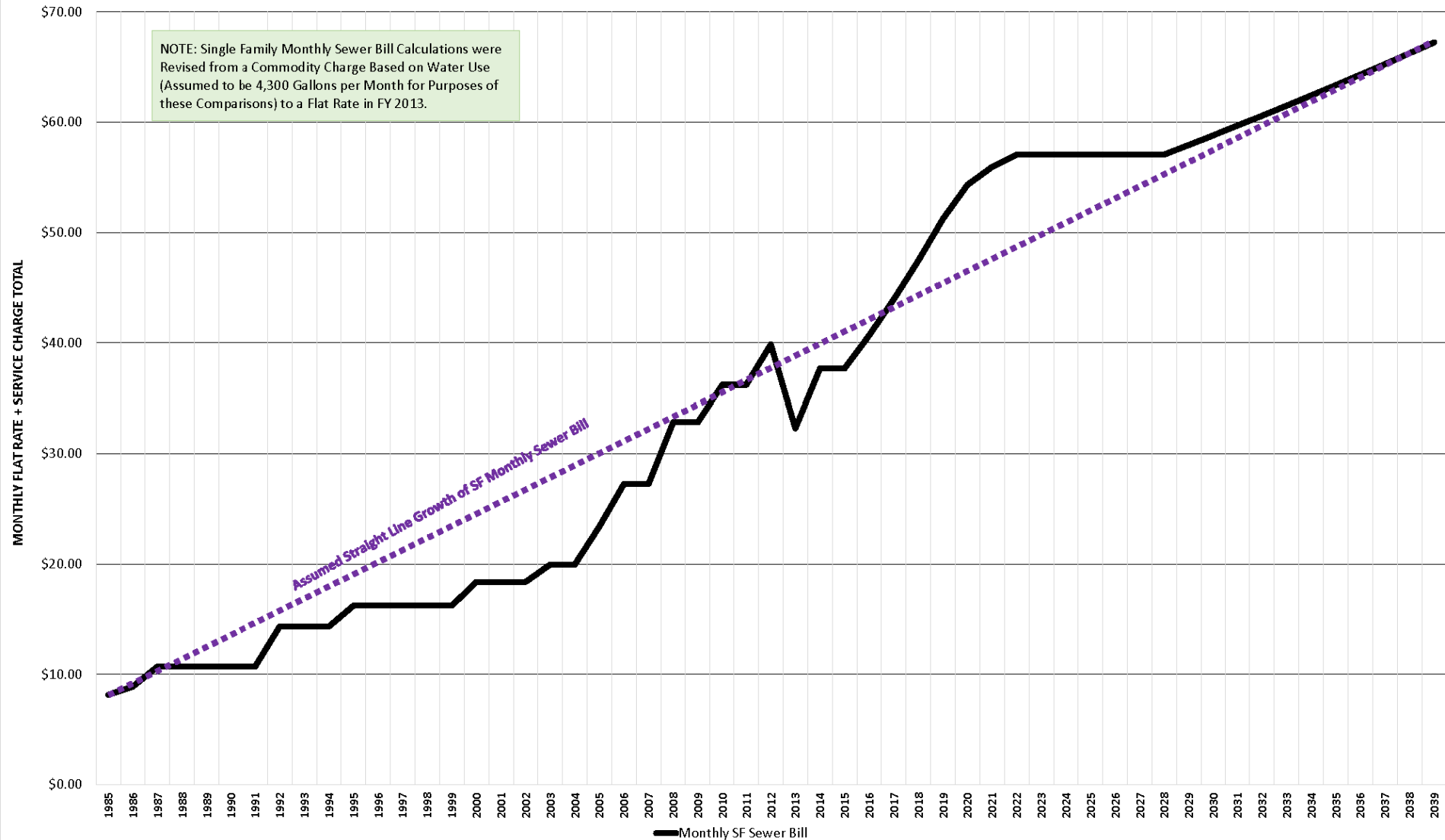
- 180-Days of Budgeted O&M Expenditures Recommended – or – 90-Days Minimum Floor
- Debt Service Reserve (Sufficient to Fund All Debt Service for the Following Year)
- Contingency Reserve (Only One Occurrence in any Single Year)
 - WP = \$750,000 Replace a Well House or Booster Station
 - DW = \$750,000 Replace a Water Tank
 - NP = \$750,000 Replace a Water Tank or Booster Station
- Retirement/Reclamation Reserve (Only One Occurrence in any Single Year)
 - WP = \$150,000 Abandon a Well House or Water Tank or Booster Station
 - DW = \$150,000 Abandon a Water Tank
 - NP = \$150,000 Abandon a Water Tank or Booster Station
- Cash Balance and Cost / Risk Sharing Between Water System Groups
 - DW and WP Group's Budget for Contingency and Retirement/Reclamation Reserves are Split 50/50
 - NP is Embedded Within WP so NP Reserves are Considered Covered by WP Reserve
- Actual (or Annuitized) CIP Program Expenditures for the Following Year – or – The System's Annual Depreciation Plus 2.5% (whichever is greater) – Future Discussion is Warranted
 - WP = \$1,350,000 Compared to \$1,500,000 (H) & \$750,000 (F)
 - DW = \$575,000 Compared to \$750,000 (H) & \$500,000 (F)
 - NP = Not Calc'd Compared to \$210,000 (F) {From NP Master Plan}

SINGLE FAMILY MONTHLY WATER BILL (6,000 Gallons) - 1985 to 2039 - HISTORIC THROUGH PROPOSED - FY 2020 FORECAST MODEL

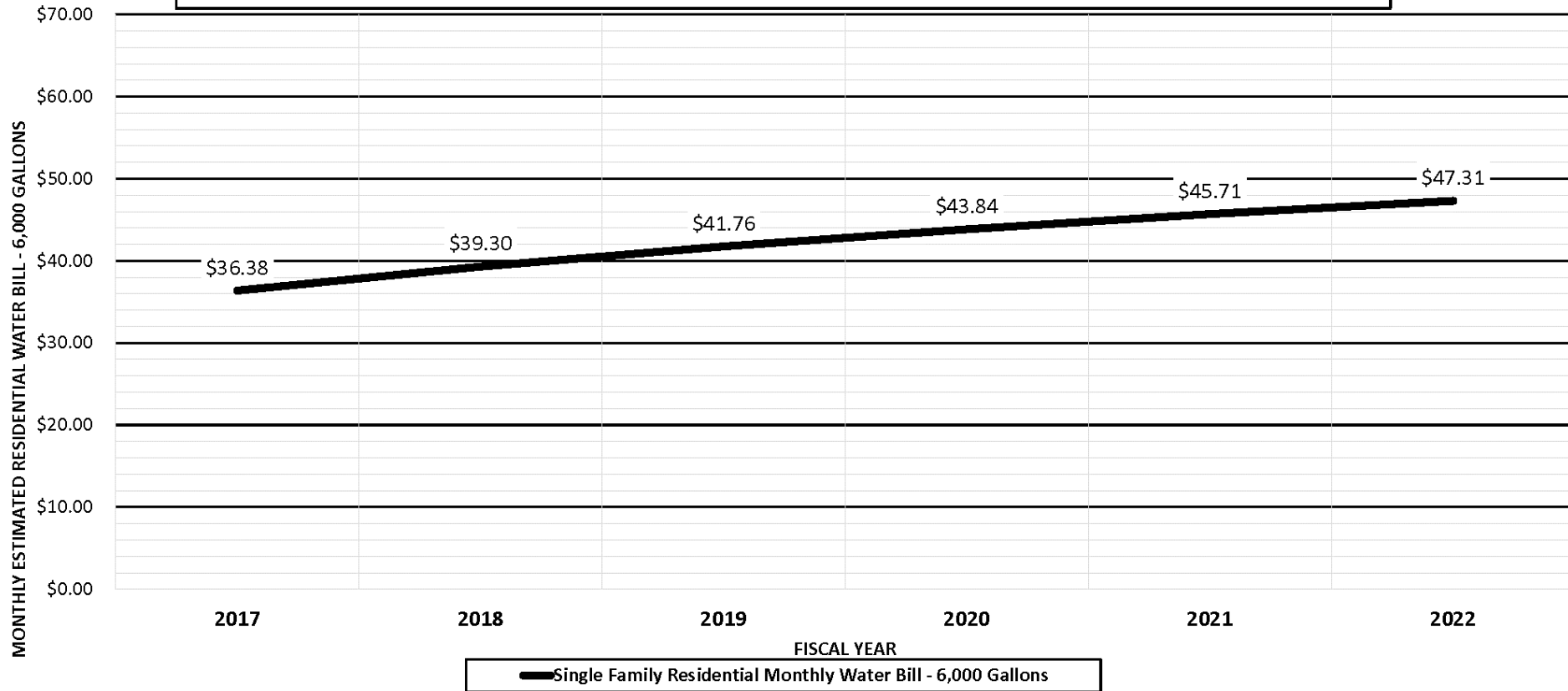


SINGLE FAMILY MONTHLY SEWER BILL - 1985 to 2039 - HISTORIC THROUGH PROPOSED FY 2020 FORECAST MODEL

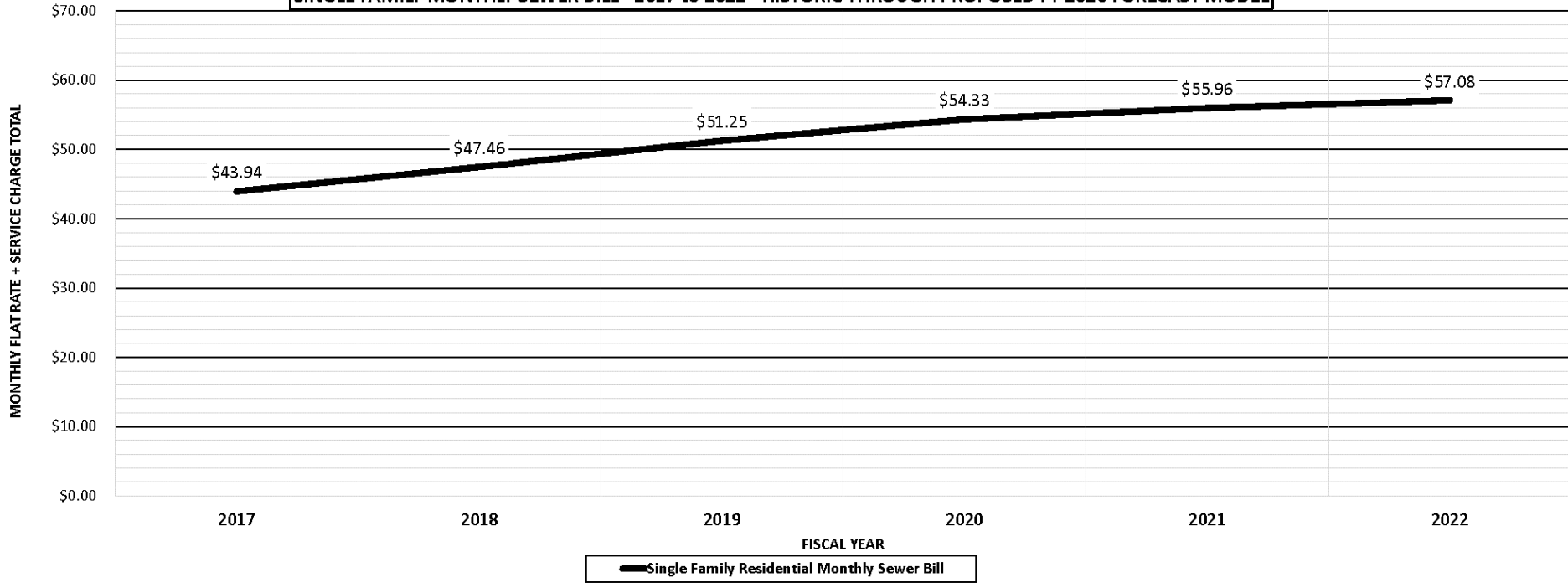
NOTE: Single Family Monthly Sewer Bill Calculations were Revised from a Commodity Charge Based on Water Use (Assumed to be 4,300 Gallons per Month for Purposes of these Comparisons) to a Flat Rate in FY 2013.

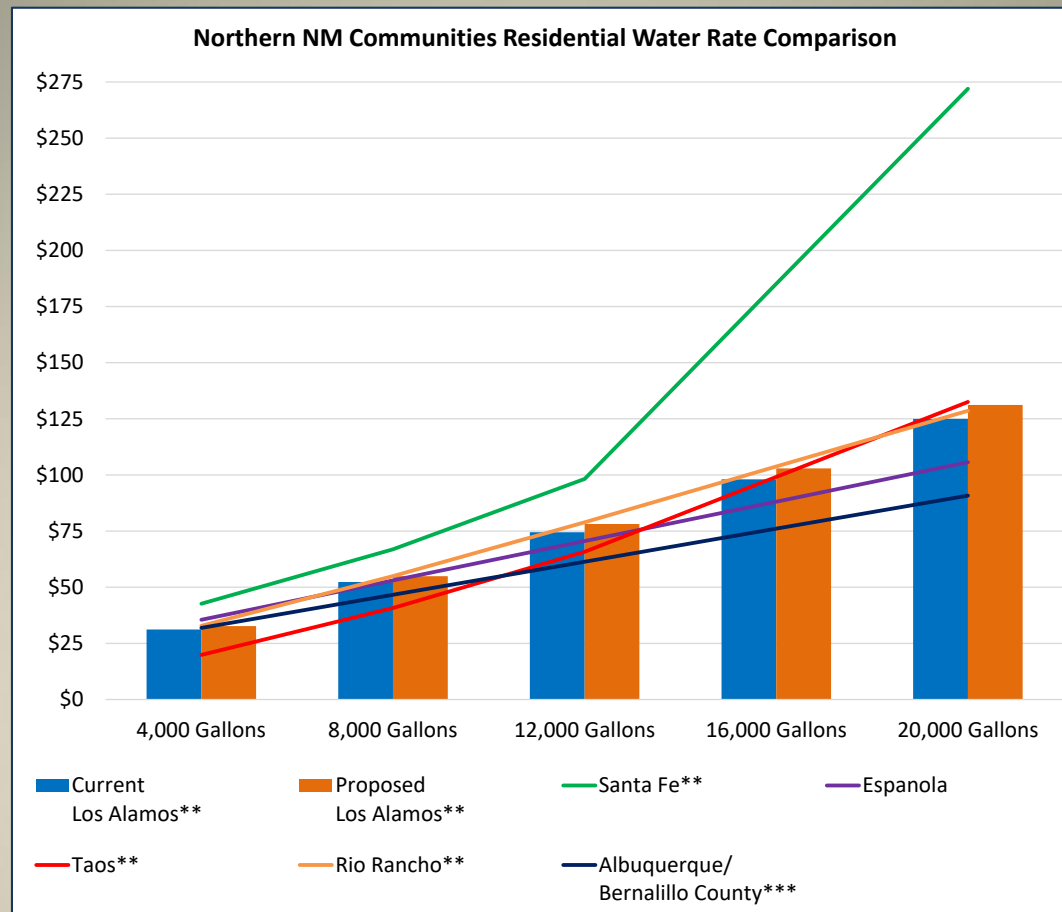


SINGLE FAMILY MONTHLY WATER BILL - 2017 to 2022 - HISTORIC THROUGH PROPOSED FY 2020 FORECAST MODEL



SINGLE FAMILY MONTHLY SEWER BILL - 2017 to 2022 - HISTORIC THROUGH PROPOSED FY 2020 FORECAST MODEL





SAMPLE RESIDENTIAL BILL - Assuming 5/8" Meter & PEAK Season*

Monthly Usage	Current Los Alamos**	Proposed Los Alamos**	Santa Fe**	Espanola	Taos**	Rio Rancho**	Albuquerque/ Bernalillo County***
4,000 Gallons	31.17	32.71	42.66	35.49	19.88	32.81	31.91
6,000 Gallons	41.75	43.81	54.78	44.26	28.22	43.45	39.27
8,000 Gallons	52.33	54.91	66.90	53.03	40.74	54.97	46.64
12,000 Gallons	74.48	78.16	98.22	70.56	65.78	78.91	61.36
14,000 Gallons	85.72	89.96	141.66	79.33	82.46	91.33	68.73
16,000 Gallons	98.06	102.92	185.10	88.10	99.14	103.75	76.09
20,000 Gallons	124.94	131.16	271.98	105.63	132.50	128.59	90.82
30,000 Gallons	192.14	201.76	489.18	149.47	215.90	190.69	127.64

* For comparison purposes, August was used for all locations

** Tiered or seasonal rates apply for this jurisdiction

*** Rates shown DO NOT include the surcharges for usage in excess of a citizen's water budget calculated by season and winter mean which can be up to 100% of commodity charge. Drought surcharges of up to 400 percent may also apply.

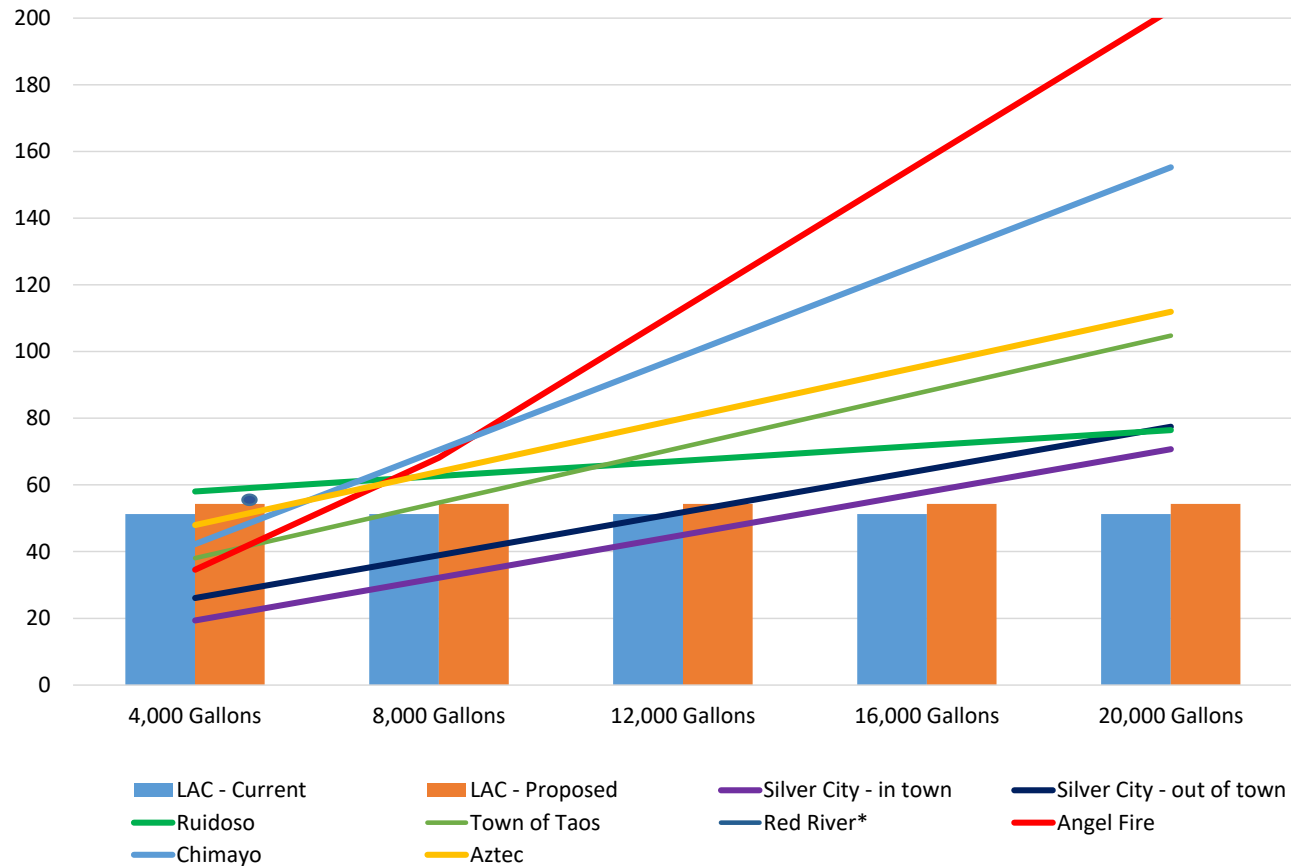
Projected Average Water Bill for Residential Customers - FY 2017 through FY 2022

	6,000 Gallon per Month Water Bill	Rate Increase Percentage	Additional Annual Cost Over Previous Year	Los Alamos Median Household Income *	Assumed Annual Income Increase	Percentage of Income Needed to Pay Water Bill		New Mexico Median Houshold Income**	Assumed Annual Income Increase	Percentage Needed To Pay Utility Bill
FY2017	\$36.38	10.00%	\$39.72	\$100,882	2.5%	0.43%		\$47,754	2.5%	0.91%
FY2018	\$39.29	8.00%	\$34.92	\$103,404	2.5%	0.46%		\$48,948	2.5%	0.96%
FY2019	\$41.75	6.25%	\$29.47	\$105,989	2.5%	0.47%		\$50,172	2.5%	1.00%
FY2020	\$43.83	5.00%	\$25.05	\$108,639	2.5%	0.48%		\$51,426	2.5%	1.02%
FY2021	\$45.70	4.25%	\$22.36	\$111,355	2.5%	0.49%		\$52,711	2.5%	1.04%
FY2022	\$47.52	4.00%	\$21.93	\$114,139	2.5%	0.50%		\$54,029	2.5%	1.06%

* Source: Sperling's "Best Places", www.bestplaces.net

** Source: www.deptofnumbers.com/income/new-mexico/

NM Mountainous Communities' Residential Sewer Rate Comparison



RESIDENTIAL SEWER RATES: LOS ALAMOS VS. COMPARABLE COMMUNITIES

Monthly Usage	LAC - Current	LAC - Proposed	Silver City - in town	Silver City - out of town	Ruidoso	Town of Taos	Red River*	Angel Fire	Chimayo	Aztec
4,000 Gallons	51.24	54.32	19.34	26.10	58.04	38.02		34.59	42.26	47.95
6,000 Gallons	51.24	54.32	25.76	32.52	60.34	46.36	47.99	34.59	56.38	55.95
8,000 Gallons	51.24	54.32	32.18	38.94	62.64	54.70		68.16	70.50	63.95
12,000 Gallons	51.24	54.32	45.02	51.78	67.24	71.38		112.92	98.74	79.95
14,000 Gallons	51.24	54.32	51.44	58.20	69.54	79.72		135.30	112.86	87.95
16,000 Gallons	51.24	54.32	57.86	64.62	71.84	88.06		157.68	126.98	95.95
20,000 Gallons	51.24	54.32	70.70	77.46	76.44	104.74		202.44	155.22	111.95
30,000 Gallons	51.24	54.32	102.80	109.56	87.94	146.44		314.34	225.82	151.95

* Available data for Red River is for Dec. 2015, 6 kgal only.

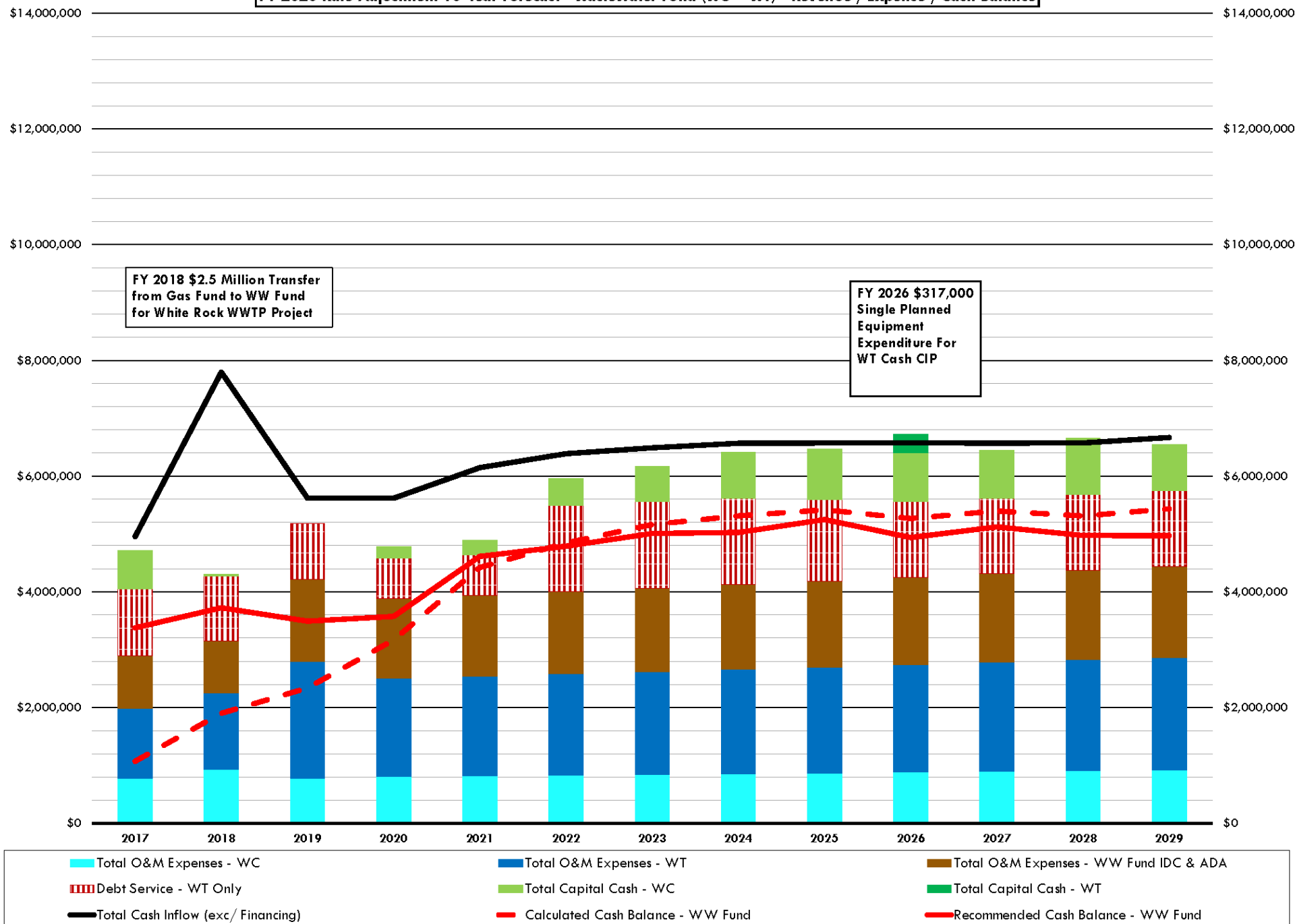
Projected Average Sewer Bill for Residential Customers - FY 2017 through FY 2022

Fiscal Year	Monthly Sewer	Rate Increase Percentage	Additional Annual Cost Over Previous Year	Los Alamos Median Household Income *	Assumed Annual Income Increase	Percentage of Income Needed to Pay Sewer Bill		New Mexico Median Household Income **	Assumed Annual Income Increase	Percentage of Income Needed to Pay Sewer Bill
FY2017	\$43.94	8.00%	\$39.00	\$105,902	2.5%	0.50%		\$46,748	2.5%	1.13%
FY2018	\$47.46	8.00%	\$42.18	\$108,550	2.5%	0.52%		\$47,917	2.5%	1.19%
FY2019	\$51.25	8.00%	\$45.56	\$111,263	2.5%	0.55%		\$49,115	2.5%	1.25%
FY2020	\$54.32	6.00%	\$36.82	\$114,045	2.5%	0.57%		\$50,342	2.5%	1.29%
FY2021	\$55.95	3.00%	\$19.56	\$116,896	2.5%	0.57%		\$51,601	2.5%	1.30%
FY2022	\$57.07	2.00%	\$13.44	\$119,818	2.5%	0.57%		\$52,891	2.5%	1.29%

* 2017 data point from <https://www.census.gov/quickfacts/fact/table/losalamoscountynewmexico/PST045217> - 2012-2016 data, 2016 dollars

** <https://www.deptofnumbers.com/income/new-mexico/> - 2016 data

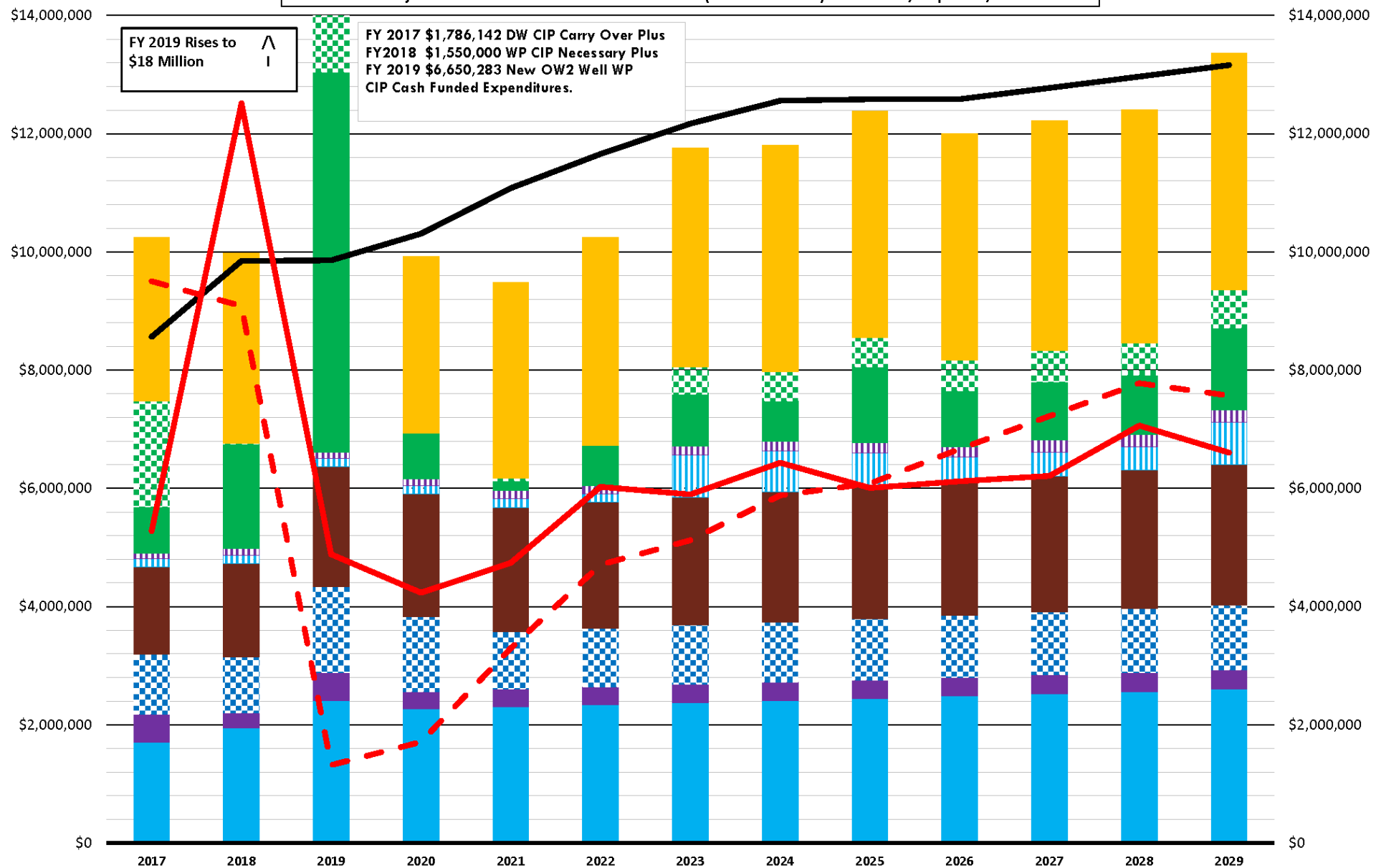
FY 2020 Rate Adjustment 10-Year Forecast - Wastewater Fund (WC + WT) - Revenue / Expense / Cash Balance



FY 2020 Rate Adjustment 10-Year Forecast - Water Fund (WP + NP + DW) - Revenue / Expense / Cash Balance

FY 2019 Rises to \$18 Million

FY 2017 \$1,786,142 DW CIP Carry Over Plus
FY2018 \$1,550,000 WP CIP Necessary Plus
FY 2019 \$6,650,283 New OW2 Well WP
CIP Cash Funded Expenditures.



- Total O&M Expenses - WP
- Total IDC & ADA Expenses - WP+NP+DW
- Total Capital Cash - WP
- Cost of Water - DW to WP
- Total O&M Expenses - NP
- Debt Service - WP
- Total Capital Cash - NP
- Total Cash Inflow exc/ Financing - WP+NP+DW
- Total O&M Expenses - DW
- Debt Service - NP
- Total Capital Cash - DW
- Total Calculated Cash Balance - WP+NP+DW

CONCLUSIONS & RECOMMENDATIONS

- Aggressive Early Year Rate Increases Are Required if the Dual Goals of Funding a CIP Adequate to Upgrade the Total Water System to an Acceptable Condition and Creating Annual Cash Balances that Meet Financial Policy Objectives are to be Achieved
- Stating the Obvious – The Timing of WP Rate Increases is a Significant Driver of DW Rate Increase Requirements
- Early Rate Increases Could be Eased Slightly if the Goal of Creating Annual Cash Balances that Meet Financial Policy Objectives is Delayed Until the End of the 20-Year Report Period (FY2036)
- It is Not Recommended to Further Delay or Expand the Time Period for Any System's CIP Program
- Alternative Forty has Been Recommended for Adoption and Water Enterprise Fund Financial Planning by the Board of Public Utilities

SUMMARY & WRAP UP

- The Different Scenarios (Except for Alternative Scenario **Thirty**) Do Not Have a Significant Differential Impact to Individual Water Bills, Therefore It Appears as Though The Question of Which Rate Structure Scenario to Select Boils Down to BPU Deciding How Rates Should Change From Year to Year
- Alternative Scenario **Thirty** is Not Recommended Due to an Excessively Low Cash Balance Throughout the 20-Year Study Period and High Later Year Rates.
- Alternative Scenario **Fifty** is Not Recommended Due to an Excessively High Cash Balance Through the First 14 Years of the Study Period
- Alternative Scenario **Ten** Has a Good Cash Balance. However, **Ten's** Cash Balance is Consistently Higher Than the Recommended Cash Balance Goal. **Ten** Has Some Early Year Excess Revenue Regarding NP Water System Expense Coverage But Has a Decent WP to NP Rate Differential Throughout the 20-Year Study Period.
- Alternative Scenario **Twenty** Has a Good Cash Balance. However, **Twenty's** Cash Balance is Consistently Lower Than the Recommended Cash Balance Goal. **Twenty** Meets NP System Expense Full Coverage (FY2033) Without Early Excess Revenue and Has a Very Good WP to NP Rate Differential Throughout the 20-Year Study Period.
- Alternative Scenario **Forty** Has a Good Cash Balance With the Earliest (FY2020) Match Point. **Forty's** Cash Balance Fluctuates Slightly Under or Over the Recommended Cash Balance Goal. **Forty** Has the Earliest NP System Expense Full Coverage (FY2029) Without Early Excess Revenue and Has a Good WP to NP Rate Differential Throughout the 20-Year Study Period.

Final Steps

- Approve the Conceptual 20-Year CIP Program Objectives and Schedule
- Select a Final Scenario Model That Meets DPU Goals
- Develop a Proposed 20-Year Rate Structure Based on the Output of the Selected Final Scenario Model
- Develop a Multi-Year Water Systems Rate Structure Understanding That Would Be Available for Implementation in FY2018
- Annually Refine the Selected Model Data Sets and Assumptions
- Annually Review and Potentially Revise Proposed Future Rates Based on the Best Available Data and Refined Model Output

Questions?

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