

Wastewater Systems Report

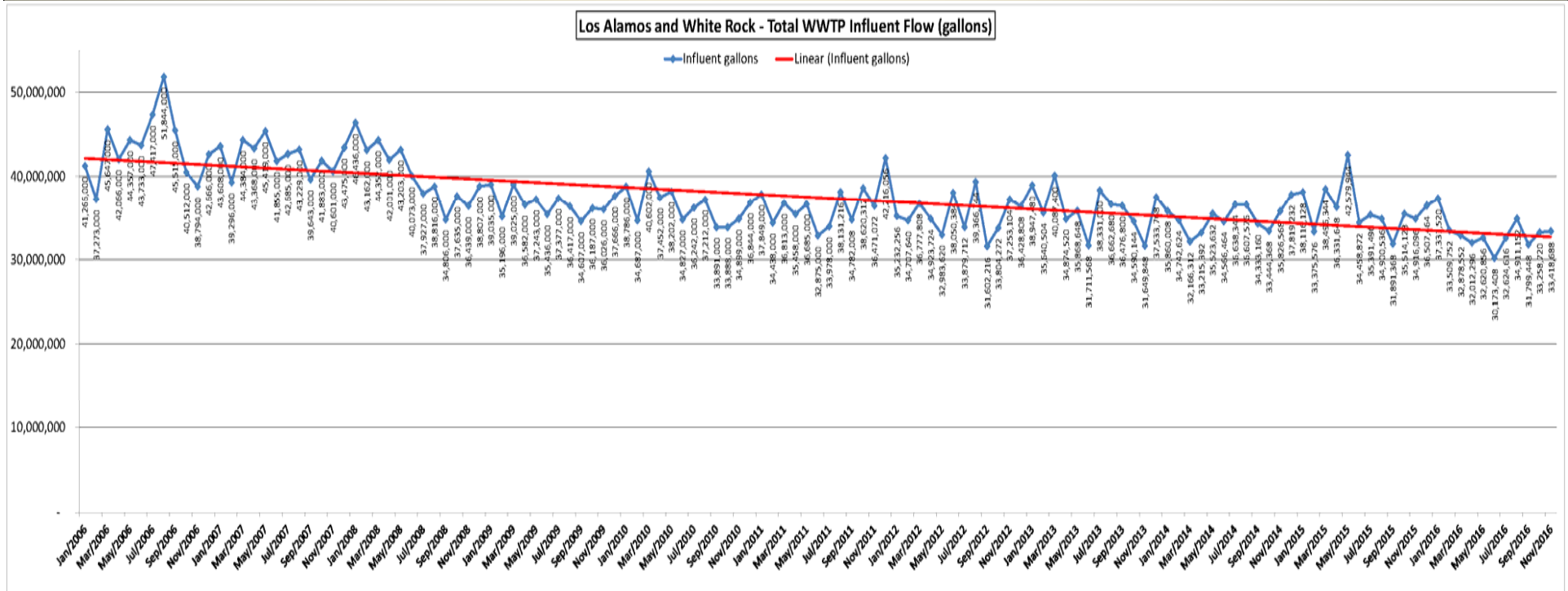
*County Council & Board of Public Utilities
Joint Meetings / 18 & 19 September 2017*



Objectives for Wastewater Systems Report to Joint Committee

- Include, But Only Quickly Discuss, Various WW System Details {11-Year Declining Volume of Wastewater, Past & Proposed Future CIP Expenditures, Financial Policy Cash Reserves Specific to the WW Systems}
- Describe the 4 Plans Being Discussed at This Evening's Joint Meeting. These Plans Are Limited to Variations of the Gas Fund Cash Reserves Transfer Approach
- Discuss the Impacts of the Various Plans to Customers {Annual Percent Increase, SF Monthly Sewer Rate, MF Monthly per Unit Rate, NR Commodity Rate}
- Show Graphs of Cumulative Percent Rate Increases and SF Monthly Rates
- Show and Discuss the Accuracy of FY2017 Actuals to the WW System 20-Year Forecast Model's FY2017 Budget Projections
- Introduce and Describe a Few Additional Alternative "Outside The Box" Funding Approaches
- Summary & Wrap Up / Recommended Next Steps
- Appendix 1 – Revenue/Expense/Cash Balance Graphs and 20-Year Forecast Model Spreadsheet Details for Tonight's Plans
- Appendix 2 – 1985 Historic thru 2036 Projected Monthly Sewer Bills for Single Family and Non-Residential (Commercial) Customers

Total LA + WR WWTP Influent Flow 2006 - 2016

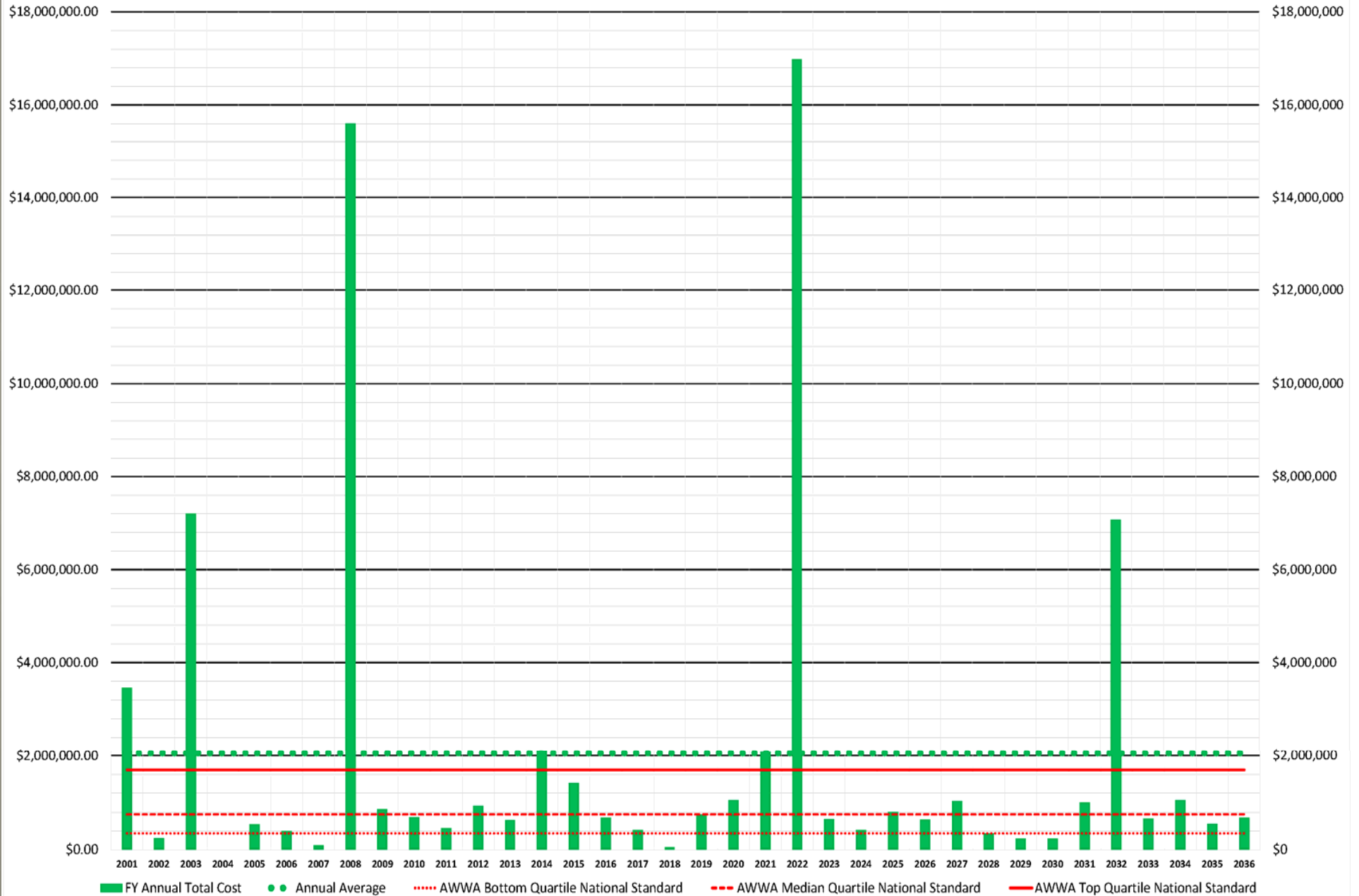


Wastewater “Sales” Volumes

- Actual Sales Volumes for 11 Years
- 2006 thru 2016 Combined (WR + LA) WWTPs Influent Flows
- Data Source – WWTP Superintendent GWS Data
- Total Flow Each Month (Gallons)
- Trend Line Indicates an Approximate 19% Decrease
- Both WWTPs (WR & LA) Individually Exhibit the Same Downward Flow Trend
- Decreased/Aging Population, Low Flow Fixture Replacements & Water Conservation Minded Citizens are the Suspected Causes
- SF & MF Sewer Rates are Flat Rate Structures to Fairly Distribute Fixed Costs of the Collection & Treatment Infrastructure. Individual Homes or MF Dwellings Do Not Vary Enough in Volume to Differentially Affect the WW System. NR (Non Residential) Rates Do Vary Significantly (Volume & Strength) and so Continue to be Volume or Water Use Based

AWWA / Wastewater System R & R

WWC + WWT System Annual Total CIP Expenditures per Fiscal Year - 2001 thru 2016 Actual & 2017 thru 2036 Proposed (Based on Plan 20)



DPU Financial Policy Reserve Requirements

- In Each Utilities Sub Fund:
 - 180-Days Budgeted O&M Expenditures
 - Annuitized or Actual CIP Program Expenditures for the Following Year / OR / A Minimum Whole System Annual Depreciation Plus 2.5%
 - For the Analyses in This Report Actual Proposed CIP Program Expenditures Are Approximately Equivalent to System Annual Depreciation + 2.5% and Were Utilized
 - Contingency Reserve (Single Largest Potential Failed Equipment)
 - Debt Service Reserve (Sufficient to Fund All Debt Service)
 - Retirement/Reclamation Reserve (Statutory, Contractual or Best Practice)
- Contingency Reserve
 - WWC = \$350,000 Replace a Section of Damaged Pipeline
 - WWT = \$350,000 Replace a Major Piece of Equipment (Clarifier Mechanism, etc.)
- Retirement/Reclamation Reserve
 - WWC = \$150,000 Abandon a Sewer Lift Station
 - WWT = \$150,000 Abandon a Major Piece of Equipment (Failed Headworks, etc.)
- Cash Reserves and Cost / Risk Sharing Between Wastewater System Groups
 - Considered Very Unlikely that Multiple Contingencies Will Occur in Any One Year
 - WWC and WWT Budget for Contingency and Retirement/Reclamation Reserves are Grouped as a Single Budget Item Within the WW System Fund (Theoretically could be split 50/50 between WWC and WWT sub-funds if desired)

Conceptual Description of Four Gas Fund Transfer Plans

- **Plan 20 {Original Plan}**

- 100% User Fees Pay for All Expenses / No Gas Fund Cash Balance Transfer
- WR WWTP Full Scale Replacement & LA WWTP 15-Year Upgrade Design in FY 2021 and Construction in FY 2022
- Early 5-Year Rate Increases (FY2017-FY2021) = 8%, 8%, 8%, 6%, 4%
- CIP Expenditures (\$450,000 “throw-away” CIP Expenditures)

- **Plan 27 {Plan 20 + Assumed \$1.9 Million Gas Fund Transfer}**

- User Fees + \$1.9 Million Gas Fund Cash Balance Transfer to Pay Off ≈ 20% of LA WWTP Existing Debt Service
- WR WWTP Full Scale Replacement & LA WWTP 15-Year Upgrade Design in FY 2021 and Construction in FY 2022
- Early 5-Year Rate Increases (FY2017-FY2021) = 8%, 8%, 7%, 5%, 3%
- CIP Expenditures (\$450,000 “throw-away” CIP Expenditures)

- **Plan 527 {Plan 27 + Refinance LAWWTP for 30-Years}**

- User Fees + \$1.9 Million GFCBT to Pay Off ≈ 20% of LA WWTP Existing Debt Service
- Refinance LAWWTP Remaining Debt & WR WWTP New Debt for 30 Years
- WR WWTP Full Scale Replacement & LA WWTP 15-Year Upgrade Design in FY 2021 and Construction in FY 2022
- Early 5-Year Rate Increases (FY2017-FY2021) = 8%, 8%, 4%, 0%, 0%
- CIP Expenditures (\$450,000 “throw-away” CIP Expenditures)
- 30-Year Financing for LAWWTP Refinancing & FY2021/22 WRWWTP Replacement

- **Plan 527 Early Build {Plan 527 + Early Construction of WRWWTP}**

- User Fees + \$1.9 Million GFCBT to Pay Off ≈ 20% of LA WWTP Existing Debt Service
- Refinance LAWWTP Remaining Debt & WR WWTP New Debt for 30 Years
- WR WWTP Full Scale Replacement & LA WWTP 12-Year Upgrade Design in FY 2019 and Construction in FY 2020
- Early 5-Year Rate Increases (FY2017-FY2021) = 8%, 8%, 3%, 1.5%, 1.5%
- CIP Expenditures (\$75,000 “throw-away” CIP Expenditures) (Saving \$375,000)
- 30-Year Financing for LAWWTP Refinancing & New LA & WR WWTP Construction

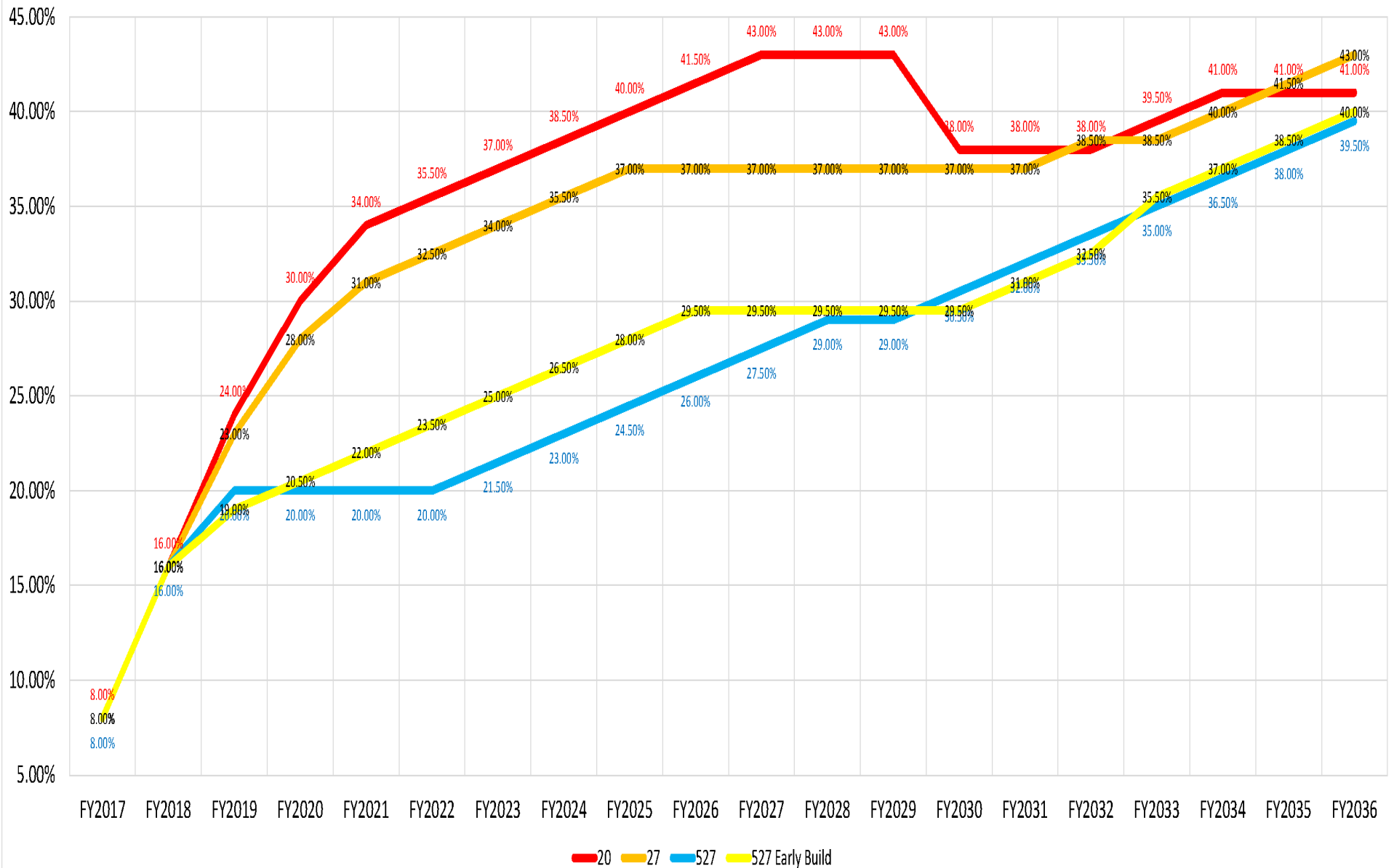
SUMMARY OF VARIOUS PLAN'S IMPACTS FY2016 – FY2036

SUMMARY OF PLANS IMPACTS: ANNUAL RATE PERCENT INCREASE - SINGLE FAMILY MONTHLY RATES - MULTI FAMILY MONTHLY PER UNIT RATES - NR COMMODITY RATES

Plan	Fiscal Year	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	FY2035	FY2036	AVERAGE
20	Rate Increase	8.00%	8.00%	8.00%	6.00%	4.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	0.00%	0.00%	-5.00%	0.00%	0.00%	1.50%	1.50%	0.00%	0.00%	2.05%
Original	SF Monthly Rate	\$43.94	\$47.46	\$51.25	\$54.33	\$56.50	\$57.35	\$58.21	\$59.08	\$59.97	\$60.87	\$61.78	\$61.78	\$61.78	\$58.69	\$58.69	\$58.69	\$59.57	\$60.46	\$60.46	\$60.46	\$57.57
No Outside	MF Monthly Rate per Unit	\$28.68	\$30.97	\$33.45	\$35.45	\$36.87	\$37.43	\$37.99	\$38.56	\$39.14	\$39.72	\$40.32	\$40.32	\$40.32	\$38.30	\$38.30	\$38.30	\$38.88	\$39.46	\$39.46	\$39.46	\$37.57
Funding	NR Commodity Rate	\$16.20	\$17.50	\$18.90	\$20.03	\$20.83	\$21.14	\$21.46	\$21.78	\$22.11	\$22.44	\$22.78	\$22.78	\$22.78	\$21.64	\$21.64	\$21.64	\$21.96	\$22.29	\$22.29	\$22.29	\$21.22
27	Rate Increase	8.00%	8.00%	7.00%	5.00%	3.00%	1.50%	1.50%	1.50%	1.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.50%	0.00%	1.50%	1.50%	1.50%	2.15%
\$1.9 Million	SF Monthly Rate	\$43.94	\$47.46	\$50.78	\$53.32	\$54.92	\$55.74	\$56.58	\$57.42	\$58.29	\$58.29	\$58.29	\$58.29	\$58.29	\$58.29	\$58.29	\$59.16	\$59.16	\$60.05	\$60.95	\$61.86	\$56.47
Gas Fund Transfer	MF Monthly Rate per Unit	\$28.68	\$30.97	\$33.14	\$34.79	\$35.84	\$36.38	\$36.92	\$37.48	\$38.04	\$38.04	\$38.04	\$38.04	\$38.04	\$38.04	\$38.04	\$38.61	\$38.61	\$39.19	\$39.78	\$40.37	\$36.85
to WW Fund	NR Commodity Rate	\$16.20	\$17.50	\$18.72	\$19.66	\$20.25	\$20.55	\$20.86	\$21.17	\$21.49	\$21.49	\$21.49	\$21.49	\$21.49	\$21.49	\$21.49	\$21.81	\$21.81	\$22.14	\$22.47	\$22.81	\$20.82
527	Rate Increase	8.00%	8.00%	4.00%	0.00%	0.00%	0.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	0.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.98%
\$1.9 Million	SF Monthly Rate	\$43.94	\$47.46	\$49.35	\$49.35	\$49.35	\$49.35	\$50.09	\$50.85	\$51.61	\$52.38	\$53.17	\$53.97	\$53.97	\$54.77	\$55.60	\$56.43	\$57.28	\$58.14	\$59.01	\$59.89	\$52.80
Gas Fund Transfer	MF Monthly Rate per Unit	\$28.68	\$30.97	\$32.21	\$32.21	\$32.21	\$32.21	\$32.69	\$33.18	\$33.68	\$34.19	\$34.70	\$35.22	\$35.22	\$35.75	\$36.28	\$36.83	\$37.38	\$37.94	\$38.51	\$39.09	\$34.46
to WW Fund	NR Commodity Rate	\$16.20	\$17.50	\$18.20	\$18.20	\$18.20	\$18.20	\$18.47	\$18.75	\$19.03	\$19.31	\$19.60	\$19.90	\$19.90	\$20.19	\$20.50	\$20.80	\$21.12	\$21.43	\$21.76	\$22.08	\$19.47
527	Rate Increase	8.00%	8.00%	3.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	0.00%	0.00%	0.00%	0.00%	1.50%	1.50%	3.00%	1.50%	1.50%	1.50%	2.00%
\$1.9 Million	SF Monthly Rate	\$43.94	\$47.46	\$48.88	\$49.61	\$50.36	\$51.11	\$51.88	\$52.66	\$53.45	\$54.25	\$54.25	\$54.25	\$54.25	\$54.25	\$55.06	\$55.89	\$57.56	\$58.43	\$59.30	\$60.19	\$53.35
GFT to WW	MF Monthly Rate per Unit	\$28.68	\$30.97	\$31.90	\$32.38	\$32.86	\$33.36	\$33.86	\$34.36	\$34.88	\$35.40	\$35.40	\$35.40	\$35.40	\$35.40	\$35.93	\$36.47	\$37.57	\$38.13	\$38.70	\$39.28	\$34.82
Early Build	NR Commodity Rate	\$16.20	\$17.50	\$18.02	\$18.29	\$18.57	\$18.84	\$19.13	\$19.41	\$19.70	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.30	\$20.60	\$21.22	\$21.54	\$21.86	\$22.19	\$19.67

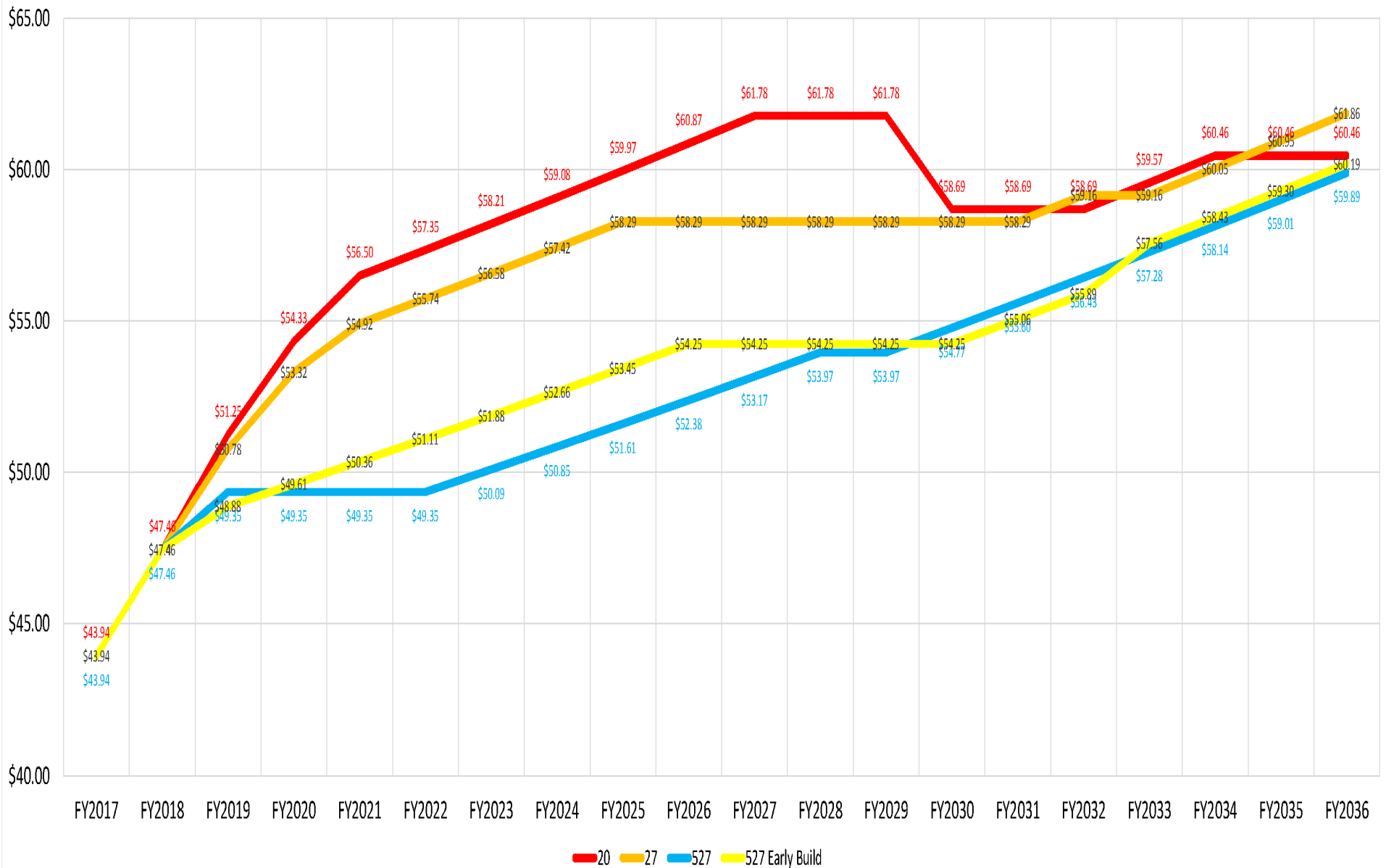
SUMMARY OF VARIOUS PLAN'S IMPACTS FY2016 – FY2036

20-Year (FY2017 - FY2036) Cumulative Annual Rate Increases for Various Plans - White Rock WWTP Funding - Assume \$1.9 mil Fund Transfer



SUMMARY OF VARIOUS PLAN'S IMPACTS FY2016 – FY2036

20-Year (FY2017 - FY2036) Annual Single Family Monthly Rate for Various Plans - White Rock WWTP Funding - Assume \$1.9 mil Fund Transfer



FY2017 ACTUAL vs. BUDGET FORECAST

Plan 27 (2022) \$4 Million Debt Pay LAWWTP VERSION

Expense Forecast		ACTUAL 2016	BUDGET 2017	ACTUAL 2017	BUDGET 2018	FORECAST 2019
	1.50%					
Wastewater Collection						
Supervision, Misc Direct Admin		233,780	323,618	262,239	230,375	233,831
Wastewater Collection		426,571	421,571	269,854	367,602	373,116
Sewer Lift Stations		275,311	245,729	209,953	275,214	279,342
Total WWC Operation Expenses		935,662	990,918	742,046	873,191	886,289
Wastewater Treatment						
LA WWTP Operations & Maintenance		833,992	969,358	767,874	869,508	882,551
WR WWTP Operations & Maintenance		506,298	418,951	417,390	448,592	455,321
Total WWT Operation Expenses		1,340,290	1,388,309	1,185,264	1,318,100	1,337,872
WW Sys. Interdepartmental Charges		372,692	416,582	411,402	590,289	599,143
WW Sys. Administrative Division Allocation		482,703	504,878	461,571	835,197	439,495
Debt Service (WWT) - CWSRF Projects		1,155,799	1,155,799	1,151,394	1,155,799	753,946
Capital - WWC - CIP & R&R		479,000	420,000	859,914	50,000	753,000
Capital - WWT - CIP & R&R		-	-	-	250,000	200,000
Capital (Bond, Loan & Grant) - WWTP CIP		-	-	-	-	-
Total WW System Operation Expenses		3,131,347	4,456,486	3,951,677	4,772,576	4,016,745
Total WW System Capital Expenditures		479,000	420,000	859,914	300,000	953,000
Total WW System Cash Outflow		3,610,347	4,876,486	4,811,591	5,072,576	4,969,745
Revenue Forecast						
Number of Res SF Flat Rate Customers		6,629	6,629	6,663	6,629	6,629
Res SF Flat Rate		31.88	34.43	34.43	37.18	38.67
Res SF Service Charge		8.81	9.51	9.51	10.27	10.68
Rate Increase Percentage		-	8.00%	-	8.00%	4.00%
Total "Sales" Revenue from Res SF Flat Rate		3,204,440	3,460,386	3,478,134	3,737,217	3,886,705
Number of Res MF Flat Rate Customers		75	75	75	75	75
Res MF Service Charge		8.81	9.51	9.51	10.27	10.68
Number of Res MF Dwelling Units		1,585	1,585	1,585	1,585	1,585
Res MF Flat Rate		26.56	28.68	28.68	30.97	32.21
Rate Increase Percentage		-	8.00%	-	8.00%	4.00%
Total "Sales" Revenue from Res MF Flat Rate		482,314	520,809	520,809	562,396	584,891
Number of Non-Residential Customers		291	291	294	291	291
Non-Residential Service Charge		8.81	9.51	9.51	10.27	10.68
Non-Residential "Sales" in Kgal	-0.20%	47,713	47,618	54,856	47,522	47,427
Adjustment Factor		24.00%	24.00%	24.00%	16.00%	12.00%
Adjusted Non-Residential "Sales" in Kgal		59,164	59,046	68,021	55,126	53,119
Non-Residential Commodity Charge per Kgal		15.00	16.20	16.20	17.50	18.20
Rate Increase Percentage		-	8.00%	-	8.00%	4.00%
Total "Sales" Revenue from Non-Residential		890,680	960,058	1,101,434	970,338	973,722
Total "Sales" Revenue		4,577,434	4,941,253	4,950,653	5,269,950	5,445,319
Interest on Utility Reserves		18,711	12,357	48,504	13,514	16,677
Inter-Utility Loan		-	-	-	-	-
Bond Issue Proceeds		-	-	-	-	-
Federal or State Grant/Loan		-	-	-	-	-
Other Revenue		-	-	-	-	-
Bond Federal Subsidy		-	-	-	-	-
Total Cash Inflow		4,596,145	4,953,610	4,999,157	5,283,464	5,461,996
Net Cash Flow		985,798	77,124	187,566	210,888	492,251
Cumulative Net Cash Flow		985,798	1,062,922	1,173,364	1,273,811	1,766,061
Cash Balance		823,785	900,909	972,493	1,111,798	1,604,049
Recommended Cash Balance		3,641,472	3,606,142	3,351,536	4,417,187	3,934,345
Plan 27 - Residential SF Flat Rate Sewer /month		\$40.69	\$43.94	\$43.94	\$47.46	\$49.35
Plan 27 - Residential MF Flat Rate Sewer / unit /month		\$26.56	\$28.68	\$28.68	\$30.97	\$32.21
Plan 27 - Non-Residential Commodity Rate / Kgal		\$15.00	\$16.20	\$16.20	\$17.50	\$18.20

C:\Users\Jack.Richardson\IACNM\Desktop\31 Aug Joint CC BPU Meeting\WC Forecast Model_Plan 27_(2022)_ \$4 Million Debt Pay LAWWTP_FY17 Actuals Unaudited_CC

ATTACHMENT A

Explanation of OTB Financing Approaches Considered

- 100% User Fee {Not OTB – Outside The Box}
 - All Revenue and WW System Income 100% From Monthly User Fee Collections
- OTB – Transfer a Portion of the Gas Fund Cash Balance to the Wastewater Fund
 - Use to Partially Pay Off Existing Debt of the LA WWTP
- OTB – Use of General Obligation Bond Financing for White Rock WWTP Replacement Only
 - G.O. Costs and Monthly Rates Assumed Proportional to Latest Recreation Bond Costs and Rates (20 Years @ 4.0%)
 - Monthly Impact Based on \$100,000 Taxable Value (≈ \$300,000 Retail Value)
 - Secondary Alternative Could Be G.O. Bond Financing for Paying Off Existing LA WWTP Debt (calculated in the “OTB - Use of County CIP Funds ...” Column)
- OTB – Temporary Return of the Electric & Gas Profit Transfer Funds
 - \$750,000 (100%) for 7 Years Then Declining Rate to \$0 for 11 Years (18 Total Years)
 - \$375,000 (50%) for 18 Years
 - \$187,500 (25%) for 18 Years
- 100% User Fee Plus LANL User Fee for WR WWTP Connection
 - LANL User Fee Assumed to be \$1 mil per Year (calculated on flow rate and commodity rate)
 - Determined to be Not Feasible Based on LANL Discharge Requirements (EPA & NMED) and Conflicting Schedules of DOE/LANL and the County
 - Determined to Provide an Efficient Planned Connection/Expansion of the New White Rock WWTP for Future Connection by LANL Regardless of Final Financing Approach selected

SUMMARY & WRAP UP

- The Differing Plans All Have Significant and Different Impacts to Individual Sewer Bills and Total Revenue Collected. However, All Plans Are Designed to Collect Adequate Revenue to Fulfill All System Requirements.
- “Early Build” Plan Minimizes Interim (“throw away”) CIP Expenditures to Maintain the WR WWTP Until Full Replacement Occurs. These Expenditures are Not Recoverable or Reusable. Reduced Early Build Expenditures = \$375,000.
- The More “Outside Funding” is Available the Fewer (or Lower) Early Year Rate Increases are Required.
- Transferring a Portion of the Gas Fund Cash Reserves to the WW Fund Requires a Revision to the Gas Rate Back Higher Because We are No Longer Burning Excess Gas Fund Cash Reserves Down Over a Period of Years.
- The Ultimate Goal is to Fund the WW Systems with Adequate Annual Revenues for O&M, R&R and Financial Policy Cash Reserves; While Limiting Rate Increases to Minimal Increases that Cover Inflation.
- Any Alternative Outside The Box Approach to Financing Requires the Acceptance and Approval of Both the Board of Public Utilities and the County Council.
- Any Alternative Approach to Financing Saves County Utility Department Customers an Amount Approximately Equal to the Total of the Funding Assistance Received.

Recommended Next Steps

- Come to Consensus on a Funding Concept
 - Gas Fund Cash Balance Transfer
 - Temporary Return of the DPU Profit Transfer Funds
 - Some Combination of Multiple Outside The Box Concepts
- Direct DPU Staff to Develop a Detailed Draft WW System Forecast Model Based on the Consensus Funding Concept – With Limited Alternative Scenarios
- Finalize and Approve (or Further Refine) the Consensus Concept 20-Year Forecast Model Based on Model Output Results
- Develop a Proposed 20-Year Rate Structure Scenario Based on the Selected Final Plan and Forecast Model
- Verify Gas Fund Impacts, If Any, and Develop a Rate Structure Scenario to Maintain Gas Fund Cash Reserves at Recommended Policy Levels
- If an “Early Build” Plan is the Consensus; Develop and Submit a Formal CWSRF Loan/Grant Application This Year for FY2019 Design and FY2020 Construction Funding Assistance
- Develop a Wastewater Systems Rate Revision Ordinance Structure That Would Be Available for Implementation in FY2019, If Necessary
- Annually Review and Potentially Revise Proposed Future Rates Based on the Best Available Data and Refined Forecast Model Output

Large Format Printouts or Digital versions of
this Presentation are Available upon Request

Final Questions?

Deputy Utilities Manager – Gas, Water, Sewer
Department of Public Utilities

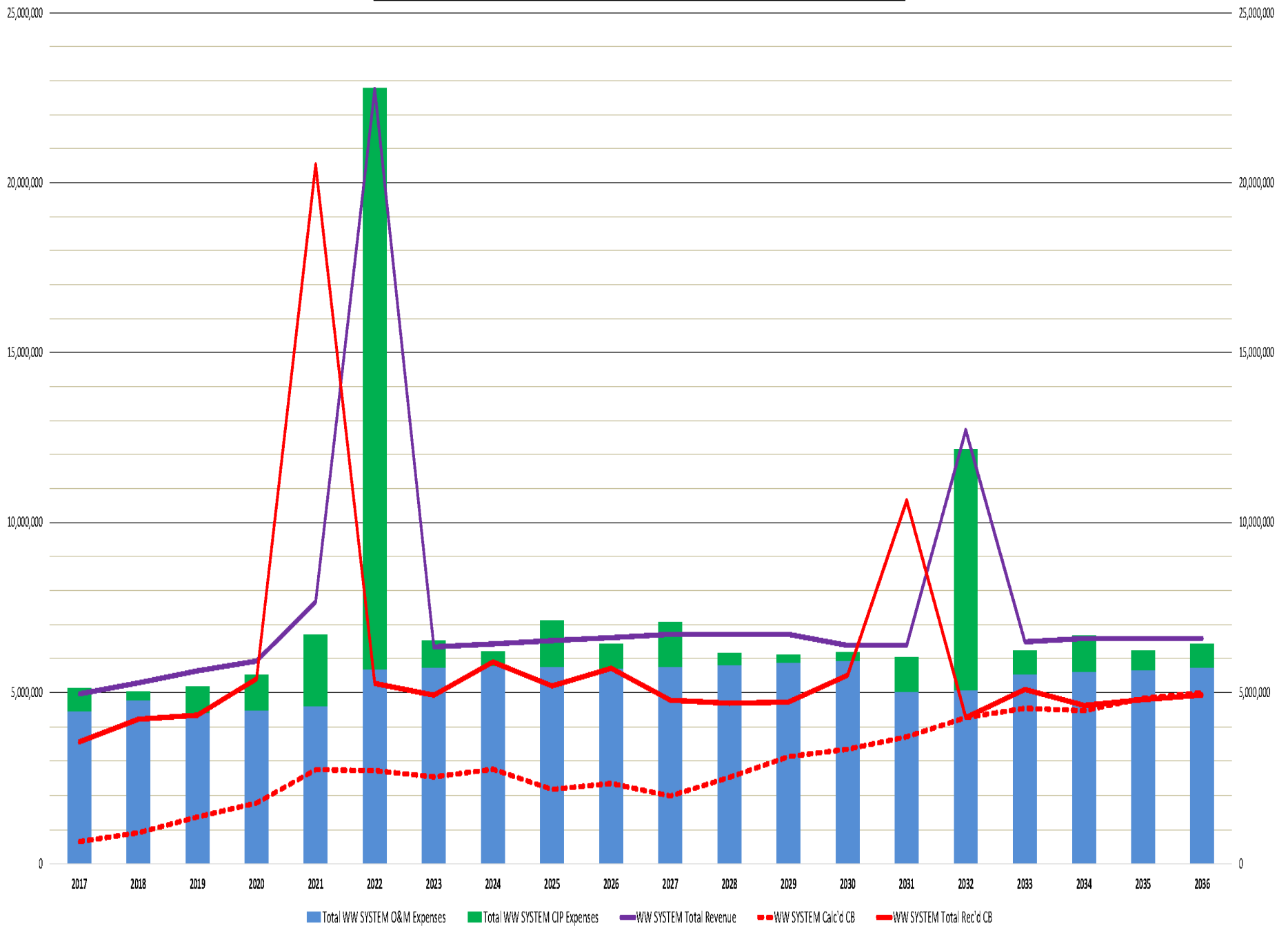
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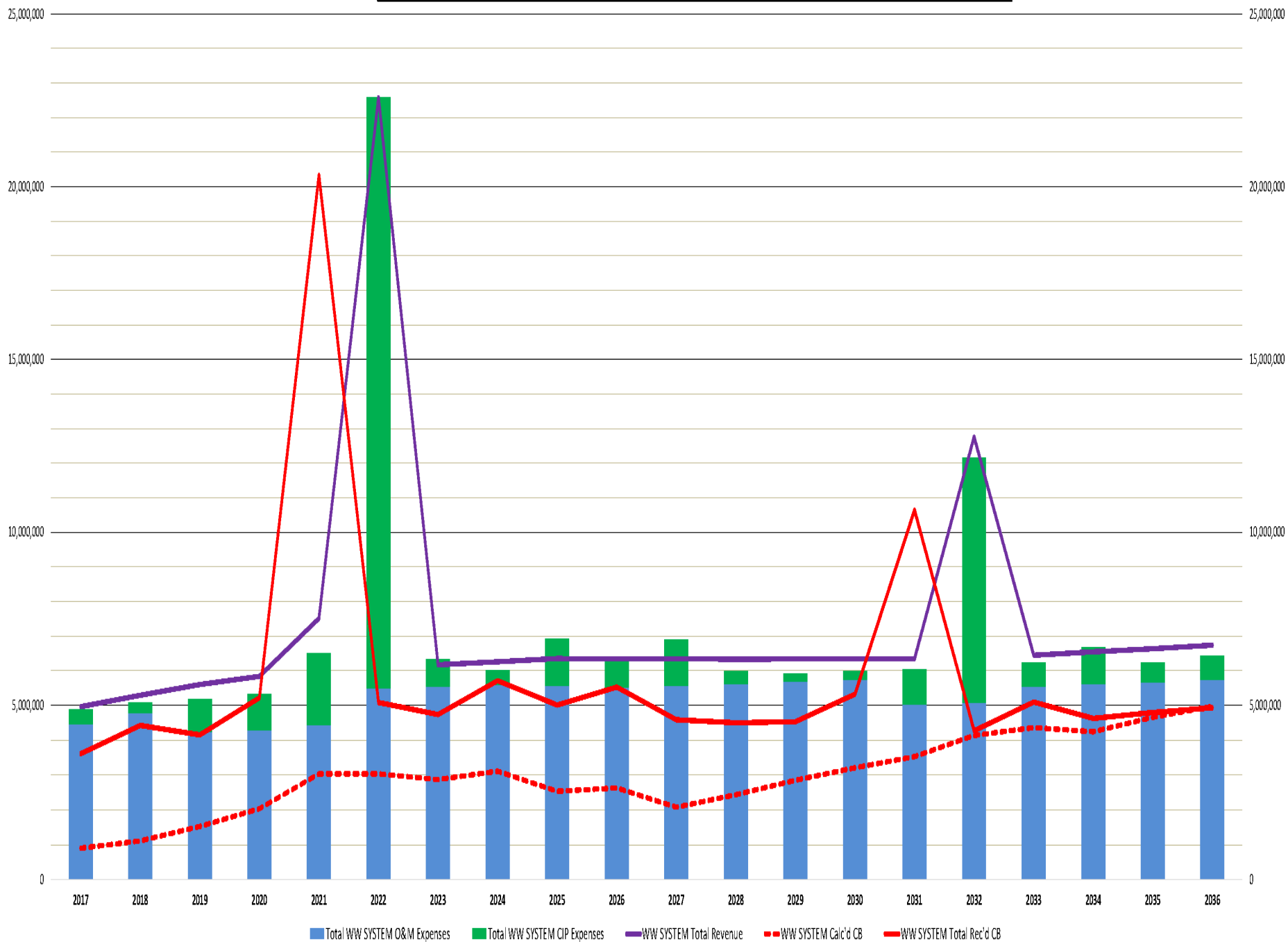
Appendix 1 – 18 & 19 Sept 2017 Discussed Plan Details

- Revenue / Expenditure / Cash Balance Graphs for Tonight's Plans
- WW System Forecast Model Spreadsheet Printout for All Plans

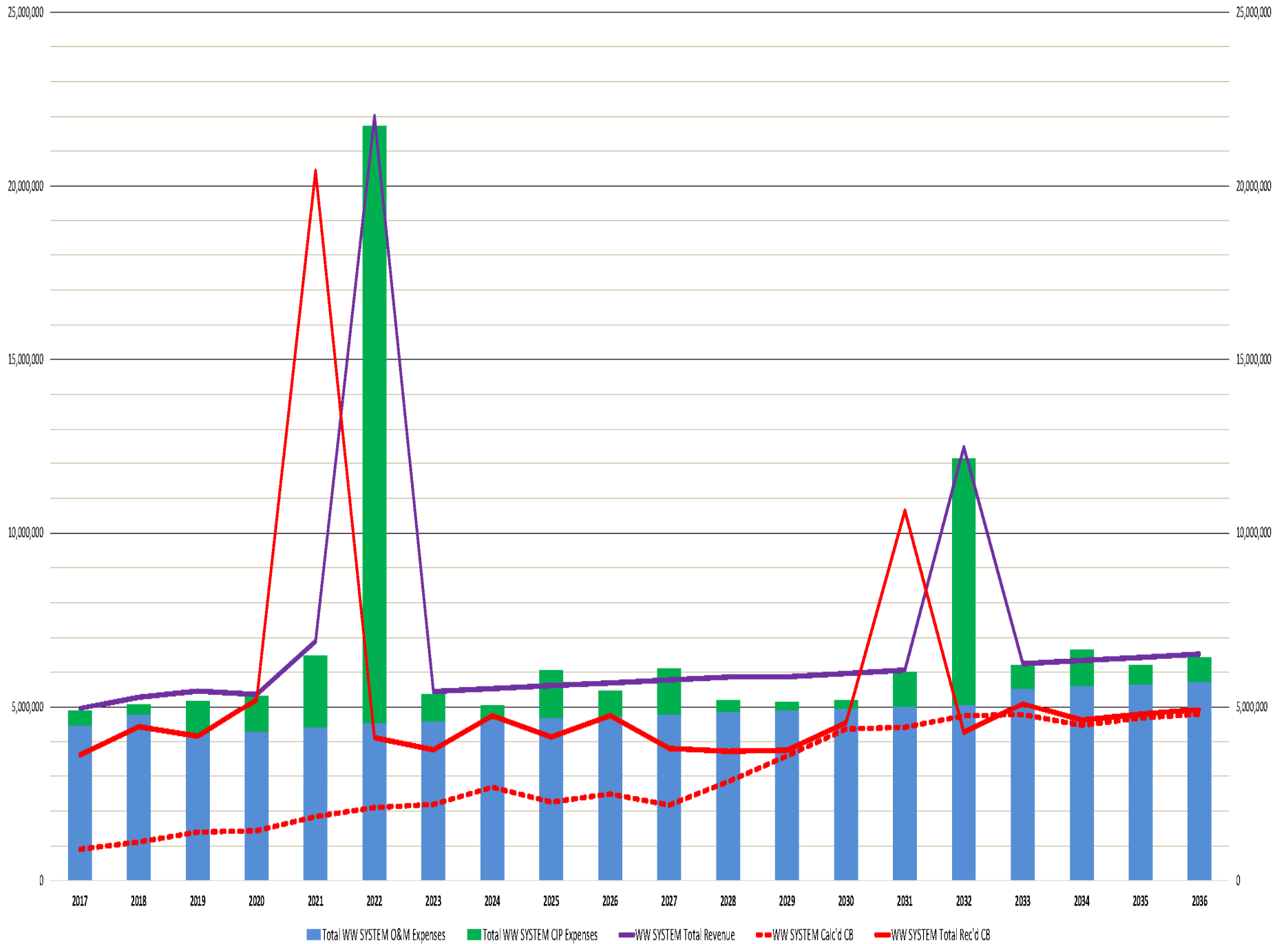
Plan 20 (2022) -7-2017 Version WW SYSTEM Total Revenue vs Total Expenses with Cash Balances (Calculated vs Recommended)



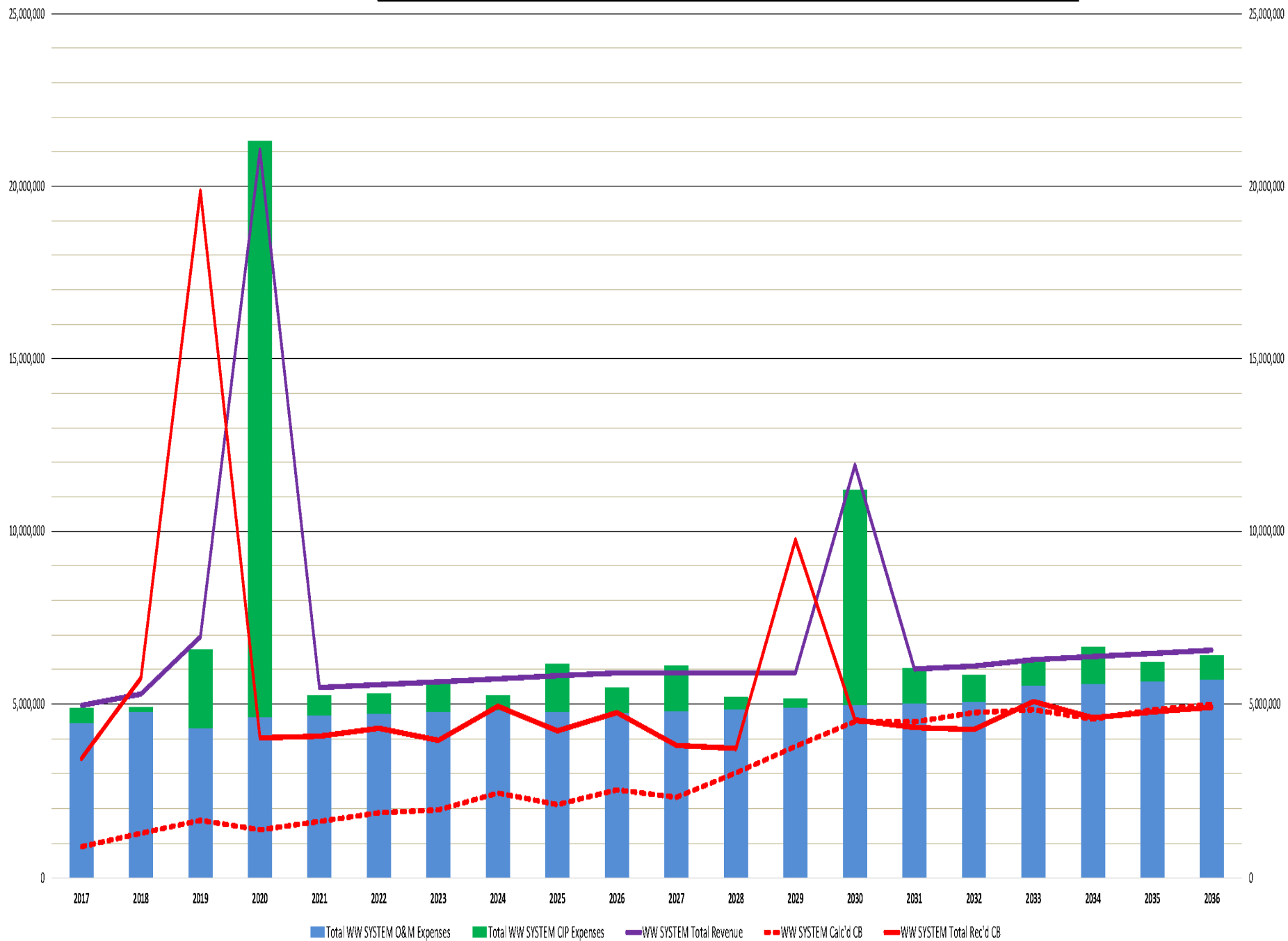
Plan 27 (2022) - \$1.9 Million Debt Pay LAW/WTP Version WW SYSTEM Total Revenue vs Total Expenses with Cash Balances (Calculated vs Recommended)



Plan 527 (2022) - \$1.9 Million Debt Pay LAWWTP Version - WW SYSTEM Total Revenue vs Total Expenses with Cash Balances (Calculated vs Recommended)



Plan 527 (2022) \$1.9 Million Debt Pay LAWWTP EARLY BUILD Version- WW SYSTEM Total Revenue vs Total Expenses with Cash Balances (Calculated vs Recommended)



Expense Forecast	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Wastewater Collection	1.50%																				
Supervision, Misc Direct Admin	233,780	323,618	230,375	233,831	237,338	240,898	244,512	248,179	251,902	255,681	259,516	263,408	267,360	271,370	275,441	279,572	283,766	288,022	292,343	296,728	301,179
Wastewater Collection	426,571	421,571	367,602	373,116	378,713	384,393	390,159	396,012	401,952	407,981	414,101	420,312	426,617	433,016	439,512	446,104	452,796	459,588	466,482	473,479	480,581
Sewer Lift Stations	275,311	245,729	275,214	279,342	283,532	287,785	292,102	296,484	300,931	305,445	310,027	314,677	319,397	324,188	329,051	333,987	338,996	344,081	349,243	354,481	359,798
Total WWC Operation Expenses	935,662	990,918	873,191	886,289	899,583	913,077	926,773	940,675	954,785	969,107	983,643	998,398	1,013,374	1,028,574	1,044,003	1,059,663	1,075,558	1,091,691	1,108,067	1,124,688	1,141,558
Wastewater Treatment																					
LA WWTP Operations & Maintenance	833,992	969,358	869,508	882,551	895,789	909,226	922,864	936,707	950,753	965,019	979,494	994,187	1,009,100	1,024,236	1,039,600	1,055,194	1,071,021	1,087,087	1,103,393	1,119,944	1,136,743
WR WWTP Operations & Maintenance	506,298	418,951	448,592	455,321	462,151	469,083	476,119	483,261	490,510	497,868	505,336	512,916	520,609	528,418	536,345	544,390	552,556	560,844	569,257	577,796	586,463
Total WWT Operation Expenses	1,340,290	1,388,309	1,318,100	1,337,872	1,357,940	1,378,309	1,399,983	1,419,968	1,441,268	1,462,887	1,484,830	1,507,102	1,529,709	1,552,654	1,575,944	1,599,583	1,623,577	1,647,931	1,672,650	1,697,740	1,723,206
WW Sys. Interdepartmental Charges	372,692	416,532	590,289	599,143	608,130	617,252	626,511	635,909	645,448	655,129	664,956	674,931	685,054	695,330	705,760	716,347	727,092	737,998	749,068	760,304	771,709
WW Sys. Administrative Division Allocation	482,703	504,878	835,197	439,495	446,087	452,779	459,570	466,464	473,461	480,563	487,771	495,088	502,514	510,052	517,703	525,468	533,350	541,350	549,471	557,713	566,078
Debt Service (WWT) - CWSRF Projects	1,155,799	1,155,799	1,155,799	1,155,799	1,155,799	1,250,270	2,272,534	2,272,433	2,272,534	2,178,750	2,084,965	2,084,965	2,081,623	2,081,623	2,081,623	2,081,623	1,116,735	1,116,735	1,529,491	1,529,491	1,529,491
Capital - WWC - CIP & R&R	479,000	420,000	50,000	753,000	1,049,000	561,000	583,000	652,000	415,000	810,000	643,000	1,029,000	348,000	236,000	240,000	910,000	751,000	668,000	732,000	549,000	589,000
Capital - WWT - CIP & R&R	-	250,000	200,000	-	-	-	-	135,000	-	555,000	85,000	286,000	-	-	-	91,000	-	-	317,000	-	98,000
Capital (Bond, Loan & Grant) - WWTP CIP	-	-	-	-	-	1,525,000	16,502,000	-	-	-	-	-	-	-	-	-	6,325,000	-	-	-	-
Total WW System Operation Expenses	3,131,347	4,456,486	4,772,576	4,418,597	4,467,540	4,611,686	5,684,372	5,735,449	5,787,495	5,746,435	5,706,165	5,760,483	5,812,275	5,868,234	5,925,033	5,017,796	5,076,312	5,548,462	5,608,747	5,669,936	5,732,042
Total WW System Capital Expenditures	479,000	670,000	250,000	753,000	1,049,000	2,086,000	17,085,000	787,000	415,000	1,365,000	728,000	1,315,000	348,000	236,000	240,000	1,001,000	7,076,000	668,000	1,049,000	549,000	687,000
Total WW System Cash Outflow	3,610,347	5,126,486	5,022,576	5,171,597	5,516,540	6,697,686	22,769,372	6,522,449	6,202,495	7,111,435	6,434,165	7,075,483	6,160,275	6,104,234	6,165,033	6,018,796	12,152,312	6,216,462	6,657,747	6,218,936	6,419,042
Revenue Forecast																					
Number of Res SF Flat Rate Customers	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629
Res SF Flat Rate	31.88	34.43	37.18	40.16	42.57	44.27	44.94	45.61	46.29	46.99	47.69	48.41	48.41	48.41	48.41	48.41	48.41	48.41	48.41	48.41	48.41
Res SF Service Charge	8.81	9.51	10.27	11.09	11.76	12.23	12.41	12.60	12.79	12.98	13.17	13.37	13.37	13.37	13.37	13.37	13.37	13.37	13.37	13.37	13.37
Rate Increase Percentage	-	8.00%	8.00%	8.00%	6.00%	4.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	0.00%	0.00%	-5.00%	0.00%	0.00%	1.50%	1.50%	0.00%	0.00%
Total "Sales" Revenue from Res SF Flat Rate	3,204,440	3,460,386	3,737,217	4,036,194	4,278,366	4,449,500	4,516,243	4,583,986	4,652,746	4,722,537	4,793,375	4,865,276	4,865,276	4,865,276	4,865,276	4,865,276	4,865,276	4,865,276	4,865,276	4,865,276	4,865,276
Number of Res MF Flat Rate Customers	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Res MF Service Charge	8.81	9.51	10.27	11.09	11.76	12.23	12.41	12.60	12.79	12.98	13.17	13.37	13.37	13.37	13.37	13.37	13.37	13.37	13.37	13.37	13.37
Number of Res MF Dwelling Units	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585
Res MF Flat Rate	26.56	28.68	30.97	33.45	35.45	37.43	39.14	39.72	39.72	39.72	39.72	39.72	39.72	39.72	39.72	39.72	39.72	39.72	39.72	39.72	39.72
Rate Increase Percentage	-	8.00%	8.00%	8.00%	6.00%	4.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	0.00%	0.00%	-5.00%	0.00%	0.00%	1.50%	1.50%	0.00%	0.00%
Total "Sales" Revenue from Res MF Flat Rate	482,314	520,809	562,396	607,387	643,830	669,584	679,627	689,822	700,169	710,672	721,332	732,152	732,152	732,152	732,152	732,152	732,152	732,152	732,152	732,152	732,152
Number of Non-Residential Customers	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291
Non-Residential Service Charge	8.81	9.51	10.27	11.09	11.76	12.23	12.41	12.60	12.79	12.98	13.17	13.37	13.37	13.37	13.37	13.37	13.37	13.37	13.37	13.37	13.37
Non-Residential "Sales" in Kgal	47,713	47,618	47,522	47,427	47,332	47,238	47,143	47,049	46,955	46,861	46,767	46,674	46,580	46,487	46,394	46,301	46,209	46,116	46,024	45,932	45,840
Adjustment Factor	24.00%	24.00%	16.00%	8.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Adjusted Non-Residential "Sales" in Kgal	59,164	59,046	55,126	51,221	48,279	47,238	47,143	47,049	46,955	46,861	46,767	46,674	46,580	46,487	46,394	46,301	46,209	46,116	46,024	45,932	45,840
Non-Residential Commodity Charge per Kgal	15.00	16.20	17.50	18.90	20.03	20.83	21.14	21.46	21.78	22.11	22.44	22.78	22.78	22.78	22.78	22.78	22.78	22.78	22.78	22.78	22.78
Rate Increase Percentage	-	8.00%	8.00%	8.00%	6.00%	4.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	0.00%	0.00%	-5.00%	0.00%	0.00%	1.50%	1.50%	0.00%	0.00%
Total "Sales" Revenue from Non-Residential	890,680	960,058	970,338	976,402	977,819	995,892	1,008,892	1,022,063	1,035,406	1,048,923	1,062,617	1,076,490	1,074,427	1,072,369	1,070,299	1,068,229	1,066,159	1,064,089	1,062,019	1,060,000	1,058,000
Total "Sales" Revenue	4,577,434	4,941,253	5,269,950	5,619,983	5,900,015	6,114,975	6,204,762	6,295,971	6,388,321	6,482,132	6,577,324	6,673,917	6,771,855	6,869,797	6,968,533	7,068,159	7,168,585	7,269,711	7,371,547	7,474,119	7,577,434
Interest on Utility Reserves	18,711	12,357	9,764	13,621	20,551	26,611	41,145	40,823	38,036	41,394	32,576	35,212	29,716	37,836	46,887	50,130	55,586	63,967	68,032	66,953	72,410
Inter-Utility Loan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bond Issue Proceeds	-	-	-	-	-	1,525,000	16,502,000	-	-	-	-	-	-	-	-	-	6,325,000	-	-	-	-
Federal or State Grant/Loan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bond Federal Subsidy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Cash Inflow	4,596,145	4,953,610	5,279,714	5,633,603	5,920,566	7,666,587	22,747,907	6,336,694	6,426,358	6,523,526	6,609,900	6,709,129	6,701,571	6,707,632	6,381,242	6,382,538	12,711,050	6,487,419	6,585,841	6,582,772	6,586,243
Net Cash Flow	985,798	(172,876)	257,138	462,006	404,026	968,900	(21,464)	(185,755)	223,862	(587,908)	175,734	(366,354)	541,297	603,398	216,209	363,742	558,738	270,957	(71,906)	363,836	167,201
Cumulative Net Cash Flow	985,798	812,922	1,070,061	1,532,067	1,936,093	2,904,993	2,883,528	2,697,773	2,921,636	2,333,727	2,509,461	2,143,107	2,684,404	3,287,802	3,504,011	3,867,752	4,426,491	4,697,448	4,625,542	4,989,378	5,156,579
Cash Balance	823,785	650,909	908,048	1,370,054	1,774,080	2,742,980	2,721,515	2,535,760	2,759,623	2,171,714	2,347,449	1,981,094	2,522,391	3,125,789	3,341,998	3,705,740	4,264,478	4,535,435	4,463,529	4,827,366	4,994,566
Recommended Cash Balance	3,891,472	3,556,142	4,217,137	4,336,198	5,397,670	20,515,978	5,265,453	4,918,941	5,895,015	5,190,592	5,710,565	4,770,724	4,682,949	4,714,929	5,504,328	10,643,285	4,264,523	5,087,977	4,618,119	4,786,713	4,920,767
Plan 20 - Residential SF Flat Rate Sewer / month	\$40.69	\$43.94	\$47.46	\$51.25	\$54.33	\$56.50	\$57.35	\$58.21	\$59.08	\$59.97	\$60.87	\$61.78	\$61.78	\$61.78	\$61.78	\$61.78	\$61.78	\$61.78	\$61.78	\$61.78	\$61.78
Plan 20 - Residential, MF Flat Rate Sewer / unit / month	\$26.56	\$28.68	\$30.97	\$33.45	\$35.45	\$37.43	\$39.14	\$39.72	\$39.72												

Expense Forecast	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Wastewater Collection	1.50%																				
Supervision, Misc Direct Admin	233,780	323,618	230,375	233,831	237,338	240,898	244,512	248,179	251,902	255,681	259,516	263,408	267,360	271,370	275,441	279,572	283,766	288,022	292,343	296,728	301,179
Wastewater Collection	426,571	421,571	367,602	373,116	378,713	384,393	390,159	396,012	401,962	407,981	414,101	420,312	426,617	433,016	439,512	446,104	452,796	459,588	466,482	473,479	480,581
Sewer Lift Stations	275,311	245,729	275,214	279,342	283,532	287,785	292,102	296,484	300,931	305,445	310,027	314,677	319,397	324,188	329,051	333,987	338,996	344,081	349,243	354,481	359,798
Total WWC Operation Expenses	935,662	990,918	873,191	886,289	899,583	913,077	926,773	940,675	954,785	969,107	983,643	998,398	1,013,374	1,028,574	1,044,003	1,059,663	1,075,558	1,091,691	1,108,067	1,124,688	1,141,558
Wastewater Treatment																					
LA WWTP Operations & Maintenance	833,992	969,358	869,508	882,551	895,789	909,226	922,864	936,707	950,758	965,019	979,494	994,187	1,009,100	1,024,236	1,039,600	1,055,194	1,071,021	1,087,087	1,103,393	1,119,944	1,136,743
WR WWTP Operations & Maintenance	506,298	418,951	448,592	455,321	462,151	469,083	476,119	483,261	490,510	497,868	505,336	512,916	520,609	528,418	536,345	544,390	552,556	560,844	569,257	577,796	586,463
Total WWT Operation Expenses	1,340,290	1,388,309	1,318,100	1,337,872	1,357,940	1,378,309	1,398,983	1,419,968	1,441,268	1,462,887	1,484,830	1,507,102	1,529,709	1,552,654	1,575,944	1,599,583	1,623,577	1,647,931	1,672,650	1,697,740	1,723,206
WW Sys. Interdepartmental Charges	372,692	416,582	590,289	599,143	608,130	617,252	626,511	635,909	645,448	655,129	664,956	674,931	685,054	695,330	705,760	716,347	727,092	737,998	749,068	760,304	771,709
WW Sys. Administrative Division Allocation	482,703	504,878	835,197	439,495	446,087	452,779	459,570	466,464	473,461	480,563	487,771	495,088	502,514	510,052	517,703	525,468	533,350	541,350	549,471	557,713	566,078
Debt Service (WWT) - CWSRF Projects	1,155,799	1,155,799	1,155,799	964,919	964,919	1,059,390	2,081,654	2,081,573	2,081,654	1,987,870	1,894,085	1,894,085	1,890,743	1,890,743	1,890,743	1,116,735	1,116,735	1,529,491	1,529,491	1,529,491	1,529,491
Capital - WWC - CIP & R&R	479,000	420,000	50,000	753,000	1,049,000	561,000	583,000	652,000	415,000	810,000	643,000	1,029,000	348,000	236,000	240,000	910,000	751,000	668,000	732,000	540,000	589,000
Capital - WWT - CIP & R&R	-	-	250,000	200,000	-	-	-	135,000	-	555,000	85,000	286,000	-	-	-	91,000	-	-	317,000	-	98,000
Capital (Bond, Loan & Grant) - WWTP CIP	-	-	-	-	-	1,525,000	16,502,000	-	-	-	-	-	-	-	-	-	6,325,000	-	-	-	-
Total WW System Operation Expenses	3,131,347	4,456,486	4,772,576	4,227,717	4,276,660	4,420,807	5,493,492	5,544,589	5,596,615	5,555,555	5,515,285	5,569,603	5,621,395	5,677,354	5,734,153	5,017,796	5,076,312	5,548,462	5,608,747	5,669,936	5,732,042
Total WW System Capital Expenditures	479,000	420,000	300,000	953,000	1,049,000	2,086,000	17,085,000	787,000	415,000	1,365,000	728,000	1,315,000	348,000	236,000	240,000	1,001,000	7,076,000	668,000	1,049,000	549,000	687,000
Total WW System Cash Outflow	3,610,347	4,876,486	5,072,576	5,180,717	5,325,660	6,506,807	22,578,492	6,331,589	6,011,615	6,920,555	6,243,285	6,884,603	5,969,395	5,913,354	5,974,153	6,018,796	12,152,312	6,216,462	6,657,747	6,218,936	6,419,042
Revenue Forecast																					
Number of Res SF Flat Rate Customers	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629
Res SF Flat Rate	31.88	34.43	37.18	39.79	41.78	43.03	43.68	44.33	45.00	45.67	45.67	45.67	45.67	45.67	45.67	45.67	45.67	45.67	45.67	45.67	45.67
Res SF Service Charge	8.81	9.51	10.27	10.99	11.54	11.89	12.06	12.24	12.43	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61
Rate Increase Percentage	-	8.00%	8.00%	7.00%	5.00%	3.00%	1.50%	1.50%	1.50%	1.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.50%	0.00%	1.50%	1.50%	1.50%
Total "Sales" Revenue from Res SF Flat Rate	3,204,440	3,460,386	3,737,217	3,993,822	4,198,763	4,324,726	4,389,597	4,455,441	4,522,272	4,590,106	4,590,106	4,590,106	4,590,106	4,590,106	4,590,106	4,590,106	4,590,106	4,590,106	4,728,842	4,799,775	4,871,771
Number of Res MF Flat Rate Customers	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Res MF Service Charge	8.81	9.51	10.27	10.99	11.54	11.89	12.06	12.24	12.43	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61
Number of Res MF Dwelling Units	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585
Res MF Flat Rate	26.56	28.68	30.97	33.14	34.79	35.84	36.38	36.92	37.48	38.04	38.04	38.04	38.04	38.04	38.04	38.04	38.04	38.04	38.04	38.04	38.04
Rate Increase Percentage	-	8.00%	8.00%	7.00%	5.00%	3.00%	1.50%	1.50%	1.50%	1.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.50%	0.00%	1.50%	1.50%	1.50%
Total "Sales" Revenue from Res MF Flat Rate	482,314	520,809	562,396	601,763	631,851	650,807	660,569	670,478	680,535	690,743	690,743	690,743	690,743	690,743	690,743	690,743	690,743	701,104	711,620	722,295	733,129
Number of Non-Residential Customers	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291
Non-Residential Service Charge	8.81	9.51	10.27	10.99	11.54	11.89	12.06	12.24	12.43	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61	12.61
Non-Residential "Sales" in Kgal	47.713	47.618	47.522	47.427	47.332	47.238	47.143	47.049	46.955	46.861	46.767	46.674	46.580	46.487	46.394	46.301	46.209	46.116	46.024	45.932	45.840
Adjustment Factor	24.00%	24.00%	16.00%	9.00%	4.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Adjusted Non-Residential "Sales" in Kgal	59,164	59,046	55,126	51,696	49,216	47,710	47,143	47,049	46,955	46,861	46,767	46,674	46,580	46,487	46,394	46,301	46,209	46,116	46,024	45,932	45,840
Non-Residential Commodity Charge per Kgal	15.00	16.20	17.50	18.72	19.66	20.25	20.55	20.86	21.17	21.49	21.49	21.49	21.49	21.49	21.49	21.49	21.49	21.81	22.14	22.47	22.81
Rate Increase Percentage	-	8.00%	8.00%	7.00%	5.00%	3.00%	1.50%	1.50%	1.50%	1.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.50%	0.00%	1.50%	1.50%	1.50%
Total "Sales" Revenue from Non-Residential	890,680	960,058	970,338	975,973	977,676	977,242	980,601	993,402	1,006,371	1,019,509	1,017,555	1,015,606	1,013,660	1,011,718	1,009,780	1,007,846	1,021,004	1,019,049	1,032,354	1,045,833	1,059,488
Total "Sales" Revenue	4,577,434	4,941,253	5,269,950	5,576,558	5,808,290	5,952,774	6,030,766	6,119,320	6,209,178	6,300,358	6,298,404	6,296,455	6,294,509	6,292,567	6,290,629	6,288,695	6,381,066	6,379,111	6,472,817	6,567,903	6,664,389
Interest on Utility Reserves	18,711	12,357	13,514	16,677	22,865	30,447	45,468	45,465	42,362	46,570	37,966	39,362	31,130	36,474	42,709	48,097	52,867	61,966	65,336	63,542	69,729
Inter-Utility Loan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bond Issue Proceeds	-	-	-	-	-	1,525,000	16,502,000	-	-	-	-	-	-	-	-	-	6,325,000	-	-	-	-
Federal or State Grant/Loan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bond Federal Subsidy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Cash Inflow	4,596,145	4,953,610	5,283,464	5,593,235	5,831,155	7,508,221	22,578,235	6,164,785	6,252,140	6,346,928	6,336,370	6,335,817	6,325,639	6,329,041	6,333,338	6,336,792	12,758,933	6,441,077	6,538,152	6,631,445	6,734,118
Net Cash Flow	985,798	77,124	210,888	412,518	505,495	1,001,415	(257)	(166,804)	240,525	(573,627)	93,085	(548,786)	356,245	415,687	359,185	317,996	606,621	224,615	(119,594)	412,509	315,076
Cumulative Net Cash Flow	985,798	1,062,922	1,273,811	1,686,329	2,191,823	3,193,238	3,192,981	3,026,177	3,266,702	2,693,075	2,786,160	2,237,373	2,593,618	3,009,305	3,368,489	3,686,485	4,293,107	4,517,721	4,398,127	4,810,636	5,125,712
Cash Balance	823,785	900,909	1,111,798	1,524,316	2,029,810	3,031,225	3,030,968	2,864,164	3,104,689	2,531,062	2,624,147	2,075,360	2,431,605	2,847,292	3,206,477	3,524,473	4,131,094	4,355,709	4,236,114	4,648,623	4,963,699
Recommended Cash Balance	3,641,472	3,606,142	4,417,187	4,145,318	5,206,790	20,325,098	5,074,573	4,728,081	5,704,135	4,999,712	5,519,685	4,579,844	4,492,069	4,524,049	5,313,448	10,643,265	4,264,523	5,087,977	4,618,119	4,786,713	4,920,767
Plan 27 - Residential SF Flat Rate Sewer / month	\$40.69	\$43.94	\$47.46	\$50.78	\$53.32	\$54.92	\$55.74	\$56.58	\$57.42	\$58.29	\$58.29	\$58.29	\$58.29	\$58.29	\$58.29	\$58.29	\$59.16	\$59.16	\$60.05	\$60.95	\$61.86
Plan 27 - Residential MF Flat Rate Sewer / unit / month	\$26.56	\$28.68	\$30.97	\$33.14	\$34.79	\$35.84	\$36.38	\$36.92	\$37.48	\$38											

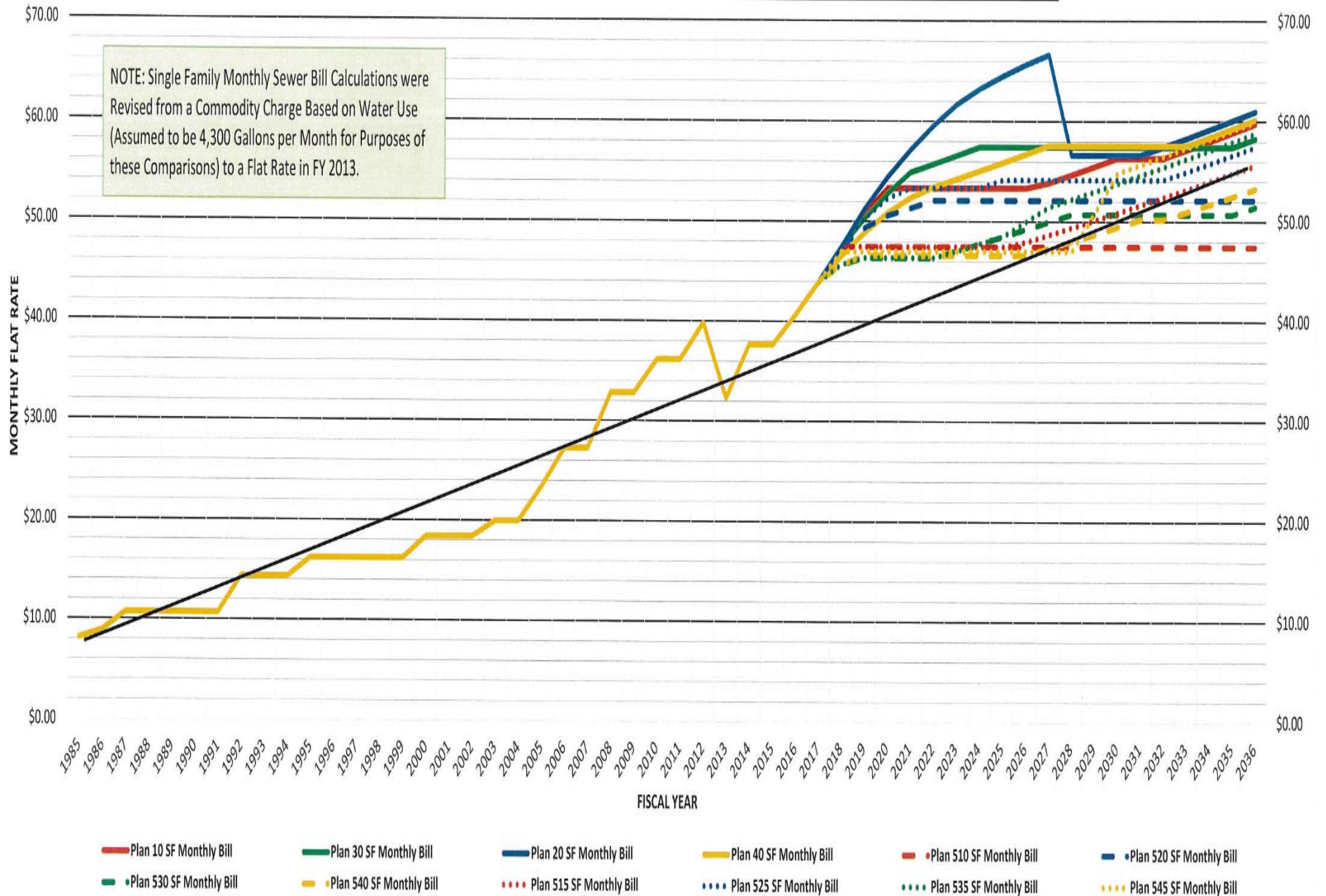
Expense Forecast	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Wastewater Collection	1.50%																				
Supervision, Mgr Direct Admin	233,780	323,618	230,375	233,831	237,338	240,898	244,512	248,179	251,902	255,681	259,516	263,408	267,360	271,370	275,441	279,572	283,766	288,022	292,343	296,728	301,179
Wastewater Collection	426,571	421,571	367,602	373,116	378,713	384,393	390,159	396,012	401,962	407,981	414,101	420,312	426,617	433,016	439,512	446,104	452,796	459,588	466,482	473,479	480,581
Sewer Lift Stations	275,311	245,729	275,214	279,342	283,532	287,785	292,102	296,484	300,931	305,445	310,027	314,677	319,397	324,183	329,051	333,987	338,996	344,081	349,243	354,481	359,798
Total WWC Operation Expenses	935,662	990,918	873,191	886,289	899,583	913,077	926,773	940,675	954,785	969,107	983,643	998,398	1,013,374	1,028,574	1,044,003	1,059,663	1,075,558	1,091,691	1,108,067	1,124,688	1,141,558
Wastewater Treatment																					
LA WWTP Operations & Maintenance	833,992	969,358	869,508	882,551	895,789	909,226	922,864	936,707	950,758	965,019	979,494	994,187	1,009,100	1,024,236	1,039,600	1,055,194	1,071,021	1,087,087	1,103,393	1,119,944	1,136,741
WR WWTP Operations & Maintenance	506,298	418,951	448,592	455,321	462,151	469,083	476,119	483,261	490,510	497,868	505,336	512,916	520,609	528,418	536,345	544,390	552,556	560,844	569,257	577,796	586,463
Total WWT Operation Expenses	1,340,290	1,388,309	1,318,100	1,337,872	1,357,940	1,378,309	1,398,983	1,419,968	1,441,268	1,462,887	1,484,830	1,507,102	1,529,709	1,552,654	1,575,944	1,599,583	1,623,577	1,647,931	1,672,650	1,697,740	1,723,206
WW Sys. Interdepartmental Charges	372,692	416,582	590,289	599,143	608,130	617,252	626,511	635,909	645,448	655,129	664,956	674,931	685,054	695,330	705,760	716,347	727,092	737,998	749,068	760,304	771,709
WW Sys. Administrative Division Allocation	482,703	504,878	835,197	439,495	446,087	452,779	459,570	466,464	473,461	480,563	487,771	495,088	502,514	510,052	517,703	525,468	533,350	541,350	549,471	557,713	566,078
Debt Service (WWT) - CWSRF Projects	1,155,799	1,155,799	1,155,799	964,919	964,919	1,034,953	1,110,358	1,110,358	1,110,358	1,110,358	1,110,358	1,110,358	1,110,358	1,110,358	1,110,358	1,110,358	1,110,358	1,110,358	1,110,358	1,110,358	1,110,358
Capital - WWC - CIP & R&R	479,000	420,000	50,000	753,000	1,049,000	561,000	583,000	652,000	415,000	810,000	643,000	1,029,000	348,000	236,000	240,000	910,000	751,000	668,000	732,000	549,000	589,000
Capital - WWT - CIP & R&R	-	-	250,000	200,000	-	-	-	135,000	-	555,000	85,000	286,000	-	-	-	91,000	-	-	317,000	-	98,000
Capital (Bond, Loan & Grant) - WWT CIP	-	-	-	-	-	1,525,000	16,627,000	-	-	-	-	-	-	-	-	-	6,325,000	-	-	-	-
Total WW System Operation Expenses	3,131,347	4,456,486	4,772,576	4,227,717	4,276,660	4,396,369	4,522,196	4,573,374	4,625,319	4,678,044	4,731,559	4,785,877	4,841,010	4,896,969	4,953,769	5,011,420	5,069,936	5,129,086	5,188,811	5,249,159	5,309,999
Total WW System Capital Expenditures	479,000	420,000	300,000	953,000	1,049,000	2,086,000	17,210,000	787,000	415,000	1,365,000	728,000	1,315,000	348,000	236,000	240,000	1,001,000	7,076,000	668,000	1,049,000	549,000	887,000
Total WW System Cash Outflow	3,610,347	4,876,486	5,072,576	5,180,717	5,325,660	6,482,369	21,732,196	5,360,374	5,040,319	6,043,044	5,459,559	6,100,877	5,189,010	5,132,969	5,193,769	6,012,420	12,145,936	6,210,086	6,651,371	6,212,559	6,412,666
Revenue Forecast																					
Number of Res SF Flat Rate Customers	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629
Res SF Flat Rate	31.88	34.43	37.18	38.67	38.67	38.67	38.67	39.25	39.94	40.44	41.04	41.66	42.29	42.29	42.92	43.56	44.22	44.88	45.55	46.24	46.93
Res SF Service Charge	8.81	9.51	10.27	10.68	10.68	10.68	10.68	10.84	11.00	11.17	11.34	11.51	11.68	11.68	11.85	12.03	12.21	12.40	12.58	12.77	12.96
Rate Increase Percentage	-	8.00%	8.00%	4.00%	0.00%	0.00%	0.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	0.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Total "Sales" Revenue from Res SF Flat Rate	3,204,440	3,460,386	3,737,217	3,886,705	3,886,705	3,886,705	3,886,705	3,945,006	4,004,181	4,064,244	4,125,207	4,187,085	4,249,892	4,249,892	4,313,640	4,378,345	4,444,020	4,510,680	4,578,340	4,647,015	4,716,721
Number of Res MF Flat Rate Customers	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Res MF Service Charge	8.81	9.51	10.27	10.68	10.68	10.68	10.68	10.84	11.00	11.17	11.34	11.51	11.68	11.68	11.85	12.03	12.21	12.40	12.58	12.77	12.96
Number of Res MF Dwelling Units	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585
Res MF Flat Rate	26.56	28.68	30.97	32.21	32.21	32.21	32.21	32.69	33.18	33.68	34.19	34.70	35.22	35.22	35.75	36.28	36.83	37.38	37.94	38.51	39.09
Rate Increase Percentage	-	8.00%	8.00%	4.00%	0.00%	0.00%	0.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	0.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Total "Sales" Revenue from Res MF Flat Rate	482,314	520,809	562,396	584,891	584,891	584,891	584,891	593,665	602,570	611,608	620,732	630,094	639,546	639,546	649,139	658,876	668,759	678,790	688,972	699,307	709,796
Number of Non-Residential Customers	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291
Non-Residential Service Charge	8.81	9.51	10.27	10.68	10.68	10.68	10.68	10.84	11.00	11.17	11.34	11.51	11.68	11.68	11.85	12.03	12.21	12.40	12.58	12.77	12.96
Non-Residential "Sales" in Kgal	47,713	47,618	47,522	47,427	47,332	47,238	47,143	47,049	46,955	46,861	46,767	46,674	46,580	46,487	46,394	46,301	46,209	46,116	46,024	45,932	45,840
Adjustment Factor	24.00%	24.00%	16.00%	12.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Adjusted Non-Residential "Sales" in Kgal	59,164	59,046	55,126	53,119	47,332	47,238	47,143	47,049	46,955	46,861	46,767	46,674	46,580	46,487	46,394	46,301	46,209	46,116	46,024	45,932	45,840
Non-Residential Commodity Charge per Kgal	15.00	16.20	17.50	18.20	18.20	18.20	18.20	18.47	19.03	19.31	19.60	19.90	19.90	20.19	20.50	20.80	21.12	21.43	21.76	22.08	22.39
Rate Increase Percentage	-	8.00%	8.00%	4.00%	0.00%	0.00%	0.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	0.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Total "Sales" Revenue from Non-Residential	890,680	960,058	970,338	973,722	871,597	869,926	868,259	879,594	891,076	902,709	914,494	926,433	938,528	936,730	948,960	961,350	973,901	986,616	999,498	1,012,543	1,025,769
Total "Sales" Revenue	4,577,434	4,941,253	5,269,950	5,445,319	5,343,194	5,341,523	5,339,855	5,418,264	5,497,827	5,578,561	5,660,484	5,743,613	5,827,965	5,826,168	5,911,739	5,998,570	6,086,680	6,176,087	6,266,811	6,358,870	6,452,286
Interest on Utility Reserves	18,711	12,357	13,514	16,677	20,896	21,473	27,557	31,490	32,831	40,186	33,822	37,343	32,544	42,616	53,654	65,228	65,999	70,975	71,529	66,834	70,031
Inter-Utility Loan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bond Issue Proceeds	-	-	-	-	-	1,525,000	16,627,000	-	-	-	-	-	-	-	-	-	6,325,000	-	-	-	-
Federal or State Grant/Loan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bond Federal Subsidy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Cash Inflow	4,596,145	4,953,610	5,283,464	5,461,996	5,364,090	6,887,996	21,994,412	5,449,754	5,530,658	5,618,747	5,694,306	5,780,956	5,860,509	5,868,784	5,965,392	6,063,798	12,477,678	6,247,062	6,338,340	6,425,704	6,522,317
Net Cash Flow	985,798	77,124	210,888	281,278	38,430	405,626	262,216	89,380	490,339	(424,296)	234,747	(319,921)	671,500	735,815	771,624	51,378	331,743	36,976	(313,030)	213,145	109,651
Cumulative Net Cash Flow	985,798	1,062,922	1,273,811	1,555,089	1,593,519	1,999,145	2,261,361	2,350,741	2,841,080	2,416,784	2,651,530	2,331,609	3,003,109	3,738,923	4,510,547	4,561,925	4,893,668	4,930,644	4,617,613	4,830,758	4,940,409
Cash Balance	823,785	900,909	1,111,798	1,393,076	1,431,506	1,837,132	2,099,348	2,188,728	2,679,067	2,254,771	2,489,518	2,169,596	2,841,096	3,576,911	4,348,534	4,399,913	4,731,655	4,768,631	4,455,601	4,668,746	4,778,396
Recommended Cash Balance	3,641,472	3,606,142	4,417,187	4,145,318	5,206,790	20,425,661	4,103,277	3,756,866	4,732,839	4,122,201	4,735,959	3,796,118	3,711,694	3,743,664	4,533,063	10,636,889	4,258,147	5,081,620	4,611,743	4,780,337	4,914,391
Plan 527 - Residential SF Flat Rate Sewer / month	\$40.69	\$43.94	\$47.46	\$49.35	\$49.35	\$49.35	\$49.35	\$50.09	\$50.85	\$51.61	\$52.38	\$53.17	\$53.97	\$53.97	\$54.77	\$55.60	\$56.43	\$57.28	\$58.14	\$59.01	\$59.89
Plan 527 - Residential MF Flat Rate Sewer / unit / month	\$26.56	\$28.68	\$30.97	\$32.21	\$32.21	\$32.21	\$32.21	\$32.69	\$33.18	\$33.68	\$34.1										

Expense Forecast	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Wastewater Collection	1.50%																				
Supervision, Misc Direct Admin	233,780	323,618	230,375	233,831	237,338	240,898	244,512	248,179	251,902	255,681	259,516	263,408	267,360	271,370	275,441	279,572	283,766	288,022	292,343	296,728	301,179
Wastewater Collection	426,571	421,571	367,602	373,116	378,713	384,393	390,159	396,012	401,952	407,981	414,101	420,312	426,617	433,016	439,512	446,104	452,796	459,588	466,482	473,479	480,581
Sewer Lift Stations	275,311	245,729	275,214	279,342	283,532	287,785	292,102	296,484	300,931	305,445	310,027	314,677	319,397	324,188	329,051	333,987	338,996	344,081	349,243	354,481	359,798
Total WWC Operation Expenses	935,662	990,918	873,191	886,289	899,583	913,077	926,773	940,675	954,785	969,107	983,643	998,395	1,013,374	1,028,574	1,044,003	1,059,663	1,075,558	1,091,691	1,108,067	1,124,688	1,141,558
Wastewater Treatment																					
LA WWTP Operations & Maintenance	833,992	969,358	869,508	882,551	895,789	909,226	922,864	936,707	950,753	965,019	979,494	994,187	1,009,100	1,024,236	1,039,600	1,055,194	1,071,021	1,087,087	1,103,393	1,119,944	1,136,743
WR WWTP Operations & Maintenance	506,298	418,951	448,592	455,321	462,151	469,083	476,119	483,261	490,510	497,868	505,336	512,916	520,609	528,418	536,345	544,390	552,556	560,844	569,257	577,796	586,463
Total WWT Operation Expenses	1,340,290	1,388,309	1,318,100	1,337,872	1,357,940	1,378,309	1,399,983	1,419,968	1,441,268	1,462,887	1,484,830	1,507,102	1,529,709	1,552,654	1,575,944	1,599,583	1,623,577	1,647,931	1,672,650	1,697,740	1,723,206
WW Sys. Interdepartmental Charges	372,692	416,582	590,289	599,143	608,130	617,252	626,511	635,909	645,448	655,129	664,956	674,931	685,054	695,330	705,760	716,347	727,092	737,998	749,068	760,304	771,709
WW Sys. Administrative Division Allocation	482,703	504,878	585,197	439,495	446,087	452,779	459,570	466,464	473,461	480,563	487,771	495,088	502,514	510,052	517,703	525,468	533,350	541,350	549,471	557,713	566,078
Debt Service (WWT) - CWSRF Projects	1,155,799	1,155,799	1,155,799	1,034,952	1,308,070	1,308,070	1,308,070	1,308,070	1,308,070	1,214,286	1,120,501	1,120,501	1,117,159	1,117,159	1,117,159	1,117,159	1,117,159	1,508,707	1,508,707	1,508,707	1,508,707
Capital - WWC - CIP & R&R	479,000	420,000	50,000	753,000	1,049,000	561,000	583,000	652,000	415,000	810,000	643,000	1,029,000	348,000	236,000	240,000	910,000	751,000	668,000	732,000	549,000	589,000
Capital - WWT - CIP & R&R	-	-	75,000	-	-	-	-	-	135,000	-	555,000	85,000	286,000	-	-	91,000	-	-	312,000	-	98,000
Capital (Bond, Loan & Grant) - WWTP CIP	-	-	-	1,525,000	15,640,000	-	-	-	-	-	-	-	-	-	-	6,000,000	-	-	-	-	-
Total WW System Operation Expenses	3,131,347	4,456,486	4,772,576	4,297,751	4,619,811	4,669,487	4,719,908	4,771,085	4,823,031	4,781,971	4,741,702	4,796,019	4,847,811	4,903,770	4,960,570	5,018,221	5,076,737	5,127,678	5,187,963	5,249,152	5,311,258
Total WW System Capital Expenditures	479,000	420,000	125,000	2,278,000	16,689,000	561,000	583,000	787,000	415,000	1,365,000	728,000	1,315,000	348,000	236,000	240,000	1,001,000	751,000	668,000	1,049,000	549,000	687,000
Total WW System Cash Outflow	3,610,347	4,876,486	4,897,576	6,575,751	21,308,811	5,230,487	5,302,908	5,558,085	5,238,031	6,146,971	5,469,702	6,111,019	5,195,811	5,139,770	11,200,570	6,019,221	5,827,737	6,195,678	6,636,963	6,198,152	6,398,258
Revenue Forecast																					
Number of Res SF Flat Rate Customers	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629	6,629
Res SF Flat Rate	31.88	34.43	37.18	38.30	38.87	39.46	40.05	40.65	41.26	41.88	42.51	42.51	42.51	42.51	42.51	43.14	43.79	45.11	45.78	46.47	47.17
Res SF Service Charge	8.81	9.51	10.27	10.58	10.74	10.90	11.06	11.23	11.40	11.57	11.74	11.74	11.74	11.74	11.74	11.92	12.10	12.46	12.65	12.84	13.03
Rate Increase Percentage	-	8.00%	8.00%	3.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	0.00%	0.00%	0.00%	0.00%	1.50%	1.50%	3.00%	1.50%	1.50%	1.50%
Total "Sales" Revenue from Res SF Flat Rate	3,204,440	3,460,386	3,737,217	3,849,333	3,907,073	3,965,679	4,025,164	4,085,542	4,146,825	4,209,027	4,272,163	4,272,163	4,272,163	4,272,163	4,336,245	4,401,289	4,533,328	4,601,327	4,670,347	4,740,403	4,810,403
Number of Res MF Flat Rate Customers	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Res MF Service Charge	8.81	9.51	10.27	10.58	10.74	10.90	11.06	11.23	11.40	11.57	11.74	11.74	11.74	11.74	11.74	11.92	12.10	12.46	12.65	12.84	13.03
Number of Res MF Dwelling Units	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585	1,585
Res MF Flat Rate	26.56	28.68	30.97	31.90	32.38	32.86	33.36	33.86	34.36	34.86	35.40	35.40	35.40	35.40	35.40	35.93	36.47	37.57	38.13	38.70	39.28
Rate Increase Percentage	-	8.00%	8.00%	3.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	0.00%	0.00%	0.00%	0.00%	1.50%	1.50%	3.00%	1.50%	1.50%	1.50%
Total "Sales" Revenue from Res MF Flat Rate	482,314	520,809	562,396	579,267	587,956	596,776	605,727	614,813	624,036	633,396	642,897	642,897	642,897	642,897	642,897	652,540	662,329	682,198	692,431	702,818	713,360
Number of Non-Residential Customers	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291	291
Non-Residential Service Charge	8.81	9.51	10.27	10.58	10.74	10.90	11.06	11.23	11.40	11.57	11.74	11.74	11.74	11.74	11.74	11.92	12.10	12.46	12.65	12.84	13.03
Non-Residential "Sales" in Kgal	47,713	47,618	47,522	47,427	47,332	47,238	47,143	47,049	46,955	46,861	46,767	46,674	46,580	46,487	46,394	46,301	46,209	46,116	46,024	45,932	45,840
Adjustment Factor	24.00%	24.00%	16.00%	13.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Adjusted Non-Residential "Sales" in Kgal	59,164	59,046	55,126	53,593	47,332	47,238	47,143	47,049	46,955	46,861	46,767	46,674	46,580	46,487	46,394	46,301	46,209	46,116	46,024	45,932	45,840
Non-Residential Commodity Charge per Kgal	15.00	16.20	17.50	18.02	18.29	18.57	18.84	19.13	19.41	19.70	20.00	20.00	20.00	20.00	20.00	20.30	20.60	21.22	21.54	21.86	22.19
Rate Increase Percentage	-	8.00%	8.00%	3.00%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	0.00%	0.00%	0.00%	0.00%	1.50%	1.50%	3.00%	1.50%	1.50%	1.50%
Total "Sales" Revenue from Non-Residential	890,680	960,058	970,338	972,650	876,165	887,602	899,189	910,928	922,820	934,867	947,072	945,257	943,446	941,639	939,835	952,106	964,537	991,570	1,004,516	1,017,632	1,030,919
Total "Sales" Revenue	4,577,434	4,941,253	5,269,950	5,401,250	5,371,194	5,450,057	5,530,081	5,611,283	5,693,680	5,777,291	5,862,132	5,860,317	5,858,508	5,856,699	5,854,895	5,940,891	6,028,154	6,207,096	6,298,275	6,390,797	6,484,682
Interest on Utility Reserves	18,711	12,357	13,514	19,302	24,849	20,757	24,362	28,135	29,355	36,630	31,635	37,996	34,805	45,268	56,701	67,366	67,202	71,216	72,455	68,462	72,378
Inter-Utility Loan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bond Issue Proceeds	-	-	-	1,525,000	15,640,000	-	-	-	-	-	-	-	-	-	-	6,000,000	-	-	-	-	-
Federal or State Grant/Loan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Revenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bond Federal Subsidy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Cash Inflow	4,596,145	4,953,610	5,283,464	6,945,552	21,036,043	5,470,815	5,554,444	5,639,419	5,723,036	5,813,921	5,893,767	5,898,313	5,893,311	5,901,967	11,911,596	6,008,257	6,095,355	6,278,312	6,370,731	6,459,259	6,557,060
Net Cash Flow	985,798	77,124	385,888	369,802	(272,768)	240,328	251,536	81,333	485,005	(333,050)	424,065	(12,706)	697,501	762,196	711,026	(10,968)	267,619	82,634	(166,232)	261,107	158,802
Cumulative Net Cash Flow	985,798	1,062,922	1,448,811	1,818,612	1,545,844	1,786,172	2,037,708	2,119,041	2,604,046	2,270,996	2,695,061	2,482,355	3,179,856	3,942,052	4,653,078	4,642,114	4,909,733	4,992,367	4,726,134	4,987,242	5,146,044
Cash Balance	823,785	900,909	1,286,798	1,656,599	1,383,832	1,624,160	1,875,695	1,957,029	2,442,033	2,108,983	2,533,048	2,320,342	3,017,843	3,780,039	4,491,065	4,480,101	4,747,720	4,830,354	4,564,122	4,925,229	4,984,031
Recommended Cash Balance	3,641,472	3,431,142	5,742,137	19,355,351	4,024,941	4,071,778	4,300,989	3,954,577	4,930,551	4,226,128	4,746,101	3,806,260	3,718,485	9,750,465	4,539,864	4,318,690	4,264,948	5,067,193	4,597,335	4,765,929	4,899,983
Plan 527 - Residential SF Flat Rate Sewer / month	\$40.69	\$43.94	\$47.46	\$48.38	\$49.61	\$50.36	\$51.11	\$51.88	\$52.66	\$53.45	\$54.25	\$54.25	\$54.25	\$54.25	\$54.25	\$55.06	\$55.89	\$57.56	\$58.43	\$59.30	\$60.19
Plan 527 - Residential MF Flat Rate Sewer / unit / month	\$26.56	\$28.68	\$30.97	\$31.90	\$32.38	\$32.86	\$33.36	\$33.86	\$34.36	\$34.86	\$35.40										

Appendix 2 – 1985 thru 2036 Sewer Bills

- Single Family Monthly Sewer Bill
- Non-Residential (Commercial) Monthly Sewer Bill
- Historic Use plus Future Projections that Include Multiple OTB Potential Funding Scenarios
- Black Line is an Arbitrary Straight Line Approximation of the Average Bill Increase Equivalent to Actual Bills

SINGLE FAMILY MONTHLY SEWER BILL - 1985 to 2036 - COMPARISON OF PLANS 10, 20, 30 & 40 and 500 & 505 SERIES PLANS



NON RESIDENTIAL (COMMERCIAL) MONTHLY SEWER BILL - 1985 to 2036 - COMPARISON OF PLANS 10, 20, 30 & 40 and 500 & 505 SERIES PLANS

