Town of Highland Beach, Florida

2020 REVENUE SUFFICIENCY AND RATE STUDY FOR THE WATER AND WASTEWATER UTILITY SYSTEM

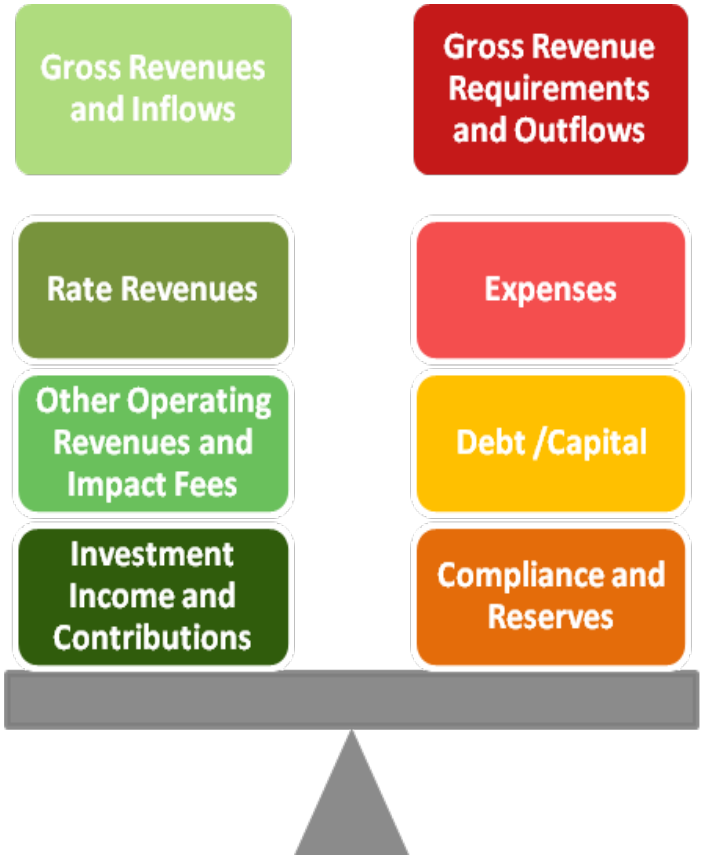
SEPTEMBER 24, 2020

Agenda

- Study Purpose
- Utility Overview
- Major Drivers Affecting Rates
- Presentation of Findings and Observations
- Rate Design
- Summary of Recommendations

Study Purpose

- Primary Objective – Develop Sustainable Rate and Cost Recovery Plan
- Develop Five-Year Financial Plan (2021-2025)
  - Fully Fund the Cost to Provide Service
  - Develop Long-term Capital Funding Plan
  - Maintain Strong Fiscal Position
  - Identify Rate Implementation Plan
- Provide Alternative Water and Wastewater Rate Structure



Utility Overview

- **Currently Provide Service to Over:**
  - 464 Water and Wastewater Accounts / 4,396 Equivalent Dwelling Units
  - Average Monthly Water Use per Residential Dwelling Unit
    - **Single Family Account – 25,000 Gallons per month**
    - **Multifamily Residential Account – 5,000 Gallons per Month**
- **Existing Rate Revenue - $3,240,000**
  - Water = $2,080,000; Wastewater = 1,160,000
  - 63% Fixed Revenue Recovery (Promotes Revenue Stability - Predictable)
- **Amount of Gross Depreciable Assets = $31.1 Million**
  - Wastewater Treatment is from Delray Beach
  - Annual Depreciation Expense = $840,000
- **Last Formal Study Performed during Fiscal Year 2016**
  - Encompassed Financial Forecast Through Fiscal Year 2020

Major Drivers Affecting Rates

- **Limited Customer / Net Revenue Growth**
  - Town Essentially "Built-out" – Limited New Customer Growth
  - Need to Promote Continued Maintenance of "Net Revenue Margins"
    - **$$ after Payment of Operating Expenses / Funds Available for CIP / Debt Repayment**
- **Continued Inflation on Cost of Operations**
  - Ongoing Inflation – CBO National CPI Projections: At 2.3% per Year
  - Increased Labor Costs (Generally Higher than Inflation)
  - Increasing Water Treatment Costs
    - **RO Water Treatment is Highly Technical (more expensive) Process**
    - **Produces High Quality Water**
  - Increasing Wholesale Wastewater Treatment Costs
  - Average Annual Expense Increase = 3.1**%**
    - **Utility Operating Expenses Generally Increase at Higher Rate than General Inflation**
    - **Primary Expenses – Labor, Power, Chemicals and WWTP Services = 63% of Total Operating Expenses**
    - **Representative of Cost Increases Being Experienced by Utility Industry**
  - Inflation = Accounts for **24.8%** of Increase in Rates

Major Drivers Affecting Rates

- **Phasing Out General Fund Reimbursed Debt Payments**
  - Includes a 5-year phasing out Plan
    - 20% reductions for 5-Years
    - This Allows for Full Cost of Service
    - Use of Water Impact Fees to Pay Principal Payment of 2007 RO Expansion Bonds)
    - Accounts for **43.7%** of Increase in Rates

	2021	2022	2023	2024	2025
Total Debt Service	$1,549,224	$1,612,824	$1,676,424	$1,307,212	$1,205,413
Less Connection Charges	($226,353)	($234,202)	($242,323)	($250,726)	($259,420)
Total Debt Service Less Connection Fees	$1,322,871	$1,378,622	$1,434,101	$1,056,486	$945,993
Percent of Annual Debt Service Reimbursed by General Fund	80%	60%	40%	20%	0%
Debt Service Paid by General Fund	$1,058,297	$827,173	$573,640	$205,144	$0
TOTAL Debt Service Paid by Utility [*]	**$490,927**	**$785,651**	**$1,102,784**	**$1,102,068**	**$1,205,413**
[*] Includes payments from Utility Rates and Water Connection Fees.					

Major Drivers Affecting Rates

- **Increased Capital Improvement Expenditure Plan**
  - Aging Infrastructure Requiring Asset Replacement
    - Wastewater Collection System Piping Rehabilitation
    - Wastewater Lift Station Improvements
    - Water Treatment Plant Improvements
  - Identified **Capital Expenditure Plan** for Forecast Period
    - Represents Significant Increase in Utility Plant Investment

Project Type (2021 – 2025)	Amount (inflation adjusted)	Percent
Wastewater Collection System Piping Rehabilitation	$3,448,946	55.2%
Wastewater Lift Station Projects	922,396	14.8%
Water Supply and Treatment Plant Projects	1,549,787	23.3%
Departmental Capital and Reclass to Operating Expenses	419,754	6.7%
Total Capital Improvement Expenditure Plan (CIP)	$6,250,883	100.0%

Major Drivers Affecting Rates

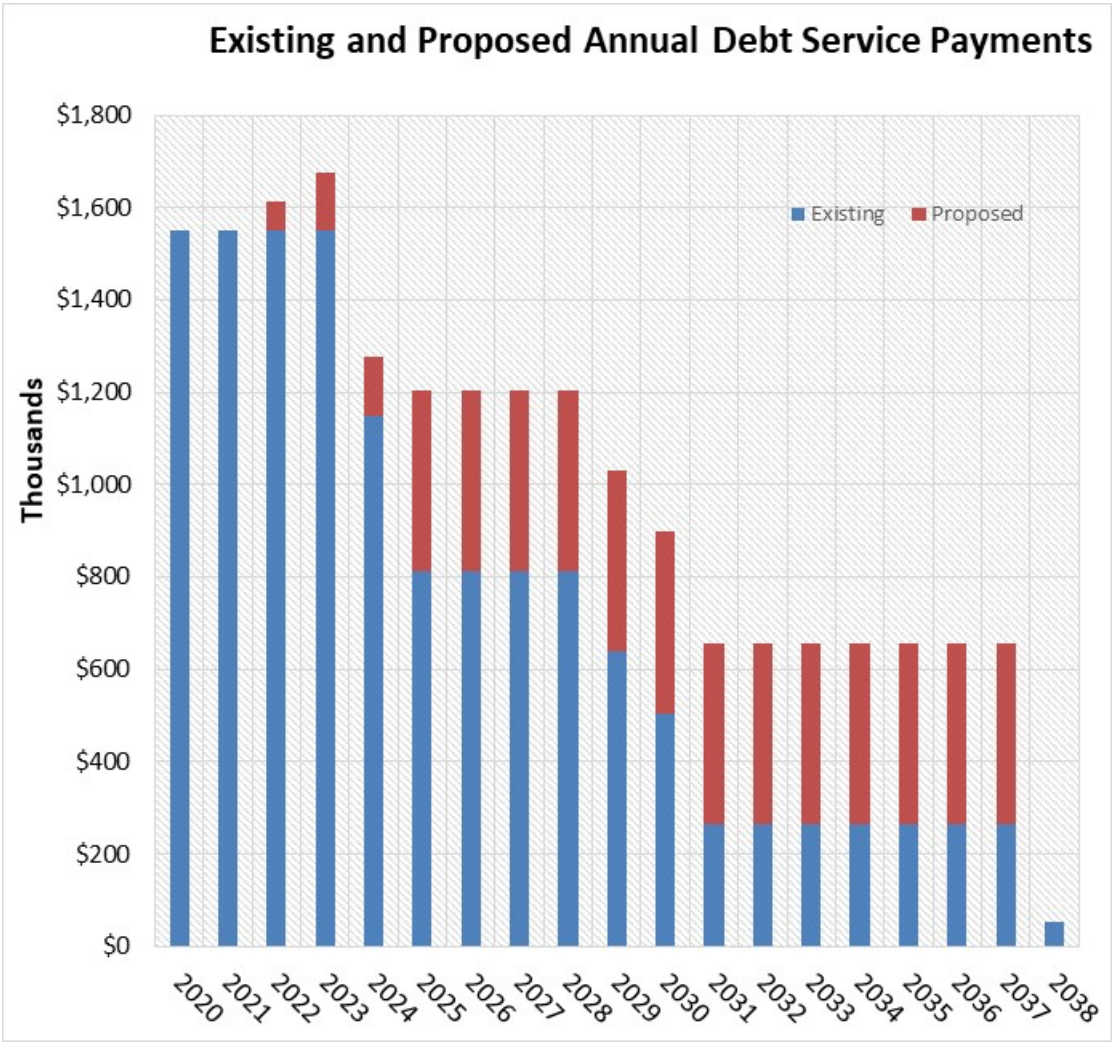
- **Identified Capital Plan for Forecast Period**
  - Identified **Capital Funding Plan** for Forecast Period

Project Type (2021 – 2025)	Amount	Percent
Continuing Operations (Rates and Reclass to Operating Expenses)	$419,754	6.7%
Operating Reserves	668,525	10.7%
Renewal and Replacement (Capital Fund) Account (Capital Re-investment)	987,313	15.8%
Additional Debt – Fiscal Year 2022	4,175,291	66.8%
Total Capital Improvement Funding Plan	$6,250,883	100.0%

- Additional Debt FY2022 Required to Support CIP Funding Plan
  - Phased-in Debt Payments to Minimize Financial Impacts
  - Provides Flexibility in Support of Long-term Planning Activities
- Increasing Deposits to R&R Account (capital re-investment)
  - Target at 11% of Annual Revenues
  - Recommend Identification and Funding of Account for Capital Re-investment and Strategic Planning
  - Limits Future Debt Needs / Promotes Rate Sustainability

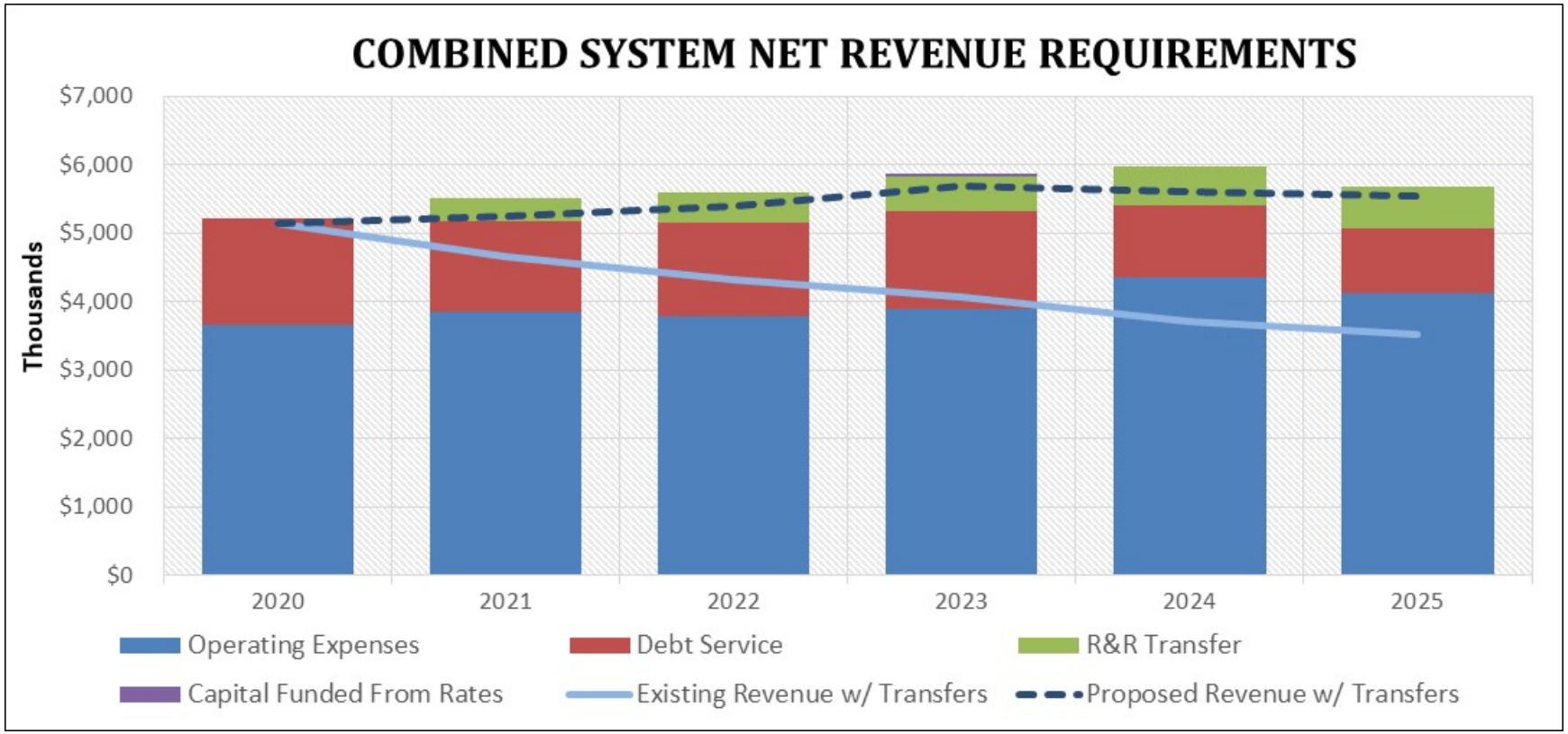
Major Drivers Affecting Rates

- **Debt Tied to CIP Needs**
- Debt Issue:
  - Bank Loan Issue
  - Issued in Mid-Year FY 2022
  - Principal = $4,240,000
  - 2.5-Years Interest Only Payments (Wrap)
- Sizing, timing, and Structure Will Be Coordinated with Town's Financial Advisor



Projected Revenue Requirements

- Existing Rates Not Considered Sufficient to Fund Revenue Requirements
- Revenue Requirements Analysis:



Proposed User Rate Revenue Adjustments

- Recommended Rate Revenue Adjustments for the Five Fiscal Years ending 2025:

	Oct. 1, 2020	Oct. 1, 2021	Oct. 1, 2022	Oct. 1, 2023	Oct. 1, 2024
Water Percentage Adjustment:					
Price Index (Inflation) Adjustment	2.50%	2.50%	2.50%	2.50%	2.50%
Additional Rate Adjustment	12.50%	9.50%	9.50%	3.50%	0.00%
Recommended Rate Adjustment	15.00%	12.00%	12.00%	6.00%	2.50%
Wastewater Percentage Adjustment:					
Price Index (Inflation) Adjustment	2.50%	2.50%	2.50%	2.50%	2.50%
Additional Rate Adjustment	22.50%	10.50%	10.50%	3.50%	0.00%
Recommended Rate Adjustment	25.00%	13.00%	13.00%	6.00%	2.50%
Effective Percentage Adjustment – Combined Service:					
Total Recommended Adjustment	18.57%	12.38%	12.38%	6.00%	2.50%

- Rate Increases Include Inflation (Index) Adjustments
- Proposed Rates Should Remain Competitive with "Neighboring" Utilities

Current Rates and Structure

Current Rate Structure	Fiscal Year 2020
Water	
Flat Charge – Per Unit	$33.59
Usage Charge per Unit (per 1,000 gallons)	
Single-Family and Commercial	
0 - 19,000 Gallons	$2.41
19,001 - 49,000 Gallons	$4.18
Above 49,000 Gallons	$5.15
Multi-Family	
0 - 13,000 Gallons	$2.41
13,001 - 23,000 Gallons	$2.90
Above 23,000 Gallons	$5.15

Current Rate Structure	Fiscal Year 2020
Wastewater	
Flat Charge – Per Unit	$44.03
Usage Charge per Unit	n/a

Residential Water Use - Bill Frequency

Fiscal Year 2019 Statistics - Water	Bill Frequency	Flows (Kgals)
Single Family Residential		
Average Use Per Customer	**25,000** gallons per month	
Block 1 (0 - 19,000 gallons)	25.88%	30,602
Block 2 (19,001 - 49,000 gallons)	26.76%	31,650
Block 3 (Above 49,000 gallons)	47.36%	56,006
Multi-Family Residential		
Average Use Per Dwelling Unit	**5,000** gallons per month	
Block 1 (0-13,000 gallons)	89.60%	219,388
Block 2 (13,001-23,000 gallons)	3.50%	8,325
Block 3 (Above 23,000 gallons)	6.90%	16,895

- Observations
  - Different Block Ranges per Dwelling Unit
  - Single Family Residential – Significant Irrigation Demands

Rate Design – Existing vs. Alternative Rate Structures - Water

Current Rate Structure	Fiscal Year 2020
Flat Charge – Per Unit	$33.59
Usage Charge per Unit (per 1,000 gallons)	
Residential and Commercial	
0-19,000 Gals	$2.41
19,001-49,000 Gals	$4.18
Above 49,000 Gals	$5.15
Multi-Family	
0-13,000 Gals	$2.41
13,001-23,000 Gals	$2.90
Above 23,000 Gals	$5.15

Maintain Current Rate Structure	Fiscal Year 2021
Flat Charge – Per Unit	$38.63
Usage Charge per Unit (per 1,000 gallons)	
***All** Customer Classes*	
0-20,000 Gals	$2.77
20,001-50,000 Gals	$3.54
Above 50,000 Gals	$5.92

Alternative Rate Structure	Fiscal Year 2021
Flat Charge – Per Unit	$38.63
Usage Charge per Unit (per 1,000 gallons)	
***All** Customer Classes*	
0-20,000 Gals	$2.75
20,001-40,000 Gals	$4.04
40,001-60,000 Gals	$5.48
Above 60,000 Gals	$6.92

Rate Design – Existing vs. Alternative Rate Structures - Wastewater

Current Rate Structure	Fiscal Year 2020
All Customer Classes	
Flat Charge – Per Unit	$44.03

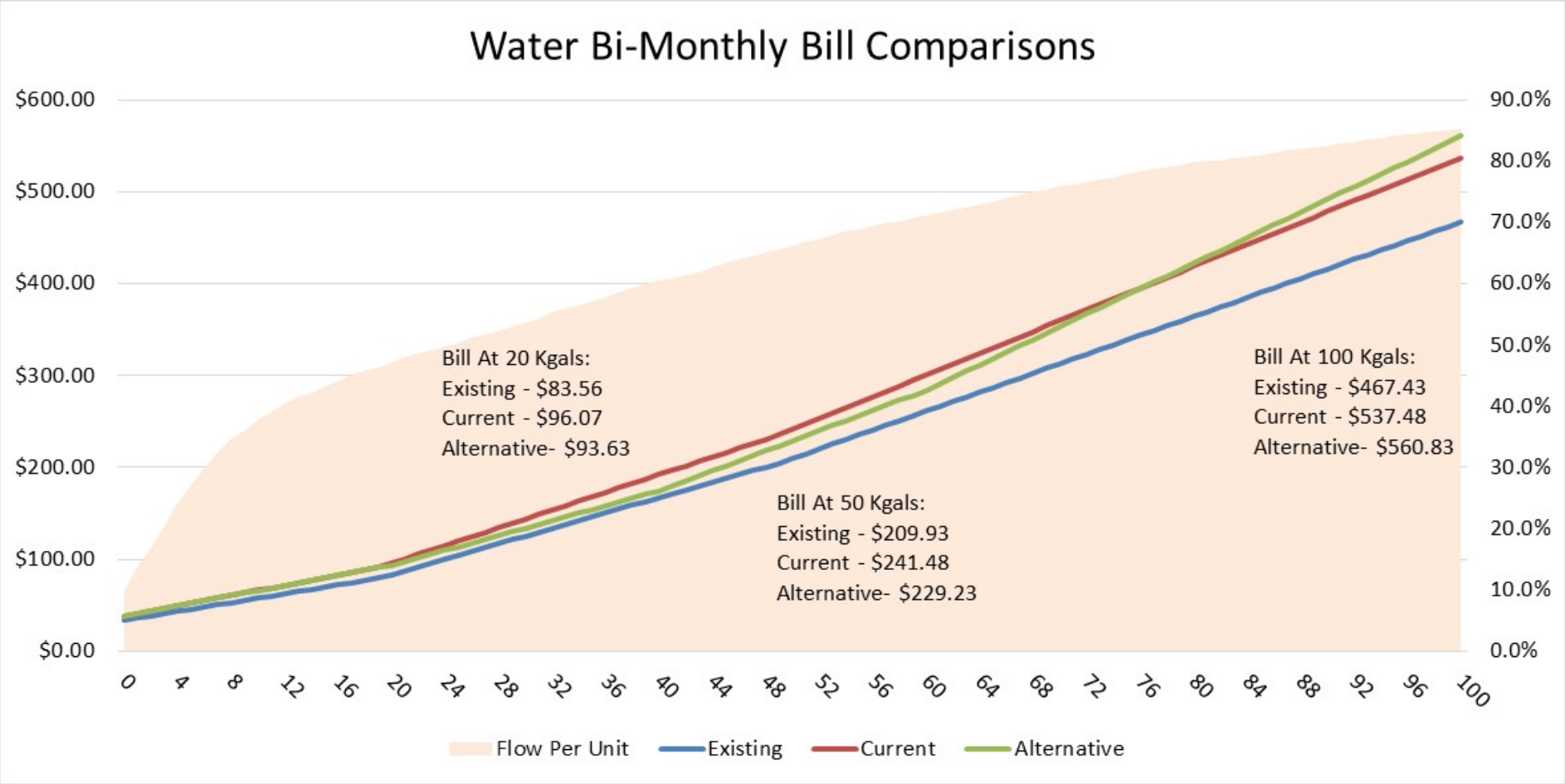
Maintain Current Rate Structure	Fiscal Year 2021
All Customer Classes	
Flat Charge – Per Unit	$55.04

Alternative Rate Structure	Fiscal Year 2021
All Customer Classes	
Flat Charge – Per Unit	$28.58
Usage Charge per Unit (per 1,000 gallons)	
Residential Service – Up to 20,000 Bi-Monthly)	$2.58
Commercial Service – All Gallons	$2.58

Customer Sample Bills

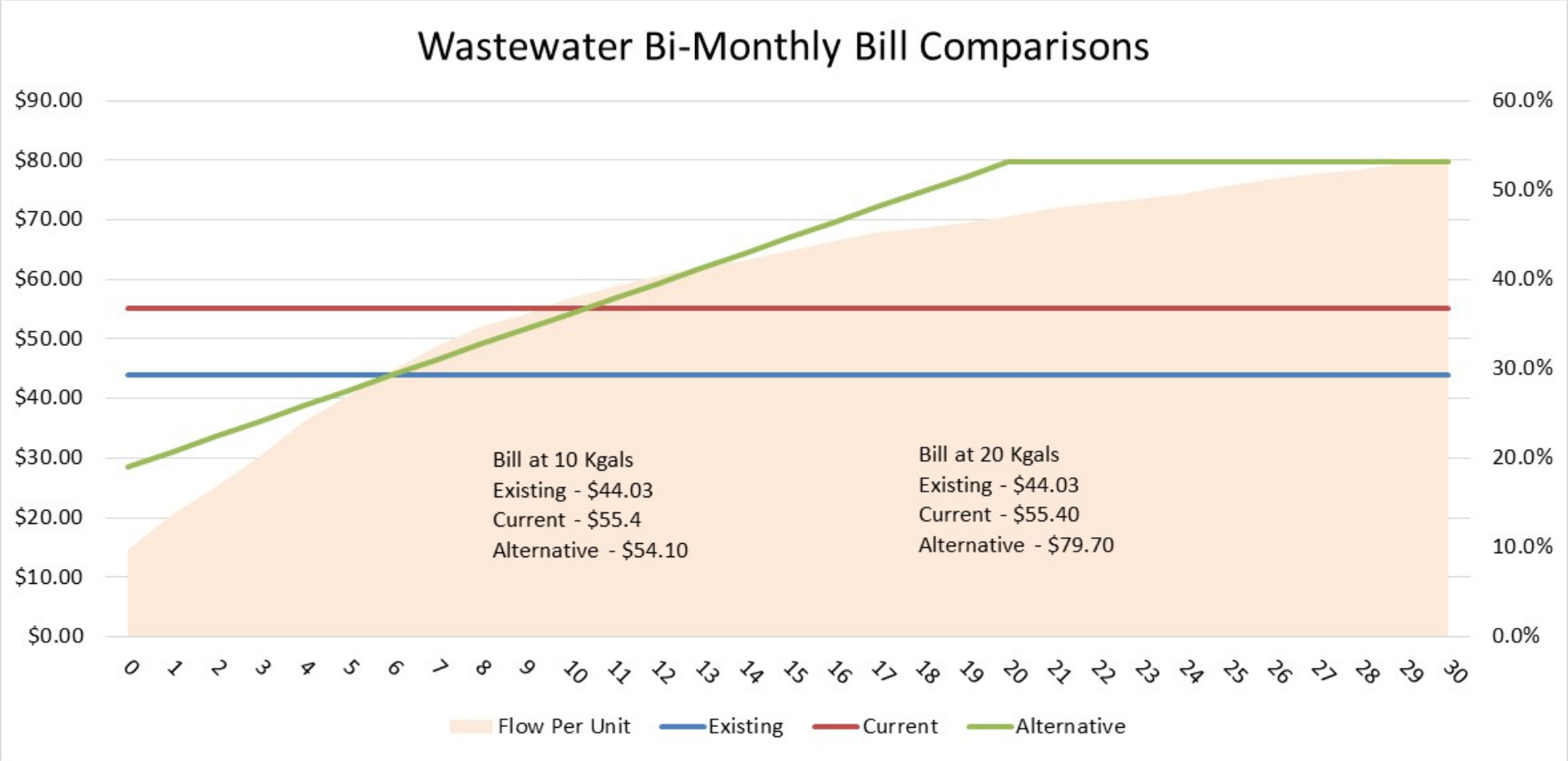
- Please See Excel Sheet

Single Family – Water Bi-Monthly Bill Comparisons



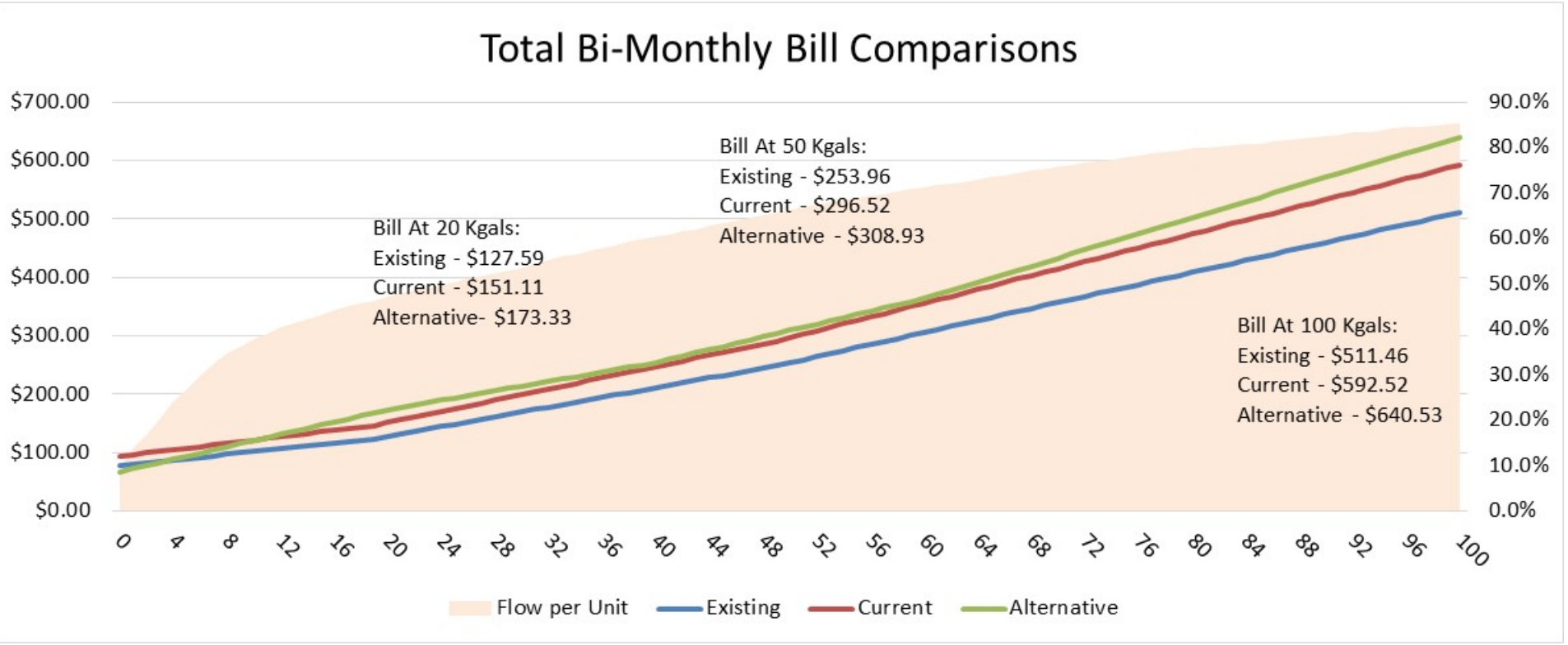
- 20 Kgals represents 37% of total Bi-monthly single-family bills rendered
- 50 Kgals represents 50% of total Bi-monthly single-family bills rendered
- 100 Kgals represents 66% of total Bi-monthly single-family bills rendered

Single Family – Wastewater Bi-Monthly Bill Comparisons



- Shifts Cost Recovery to Users Contributing to Demands (Flow)
- 5Kgals is Approximately the Breakeven Point
- 10Kgals Monthly is the Residential Billing Cap – Reflective of Indoor (essential) Use

Single Family – Water and Wastewater Bi-Monthly Bill Comparisons



- 20 Kgals represents 37% of total Bi-monthly single-family bills rendered
- 50 Kgals represents 50% of total Bi-monthly single-family bills rendered
- 100 Kgals represents 66% of total Bi-monthly single-family bills rendered

- Rate Difference for Alternative Rates – Cap on Wastewater Flows at 20,000 gallons per Bi-monthly Period Puts More Emphasis on Smaller Water Users

Yearly Revenue By Class

Yearly Revenue By Class					
Water	Current 2020	Uniform 2021	Increase %	Alternative 2021	Increase %
Residential	$570,965	$656,610	15%	$685,421	4.4%
Multifamily	$1,421,871	$1,635,152	15%	$1,634,639	(0.03%)
Commercial	$77,179	$88,756	15%	$93,334	5.2%
Total Water	$2,070,016	$2,380,518	15%	$2,413,394	1.4%
Wastewater					
Residential	$100,653	$125,816	25%	$147,560	17.3%
Multifamily	$1,023,698	$1,279,622	25%	$1,249,033	(2.4%)
Commercial	$32,758	$40,948	25%	$58,886	43.8%
Total Wastewater	$1,157,108	$1,446,386	25%	$1,455,479	0.6%

Water and Wastewater Statistical Information

Water and Wastewater Statistical Information						
				Fiscal Year 2019 Billing Statistics		
Water	Number of EDUs	FY2017 Flows	FY2018 Flows	FY2019 Flows	Avg Use per EDU	% of Total Flow
Residential	381	111,280	142,015	118,258	25,866	31%
Multifamily	3,883	222,907	283,021	244,853	5,255	65%
Commercial	124	15,601	18,614	14,618	9,824	4%
Total Water	4,388	349,799	443,650	377,729	7,174	
Wastewater						
Residential	381	30,012	38,301	31,871	6,971	12%
Multifamily	3,883	205,966	261,511	226,037	4,851	83%
Commercial	124	15,601	18,614	14,582	9,800	5%
Total Wastewater	4,388	251,579	318,427	272,490	5,175	

Average Cost per 1,000 Gallons

Average Cost per 1,000 Gallons Paid by Customer Class					
Water	Current 2020	Uniform 2021	Increase %	Alternative 2021	Increase %
Residential	$4.83	$5.55	15%	$5.80	4.4%
Multifamily	$5.81	$6.68	15%	$6.68	0.0%
Commercial	$5.28	$6.07	15%	$6.38	5.2%
Wastewater					
Residential	$3.16	$3.95	25%	$4.63	17.3%
Multifamily	$4.53	$5.66	25%	$5.53	(2.4%)
Commercial	$2.25	$2.81	25%	$4.04	43.8%

Rate Design – Advantages / Disadvantages

Current Rate Structure	
Advantages	**Disadvantages**
Promotes Rate Stability Due, in part, to Flat Wastewater Charge (not vary by flow)	Differences between Single-Family and Per-Unit Multi-family Water Usage Charges and Blocks may not be Fair
Customers are Used to Rate Structure	Flat Sewer Rate Customers do not Benefit from Low-Use
Application of Rate Adjustments will Result in all Customers Receiving Same % Increase	Purchased Wastewater is a Volumetric and Rates not Consistent with Cost Incurred

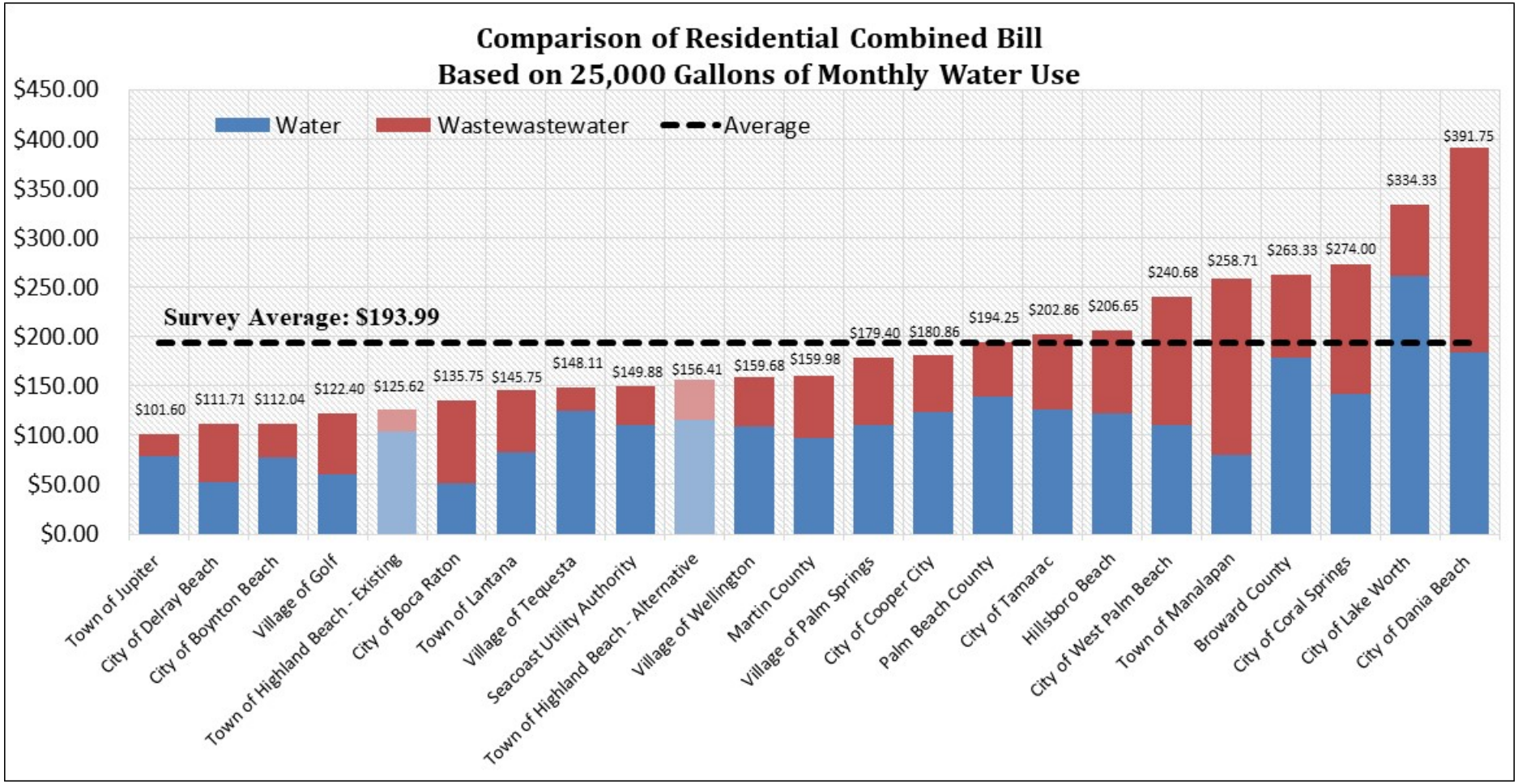
Alternative Rate Structure	
Advantages	**Disadvantages**
Promotes equability – customers pay based on flow contribution	Rate Shift Will Cause Some Customers to Receive Higher than Average Increase
All Water and Wastewater Customers Pay Same Rate Structure per Unit	Reduced Revenue Stability due to Introduction of Sewer Flow Charge / Higher Conservation Rates
Provides a Stronger Water Conservation Signal to Excessive Use Customers – Links to Essential / Discretionary / Excessive Use	Customers not Familiar with Rate Structure – May Result in Customer Use Changes
Water Rate Blocks Linked to LOS = 350 gallons per day (indoor use) – Sewer Links to Essential (Indoor) Use Block	

Proposed Rates Through End of Forecast Period

Current Rate Structure	2021	2022	2023	2024	2025
Water					
Flat Charge	$38.63	$43.27	$48.46	$51.37	$52.65
Block 1 (0-19,000 Gals)	$2.77	$3.10	$3.48	$3.69	$3.78
Block 2 (19,001-49,000 Gals)	$4.81	$5.38	$6.03	$6.39	$6.55
Block 3 (49,001 Gals and Above)	$5.92	$6.63	$7.43	$7.87	$8.07
Wastewater					
Flat Charge Only	$55.04	$62.19	$70.28	$74.49	$76.36

Alternative Rate Structure	2021	2022	2023	2024	2025
Water					
Flat Charge	$38.63	$43.27	$48.46	$51.37	$52.65
Block 1 (0-20,000 Gals)	$2.75	$3.08	$3.45	$3.66	$3.75
Block 2 (20,001-40,000 Gals)	$4.04	$4.52	$5.06	$5.36	$5.49
Block 2 (40,001-60,000 Gals)	$5.48	$6.14	$6.88	$7.29	$7.47
Block 3 (60,000 Gals and Above)	$6.92	$7.75	$8.68	$9.20	$9.43
Wastewater					
Flat Charge	$28.58	$32.30	$36.50	$38.69	$39.66
Block Charge (Residential Capped at 20 Kgals Bi-Monthly)	$2.58	$2.92	$3.30	$3.50	$3.59

Monthly Water and Wastewater User Rates Remain Competitive



Results of Rate Adjustment Implementation

- Allows Town to Fully Fund Capital Plan – Including Wastewater Collection System Piping Rehabilitation
  - Promotes Favorable Credit - Provides Ability to Issue Debt
- Allows Town to Transfer Debt Repayment to Enterprise Fund
- Promotes a Strong Fiscal Position
  - Maintains Revenue Margins ($ Available for Debt / Capital)
  - Provides Recurring Funds for RR Capital Funding (Capital Re-investment – Depreciation Equivalent)
  - Favorable Cash Liquidity Position – Reduces Financial Risk
  - Rates Projected to Remain Competitive for Fiscal Year 2021

Rate Recommendations

- Consider Preparation of a Rate Resolution which Provides the Following:
  - Adopt Proposed 5-year Utility Rate Plan
  - Adopt New Water and Wastewater Rate Structure
- Continue to Monitor Financial and Rate Position and Adjust Plan Accordingly

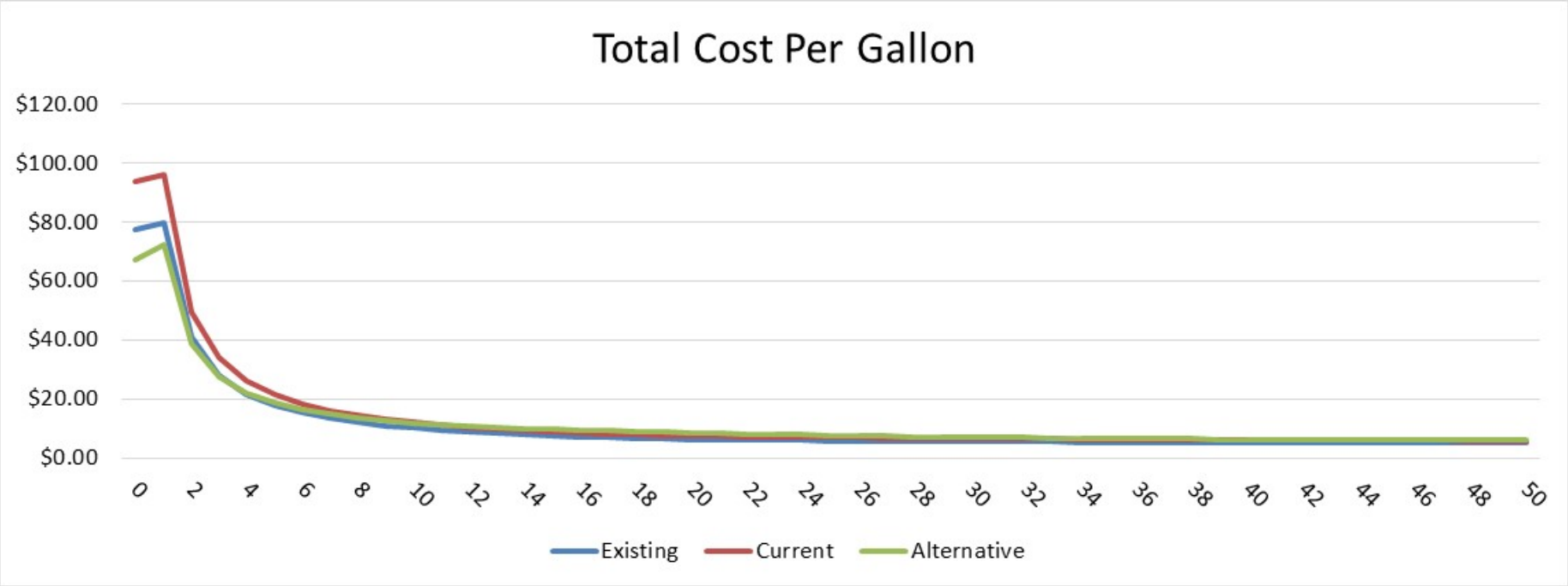
Questions and Discussion

Assumption – Expense Forecast

- **Based on Fiscal Year 2020 & 2021 Budget**
  - Adjusted Based on YTD 2020
  - Personnel Services Allocated Between Water and Wastewater
  - Added Contingency = 3% of O&M Expenses
  - Added Bad Debt Expense = .15% of Total Revenues
  - Purchased Wastewater is the Largest Expense
    - Higher n the current and next year due to true up to Delray Beach
    - Represents 26% of Total Utility Budget

	Operating and Maintenance Expenses					
	2020	2021	2022	2023	2024	2025
Water	$2,225,030	$2,361,449	$2,462,612	$2,536,842	$2,612,346	$2,689,196
Wastewater	1,330,186	1,440,468	1,322,955	1,362,443	1,402,721	1,443,840
Total	$3,555,217	$3,801,917	$3,785,567	$3,899,285	$4,015,066	$4,133,037

Total Cost Per Gallon



Commercial – Water and Wastewater Bi-Monthly Bill Comparisons