AGENDA STATEMENT

City of Bellaire

MEETING: City Council - May 13 2024
PREPARED BY: Todd Gross
DEPARTMENT: Finance

ITEM TITLE:

Presentation by Jason Gray with Willdan Financial Services on the utility cost-of-service and rate study, with an update from Mark Velasquez, Director of Public Works, and Beth Jones, Assistant City Manager, on water demand and system optimization as it relates to the cost of providing water service - Submitted by Terrence Beaman, Chief Financial Officer.

RECOMMENDATION:

Terrence Beaman, Chief Financial Officer, recommends that City Council receive the report and provide feedback as appropriate.

BACKGROUND/SUMMARY:

Jason Gray, Managing Principal with Willdan Financial Services, will present the results of the utility cost-of-service and rate study. The study was undertaken to identify the City's cost of providing water, wastewater collection, wastewater treatment, solid waste and recycling, and stormwater drainage services and will recommend rates for Fiscal Year 2025 and beyond that recover the costs of providing these services.

In addition, Mark Velasquez, Director of Public Works, and Beth Jones, Assistant City Manager, will provide an update on water demand and system optimization as it relates to the cost of providing water service.

PREVIOUS COUNCIL ACTION:

On January 22, 2024, Council approved Ordinance No. 24-004 for a contract with Willdan Financial Services in an amount not to exceed $57,010.

CITY ATTORNEY REVIEW:

☐ **Yes** ☑ **No**

CITY OF BELLAIRE

Water, Wastewater, and Solid Waste Rate Study
Council Presentation

May 2024

City of Bellaire

WILLDAN

Agenda

City of Bellaire

- Background on Rates
- Customers and Volumes
- Current and Forecast Cost of Service
- Proposed Rate Plan
- Solid Waste and Recycling
- Summary and Next Steps

PRELIMINARY & SUBJECT TO CHANGE

BACKGROUND ON RATES

21st Century Water & Wastewater Rate Facts

City of Bellaire

- American Water Works Association (AWWA) forecasts that water and wastewater rates across the U.S. will **triple** over the next 15 years
- Rate adjustments are primarily due to reasons beyond a utility's direct control – inflation, necessary Capital Improvement Plans, wholesale costs, and other indirect expenses
- Average utility has been increasing rates 5-6% per year, a trend that is expected to continue and may accelerate
- Notably, 30-40% of utilities charge rates that **do not cover their costs**

PRELIMINARY & SUBJECT TO CHANGE

City of Bellaire
Water and Wastewater Rate Background

City of Bellaire

- City increased its water and wastewater rates by 10% in October 2023
- Inflation continues to drive up utility operating and capital costs annually
- City is currently expected to invest $4.37 million in CIP projects in FY2024-2028 – an amount that will likely increase with water/wastewater capital planning efforts
- City of Houston (COH) costs are forecast to increase due to annual rate adjustments
- Combination of above factors results in need to implement a new long-term rate plan

PRELIMINARY & SUBJECT TO CHANGE

Current Water and Wastewater Rate Structure

City of Bellaire

WATER RATE STRUCTURE	Res, Comm, Sprinkler
Base Charge by Meter Size	
5/8 & 3/4”	$9.99
1”	24.97
1½”	49.98
2”	79.89
2½”	119.83
3”	149.78
4”	249.63
6”	499.26
8”	798.81

WATER RATE STRUCTURE	Res, Comm, Sprinkler
Volume Rate per kGal	
0 - 2,000	$2.39
2,001 - 4,000	3.21
4,001 - 6,000	4.01
6,001 - 8,000	4.39
8,001 - 10,000	5.21
10,000 - 15,000	6.00
15,001 - 20,000	6.40
20,000 - Above	7.20

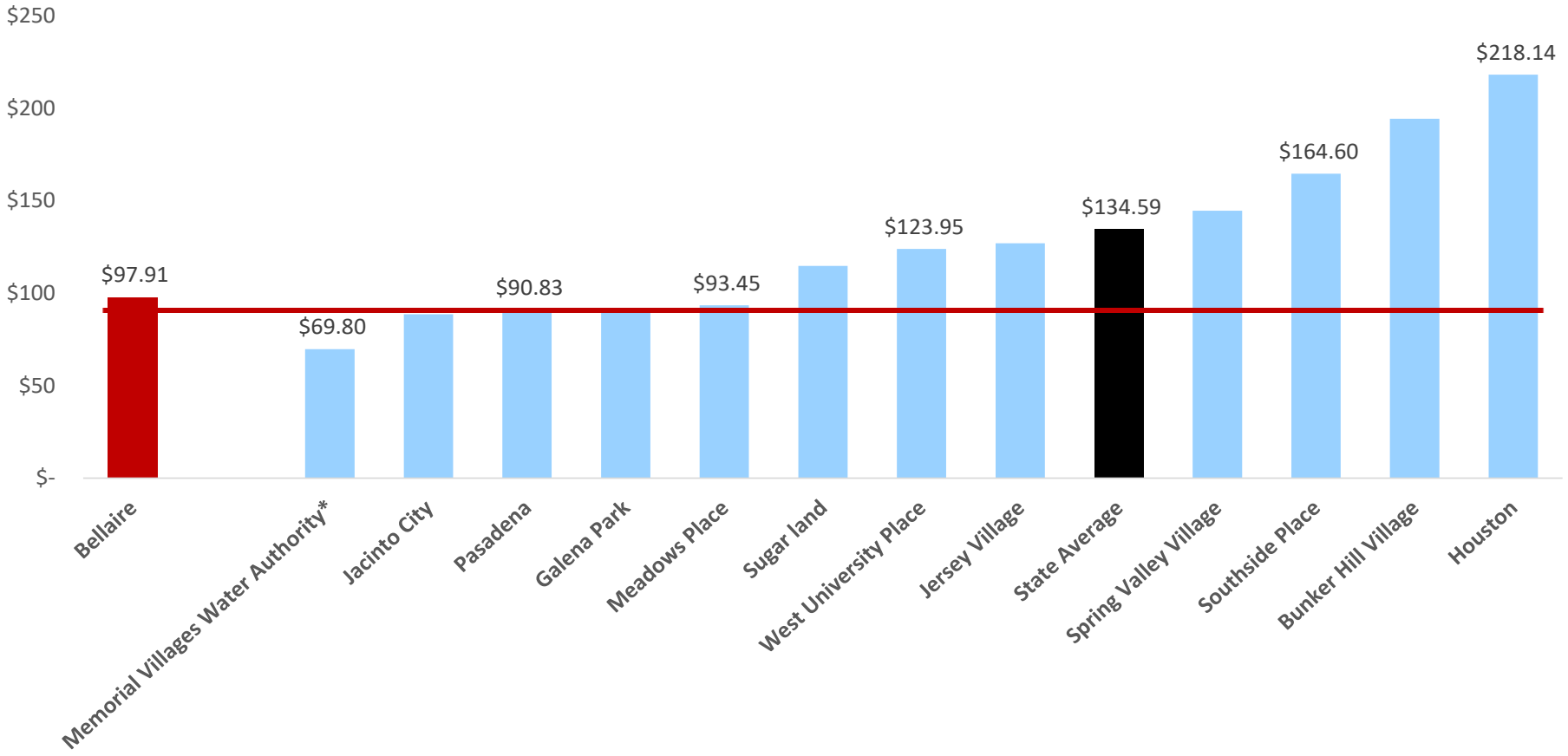
WW RATE STRUCTURE	Res and Comm
Base Charge by Meter Size	
All Meter Sizes	$10.20

WW RATE STRUCTURE	Res and Comm
Volume Rate per kGal	
All Volumes	$3.93

PRELIMINARY & SUBJECT TO CHANGE

Monthly Residential Charges | 10kGal Water and Wastewater

City of Bellaire



*Rates as of February 2024

Bellaire's average residential user uses 9,689 gal. of water/mo.

PRELIMINARY & SUBJECT TO CHANGE

CUSTOMERS & VOLUMES

Water and Wastewater Accounts | Test Year 2024

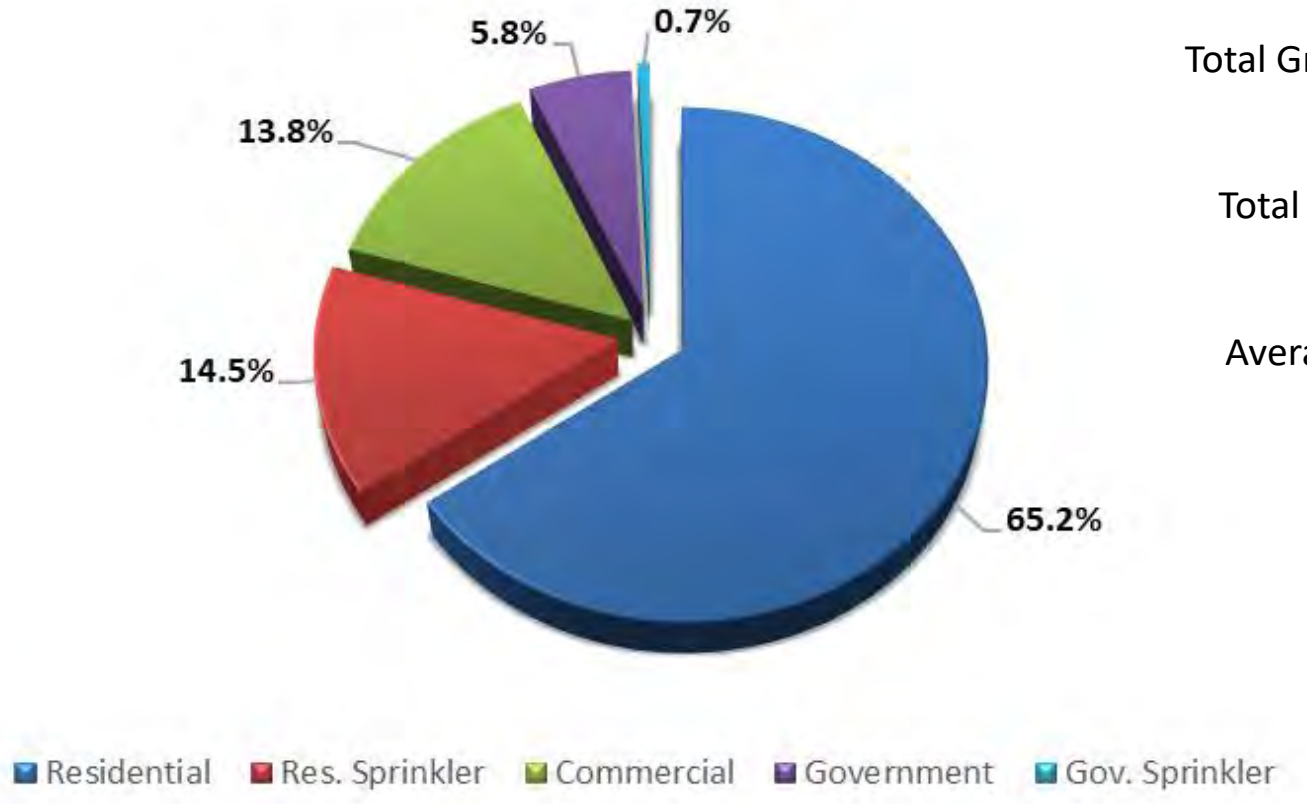
City of Bellaire

RATE MODEL CUSTOMER CLASS			
WATER Customers		**WASTEWATER Customers**	
Residential	6,189	Residential	6,077
Res. Sprinkler	959	Commercial	292
Commercial	308	Government	5
Comm. Sprinkler	-		
Government	19		
Gov. Sprinkler	67		
Total	**7,542**	**Total**	**6,374**

PRELIMINARY & SUBJECT TO CHANGE

Water Consumption by Customer Class| Test Year 2024

City of Bellaire



Total Ground and Surface Water:
1.3B Gallons

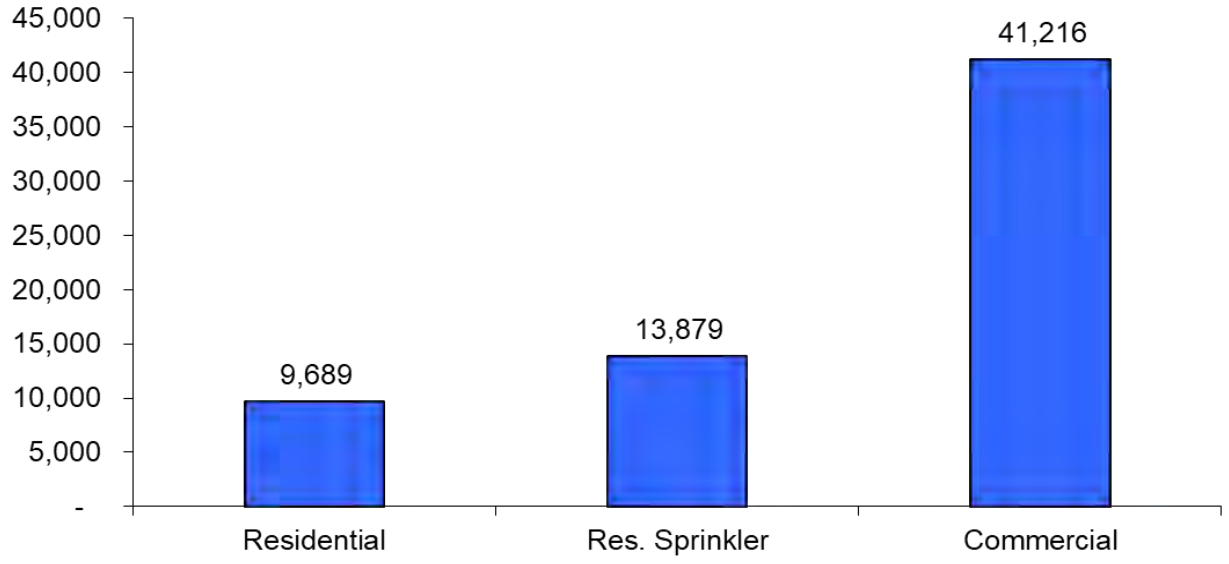
Total Metered Consumption:
1.1B Gallons

Average System Water Loss:
±20.9%

PRELIMINARY & SUBJECT TO CHANGE

TY Average Monthly Water Consumption (gallons)

City of Bellaire



Monthly water usage varies considerably with weather patterns, the model is based on the overall trend.

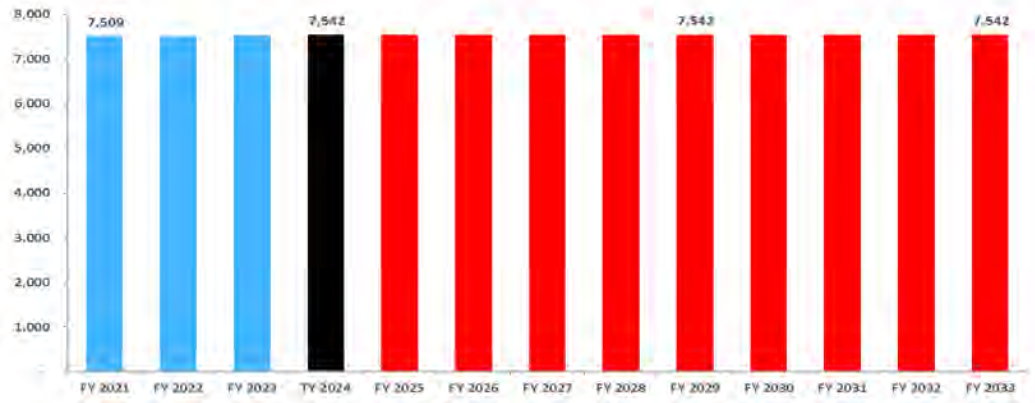
**West University Place average residential water use is 9,405 gal. per mo.*

PRELIMINARY & SUBJECT TO CHANGE

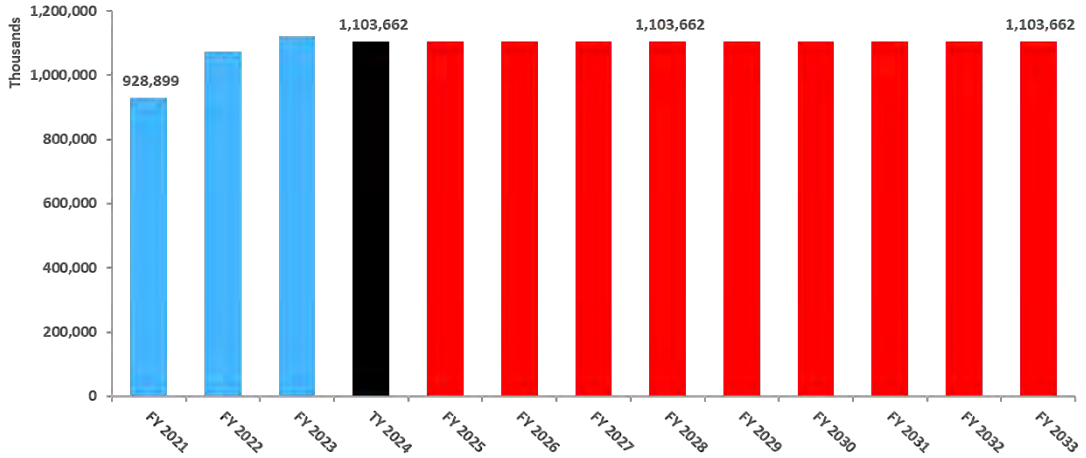
Historical and Forecast Water Accounts and Consumption

City of Bellaire

Accounts:



Consumption:



Project team estimates that forecast number of accounts (approx. 7,540 acc) and metered water consumption (approx. 1.1B gallons) will remain relatively constant over the forecast period.

However, actual water usage may vary considerably with weather patterns.

The model is based on the overall trend.

PRELIMINARY & SUBJECT TO CHANGE

WATER & WASTEWATER
CURRENT AND FORECAST COST OF SERVICE

Key Assumptions for Forecast Financial and Rate Plan

City of Bellaire

- Forecast COH water purchases will remain at the test year levels (±693MG or 63% of total metered consumption)
- Most operating expenses will increase at 3% per year; certain expenses (e.g. insurance, fuel, chemicals, etc.) increase at a higher rate
- TY2024 model adjustment is $63k for Water Main Maintenance (based on 5-YR average) and $495k for COH water (based on actual purchases)
- FY2025 model adjustments are $472k (include chemicals, fuel, trash hauls, WWT maintenance, and other professional)
- The model includes additional O&M spending for known issues ($633k in FY2025)

- COH rate is forecast to increase by **9%** each year
- Known Water and WW CIP for FY 2024-2028 are: **$4.37M***
- Previously funded projects: **$2.27M**
- Projects to be funded by long-term debt: **$2.1M**
- New debt is expected to be issued in FY2026-2028
- New debt terms: **25-years, 4.0% interest**

**City is conducting a CIP study, and the final CIP number will change. Recommended rate plan is based only on known CIP projects.*

PRELIMINARY & SUBJECT TO CHANGE

CIP Forecast FY 2024-2028

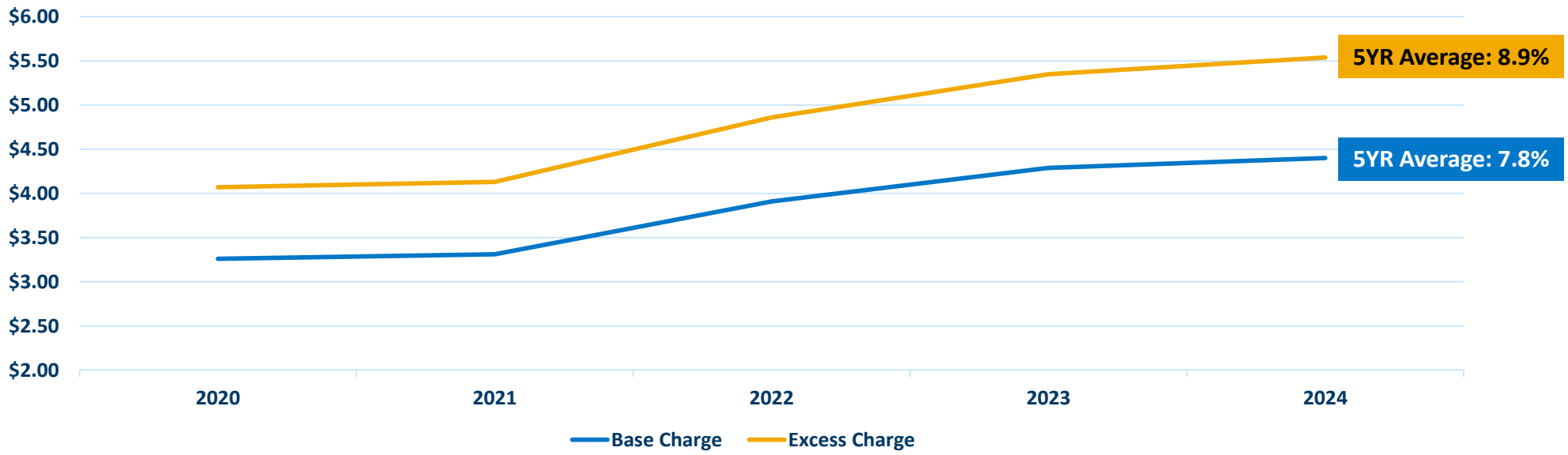
City of Bellaire

WATER			WASTEWATER		
WAXXXX	Central Well Chlorine Building	$ 60,000	WW2203	Wastewater Treatment Plant Fine Screen Replacemei	$ 100,000
WAXXXX	Renwick Well Generator	164,284	WW2202	Wastewater Collection System Improvements	275,000
WA2202	Fire Hydrant Rehabilitation and Replaceme	100,000		Future Projects	-
WA2203	Water Distribution System Valve Improven	232,000		Future Projects	-
WA2205	Priority Water Line Improvements	636,400		Future Projects	-
WAXXXX	Water Tower Rehab	2,100,000		Future Projects	-
WA2205	Priority Water Line Improvements	700,000		Future Projects	-
Total Water CIP		**$ 3,992,684**	**Total Wastewater CIP**		**$ 375,000**
Total Water and Wastewater CIP		**$ 4,367,684**			

City of Houston Annual Rate Adjustments

City of Bellaire

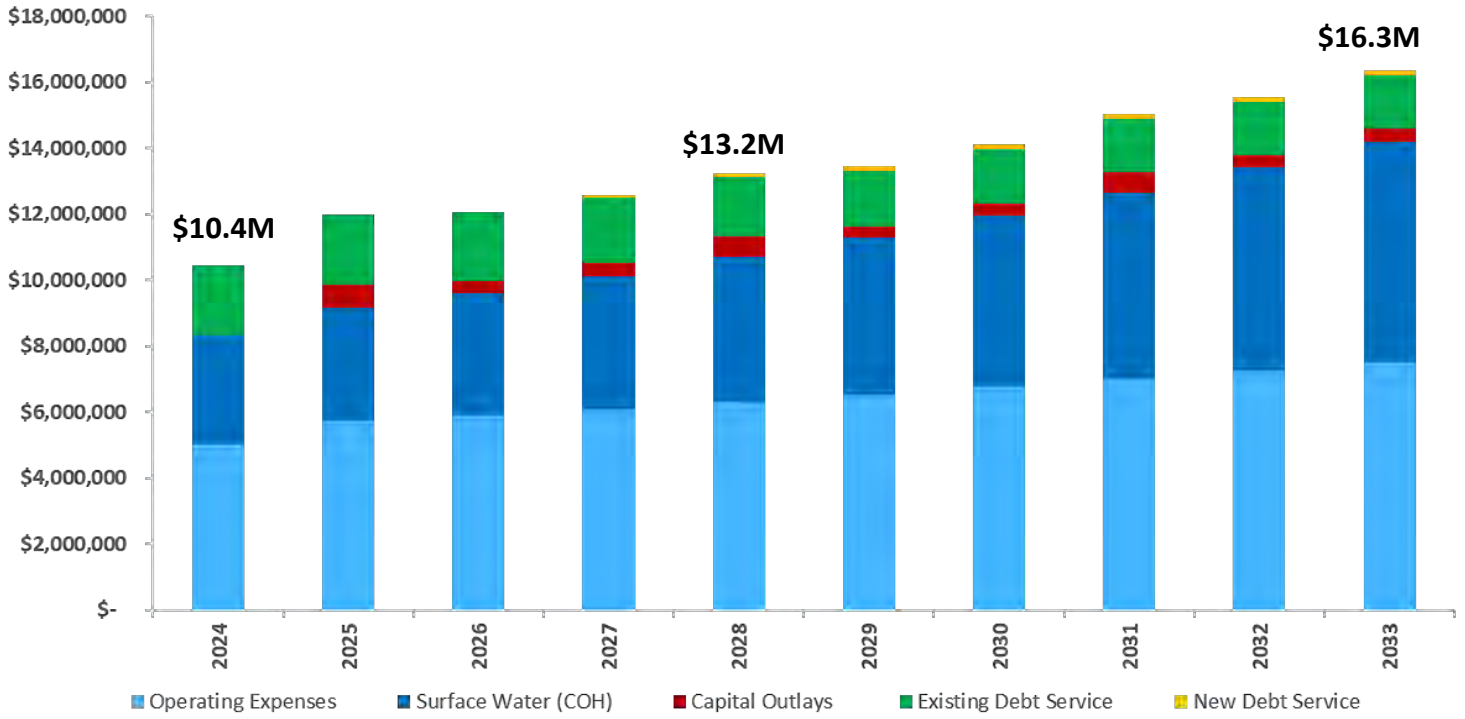
- COH applies annual rate adjustments based on inflationary indices described in Section 5.2 of the Master Ordinance and Ordinance No. 2010-305 (% adjustments) **AND** Ordinance No. 2021-515 (5-YR rate plan $ adjustments)
- Historically, annual COH rate increases have ranged between 1.2% and 18.1%
- Base charge and excess charge increase at different paces



PRELIMINARY & SUBJECT TO CHANGE

Forecast Cost of Service | Water and Wastewater

City of Bellaire



PRELIMINARY & SUBJECT TO CHANGE

Forecast Net Revenue Requirement| Water and Wastewater

City of Bellaire

CURRENT AND FORECAST NET REVENUE REQUIREMENT

	Operating Expenses	Surface Water (COH)	Capital Outlays	Debt Service	Total Cost of Service	Less Non-Rate Revenues	Net Revenue Requirement
TOTAL Revenue Requirement							
TY 2024	$ 4,999,428	$ 3,322,163	$ -	$ 2,111,256	$ 10,432,847	$ 302,340	**$ 10,130,507**
FY 2025	5,749,215	3,411,444	712,962	2,109,220	11,982,841	302,340	**11,680,501**
FY 2026	5,891,717	3,709,062	366,458	2,109,213	12,076,450	302,340	**11,774,110**
FY 2027	6,095,878	4,033,183	380,539	2,055,134	12,564,734	302,340	**12,262,394**
FY 2028	6,308,682	4,394,161	628,635	1,908,446	13,239,924	302,340	**12,937,584**
FY 2029	6,530,515	4,770,655	322,642	1,845,326	13,469,137	302,340	**13,166,797**
FY 2030	6,761,779	5,189,421	358,808	1,798,086	14,108,094	302,340	**13,805,754**
FY 2031	7,002,897	5,645,558	641,044	1,741,566	15,031,064	302,340	**14,728,724**
FY 2032	7,254,310	6,153,680	391,022	1,743,402	15,542,413	302,340	**15,240,074**
FY 2033	7,516,479	6,683,661	399,219	1,740,157	16,339,516	302,340	**16,037,176**

PRELIMINARY & SUBJECT TO CHANGE

WATER & WASTEWATER
PROPOSED RATE PLANS

WATER & WASTEWATER
SCENARIO 1 | STATUS QUO

SCENARIO 1 | STATUS QUO

City of Bellaire

- Status Quo Scenario – Keeps the Existing Rate Structure and Tiers
- 5-year rate plan with adjustments assumed to be effective October 1st of each year
- Assumes no change in fundamental rate structure
- Uniform percentage adjustments for base and volume charges
- Higher increases for water, lesser increases for wastewater
- Significant one-time rate increase in FY2025, lesser increases afterwards

PRELIMINARY & SUBJECT TO CHANGE

SCENARIO 1 | STATUS QUO | RATE PLAN

City of Bellaire

The rate plan fully funds all aspects of the water and wastewater utility based on the existing market conditions and assumptions.

			Proposed Rate Plan				
		Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	Forecast Oct-28
Water Rates -- Residential, Commercial, and Sprinkler							
Monthly Minimum Charge							
	5/8" & 3/4"	$ 9.99	$ 12.29	$ 13.52	$ 14.19	$ 14.90	$ 15.65
	1"	24.97	30.71	33.78	35.47	37.25	39.11
	1 1/2"	49.98	61.48	67.62	71.00	74.55	78.28
	2"	79.89	98.26	108.09	113.50	119.17	125.13
	2 1/2"	119.83	147.39	162.13	170.24	178.75	187.69
	3"	149.78	184.23	202.65	212.78	223.42	234.60
	4"	249.63	307.04	337.75	354.64	372.37	390.99
	6"	499.26	614.09	675.50	709.27	744.74	781.97
	8"	798.81	982.54	1,080.79	1,134.83	1,191.57	1,251.15
Volume Rate Per 1,000 Gal							
-	2,000	2.39	2.94	3.23	3.40	3.57	3.74
2,001	4,000	3.21	3.95	4.34	4.56	4.79	5.03
4,001	6,000	4.01	4.93	5.43	5.70	5.98	6.28
6,001	8,000	4.39	5.40	5.94	6.24	6.55	6.88
8,001	10,000	5.21	6.41	7.05	7.40	7.77	8.16
10,001	15,000	6.00	7.38	8.12	8.52	8.95	9.40
15,001	20,000	6.40	7.87	8.66	9.09	9.55	10.02
20,001	Above	7.20	8.86	9.74	10.23	10.74	11.28
Wastewater Rates - Residential and Commercial							
Monthly Minimum Charge							
	All Meters	$ 10.20	$ 11.83	$ 12.54	$ 13.17	$ 13.83	$ 14.38
Volume Rate Per 1,000 Gal							
	Volume Charge	3.93	4.56	4.83	5.07	5.33	5.54

PRELIMINARY & SUBJECT TO CHANGE

SCENARIO 1 | STATUS QUO | IMPACT ON BILLS

City of Bellaire

		Current	Proposed Rate Plan				
			Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	Forecast Oct-28
Residential Monthly Charge -- 5/8" Meter							
5,000 Gal W	Total	$ 55.05	$ 65.62	$ 70.80	$ 74.34	$ 78.06	$ 81.55
5,000 Gal WW	Increase -- $		**10.57**	**5.18**	**3.54**	**3.72**	**3.50**
	Increase -- %		19.2%	7.9%	5.0%	5.0%	4.5%
10,000 Gal W	Total	97.91	116.96	126.36	132.68	139.32	145.61
10,000 Gal WW	Increase -- $		**19.05**	**9.40**	**6.32**	**6.63**	**6.29**
	Increase -- %		19.5%	8.0%	5.0%	5.0%	4.5%
20,000 Gal W	Total	199.21	238.81	258.57	271.50	285.08	298.13
20,000 Gal WW	Increase -- $		**39.60**	**19.76**	**12.93**	**13.58**	**13.05**
	Increase -- %		19.9%	8.3%	5.0%	5.0%	4.6%
Commercial Monthly Charge -- 2" Meter							
20,000 Gal W	Total	$ 269.11	$ 324.79	$ 353.15	$ 370.81	$ 389.35	$ 407.61
20,000 Gal WW	Increase -- $		**55.68**	**28.36**	**17.66**	**18.54**	**18.26**
	Increase -- %		20.7%	8.7%	5.0%	5.0%	4.7%
40,000 Gal W	Total	491.71	593.09	644.63	676.86	710.70	743.97
40,000 Gal WW	Increase -- $		**101.38**	**51.54**	**32.23**	**33.84**	**33.27**
	Increase -- %		20.6%	8.7%	5.0%	5.0%	4.7%

PRELIMINARY & SUBJECT TO CHANGE

WATER & WASTEWATER
SCENARIO 2 | LIMITED TIERS

SCENARIO 2 | LIMITED TIERS

City of Bellaire

- Conservation Scenario – Introduces new tier structure for Water to promote conservation:

Gallons Used	Volumetric Rate
0 – 5,000	$3.50
5,000 – 10,000	$5.25
10,000 – 15,000	$7.88
15,000 – 20,000	$9.84
20,000 - Above	$12.30

- Wastewater tier structure remains unchanged
- New tier structure will benefit low- and moderate-use customers (up to 10k gal./mo.)
- High-use customers (over 20k gal/mo.) will be impacted the most

PRELIMINARY & SUBJECT TO CHANGE

SCENARIO 2 | LIMITED TIERS | RATE PLAN

City of Bellaire

The rate plan fully funds all aspects of the water and wastewater utility based on the existing market conditions and assumptions.

			Proposed Rate Plan				
		Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	Forecast Oct-28
Water Rates -- Residential, Commercial, and Sprinkler							
Monthly Minimum Charge							
	5/8" & 3/4"	$ 9.99	$ 11.99	$ 12.83	$ 13.47	$ 14.14	$ 14.85
	1"	24.97	29.96	32.06	33.66	35.35	37.12
	1 1/2"	49.98	59.98	64.17	67.38	70.75	74.29
	2"	79.89	95.87	102.58	107.71	113.09	118.75
	2 1/2"	119.83	143.80	153.86	161.55	169.63	178.11
	3"	149.78	179.74	192.32	201.93	212.03	222.63
	4"	249.63	299.56	320.52	336.55	353.38	371.05
	6"	499.26	599.11	641.05	673.10	706.76	742.10
	8"	798.81	958.57	1,025.67	1,076.96	1,130.80	1,187.34
Volume Rate Per 1,000 Gal							
-	**5,000**	2.39 - 4.01	3.50	3.75	3.93	4.13	4.34
5,001	**10,000**	4.01 - 5.21	5.25	5.62	5.90	6.19	6.50
10,001	**15,000**	6.00	7.88	8.43	8.85	9.29	9.75
15,001	**20,000**	6.40	9.84	10.53	11.06	11.61	12.19
20,001	**Above**	7.20	12.30	13.17	13.82	14.52	15.24
Wastewater Rates - Residential and Commercial							
Monthly Minimum Charge							
	All Meters	$ 10.20	$ 11.73	$ 12.55	$ 13.18	$ 13.84	$ 14.39
Volume Rate Per 1,000 Gal							
	Volume Charge	3.93	4.52	4.84	5.08	5.33	5.54

PRELIMINARY & SUBJECT TO CHANGE

SCENARIO 2 | LIMITED TIERS | BILL IMPACT

City of Bellaire

			Proposed Rate Plan				
		Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	Forecast Oct-28
Residential Monthly Charge -- 5/8" Meter							
5,000 Gal W	Total	$ 55.05	$ 63.82	$ 68.28	$ 71.70	$ 75.28	$ 78.64
5,000 Gal WW	Increase -- $		**8.77**	**4.47**	**3.41**	**3.58**	**3.36**
	Increase -- %		15.9%	7.0%	5.0%	5.0%	4.5%
10,000 Gal W	Total	97.91	112.66	120.55	126.58	132.91	138.88
10,000 Gal WW	Increase -- $		**14.75**	**7.89**	**6.03**	**6.33**	**5.97**
	Increase -- %		15.1%	7.0%	5.0%	5.0%	4.5%
20,000 Gal W	Total	199.21	246.45	263.70	276.89	290.73	304.06
20,000 Gal WW	Increase -- $		**47.24**	**17.25**	**13.19**	**13.84**	**13.33**
	Increase -- %		23.7%	7.0%	5.0%	5.0%	4.6%
Commercial Monthly Charge -- 2" Meter							
20,000 Gal W	Total	$ 269.11	$ 330.33	$ 353.45	$ 371.13	$ 389.68	$ 407.96
20,000 Gal WW	Increase -- $		**61.22**	**23.12**	**17.67**	**18.56**	**18.28**
	Increase -- %		22.7%	7.0%	5.0%	5.0%	4.7%
40,000 Gal W	Total	491.71	666.82	713.49	749.17	786.63	823.69
40,000 Gal WW	Increase -- $		**175.11**	**46.68**	**35.67**	**37.46**	**37.06**
	Increase -- %		35.6%	7.0%	5.0%	5.0%	4.7%

PRELIMINARY & SUBJECT TO CHANGE

Scenario Comparison

City of Bellaire

	Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	Effective Oct-28
Residential Monthly Charge -- 5,000 Gal Water, 5,000 Gal WW						
Scenario I -- Status Quo	$ 55.05	$ 65.62	$ 70.80	$ 74.34	$ 78.06	$ 81.55
Scenario II -- Conservation	55.05	63.82	68.28	71.70	75.28	78.64
Increase -- Dollars						
Scenario I -- Status Quo		10.57	5.18	3.54	3.72	3.50
Scenario II -- Conservation		8.77	4.47	3.41	3.58	3.36
Increase -- Percentage						
Scenario I -- Status Quo		19.2%	7.9%	5.0%	5.0%	4.5%
Scenario II -- Conservation		15.9%	7.0%	5.0%	5.0%	4.5%
Residential Monthly Charge -- 10,000 Gal Water, 10,000 Gal WW						
Scenario I -- Status Quo	$ 97.91	$ 116.96	$ 126.36	$ 132.68	$ 139.32	$ 145.61
Scenario II -- Conservation	97.91	112.66	120.55	126.58	132.91	138.88
Increase -- Dollars						
Scenario I -- Status Quo		19.05	9.40	6.32	6.63	6.29
Scenario II -- Conservation		14.75	7.89	6.03	6.33	5.97
Increase -- Percentage						
Scenario I -- Status Quo		19.5%	8.0%	5.0%	5.0%	4.5%
Scenario II -- Conservation		15.1%	7.0%	5.0%	5.0%	4.5%

PRELIMINARY & SUBJECT TO CHANGE

Scenario Comparison

City of Bellaire

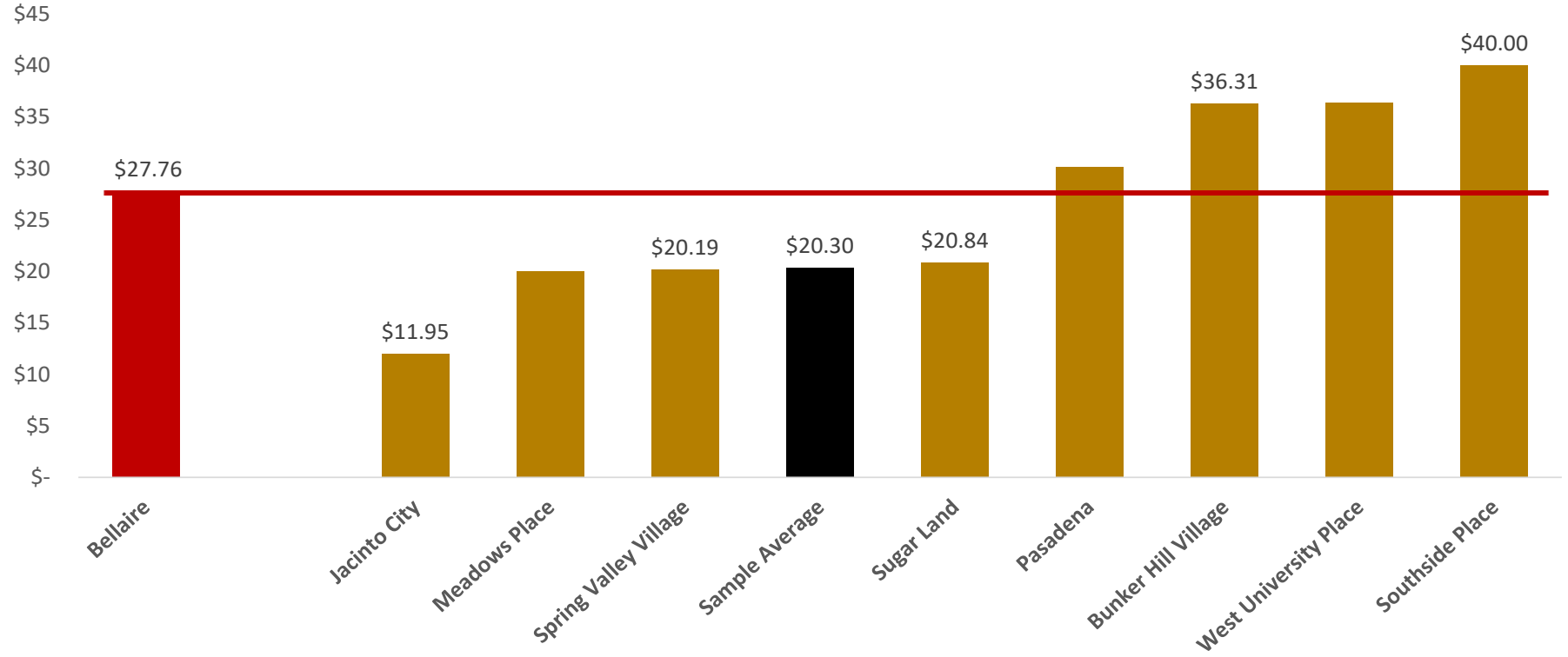
	Current	Effective Oct-24	Effective Oct-25	Effective Oct-26	Effective Oct-27	Effective Oct-28
Residential Monthly Charge -- 20,000 Gal Water, 20,000 Gal WW						
Scenario I -- Status Quo	$ 199.21	$ 238.81	$ 258.57	$ 271.50	$ 285.08	$ 298.13
Scenario II -- Conservation	199.21	246.45	263.70	276.89	290.73	304.06
Increase -- Dollars						
Scenario I -- Status Quo		39.60	19.76	12.93	13.58	13.05
Scenario II -- Conservation		47.24	17.25	13.19	13.84	13.33
Increase -- Percentage						
Scenario I -- Status Quo		19.9%	8.3%	5.0%	5.0%	4.6%
Scenario II -- Conservation		23.7%	7.0%	5.0%	5.0%	4.6%
Commercial Monthly Charge -- 40,000 Gal Water, 40,000 Gal WW						
Scenario I -- Status Quo	$ 491.71	$ 593.09	$ 644.63	$ 676.86	$ 710.70	$ 743.97
Scenario II -- Conservation	491.71	666.82	713.49	749.17	786.63	823.69
Increase -- Dollars						
Scenario I -- Status Quo		101.38	51.54	32.23	33.84	33.27
Scenario II -- Conservation		175.11	46.68	35.67	37.46	37.06
Increase -- Percentage						
Scenario I -- Status Quo		20.6%	8.7%	5.0%	5.0%	4.7%
Scenario II -- Conservation		35.6%	7.0%	5.0%	5.0%	4.7%

PRELIMINARY & SUBJECT TO CHANGE

SANITATION AND RECYCLING

Monthly Residential Charges | Sanitation and Recycling

City of Bellaire



**Houston Sanitation Department is funded from the General Fund*

PRELIMINARY & SUBJECT TO CHANGE

Solid Waste Key Assumptions

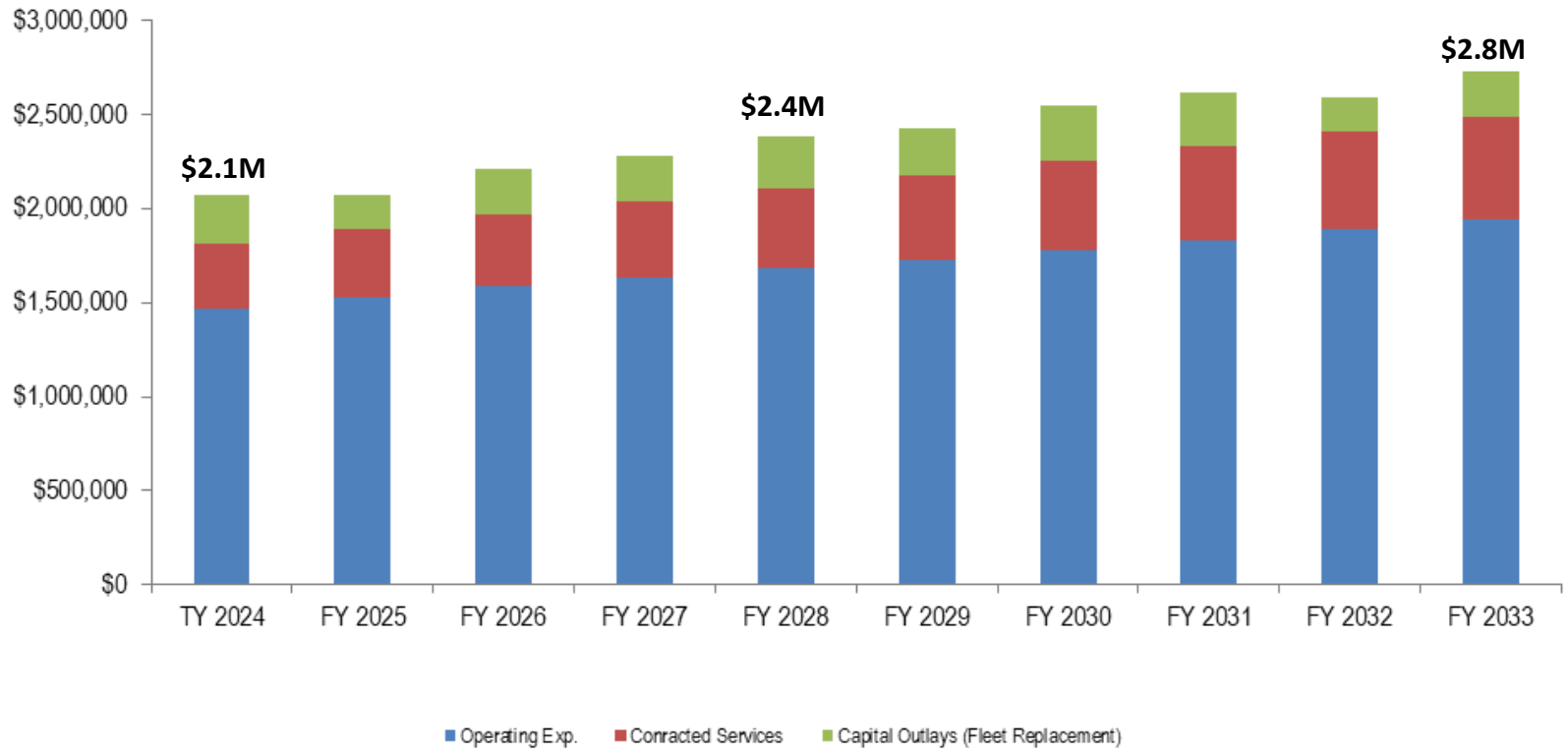
City of Bellaire

- Operating expenses are forecast to increase by 3-4% annually
- Republic Services and Recycle America costs are forecast to increase by 5% each year
- No change in 2/1 (trash/recycling) pickup policy
- Fleet vehicles will be replaced according to the Fleet Replacement Schedule
- 6,066 active SW accounts in the Test Year. The number of SW accounts will remain flat for the forecast period
- Rate increases in October of each year

PRELIMINARY & SUBJECT TO CHANGE

Forecast Cost of Service | Solid Waste

City of Bellaire



PRELIMINARY & SUBJECT TO CHANGE

Forecast Net Revenue Requirement| Solid Waste

City of Bellaire

FORECAST SANITATION NET REVENUE REQUIREMENT

	Operating Expenses	Contracted Services	Capital Outlays	Debt Service	Total Cost of Service	Less Non-Rate Revenues	Net Revenue Requirement
Sanitation Revenue Requirement							
TY 2024	$ 1,467,976	$ 348,750	$ 260,109	$ -	**$ 2,076,835**	$ (32,760)	**$ 2,044,075**
FY 2025	1,520,162	366,475	176,852	-	**2,063,489**	(32,782)	**2,030,707**
FY 2026	1,574,321	385,101	237,394	-	**2,196,816**	(32,805)	**2,164,011**
FY 2027	1,630,533	404,672	241,523	-	**2,276,728**	(32,827)	**2,243,901**
FY 2028	1,688,880	425,239	278,324	-	**2,392,443**	(32,849)	**2,359,594**
FY 2029	1,749,449	446,850	251,844	-	**2,448,144**	(32,871)	**2,415,272**
FY 2030	1,812,331	469,559	293,214	-	**2,575,105**	(32,894)	**2,542,211**
FY 2031	1,877,620	493,423	292,240	-	**2,663,282**	(32,916)	**2,630,366**
FY 2032	1,945,413	518,498	185,023	-	**2,648,934**	(32,938)	**2,615,996**
FY 2033	2,015,813	544,848	242,501	-	**2,803,162**	(32,960)	**2,770,202**

PRELIMINARY & SUBJECT TO CHANGE

Solid Waste Rate Plan and Impact on Monthly Bill

City of Bellaire

CITY OF BELLAIRE

SANITATION RECOMMENDED RATE PLAN

	Current	Forecast Oct-24	Forecast Oct-25	Forecast Oct-26	Forecast Oct-27	Forecast Oct-28
Solid Waste Monthly Fee - All Residential						
Residential -- Sanitation	$ 24.72	$ 26.45	$ 27.77	$ 28.88	$ 30.04	$ 31.24
Residential -- Recycling	3.04	3.25	3.42	3.55	3.69	3.84
Total	$ 27.76	$ 29.70	$ 31.19	$ 32.44	$ 33.73	$ 35.08
Increase - $		1.94	1.49	1.25	1.30	1.35
Increase - %		7.0%	5.0%	4.0%	4.0%	4.0%

PRELIMINARY & SUBJECT TO CHANGE

SUMMARY

Summary and Next Steps

City of Bellaire

- Review proposed rate plans
- Revise recommendations based on Council feedback from workshop
- Prepare final Council presentation and present formal rate plan for adoption

PRELIMINARY & SUBJECT TO CHANGE

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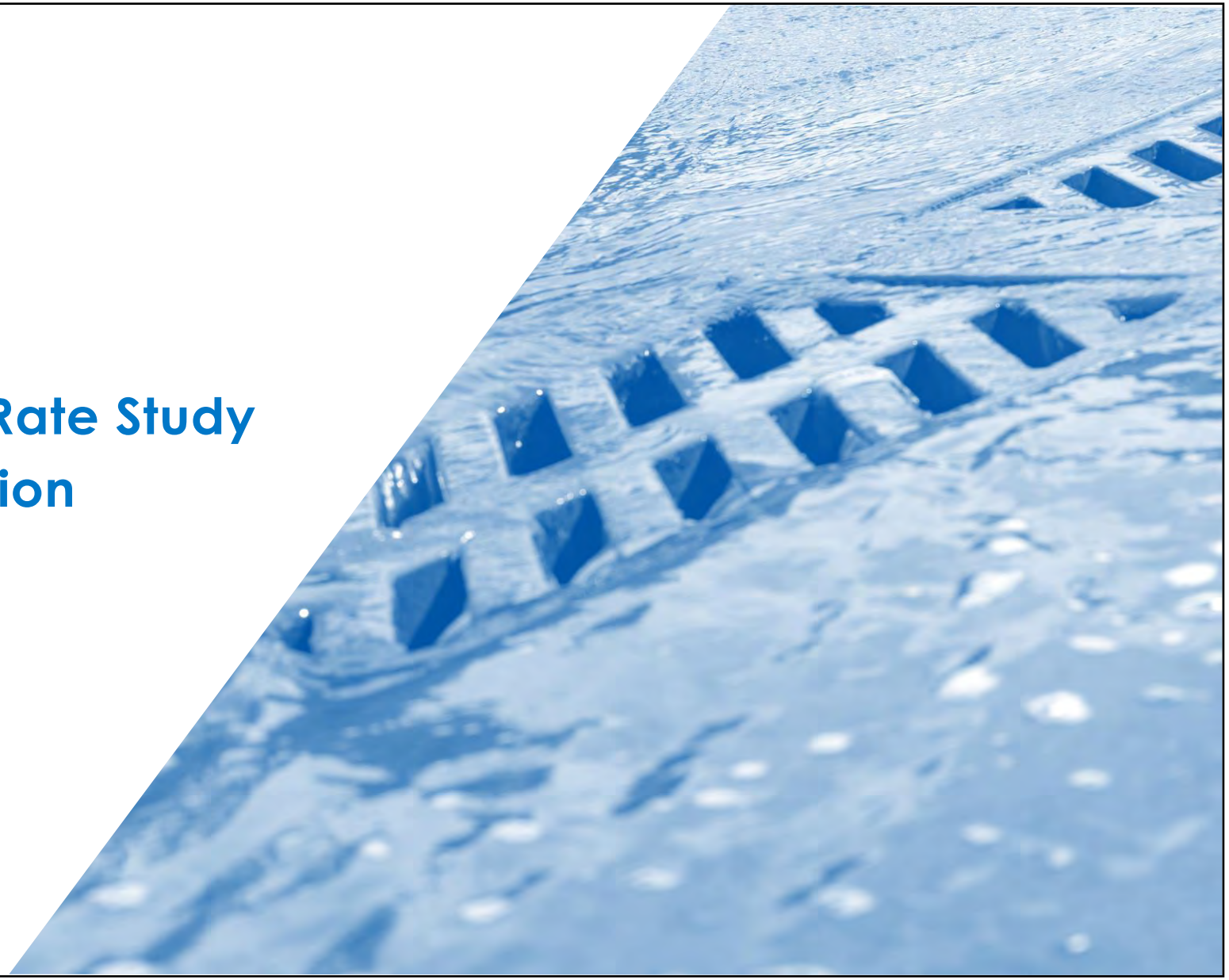
QUESTIONS & DISCUSSION

City of Bellaire

2024 Stormwater Rate Study Council Presentation

May 2024

WILLDAN



Agenda

City of Bellaire

- **BACKGROUND ON STORMWATER MANAGEMENT AND UTILITIES**
- **STORMWATER FEE CALCULATION METHODOLOGY**
- **STORMWATER PROPOSED RATE PLAN**
- **PRESENTATION SUMMARY**

PRELIMINARY & SUBJECT TO CHANGE

BACKGROUND ON STORMWATER UTILITIES

Facts about Stormwater Management

City of Bellaire

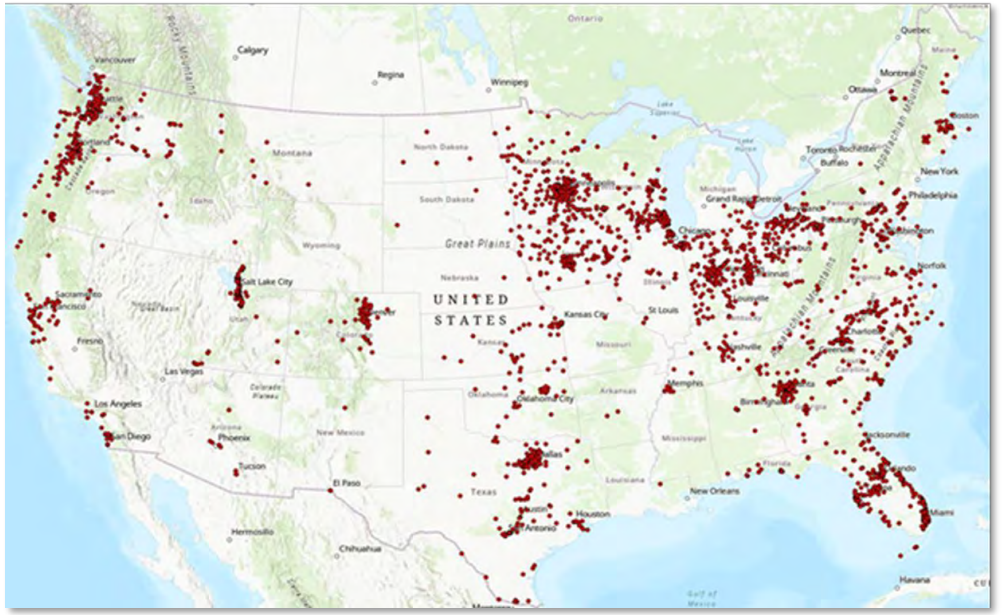
- Urbanization and development has a significant impact how water moves after storm events
- EPA has issued regulations requiring cities to create and implement comprehensive stormwater management plans
- These regulations and increasing urbanization have led to higher stormwater-related costs
- In the past, cities have mostly absorbed stormwater costs in utility and general funds
- As costs continue to rise and restrictions on general revenues tighten, cities are increasingly establishing separate utilities to finance and manage stormwater operations

PRELIMINARY & SUBJECT TO CHANGE

Facts about Stormwater Utilities

City of Bellaire

- The latest Stormwater Utility Survey conducted in 2023 by Western Kentucky University identified over two thousand stormwater utilities (SWUs) located in 42 U.S. states and DC
- Most SWUs are located in Minnesota, Florida, Texas, Pacific Northwest and Upper Midwest
- 11 states have 100 or more SWUs
- Monthly fees range from $0 to $45 (for residential rate payers)
- Average monthly single-family residential fee is $6.06



Source: Western Kentucky University | 2023

PRELIMINARY & SUBJECT TO CHANGE

Bellaire Stormwater Background

City of Bellaire

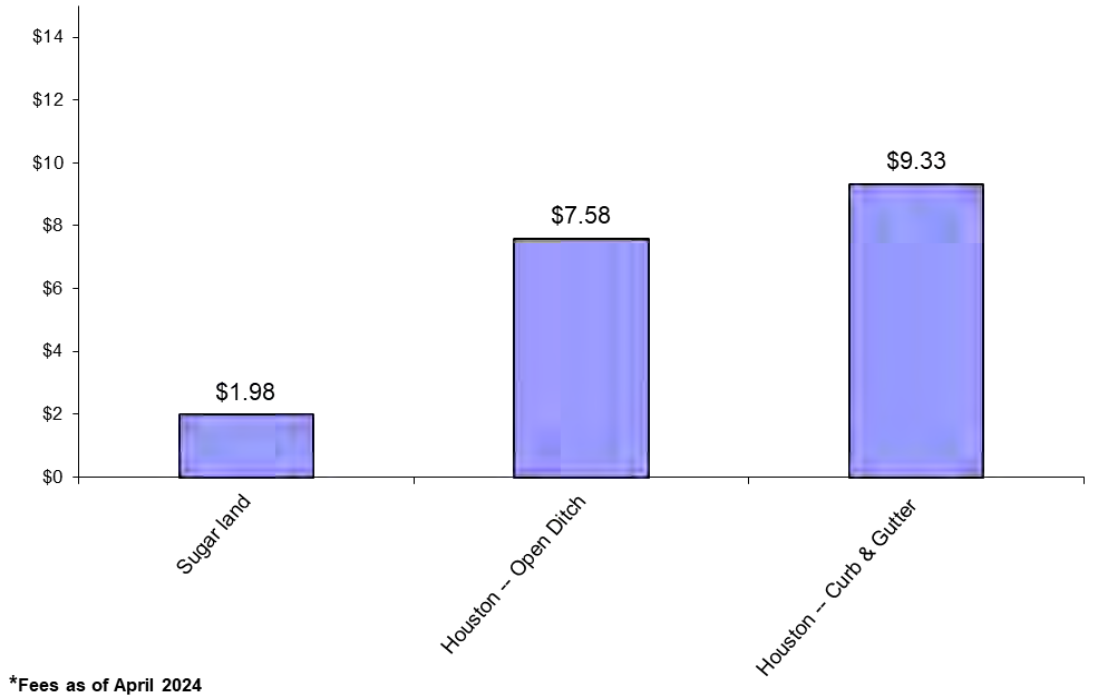
- Currently, the City doesn't have a Drainage utility (PW department is managing drainage projects)
- Over 95% of properties in Bellaire are at risk of flooding*
- City Staff has identified up to **$9** million of stormwater capital improvements to address flooding issues and improve drainage systems in the City (CIP project DR2202 - Regional Drainage Program).
- Combination of above factors results in need to create a Drainage utility and implement a new long-term drainage fee rate plan

*Source: riskfactor.com

PRELIMINARY & SUBJECT TO CHANGE

Stormwater Rate Comparison

City of Bellaire



*Fees as of April 2024

* Based on a single residence with ISA of 3,500 sq. ft.

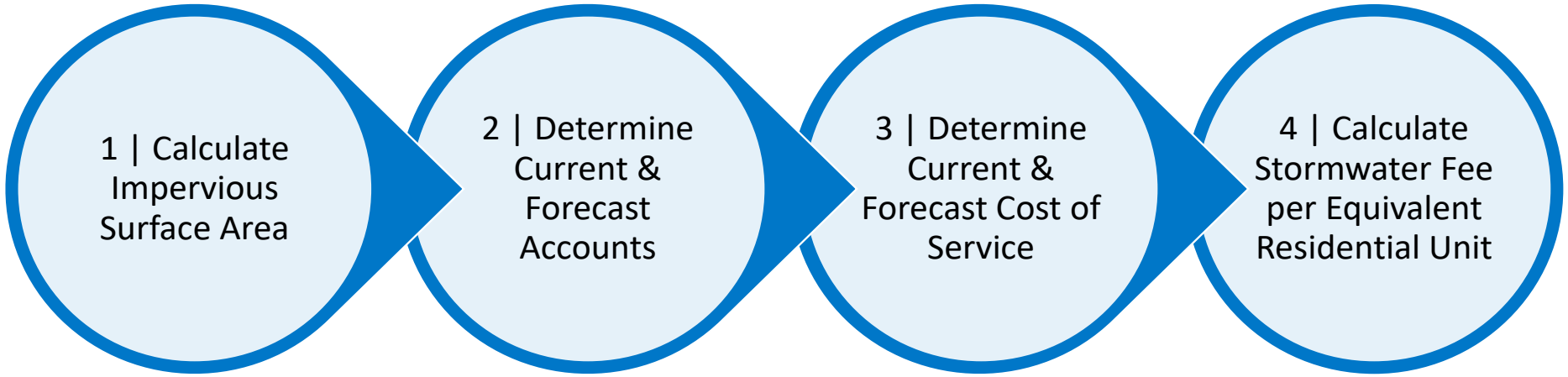
**** No Stormwater fee data was found for other neighboring cities**

PRELIMINARY & SUBJECT TO CHANGE

STUDY METHODOLOGY

Stormwater Fee Calculation Methodology

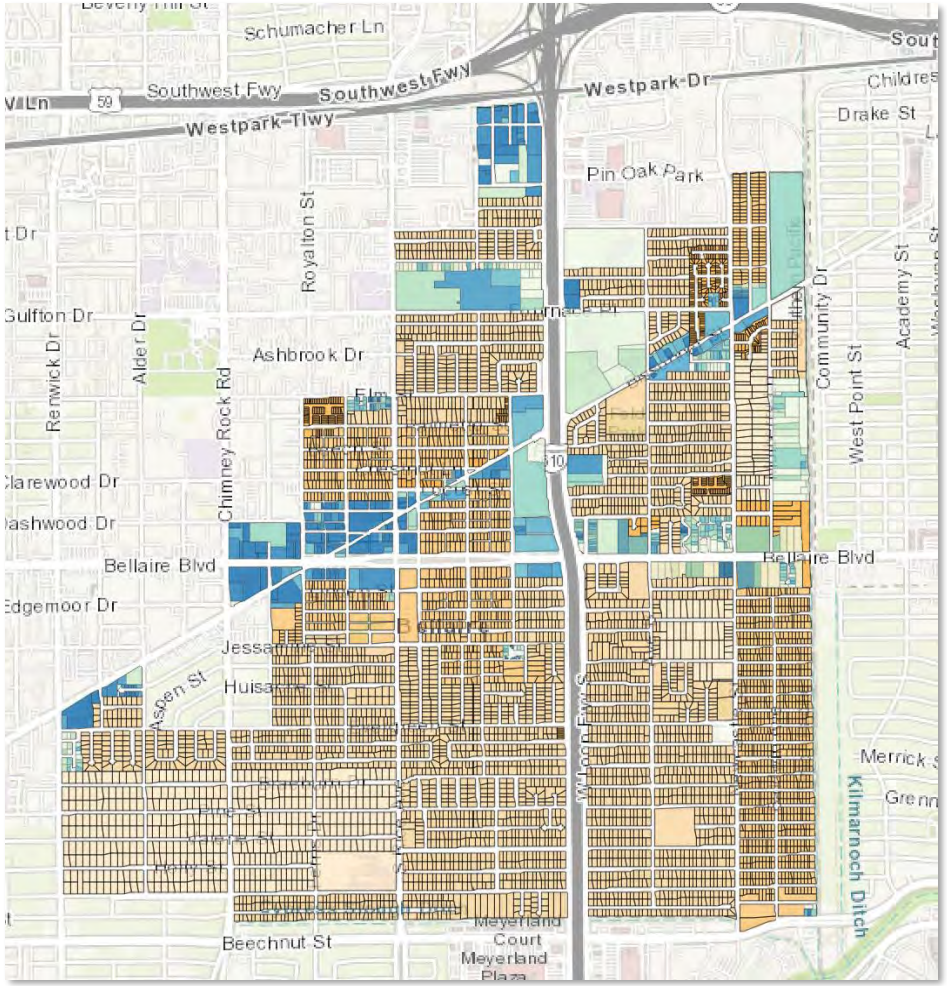
City of Bellaire



PRELIMINARY & SUBJECT TO CHANGE

Impervious Surface Area Calculation

City of Bellaire



Total Residential accounts: 6,189

Total Non-Residential accounts: 308

Project team estimates that the number of accounts will remain relatively constant over the forecast period.

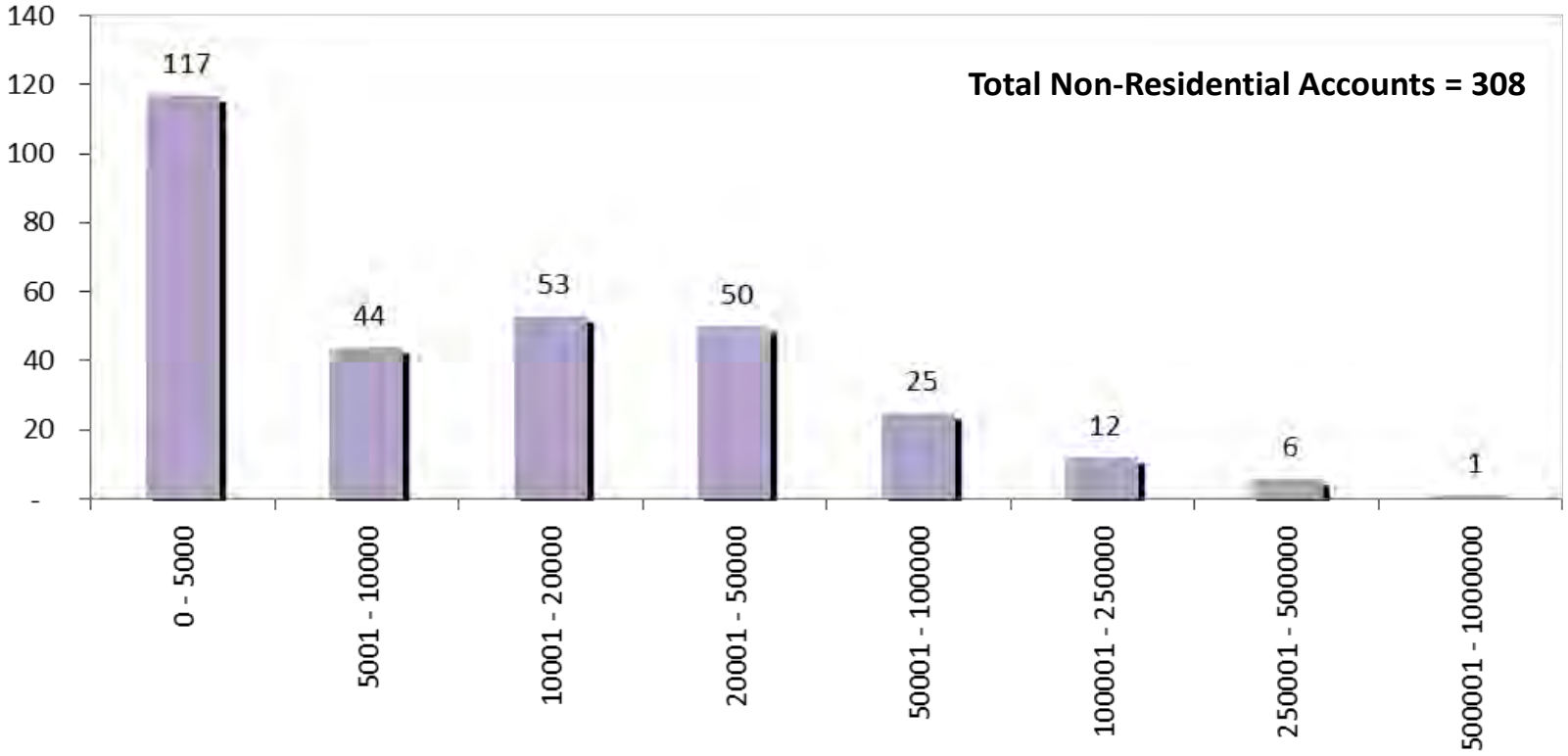
Top 6 largest non-residential customers by ISA (250k+ sq. ft.) :

1. **CenterPoint Energy**
2. **SLS Properties**
3. **Episcopal High School**
4. **Houston ISD**
5. **CCI Bellaire (aka. Capital Commercial Investments, Inc.)**
6. **Protestant Episcopal Church**

PRELIMINARY & SUBJECT TO CHANGE

Impervious Surface Area (ISA) in sq. ft.

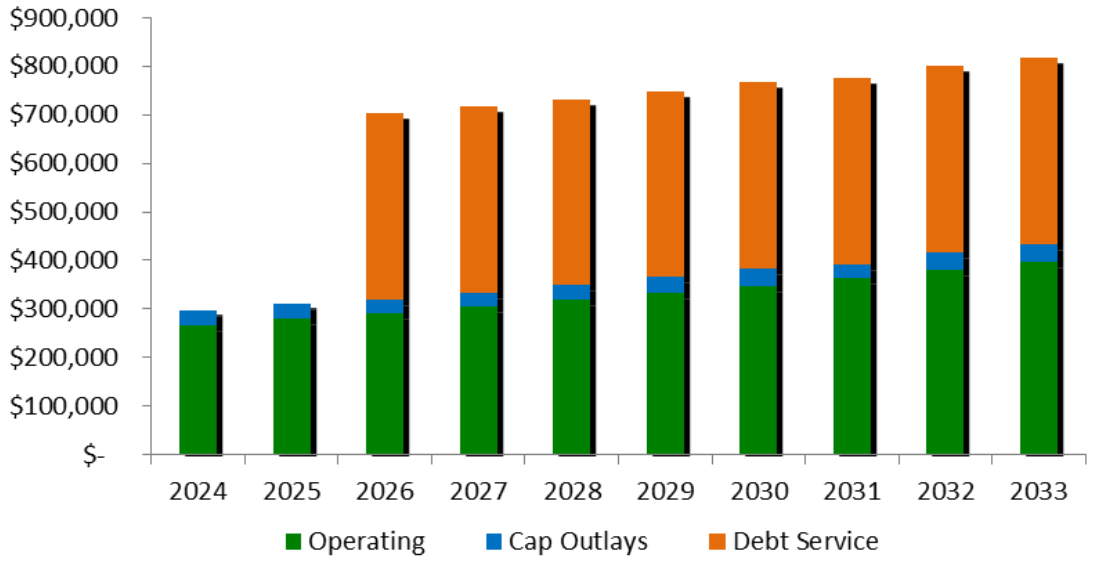
City of Bellaire



PRELIMINARY & SUBJECT TO CHANGE

Forecast Cost of Service

City of Bellaire



20% of PW Budget is allocated to Drainage Utility (this number is highly preliminary)

Operating and personnel expenses are forecast to increase 3-5% per year (some expenses are increasing at a higher rate than others)

City is expected to fund $9 million in stormwater capital improvement projects (CIP) (this number is subject to change pending stormwater study results)

Founding Sources: $3M from GF and $6M with new debt in FY2025. The debt will have a 25-year term and 4.0% APR

PRELIMINARY & SUBJECT TO CHANGE

STORMWATER PROPOSED RATE PLANS

Notes on Proposed Rate Plan – O&M Plan

City of Bellaire

- Generates sufficient revenue to fund only O&M expenditures and Capital Outlays of the Drainage Facility
- 5-year rate plan with adjustments assumed to be effective October 1st of each year
- Assumes a flat rate for Residential customers and Tier-based rate structure for Non-Residential
- Tier structure is based on the Impervious Surface Area (ISA) in sq. ft.

PRELIMINARY & SUBJECT TO CHANGE

Recommended Monthly Fees – O&M Plan

City of Bellaire

		Current	2025	2026	2027	2028	2029
Stormwater Monthly Fees							
Residential		$ -	$ 4.00	$ 4.25	$ 4.50	$ 4.75	$ 5.00
Non-Residential							
-	10,000	$ -	$ 4.00	$ 4.25	$ 4.50	$ 4.75	$ 5.00
10,001	50,000	-	4.80	10.20	16.20	22.80	30.00
50,001	100,000	-	12.00	25.50	40.50	57.00	75.00
100,001	250,000	-	28.00	59.50	94.50	133.00	175.00
250,001	500,000	-	56.00	119.00	189.00	266.00	350.00
500,001	Above	-	120.00	255.00	405.00	570.00	750.00

A new fee structure with fixed rates for Residential customers and tier-based rates for Non-Residential customers based on the average imperious surface area (ISA)

PRELIMINARY & SUBJECT TO CHANGE

Net Revenue Forecast – O&M Plan

City of Bellaire

	2025	2026	2027	2028	2029	2030	2031	2032	2033
Revenues	$ 323,328	$ 357,420	$ 396,442	$ 437,463	$ 480,481	$ 506,267	$ 530,471	$ 554,675	$ 578,879
Less Cost of Service									
Operating Costs	279,174	292,382	305,439	319,102	333,401	348,364	364,024	380,415	397,571
Capital Outlays	30,760	27,031	27,553	29,345	31,826	34,877	28,242	36,002	36,564
Debt Service	-	-	-	-	-	-	-	-	-
Total Cost of Service	309,934	319,413	332,992	348,448	365,226	383,241	392,267	416,417	434,135
Net Revenues	**13,394**	**38,007**	**63,450**	**89,015**	**115,255**	**123,026**	**138,204**	**138,258**	**144,744**
	4.1%	10.6%	16.0%	20.3%	24.0%	24.3%	26.1%	24.9%	25.0%
Drainage Fund Balance	**13,394**	**51,401**	**114,851**	**203,866**	**319,121**	**442,147**	**580,351**	**718,609**	**863,353**

The proposed rate plan fully funds O&M Expenditures and Capital Outlays

PRELIMINARY & SUBJECT TO CHANGE

Notes on Proposed Rate Plan – CIP Plan

City of Bellaire

- In addition to the revenue required for O&M expenditures and Capital Outlays, generates additional revenue to fund the debt service
- Allows the City to issue up to **$6M** in new debt to fund Stormwater CIP
- Requires significantly higher base rates, may create the shock among customers
- This rate plan also assumes a flat rate for all Residential customers and Tier-based rates for Non-Residential
- Tier structure is based on the Impervious Surface Area (ISA) in sq. ft.

PRELIMINARY & SUBJECT TO CHANGE

Recommended Monthly Fees – CIP Plan

City of Bellaire

		Current	2025	2026	2027	2028	2029
Stormwater Monthly Fees							
Residential		$ -	$ 6.00	$ 7.00	$ 8.00	$ 9.00	$ 9.50
Non-Residential							
-	10,000	$ -	$ 6.00	$ 7.00	$ 8.00	$ 9.00	$ 9.50
10,001	50,000	-	7.20	16.80	28.80	43.20	57.00
50,001	100,000	-	18.00	42.00	72.00	108.00	142.50
100,001	250,000	-	42.00	98.00	168.00	252.00	332.50
250,001	500,000	-	84.00	196.00	336.00	504.00	665.00
500,001	Above	-	180.00	420.00	720.00	1,080.00	1,425.00

A new fee structure with fixed rates for Residential customers and tier-based rates for Non-Residential customers based on the average imperious surface area (ISA)

PRELIMINARY & SUBJECT TO CHANGE

Net Revenue Forecast – CIP Plan

City of Bellaire

	2025	2026	2027	2028	2029	2030	2031	2032	2033
Revenues	$ 484,992	$ 584,729	$ 700,859	$ 824,981	$ 912,721	$ 919,752	$ 919,752	$ 919,752	$ 919,752
Less Cost of Service									
Operating Costs	279,174	292,382	305,439	319,102	333,401	348,364	364,024	380,415	397,571
Capital Outlays	30,760	27,031	27,553	29,345	31,826	34,877	28,242	36,002	36,564
Debt Service	-	384,072	384,072	384,072	384,072	384,072	384,072	384,072	384,072
Total Cost of Service	309,934	703,485	717,064	732,520	749,298	767,313	776,338	800,489	818,207
Net Revenues	**175,058**	**(118,756)**	**(16,205)**	**92,461**	**163,423**	**152,439**	**143,414**	**119,263**	**101,545**
	36.1%	-20.3%	-2.3%	11.2%	17.9%	16.6%	15.6%	13.0%	11.0%
Drainage Fund Balance	**175,058**	**56,302**	**40,097**	**132,559**	**295,982**	**448,421**	**591,835**	**711,098**	**812,643**

The proposed rate plan fully funds O&M Expenditures, Capital Outlays and New Debt Service

PRELIMINARY & SUBJECT TO CHANGE

SUMMARY

Presentation Summary

City of Bellaire

- Increasing stormwater costs are a result of urbanization and compliance with EPA regulations
- Rate plan implementation is required to ensure that drainage utility recovers its cost of service
- Drainage fees should be reviewed next year after collecting 12-months of COS data for drainage utility

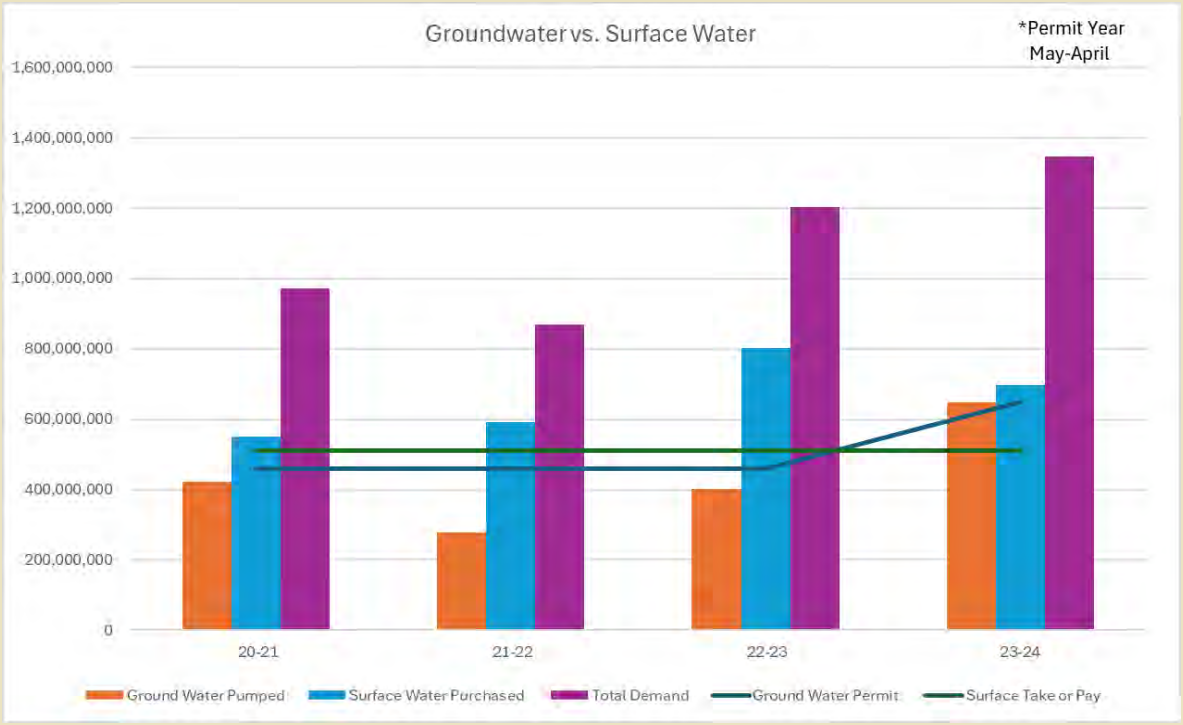
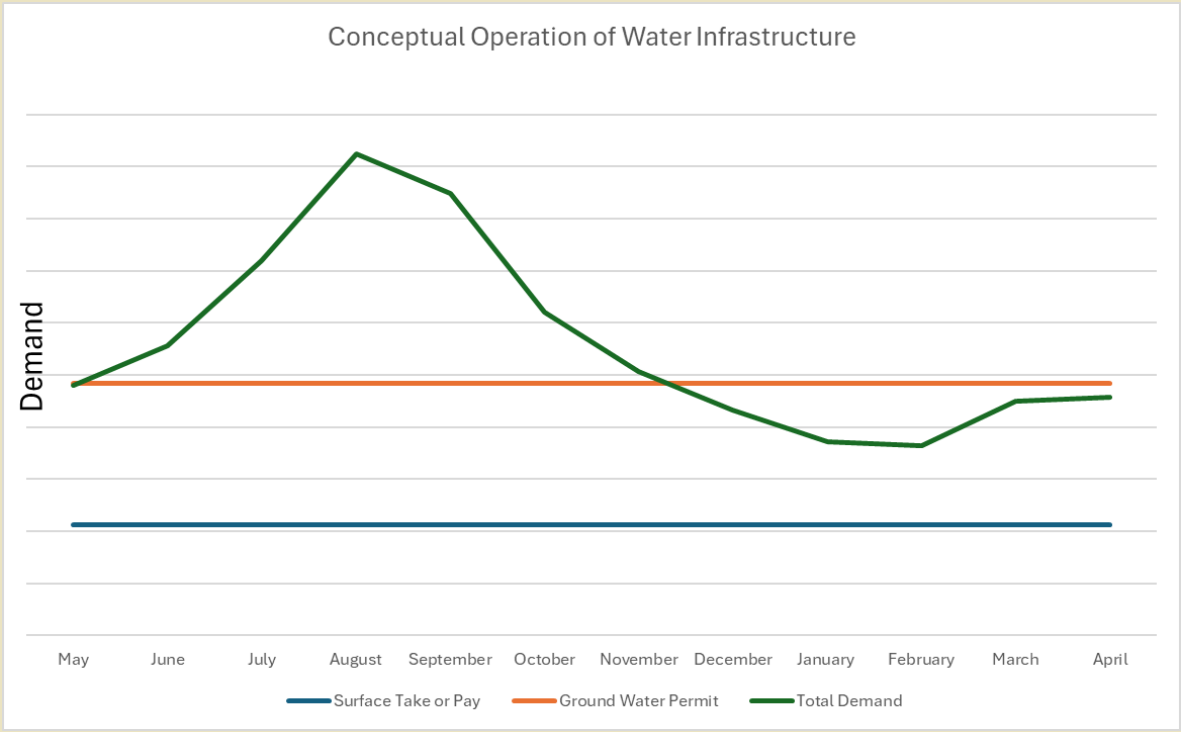
WILLDAN

QUESTIONS & DISCUSSION

City of Bellaire

Water Demand and System Optimization

Pumping Data



Pumping Data