



Fort Lauderdale, FL

Water and Sewer Rate Study

Follow up Discussion

May 21, 2019

*Mike Burton
Kyle Stevens*

Background

- Water and sewer systems are combined within a single enterprise fund and supported by user rates
- The City applies an annual 5.00% indexing adjustment to its water and sewer rates
- Stantec has reviewed the financial sustainability of the combined system annually since 2013 and supported the 2018 bond issuance
- Current rate structure and impact fees have not been updated in over ten years

Rate Study Overview

Key Elements

- 1 Revenue Sufficiency
- 2 Cost of Service
- 3 User Rates
- 4 Impact Fees

Basic Parameters

- 10 year financial forecasting model
 - Updated annually as part of the budget process
- Reflects the most current data and assumptions:
 - FY 2019 budget (Revenues & Expenses)
 - 5-Year capital spending per public works
 - Billing data and account growth forecast
 - Forecasted debt issuance every 5 years (FY 2023)
 - ROI Phase out over a 4 year period (FY 2021)
- Analysis will be updated as part of FY 2020 budget

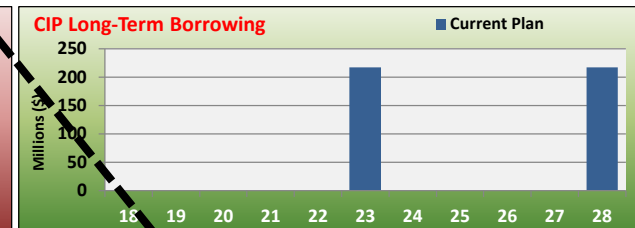
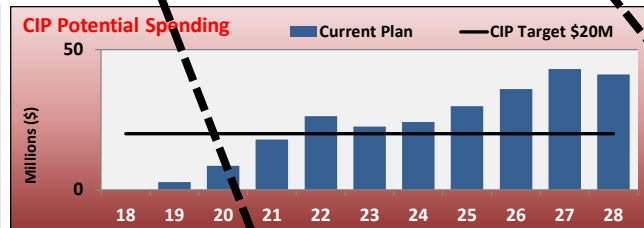
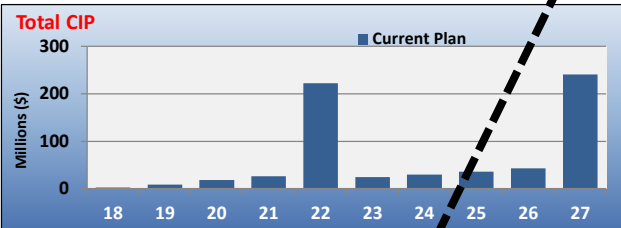
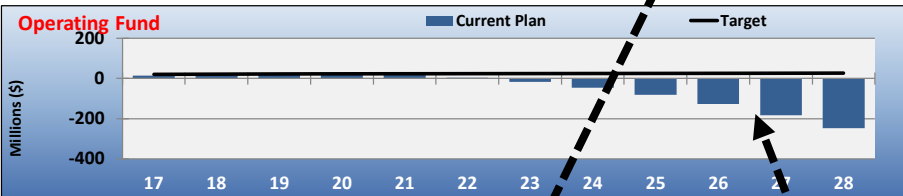
Key Cost Drivers/Changes

- Large increase in Central Region R/R (capital)
- Increase in debt of \$200M in FY 23 and FY 28
- Significant unplanned force main failure
- Establish annual cash funded capital of \$20M+

FY 2019 Financial Forecast (No Rate Adjustment, Includes ROI Phase Out)

FINANCIAL ANALYSIS AND MANAGEMENT SYSTEM (FAMS) SUMMARY

SAVE	CALC	ROLL		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Cumulative Change	
			Override ▶	5.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	FY 2023	FY 2028
			Water Rate Increases	5.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.00%	4.96%
			Override ▶	5.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	PS FY20 ▶	98.0%
			Sewer Rate Increases	5.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	OMF FY20 ▶	100.0%
			Rate Covenant	2.14	1.97	1.86	1.80	1.72	1.26	1.09	1.02	0.95	0.89	0.65		



0.00% Rate increase

AM

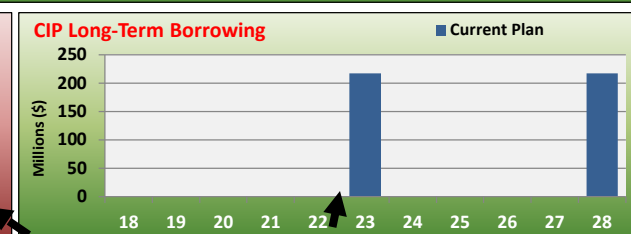
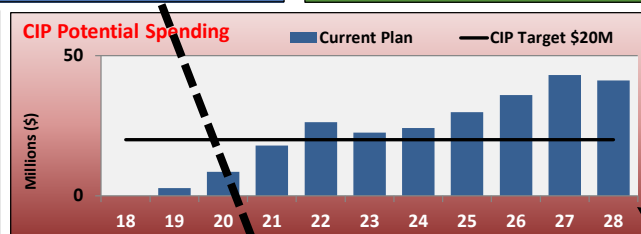
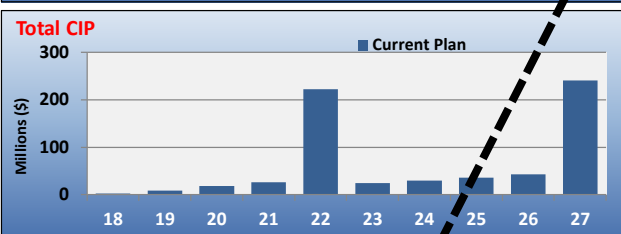
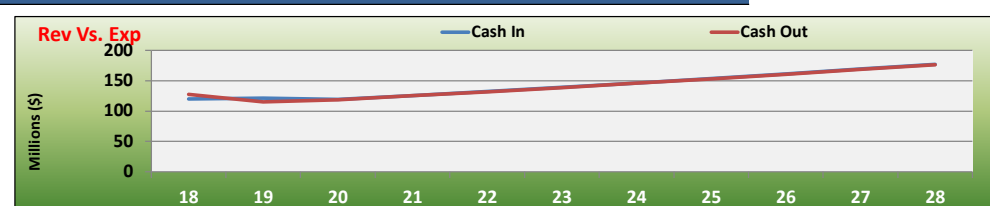
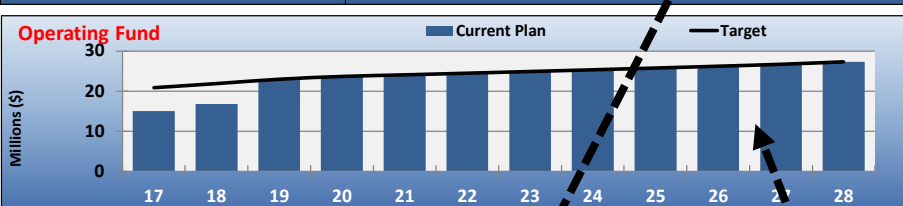
Minimum Reserves
Depleted

Coverage Impaired

FY 2019 Financial Forecast (Recommended Plan Includes ROI Phase Out)

FINANCIAL ANALYSIS AND MANAGEMENT SYSTEM (FAMS) SUMMARY

SAVE	CALC	ROLL		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Cumulative Change	
			Override	5.00%	5.00%	0.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	FY 2023	FY 2028
			Water Rate Increases	5.00%	5.00%	0.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	21.66%	55.19%
			Override	5.00%	5.00%	0.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	PS FY20	98.0%
			Sewer Rate Increases	5.00%	5.00%	0.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	OMF FY20	100.0%
			Rate Covenant	2.14	1.97	1.86	2.02	2.19	1.80	1.77	1.90	2.04	2.24	1.95		



5.00% Rate increase
needed FY 21
Forward

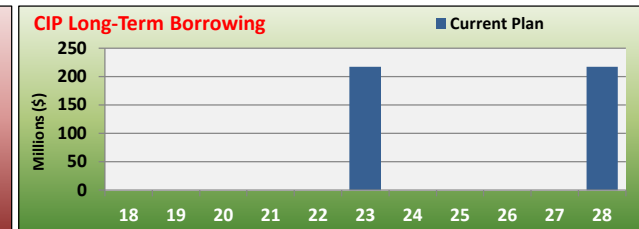
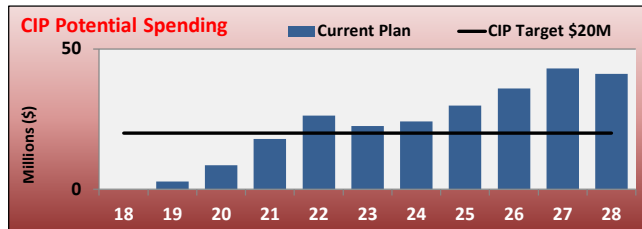
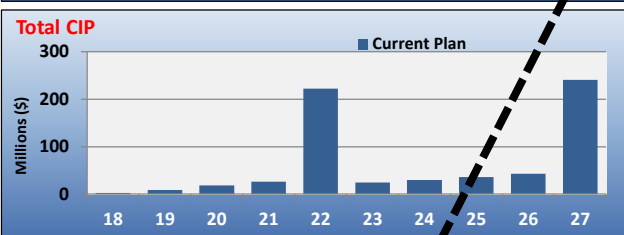
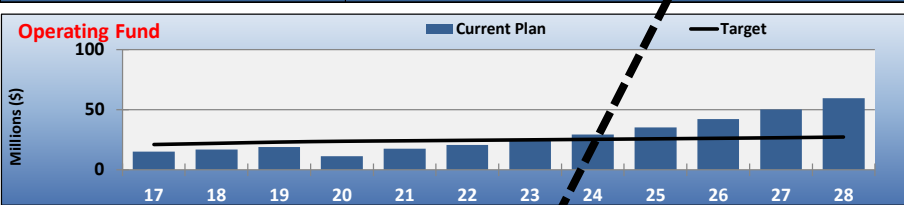
Minimum Reserves
Maintained

Full Funding Cash
CIP and New Debt

FY 2019 Financial Forecast (No ROI Phase Out)

FINANCIAL ANALYSIS AND MANAGEMENT SYSTEM (FAMS) SUMMARY

SAVE	CALC	ROLL		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Cumulative Change	
			Override ▶	5.00%	5.00%	0.00%	19.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	FY 2023	FY 2028
			Water Rate Increases	5.00%	5.00%	0.00%	19.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	37.73%	75.92%
			Override ▶	5.00%	5.00%	0.00%	19.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	PS FY20 ▶	98.0%
			Sewer Rate Increases	5.00%	5.00%	0.00%	19.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	OMF FY20 ▶	100.0%
			Rate Covenant	2.14	1.97	1.86	2.63	2.83	2.31	2.26	2.41	2.58	2.82	2.45		



19.00%
Rate Increase
FY 2021

ROI phase out has resulted in no
increase in FY 2020 and a 14%
lower rate increase in FY 2021

Rate Study Overview

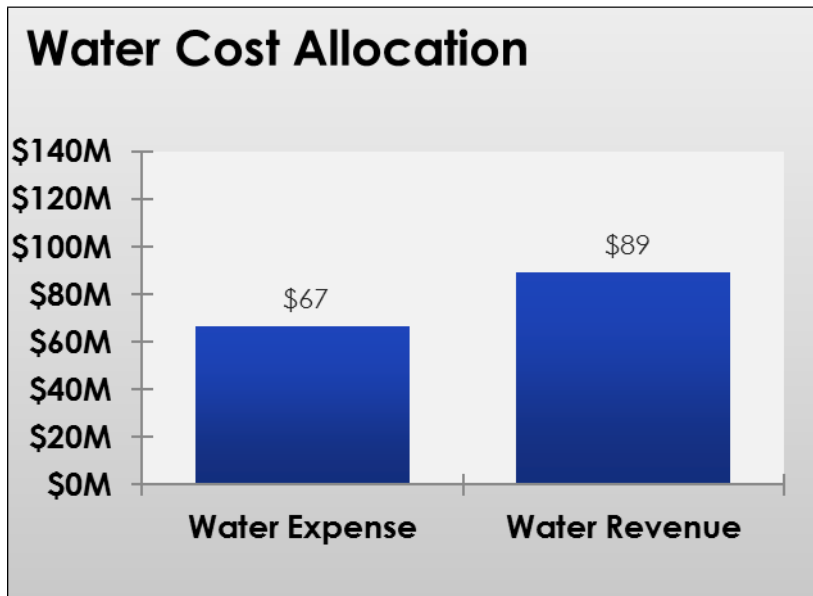
Key Elements

- 1 Revenue Sufficiency
- 2 Cost of Service
- 3 User Rates
- 4 Impact Fees

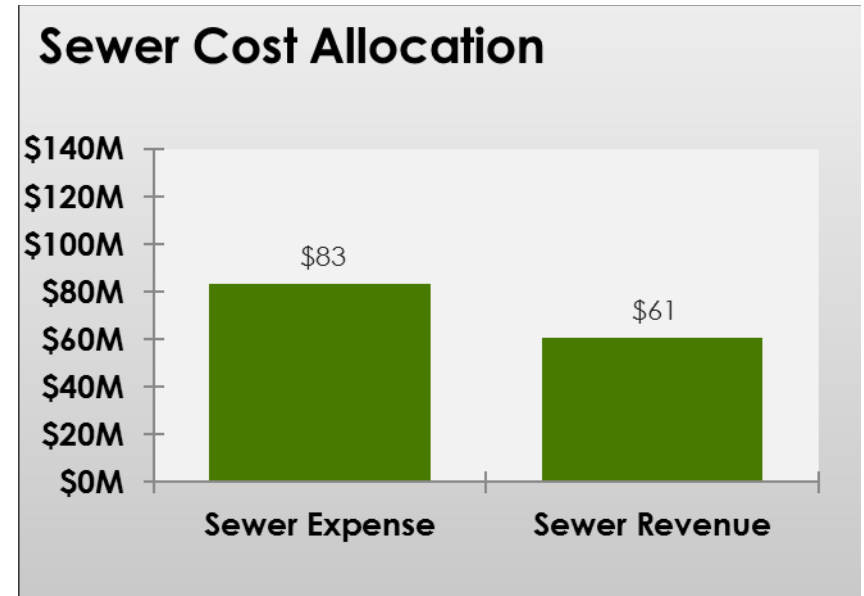
Base Parameters

- Based on the FY 2019 budget for water and sewer fund, intended to be “Revenue Neutral”
- Primary analysis sought to identify the unique cost of providing water and sewer services separately
- Analysis used relevant data, staff knowledge and expense type to allocate every line item in the utility budget (1,300 unique items)
- The City’s last similar analysis was 10+ years ago

FY 2019 Cost of Service Results



Revenues \$22M Over Cost



Revenues \$22M Under Cost



Key Driver: Recent sewer system investment and organizational attention

Key Note: Analysis is a snapshot in time and allocations could change

Recommendations

- Industry practice and future cost requirements would suggest a phased approach is most appropriate
- Modify annual rate indexing based on cost of service results

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Effective Date	10/1/19	10/1/20	10/1/21	10/1/22	10/1/23
Water Rate Adjustment	0.0%	3.6%	3.6%	3.6%	3.6%
Wastewater Rate Adjustment	0.0%	7.0%	7.0%	7.0%	7.0%
Overall Revenue Adjustment	0.0%	5.0%	5.0%	5.0%	5.0%

- Update cost of service analysis periodically (every 3-5 years) and adjust indexing plan as appropriate

Rate Study Overview

Key Elements

- 1 Revenue Sufficiency
- 2 Cost of Service
- 3 User Rates
- 4 Impact Fees

Base Parameters

General description of the City's rate structure:

Fixed Monthly Charge- Is dependent on meter size. Provides revenue stability to the utility by capturing a portion of customer related and “readiness to serve” costs.

Volumetric Charges- Charges are dependent on the level of metered water use by customer class. Recover remaining costs.

Objectives to consider in evaluating potential modifications for FY 2020:

- Recommendations will enhance rate payer equity
- Comport with cost of service findings
- Align with industry best practices

Water Fixed Charge Update

Single-Family & Commercial

Multi-Family

Wholesale

Per Bill

\$2.29

\$2.29

\$2.29

Per Unit

A



\$2.46

B



Meter Size

5/8"

\$4.48

\$36.52

3/4"

\$6.71

\$54.78

1"

\$11.19

\$ 91.30

1.5"

\$22.38

\$182.60

2"

\$35.80

\$292.17

3"

\$78.32

\$639.12

4"

\$134.27

\$1,095.63

6"

\$302.19

\$2,465.16

8"

\$358.05

\$2,921.67

10"

\$939.88

\$7,669.38

12"

\$1,186.03

\$9,678.03

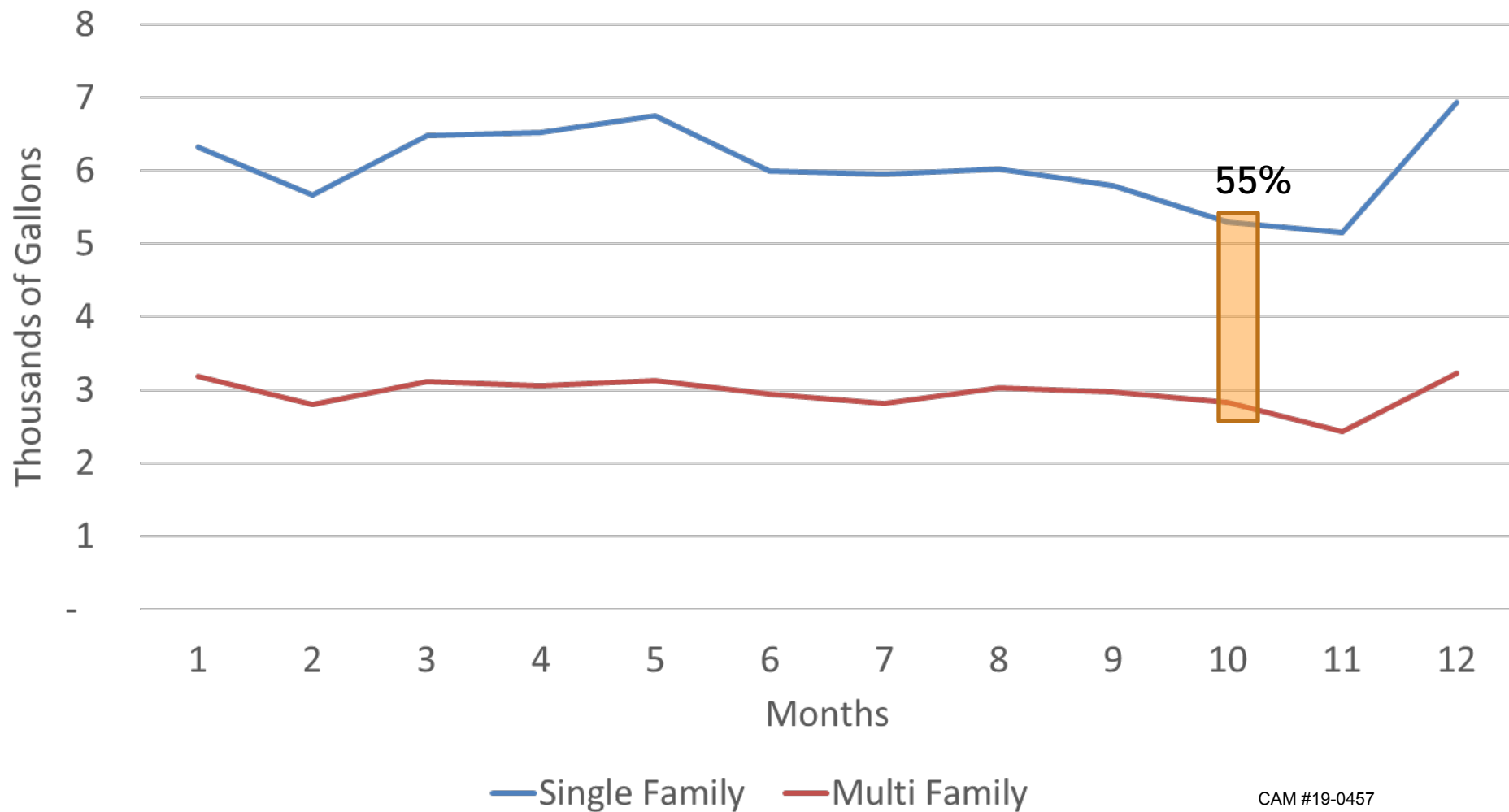
16"

\$1,365.06



\$11,138.99

Multifamily Usage Trends

Monthly Usage



Water Fixed Charges

	Residential		Commercial	Multifamily
	Current	Proposed	Proposed	Proposed
Per Unit		A		\$ 2.46
Per Bill		\$ 2.29	\$ 2.29	\$ 2.29
5/8	7.56	\$ 4.48	\$ 4.48	 B
3/4	10.48	\$ 6.71	\$ 6.71	
1	16.36	\$ 11.19	\$ 11.19	
1 1/2	31.08	\$ 22.38	\$ 22.38	
2	48.72	\$ 35.80	\$ 35.80	
3	89.89	\$ 78.32	\$ 78.32	
4	148.73	\$ 134.27	\$ 134.27	
6	295.79	\$ 302.10	\$ 302.10	
8	472.25	\$ 358.05	\$ 358.05	
10	678.11	\$ 939.88	\$ 939.88	
12	1,266.13	\$ 1,186.03	\$ 1,186.03	
16	2,060.42	\$ 1,365.06	\$ 1,365.06	

	Wholesale	
	Current	Proposed
Per Bill		\$ 2.29
5/8	\$ 26.41	\$ 36.52
3/4	\$ 35.21	\$ 54.78
1	\$ 56.39	\$ 91.30
1 1/2	\$ 109.92	\$ 182.60
2	\$ 174.02	\$ 292.17
3	\$ 322.83	\$ 639.12
4	\$ 536.37	\$ 1,095.63
6	\$1,069.87	\$ 2,465.16
8	\$1,709.25	\$ 2,921.67
10	\$3,070.38	\$ 7,669.38
12	\$4,936.80	\$ 9,678.03
16	\$8,343.14	\$11,138.87

Sewer Fixed Charge Update

Single-Family & Commercial

Multi-Family

Per Bill

\$2.37

\$2.37

Per Unit

A



\$4.93

Meter Size

5/8"

\$8.96



B

3/4"

\$13.44

1"

\$22.41

1.5"

\$44.81

2"

\$71.70

3"

\$156.85

4"

\$268.88

6"

\$604.98

8"

\$717.01

10"

\$1,882.15



12"

\$2,375.10

16"

\$2,735.99

Sewer Fixed Charges

	Residential		Commercial	Multifamily
	Current	Proposed	Proposed	Proposed
Per Unit			A 	\$ 4.93
Per Bill		\$ 2.37	\$ 2.37	\$ 2.37
5/8	\$ 11.09	\$ 8.96	\$ 8.96	 B
3/4	\$ 15.81	\$ 13.44	\$ 13.44	
1	\$ 25.26	\$ 22.41	\$ 22.41	
1 1/2	\$ 48.81	\$ 44.81	\$ 44.81	
2	\$ 77.13	\$ 71.70	\$ 71.70	
3	\$ 143.15	\$ 156.85	\$ 156.85	
4	\$ 237.50	\$ 268.88	\$ 268.88	
6	\$ 473.29	\$ 604.98	\$ 604.98	
8	\$ 756.28	\$ 717.01	\$ 717.01	
10	\$1,086.41	\$ 1,882.15	\$ 1,882.15	
12	\$2,029.68	\$ 2,375.10	\$ 2,375.10	
16	\$3,303.08	\$ 2,735.99	\$ 2,735.99	

Current Volumetric Charges

Water:

WATER COMMODITY - MONTHLY USAGE CHARGES

		CONSUMPTION	RATE
SINGLE FAMILY (1,000 gallons per month)	BLOCK 1	0 - 3,000	\$2.32
	BLOCK 2	4,000 - 8,000	\$5.12
	BLOCK 3	9,000 - 12,000	\$6.41
	BLOCK 4	13,000 - 20,000	\$8.64
	BLOCK 5	> 20,000	\$12.54

MULTIFAMILY RESIDENTIAL (1,000 gallons per month X number of dwelling units)	BLOCK 1	0 - 1,000	\$2.32
	BLOCK 2	2,000 - 3,000	\$5.12
	BLOCK 3	4,000 - 5,000	\$6.41
	BLOCK 4	6,000 - 8,000	\$8.64
	BLOCK 5	> 8,000	\$12.54

COMMERCIAL	> 1,000	\$5.29
MASTER METER (for each 1,000 gallons or fraction thereof)	> 1,000	\$4.82

Sewer:

SEWER (WASTEWATER) COMMODITY - MONTHLY USAGE CHARGES

		CONSUMPTION	RATE
SINGLE & MULTIFAMILY RESIDENTIAL (UNITS THAT HAVE SEPARATE METERS)	BLOCK 1	0 - 3,000	\$4.10
	BLOCK 2	4,000 - 20,000	\$9.06
	BLOCK 3	> 20,000	N/A

Single family residences will not be charged a commodity charge for usage in excess of twenty-thousand (20,000) gallons per month per unit.

MULTIFAMILY RESIDENTIAL (multifamily units that are not separately metered - 1,000 gallons per month X number of units)	BLOCK 1	0 - 1,000	\$4.10
	BLOCK 2	2,000 - 8,000	\$9.06
	BLOCK 3	> 8,000	N/A

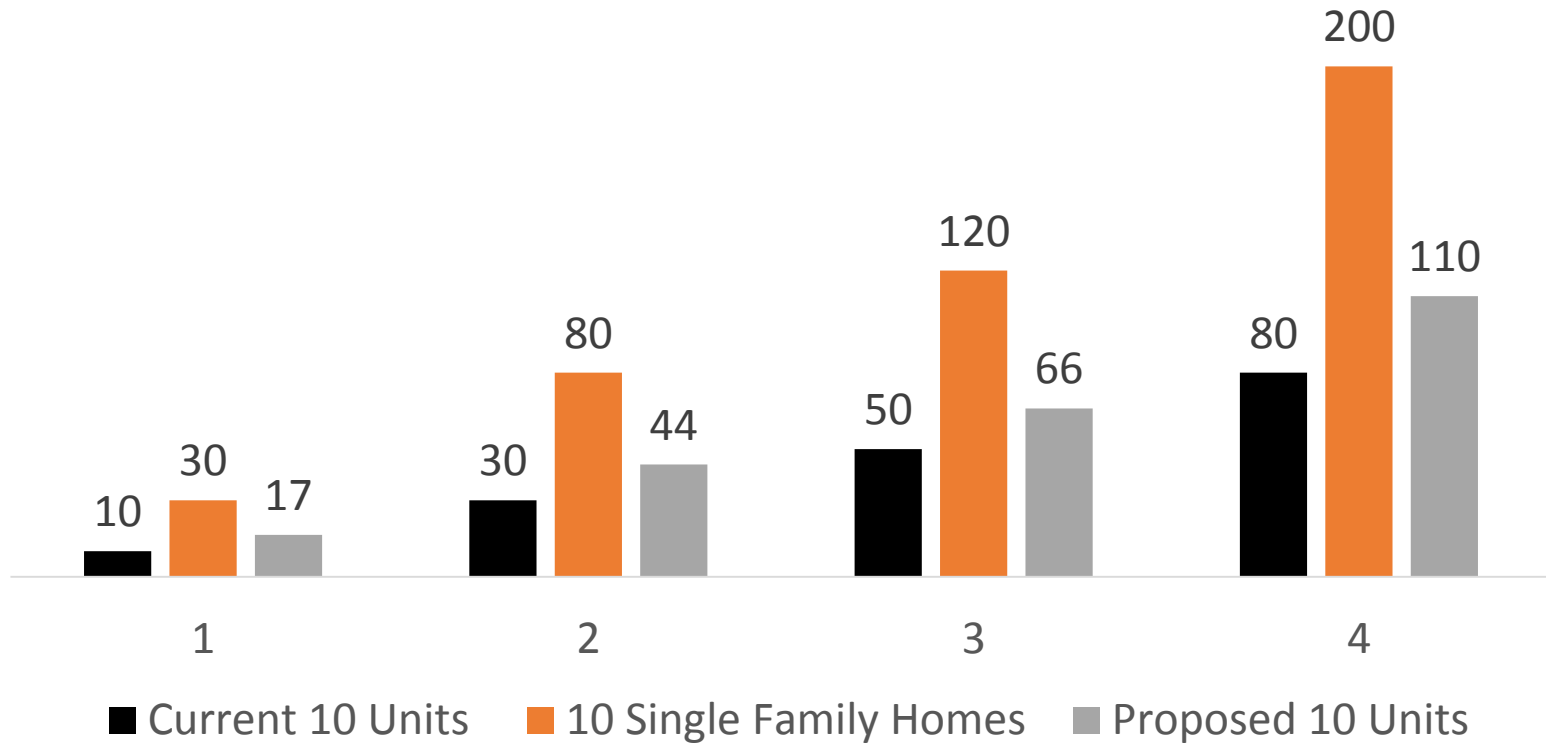
Multifamily residences will not be charged a commodity charge for usage in excess of eight-thousand (8,000) gallons per month per unit.

COMMERCIAL	> 1,000	\$7.28
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Volume Rate Modifications

- Removal of the sewer billing cap, currently 20,000 gallons monthly for single family homes and 8,000 gallons per unit for multifamily units
- Update of the wholesale rate using cost allocation principles to ensure the appropriate level of cost recovery
- Application of a 25% outside city surcharge to wholesale customers
- Resizing of Multi-family Tiers to ensure the equity of tier ranges

Multi-family Tier Sizing



Updated Volume Rates

Water Volume Pricing

	Residential	Commercial	Multifamily	Wholesale
All	\$	5.59	\$	2.78
Tier 1	\$	2.45	\$	2.45
Tier 2	\$	5.41	\$	5.41
Tier 3	\$	6.77	\$	6.77
Tier 4	\$	9.13	\$	9.13
Tier 5	\$	13.25	\$	13.25

Tier Break Points *

	Residential	Commercial	Multifamily	Wholesale
Tier 1	3,000	All Use	3,000	All Use
Tier 2	8,000		8,000	
Tier 3	12,000		12,000	
Tier 4	20,000		20,000	
Tier 5	> 20,000		> 20,000	

*Multiplied Against effective ERUs

Wastewater Volume Pricing

	Residential	Commercial	Multifamily
All	\$	7.39	
Tier 1	\$	4.16	\$ 4.16
Tier 2	\$	9.19	\$ 9.19

Tier Break Points*

	Residential	Commercial	Multifamily
Tier 1	3,000	All Use	3,000
Tier 2	>3,000		>3,000

*Multiplied Against effective ERUs

Residential Water & Sewer 5/8" Meter Customer Impacts

K Gallons	Cumulative Bills	Current Total	Proposed Total	Change \$	Change %
0	7%	\$ 18.65	\$ 18.10	\$ (0.55)	-2.95%
1	15%	\$ 25.07	\$ 24.71	\$ (0.36)	-1.44%
2	27%	\$ 31.49	\$ 31.32	\$ (0.17)	-0.54%
3	41%	\$ 37.91	\$ 37.93	\$ 0.02	0.05%
4	54%	\$ 52.09	\$ 52.53	\$ 0.44	0.84%
5	64%	\$ 66.27	\$ 67.13	\$ 0.86	1.30%
6	72%	\$ 80.45	\$ 81.73	\$ 1.28	1.59%
7	77%	\$ 94.63	\$ 96.33	\$ 1.70	1.80%
8	82%	\$ 108.81	\$ 110.93	\$ 2.12	1.95%
9	85%	\$ 124.28	\$ 126.89	\$ 2.61	2.10%
10	87%	\$ 139.75	\$ 142.85	\$ 3.10	2.22%
15	94%	\$ 223.79	\$ 229.73	\$ 5.94	2.65%
20	96%	\$ 312.29	\$ 321.33	\$ 9.04	2.89%
25	98%	\$ 374.99	\$ 433.53	\$ 58.54	15.61%
30	99%	\$ 437.69	\$ 545.73	\$ 108.04	24.68%

Water and Sewer Rate Survey 5/8" User @ 5,000 Gallons

Combined Water & Sewer Bill Survey at 5,000 Gallons per Month

Davie	\$113.77
Wilton Manors	\$99.73
Oakland Park	\$99.39
Dania Beach	\$93.82
Parkland	\$92.68
Sunrise	\$91.80
Hollywood	\$81.20
North Lauderdale	\$79.55
Coconut Creek	\$74.14
Miramar	\$72.58
Cooper City	\$70.84
Pembroke Pines	\$69.58
Broward County	\$67.58
Fort Lauderdale (Proposed)	\$67.13
North Springs Improvement District	\$66.37
Coral Springs	\$66.29
Fort Lauderdale	\$66.27
Hallandale Beach	\$65.80
Tamarac	\$64.55
Margate	\$61.96
Royal Utility	\$58.68
Lauderhill	\$58.68
Deerfield Beach	\$52.78
Pompano Beach	\$52.72
Plantation	\$50.35
Coral Springs Improvement District	\$50.02

21,476 Meters

Select Commercial Customer Impacts

User Rates

5/8" Meter					
K Gallons	Current Total	Proposed Total	Change \$	Change %	
0	\$ 18.65	\$ 18.10	\$ (0.55)	-2.95%	
5	\$ 81.50	\$ 83.00	\$ 1.50	1.84%	
10	\$ 144.35	\$ 147.90	\$ 3.55	2.46%	
20	\$ 270.05	\$ 277.70	\$ 7.65	2.83%	
30	\$ 395.75	\$ 407.50	\$ 11.75	2.97%	

1,879 Meters

1" Meter					
K Gallons	Current Total	Proposed Total	Change \$	Change %	
0	\$ 41.62	\$ 38.26	\$ (3.36)	-8.07%	
5	\$ 104.47	\$ 103.16	\$ (1.31)	-1.25%	
10	\$ 167.32	\$ 168.06	\$ 0.74	0.44%	
20	\$ 293.02	\$ 297.86	\$ 4.84	1.65%	
30	\$ 418.72	\$ 427.66	\$ 8.94	2.14%	
50	\$ 670.12	\$ 687.26	\$ 17.14	2.56%	

1,444 Meters

Select Multi-Family Customer Impacts

User Rates

Option A

Meter Size	Units	Monthly Water (Gal)	Monthly Sewer (Gal)	Total Existing	Total Proposed	\$ Chg.	% Chg.	
1"	20	50,000	50,000	\$595.42	\$618.79	\$23.37	3.9%	
2"	100	300,000	300,000	\$3,603.85	\$3,805.31	\$201.46	5.6%	
2"	10	20,000	20,000	\$331.85	\$238.73	-\$93.13	-28.1%	
4"	280	3,000,000	3,000,000	\$50,071.83	\$47,305.68	-\$2,766.15	-5.5%	
4"	400	1,100,000	1,100,000	\$11,462.23	\$12,287.26	\$825.03	7.2%	
6"	370	1,300,000	1,100,000	\$13,858.98	\$14,084.07	\$225.08	1.6%	
6"	30	200,000	200,000	\$3,625.68	\$2,848.06	-\$777.63	-21.4%	
8"	33	275,000	275,000	\$5,387.19	\$4,139.99	-\$1,247.20	-23.2%	
8"	408	2,700,000	2,700,000	\$39,724.29	\$38,308.43	-\$1,415.86	-3.6%	

Option B

Meter Size	Units	Monthly Water (Gal)	Monthly Sewer (Gal)	Total Existing	Total Proposed	\$ Chg.	% Chg.	
1"	20	50,000	50,000	\$595.42	\$503.12	-\$92.30	-15.5%	
2"	100	300,000	300,000	\$3,603.85	\$3,169.15	-\$434.70	-12.1%	
2"	10	20,000	20,000	\$331.85	\$267.67	-\$64.19	-19.3%	
4"	280	3,000,000	3,000,000	\$50,071.83	\$45,622.12	-\$4,449.71	-8.9%	
4"	400	1,100,000	1,100,000	\$11,462.23	\$9,716.90	-\$1,745.33	-15.2%	
6"	370	1,300,000	1,100,000	\$13,858.98	\$12,217.46	-\$1,641.53	-11.8%	
6"	30	200,000	200,000	\$3,625.68	\$3,494.05	-\$131.64	-3.6%	
8"	33	275,000	275,000	\$5,387.19	\$4,924.48	-\$462.71	-8.6%	
8"	408	2,700,000	2,700,000	\$39,724.29	\$36,321.67	-\$3,402.62	-8.6%	

Select Wholesale Customer Impacts

User Rates

Account	Usage (Kgal)	Current Total	Proposed Total	\$ Change	% Change
Account 1	30,504	\$ 159,867.72	\$ 142,631.83	\$ (17,235.89)	-10.8%
Account 2	105,646	\$ 550,235.72	\$ 453,518.07	\$ (96,717.65)	-17.6%
Account 3	745	\$ 24,101.90	\$ 46,438.96	\$ 22,337.06	92.7%
Account 4	845	\$ 24,583.90	\$ 46,785.21	\$ 22,201.31	90.3%
Account 5	244,700	\$1,279,571.68	\$1,014,391.09	\$(265,180.59)	-20.7%
Account 6	73,927	\$ 369,166.58	\$ 292,983.97	\$ (76,182.61)	-20.6%

45 Meters

Presentation Overview

Today's Topics

- 1 Revenue Sufficiency
- 2 Cost of Service
- 3 User Rates
- 4 Impact Fees

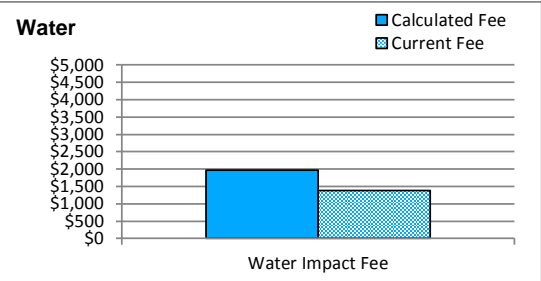
Impact Fee Update

- Impact fees last updated 10+ years ago
- Analysis calculated the cost of capacity of the current water and sewer systems.
- Reviewed and updated the level of service provided to each ERU.
- The resulting fee represents the current cost to buy into the system for an ERU.

Impact Fee Update

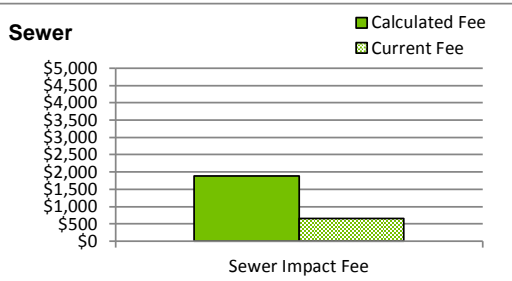
Water Impact Fee

Total Plant In Service	\$ 533,891,454
Expansion Capital Costs	\$ -
Total Costs Buy-In Method	\$ 533,891,454
Cost per ERU	\$ 3,048
Debt Service Credit	\$ (1,129)
Cost Recovery Percentage	100.0%
Total Calculated Fee:	\$ 1,977
Credit % (Incremental or Combined)	37.0%
Current Fee:	\$ 1,386
Dollar Change:	\$ 591
Percentage Change:	43%



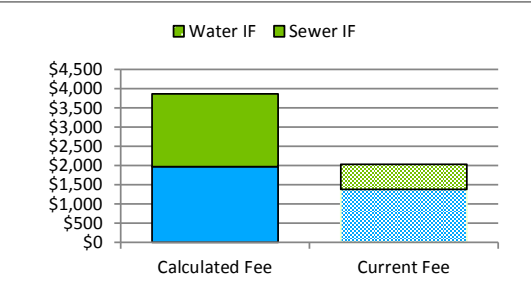
Sewer Impact Fee

Total Plant In Service	\$ 939,034,371
Expansion Capital Costs	\$ -
Total Costs Buy-In Method	\$ 939,034,371
Cost per ERU	\$ 2,904
Debt Service Credit	\$ (1,071)
Cost Recovery Percentage	100.0%
Total Calculated Fee:	\$ 1,888
Credit % (Incremental or Combined)	36.9%
Current Fee:	\$ 651
Dollar Change:	\$ 1,237
Percentage Change:	190%



Total Impact Fee

Current	
Water IF	\$ 1,386
Sewer IF	\$ 651
Total SDFs	\$ 2,037
Calculated	
Water IF	\$ 1,977
Sewer IF	\$ 1,888
Total Calculated SDFs	\$ 3,860
Dollar Change	\$ 1,823
Percent Change	89.5%



Impact Fee Recommendations

- The City should consider updating the impact fees charged to fully recovery the current cost of capacity for new connections.
- The City should consider assessing impact fee to new connections on the wholesale systems.

Questions/Discussions

