



# City of Cape Coral

**Solid Waste Collection Service  
In-House Cost Estimating**

August 23, 2023

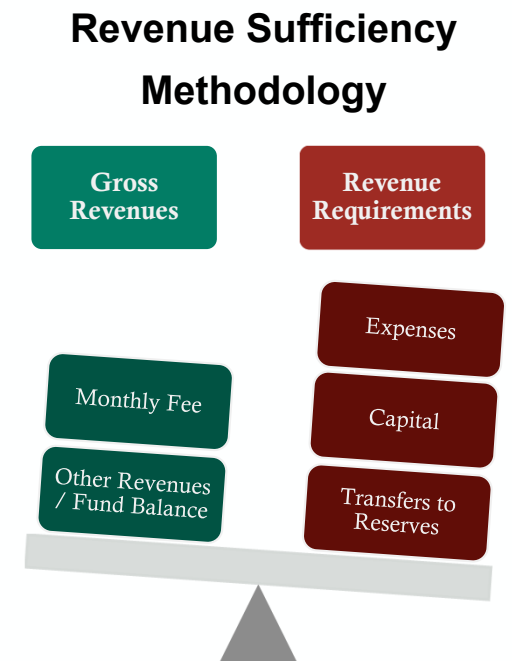


# Agenda

- 1. Background**
- 2. Key Assumptions**
- 3. Findings & Conclusions**

# Background - Collection Service Evaluation

- **Tasked in 2022 to evaluate potential cost-of-service to provide collection service in-house**
  - › Included Routing Requirements Study
  - › Developed Ten (10) Year Financial Model
- **Requested to update analysis in 2023 with revised assumptions and updated costs**
  - › Revised Level of Service
  - › Updated Inflation
  - › Extended model to 20 Years



# Background - Collection Service Evaluation

- **Key Costs Examined:**
  - › **Facilities**
  - › **Labor**
  - › **Equipment and Vehicles**
  - › **Operating Supplies**
  - › **Maintenance**
  - › **Contingency**



# Key Assumptions: Statistical Data

- The City has experienced significant growth in recent years, the evaluation assumed a continuation in recent growth trends
- Tonnages were estimated based on County reported and Hauler reported data

<b>Description</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>
Customer Growth Rate		5.0%	5.0%	4.0%	3.0%	2.0%	1.0%	1.0%	1.0%	1.0%
Residential Accounts	84,035	88,237	92,649	96,355	99,245	101,230	102,242	103,265	104,297	105,340

<b>Description</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>
Customer Growth Rate		3.00%	3.00%	3.00%	3.00%	2.00%	1.00%	1.00%	1.00%	1.00%
Commercial Accounts	2,448	2,521	2,597	2,675	2,755	2,810	2,838	2,867	2,896	2,924



# Key Assumptions: Level of Service Comparison

Description	Est. FY24		Bill Impact & LOS Change
	Residential Contract	In-house FY24	
<b>Monthly Residential Fee</b>	\$13.58 <sup>(1)</sup>	\$30.00	\$16.42
<b>Collection Days</b>	5	5	0
<b>Hours per Day per Employee</b>	10	8	(2)
<b>Routes</b>			
<b>MSW</b>	16	22	6
<b>Recycling</b>	14	19	5
<b>Horticulture</b>	15	21	6
<b>Bulk</b>	6	8	2
<i>(1) Estimated FY24 Contract is assumed to be the from FY23 escalated by 3%</i>			

# Key Assumptions: Facilities

- Capital allowances were assumed to acquire and construct the necessary facilities needed for operations
  - Vehicle Operations & Maintenance Facility - \$10 million in the Residential Forecast
  - Storage & Maintenance Facility - \$2.8 million in commercial forecast
- Facility costs were assumed to be debt financed
  - Term – 30 years
  - Interest Rate – 4.5%

# Key Assumptions: Labor

- Labor costs provided by City Staff as of FY23
  - › Includes salary and benefits
  - › No Overtime Assumed
  - › Indirect Staff
    - Director (1), Manager (1)
    - Residential: Supervisor (4), Fleet Mechanics (6), Customer Service Representatives (6)
    - Commercial: Supervisor (1), Fleet Mechanic (1), Customer Service Representatives (3), Fabricator (1), Welder (1)
  - › Direct Staff (Res 99 / Com 18)
    - Drivers (Res 70 / Com 14)
    - Loaders (Res 29 / Com 4)

## Estimated Residential Labor Costs

Calculated Expense	2024	2025	2026	2027	2028	2029	2030	2031
<b>Indirect</b>	\$1.61M	\$1.69M	\$1.76M	\$1.84M	\$1.93M	\$2.01M	\$2.10M	\$2.20M
<b>Direct</b>	\$8.97M	\$9.76M	\$10.58M	\$11.25M	\$11.78M	\$12.54M	\$13.12M	\$13.93M
<b>Total Costs</b>	\$10.6M	\$11.5M	\$12.3M	\$13.1M	\$13.7M	\$14.5M	\$15.2M	\$16.1M
<b>Indirect Staff</b>	18	18	18	18	18	18	18	18
<b>Direct Staff</b>	99	103	107	109	109	111	111	113
<b>Total Staff</b>	117	121	125	127	127	129	129	131

## Estimated Commercial Labor Costs

Calculated Expense	2024	2025	2026	2027	2028	2029	2030	2031
<b>Indirect</b>	\$0.20M	\$0.20M	\$0.21M	\$0.22M	\$0.23M	\$0.24M	\$0.25M	\$0.27M
<b>Direct</b>	\$1.50M	\$1.63M	\$1.71M	\$1.79M	\$2.03M	\$2.12M	\$2.22M	\$2.33M
<b>Total Costs</b>	\$1.69M	\$1.83M	\$1.92M	\$2.01M	\$2.26M	\$2.37M	\$2.48M	\$2.59M
<b>Indirect Staff</b>	7	7	7	7	7	7	7	7
<b>Direct Staff</b>	18	19	19	19	20	20	20	20
<b>Total Staff</b>	25	26	26	26	27	27	27	27



# Key Assumptions: Vehicles & Fuel

- Vehicles were based on FY 22 cost estimates
  - › Automatic Side-Loaders, Front-end Loaders, Rear-end Loaders, Roll-Offs
  - › Service Life – 8 years
  - › Truck reserve allowance - 40%
- Assumed debt financing for vehicles
  - › Term – 5 years
  - › Interest Rate – 3.5%
- Fuel: Costs were estimated based on total mileage
  - › Assumed price per gallon for diesel fuel - \$4.64
    - Escalated annually 4% per year

## *Residential Vehicles*

Vehicle Type	Service Type	FY22 \$Cost	2024
Automatic Side Loader	MSW	\$375k	22
Automatic Side Loader	Recycle	\$375k	19
Claw / Boom Truck	Horticulture	\$175k	2
Rear-end Loader	Horticulture	\$230k	19
Claw / Boom Truck	Bulky	\$175k	2
Rear-end Loader	Bulky	\$230k	6
Light Vehicle/Pick-up	Overhead	\$50k	5
		\$30k	1
Cart Washer	Carts		
	Total		76

# Key Assumptions: Containers

- City currently owns containers in service but assumed full replacement for conservative planning
  - › Likely not all carts would require replacement
- Residential Containers (96 gal or 64 gal)
  - › Assumed 2 containers per household
    - 95% 96 gal and 5% 64 gal MSW
    - Service Life
      - MSW – 10 years
      - Recycling – 15 years
- Commercial Containers (2 CY – 40 CY)
  - › Service Life – 15 years

## *Replacement Container Purchase Assumptions*

Residential Container	2024
96-Gallon	176,032
64-Gallon	9,265

Commercial Container Purchases	2024
2 CY	629
4 CY	559
6 CY	295
8 CY	408
12 CY	3
18 CY	11
Compactor - 20 CY	1
Compactor - 30 CY	22
Compactor - 34 CY	4
Compactor - 35 CY	6
Stationary Compactor - 2 CY	10
Open Top - 20 CY	10
Open Top - 30 CY	2
Open Top - 40 CY	3
96-gallon Cart	1,005
64-gallon Cart	60
35-gallon Cart	1,553

# Key Assumptions: Maintenance

- Vehicle maintenance and insurance expenses were determined on cost curve linked to vehicle age
  - › Cost estimated based on prior engagement maintenance cost data
  - › Provides reasonable estimate for planned and unplanned maintenance

*Residential Maintenance Expense Costs*

Description	2024	2025	2026	2027	2028	2029	2030	2031
<b>Baseline Costs:</b>								
Automatic Side loader	\$0.46M	\$0.56M	\$0.65M	\$0.74M	\$0.82M	\$0.91M	\$1.00M	\$1.16M
Front-end Loader	\$0.17M	\$0.21M	\$0.24M	\$0.28M	\$0.32M	\$0.35M	\$0.38M	\$0.45M
Rear-end Loader	\$0.02M	\$0.02M	\$0.03M	\$0.03M	\$0.04M	\$0.04M	\$0.04M	\$0.05M
<b>Total Calculated Expense</b>	<b>\$0.65M</b>	<b>\$0.79M</b>	<b>\$0.93M</b>	<b>\$1.05M</b>	<b>\$1.17M</b>	<b>\$1.30M</b>	<b>\$1.42M</b>	<b>\$1.65M</b>
<b>Incremental Costs:</b>								
ASL Maintenance <sup>1</sup>	\$0.45M	\$0.47M	\$0.48M	\$0.49M	\$0.50M	\$0.51M	\$0.53M	\$0.54M
<b>Total Maintenance Costs</b>	<b>\$0.65M</b>	<b>\$0.79M</b>	<b>\$0.93M</b>	<b>\$1.05M</b>	<b>\$1.17M</b>	<b>\$1.30M</b>	<b>\$1.42M</b>	<b>\$1.65M</b>

<sup>1</sup> ASL maintenance assumes \$35,000 in periodic maintenance for arm replacement for 38 total vehicles. Such costs were amortized and escalated over the forecast period.

Description	Maintenance Expense Curve									
Age	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Insurance & Maintenance Expense as % of Vehicle Cost	3%	4%	4%	5%	5%	6%	6%	7%	8%	9%

# Key Assumptions: Fiscal Targets & Contingencies

- To account for uncertainty and allow flexibility reserve allowances were assumed
  - › Residential and Commercial
    - Personnel Reserve Allowance – 13% of personnel expenses
    - Indirect Overhead Allowance – 5% of operating expenses
    - Vehicle Reserve Allowance – 20% of vehicles
    - Contingency for Unknowns – 3% of total costs
- Fiscal Targets:
  - › Minimum Cash Reserve Target – 90 days
    - \$30 Residential Fee will get City to 90 days in 3 years
  - › Minimum Debt Coverage Target – 1.25

# Findings & Conclusions: Residential Forecast

## *Residential Unit Costs and Proposed Fees*

Description	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Proposed Fee</b>	n/a	\$30.00	\$30.00	\$30.00	\$30.00	\$30.00	\$30.00	\$30.00	\$30.00
<b>Annual Revenues</b>	\$0.00M	\$33.35M	\$34.69M	\$35.73M	\$36.44M	\$36.81M	\$37.18M	\$37.55M	\$37.92M
<b>Cost of Service</b>	(\$0.89M)	(\$30.48M)	(\$32.38M)	(\$34.23M)	(\$35.66M)	(\$36.89M)	(\$31.53M)	(\$32.52M)	(\$34.15M)
<b>Net to Reserves</b>	(\$0.89M)	\$2.87M	\$2.31M	\$1.50M	\$0.78M	(\$0.08M)	\$5.65M	\$5.03M	\$3.78M

## *Residential Cash Position*

Description	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Beginning Cash</b>	\$0.00M	(\$0.89M)	\$1.98M	\$4.29M	\$5.79M	\$6.57M	\$6.49M	\$12.14M	\$17.17M
<b>Ending Cash</b>	(\$0.89M)	\$1.98M	\$4.29M	\$5.79M	\$6.57M	\$6.49M	\$12.14M	\$17.17M	\$20.94M
<b>Days of Cash</b>	n/a	36	72	91	97	91	161	218	250
<b>Min Target</b>	90	90	90	90	90	90	90	90	90

Achieve Cash Reserve Targets by Year 3

# Findings & Conclusions: Commercial Forecast

- Assumes City would charge same fee as contractor and escalate at 3% a year
- Surpluses could be used to lower rates

## Commercial Net to Reserves

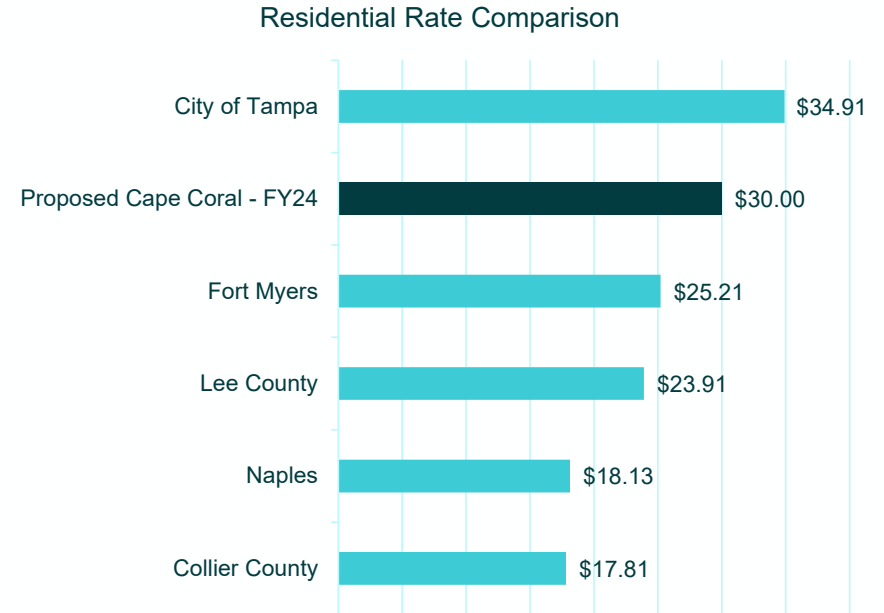
Description	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Rate Adj.</b>		3%	3%	3%	3%	3%	3%	3%	3%
<b>Annual Revenues</b>	\$0.00M	\$9.28M	\$9.84M	\$10.43M	\$10.95M	\$11.38M	\$11.82M	\$12.29M	\$12.76M
<b>Cost of Service</b>	(\$0.25M)	(\$8.64M)	(\$9.21M)	(\$9.61M)	(\$10.00M)	(\$10.72M)	(\$9.81M)	(\$10.12M)	(\$10.55M)
<b>Net to Reserves</b>	(\$0.25M)	\$0.64M	\$0.64M	\$0.82M	\$0.95M	\$0.65M	\$2.02M	\$2.16M	\$2.21M

## Commercial Cash Position

Description	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Beginning Cash</b>	\$0.00M	(\$0.25M)	\$0.39M	\$1.03M	\$1.84M	\$2.79M	\$3.45M	\$5.47M	\$7.63M
<b>Ending Cash</b>	(\$0.25M)	\$0.39M	\$1.03M	\$1.84M	\$2.79M	\$3.45M	\$5.47M	\$7.63M	\$9.84M
<b>Days of Cash</b>	n/a	40	98	167	242	270	408	544	667
<b>Min Target</b>	90	90	90	90	90	90	90	90	90

# Findings & Conclusions: Considerations

- In-housing Estimated to Result in Greater Cost
  - › Greater Level of Service Assumed
  - › Significant Start-up Capital
- More control over service
- Rates Above Average
  - › Several entities will face pressure to raise rates due to expiring collection contracts in next several years

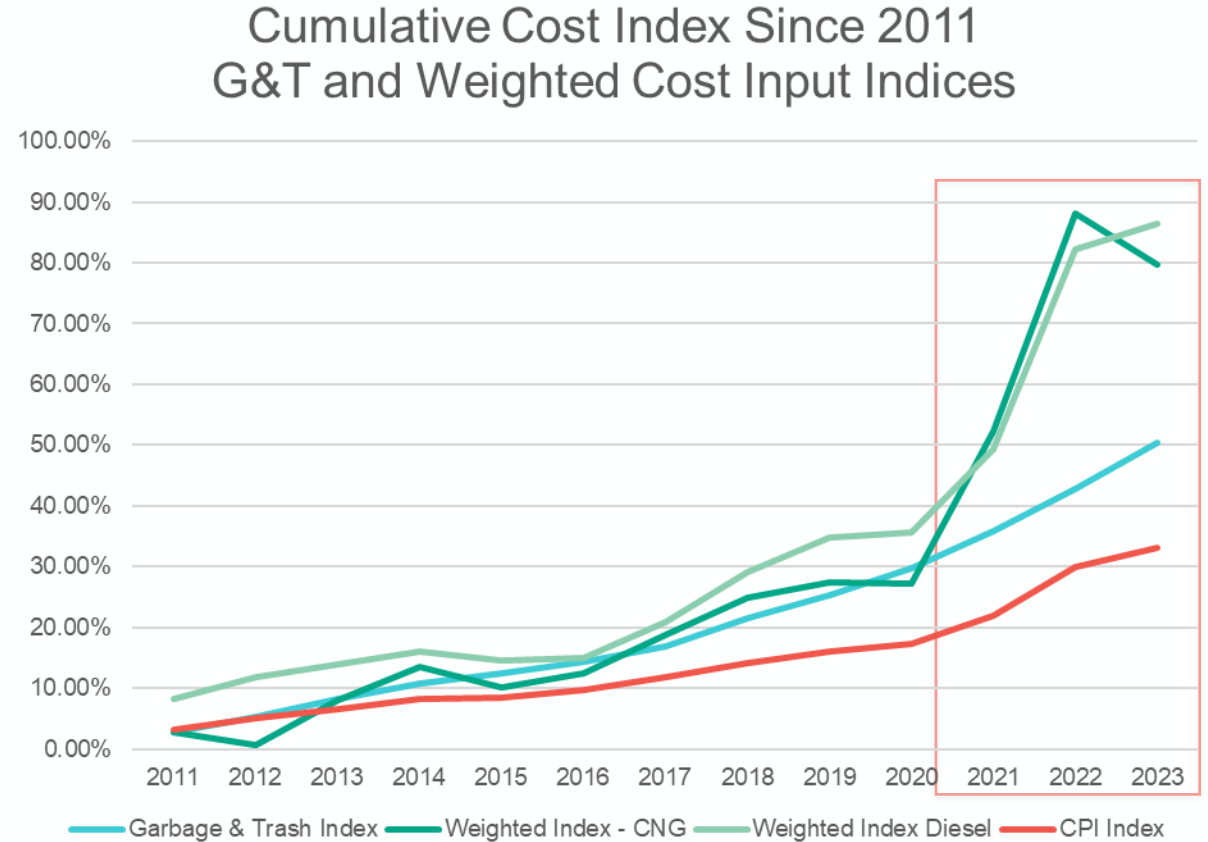




# Q&A

# Findings & Conclusions: Considerations

- Cost of service has outpaced inflation
- Market bids for service ranging between \$20-\$25 per residential unit
- The evaluation and identified fee \$30 is preliminary and subject to change based on decided level of service



	<b>Year</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>
CPI	Cape Coral	\$ 13.29	\$ 13.93	\$ 14.60	\$ 15.31	\$ 16.04	
Inflation	Market Rate	\$ 25.26	\$ 26.81	\$ 28.45	\$ 30.20	\$ 32.05	\$ 34.01
	In-house Rate	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00	\$ 30.00
	Variance to Market	\$ 4.74	\$ 3.19	\$ 1.55	\$ (0.20)	\$ (2.05)	\$ (4.01)

Market Rate 60% are 2xW service