



UPDATE REPORT

Solid Waste Rate Study

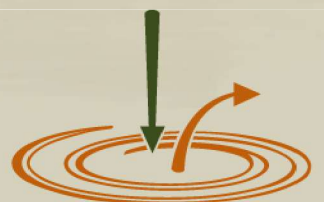
OCT 27TH
2020

PREPARED FOR

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WE WORK GREEN

- > KCI is proud to be a carbon neutral company
- > Sustainable Business Award Recipient from Earth Charter U.S.
- > National Small Business Champion for EPA WasteWise & Member
- > Recognized by the Florida Department of Environmental Protection for outstanding recycling efforts
- > KCI's Green Office Program includes:
 - o Curbside Recycling of Metal, Glass, Plastics & Paper
 - o Food Waste Composting
 - o Post-Consumer Recycled Content Paper Products
 - o Duplex Printing, Paper Reuse & Recycling
 - o Reusable & Refillable Office Supplies
 - o Low Flow Water Fixtures
 - o Energy-Efficient Lighting & Equipment
 - o Eco-Friendly Non-Toxic Cleaning Supplies
 - o Xeriscaping
- > All company vehicles are hybrid/electric
- > KCI Employees Volunteer with sustainable organizations:
 - o Solid Waste Association of North America
 - o SWANA Florida
 - o American Public Works Association
 - o U.S. Composting Council
 - o U.S. Green Building Council
 - o Florida Green Building Coalition
 - o Recycle Florida Today



WE LIVE GREEN

- > Employees actively recycle and compost at home
- > Many of our employees practice environmentally preferable landscaping methods including, Xeriscaping, Grass-Cycling and other water conservation techniques
- > Employee Conservation Efforts at Home include:
 - o Energy Star® Rated Appliances
 - o Energy Efficient Lighting
 - o Low Flow Water Fixtures
 - o Solar Panels



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Section 1

Introduction

1.1 Project Scope

In 2017, the City of Naples (City) requested Kessler Consulting, Inc. (KCI) to assist in performing a comprehensive Solid Waste Rate Study that includes a rate review and provides recommendations for solid waste rates for the next five (5) years. In 2019, the City again requested KCI to assist the City in updating the Solid Waste Rate Study that was completed in 2017. This update was to focus on maintaining the required fund balance minimum set by the preceding study and addressing cost increases in Recycling Processing service and Horticulture Collection and Disposal service. This report details the assumptions and methodology used in the rate model, findings pertaining to cost of services (COS) and revenue and expense projections (REP), and recommendations to help achieve and maintain the required minimum fund balance, thus ensuring the future stability and health of the enterprise fund.

The City requested KCI perform an additional task which was an evaluation of the shared compactor collection system and rates. A technical memorandum dated April 23, 2020 was submitted to the City, and a summary of the system and findings is included in Section 1.3.

1.2 Overview of Existing Solid Waste System

Naples is located in southwest Florida on the Gulf Coast with a population of about 22,000. The Solid Waste collection program is managed by the City's Utilities Department (Department). The Department provides a high level of service in response to the demands requested by the customers it serves. The Department, specifically the Solid Waste Division (Division), is funded through an enterprise fund, and services approximately 8,200 residences (single family, duplexes, and triplexes) and 11,500 Multi-Family units (complexes with four or more units). Commercial waste is collected from approximately 650 Commercial customers. The City provides billing on a bi-monthly basis.



Current services based upon lines of business (LOB) are as follows:

Residential Services (single family, duplexes, and triplexes)

- Solid waste is collected twice per week via side-door service in customer-provided containers; customers may have two (2) containers of 30 gallons or less, or three (3) containers of 20 gallons or less and additional garbage must be placed curbside by the resident.

- Single stream recycling is collected once per week in City-provided 65-gallon carts that must be placed curbside.
- Horticulture debris and yard waste is collected once per week and must be placed within six (6) feet of the curb.
- The City provides scheduled collection for large oversized items (bulk waste) at no additional charge.
- The City provides collection of remodeling or construction and demolition debris from do-it-yourself projects (no contractor-generator debris) that must be scheduled and has special charges.

Multi-Family Services (complexes with ≥ 4 units)

- Solid waste is collected via carts, dumpsters, and self-contained or break away compactors. Container size and frequency is determined by the customer's needs.
- Single stream recycling is collected once per week in carts or dumpsters.
- Horticulture debris and yard waste is collected once per week.¹

Commercial Services

- Solid waste is collected via carts, dumpsters, and self-contained or break away compactors. Container size and frequency is determined by the customer's needs.
- Temporary roll-off container service is available for large volumes of debris and special clean-up projects.
- Recycling services are not provided by the City but are available through an open market.
- Horticulture debris collection service is not provided to Commercial customers.

The City delivers solid waste to the Collier County Landfill and recyclables are currently processed at the Lee County Material Recovery Facility (MRF). Recyclables are hauled to a transfer station owned by the City, aggregated, and then hauled to the MRF daily. The Lee County MRF informed the City they would be unable to accept recyclables after the end of the current contracted year ending on September 30, 2020. The interlocal agreement with Lee County was later amended to continue to haul recyclable material to the Lee County MRF through March 31, 2021. The City is currently evaluating options for contracting with one of two other MRFs in the southwest Florida region. In either of these cases, the expenses for processing recyclables will increase considerably. As a part of this study, we have estimated these costs at \$125 per ton of recyclables in the current market.

The City contracts for Horticulture debris waste collection and disposal services with an outside service provider, Waste Connections of Florida, Inc., and the current agreement expires on September 30, 2020, with no remaining renewal options. The City published a Request for Proposal (RFP) on March 6, 2020, but only received one proposal. The City has since modified the RFP and will put it back out for consideration, with the expectation of an increase in annual contract prices.

¹ Although Horticulture debris collection services are available to all Multi-Family customers, debris generated by commercial landscapers or lawn maintenance services is not included in this service.

Upon completion of the RFP, the City performed an in-house service analysis to determine the most affordable option for providing the service. This analysis showed that the cost to provide the service in-house was substantially lower than the current proposed rate and made a policy decision to convert to that style of service.

Finally, the rate scenarios in this report were developed with and include an estimated annual Consumer Price Index (CPI) increase of 2% and will be adjusted upon selection of the successful vendor and updated pricing.

1.3 Shared Compactor Collection System

The City provides roll-off container and compactor (self-contained and break away units) collection service to Commercial businesses and charges bi-monthly based on the number of pulls per container and the actual tonnage disposal costs. The City has a service agreement with a vendor to haul self-contained and breakaway compactors and assorted types and sizes of roll-off containers for a flat fee each time a compactor or roll-off container is hauled.

Because of business densities and space limitations, some compactors have been provided for shared use by businesses and some Multi-Family units. Shared compactors present a billing challenge, because multiple businesses of varying sizes, types, and waste generation rates, as well as Multi-Family units contribute to the same compactor, with no way to determine exactly what portion of the waste volume comes from each generator.

The method by which, and variations in how, the City calculates and charges for shared compactor services make it difficult for it to recover the cost of service. KCI researched eight (8) other local governments that had similar collection services provided and no industry standard could be found. A more in-depth rate evaluation is recommended to determine the most equitable shared compactor rate structure. Special focus should be given on the methodology used to determine waste generation rates assigned to each business utilizing a shared compactor. Until such time as this rate evaluation can be provided, KCI will provide examples and new options as they become available through other projects and clients.

Section 2

Methodology

The rate model used in this study was developed using Microsoft Excel[®] and is a dynamic model that includes a comprehensive COS analysis and REPs through fiscal year (FY) 2025. The methodology for updating the rate model is summarized in this section.

The results of the COS analysis and REP spreadsheets are provided in Section 3. The COS analysis provides quantitative information regarding the Department's activities that can be helpful to make appropriate rate-setting and operational decisions. The REP spreadsheets provide the option to update assumptions as changes in revenue and/or expenses are anticipated so that the effect on the enterprise fund can be identified and evaluated. This rate model is a tool that will allow the Department to be proactive in maintaining a well-funded and sustainable enterprise fund.

2.1 Cost of Services Analysis

KCI used City-provided financial and operational data and discussions with Department staff to perform the COS analysis. The COS was modeled for each service provided within the Residential, Multi-Family, and Commercial LOBs. Collection costs for each service were determined by allocating expenses (not including disposal and processing expenses/revenue) for each LOB across the number of service events. To assist with the allocation, Department staff assigned each employee's actual work efforts and each vehicle, by percentage, to a LOB, or as a non-direct Administrative expense.

- Account 1201 (Administration) expenses were allocated across all customers proportionate to the cost of collection for all services.
- Account 1222 (Residential – Solid Waste) expenses were allocated to Residential customers and Multi-Family/Commercial carts² based on the number of service events.
 - The total number of service events was determined by multiplying the number of customers by the number of collection events provided each week.
 - A collection factor was assigned based on the level of effort required to provide collection services. Residential side-yard service was assigned a factor of 1.25 and Multi-Family/Commercial cart service of 1.0. The factor reflects the added level of effort to collect Residential garbage from the front or side of a home, as well as the occasional collection of bulk waste.
- Account 1223 (Commercial) expenses were allocated across the total number of collection events.

² Multi-Family/Commercial carts are included with Residential solid waste collection for allocation purposes because Multi-Family/Commercial solid waste carts are collected on Residential routes and waste is commingled in Residential tonnage.

- Account 1224 (Recycling) expenses were allocated across Residential and Multi-Family customers based on the number of service events.
 - The total number of service events was determined by multiplying the number of containers serviced by the number of collection events provided each week.
- Horticulture Services
 - Contractual costs for Horticulture collection and disposal were removed from Account 1201 (Administration) and allocated across the total number of customers to whom the service is made available (Residential and Multi-Family).
 - City-provided services for the collection of Horticulture in dumpsters was allocated from Account 1223 (Commercial).
 - A collection factor was assigned based on the level effort required to provide Horticulture collection services. Residential service was assigned a factor of 1.0 and Multi-Family service (4 units or more) of 0.75. The factor reflects a reduced level of effort to collect piles at Multi-Family complexes, as well as the lesser volume per customer with Multi-Family Horticulture service.

Disposal costs for each service were determined by allocating solid waste tonnage across system capacity. System capacity was determined by multiplying average monthly customer counts by weekly service volume provided. The estimated weekly tonnage per service was then multiplied by 4.33 to determine monthly tonnage and multiplied by the appropriate current disposal rate to determine the monthly allocated disposal cost per service.

Although the City has received revenue for recyclable materials in prior years, no revenue was received in FY 2018 and FY 2019 and none is projected in this rate study. Additionally, expenses increased for recyclable material residue disposal in FY 2018 and FY 2019. Recycling processing expense projections are expected to increase significantly when a new Recycling Processing Agreement begins on April 1, 2021.

FY 2019 tonnage was allocated and an estimated average pounds per unit per year determined.

- Residential solid waste collection and Multi-Family/Commercial carts were assumed to have equal capacity.
- Commercial compacted garbage was assumed to have a compaction ratio of three (3) uncompacted cubic yards to one (1) compacted cubic yard.
- Recyclables were allocated equally across Residential and Multi-Family customers.

Once collection costs and disposal costs for each service were determined, an estimated cost of service was compiled for each service type.

2.2 Revenue and Expense Projections

The rate model enables various factors affecting revenue and/or expenses to be adjusted as conditions warrant based on the effect on the enterprise fund and identifies projected budget

shortfalls, which may trigger rate increases or cost reduction measures to make up for the projected deficit.

The revenue and expenses used are actuals from FY 2017, FY 2018, and FY 2019 and are projected for FY 2020 through FY 2025. The following assumptions are defined and/or sourced and the interrelation in the model identified.

- Customer/Units

- Residential service growth was estimated at 2%.
- All other service growth was estimated at 1.5%.

Customer accounts are used to determine revenue and calculate waste generation for projecting disposal costs.

- Service Rates

Historical rates were included for the current and past three (3) fiscal years. Current rates were used for future years in the baseline. Three different rate scenarios were modeled per City directive and are presented in Section 3. Scenario 1 is one large increase to achieve the required 3-month minimum fund balance. Scenario 2 is a stepped increase that achieves the required minimum fund balance in two years. Scenario 3 is a stepped increase that achieves the minimum fund balance requirement over a five-year period. ***Scenario 3 was not selected for continued consideration by the Naples City Council.***

- Tonnage

Actual tonnage for the previous three (3) years was identified. For each category of waste, an average weight per customer or service event was calculated depending on the type of waste. The average weight per customer or service event for FY 2019 was used to calculate the five-year tonnage projections.

- Variables

Key variables were determined that affect the Department budget based on either an adjustment in dollar amount or percentage within the following categories: revenue discounts, salary and benefits, operations, vehicles and equipment, capital outlay, and disposal and processing tip fees. This allows the REP to be adjusted by individual variables as assumptions change. Each variable directly affects either projected revenue or expenses.

- Revenue

Revenue is made up of solid waste service fees, special pickup fees, commercial roll-off, recyclable materials sales, sale of surplus assets, investment income, and other miscellaneous revenue.

- Service fees are determined by multiplying the projected monthly customer count by the projected monthly service rate times twelve months.
- Special pickup fees were held static.
- Commercial roll-off fees were projected using a 2% annual increase.

- Recyclable materials sales, sale of surplus assets, investment income, and other miscellaneous revenue were not considered regular, sustainable income and set at zero dollars (\$0.00).
- Expenses

Expenses include all aspects of collecting, transporting, and delivering solid waste and recyclables for disposal or processing. Expenses are broken down into LOB and Administrative expenses are allocated proportionate to expenses across each LOB. Each LOB includes five general categories: salary and benefits, operations, vehicles and equipment, capital outlay, and depreciation, except for the horticulture LOB that does not incur capital outlay or depreciation. These categories are associated with variables that drive the adjustment of expenses each year.
- Unrestricted Fund Balance

The Department's unrestricted fund balance policy is based on the percentage of unassigned monies compared to operating expenditures. The minimum required unrestricted fund balance is equal to three (3) months of operating expenses or 25% of the annual operating expenses, and the maximum unrestricted fund balance is equal to six (6) months of operating expenses or 50% of the annual operating expenses. The minimum required unrestricted fund balance amount is calculated by applying 25% to the total expenditures minus depreciation and capital outlay. The projected unrestricted fund balance is determined by taking the previous end-of-year unrestricted fund balance plus the current year's projected surplus/shortfall.

The REP was designed to assist the Department by projecting future budget implications based on current budget impacts. In addition, the unrestricted fund balance is compared to its target level to identify any projected shortfalls.

Section 3

Cost of Services and Rate Scenarios

3.1 Cost of Services

The COS model is an effective tool to help make financial-based decisions when improving operational efficiency in order to reduce expenditures, as well as identifying disposal/processing market opportunities and/or limitations.

The COS analysis was conducted using FY 2019 actual expenses. Each service’s estimated COS was then increased by an assumed increase based upon rate changes and the CPI from FY 2019 to FY 2020. Table 3-1 compares the estimated COS to FY 2020 rates.

Following are some of the key findings from the COS analysis:

- Residential and Multi-Family rates do not cover the COS provided, and the recycling services portion of the rates have the largest disparity.
- Commercial rates cover the COS.
- The total Administration costs are approximately 27% of total operating expenses.

Table 3-1: Estimated Cost of Services Compared to Current Service Rates

	FY 2020 Rates	Estimated Cost of Services (per Month/Unit)
Residential Collection Service (single family)		
Curbside MSW (includes Bulk Waste)	\$18.77	\$24.23
Curbside Recycling	\$0.83	\$6.46
Curbside Horticulture - contracted services	\$4.98	\$4.43
Total Monthly Residential Service Rate	\$24.58	\$35.12
Residential Collection Service (duplexes and triplexes)		
Curbside MSW (includes Bulk Waste)	\$17.17	\$24.23
Curbside Recycling	\$0.73	\$6.46
Curbside Horticulture - contracted services	\$4.15	\$4.43
Total Monthly Residential Service Rate	\$22.05	\$35.12
Multi-Family Collection Service (≥4 units; rate per unit)		
Recycling	\$0.73	\$6.39
Horticulture - contracted services	\$2.13	\$3.32
Total Monthly Multi-Family Service Rate	\$2.86	\$9.71
Commercial/Multi-Family Carts (per cart)	\$42.27	\$19.76
Commercial/Multi-Family - Uncompacted MSW (per CY)	\$8.67	\$6.04
Commercial/Multi-Family - Compacted MSW (per CY)	\$16.97	\$9.67

*Note: Commercial / Multi-family Rates are Calculations, not official published rates.
MSW=Municipal Solid Waste; CY=cubic yard.*

3.2 Revenue and Expense Projections

Based on KCI's analysis of the information provided by the City, the Department's financial health has been harder hit by increasing costs and changes in operations than expected in 2017. Revenues have trended steadily lower than total expenditures; however, when depreciation, a non-cash expense, is removed from the total, the revenues have sufficiently covered the operating expenses.

The City requires a 25% fund balance minimum threshold for enterprise funds. In 2017, during the previous study, it was noted that the unrestricted fund balance went below the minimum policy requirement in FY 2015 and stayed below through FY 2018. The end of year unrestricted fund balance did meet the requirements in FY 2019 due to significant, non-recurring year-end adjustments that positively affected the balance; however the balance is projected to steadily decrease and be below the minimum requirement from FY 2020 forward if rate adjustments are not made.

Large projected increases in recyclables processing expenses will greatly impact the fund balance revenue in the future and will require rate increases to cover the additional costs. The Horticulture debris collection expenses may also increase, but the change is not expected to be as substantial as the recyclables processing increase.

3.3 Rate Scenarios

3.3.1 Summary of Scenarios

A baseline and three revenue scenarios were modeled. These scenarios were recommended by KCI and approved for inclusion in this report by City staff. Scenario 1 included one large revenue increase in the first year to achieve the required 3-month minimum fund balance. Scenario 2 included a stepped rate increase over the next two years that achieves the required minimum fund balance. Scenario 3 included a five-year stepped rate increase that also achieved the minimum fund balance requirement. **Scenario 3 was not selected for continued consideration by the Naples City Council.** Each scenario includes annual CPI adjustments after the minimum unrestricted fund balance is achieved, as directed by City staff. *For ease of viewing, all tables presenting information regarding the two selected scenarios are located at the end of this section.*

All three scenarios increase Residential, Multi-Family and Commercial rates by the same corresponding percentages. The proposed rates for the two selected scenarios are summarized in Table 3-3.

3.3.2 Baseline Scenario

Table 3-4 presents a summary of the baseline REP rate structure. Table 3-5 then represents the financial modeling of the rates set in the structure. The baseline REP is intended to document the financial health of the fund without changes such as rate increases, or expenditure changes that are not already projected by the City. The key finding from the baseline REP model is the unrestricted fund balance is projected to be below the minimum policy requirement in FY 2020 and is not projected to recover without rate adjustments. Figure 3-1 depicts the baseline REP graph.

3.3.3 Scenario 1 – Immediate Rate Increase & Fund Balance Correction

Scenario 1 adjusts the rates with one large increase in FY 2021 for all services except Multi-Family and Commercial carted service to achieve the required minimum unrestricted fund balance in FY 2021. Table 3-3 represents the Rate Structure using this methodology. Based upon this scenario, the City would increase rates in all three categories of service, with a large increase (400%) in recycling fees to cover new processing costs. Table 3-6 presents a summary of the Scenario 1 REP. Figure 3-2 depicts the Scenario 1 REP graph.

3.3.4 Scenario 2 – Two Year Rate Increase & Fund Balance Correction

Scenario 2 adjusts the rates more moderately over a two-year period for all services except Multi-Family and Commercial carted service to achieve the required minimum unrestricted fund balance in FY 2022. Table 3-3 represents the Rate Structure following this scenario and Table 3-7 presents a summary of the Scenario 2 REP. This scenario calls for a minimum of two increases in Residential rates over the two years and increases in Multi-Family and Commercial in each of those years as well. Figure 3-3 depicts the Scenario 2 REP graph.

3.3.5 Scenario 3 – Stepped Increase over Five Years

Scenario 3 adjusts the rates the most gradually over a five-year period for all services except Multi-Family and Commercial carted service to achieve the required minimum unrestricted fund balance in FY 2025.

This scenario was not selected for continued consideration by the Naples City Council.

Table 3-2: Current City Rate Schedule

	FY 2017	FY 2018	FY 2019	FY 2020
Single Family (SF) Service				
Garbage Collection (MSW + BW)	\$138.78	\$141.84	\$145.32	\$147.96
Collier County Disposal	\$68.10	\$70.08	\$72.96	\$75.06
Single Family Home (Annual)	\$206.88	\$211.92	\$218.28	\$223.02
Single Family Home (Monthly)	\$17.24	\$17.66	\$18.19	\$18.59
Residential Recycling Coll & Proc (Annual)	\$9.24	\$9.48	\$9.72	\$9.96
Residential Recycling Coll & Proc (Monthly)	\$0.77	\$0.79	\$0.81	\$0.83
Residential Horticultural Coll & Disp (Annual)	\$56.10	\$57.36	\$58.68	\$59.76
Residential Horticultural Coll & Disp (Monthly)	\$4.68	\$4.78	\$4.89	\$4.98
SF Home (Total Monthly Fee – MSW/REC/HORT Coll + Disp)	\$22.69	\$23.23	\$23.89	\$24.40
Multi-Family (MF) Duplex & Triplex Can Service				
Garbage Collection (MSW+BW)	\$120.78	\$123.42	\$126.48	\$128.76
Collier County Disposal	\$68.10	\$70.08	\$72.96	\$75.06
Multi-Family Unit w/Curbside Collection (Annual)	\$188.88	\$193.50	\$199.44	\$203.82
Multi-Family Unit w/Curbside Collection (Monthly)	\$15.74	\$16.13	\$16.62	\$16.99
Recycling Coll & Proc w/Curbside (Annual per Unit)	\$8.28	\$8.46	\$8.70	\$8.76
Recycling Coll & Proc w/Curbside (Monthly per Unit)	\$0.69	\$0.71	\$0.73	\$0.73
Horticultural Coll & Disp w/Curbside (Annual)	\$46.80	\$47.88	\$48.96	\$49.80
Horticultural Coll & Disp w/Curbside (Monthly)	\$3.90	\$3.99	\$4.08	\$4.15
MF Duplex/Triplex (Total Monthly Fee – MSW/REC/HORT Coll + Disp)	\$20.33	\$20.82	\$21.43	\$21.87
Multi-Family Service (with Container Service)				
Recycling Coll & Proc w/Dump (Annual per Unit)	\$8.28	\$8.46	\$8.64	\$8.76
Recycling Coll & Proc w/Dump (Monthly per Unit)	\$0.69	\$0.71	\$0.72	\$0.73
Horticultural Coll & Disp w/Dump (Annual per Unit)	\$23.40	\$24.48	\$25.08	\$25.56
Horticultural Coll & Disp w/Dump (Monthly per Unit)	\$1.95	\$2.04	\$2.09	\$2.13
MF Service with Container (Total Monthly Fee – REC/HORT Coll + Disp)	\$2.64	\$2.75	\$2.81	\$2.86
Commercial & MF Cart Service				
Commercial & MF Cart Collection Service (96G)	\$323.46	\$330.60	\$338.64	\$344.76
Collier County Disposal	\$144.60	\$148.80	\$154.80	\$159.36
Commercial & MF Carted Service (Annual)	\$468.06	\$479.40	\$493.44	\$504.12
Commercial & MF Carted Service (Monthly)	\$39.01	\$39.95	\$41.12	\$42.01
Commercial & MF Cart Service (Total Monthly Fee – MSW Coll + Disp)	\$39.01	\$39.95	\$41.12	\$42.01
Other Services				
Special Pickup – C&D Coll & Disp (per CY)	\$14.75	\$15.00	\$15.37	\$15.65
Minimum Charge	\$35.00	\$50.00	\$50.00	\$50.00

BW= Bulk Waste

Table 3-3: New City Rate Schedules based on Scenarios

	SCENARIO 1			SCENARIO 2					
	FY 2021			FY 2021			FY 2022		
	BiMonthly		% Change	BiMonthly		% Change	BiMonthly		% Change
Single Family (SF) Service									
Garbage Collection (MSW + BW)	\$32.06	\$192.36	30.01%	\$28.36	\$170.16	15.00%	\$31.76	\$190.56	11.99%
Collier County Disposal	\$13.24	\$79.44	2.87%	\$13.24	\$79.44	2.87%	\$13.62	\$81.72	2.87%
Single Family Home (Annual)		\$271.80	20.70%		\$249.60	10.84%		\$272.28	9.09%
Single Family Home (Monthly)		\$22.65	20.70%		\$20.80	10.84%		\$22.69	9.09%
Single Family Home (Monthly - MSW Collection)		\$16.03	30.01%		\$14.18	15.00%		\$15.88	11.99%
Single Family Home (Monthly - MSW Disposal)		\$6.62	2.87%		\$6.62	2.87%		\$6.81	2.87%
Residential Recycling Coll & Proc (Annual)	\$8.30	\$49.80	400.00%	\$3.66	\$21.96	120.48%	\$6.40	\$38.40	74.86%
Residential Recycling Coll & Proc (Monthly)		\$4.15	400.00%		\$1.83	120.48%		\$3.20	74.86%
Residential Horticultural Coll & Disp (Annual)	\$10.16	\$60.96	2.01%	\$10.16	\$60.96	2.01%	\$10.36	\$62.16	1.97%
Residential Horticultural Coll & Disp (Monthly)		\$5.08	2.01%		\$5.08	2.01%		\$5.18	1.97%
SF Home (Total Monthly Fee - MSW/REC/HORT Collection + Disposal)		\$31.88	29.73%		\$27.71	12.76%		\$31.07	12.13%
Multi-Family (MF) Duplex & Triplex Can Service									
Garbage Collection (MSW+BW)	\$32.06	\$192.36	49.39%	\$28.36	\$170.16	32.15%	\$31.76	\$190.56	11.99%
Collier County Disposal	\$13.24	\$79.44	2.80%	\$13.24	\$79.44	2.80%	\$13.62	\$81.72	2.87%
Multi-Family Unit w/Curbside Collection (Annual)		\$271.80	31.92%		\$249.60	21.14%		\$272.28	9.09%
Multi-Family Unit w/Curbside Collection (Monthly)		\$22.65	31.92%		\$20.80	21.14%		\$22.69	9.09%
Multi-Family Home (Monthly - MSW Collections)		\$16.03	49.39%		\$14.18	32.15%		\$15.88	11.99%
Multi-Family Home (Monthly - MSW Disposal)		\$6.62	2.80%		\$6.62	2.80%		\$6.81	2.87%
Recycling Coll & Proc w/Curbside (Annual per Unit)	\$8.30	\$49.80	468.49%	\$3.66	\$21.96	150.68%	\$7.32	\$43.92	100.00%
Recycling Coll & Proc w/Curbside (Monthly per Unit)		\$4.15	468.49%		\$1.83	150.68%		\$3.66	100.00%
Horticultural Coll & Disp w/Curbside (Annual)	\$10.16	\$60.96	22.41%	\$10.16	\$60.96	22.41%	\$10.36	\$62.16	1.97%
Horticultural Coll & Disp w/Curbside (Monthly)		\$5.08	22.41%		\$5.08	22.41%		\$5.18	1.97%
MF Duplex/Triplex (Total Monthly Fee - MSW/REC/HORT Coll + Disp)		\$31.88	44.58%		\$27.71	25.669%		\$31.53	13.79%
Multi-Family Service (with Container Service)									
Recycling Coll & Proc w/Dump (Annual per Unit)	\$4.98	\$29.88	241.1%	\$3.22	\$19.32	120.5%	\$5.64	\$33.84	75.2%
Recycling Coll & Proc w/Dump (Monthly per Unit)		\$2.49	241.1%		\$1.61	120.5%		\$2.82	75.2%
Horticultural Coll & Disp w/Dump (Annual per Unit)	\$4.34	\$26.04	1.9%	\$4.34	\$26.04	1.9%	\$4.42	\$26.52	1.8%
Horticultural Coll & Disp w/Dump (Monthly per Unit)		\$2.17	1.9%		\$2.17	1.9%		\$2.21	1.8%
MF Service with Container (Total Monthly Fee - REC/HORT Coll + Disp)		\$4.66	62.94%		\$3.78	32.17%		\$5.03	33.07%
Commercial & MF Cart Service									
Commercial & MF Cart Collection Service (96G)	\$68.96	\$413.76	20.0%	\$66.08	\$396.48	15.00%	\$67.40	\$404.40	2.0%
Collier County Disposal	\$27.86	\$167.16	2.9%	\$27.86	\$167.16	2.88%	\$28.42	\$170.52	2.0%
Commercial & MF Carted Service (Annual)		\$580.92	14.5%		\$563.64	11.12%		\$574.92	2.0%
Commercial & MF Carted Service (Monthly)		\$48.41	14.5%		\$46.97	11.12%		\$47.91	2.0%
Commercial & MF Carted (Monthly - Collections)		\$34.48	20.01%		\$33.04	15.00%		\$33.70	2.00%
Commercial & MF Carted (Monthly - Disposal)		\$13.93	2.88%		\$13.93	2.88%		\$14.21	2.01%
Commercial & MF Cart Service (Total Monthly Fee -MSW Coll + Disp)		\$48.41	14.53%		\$46.97	11.12%		\$47.91	2.00%
Other Services									
Special Pickup - C&D Coll & Disp (per CY)		\$20.35	30.0%		\$18.00	15.0%		\$21.39	18.8%
Minimum Charge									

Table 3-4: Baseline Scenario Rate Structure (No Changes from Normal)

Monthly Service Rates:	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Projected	FY 2021 Projected	FY 2022 Projected	FY 2023 Projected	FY 2024 Projected	FY 2025 Projected
TOTAL SF Residential Service (MSW/REC/HORT/BW)	\$22.68	\$23.23	\$23.89	\$24.40	\$24.89	\$25.39	\$25.90	\$26.42	\$26.96
Annual Adjustment	0.0%	2.4%	2.8%	2.1%	2.0%	2.0%	2.0%	2.0%	2.0%
TOTAL MF Duplex/Triplex (MSW/BW)	\$15.74	\$16.13	\$16.62	\$16.99	\$17.32	\$17.67	\$18.02	\$18.38	\$18.75
Annual Adjustment	0.0%	2.5%	3.1%	2.2%	2.0%	2.0%	2.0%	2.0%	2.0%
MF Duplex/Triplex (RECYCLING)	\$0.69	\$0.71	\$0.73	\$0.73	\$0.74	\$0.75	\$0.77	\$0.79	\$0.81
Annual Adjustment	0.0%	2.2%	2.8%	0.7%	2.0%	2.0%	2.0%	2.0%	2.0%
MF Duplex/Triplex (HORTICULTURE)	\$3.90	\$3.99	\$4.08	\$4.15	\$4.23	\$4.31	\$4.40	\$4.49	\$4.58
Annual Adjustment	0.0%	2.3%	2.3%	1.7%	2.0%	2.0%	2.0%	2.0%	2.0%
MF Units 4+ (HORTICULTURE)	\$1.95	\$2.04	\$2.09	\$2.13	\$2.17	\$2.21	\$2.25	\$2.30	\$2.35
Annual Adjustment	0.0%	4.6%	2.5%	1.9%	2.0%	2.0%	2.0%	2.0%	2.0%
MF Units 4+ (RECYCLING)	\$0.69	\$0.71	\$0.72	\$0.73	\$0.74	\$0.75	\$0.77	\$0.79	\$0.81
Annual Adjustment	0.0%	0.0%	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Total Commercial/MF Carted Service	\$38.34	\$39.95	\$41.12	\$42.01	\$42.01	\$42.01	\$42.01	\$42.01	\$42.01
Annual Adjustment	0.0%	4.2%	2.9%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Commercial/MF Container - Uncomp (CY)	\$7.76	\$8.09	\$8.35	\$8.55	\$8.72	\$8.89	\$9.06	\$9.25	\$9.44
Annual Adjustment	0.0%	4.3%	3.2%	2.3%	2.0%	1.9%	1.9%	2.1%	2.1%

Table 3-5: Baseline Revenue and Expense Projections Summary

Operating Revenues:	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Projected	FY 2021 Projected	FY 2022 Projected	FY 2023 Projected	FY 2024 Projected	FY 2025 Projected
Service Fees	\$7,115,588	\$7,093,444	\$7,384,825	\$7,614,713	\$8,171,361	\$8,449,163	\$8,735,859	\$9,042,504	\$9,358,942
Other Revenue	\$103,048	\$27,708	\$243,270	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL REVENUES	\$7,218,636	\$7,121,152	\$7,628,095	\$7,900,591	\$8,171,361	\$8,449,163	\$8,735,859	\$9,042,504	\$9,358,942
Operating Expenses:	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Projected	FY 2021 Projected	FY 2022 Projected	FY 2023 Projected	FY 2024 Projected	FY 2025 Projected
Administration	\$1,723,444	\$1,404,505	\$1,454,701	\$1,622,086	\$1,690,116	\$1,729,653	\$1,770,171	\$1,811,697	\$1,854,257
Residential	\$1,107,525	\$1,129,334	\$1,069,819	\$1,409,687	\$1,520,766	\$1,565,970	\$1,612,560	\$1,660,581	\$1,710,077
Commercial	\$1,121,208	\$1,256,601	\$1,614,813	\$1,527,225	\$1,598,903	\$1,640,316	\$1,682,854	\$1,726,549	\$1,771,432
Recycling	\$1,099,010	\$977,528	\$1,118,848	\$1,099,181	\$1,167,959	\$1,202,077	\$1,237,215	\$1,273,405	\$1,310,677
Horticulture	\$687,553	\$687,553	\$714,595	\$715,753	\$510,259	\$520,709	\$531,376	\$542,265	\$553,380
Disposal/Processing	\$1,709,259	\$1,786,479	\$1,846,981	\$1,944,000	\$2,491,361	\$2,628,603	\$2,771,904	\$2,924,620	\$3,086,507
TOTAL EXPENDITURES	\$7,447,999	\$7,242,000	\$7,819,756	\$8,317,932	\$8,979,363	\$9,287,328	\$9,606,081	\$9,939,117	\$10,286,331

TOTAL SURPLUS/(SHORTFALL)	(\$229,363)	(\$120,848)	(\$191,661)	(\$703,218)	(\$808,002)	(\$838,165)	(\$870,222)	(\$896,613)	(\$927,389)
Depreciation	\$644,217	\$649,812	\$618,320	\$637,450	\$655,298	\$673,647	\$692,509	\$711,899	\$731,832

Unrestricted Fund Balance									
Fund Balance (end of year)	\$835,761	\$1,342,190	\$1,699,434	\$996,216	\$188,214	(\$164,518)	(\$177,713)	(\$184,714)	(\$195,556)
Minimum Policy Requirement	\$1,605,004	\$1,598,557	\$1,640,122	\$1,748,358	\$1,904,445	\$1,971,905	\$2,041,795	\$2,114,982	\$2,191,431
Fund Balance Value (Months of Op Expenses)	1.6	2.7	3.3	1.7	0.3	-0.3	-0.3	-0.3	-0.3

Figure 3-1: Baseline Revenue and Expense Projections Graph

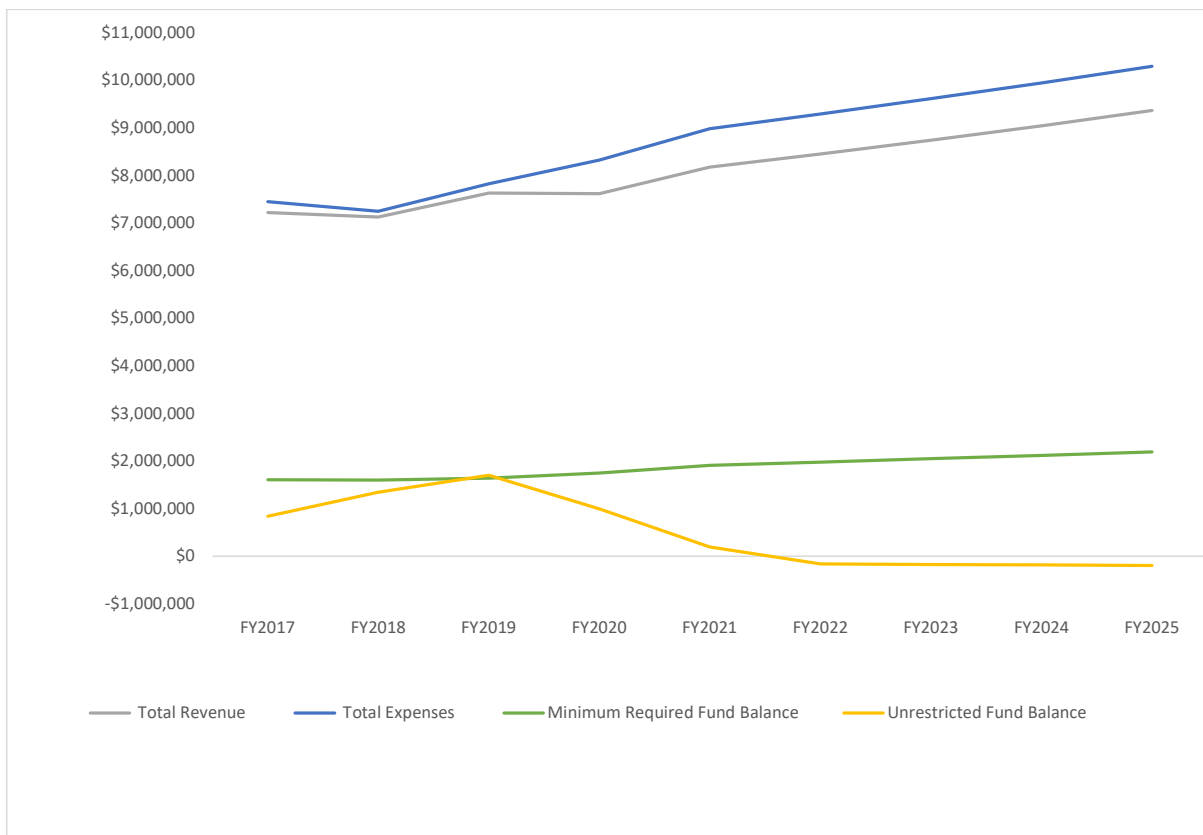


Table 3-6: Scenario 1 Revenue and Expense Projections Summary

Operating Revenues:	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Projected	FY 2021 Projected	FY 2022 Projected	FY 2023 Projected	FY 2024 Projected	FY 2025 Projected
Revenue for Service Fees	\$7,115,588	\$7,093,444	\$7,384,825	\$7,690,344	\$9,791,877	\$10,135,993	\$10,490,431	\$10,857,369	\$11,234,919
Other Revenue	\$103,048	\$27,708	\$243,270	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL REVENUES	\$7,218,636	\$7,121,152	\$7,628,095	\$7,690,344	\$9,791,877	\$10,135,993	\$10,490,431	\$10,857,369	\$11,234,919
Operating Expenses:	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Projected	FY 2021 Projected	FY 2022 Projected	FY 2023 Projected	FY 2024 Projected	FY 2025 Projected
Administration	\$1,723,444	\$1,404,505	\$1,454,701	\$1,622,086	\$1,690,116	\$1,729,653	\$1,770,171	\$1,811,697	\$1,854,257
Residential	\$1,107,525	\$1,129,334	\$1,069,819	\$1,409,687	\$1,520,766	\$1,565,970	\$1,612,560	\$1,660,581	\$1,710,077
Commercial	\$1,121,208	\$1,256,601	\$1,614,813	\$1,527,225	\$1,598,903	\$1,640,316	\$1,682,854	\$1,726,549	\$1,771,432
Recycling	\$1,099,010	\$977,528	\$1,118,848	\$1,099,181	\$1,167,959	\$1,202,077	\$1,237,215	\$1,273,405	\$1,310,677
Horticulture	\$687,553	\$687,553	\$714,595	\$715,753	\$510,259	\$520,709	\$531,376	\$542,265	\$553,380
Disposal/Processing	\$1,709,259	\$1,786,479	\$1,846,981	\$1,944,000	\$2,491,361	\$2,628,603	\$2,771,904	\$2,924,620	\$3,086,507
TOTAL EXPENDITURES	\$7,447,999	\$7,242,000	\$7,819,756	\$8,317,932	\$8,979,363	\$9,287,328	\$9,606,081	\$9,939,117	\$10,286,331

TOTAL SURPLUS/(SHORTFALL)	(\$229,363)	(\$120,848)	(\$191,661)	(\$627,587)	\$812,514	\$848,665	\$884,350	\$918,252	\$948,589
Depreciation	\$644,217	\$649,812	\$618,320	\$637,450	\$655,298	\$673,647	\$692,509	\$711,899	\$731,832

Unrestricted Fund Balance									
Unrestricted Fund Balance (end of year)	\$835,761	\$1,342,190	\$1,699,434	\$1,071,847	\$1,884,360	\$2,733,026	\$3,617,375	\$4,535,628	\$5,484,216
Minimum Policy Requirement	\$1,605,004	\$1,598,557	\$1,640,122	\$1,748,358	\$1,904,445	\$1,971,905	\$2,041,795	\$2,114,982	\$2,191,431
Value of Fund Balance (Months of Op Expenses)	1.6	2.7	3.3	1.8	3.0	4.2	5.3	6.4	7.5

Figure 3-2: Scenario 1 Revenue and Expense Projections Graph

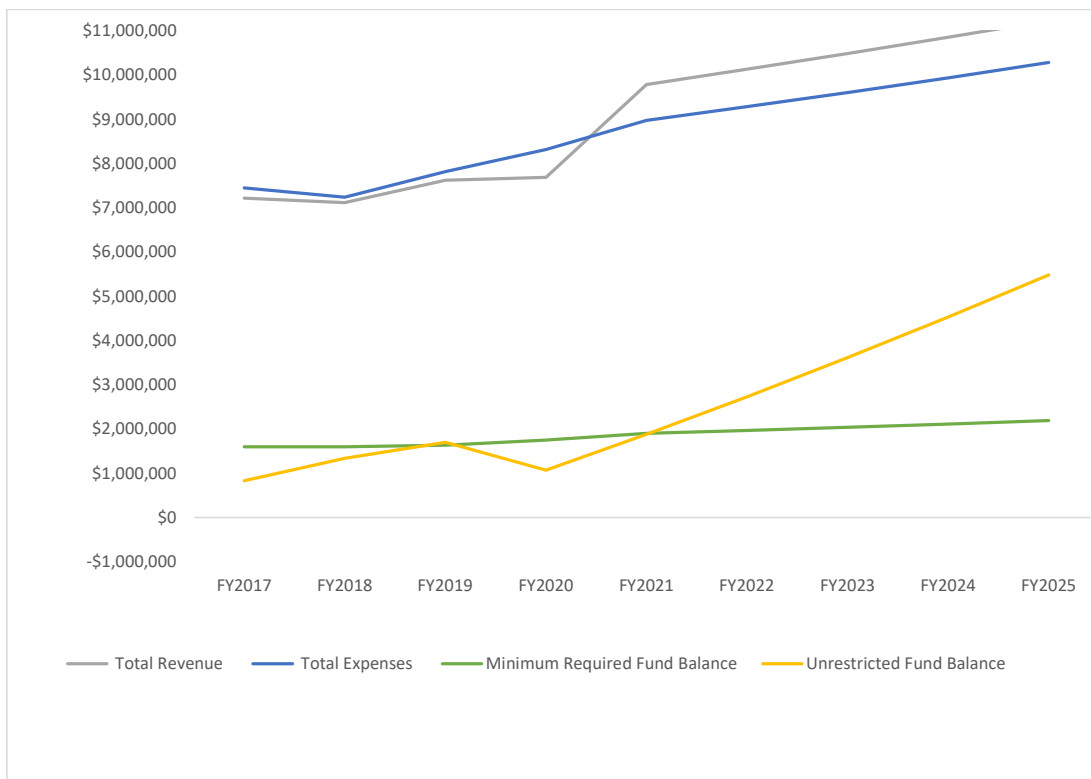


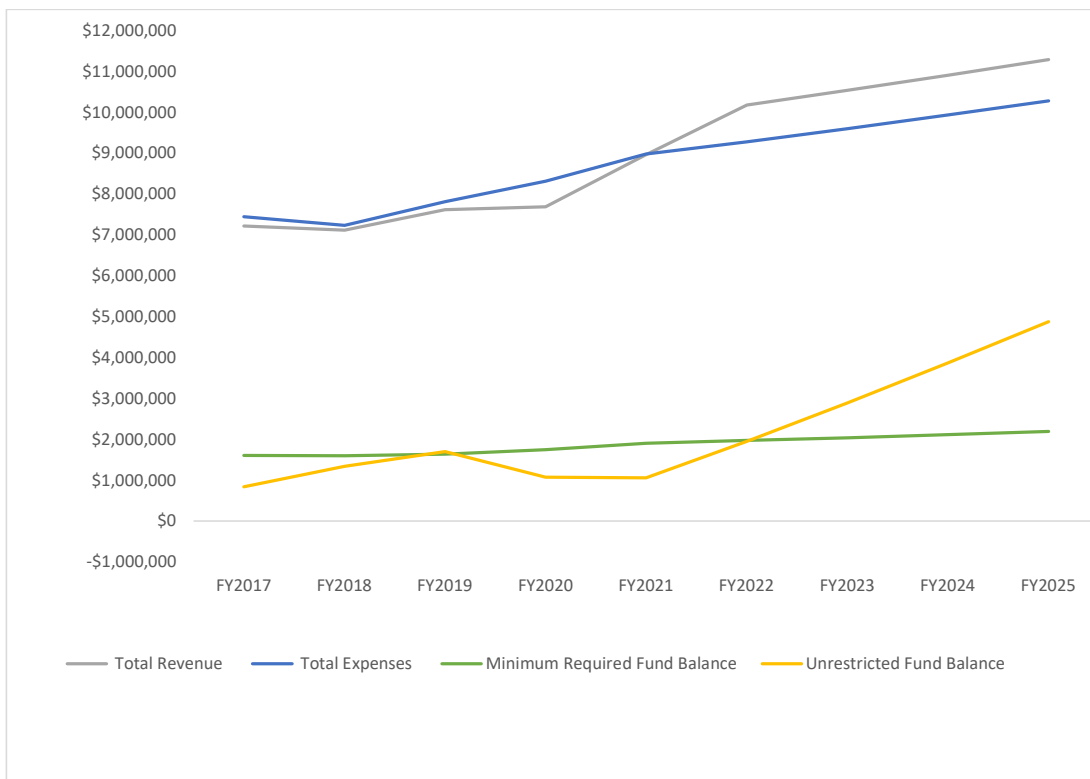
Table 3-7: Scenario 2 Revenue and Expense Projections Summary

Operating Revenues:	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Projected	FY 2021 Projected	FY 2022 Projected	FY 2023 Projected	FY 2024 Projected	FY 2025 Projected
Revenue for Service Fees	\$7,115,588	\$7,093,444	\$7,384,825	\$7,690,344	\$8,967,288	\$10,185,100	\$10,543,885	\$10,914,983	\$11,297,022
Other Revenue	\$103,048	\$27,708	\$243,270	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL REVENUES	\$7,218,636	\$7,121,152	\$7,628,095	\$7,690,344	\$8,967,288	\$10,185,100	\$10,543,885	\$10,914,983	\$11,297,022
Operating Expenses:	FY 2017 Actual	FY 2018 Actual	FY 2019 Actual	FY 2020 Projected	FY 2021 Projected	FY 2022 Projected	FY 2023 Projected	FY 2024 Projected	FY 2025 Projected
Administration	\$1,723,444	\$1,404,505	\$1,454,701	\$1,622,086	\$1,690,116	\$1,729,653	\$1,770,171	\$1,811,697	\$1,854,257
Residential	\$1,107,525	\$1,129,334	\$1,069,819	\$1,409,687	\$1,520,766	\$1,565,970	\$1,612,560	\$1,660,581	\$1,710,077
Commercial	\$1,121,208	\$1,256,601	\$1,614,813	\$1,527,225	\$1,598,903	\$1,640,316	\$1,682,854	\$1,726,549	\$1,771,432
Recycling	\$1,099,010	\$977,528	\$1,118,848	\$1,099,181	\$1,167,959	\$1,202,077	\$1,237,215	\$1,273,405	\$1,310,677
Horticulture	\$687,553	\$687,553	\$714,595	\$715,753	\$510,259	\$520,709	\$531,376	\$542,265	\$553,380
Disposal/Processing	\$1,709,259	\$1,786,479	\$1,846,981	\$1,944,000	\$2,491,361	\$2,628,603	\$2,771,904	\$2,924,620	\$3,086,507
TOTAL EXPENDITURES	\$7,447,999	\$7,242,000	\$7,819,756	\$8,317,932	\$8,979,363	\$9,287,328	\$9,606,081	\$9,939,117	\$10,286,331

TOTAL SURPLUS / (SHORTFALL)	(\$229,363)	(\$120,848)	(\$191,661)	(\$627,587)	(\$12,075)	\$897,772	\$937,804	\$975,866	\$1,010,691
Depreciation	\$644,217	\$649,812	\$618,320	\$637,450	\$655,298	\$673,647	\$692,509	\$711,899	\$731,832

Unrestricted Fund Balance									
Unrestricted Fund Balance (end of year)	\$835,761	\$1,342,190	\$1,699,434	\$1,071,847	\$1,059,772	\$1,957,544	\$2,895,348	\$3,871,214	\$4,881,905
Minimum Policy Requirement	\$1,605,004	\$1,598,557	\$1,640,122	\$1,748,358	\$1,904,445	\$1,971,905	\$2,041,795	\$2,114,982	\$2,191,431
Fund Balance Value (Months of Op Expenses)	1.6	2.7	3.3	1.8	1.7	3.0	4.3	5.5	6.7

Figure 3-3: Scenario 2 Revenue and Expense Projections Graph



3.4 Conclusion and Next Steps

The City provides a high level of service for its residents and businesses. The COS analysis determined that Residential and Multi-Family (except Multi-Family carts) customers receive a subsidization from commercial solid waste fees. However, based on KCI's analysis, future risk to the fund's financial health is primarily due to expenditures growing at a higher rate than anticipated and revenues needing to catch up to those cost increases.

The unrestricted fund balance went below the minimum policy requirement in FY 2015 and stayed below through FY 2018. The end of year unrestricted fund balance did meet the requirements in FY 2019 due to significant, non-recurring year-end adjustments that positively affected the balance; however, the balance is projected to steadily decrease and remain below the minimum requirement throughout the five (5) year projected timeframe if no action is taken.

Depending on whether the City chooses to adopt either of the two (2) rate scenarios modeled, the unrestricted fund balance will reach the minimum policy requirement in FY 2021 or FY 2022, respectively. To continue the health of the enterprise fund, annual CPI-based rate adjustments could continue to be made after the attainment of the minimum unrestricted fund balance. However, both scenarios show a significant increase in fund balance going forward and as such may not need annual adjustments. In addition, the City should review the financial model annually with KCI or their finance department and compare actual revenue and expenses with the projected revenue and expenses to monitor whether it is tracking with projections.

City staff has shown interest in the Scenario 2, two-year increase. This would provide the ability to meet fund balance requirements in a steady and measured time frame while keeping fund balance projections within policy requirements. KCI also suggests that the City review current contracts for services (as they are doing with Recycling Processing and Horticulture Collection) to determine if cost increases can be limited or costs potentially decreased to guarantee continued fund balance financial health.

Naples continues to be a quality solid waste service provider with great operational management and implementation. Continued vigilance in managing changes in the markets and costs of services around them will continue to maintain adequate fund balances for the coming five (5) years.

Raising solid waste service fees can be difficult for customers, especially in the current climate of economic uncertainty. Whatever rate package the City chooses, the City should consider undertaking a proactive process of public engagement to explain the necessity, options considered, cost saving measures being implemented, etc. to build customer awareness prior to a final decision being made by City Council/Commission.