



SOLID WASTE RATE STUDY

December 2015

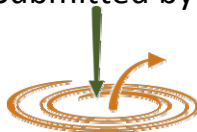


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Section 1

Introduction

1.1 Project Scope

The City of Venice (City) requested Kessler Consulting, Inc. (KCI) to assist the City in conducting a comprehensive cost of services study that includes a rate review and provides recommendations for solid waste rates over the next five years. The Solid Waste and Recycling Division (Division) of the City's Public Works Department is funded through an enterprise fund, with service fees intended to cover 100 percent of services provided. A spreadsheet-based rate model using Microsoft Excel® was developed to estimate the current cost for each type of collection service and a five-year revenue and expense projection. In addition, KCI was requested to assess various collection service and infrastructure options that the City may choose to implement in order to meet City goals and objectives and to further improve and modernize solid waste services.

This report documents the assumptions and methodology on which the rate model is based, presents our results pertaining to current cost of services and revenue and expense projections, and recommendations for helping to ensure the future stability and health of the enterprise fund.

1.2 Overview of Existing System

1.2.1 Residential Collection

The City of Venice is the sole provider of municipal solid waste (MSW) collection services to residential and commercial properties within the city limits. Residential customers include single family, condominium units, mobile homes and duplexes of which there are approximately 9,018 currently. In the next several years the number of residential customers is expected to grow significantly; approximately 3,000 additional dwelling units are currently permitted for construction with another 6,000 to 7,000 reportedly in the design review process.

Residential services are summarized in Table 1 and include garbage, dual stream recyclables, and yard waste collection. In addition to these regular services, residential customers can schedule special pick-ups of bulk yard waste, bulk waste, and appliances. Customers can schedule two bulk yard waste and two used appliance collections per year for no additional cost. Customers requiring more collections are charged \$20 per cubic yard for this service.

Table 1: Residential Collection Services

Service	Frequency of Collection	Set-out Method	Collection Method	Truck Type* & Crew Size	Rate
Garbage	Twice per Week	Customer-provided Cans	Manual	FL Carry-Can; 1 Person	\$9.56/month
Recyclables	Weekly	Dual Stream 14-gallon Bins	Manual	SL 2-Compartment; 1 Person	\$7.28/month
Yard Waste	Weekly	Customer-provided Cans, Bags, or Bundles	Manual	FL Carry-Can; 1 Person	Included in Recycling Rate
Bulk Yard Waste & Appliances	Twice per Year of each type	Loose Bulk	Manual	Grapple; 1 Person	Included in Recycling Rate
Bulk Waste	As Desired	Loose Bulk	Manual	Grapple; 1 Person	\$20/cubic yard

* FL = front load collection truck; SL = side load collection truck.

1.2.2 Commercial and Multi-Family Collection

Regularly scheduled commercial and multi-family (MF) services include garbage, dual stream recyclables, and segregated cardboard collection. Customers can choose from two types of garbage collection service:

- The City offers commercial and MF can service, which consists of up to two cans or bags (32-gallon max each) collected twice weekly for \$9.56 per month (same as Residential Collection Service).
- The City also offers commercial and MF customers with front-load non-compacted container (dumpster) service. Rates are based on standard service and pull out service (see Table 3). Although the City offers rates for customer-owned compacted dumpster service, the City has phased out this service.

The City offers commercial and MF recycling services including dual stream 14-gallon bins (same as Residential Collection Service), 94-gallon roll carts, bundled cardboard, and segregated cardboard dumpsters (see Table 4).

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Table 2: Standard Commercial Garbage Collection Services

Non-Compacted City-Owned Dumpsters (monthly rate) - STANDARD						
Container Size (cubic yards)	Pickups per Week					
	1	2	3	4	5	6
1	\$69.64	\$126.14	\$182.66	\$239.16	\$295.68	\$352.18
2	\$90.90	\$165.16	\$239.46	\$313.72	\$388.00	\$462.26
3	\$110.28	\$200.70	\$291.14	\$381.56	\$471.96	\$562.38
4	\$128.00	\$232.94	\$337.90	\$442.84	\$547.80	\$652.74
6	\$171.56	\$312.04	\$452.50	\$592.98	\$733.44	\$873.90
8	\$222.48	\$409.68	\$596.88	\$784.08	\$971.28	\$1,158.48

Table 3: Pull-Out Commercial Garbage Collection Services

Non-Compacted City-Owned Dumpsters (monthly rate) - PULL OUT						
Container Size (cubic yards)	Pickups per Week					
	1	2	3	4	5	6
1	\$73.12	\$133.10	\$193.08	\$253.08	\$313.08	\$373.06
2	\$95.48	\$174.32	\$253.16	\$332.00	\$410.86	\$489.70
3	\$115.84	\$211.84	\$307.82	\$403.80	\$499.78	\$595.76
4	\$134.44	\$245.86	\$357.26	\$468.66	\$580.08	\$691.48
6	\$180.20	\$329.32	\$478.42	\$627.56	\$776.66	\$925.78
8	\$234.00	\$432.72	\$631.44	\$830.16	\$1,028.88	\$1,227.60

Table 4: Commercial Recycling Collection Services

Service	Frequency of Collection	Set-out Method	Collection Method	Truck Type* & Crew Size	Rate
Recyclables	Weekly	Dual Stream 14-gallon bins	Manual	FL Carry-Can; 1 Person	\$7.28/mo
Recyclables	Weekly	94-gallon roll carts	Automated	ASL; 1 Person	\$28.02/mo 1 cart \$18.69/mo per cart for 2+ carts
Segregated Cardboard	Weekly	Bundled; equivalent to 94-gallon roll cart	Manual	FL Carry-Can; 1 Person	\$28.02/mo (If higher level of service is required use dumpsters)
Segregated Cardboard	Scheduled	Dumpster	Automated	FL; 1 Person	Approximately 60% of MSW Dumpster Service Rate

* FL = front load collection truck; ASL = automated side load collection truck.

1.2.3 Roll-Off Container Collection

The City also provides roll-off container collection service. Container sizes range from 10 to 40 cubic yards. Rates are as follows:

- Rental
 - \$1.25 per day, long-term (longer than 90 days)
 - \$2.50 per day, short-term
- Pull Charge
 - \$80 per pull, for long-term rentals
 - \$100 per pull, for short-term rentals
- Tipping Fee
 - Garbage \$48.34 per ton
 - Yard Waste \$32.53 per ton
 - Construction & demolition debris (C&D) \$48.96 per ton

1.3 Rate Comparison with Other Jurisdictions

KCI researched service levels and rates charged by other jurisdictions in the area. The rates obtained by KCI are based on information provided by city/county personnel or included in the jurisdictions franchise agreement/service contract and reflect fiscal year (FY) 2015 rates.

Please note that direct comparison between rates is cautioned due to differences in the level of services, types of services provided, contract terms, and local community demographics and size, all of which impact costs and rates. In addition, rates charged do not necessarily reflect the actual cost of services.

1.3.1 Residential Rates

As shown in Table 5, residential rates in Venice are lower than those charged in other municipalities where the city is responsible for all or part of collection services: \$16.84 per household per month in Venice versus \$17.10 - \$27.46 per household per month in other jurisdictions with city-provided service. Service level is defined as frequency of collection per week for garbage-recyclables-segregated yard waste (MSW-R-YW). All rates include collection and disposal.

Rates in Longboat Key are lower, which may be partly attributed to the fact that residential and commercial services are bundled into a single, recently-bid contract which may be based on commercial rates subsidizing residential rates. Rates in Sarasota County are also lower than Venice; however, the primary reason for lower rates in the unincorporated county is likely the fact that MSW collection is once weekly instead of twice weekly. Other potential factors are the larger customer base and economies of scale in the unincorporated county and the fact that rates have not increased since 2005.

Table 5 provides a snapshot of rates; Exhibit A (page 31) provides more details regarding the types of service and billing details.

Table 5: Residential Collection Service Rate Comparison Snapshot

Jurisdiction	Service Level	Service Provider	Total Monthly Billing Rate	Set-Out Method (MSW; R)	Single Family Units
City of Venice	2-1-1	City	\$16.84	Customer Cans; Dual Stream Bins	11,183
City of Clearwater	2-1-1	City	\$27.46	Carts; Single Stream Carts	27,000
City of Dunedin	1-1-1	City (MSW/YW) Republic (R)	\$17.10	Carts; Single Stream Carts	13,000
City of Largo	2-1-1	City	\$17.65	Carts; Single Stream Carts	17,000
City of North Port	1-1-1	City	\$20.75	Carts; Dual Stream Bins	20,856
City of Punta Gorda	2-1-1	City (MSW/YW) Waste Pro (R)	\$19.20	Customer Cans; Single Stream Bins	7,000
City of Sarasota	1-1-1	City (MSW) WM* (YW/R)	\$21.66	Carts; Dual Stream Bins	22,460
Town of Longboat Key	2-1-1	WM	\$14.86	Carts; Single Stream Carts	2,008
Sarasota County (unincorporated)	1-1-1	WM	\$13.29	Customer Cans; Dual Stream Bins	93,262

* Waste Management

1.3.2 Commercial Rates

Table 6 provides a summary comparison of commercial dumpster service rates. In order to compare commercial rates on an equivalent basis, KCI divided the monthly rate by monthly cubic yards of service (container size multiplied by the number of collections). This allows comparison of the range of costs per cubic yard. KCI further adjusted the rates to separately estimate the collection and disposal components of the rate. The disposal cost component was estimated by using the applicable county tip fee and average weights of 98 pounds (non-compacted) and 294 pounds (compacted) per cubic yard of container capacity. These density assumptions account for average waste density and unutilized container space.

Although commercial dumpster service collection rates are highly variable among the jurisdictions surveyed, Venice rates fall within the range calculated for other jurisdictions. Rates in Venice are variable due to a rate structure that assigns a higher rate per cubic yard of service for smaller containers with less frequent collection. This progressive rate structure can be justified by the commitment of the same level of collection assets (truck and crew time) to collect a container regardless of its size.

1.3.3 Roll-Off Rates

Table 7 provides a comparison of pull charges for roll-off container service. Venice’s pull charges for non-compacted roll-offs are lower than other jurisdictions. Venice’s pull charge for compacted roll-offs is lower than all other jurisdictions with the exception of Longboat Key’s rate for a 10 cubic yard roll-off. Please note that KCI removed disposal charges from the City of Dunedin’s rates in order to put them on a common basis for comparison.

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Table 6: Commercial MSW Collection Rate Comparison – Dumpster Service per Cubic Yard

	Non-Compacted					Compacted				
	Total		Disposal	Collection		Total		Disposal	Collection	
	Min	Max		Min	Max	Min	Max		Min	Max
City of Venice	\$5.57	\$16.08	\$2.82	\$2.75	\$13.26	\$21.63	\$52.20	\$8.46	\$13.17	\$43.74
City of Clearwater	\$8.05	\$16.95	\$1.84	\$6.21	\$15.11	\$23.35	\$70.10	\$5.51	\$17.83	\$64.59
City of Dunedin	\$6.32	\$6.32	\$1.84	\$4.48	\$4.49	\$18.95	\$18.97	\$5.51	\$13.44	\$13.46
City of Largo	\$5.31	\$6.12	\$1.84	\$3.47	\$4.28	\$21.25	\$24.48	\$5.51	\$15.73	\$18.97
City of North Port	\$7.07	\$12.70	\$2.82	\$4.25	\$9.88	\$14.57	\$25.40	\$8.46	\$6.10	\$16.94
City of Punta Gorda	\$4.14	\$9.03	\$1.76	\$2.38	\$7.26	n/a	n/a	\$5.29	n/a	n/a
City of Sarasota	\$5.68	\$23.08	\$2.82	\$2.86	\$20.26	\$17.05	\$58.20	\$8.46	\$8.59	\$49.74
Town of Longboat Key*	\$4.44	\$5.52	\$1.76- \$2.82	\$2.59	\$2.59	\$11.25	\$14.48	\$5.29- \$8.46	\$5.73	\$5.73
Sarasota County (unincorporated)	\$3.83	\$13.81	\$2.82	\$1.01	\$10.99	\$11.44	\$21.54	\$8.46	\$2.98	\$13.08

*Collection and disposal rate only; does not include maintenance fee of \$43.88 per month plus a \$0.90 per month franchise fee on all containers.

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Table 7: Roll-Off Services Rate Comparison

	Provider	Non-Compacted				Compacted			
		10CY	20CY	30CY	40CY	10CY	20CY	30CY	40CY
City of Venice									
Pull Fee	City	\$100.00 short term (<90 days); \$80.00 long term				\$150.00			
Container Fee		ST rental = \$2.50/day; LT rental = \$1.25/day				\$2.50/day rental			
City of Clearwater*									
Pull Fee	City	\$140.46	\$140.46	\$127.95	\$133.79	\$140.46	\$140.46	\$127.95	\$133.79
Container Fee		\$103/mo rental if not serviced w/i 14 days				\$103/mo rental if not serviced w/i 14 days			
City of Dunedin									
Pull Fee	City	\$183.21	\$256.21	\$329.19	--	--			
Container Fee		\$4/day rental if >14 days							
City of Largo**									
Pull Fee	City	\$130.00	\$143.00	\$157.00	\$173.00	--	\$186.00	\$200.00	\$216.00
Container Fee		--							
City of North Port									
Pull Fee	City	\$158.13				\$172.50			
Container Fee		\$4.10/day rental				\$4.10/day rental			
Town of Longboat Key									
Pull Fee	WM	\$101.20	\$202.40	\$303.60	\$404.80	\$117.40	\$234.80	\$352.20	\$469.60
Container Fee		\$63.28, \$77.89, \$93.47, \$155.80, --, --, --, --							
Sarasota County (UI)									
Pull Fee	WM	\$190.41							
Container Fee		--	\$117.32	\$175.97	\$234.66	--	--	\$527.92	\$703.92

* Plus 15% franchise fee

** Rates have only been adjusted once in the past 23 years; last rate adjustment was 8 years ago

Section 2

Methodology

KCI developed a dynamic rate model with Microsoft Excel that includes a comprehensive cost of services analysis and a five-year revenue and expense projection. An electronic copy of the model was provided to the City. The cost of services analysis provides quantitative information regarding the Division's activities. The revenue and expense projection spreadsheet provides 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. If as a result a rate increase/decrease is considered, the proposed rates can be entered into the model to project the neutralizing effect on the enterprise fund. The rate model is a tool that will allow the Division to make appropriate rate-setting and operational decisions and be proactive in maintaining a healthy and sustainable enterprise fund. The methodology for developing the rate model is summarized within this section.

2.1 Limitations

KCI utilized City-provided data in the cost of services model. The accuracy of the cost of services model and validity of the results are directly related to the quality of data. Some data limitations had a direct impact on the level of effort required to develop the model, quality of results for allocating collection and processing/disposal costs, and the cost of services analysis. Where data was not available, KCI developed assumptions for use in the cost of services model. These assumptions were reviewed and accepted by City staff. KCI raised concern regarding the City's FY2017 projected budget. Both revenue and expenses are projected to drop from FY2016 proposed levels (revenue by 1.83 percent and expenses by 6.53 percent). Division staff were unable to identify the driver for these projections.

2.2 Cost of Services Analysis

KCI compiled and reviewed Division-provided data pertinent to the cost of service analysis. We reviewed 10 years of the Division's financials including FY2011 through FY2015 actual, FY2016 proposed, and FY2017 through FY2020 projected budgets. The Division's FY2015 actual budget and current customer counts were used for the baseline. Based on the previous four years actuals, FY2015 is a reasonable baseline and provides a conservative outlook. Separate collection and processing/disposal costs for tires, electronics, and scrap metal were not available; therefore, the cost for these services were included in the core services the Division provides.

KCI also reviewed solid waste and recycled material tonnage for the current and past three fiscal years, current disposal and processing fees, the number of monthly customer accounts/units, and monthly collection capacity (the estimated volume or tonnage per collection service provided).

2.2.1 Collection Allocation

KCI estimated the collection costs by allocating expenses, not including processing and disposal expenses, for each line of business (Garbage, Recycling, and Roll-Off) across the number of potential service events for standard services or actual service events for variable services. The Division does not collect actual set-out data for standard services.

For standard and regularly-scheduled services KCI determined monthly collection capacity based on collection container size multiplied by frequency of weekly service times 4.33 weeks per month.

In order to moderate fleet purchases, KCI utilized an average annual fleet purchase across all ten years (actual and planned), rather than the actual fleet expenditures in FY2015.

General expenses (i.e., not direct expenses) were reallocated to Administration and Administration was allocated proportionately across the cost of all collection services. The following bullet points provide additional detail on KCI’s assumptions and methodology.

- Garbage Service (Account 0940) expenses were allocated to residential can service, commercial can service, and standard (STD) and pull out (PO) commercial dumpster service. Because bulky waste collection service data was unavailable, this service was included as regular garbage service.
 - The total number of standard service events was determined by multiplying the number of customers by the number of collection events each week, or by known monthly collection events.
 - Multi-family can and dumpster service are treated as part of commercial can and dumpster service.
 - Collection service factors were applied to reflect a service differential between the base service (residential can service) and other services. Table 8 (below) shows the assumptions used to determine collection service factors.

Table 8: Garbage Collection Service Factors Utilized for Cost Allocation

Service Type	Average Units per Route	Collection Service Factor
Residential/Commercial Can Service	875	1.0
Commercial Dumpster – STD	100	8.8
Commercial Dumpster – PO	94*	9.3

**Division estimated a 6 percent higher cost to service a PO dumpster than a STD dumpster; therefore, the estimated route size was reduced by 6 percent.*

- Recycling Service (Account 0948) expenses were allocated to residential 2-bin recycling, residential yard waste, commercial 2-bin recycling, commercial carted (94-gallon) recycling, and STD and PO commercial dumpster service.
 - The total number of service events was determined by multiplying the number of customers by the number of collection events each week, or by known monthly collection events.

- Multi-family can and dumpster service is included in commercial can and dumpster service.
- Collection service factors were applied to reflect a service differential between the base service (residential recycling service) and other services. The matrix below shows the assumptions used to determine collection service factors.

Table 9: Recycling Collection Service Factors Utilized for Cost Allocation

Service Type	Average Units per Route	Collection Service Factor
Residential/Commercial Can/Bin Service	875	1.0
Residential Yard Waste	2,000	0.4
Commercial Cart Service	227	3.9
Commercial Dumpster – STD	100	8.8
Commercial Dumpster – PO	94*	9.3

**Division estimated a 6 percent higher cost to service a PO dumpster than a STD dumpster; therefore, the estimated route size was reduced by 6 percent.*

- Roll-off Service expenses were allocated to roll-off customers. Roll-off data was limited; the City does not track information regarding breakdown of container sizes serviced, short-term and long-term rates charged, uncompacted and compacted service, and average daily rental fees. A pull rate of \$90 was used based on the average of the long-term pull rate (\$80) and short-term pull rate (\$100). Although expenses for sheet metal used to repair roll-offs were identified and allocated to roll-off services, it is probable that other direct expenses to roll-off services were not included. As a result, collection costs are most likely underestimated.
- Administration (assigned as Account 1001) expenses were allocated across all customers proportionate to the cost of collection for all services.

2.2.2 Processing/Disposal Allocation

KCI allocated processing/disposal costs, including cardboard and fiber revenue, for each service by using average monthly solid waste, recyclables and yard waste tonnage allocated across estimated monthly collection capacity. Collection capacity for standard services was calculated by number of customers multiplied by container size multiplied by weekly frequency of collection multiplied by 4.33 weeks in a month; collection capacity for variable services was actual capacity serviced. KCI then multiplied the allocated tonnage by the appropriate current disposal or processing cost to determine the monthly allocated processing/disposal cost per service.

- Because of the consistent tonnage increase over the current and past years, tonnage for FY2015 was used to estimate an average monthly tonnage, which was allocated across collection capacity.
- Because the City utilizes a progressive rate structure for commercial dumpster service, processing/disposal allocation is not calculated per cubic yard, but rather the

average cubic yards per collection event in order to provide costs that could more accurately be compared. An average cubic yards per collection event was determined separately for non-compacted MSW STD service, MSW PO service, recycling STD service, and recycling PO service.

- Commercial recycling dumpster service was assigned an average weight of 55 pounds per cubic yard for cardboard. The calculated tonnage was removed from the cardboard tonnage before allocating the remaining cardboard tonnage across residential and commercial bin and cart service.
- Roll-off disposal is a pass through cost and, therefore, was not allocated.

2.3 Revenue and Expense Projections

The revenue and expense projections spreadsheet links assumptions together to project anticipated changes in revenue and/or expenses and the resulting effect on the Division's enterprise fund. The revenue and expenses used are actual (FY2011-FY2015), proposed (FY2016), and projected (FY2017-FY2020). In the following bullets, various assumptions are defined and/or sourced and the interrelation in the model identified.

- **Customers/Units**

The City's Planning Department was unable to provide projected growth rates for residential households and commercial entities. Therefore, using the City's historical data, industry trends, and City staff input, KCI developed the following baseline conservative growth projection:

- Single family solid waste service = 2%
- Multi-family and commercial solid waste service = 1.5%
- Single family recycling service = 1.5%
- Multi-family and commercial recycling service = 0%
- Roll-off service = 10%

KCI used the number of customer accounts to determine revenue and disposal allocation. City staff are aware of the potential for moderate to high growth in the next few years. If the actual rate of growth exceeds the baseline assumptions, the rate model can be revised to reflect the increased growth rate.

- **Service Rates**

Current rates were used for the base scenario. The City's current rates have not been adjusted since 2006 and are ten years old.

- **Tonnage**

Actual tonnage was used for the previous four years. For each category of waste, an average weight per customer or service event, depending on the type of waste, was

determined. The current year and projected years use the four-year average per customer/service event to project tonnage. Exceptions are as follows:

- Roll-off services: Only the past two years of tonnages were used because FY2012 and FY2013 tonnages included unusual project work.
- Recyclables: Recyclables were set at zero percent (0%) growth. Historical data reflected, and City staff established, that the recycling services in the City are stable. However, recyclables would likely increase significantly should the City decide to convert to single stream recycling and use carted collection.
- Electronics: Electronics were adjusted downward based on new standards that allow TV's to be landfilled.

- Variables

Key variables were determined that affect the Division budget based on either an adjustment in dollar amount or percentage within the following categories: non-payment of service fees, penalty fees, operations, capital outlay, and disposal and processing tip fees. This section allows the revenue and expense projections to be adjusted by individual variables as assumptions change. Each variable directly affects either projected revenue or projected expenses.

- Revenue

Revenue is made up of solid waste and recycling service and penalty fees, recycling sales, interest on investments, other miscellaneous revenue, and appropriated fund balance revenue.

- Service fees are determined by multiplying the projected monthly customer count by the projected monthly service rate times twelve months minus the projected non-payment percentage. The City does not have a non-payment assumption so that variable is set at zero percent (0%).
- Recycled fiber (cardboard and mixed paper) revenue is determined by projected tonnage and current revenue per ton.
- Interest on investments, recycled metals, electric franchise fees, and other miscellaneous revenue are provided by the City's Finance Department.

- Expenses

Expenses include all aspects of collecting, transporting, and delivering solid waste and recyclables for disposal or processing. Expenses are broken down into the three lines of business (Garbage, Recycling, and Roll-Off) and Administration, each consisting of four general categories: salary and benefits, operations, vehicles and equipment, and capital outlay.

The revenue and expense projection was designed to assist the Division by projecting future budget implications based on current budget impacts.

Section 3

Service Options Assessment

This section provides an assessment of various collection service and infrastructure options that the City may choose to implement immediately, in a phased-in approach, or at some time in the future in order to meet the City goals and objectives to further improve and modernize solid waste services. The findings, assessment, and conclusion provide the City information, insight, and understanding as to how the service options would affect the current system and rates.

3.1 Residential Growth

Background:

- Population growth in southwest Florida has picked up pace in recent years. The Bradenton-Sarasota-Venice metropolitan area was one of the top 20 fastest growing metro areas in the U.S. in 2013 and 2014.
- According to Division staff, approximately 3,000 new residential units are currently permitted for construction. In addition, another 6,000 to 7,000 units are reportedly in the design review process.
- Much of the anticipated growth is expected in the northern and eastern sections of the City, which are located further away from the Division's current location.
- The City Planning and Zoning Department provided KCI with an estimate of 200 residential (single family and multi-family) units for FY2016 and reported that non-residential growth is unknown.

Assessment:

- It is unknown how quickly build-out of these units will take, but regardless of timing, permitted units alone represent a 32% increase in residential customers. Based on current route size of approximately 875 homes and twice weekly collection, the City will need to add the full-time equivalent of 1.5 additional collection crews to accommodate permitted growth.
- If the additional 6,000 to 7,000 units are ultimately constructed, the City would need an additional 3.0 to 4.6 additional full-time equivalent collection crews.
- The Division's current facility is unable to accommodate this potential growth.

Conclusion:

- For modeling purposes, the Division should work with City Planning and Zoning Department to determining appropriate growth projections based on anticipated new construction.
- The baseline rate model utilizes conservative growth assumptions based the provided growth assumptions and historical growth (see Section 2.3.) but can be updated with new projections once determined.

3.2 Solid Waste Division Facility

Background:

- The Division's current location on Seaboard Avenue is used for Public Works Administration, Solid Waste and Recycling, General Maintenance, Parks Maintenance, and Vehicle Maintenance.
- The administration building has limited office space and lacks appropriate features. Management and supervisory staff do not have private office space in order to conduct personnel-related activities. The current location lacks adequate and appropriate facilities for collection staff. Employee bathroom facilities are only accessible through the public conference room.
- The Division facility lacks adequate space for container storage and repair and currently uses additional sites for these functions including a 0.7 acre site on Seaboard Ave. and a 0.5 acre site at the wastewater treatment plant.

Assessment:

- The current facility does not provide adequate space and facilities for current Division activities, let alone for anticipated future needs based on potential growth.
- Department staff conducted a needs assessment that estimated 8 to 10 acres would provide sufficient space for Department functions and future growth. Staff is considering various options for relocating Division and Department operations, including:
 - Developing a nearby location to house Department administration, Division employee facilities, Division fleet parking, basic Division fleet preventative maintenance activities, and container storage and maintenance. The current site would potentially then be dedicated to fleet fueling, maintenance and repair, and other Department operations.
 - Moving non-solid waste functions to the current Police facility when/if it becomes available and renovate the current facility.
 - Moving all Department functions to a new site in the north or east of the City.
- One advantage of developing an additional site in the current Seaboard Avenue vicinity is that the Department would continue to keep operations centralized. However, sufficient acreage may not be available in this section of the City.
- Relocating the Department to a new northeastern location has several implications:
 - It would have limited impact on the Division. Projected growth in the northeast section of the City will cause Division to service more collection routes in that area incurring additional travel time from the current location. However, the Division will still be hauling solid waste north to the County landfill so neither a downtown or northeastern service yard would be significantly more favorable for Division route optimization.
 - It might be less convenient for other departments (Airport, Fire, Police and Utility) that utilize Vehicle Maintenance services. It would also be less convenient for other

Department functions like Streets and Parks that have work concentrated in central and coastal parts of the City.

- It might be less convenient for customer service. Division customers frequently need to go to both the Division office and City Hall. This already poses an inconvenience for customers, which would be exacerbated by relocating the Division administration to a new northeastern location.

Conclusion:

- Based on an initial assessment identifying the current facility limitations, the City should proceed with planning and development of a new facility to house Department and/or Division functions.
- Based on the assessment, customer service issues are a significant issue in facility development. The City would mitigate issues and significantly improve customer convenience by establishing a web-based online system for customer transactions and modifying current office-based procedures so that all transactions can be made at a single location.
- For modeling purposes, the cost to develop a new Division facility should be included in future capital planning. The Division's proposed budget for FY2016 already includes \$100,000 for consulting and design services.

3.3 Bulky Waste Collection

Background:

- Venice currently provides residential customers with up to two bulky waste collections annually as part of their basic service package. The City charges customers \$20 per cubic yard for additional collections.

Assessment:

- The current on-call system requires a significant amount of Division administration and management support including daily tracking and dispatch to respond to customer set outs that can be widely dispersed throughout the City, staff to monitor which customers have used the allotted twice yearly services, and tracking and billing for additional collections.
- Regularly-scheduled bulky waste collection mitigates many of administrative and management issues of an on-call service. However, other issues could arise such as the following:
 - Regular service has the potential to increase the amount of bulky waste set outs by customers. However, the City can put in place volume limits, set out requirements, and monitoring procedures to ensure that the service is not misused (e.g., disposal of contractor-generated construction debris).
 - Including bulky waste as part of standard collection service, such as a standard weekly or monthly service, may increase the Division's expenses by requiring additional capital assets and staff requiring an increase in rates to cover costs of service. Those

customers who do not regularly generate bulky waste may oppose a rate increase that includes a service that they do not regular use.

- The goal of mitigating administrative costs, providing appropriate level of service, and discouraging excessive waste disposal must all be considered, in addition to the potential misuse of the service by commercial contractors. To achieve these divergent objectives, appropriate frequency of service, service limits, and enforcement will be required.

Conclusion:

- For modeling purposes, bulky waste collection was included in regular garbage service.
- Existing bulky waste collection equipment and staff may be able to provide monthly bulky waste service if collection routes were established to service one quadrant of the City each week. An operational assessment of the bulky waste collection service would evaluate the current work load and help determine the parameters for estimating costs, and planning and implementing a modified service.

3.4 Automated Residential Garbage Collection

Background:

- In 2013, KCI conducted an analysis of the Division’s residential garbage collection. The key conclusions of that analysis, which are still relevant today, were as follows:
 - The Division has a well-run system with collection workers achieving high productivity figures for a one-man manual collection configuration. Asset utilization is high as well with a fleet of front loaders used for both commercial and residential collection that operate six-days per week.
 - KCI observed the Division’s one-man garbage routes collecting six or more tons per day, which represents the industry’s “human fatigue factor” per worker per day for manual collection. Observations were conducted in summer when waste generation set-out rates typically are low, so tons per crew per day are likely higher during the winter months.
 - Division staff also noted that residents sometimes use cans larger than the 30-gallon limit. These can be too heavy for workers to lift, which can lead to unsafe lifting or workers needing to pull bags out of cans.

Assessment:

- Automated collection mitigates the issues of human fatigue and worker safety, and increases operational efficiency. Communities typically offer customers a standardized container size for their basic garbage service (e.g. a 65-gallon roll cart). Larger or multiple carts can be provided for an additional fee to those customers for whom the basic cart size is not sufficient.
- Automated collection provides the safest work environment for solid waste collectors. It reduces the risk of worker injury and related worker compensation claims and the challenge of coordinating human resources to cover for injured workers.

- KCI determined that the best opportunity for the City to increase production is to mechanize collection using roll carts. By using Heil Curotto Cans in the place of existing Carry-Cans, the City could implement automated collection and as a result of the increased productivity develop larger route sizes reducing equipment and labor requirements. The same equipment configuration could also be used if and when the City has the opportunity to convert to a carted single stream recycling program.
- Division could retrofit existing fleet with Curotto Cans or specify future vehicle purchases be for low-entry, Curotto-ready trucks. Updated capital costs estimates to convert to automated residential collection includes: \$55 per cart, \$10,000 per truck to retro-fit existing trucks with Curotto Cans, and \$32,000 per Curotto Can for each truck.
- KCI conducted a survey of residential customers in 2013, which yielded the following key results:
 - 78% of respondents are highly satisfied with the City's garbage collection service.
 - 67% are highly satisfied with the City's recycling collection service.
 - 85% say they are getting a good value for the \$16.84 they pay for garbage and recycling services.
 - 56% would not be in favor of a volume-based Pay-As-You-Throw (PAYT) garbage rate.
 - 64% would not be in favor of switching to weekly automated garbage collection to save approximately \$1 on their monthly bill, however 55% believe weekly collection can reduce pollution, limit wear and tear, and improve safety.
- Although a capital expense is incurred, the operational savings more than cover the expense. Based on KCI's updated analysis, the net impact is approximately \$1.10 per household per month savings.

Conclusion:

- For modeling purposes, automated collection was not included.
- By implementing automated collection, the City could:
 - Increase productivity.
 - Improve workforce sustainability through reduced accident risk and worker compensation claims.
 - Reduce the cost for services to help reduce the amount of rate increases required to maintain enterprise funding requirements.
 - Position the City for the possibility to implement carted single stream recycling.
 - Position the City for the possibility to implement PAYT based on variable cart sizes.

3.5 Roll-Off Service

Background:

- In 2015, roll-off container service represented a relatively small portion of the City's revenue, accounting for approximately 7% of solid waste service revenue; however, roll-off collection accounted for approximately 24% of total tonnage collected by the City. The cost to operate the City roll-off service is approximately 195% higher than the revenue currently generated from fees.
- Currently, City ordinance requires all solid waste accumulated in the City to be collected, conveyed, and disposed of by the City. According to ordinance definitions, solid waste includes special wastes such as yard trash and C&D debris. It does not appear that the City strictly enforces this ordinance.

Assessment:

- The City's roll-off rates are lower than other jurisdictions. If the City adjusts roll-off rates to more closely align with actual costs, it may affect demand.
- City staff reports that some businesses use roll-off service instead of dumpster service for their garbage because it is less expensive, although roll-off service is intended only for bulky waste and C&D debris. Increasing roll-off rates may discourage this practice.
- According to discussions with City staff, current procedures for customers wishing to set up roll-off service can be time consuming and confusing, with trips required to both City Hall and Public Works. This tedious process may discourage potential customers.
- City staff has indicated that the level of effort required to administer short-term roll-off service is significantly higher than long-term service.
- The Division indicated the desire to consider being the sole provider for roll-off services within the City borders. If the City desired to become the sole provider of roll-off service it would need to comply with requirements for Florida Statute 403.70605, which states that government cannot displace a private solid waste collection company unless it holds a public hearing and provides affected private haulers with 3-year notice before displacing them. Alternately to the 3-year notice, the City may in essence "buy-out" the private companies by paying them the equivalent of their preceding 15 months' gross revenue.

Conclusion:

- Current roll-off rates are significantly less than the estimated actual cost to provide the service. The City should consider adjusting rates to cover costs.
- For modeling purposes, rates were not adjusted in the baseline.
- If the City is still interested in evaluating the value of expanding roll-off services, after adjusting rates to cover the current cost of services a more detailed analysis should be conducted to consider demand for services, customer satisfaction, statutory requirements, and enforcement issues.

3.6 CNG Conversion

Background:

- Compressed natural gas (CNG) is less costly than diesel fuel: CNG cost has averaged approximately 50% of diesel costs in recent years.
- CNG has lower greenhouse gas (GHG) and other emissions such as SO_x (i.e., lower sulfur oxides, sulfur monoxide, sulfur dioxide, sulfur trioxide, higher sulfur oxides, disulfur monoxide, and disulfur dioxide), NO_x (i.e., mono-nitrate oxides NO and NO₂), and particulates than diesel or gasoline.
- CNG proponents claimed that CNG trucks have lower engine and powertrain maintenance costs, however the waste collection industry does not yet have long-term experience to confirm this.
- CNG engines have lower power for comparable displacement so larger engines are needed to have comparable load performance as diesel.
- CNG requires a dedicated fueling facility. Slow-fill facilities, which can be used to re-fuel vehicles overnight, are less costly to develop and operate than fast-fill facilities, which can re-fuel CNG vehicles in time comparable to diesel fueling.
- Capital investment is generally necessary to modify existing or build new vehicle maintenance facilities compliant with CNG vehicle servicing regulations.

Assessment:

- City staff has consulted with a company that offers CNG infrastructure development. It was confirmed that existing CNG fueling facilities are not currently available for the Division fleet.
- The Division's current fleet alone is not quite large enough to achieve the economies of scale necessary to financially justify CNG conversion; however, based on anticipated growth it may become economically viable in the future.
- CNG could be economically viable in the near term if other City fleet vehicles in addition to the Division convert.

Conclusion:

- For modeling purposes, CNG was not included.
- The City should reassess feasibility of CNG conversion if:
 - CNG fueling facilities become available in the area.
 - Other City fleet decide to switch to CNG.
 - The Division's fleet increased sufficiently to achieve economies of scale.
- If reassessed, a feasibility assessment should be based on clear objectives for conversion including, but not limited to, cost savings, vehicle maintenance and repair, air quality, and GHG reductions.

3.7 Single Stream Recycling

Background:

- Venice currently provides dual stream recycling collection. Residents are provided two 14-gallon containers and instructed to place mixed fiber and commingled containers in separate bins.
- Sarasota County's program is based on dual stream recycling. The County MRF does not currently accept single stream recyclables, where recyclables are collected commingled with containers and paper in the same container, nor is there any confirmed plan to for the County to convert to single stream.
- Single stream recycling has become the standard residential recycling method in many Florida communities.
- Single stream carted collection has been demonstrated to increase recycling tonnage significantly. Increased tonnage can be attributed to several factors:
 - Increased convenience by not needing to separate fiber and containers.
 - Larger capacity of carts versus bins. A 64-gallon recycling cart provides more than twice the capacity as two 14-gallon bins.
 - Less effort to roll a cart versus carrying two bins to the curb for collection.

Assessment:

- To implement single stream, Venice would need to secure an agreement with a MRF that accepts single stream recyclables. Options in the City's vicinity are limited to Waste Management in Sarasota (23 miles) and Charlotte County (32 miles).
- Conversion to automated single stream collection would have the following primary financial impacts:
 - Capital costs associated with purchasing automated collection trucks and roll carts. As noted previously, the City could continue to utilize a single fleet of trucks for residential and commercial collection and thereby maximize asset utilization.
 - Reduced operational costs per customer due to increased recycling collection productivity.
 - Reduced garbage disposal cost due to higher recycling rate.
- Conversion would also impact marketing of recyclables. Venice currently markets recycled fiber to private recyclers. Recycled fiber is tipped in the City, loaded into transfer trailers, and delivered to a private recycling facility in Pinellas County. This facility has historically paid \$25 per ton of mixed paper and \$30 per ton of cardboard; however, beginning August 1, 2015 the revenue per ton was reduced to \$15 for both mixed paper and cardboard. The City delivers commingled containers to the county MRF and pays \$7.53 per ton.

- KCI developed a preliminary estimate of the financial impact of converting to single stream based on the results of our allocated cost of service analysis and expected performance metrics.
 - Key operating assumptions: 40% more recycling tonnage due to single stream; 15% reduction in recycling collection cost per household due to single stream and automation; and collection trucks delivering single stream recyclables to Sarasota.
 - Key financial assumptions: \$101 per hour for dual stream collection crew; \$106 per hour for single stream collection crew; \$30 and \$25 per ton revenue for separated OCC and dual stream fiber, respectively; \$7.53 per ton tip fee for dual stream containers; \$15 per ton tip fee for single stream recyclables; and \$57 per ton avoided disposal cost.
 - Result: Conversion to single stream collection would reduce City costs by approximately \$130,000 per year based on current recycling tip fees, resulting in a savings of approximately \$0.63 per customer per month.

Conclusion:

- For modeling purposes, single stream recycling was not included.
- Given the limited processing options available, the City is not positioned for converting to single at this time. However, market opportunities should be monitored, including the County's solid waste master plan and its recommendation to convert to single stream.
- Should favorable processing options exist, a detailed analysis should be conducted to more accurately determine the operational and financial impacts of conversion to single stream.

3.8 Seasonal Credits

Background:

- Currently residential customers are charged for service year round, regardless of whether or not they are seasonal residents.
- Some communities in Florida allow residents to suspend collection service and not be billed if the home is vacant on seasonal basis. In some cases sanitation service is tied to other municipal utility services, such as water, and may be suspended if the other utility is turned off.

Assessment:

- Seasonal disconnects would reduce the amount of revenue received by the Division. The financial impact is difficult to estimate because the number of seasonal properties/property owners who would request seasonal credits are not known.
- Although City staff would not have to provide collection service to vacant homes, fixed operating costs would still be incurred. Recycling and solid waste services are like other municipal services and utilities and they must be available regardless of whether residents use the service year round or seasonally. Trucks and employees cannot be sold or laid-off to adjust to monthly fluctuations in customers, so these costs are incurred year-round. Crews must

drive down every street even if some customers do not set out anything for collection. The Division must be ready to service all customers.

Conclusion:

- For modeling purposes, seasonal credits were not included.
- If the City wants to further consider seasonal credits, a detailed analysis should be conducted surveying practices in other jurisdictions with particular focus on how credits are established and how jurisdictions manage or minimize fluctuations in revenue.

3.9 Residential Pay-As-You-Throw (PAYT)

Background:

- PAYT essentially treats garbage collection like other public utilities such as water and electricity where users pay based on their level of usage. Communities with well-designed PAYT programs reduce MSW by 15 to 20% while significantly increasing recycling rates. PAYT comes in a range of forms depending on jurisdictions' objectives and preferences.
 - Can/Cart Programs: Generators pay a fixed price based on the size or number of containers they select for their waste service, e.g. 15-, 30-, 60- or 90-gallon carts. The larger or greater number of waste collection containers used, the more a generator pays.
 - Bag/Sticker Programs: Generators purchase special color-coded or imprinted plastic bags or stickers for their waste. The predetermined price of each bag or sticker includes some or all of the cost of waste services.
 - Hybrid Programs: Generators pay a fixed amount for a specified base volume of waste service e.g., one 30-gallon container per week per dwelling unit. Waste placed out for collection that exceeds this amount accrues an additional charge.
 - Weight-Based Programs: Weight is determined by collection vehicles equipped with technology that can assess the weight of the contents of a container at curbside and charge accordingly. (Please note that the technology for this is not yet reliable and accurate enough for residential services.)
- Public reactions to PAYT range from those supporting it because they can reduce how much they pay, to those opposing it as unfair to larger families and those who generate more waste.
- A common concern about PAYT is that it may increase illegal dumping; however, most communities reportedly do not experience this problem. Offering convenient, comprehensive waste diversion opportunities (e.g., recycling and yard waste) helps address this concern. In addition, illegal dumping can be controlled through education, monitoring, and enforcement.
- Developing a PAYT rate structure requires careful planning to project how many customers will subscribe to each size/rate level, and thereby establish rates that generate revenue sufficient to cover fixed operating costs. Rate structures are typically established that cover costs for recycling and yard waste collection as part of the variable garbage fees. Designing and

implementing a PAYT program requires significant outreach and education to ensure citizens understand the equitability of the program and how it works.

Assessment:

- If Venice were to implement PAYT and achieve a 15% reduction in garbage tonnage that would equate to an estimated 740 tons per year less garbage. The City would realize approximately \$44,000 per year savings from avoid disposal costs (based on \$57 per ton tip fee).
- The survey conducted by KCI in 2013 asked residents' opinions on PAYT. A slight majority of respondents (56%) were opposed to a PAYT system. Based on written responses, a large proportion of these residents feel that such a system would be too complicated due to the variable nature of solid waste.
- Can/cart-based PAYT would require each customer choose a specific size and/or number of containers. Operational and financial consequences for a carted program include the following.
 - Potentially yield greater operational efficiency and cost savings.
 - Significant up-front costs to purchase and deploy carts.
 - The need to manage a diverse inventory of deployed cans/carts, track the size and number of containers at each customer location, and integrate with City billing services.
- Bag/sticker PAYT would require that citizens purchase special bags in which to place garbage or affix stickers to standard garbage bags for collection. Operational and financial consequences include the following.
 - A bag/sticker program is compatible with the City's current manual collection service.
 - With a sticker program Staff would need to inspect each bag and if bags are placed inside containers it could slow down operations.
 - Bags/stickers are typically distributed through City retailers (typically grocery and convenience stores) to make it easy for citizens to obtain them. The City would need to implement and coordinate a program to manage inventory, distribute, and collect revenue from the sale of PAYT bags or stickers.
 - A bag/sticker program is not compatible with automated collection because it is impractical to visually inspect the contents of collection carts.
- A hybrid PAYT would have the following potential operational requirements:
 - The City would need to implement on-route monitoring systems to track quantities above the specified base service level and that integrates with the City billing system.

Conclusion:

- For modeling purposes, PAYT was not included.
- An in-depth assessment of a PAYT program was beyond the scope of this project. If the City wishes to consider PAYT further, a detailed analysis should be conducted including detailed

operational and financial impacts, case studies of PAYT systems in comparable communities, and further assessment of customer opinions.

3.10 Summary

Based on the assessment of collection service and infrastructure options and the Division's goal to further improve and modernize solid waste services, two major changes should be implemented in the next few years that have a significant impact on expenditures and thus customer rates. These changes are conversion to automated residential garbage collection and development of a new service yard for the Division.

Overlaying these service and infrastructure issues is the need to accommodate significant growth in the coming years. In addition to maintaining regular fleet replacement schedules, the City's capital investment plan must also be able to fund the purchase of new vehicles and containers to service the growing base of residential and commercial customers.¹

It is anticipated that other major programmatic changes discussed in this assessment – single stream recycling, weekly garbage collection and residential PAYT – may be implemented. Based on KCI's 2013 assessment, conversion to single stream and weekly garbage collection would potentially lead to overall reduction in Division expenditures. PAYT programs can be designed to be revenue- and cost-neutral by balancing the variable rates with expected percentages of customers that would subscribe to each cart size.

To help further assess and prioritize service options and programmatic changes, it is recommended that the City establish a citizen advisory group to provide input and recommendations for service options to the Division and city-decision makers. The duties of this group could include gathering input from the public, review staff and consultant findings and recommendations, and act as a liaison between the public and City Council.

¹ The Division's current fleet replacement plan attributes current pricing to future purchases. The Division may want to update the fleet replacement plan to the future value of the fleet to be purchased.

Section 4

Findings and Recommendations

4.1 Findings

4.1.1 Cost of Services

The analysis provides estimates for the cost of services for each service type that the Division offers by collection and disposal component. Because cost of services is affected by changes in operational costs and disposal costs, the cost of services model is an effective tool to help City staff make financial-based decisions when improving operational efficiency in order to reduce expenditures, as well as identifying disposal/processing market opportunities and/or limitations. Table 10 compares the estimated cost of services based on the Division's FY2015 actual revenue and expenses, and current rates.

Following are some key findings from the cost of services analysis:

- The standard commercial garbage dumpster service is currently subsidizing the rest of the system, with the cost of service being approximately 79 percent of the current rates.
- The cost of residential and commercial can service is approximately 168 percent higher than current rates.
- The cost of residential recycling and yard waste service is approximately 122 percent higher than current rates.
- The cost of roll-off services is approximately 195 percent higher than current rates. As discussed earlier daily rental revenue was not calculated because of lack of data, which could help narrow the gap. However, limited information was available to fully allocate direct expenses associated with roll-off service, which if accounted for could widen the gap. Regardless, it is clear that the roll-off program is not currently supporting itself.

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Table 10: Estimated Cost of Services Compared to Current Service Rates

	Estimated Cost of Services	2015 Rates**	% Est Cost of Services/Rate
Garbage Services			
Residential Can Service	\$16.08	\$9.56	168.2%
Commercial Can Service	\$16.08	\$9.56	168.2%
Commercial Dumpster Service*	\$26.70	\$33.70	79.2%
Recycling Services			
Residential/MF - DS 14G Bins + Yard Waste	\$8.88	\$7.28	122.0%
Commercial - DS 14G Bins	\$6.10	\$7.28	83.8%
Commercial - DS 94G Carts	\$23.79	\$28.02	84.9%
Commercial Dumpster Service*	\$10.70	\$17.06	62.7%
Roll-Off Services			
Per Pull	\$175.21	\$90.00	194.7%

* STD and PO rates for commercial dumpster service were calculated as average cubic yards per collection. STD service has a higher average cubic yard capacity per collection event than STD service based on customer requirements. In a progressive rate structure, such as the City's, the cost per cubic yard is greater for lower capacity service causing PO services to appear inflated. Therefore, STD service was used to compare the estimated costs of service to current rates.

** 2015 Rates for commercial dumpster service were adjusted to reflect the actual rate for the estimated average cubic yard per collection event.

4.1.2 Revenue and Expense Projections

The revenue and expense spreadsheet provides a dynamic model that enables various factors affecting revenue and/or expenses to be adjusted as conditions warrant. The model projects the effect on the enterprise fund and can identify projected budget shortfalls and, subsequently, if the fund balance is projected to dip below policy-required level. Either of these events may trigger the need to increase rates or reduce costs to make up for the projected deficit. The model can also be used to evaluate “what if” scenarios should a change in one or more of the critical drivers become imminent. The visibility provided by the model will help the Division be better prepared to meet future budget requirements and maintain a healthy enterprise fund.

Overall, based on KCI’s analysis of the information provided by the City, the Division’s expenditures exceed revenue and a consistent shortfall exists that will quickly deplete the current fund balance. In order to ensure the long-term viability of the solid waste system and enterprise fund, rate modifications are necessary.

4.2 Recommendations

4.2.1 Fund Balance

Policy requires Division’s fund balance to equal or exceed four months of operating expenses. However, this policy-required fund balance does not include non-operating expenses such as

transfers to the General Fund and Fleet Fund, nor does it provide a cushion for growth. In FY2015, the non-operating expenses comprised almost 29 percent of total expenses. In addition, the City acknowledges a potential for moderate to high growth in the next few years that would require an expansion in operations. By simply maintaining the policy-required fund balance, Division would not have sufficient resources to meet the demand on the system.

Although the fund balance varies based on cash flow at the end of the year and cannot be precisely modeled, the rate model projects the fund balance by making adjustments based on revenue minus total expenses plus adding back in non-cash expenses such as depreciation and other post employee benefits. KCI recommends that the Division use this adjustment as a cost-neutral target with the non-cash expenses building the cushion in the enterprise fund for inevitable expansion.

4.2.2 Fleet Financing

From FY2011 through FY2014, Division purchased replacement fleet vehicles outright via the enterprise fund. Due to the shrinking fund balance, in the past few years' vehicle replacement has been put off, where possible. In FY2015, a dedicated Fleet Fund was established from which the Division transferred funds and purchased \$785,478 worth of replacement fleet. However, the Division has \$4.76 million in fleet replacement planned over the next five years and the current system, based on rates and the existing fund balance, is not sufficient to meet the Division's capital investment needs.

In order to provide immediate relief KCI recommends that the Division begin financing fleet purchases. This will provide an immediate increase to the fund balance, but as the financing payments begin to stack over the years the Division will again need to draw from the fund balance to meet expenses.

4.2.3 Roll-Off Services

KCI recommends the City increase roll-off service rates and simplify the roll-off rate structure. Typically, roll-off charges are comprised of a pull fee (charged each time a container is serviced), a container or service fee (either a daily rental fee or monthly flat fee), and a disposal fee that is typically a pass through fee for the cost to tip the container at the disposal or processing facility.

Currently, the City charges a daily fee but the rate is different depending on whether the container has been at the customer's location for less than 90 days or more than 90 days. The cost of service analysis identified that the estimated cost per pull is approximately \$191. As discussed previously, due to the limited information regarding direct expenses for roll-off services, the full cost of service may be higher and the roll-off program is not supporting itself.

KCI recommends a monthly flat fee for roll-off services. However, the City could waive the monthly fee for customers that have their container serviced regularly, such as weekly. Regular service offers the greatest efficiency through asset utilization and regular collection

service. The service fee would help to offset the City’s cost for unused assets. KCI also recommends increasing the City’s pull fee to cover the cost of providing the service. Table 11 provides a comparison of the City’s current and recommended rates.

Table 11: Current Roll-Off Service Rates Compared to Recommended Rates

Collection Service	Current Rate (Short Term/Long Term)	Recommended Rate
Uncompacted Service		
Pull Charge (per pull)	\$100.00/\$80.00	\$200.00
Rental Charge (per day)	\$2.50/\$1.25	N/A
Monthly Service Fee*	N/A	\$75.00
Compacted Service		
Pull Charge (per pull)	\$150.00	\$250.00
Rental Charge (per day)	\$2.50	N/A
Monthly Service Fee*	N/A	\$75.00

* The monthly service fee is waived with regular service.

KCI conducted a side-by-side rate comparison for the recommended rates with the other jurisdictions identified in the current rate comparison reported in Section 1.3. Three separate services were included in the side-by-side comparison using the City’s current and recommended rates. Table 12 provides the roll-off service rate comparison.

Table 12: Roll-Off Service Current and Recommended Rate Comparison

Jurisdiction	Uncompacted 20cy 1x/wk pull	Uncompacted 20cy 1x/mo pull	Compacted 30cy 1x/wk pull
City of Venice (current rates)	\$383.90 - \$508.00	\$117.50 - \$175.00	\$724.50
City of Clearwater	\$699.42	\$279.98	\$637.12
City of Dunedin	\$1,109.39	\$376.21	N/A
City of Largo	\$619.19	\$143.00	\$866.00
City of North Port	\$807.70	\$281.13	\$869.93
Town of Longboat Key	\$954.28	\$358.18	\$1,525.03
Sarasota County	\$941.80	\$307.73	\$1,352.40
City of Venice (recommended rates)	\$866.00	\$275.00	\$1,082.50

4.2.4 Residential Rates

The City’s rates have remained the same since 2006 – almost 10 years ago. KCI recommends that rates be reviewed annually and adjustments made periodically (annually or semi-annually) to reflect the change in cost to provide services. The Consumer Price Index (CPI) is often used as an escalator. If the City’s 2006 monthly residential rate for garbage and

recycling had been escalated by CPI², the FY2016 rate would be \$20.94. The escalated rate is more than \$4.50 per month greater than the current rate. Regular rate adjustments help in maintaining a healthy and sustainable enterprise fund.

4.2.5 Update and Review Rate Model

The rate model should be updated annually with revenue, expenses, tonnage, and customer/unit numbers and reviewed to evaluate the fund balance position based on actual and projected growth. In a stable system the cost of service analysis does not have to be updated regularly; however, because of the potential for multiple changes within the City's solid waste system within the next few years, including anticipated growth within the City at uncertain levels, the need for facility upgrades and expansion, and potential for various service options to be implemented, KCI recommends that the cost of services analysis be updated in three years. This will allow the Division to better understand the effect of impacts on the system and ensure that the enterprise fund is still healthy and sustainable.

4.3 Conclusion

The rate model developed through this project provides the City with a dynamic model that estimates the cost of services and projects future revenues and expenses over a five-year timeframe. The base rate model projected that the future stability of the enterprise fund is in jeopardy if no action is taken. The financing of fleet beginning in FY2017 and adjustment of rates as discussed previously will stabilize the long-term outlook of the enterprise fund. The City can continue to utilize the rate model to evaluate other revenue and expense adjustments in the future.

² CPI for All Urban Consumers; South Urban Region; All Items, not seasonally adjusted, 1982-1984=100 reference base, published by the United States Department of Labor, Department of Labor Statistics (Series ID = CUUR0300SA0).

Exhibit A: Residential Collection Service Rate Comparison Details

Jurisdiction	Service Level	Service Provider	Total Monthly Billing Rate	Monthly Billing Rate by Service				Set-Out Method (MSW; R)	Single Family Units
				Garbage	Recycling	Yard Waste	Bulk		
City of Venice	2-1-1	City	\$16.84	\$16.84	Included	Included	Included, limit not specified	Customer Cans; Dual Stream Bins	11,183
City of Clearwater	2-1-1	City	\$27.46	\$24.86	\$2.60	Included	Included, limit not specified	Carts; Single Stream Carts	27,000
City of Dunedin	1-1-1	City (MSW/YW) Republic (R)	\$17.10	\$17.10	Included	Included	Included, limit not specified. \$15.68 per appliance	Carts; Single Stream Carts	13,000
City of Largo	2-1-1	City	\$17.65	\$17.65	Included	Included	Included, 4 collection/yr, <20 CY per collection	Carts; Single Stream Carts	17,000
City of North Port	1-1-1	City	\$20.75	\$20.75	Included	Included	Included, 2 collection/yr, <5 CY per collection, add'l bulk, \$15 per CY	Carts; Dual Stream Bins	20,856
City of Punta Gorda	2-1-1	City (MSW/YW) Waste Pro (R)	\$19.20	\$12.00	\$5.00	\$2.20	Included, limit not specified	Customer Cans; Single Stream Bins	7,000
City of Sarasota	1-1-1	City (MSW) WM (YW/R)	\$21.66	\$21.66	Included	Included	Included, limit not specified	Carts; Dual Stream Bins	22,460
Town of Longboat Key	2-1-1	WM	\$14.86	\$9.88	\$2.59	\$2.39	Included, limit not specified	Carts; Single Stream Carts	2,008
Sarasota County (unincorporated)	1-1-1	WM	\$13.29	\$13.29	Included	Included	Included, limit not specified	Customer Cans; Dual Stream Bins	93,262