kessler consulting inc.
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TECHNICAL MEMORANDUM

TO: Jay Gewin
Key West Utilities Manager

FROM: Robin Mitchell
Project Manager

DATE: July 13, 2011

SUBJ: **Analysis of Collection Agreement, Services and Fees; Identification of Recycling Opportunities**

PROJ #: 120-00.00

Per Task 2 of Task Order 1, Kessler Consulting, Inc. (KCI) reviewed the existing agreement for the collection of residential and commercial solid waste and residential recyclables (Agreement) between the City of Key West (City) and Waste Management (WM). Per Task 3, KCI also compared solid waste and recycling collection fees with those in other jurisdictions. This memorandum provides general comments on the existing Agreement, presents a comparative analysis of WM's residential and commercial collection fees, and identifies initial opportunities to increase recycling in the near-term working in partnership with WM and within the parameters of the existing Agreement. These recycling opportunities do not take the place of the broader and more substantive waste diversion opportunities that are being evaluated as part of Task 6 for inclusion in the Solid Waste Master Plan.

Collection Agreement Background

In 1999, the City issued a Request for Qualifications to which three large waste hauling firms responded. The City Commission ranked WM highest and City staff negotiated a contract and pricing structure. The City entered into an exclusive Agreement with WM for residential and commercial solid waste and residential recycling collection on January 1, 2000. The City and WM renewed the agreement in 2005 and again in 2009, each for additional five-year terms. The current Agreement expires on December 31, 2014, but also has a clause that allows termination for convenience with a 180-day written notification.

WM received the following fee increase, when the Agreement was renewed in April 2005, to be used as a direct housing allowance to its 34 employees. This was in addition to the CPI increase allowed in the Agreement.

- $1.05 per residential unit per month
- $0.30 per cubic yard per month for commercial collection

During the 2009 extension negotiations and according to a Memorandum from Jay Gewin, Utilities Director, dated November 3, 2009, WM agreed to negotiate with the City on the following concepts if the five-year extension was approved:

- Mechanisms designed to make recycling more convenient for families and businesses, including increased promotional efforts along with a recycling incentive program.
- Improved customer service and response, including a local call center.
- Research into the feasibility of a new composting program.
- The incorporation of Best Management Practices.
- Creating an e-waste collection program.
- Creating a monthly Household Hazardous Waste (HHW) collection program within the City limits.
- Feasibility of incorporating a pay-as-you-throw solid waste customer billing system.

Opportunities to Increase Recycling

As mentioned above, during the 2009 extension negotiations, WM agreed to negotiate with the City regarding mechanisms designed to make recycling more convenient for residents and businesses. The recycling opportunities outlined below present a starting point and framework for such negotiations. The City has contracted with KCI to develop a Solid Waste Master Plan; however, the City could proceed with implementing many of the items listed below prior to completion of the plan. With assistance from KCI, the City and WM could begin discussing these various recycling opportunities and working cooperatively to establish a more effective program for capturing residential and commercial recyclables. Some of these opportunities can be pursued immediately, while others may require additional planning or resources.

1. **Commercial Recycling**: The greatest opportunities to increase recycling are in the commercial sector. Some businesses self-haul recyclables to the City's Transfer Station because they are not aware that WM offers this service or believe it is too expensive. Businesses should be able to partially offset the cost of recycling through savings in garbage collection. Specific actions to begin to increase commercial recycling include the following:

    a. **Negotiate and establish not-to-exceed commercial recycling fees** in the Agreement that are equal to or less than comparable fees to collect solid waste (disposal not included). Exhibit B of the Agreement states the commercial recycling fees at that time, which are identical to the commercial solid waste collection fees, indicating the intent of the Agreement for these fees to be equivalent to each other during the term of the Agreement.

    These fees are no longer equivalent, as noted in Table 1, which provides a comparison of WM's current commercial solid waste and recycling collection fees. Fees for commercial recycling dumpsters are 27 percent greater than comparable fees for solid waste collection, and fees for recycling cart service are 71 percent greater than the cost of commercial solid waste cart collection. Because WM also receives revenue from marketing the recovered commodities, collection fees for recyclables should arguably be lower given the current marketplace for recovered commodities.

Table 1: Comparison of Commercial Collection Fees for Solid Waste and Recyclables

Container Type	Solid Waste		Recyclables		% Difference
	Per Pickup	Per CY	Per Pickup	Per CY	
18-Gallon Bins	NA	NA	$0.53	$7.66	NA
Dumpsters (OCC)	Varies	$7.46 - $8.47	Varies	$10.72	27%
32-Gallon Carts	$1.52	$9.57	$2.59	$16.33	71%
95-Gallon Carts	$4.55	$9.67	$7.76	$16.50	71%

OCC = Old Corrugated Cardboard NA = Not Applicable

KCI analyzed the fee for collecting commercial cardboard in dumpsters. One ton of flattened, uncompacted cardboard takes up about 20 cubic yards of space, which at $10.72 per cubic yard, would cost $214 for collection. The current market value of cardboard is approximately $170 per ton, for potential gross revenue to WM of about $384 per ton. Assuming an actual cost for collection of $6 per cubic yard, a cost of $37 per ton to transport recyclables from Key West to WM's MRF in Broward County, and a processing cost of $50 per ton, WM would potentially net more than $175 per ton from recovering commercial cardboard. Therefore, the collection fees for commercial cardboard seem high and warrant further discussion with WM. Cardboard is only one of many recyclable materials, and different commodities have different market values.

b. **Require WM to offer collection of the same types of recyclable materials from businesses as it does from residents**, including all grades and types of recyclable paper and containers. Section 5.B (Commercial Recycling, page 12) of the Agreement requires WM to offer a commercial recycling program equal to residential service; however, it appears that commercial dumpster service is available only for corrugated cardboard. A fee structure should be established to collect recyclable fiber and recyclable containers in all types of collection containers typically utilized by commercial businesses.

c. **Develop an outreach campaign to promote commercial recycling and a technical assistance program to assist businesses in establishing programs**. The City and WM should work cooperatively on this mutually beneficial campaign and assistance program. Businesses should be made aware of available recycling services and fees, as well as the potential savings of right-sizing their waste collection services once recycling is established.

d. Explore opportunities to collect source-separated glass from bars and restaurants and process for local use. Glass is one of the heaviest recyclable materials and one of the lowest in value. If collected separately, it could potentially be processed for recycling in a non-container use, such as construction aggregate, paving material, or other alternative application.

e. **Request WM to track and report on businesses to which it offers recycling services** and, if such services are refused, the reasons for refusal.

f. **Amend City Ordinance and building codes, as appropriate, to comply with recently passed State legislation** (2010 HB 7243): "(i)n accordance with applicable local government ordinances, newly developed property receiving a certificate of occupancy, or its equivalent, on or after July 1, 2012, that is used for multifamily residential or commercial purposes, must provide adequate space and an adequate receptacle for recycling by tenants and owners of the property." (Section 403.706(2)(c), F.S.) In addition, WM should proactively work with new developments to establish and provide recycling service.

2. **Residential Recycling**: Residential recycling is more established than commercial recycling, but opportunities exist for improvement. KCI will be evaluating the feasibility of Pay-As-You-Throw and other incentive programs as part of our ongoing work, but more immediate suggested actions include the following:

   a. **Eliminate the annual 5 percent cap on WM's purchase and distribution of new recycling containers** as established in Section 5.A.32 (page 12) of the Agreement. According to City staff, the 5 percent cap has not been exceeded in the past few years; however, the inability to obtain sufficient recycling containers can be a deterrent to recycling. The limit should be eliminated or, at a minimum, WM should offer and deliver additional containers to residents at cost and recycling stickers to place on customer-provided containers at no cost. Residents should not be required to pick up recycling stickers at City Hall.

   b. **Require WM to provide current and accurate recycling information to customers**, as well as non-collection notices that clearly explain the reason materials were not collected with recyclables. Anecdotal information indicates the recycling information currently distributed with new recycling bins has not been updated to include the additional materials now being accepted by WM.

   c. **Develop a customer education campaign with WM's assistance**. Section 5.A.1 (Educational Information, page 12) of the Agreement requires WM to provide educational information related to recycling, sponsor Public Service Announcements, and provide at least $6,000 of educational support annually. WM should annually provide the City with a list of proposed educational information and activities, with monthly updates on activities performed.

   d. **Require WM to provide sufficient recycling containers and service to all multifamily dwelling units**, and to report on any complexes that refuse such service and the reasons for refusal. According to Section 5.A.2 (page 12) of the Agreement, WM is to provide appropriate-sized recycling containers to multifamily dwelling units up to a "maximum" capacity of 18 gallons multiplied by the number of residential units in the multifamily dwelling unit. Since single-family residential units are allowed to place multiple recycling containers curbside for collection and multifamily dwelling units pay the same fee for recycling as single-family units, this "maximum" capacity limit should be eliminated or turned into a "minimum" capacity. The City should request from and review with WM a list of multifamily dwelling units to identify those without sufficient recycling capacity.

   e. **Convert to recycling carts instead of bins**. Recycling carts provide greater capacity and are found to increase recycling rates. Any change in service or containers will require upfront public education to introduce and explain the new system.

3. **Recycling at Special Events and in Public Areas**: The Agreement can also be utilized to ensure that special event planners can obtain recycling services at a reasonable rate, as well as to expand recycling in public areas. Suggested actions include the following:

   a. **Negotiate not-to-exceed service fees for providing recycling at special events** and incorporate these fees into the Agreement. Fees should be provided for various container types and sizes.

   b. **Discuss with WM the placement and servicing of recycling containers in public areas**. According to Exhibit B (page 8) of the Agreement, WM is to provide and maintain recycling containers for use at public sites as directed by the City.

4. **Organics Recovery**: Diversion of organics, especially yard waste, offers a significant opportunity to increase the City's recycling rate, but requires the infrastructure to process the materials

once collected. As part of our ongoing work, KCI will be working with the City to explore opportunities to establish or pilot a composting operation. Section 4.B.3.(ii) of the Agreement requires WM to develop procedures for the separation of yard waste if the City begins a composting program. At that time, the City should also consider converting to weekly solid waste collection to avoid a fee increase.

The recycling opportunities outlined above do not replace the more in-depth research and analysis of waste reduction strategies that KCI will be conducting in future tasks. Rather, they represent initial actions that can start to boost recycling in the near-term and lay the foundation for future efforts.

Comments Regarding Collection Agreement

KCI noted differences between what is required in the Agreement and the services currently provided by WM. KCI assumes that the City approved these changes, but no documentation was available, nor was it clear whether the City received any benefit or compensation, in terms of reduced fees, for these changes. Provided below are comments regarding the Agreement, some of which warrant review and discussion with WM.

1. The following items were noted in the Definitions section, which warrant revision during the next Agreement amendment:
   - Section 3.BB, definition of Garbage Receptacle (page 4) – The definition refers to a garbage can rather than the solid waste carts that are currently used. This definition should be revised and/or a definition added for Solid Waste Cart.
   - Section 3.RR, definition of Refuse Regulations (page 5) – The last sentence of this definition appears to belong to the definition of Roll-Off Container Collection Services rather than Refuse Regulations.
   - Section 3.UU, definition of Bio-Hazardous Wastes (page 6) – This is not a full definition and should be combined with the earlier definition of Bio-Hazardous Waste in Section 3.C.
   - Section 3.HHH (page 7) – It does not state what term is being defined.
2. Section 4.B.3.(iii), Items Collected (page 8) – Contractor is required to remove refrigerant from White Goods curbside. WM is currently removing refrigerant from white goods after they are delivered to the City's Transfer Station. This clause should be revised to reflect the current management procedures.
3. Section 4.B.3.(iii), Items Collected (page 8) – This section also references a Metals Marketing and Management Plan in Attachment A (appears that reference should be Attachment B), which states that WM will load, transport, and market metals and white goods received at the City's Waste-to-Energy plant at a cost to the City of $20 per ton. The City assumed the responsibility of loading metals and white goods when operations moved to the City's Transfer Station; however, the City continues to pay WM $21.60 per ton to transport and market these materials. The City should receive some level of compensation (or reduction in fees) for providing the loading services for WM. WM retains any revenue for these commodities when marketed; the current market value of white goods in the southeast U.S. is approximately $150 per ton.[1]
4. Section 4.E(i) (page 10) – Contractor is required to provide drop-off services for household hazardous waste four times per year at no additional charge to Residential Customers. This service is not being provided and no apparent compensation was provided to the City for

[1] Source: Secondary Materials Pricing index (Hhttp://www.wasterecyclingnews.comH).

eliminating this requirement. City staff should discuss with WM the reasons for eliminating this service and the feasibility of re-establishing it. This clause should be revised to reflect what is agreed upon between the parties.

5. Section 4.E(iii) (page 10) – Contractor is required to collect construction and demolition (C&D) debris, but this is not a service exclusive to the Contractor. This provision should be modified to reflect changes to Florida law requiring, as of January 1, 2012, processing of C&D debris prior to disposal if economically feasible (Section 403.707(9)(g), F.S).
6. Section 4.F, Recyclable Materials (page 10) – Contractor is required to operate the recycling area at the City's facility, which was then located on Stock Island at the Waste-to-Energy plant. Contractor was to maintain and repair all associated equipment and facilities for this service. As with metals and white goods, when solid waste operations were moved to the City's Transfer Station on Rockland Key, the City took over this responsibility and should have received compensation for this. This section should be revised to reflect current operations, the types of materials currently accepted for recycling, and the existing location of the Transfer Station. In addition, given the current market value of recovered commodities, the City should also be receiving a share of the revenue from these commodities.
7. Section 4.H.1, Schedule and 4.H 3, Holidays (page 11) – These two sections contain conflicting information regarding holidays. Section 4.H.1 states that the Contractor shall collect solid waste on the business day following a holiday and Section 4.H.3 states that such collection shall be on the next regularly scheduled collection day following a holiday. The incorrect text should be deleted.
8. Section 4.K, Load Separation (page 12) – Contractor is required to collect commercial solid waste separately from yard waste and separately from residential solid waste that is collected in commercial style as long as there are different charges for different classes of material or as long as separation is required by regulation. Such separation is no longer occurring. This provides operational efficiencies for WM, but the City should have received compensation from WM for this change.
9. Section 5.C, Data Gathering (page 13) – Contractor is required to track residential recycling participation based on weekly setout rates and report monthly to the City. In addition, Contractor is to report to the City details on rejected materials in Recycling Containers on a weekly basis. Neither reporting is currently occurring. The City should determine what types and level of reporting would be most useful, discuss this with WM, and amend this provision accordingly. In lieu of tracking residential recycling participation, KCI recommends that WM be required to track residential recycling setout rates over a one-month period twice per year, in months specified by the City.
10. Section 6.A(ii)(b), Compensation for Commercial Collection Service (page 14) – Contractor is required to provide the City with a monthly computer list of commercial accounts billed. WM should be requested to submit such list in a Microsoft Excel format that enables the City to easily evaluate the data and verify payment of commercial disposal fees.
11. Section 13.B, Reports and Records (page 22) – Contractor is to maintain and provide information, reports, or records to the City as set forth in Exhibit F. According to Exhibit F, the Contractor is to provide the following reports:
    a. Weekly report detailing rejected recycle materials.
    b. List of complaints received (monthly).

c. Monthly report to include (1) residential unit, (2) special pickups, (3) commercial fees, (4) recycle bins delivered, (5) recycling tons, (6) recycling education, (7) hazardous material, and (8) safety.
d. Biannual report on residential tonnage and commercial tonnage, based on one-week collection routes that isolate residential waste from commercial waste.
e. Annual report on recyclable weight by month.
f. Annual report on collection of solid waste and fees from commercial customers.

WM is currently reporting some but not all of this information. The City should determine the reporting and report format it desires, discuss with WM, and revise Exhibit F accordingly.

Comparative Analysis of Collection Fees

KCI conducted a comparative analysis of WM's CY 2011 service fees. Provided below is a discussion of residential and commercial fees in the City, and a comparative analysis with other selected Florida jurisdictions. KCI cautions against making direct comparisons between jurisdictions because of differences in service level, location, market competition, and various other factors. All markets are local, and Key West is a unique community, especially in terms of geographic location. A comparative analysis with multiple jurisdictions can, however, provide an indication of whether the City's service fees are reasonable within the current South Florida marketplace.

Residential Service Fees

WM currently charges the City $10.24 per residential unit per month for solid waste collection and $2.29 per month for recyclable materials collection, for a combined fee of $12.53 per month. Solid waste is collected twice per week, recyclable materials once per week, and yard trash is collected with solid waste, not separately.

Table 2 provides a summary of contractor fees for residential collection services in selected Florida jurisdictions, and Figure 1 depicts a comparison of these fees. For information purposes, Table 2 includes fees not only in South Florida jurisdictions, but also in several jurisdictions around the state that have other service levels, such as weekly solid waste collection, separate yard waste collection, and a Pay-As-You-Throw (PAYT) program (Alachua County).

The City's residential service fee seems reasonable given the location, and appears to be the lowest in the Florida Keys. It is, however, higher than contracted services in several other South Florida jurisdictions of comparable size and service level. The City could potentially receive additional services (e.g., separate yard waste collection) or achieve more favorable rates through contract negotiations or a competitive procurement process.

Should the City decide to conduct a competitive procurement, provided below is a preliminary list of companies that currently provide service in South Florida or are large firms that provide service throughout Florida. This is not an exhaustive list of companies that might be interested in providing collection service in the City.

- Keys Sanitary Services
- Marathon Garbage
- Veolia
- All Service Refuse
- Choice Environmental (recently acquired by Swisher Hygiene)
- Republic
- Waste Pro
- Advanced Disposal
- Waste Services
- Waste Management

Table 2: Single-Family Residential Collection Fees and Services in Selected Florida Jurisdictions

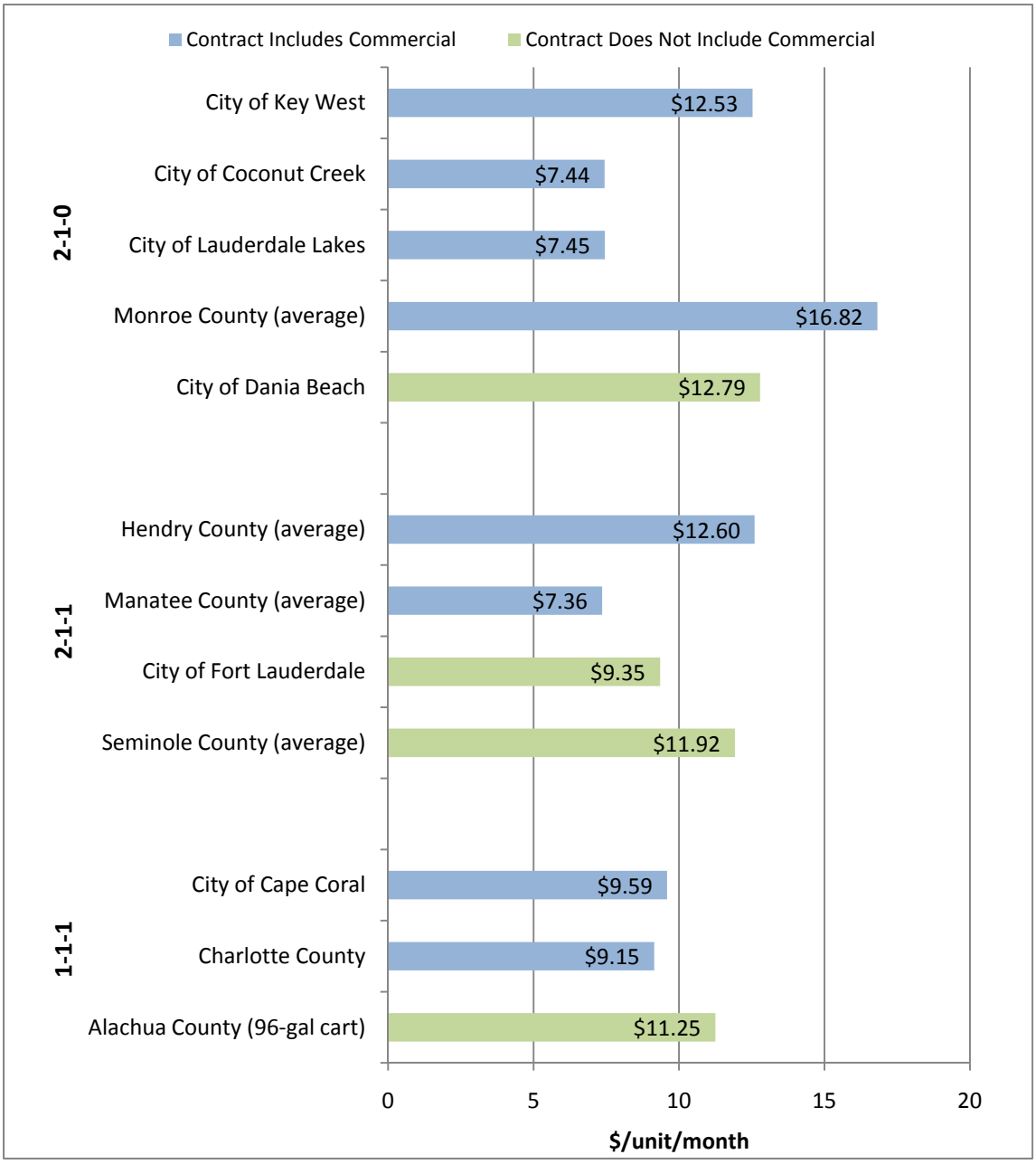
Note: Data provided in this table are based on information provided by city or county personnel or included in each respective contract. Direct comparisons between jurisdictions are cautioned because of differences in the level of services provided, contract terms, and various other local circumstances.

JURISDICTION	HAULER(S)	CONTRACTOR COLLECTION FEES[1] ($/unit/month)	BILLING RATE ($/unit/year)	COLLECTION FREQUENCY[2] (x/week)	TYPE OF COLLECTION	# OF UNITS	CONTRACT INCLUDES COMMERCIAL COLLECTION?
Monroe County							
City of Key West	Waste Management	$12.53	$319.17	2-1-0 Monthly bulk	Automated SW Manual Recycling	14,264	Yes
Monroe County	Waste Management Marathon Garbage Keys Sanitary Services Ocean Reef Club	$17.51 $16.94 $16.99 $15.85	$396.00	2-1-0	Manual	31,535	Yes
Village of Islamorada	Veolia	$27.08 (includes disposal)	$347.55	2-1-1 On call bulk	Manual	4,200	Yes
Miami-Dade County							
City of Miami Beach	Choice Environmental (SW) World Waste (recycling)	$27.23 (includes disposal)	$478.32	2-1-0 On call bulk, 4x/yr	Manual SW Automated Recycling	6,500	No
Broward County							
City of Coconut Creek	All Service Refuse	$7.44	$298.56	2-1-0 Every other month bulk	Manual SW Automated Recycling	10,000	Yes
City of Dania Beach	Waste Management	$12.79	$269.40	2-1-0 Monthly bulk	Automated	9,000	No
City of Fort Lauderdale	Choice Environmental (2 districts)	$8.85 $9.85	$347.40	2-1-1 Monthly bulk	Manual SW & YW Automated Recycling	36,323	No
City of Lauderdale Lakes	Waste Management	$7.45	$280.08	2-1-0 Monthly bulk	Manual & Automated	4,791	Yes
Other Jurisdictions							
City of Cape Coral	Waste Pro	$9.59	$168.00	1-1-1	Automated SW	69,175	Yes
Alachua County (PAYT)	Emerald Waste Services	96- gallon - $11.25 64-gallon - $10.80 35-gallon - $10.30 20-gallon - $10.20	$366.41 $265.35 $202.80 $167.88	1-1-1 On call bulk	Manual	20,232	No
Charlotte County	Waste Management	$9.15	$148.04	1-1-1 On call bulk	Automated	82,000	Yes
Hendry County	Waste Services Choice Environmental	$12.49 $15.68	$221.00	2-1-1 On call bulk	North - Manual & Automated South - Manual	6,675 240	Yes
Manatee County	Waste Pro Waste Management	$7.95 $6.72	$155.52	2-1-1 On call bulk for extra fee	Manual	63,800 54,000	Yes
Seminole County	Waste Pro Veolia Waste Pro	$11.92 $11.14 $12.85	$199.00	2-1-1 On call bulk	Manual	21,650 21,200 22,450	No

[1] CONTRACTOR COLLECTION FEE only includes the fee charged for collection. It does not include disposal, franchise or billing fees unless otherwise noted.
[2] COLLECTION FREQUENCY indicates number of solid waste, recycling, and yard waste collections weekly. For example, 2-1-0 means twice weekly collection of solid waste, weekly collection of recyclables, and no separate collection of yard waste (i.e., yard waste is collected with solid waste).

Figure 1: Comparison of Contractor Fees for Residential Collection by Level of Service

Note: Data provided in this figure are based on information provided by city or county personnel or included in each respective contract. Direct comparisons between jurisdictions are cautioned because of differences in the level of services provided, contract terms, and various other local circumstances.



KCI was also requested to address the feasibility of establishing a municipally run solid waste collection system. This would entail substantial start-up costs for vehicles, equipment, and personnel experienced in running collection operations. In addition, municipal collection operations are generally not run as efficiently or cost-effectively as private operations, which usually have a higher level of asset utilization. In fact, the trend is toward increased privatization. For example, in Broward County, the Cities of Fort Lauderdale and Hollywood have privatized waste hauling services and the City of Deerfield Beach is seriously considering doing so.

KCI also evaluated the City's residential billing rate of $26.60 per month for solid waste services, which includes the $12.53 collection fee and $14.07 for disposal. The City previously estimated that the average residential household disposes of 1.21 tons of solid waste annually. Based on KCI's previous research in other Florida communities, 1.21 tons per household per year of combined solid waste and yard waste is somewhat low, but may not be unreasonable given that some City residents are seasonal. However, based on the current tipping fee of $165.97 per ton, the $14.07 per month collected for disposal pays for only 1.02 tons of solid waste annually rather than 1.21 tons. The reason for this is that residential billing rates are increased based on a percentage of the previous year's rate, rather than on increases in the tipping fee.

KCI recommends that the City (1) update the per-unit waste generation figure by conducting a residential waste generation study and (2) calculate annual billing rate increases by adjusting the collection portion based on changes in the contract collection fee and the disposal portion based on changes in the tipping fee.

Commercial Solid Waste Service Fees

The 2011 service fees charged by WM in the City for various types of commercial solid waste collection and disposal are provided in the following tables:

- Table 3 – commercial dumpster service
- Table 4 – commercial container and cart service
- Table 5 – commercial compactor service

Table 6 provides a comparison of WM's commercial billing fees for various types of containers by converting the collection and disposal components to a cubic yard basis. The disposal fee for non-compaction containers is based on a waste density of 163 pounds per cubic yard; that density is tripled for compaction containers. The disposal fee per cubic yard for containers and carts is higher than that for non-compaction dumpsters, likely based on the assumption that containers tend to have less empty air space when serviced than dumpsters. KCI will be conducting a commercial waste generation study during a future task to evaluate the density of waste generated by various commercial sectors.

Comparisons of commercial fees between jurisdictions are generally more difficult than residential rate comparisons because many fee structures include the cost of disposal, which may vary significantly between jurisdictions. Table 7 provides the range of collection fees per cubic yard for non-compaction containers in those selected jurisdictions that were able to break out commercial collection fees separate from disposal. Figure 2 presents a comparative analysis of the fees for selected levels of non-compaction container service in those same jurisdictions. For consistency, the fees in Table 7 and Figure 2 include container rental and maintenance, but do not include disposal, franchise fees, or other administrative fees.

Table 3: Fees for Commercial Dumpster Service, CY 2011

Monthly Charge for Collection - Dumpsters							
Container Size (cy)	Pickups per Week						
	1	2	3	4	5	6	7
1	$36.66	$69.56	$100.66	$132.92	$164.63	$195.71	$226.14
2	$73.32	$139.12	$201.32	$265.84	$329.26	$391.42	$452.28
3	$109.98	$208.68	$301.98	$398.76	$493.89	$587.13	$678.42
4	$146.64	$278.24	$402.64	$531.68	$658.52	$782.84	$904.56
6	$219.96	$417.36	$603.96	$797.52	$987.78	$1,174.26	$1,356.84
8	$293.28	$556.48	$805.28	$1,063.36	$1,317.04	$1,565.68	$1,809.12
10	$366.60	$695.60	$1,006.60	$1,329.20	$1,646.30	$1,957.10	$2,261.40
Monthly Charge for Disposal - Dumpsters							
Container Size (cy)	Pickups per Week						
	1	2	3	4	5	6	7
1	$58.58	$117.17	$175.75	$234.34	$292.92	$351.51	$410.09
2	$117.17	$234.34	$351.51	$468.68	$585.85	$703.02	$820.19
3	$175.75	$351.51	$527.26	$703.02	$878.77	$1,054.53	$1,230.28
4	$234.34	$468.68	$703.02	$937.36	$1,171.70	$1,406.04	$1,640.38
6	$351.51	$703.02	$1,054.53	$1,406.04	$1,757.55	$2,109.06	$2,460.57
8	$468.68	$937.36	$1,406.04	$1,874.72	$2,343.40	$2,812.08	$3,280.75
10	$585.85	$1,171.70	$1,757.55	$2,343.40	$2,929.25	$3,515.09	$4,100.94
Total Monthly Charge for Collection and Disposal - Dumpsters							
Container Size (cy)	Pickups per Week						
	1	2	3	4	5	6	7
1	$95.24	$186.73	$276.41	$367.26	$457.55	$547.22	$636.23
2	$190.49	$373.46	$552.83	$734.52	$915.11	$1,094.44	$1,272.47
3	$285.73	$560.19	$829.24	$1,101.78	$1,372.66	$1,641.66	$1,908.70
4	$380.98	$746.92	$1,105.66	$1,469.04	$1,830.22	$2,188.88	$2,544.94
6	$571.47	$1,120.38	$1,658.49	$2,203.56	$2,745.33	$3,283.32	$3,817.41
8	$761.96	$1,493.84	$2,211.32	$2,938.08	$3,660.44	$4,377.76	$5,089.87
10	$952.45	$1,867.30	$2,764.15	$3,672.60	$4,575.55	$5,472.19	$6,362.34

Table 4: Fees for Commercial Container and Cart Service, CY 2011

Commercial Charges - Containers and Carts			
Container Size (gallon)	Charges per Container per Pickup		
	Collection	Disposal	Total
32	$1.5163	$4.51	$6.0263
64	$3.1989	$9.12	$12.3189
95	$4.5488	$13.53	$18.0788

Table 5: Fees for Commercial Compactor Service, CY 2011

Compacting Containers - Monthly Fees for 1 Pull/Week				
Size (CY)	Haul	Disposal	Rent	Total
3	$235.13	$527.26	$304.80	$1,067.20
4	$313.52	$703.02	$304.80	$1,321.34
5	$391.91	$878.77	$304.80	$1,575.49
6	$470.29	$1,054.53	$304.80	$1,829.62
Roll-off Compactors - Monthly Fees for 1 Pull/Week				
Size (CY)	Haul	Disposal	Rent	Total
5	$1,466.41	$878.77	$596.85	$2,942.04
10	$1,491.20	$1,757.55	$596.85	$3,845.60
15	$1,515.99	$2,636.32	$596.85	$4,749.16
20	$1,540.77	$3,515.09	$596.85	$5,652.72
30	$1,590.34	$5,272.64	$596.85	$7,459.84
40	$1,639.91	$7,030.19	$596.85	$9,266.96

Table 6: Comparison of Commercial Service Fees, CY 2011

Container Type	Collection		Disposal		Total
	Per Pickup	Per CY	Per Pickup	Per CY	Per CY
Dumpsters	NA	$7.46 - $8.47	NA	$13.53	$20.99 - $22.00
32-Gallon Carts	$1.5163	$9.57	$4.51	$28.47	$38.04
64-Gallon Carts	$3.1989	$10.10	$9.12	$28.78	$38.88
95-Gallon Carts	$4.5488	$9.67	13.53	$28.77	$38.44
Compacting Containers	Varies	$18.10	Varies	$40.59	$58.69
Small Roll-off Compactors	Varies	$23.34 - $67.73	Varies	$40.59	$63.93 - $108.32
Large Roll-off Compactors	Varies	$9.47 - $17.79	Varies	$40.59	$50.06 - $58.38

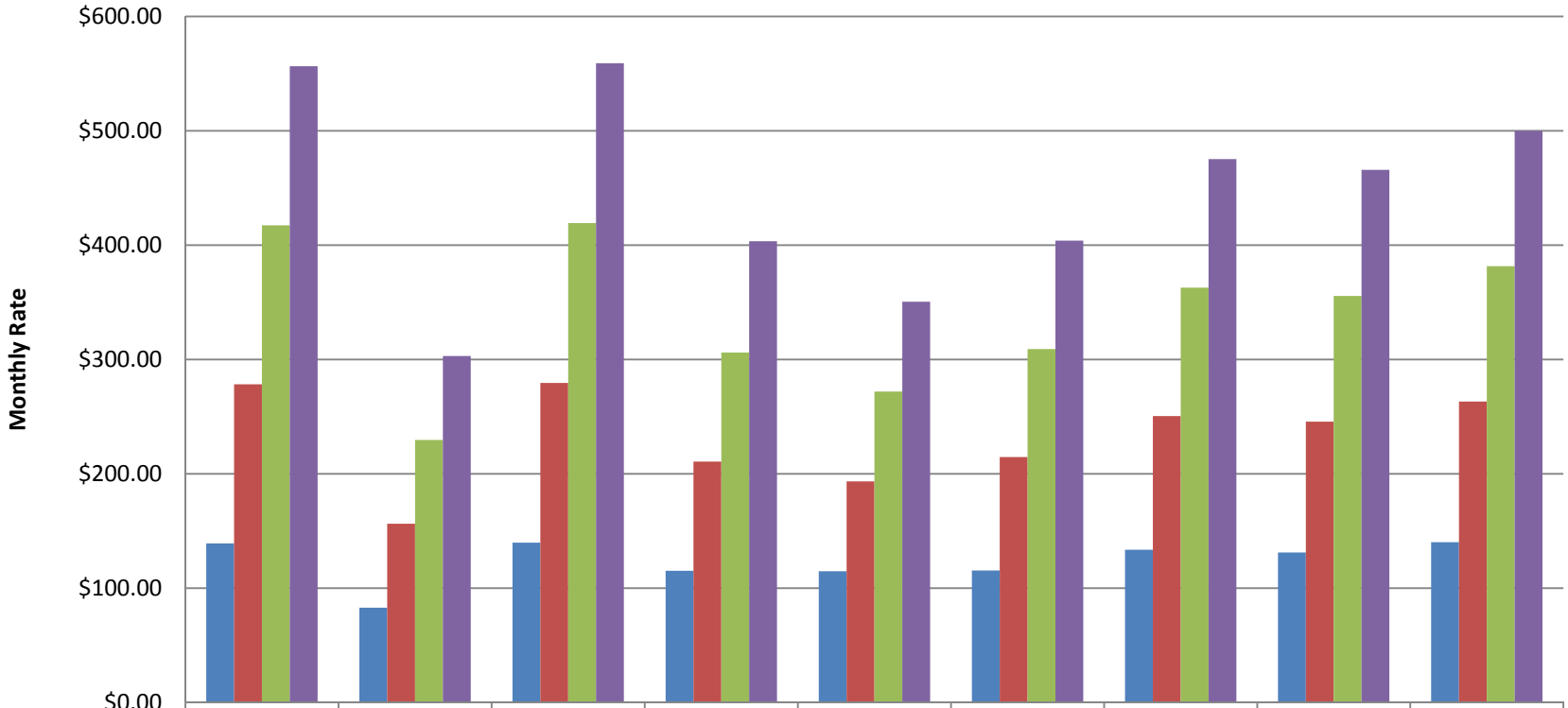
NA = Not Applicable

Table 7: Commercial Non-Compaction Container Collection Fees in Selected Jurisdictions, 2011

Jurisdiction	Fee per Cubic Yard
City of Key West	$7.46 - $8.47
City of Coconut Creek	$4.27 - $5.34
City of Lauderdale Lakes	$8.07
Manatee County	
Area 1	$5.44 - $10.77
Area 2	$4.69 - $12.90
Monroe County	
Area 1	$5.57 - $9.18
Area 2	$6.59 - $10.24
Area 3	$6.45 - $10.10
Area 4	$6.80 - $10.77

Note: Fees include container rental and maintenance, but do not include disposal, franchise fees, or other fees.

Figure 2: Comparison of Commercial Collection Fees in Selected Florida Jurisdictions, 2011



	City of Key West	City of Coconut Creek	City of Lauderdale Lakes	Manatee County Area 1	Manatee County Area 2	Monroe County Area 1	Monroe County Area 2	Monroe County Area 3	Monroe County Area 4
2 CY - 2x/Week	$139.12	$82.94	$139.77	$115.24	$114.81	$115.53	$133.65	$131.15	$140.23
4 CY - 2x/Week	$278.24	$156.29	$279.54	$210.66	$193.40	$214.66	$250.47	$245.61	$263.20
6 CY - 2x/Week	$417.36	$229.64	$419.32	$306.09	$272.00	$309.17	$362.82	$355.50	$381.60
8 CY - 2x/Week	$556.48	$302.99	$559.09	$403.49	$350.59	$403.94	$475.20	$465.82	$499.98

Note: Fees include collection and container rental and maintenance, but do not include disposal, franchise fees or other fees.

The commercial collection fees charged by WM in the City fall within the range of fees charged in Monroe County, with the low end of the range not quite as low and the high end of the range not as high. However, as noted in Figure 2, the City's commercial rates for the service levels included in the chart are consistently higher than all but one of the jurisdictions surveyed (Lauderdale Lakes). Considering the number and density of commercial businesses, the potential exists to achieve more favorable fees during future contract negotiations or through a competitive procurement.

The City sets the disposal rates for commercial solid waste service, and WM bills the customer and makes payment to the City. Disposal rates are based on a formula established in the Agreement (container size x number of pickups per month x 163 pounds per cubic yard) rather than the actual weight tipped. Because the City has not enforced the requirement in Section 4.K to collect residential and commercial waste in separate loads, an accurate accounting of residential versus commercial tonnage is not available. Therefore, KCI compared disposal revenue received by the City in FY 2009/10 for residential and commercial solid waste collected pursuant to the Agreement with the amount that should have been received based on the FY 2009/10 tipping fee. As can be seen in Table 8, this analysis reveals a discrepancy of approximately $360,700, some of which is a result of customer nonpayment. This discrepancy will be further evaluated when KCI looks at commercial waste generation and the billing structure in a future task.

Table 8: Comparison of Estimated Actual and Calculated Disposal Revenue, FY 2009/10

	FY2009/10 Est. Actual Revenue	Less Est. Payment to WM for Collection	FY2009/10 Est. Actual Revenue for Disposal
SW - Residential	$ 4,108,400	$ 2,119,060	$ 1,989,340
SW - Commercial	$ 4,341,100		$ 4,341,100
Total	$ 8,449,500		$ 6,330,440
Calculated Disposal Revenue (41,493 tons @ $161.26/ton)			$ 6,691,156
Difference Between Est. Actual and Calculated Disposal Revenue			$ (360,716)

*Based on "FY 09/10 Estimated Actual" figures provided in the City's *Budget for FY 10/11*.

Commercial Recycling Service Fees

The Agreement does not give WM the exclusive right to collect commercial recyclables,[2] but does require WM to provide recycling services to commercial customers requesting such service. The FY 2010/11 service fees provided by WM to the City for collection of commercial recyclables are as follows:

- Recycling bins - $2.30 per month per bin for once per week collection.
- 32-gallon cart - $11.20 per month per container times number of pickups per week.
- 95-gallon cart - $33.61 per month per container times number of pickups per week.
- Cardboard Collection in Dumpsters - $10.7187 per cubic yard.
- Cardboard Bale Collection - $50.00 per month for unlimited bale collection. Bales are dropped at the City's Transfer Station where they are broken and combined with single stream recyclables for transport to WM's MRF.

[2] Per Florida Statute (Section 403.7046 (3), F.S.), a local government may not give any company the exclusive right to collect commercial recyclables.

WM's stated fee for servicing a commercial recycling bin weekly ($2.30/month) is comparable to the fee for residential curbside recycling ($2.29/month). A comparison of WM's other fees for commercial recycling with its fees for commercial solid waste collection is provided in Table 1 (page 2) of this document, as well as recommendations for negotiating more favorable fees.

Fees for Collection of Solid Waste in Public Areas

Per the Collection Agreement, WM services garbage containers located along City sidewalks daily. In peak tourism season, the containers along Duval Street are serviced twice per day. WM charges the City $1.16 per container per collection, which amounts to more than $12,000 per month. The cities surveyed by KCI service public trash containers using city crews; therefore, a rate comparison was not possible. Options to reduce collection costs include exploring the use of solar compacting containers to reduce the frequency of collection, structuring future collection contracts so this is a service provided to the City at no additional charge, and/or negotiating lower rates with WM.

In conclusion, KCI recommends that the City, with KCI's assistance, meet with WM to discuss and implement the various recommendations outlined in this document. In particular, we believe that opportunities exist within the parameters of the existing Agreement to establish a more effective program for capturing residential and commercial recyclables. This is in keeping with the concepts agreed to by WM, during the 2009 extension negotiations, to negotiate with the City regarding mechanisms designed to make recycling more convenient for residents and businesses. Furthermore, this document identifies inconsistencies between the Agreement and what is currently occurring pursuant to the Agreement. These differences should be corrected either by the Contractor or through an Agreement amendment. As mentioned previously, the recommendations provided herein do not replace the more in-depth analysis of waste reduction strategies that KCI is conducting in other tasks, but rather represent practical, results-oriented solutions that can start to boost recycling in the near-term and lay the foundation for future efforts.