

July 9, 2021

*via electronic delivery*

Himanshu Mehta  
SWDD Director  
Indian River County  
1325 74<sup>th</sup> Avenue, SW  
Vero Beach, FL 32968

**Re: Proposed Scope of Work to Conduct a Waste Generation Study and Non-Ad Valorem Rate Analysis**  
**KCI Project No.:** 99-90.00

Dear Mr. Mehta:

As requested, Kessler Consulting, Inc. (KCI) is pleased to provide this proposed scope of work to assist the Indian River County (County) Solid Waste Disposal District (SWDD) to complete two phases of work:

- Phase 1: Determine residential and commercial waste generation rates.
- Phase 2: Conduct a cost of service and rate analysis.

### **Background**

In March 2021, KCI submitted a technical memorandum that analyzed the current SWDD assessment system and described a Phase 1 methodology to measure the amount of waste generated by commercial and residential properties. The proposed methodology entails gathering generation data over several months from commercial and multi-family customers utilizing truck-mounted scales, residential and compactor customers from landfill scale records, and supporting these data with field observations.

Phase 1 results would provide the basis for updating the waste generation units (WGUs) assigned to each type of property use code. It is expected that Phase 1 work will result in new WGUs being assigned to commercial and residential properties. In this case, the SWDD will need to establish new rates to ensure ongoing financial sustainability. Phase 2 work will focus on conducting a cost analysis of SWDD, projecting future revenue requirements, and evaluating various rates scenarios for meeting future revenue requirements.

### **Phase 1 Scope of Work – Generation Rate Study**

Described below are the proposed tasks and activities KCI anticipates conducting. These tasks are based on our current understanding of the County's needs and objectives.

## Task 1: Planning and Mobilization

The purpose of this task is to ensure all advanced logistics have been completed, e.g., installation of truck scales, data management systems are in place, and an operations plan is in place. Work activities will include:

- KCI will submit to the County a draft operations plan for conducting the waste generation study and participate in a video conference with the County to review and discuss the plan, which will address:
  - Description of data to be collected.
  - Roles and responsibilities for operations, data management, field audits, etc.
  - Schedule.
  - Communication and project management.
- KCI will further analyze the SWDD Roll and Waste Management, Inc. (WMI) customer lists and seek assistance from WMI to increase the number of matched properties in the sample pool (SWDD Roll property and waste assessment matched to collection service provided by WMI).
- KCI will request WMI route maps and customer lists, cross reference route information with the sample pool, and work with WMI to identify two trucks which cover the most diverse set of use codes and greatest number of matched properties.
- KCI will provide technical support to the County, WMI, and Air Weigh® as needed to facilitate procurement and installation of the two truck scales, training of WMI and County personnel on the operations and maintenance of the scale system, establishing procedures for data transfer, and establishing the data management system.
- It is anticipated that the County will work with WMI to provide KCI with direct access to the WMI's route verification software (Vision®). KCI will coordinate directly with WMI for software training, levels of access, and development of any customized reports.
- The County will develop WasteWORKS® software reports and scale personnel work procedures to generate electronic reports for KCI detailing the weight of waste received for individual loads received and the source of waste (residential, commercial and multi-family container, and compactors). KCI will provide technical support to County staff as needed to ensure the desired data will be obtained.
- Based upon the results of the preceding activities, KCI will submit to the County and WMI a final operations plan and participate in a video conference with the County and WMI to review and discuss the plan.

### *Deliverables:*

- Draft and final operations plan.

### Task 2: Start Up and Operations

The purpose of this task is to ensure successful and timely start-up and operation of the data acquisition and field work. Work activities will include:

- Prior to the official start date, KCI will be on-site to work with the County and WMI to ensure that the suite of hardware, software, and data management procedures are fully functional, i.e., the truck scale and laptop, WMI service verification reports, landfill scale reports, and KCI database.
- During the first month of operations, KCI will schedule and lead weekly team teleconferences with the County and WMI to review status and discuss any upcoming work activities. Subsequently, teleconferences will be held monthly.

*Deliverables:*

- Minutes from team teleconferences.

### Task 3: Monitor and Compile Truck-Mounted and Landfill Scale Data

The purpose of this task is to obtain waste generation data over a five-month time period (e.g., October through February) to account for fluctuations in weekly and monthly generation and thus ensure reliability of annualized waste generation rates. This task will entail substantial work to obtain and aggregate the large volume of data to be obtained from diverse sources (see Table 1), which is necessary to determine waste generation rates for the various generator types and use codes.

*Table 1 – Waste Generation Study Data and Data Sources*

	Scope	Schedule	Commercial		Compactor	Residential	
			Waste	Recycle	Waste	Waste	Recycle
<b>Truck # / Route #</b>	All Routes	5 months	WMI <sup>1</sup> & Landfill	WMI <sup>1</sup> & Landfill	WMI <sup>1</sup> & Landfill	WMI <sup>1</sup> & Landfill	WMI <sup>1</sup> & Landfill
<b>Truck Weight</b>	All Routes	5 months	Landfill	Landfill	Landfill	Landfill	Landfill
<b>No. of Stops/Lifts</b>	All Routes	5 months	WMI <sup>1</sup> & Truck <sup>2</sup>	WMI <sup>1</sup>		WMI <sup>1</sup>	WMI <sup>1</sup>
<b>Lift Location</b>	All Routes	5 months	WMI <sup>1</sup> & Truck <sup>2</sup>	WMI <sup>1</sup>		WMI <sup>1</sup>	WMI <sup>1</sup>
<b>Lift Weight</b>	Sample Routes	5 months	Truck <sup>2</sup>				
<b>Container Fullness</b>	Sample Routes	Two 1-wk Audits	Field Audit				
<b>WMI Customer #</b>	All Routes	5 months	WMI <sup>3</sup>	WMI <sup>3</sup>	WMI <sup>3</sup>	WMI <sup>3</sup>	WMI <sup>3</sup>
<b>Container Size</b>	All Routes	5 months	WMI <sup>3</sup>	WMI <sup>3</sup>	WMI <sup>3</sup>	WMI <sup>3</sup>	WMI <sup>3</sup>
<b>No. of Containers</b>	All Routes	5 months	WMI <sup>3</sup>	WMI <sup>3</sup>	WMI <sup>3</sup>	WMI <sup>3</sup>	WMI <sup>3</sup>

Notes:

<sup>1</sup> From WMI Vision; <sup>2</sup> from Air Weigh; & <sup>3</sup> from WMI monthly reports.

Work activities will include:

- KCI will develop a customized database to house and analyze the multiple sources of data being obtained throughout the study.
- KCI will obtain and database electronic reports from WMI service verification software for daily residential garbage, residential recycling, and commercial garbage container collection routes.
- KCI will obtain and database electronic reports from the County landfill scale software for individual loads of residential garbage, residential recycling, and commercial garbage container.
- KCI will obtain and database electronic reports from Air Weigh software for each container serviced on commercial garbage container collection routes.
- KCI will perform regular spot checks to ensure data integrity and assess trends.

*Deliverables:*

- Results of this task will be summarized in the Task 5 technical memorandum.

#### Task 4: Field Observations of Waste Generation

The purpose of this task is to audit individual containers and carts set out for collection by commercial, multi-family, and single-family customers. KCI will coordinate with WMI route schedules and drivers so that observations precede the collection truck. A full week (5 days) of field observations will be conducted twice during the five-month data collection period.

Work activities will include:

- KCI will obtain the following information for a portion of commercial and multi-family customers in the sample pool: determine the number and size of containers, identify discrepancies from the WMI customer database, make note of recycling containers at customer locations (e.g., for cardboard collection) which may impact generation rates, estimate the waste container fullness, and identify any notable characteristics of the waste.
- KCI will cross reference field observations with WMI's customer account information and truck scale data to estimate the bulk density of waste (pounds per cubic yard).
- During the course of the field work, KCI will coordinate monthly conference calls with the County to report on work status. Separate calls will be scheduled with WMI on an as needed to basis to coordinate and adjust field work activities to its operations.

*Deliverables:*

- Monthly status calls with County staff.
- Results of this task will be provided in the Task 5 technical memorandum.

### Task 5: Data Analysis and Technical Memorandum

The purpose of this task is to compile and analyze the data obtained in Tasks 3 and 4, calculate annual waste generation rates for the specific use codes monitored, and develop waste generation rates for all use codes in the SWDD assessment.

Work activities will include:

- KCI will calculate annual waste generation rates for commercial and multi-family properties monitored via truck scales (container service) and landfill scales (roll-off & compactor service), cross reference generation rates with SWDD Roll property information, and calculate WGUs per unit.
- KCI will calculate annual waste generation rates for single-family properties monitored via landfill scales and WMI route counts and calculate WGU's per unit.
- KCI will then develop a proposed list of WGUs for all property use codes in the SWDD Roll.
- KCI will submit a draft technical memorandum summarizing the results of the field work and determination of property use code WGUs. Based on review and discussion with County staff, KCI will submit a final memorandum.
- KCI will submit a draft presentation for a meeting with County administration and an anticipated study session with the County Commission regarding the results of the study, proposed changes in WGUs, and general impacts on the non-ad valorem (NAV) assessment. Based on review and discussion with County staff, KCI will submit a final presentation.
- KCI will participate in one video conference and one on-site meeting with the County administration and/or Commission to present results of the study.

*Deliverables:*

- Draft and final waste generation study technical memorandum.
- Draft and final waste generation study presentation.
- One video conference and one on-site meeting.

### **Phase 2 Scope of Work – Cost of Service and Rate Analysis**

KCI will prepare a cost of service analysis of the SWDD based on recent years' operational and financial data, project future revenue requirements, and assess alternative scenarios for adjusting NAV assessments to meet those revenue requirements based on the WGUs developed in Phase 1. This scope will provide the basis for future budgetary planning, recommendations, and decisions. Described below are the proposed tasks and activities KCI anticipates conducting based on our current understanding of the County's needs and objectives. Please note that Phase 2 work can begin during Phase 1.

#### Task 1: Kick-off, Information Request and Existing Financial System Assessment

The purpose of this task is to update KCI's knowledge regarding SWDD operations and finances (personnel, equipment replacement, annual expenditures, capital improvement plans, debt

obligations, landfill construction, closure, post closure care, etc.) as the foundation for subsequent task work.

Work activities will include:

- KCI will participate in a conference call with County staff to confirm and refine project objectives and schedule.
- KCI will submit a request for information to supplement information already obtained during previous work, for example:
  - Actual revenues and expenditures for past five years, current year budget, capital improvement plans, and recent year calculations of closure and post-closure care costs.
  - Consolidated annual financial reports for the SWDD.
  - Description and financial schedules for current debt obligations.
  - Current organizational chart of the County solid waste department.
  - Current equipment and fleet inventory including purchase cost, replacement schedule, annual service cost, and fuel cost for the past five years.
  - Anticipated changes in infrastructure and services of the SWDD.
  - Contracts for services.
- KCI will review information with County staff to gain further clarification.
- KCI will prepare a series of tables that consolidate and summarize SWDD current operations and financials.

*Deliverables:*

- Consolidated summary information for review and approval by the County.

### Task 2: Cost of Service Analysis

The purpose of this task is to develop current actual and future projected full cost accounting of the SWDD to determine future revenue requirements for a 10-year planning period. We anticipate projecting future revenue requirements based on a variety of factors, including historical budgetary trends, growth rates for major expenditure categories (e.g., salaries, benefits, equipment replacement, infrastructure development, etc.), and projected waste quantities. Work activities will include:

- KCI will prepare a full cost of service analysis for current and recent years, including allocated costs for major categories of SWDD customers (i.e., residential, multi-family, and commercial based on the solid waste assessment use codes) based on the applicable services (e.g., convenience centers, recycling, and disposal).
- KCI will develop assumptions for future projections and review them with County staff.

- KCI will project future operational expenses, equipment repair and replacement, infrastructure and capital costs, and long-term liabilities and debt service, over a 10-year planning horizon to estimate future revenue requirements.
- KCI will submit to the County summary tables regarding current and projected total costs, cost by service, annual costs per customer type (single-family, multi-family and commercial), overall fund balance, and new revenue requirements. KCI will then participate in a video conference with the County to review results and discuss alternative scenarios for subsequent rate analysis.

*Deliverables:*

- Cost of service analysis, submitted electronically in Excel® spreadsheet and PDF format.
- Video conference with County staff.

Task 3: Rate Analysis

The purpose of this task is to evaluate a baseline (current WGUs and rates) and alternative (proposed WGUs and revised rates) scenarios for meeting future revenue requirements developed in Task 2 over a 10-year planning period. KCI will use a spreadsheet-based, dynamic rate model that incorporates multiple variables and assumptions based upon discussions with the County. Our dynamic rate model isolates the key variables from the calculations so that “what-if” scenarios can be easily accommodated, and the County can understand the implications. Work activities will include:

- KCI will develop a baseline rate scenario to determine the future rate requirements (i.e., \$/WGU) based on current WGUs and rate structure that meet SWDD financial obligations and fund balance requirements.
- KCI will develop up to three alternative rate scenarios to determine the future rate requirements (i.e., \$/WGU) based on the generation factors developed in Phase 1 that meet SWDD financial obligations and fund balance requirements.
- KCI will submit spreadsheet tables and graphs summarizing the results of the rate analysis. We will participate in an on-site work session with County staff to review all model assumptions and the proposed rate structure(s) and financing requirements.
- KCI will adjust the rate analysis based the County’s financial and political goals and submit one set of revised tables and graphs.

*Deliverables:*

- Draft results of cost of service and rate analysis in tables and graphs.
- Work session with County staff.
- Revised results of cost of service and rate analysis in tables and graphs.

Task 4: Technical Memorandum and Presentation

The purpose of this task is to provide documentation of the cost of service and rate analysis and supporting materials for briefing County leadership. Work activities will include:

- Prepare and submit a draft technical memorandum and presentation summarizing results of the cost of service analysis and rate study.
- Participate in up to two video meetings with County staff to discuss the draft and the strategy and schedule for next steps.
- Prepare and submit final technical memorandum and presentation.
- Meet with County staff to prepare for and participate in a presentation and briefing with County leadership.

*Deliverables:*

- Draft technical memorandum and presentation.
- Video meeting with City staff.
- Final technical memorandum and draft presentation for City leadership.
- Preparatory on-site meeting with City staff and briefings with City leadership.

**Estimated Budget**

Phase 1

Because of the potential variability in the level of effort required for each phase of this project, KCI proposes to conduct the Phase 1 Waste Generation Study on a time-and-materials basis for an amount not to exceed \$102,000. In addition, the cost for installing two truck scales is estimated at \$28,000. Currently, there is approximately \$1,700 remaining in the budget for the planning study conducted earlier this year, which is available for this project. Thus, the net budget for Phase 1 is estimated at a not to exceed total of \$128,300.

Phase 2

KCI proposes to conduct the Phase 2 Cost of Service and Rate Analysis on a time-and-materials basis for an amount not to exceed \$38,000.

KCI Billing Rates

KCI will charge hourly rates for professional services based upon our current contract with the City of Oakland Park – R-2021-062 (see below).

Staff Position	Hourly Rate
Principal	\$210
Project Director	\$175
Project Manager	\$160
Senior Consultant II	\$145
Senior Consultant I	\$140
Consultant II	\$105
Consultant I	\$95
Research Analyst II	\$85
Research Analyst I	\$75
Administrative Support	\$65



**Estimated Schedule**

KCI anticipates completing the proposed scope 6 months after receiving notice to proceed (see following tentative schedule). However, the project schedule is highly dependent on the collaboration and responsiveness of WMI and County staff particularly during the initial Phase 1 tasks. KCI will keep County staff apprised of work progress and work to meet the County’s decisions making schedule.

**Indian River County, FL  
Waste Generation Study and Rate Analysis**

	Activity	Month 1	Month 2	Month 3	Month 3	Month 4	Month 5	Month 6
Phase 1	Waste Generation Study							
1	Planning	█						
2	Start Up		█					
3	Monitor, Compile & Analyze Data		█	█	█	█	█	█
4	Field Audits			█		█		
5	Tech Memo & Presentation						█	█
Phase 2	Cost of Service and Rate Analysis							
1	Financial Assessment					█		
2	Cost of Service Analysis						█	
3	Rate Analysis						█	█
4	Tech Memo & Presentation							█

**Summary**

KCI appreciates the opportunity to provide this proposal and looks forward to the opportunity to assist the County with this important project. Our goal is to provide the services and support that you need to achieve your objectives, therefore if you would like to discuss and refine the scope described above, please do not hesitate to contact me or Peter Engel.

Sincerely,

Kessler Consulting, Inc.



Mitch Kessler  
President