



TASK ORDER APPROVAL FORM

CONTRACT #: C19-2746-PW

TASK ORDER #: 27

TASK ORDER AMOUNT: \$62,602

OFFERED BY CONSULTANT:

HDR Engineering, Inc.
FIRM'S NAME

Katie E. Duty
REPRESENTATIVE'S PRINTED NAME

Katie E. Duty
SIGNATURE

Area Manager/Vice President
TITLE

11/17/2023
DATE

RECOMMENDED FOR APPROVAL (Department Director)

Jason T. Autrey, PE,
CPM
SIGNATURE

Pubic Works Director
TITLE

02.20.2024
DATE

John Hofstad
COUNTY ADMINISTRATOR (if applicable)
02.23.2024
DATE

APPROVED BY OKALOOSA COUNTY (Per Purchasing Manual)

- \$25,000 or less approved by Purchasing Manager
- \$25,001 to \$50,000 approved by OMB Director
- Between \$50,001 and \$100,000 approved by Purchasing Director and County Administrator
- In excess of \$100,000 approved by the Board.

DeRita Mason
PURCHASING MANAGER

02.20.2024
DATE

Faye Douglas
OMB Director

02.20.2024
DATE

CHAIRMAN (if applicable)
DATE



January 18, 2023

Mr. Jim Reece
Okaloosa County Environmental
80 Ready Avenue
Ft. Walton Beach, FL 32548

**Subject: Recyclables and Municipal Solid Waste (MSW) Composition Studies
Scope and Fee Estimate, Okaloosa County, Florida**

Dear Mr. Reece:

HDR Engineering, Inc. (HDR) is pleased to provide Okaloosa County with this proposal to perform a recyclables composition study and a municipal solid waste (MSW) composition study. The objective of the studies is to determine statistically valid composition data regarding the materials that make up the residential curbside recyclables and MSW collected within Okaloosa County. The remainder of this proposal includes a summary of our proposed scope of work, list of key assumptions, and estimate of professional fees.

We appreciate the opportunity to be of service to Okaloosa County on this project. Should you have any questions or need any further information or clarification, please contact me at (941) 321-8205 or by email at Keith.Howard@hdrinc.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Keith Howard', with a large, stylized initial 'K'.

Keith Howard, P.E.
Florida Waste Market Lead

Enclosures:
Okaloosa County Task Order Approval Form
HDR Scope of Work & Fee Schedule

hdrinc.com

315 E Robinson Street, Suite 400
Orlando, FL 32801
407.420.4200



SCOPE OF WORK

RECYCLABLES AND MUNICIPAL SOLID WASTE (MSW) COMPOSITION STUDIES

INTRODUCTION

Okaloosa County needs to perform a recyclables composition study and a municipal solid waste (MSW) composition study to determine statistically valid composition data regarding the materials that make up the residential curbside recyclables and MSW collected within the County.

The HDR fee for this scope of work is a Not to Exceed amount of \$62,602.00.

Total Task Order Amount: **\$62,602.00.**

ACCEPTANCE BY:

Jason Autrey, PE
Public Works Director



PROPOSED SCOPE OF WORK

Task #1 – Recyclables Composition Study

Project Overview

The recyclables composition study will be conducted over the course of one week with 5 days of sampling at the South Transfer Station located at 630 Martin Luther King, Jr. Blvd, Fort Walton Beach, Florida 32547.

Okaloosa County maintains an exclusive franchise agreement with Waste Management (WM) for curbside collection of solid waste, recyclables, and yard waste in specified areas of the unincorporated county. Given that WM provides once a week collection of residential curbside recyclables with routes running Monday through Friday each week, this methodology will allow HDR to select samples from a wide variety of collection routes across the County's service area.

Task 1.1 – Project Initiation

As part of Project Initiation, the HDR team will perform the following activities:

- HDR team will provide the County a written data request (via email) which will include but not be limited to: recyclable tonnage data, WM route and truck information, service area maps and collection schedule information.
- HDR team will arrange a kick-off meeting via Webex. Up to three HDR team members will attend the kickoff meeting.
- HDR team will perform the necessary research and planning required for a successful recyclables composition study.
- HDR team will develop a detailed Sampling Plan that will include the material category list and materials definition consistent with the previous Recyclables Composition Study published in September 2014. The Sampling Plan will also detail the targeted number of samples per area.
- HDR team will develop a site-specific Safety Plan to be reviewed and followed by all HDR staff and sorting crew members.

Key Deliverables:

1. Sampling Plan
2. Safety Plan

Task 1.2 – Recycling Sorting Event

HDR will perform a recyclables composition study consistent with ASTM D5231. It is assumed that the sorting event can be performed over the course of one week with 5 days of sampling at the South Transfer Station located at 630 Martin Luther King, Jr. Blvd, Fort Walton Beach, Florida 32547. The County will supply an operator and a loader for movement of materials and reloading and removal when sorting is completed. Sampling



protocols (targeted routes, customer type of waste, etc.) will be developed with the County's input and will be consistent with the previous Recyclables Composition Study published in September 2014.

HDR assumes that County staff will arrange for a suitable location to conduct the sampling and sorting. This includes a dry, covered area, if feasible, with enough room to hold a 15' x 15' tarp, 8' table and 34 sorting bins for each of the material categories consistent with the September 2014 Recyclables Composition Study. All samples taken during the study will be chosen randomly from incoming County loads. The WM vehicles from which samples are taken will be selected randomly and the sampled portion of the vehicle load will also be chosen randomly. Each sample will have a total weight of between 200-300 pounds, and only one sample will be taken from each selected vehicle.

The sorting and weighing of samples will involve the use of one sorting crew made up of a HDR Field Supervisor, a HDR Crew Chief, and labor staff supplied by HDR. The Field Supervisor will be responsible for working with the labor staff to obtain the appropriate samples to be sorted and the Crew Chief will manage the sorting and weighing process.

All finalized material category definitions will be reviewed with the sorting crew prior to commencement of sorting activities so that a uniform recyclables composition study is performed. Materials will be placed in separate containers that have been identified for each material category. At the completion of each sample sort, the containers will be moved to a scale, provided by HDR and calibrated to 0.02 pounds, where the HDR Crew Chief will weigh each container. The gross weight and the container weight will be recorded on a field data sheet generated for each sample. Measurements will be made to the nearest 0.1 pound. Once the weights are recorded, it is assumed that sorted samples can be discarded near the work area for removal by the County/facility staff.

This process will be repeated until all the samples have been sorted and weighed. Proper site layout and close supervision of sampling will be maintained to minimize sampling bias or other impacts on the integrity of the data, as well as minimize impacts on facility operations.

Task 1.3 – Data Analysis and Report

Following completion of sampling and sorting activities, HDR will enter the data from the field data sheets into Microsoft Excel for analysis. A statistical analysis will be performed to calculate the mean composition, standard deviation, and 90 percent confidence interval for each of the material types. The data will be presented in table and chart format, indicating the annualized quantities and percentages of the 34 material categories sorted.



HDR will prepare a Final Report summarizing the results of the study. The Final Report will include all of the raw data collected as part of the project as well as photos and other relevant information as attachments.

Key Deliverables:

1. Final Composition Study



Task #2 – Municipal Solid Waste (MSW) Composition Study

Project Overview

The municipal solid waste (MSW) composition study will be conducted over the course of one week with 5 days of sampling at the County's Transfer Station locations: Baker Transfer Station, also known as the North Transfer Station, located at the Baker Landfill at 1415 Charlie Day Road, Baker, Florida 32531 and the South Transfer Station located at 630 Martin Luther King, Jr. Blvd, Fort Walton Beach, Florida 32547.

Okaloosa County maintains franchise agreement with Waste Management (WM) for household trash, recyclables, and yard waste at curbside disposal in the unincorporated areas of the county. Given that WM provides twice a week collection of MSW curbside with routes running Monday through Friday each week, this methodology will allow HDR to select samples from a wide variety of collection routes across the County's service area. The waste composition study will also focus on commercial waste delivered to the County's facilities.

Task 2.1 – Project Initiation

As part of Project Initiation, the HDR team will perform the following activities:

- HDR team will provide the County a written data request (via email) which will include but not be limited to: single-family, multi-family and commercial waste tonnage data, route and Waste Management truck information, collection information, and service area maps.
- HDR team will arrange a kick-off meeting via Webex. Up to three HDR team members will attend the kickoff meeting.
- HDR team will perform the necessary research and planning required for a successful MSW composition study.
- HDR team will develop a detailed Sampling Plan that will include the material category list and materials definition consistent with the previous Waste Composition Study published in September 2014. The Sampling Plan will also detail the targeted number of samples per area and generator sector.
- HDR team will develop a site-specific Safety Plan to be reviewed and followed by all HDR staff and sorting crew members.

Key Deliverables:

1. Sampling Plan
2. Safety Plan

Task 2.2 – MSW Sorting Event

HDR will perform a MSW composition study consistent with ASTM D5231. It is assumed that the sorting event can be performed over the course of one week with 5 days of sampling at the County's Transfer Station locations: Baker Transfer Station, also known



as the North Transfer Station, located at the Baker Landfill at 1415 Charlie Day Road, Baker, Florida 32531 and the South Transfer Station located at 630 Martin Luther King, Jr. Blvd, Fort Walton Beach, Florida 32547. The County's contractor will supply an operator and a loader for movement of materials and reloading and removal when sorting is completed. Sampling protocols (targeted routes, customer type of waste, etc.) will be developed with the County's input and will be consistent with the previous Waste Composition Study published in September 2014.

HDR assumes that County staff will arrange for a suitable location to conduct the sampling and sorting. This includes a dry, covered area, if feasible, with enough room to hold a 15' x 15' tarp, 8' table and 34 sorting bins for each of the material categories consistent with the September 2014 Waste Composition Study. All samples taken during the study will be chosen randomly from incoming County loads. The WM vehicles from which samples are taken will be selected randomly and the sampled portion of the vehicle load will also be chosen randomly. Each sample will have a total weight of between 200-300 pounds, and only one sample will be taken from each selected vehicle.

The sorting and weighing of samples will involve the use of one sorting crew made up of a HDR Field Supervisor, a HDR Crew Chief, and labor staff supplied by HDR. The Field Supervisor will be responsible for working with the labor staff to obtain the appropriate samples to be sorted and the Crew Chief will manage the sorting and weighing process.

All finalized material category definitions will be reviewed with the sorting crew prior to commencement of sorting activities so that a uniform MSW composition study is performed. Materials will be placed in separate containers that have been identified for each material category. At the completion of each sample sort, the containers will be moved to a scale, provided by HDR and calibrated to 0.02 pounds, where the HDR Crew Chief will weigh each container. The gross weight and the container weight will be recorded on a field data sheet generated for each sample. Measurements will be made to the nearest 0.1 pound. Once the weights are recorded, it is assumed that sorted samples can be discarded near the work area for removal by the County/facility staff.

This process will be repeated until all the samples have been sorted and weighed. Proper site layout and close supervision of sampling will be maintained to minimize sampling bias or other impacts on the integrity of the data, as well as minimize impacts on facility operations.



Task 2.3 – Data Analysis and Report

Following completion of sampling and sorting activities, HDR will enter the data from the field data sheets into Microsoft Excel for analysis. A statistical analysis will be performed to calculate the mean composition, standard deviation, and confidence interval for each of the material types. The data will be presented in table and chart format, indicating the annualized quantities and percentages of the 34 material categories sorted.

HDR will prepare a Final Report summarizing the results of the study. The Final Report will include all of the raw data collected as part of the project as well as photos and other relevant information as attachments.

Key Deliverables:

1. Final Composition Study

KEY ASSUMPTIONS

- The County will provide HDR with information on the general number and timing of loads delivered to the facility each collection day by the County's franchise hauler, Waste Management.
- The County will provide adequate floor space for one sorting station at their facility during the days on which the sampling event is to be conducted. This includes a dry, covered area if feasible, with enough room to hold 15' x 15' tarp, 8' table and sorting bins for the predetermined material categories.
- The County will provide a skid steer or other equipment and associated operator to assist in collecting samples from selected loads of recyclables delivered to the facility during the days on which the sampling event is conducted.
- The County will coordinate with Waste Management for the use of Bagsters for category sorting/separation.
- Each sort will be performed over one week duration to allow for sampling of MSW and recycling collection vehicles from each part of the County.
- For the MSW Sort, the sort will focus on residential and commercial waste delivered to the County's transfer station. Three waste generator sectors will be targeted: single-family residential waste, multi-family residential waste, and commercial waste.
- The recycling sort will only focus on curbside residential recycling materials.
- The sorts will occur sequentially to avoid demobilization.
- The sort will utilize the material categories used in the previous Waste Composition Study for MSW and recyclables published in September 2014.
- If necessary, HDR staff will visit the transfer station in advance of the sampling event to evaluate the space available for sampling and sorting, finalize supply and equipment needs, and evaluate other logistical factors.



- Temporary labor staff will be provided by HDR to serve as the sorting crew during the duration of the sorting event. The temporary labor staff will include approximately 6-8 members.
- HDR will provide a Crew Chief and Field Supervisor to coordinate and oversee all sampling and sorting.

FEE ESTIMATE

Table 1 presents HDR's fee estimate for completion of the services outlined in this document.

Table 1 – Estimate of Professional Fees

TASK	DESCRIPTION	FEE ESTIMATE
Task #1 – Recycling Composition Study		
1.1	Project Initiation	\$4,486
1.2	Recyclables Sorting Event	\$23,970
1.3	Data Analysis and Report	\$2,845
Task #1 Total		\$31,301
Task #2 – MSW Composition Study		
2.1	Project Initiation	\$4,486
2.2	MSW Sorting Event	\$23,970
2.3	Data Analysis and Report	\$2,845
Task #2 Total		\$31,301
TOTAL COST ESTIMATE:		\$62,602



HDR will perform the scope of work for the Recyclable & MSW Composition Study for a Not to Exceed cost of \$62,602.00. The work will be billed monthly based on the percent work complete. HDR will communicate regularly with Okaloosa County and include updates of project progress. HDR will inform the County if additional work outside the scope of work is required and will provide the County with a cost estimate to perform any additional work. HDR will not perform any additional work with authorization from the County.