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July 20, 2017

Mr. Scott Smithline, Director
California Department of Resources Recycling and Recovery (CalRecycle)
P.O. Box 4025
Sacramento, CA 95812-4025

Dear Mr. Smithline:

COMMENTS ON DRAFT SCOPE OF WORK FOR THE PROPOSED CALRECYCLE 2018 WASTE CHARACTERIZATION STUDY

The Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force (Task Force) would like to express its appreciation to the California Department of Resources Recycling and Recovery (CalRecycle) for soliciting input from the public and local jurisdictions regarding the draft Scope of Work (copy enclosed) for the upcoming 2018 State Waste Characterization Study. Based on our review of the draft Scope, we have the following comments:

General Comments

1. The lack of specificity with respect to the study design criteria is a point of concern. The proposed scope of work attempts to designate both a clear need for statistically representative results, as well as a desire to take additional samples from specific streams, sectors, and facilities. These two concepts run counter to one another and present a challenge to the generalizability of the study's findings.

2. The term "statistically representative results" should be defined and measured by a "Confidence level" such as 90 percent or higher.

3. The inclusion of the pre-processed sector presents some logistical challenges because sampling of process residuals by sector is not something that facilities are currently in the practice of performing. Additional information is needed to

discern how process residuals can be properly characterized by sector, as it is the current practice of facilities to process mixed loads, regardless of sector of origin.

Specific Comments

1. The proposed scope of work as written does not provide clear geographic regions (page 2) and exposes the study to the risk of lacking statistical representation. The scope states that "…samples may need to be concentrated in certain areas of the state…to better represent the statewide waste stream" (page 1). However, on page 1, as well as throughout the document, the scope states the need for data to be combined "into an overall statewide waste composition that is statistically representative." The Task Force is concerned that oversampling or under-sampling of certain areas may result in findings that are not in fact representative of the state's overall disposal practices due to the nature of the study design.

   Further, the need for extensive coordination between the facilities and the contractor to complete the characterization of the pre-processed sector may be a confounding variable which alters the results of the study. CalRecycle's contractor will need to coordinate with the selected facilities, waste haulers, and self-haulers to separately identify the sector of origin for the process residual stream. This may inadvertently impact the integrity of the study design because the participants may choose to modify their behavior to reflect the best version of the facilities' sorting operations.

2. CalRecycle indicated in its scope that it may perform supplemental data collection related to the study, such as taking additional samples or surveys (pages 1 and 4). Again, this generates concern with respect to how accurately the data represents the overall statewide waste streams because it suggests that some sectors or geographic regions may be disproportionately represented in the sampling results.

As background information, the Task Force was formed pursuant to Chapter 3.67 of the Los Angeles County Code and the California Integrated Waste Management Act of 1989 (Assembly Bill 939, as amended). The Task Force is responsible for coordinating the development of all major solid waste planning documents prepared for the County of Los Angeles and the 88 cities in Los Angeles County with a combined population in excess of ten million. The Task Force also addresses issues impacting the system on a countywide basis including, but not limited to, ensuring the conformance of the in County solid waste disposal facilities with the Los Angeles County Countywide Siting Element

and its siting criteria. The Task Force membership includes representatives of the League of California Cities-Los Angeles County Division, County of Los Angeles Board of Supervisors, City of Los Angeles, waste management industry, environmental groups, the public, and a number of other governmental agencies.

The Task Force appreciates this opportunity to present its concerns and suggestions, and respectfully requests that CalRecycle consider and address the above comments as a part of preparation of the Final Scope of Work for its 2018 Waste Characterization Study.

If you have any questions regarding this matter, please contact Mr. Mike Mohajer, a Member of the Task Force, at MikeMohajer@yahoo.com or at (909) 592-1147.

Sincerely,

Margaret Clark

Margaret Clark, Vice-Chair
Los Angeles County Solid Waste Management Committee/
Integrated Waste Management Task Force and
Council Member, City of Rosemead

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cc: CalRecycle (Howard Levenson)
League of California Cities
League of California Cities, Los Angeles Division
California State Association of Counties
Each Member of the Los Angeles County Board of Supervisors
Sachi A. Hamai, Los Angeles County Chief Executive Officer
Each City Mayor/Manager in the County of Los Angeles
South Bay Cities Council of Governments
San Gabriel Valley Council of Governments
Gateway Cities Counsel of Governments
Each City Recycling Coordinator in Los Angeles County
Each Member of the Los Angeles County Integrated Waste Management Task Force
Each Member of the Task Force Alternative Technology Advisory Subcommittee
Each Member of the Task Force Facility Plan Review Subcommittee

Draft Scope of Work for the Proposed CalRecycle 2018 Waste Characterization Study

Part 1: Introduction

The purpose of this contract is to conduct a comprehensive statewide waste characterization study to gather accurate, representative data on the disposed waste stream. Because California's waste management system has changed significantly over the past few years (and will continue to evolve in the future), the first part of this contract will be to modify CalRecycle's past methods and to develop new methods that will best adjust to and account for these type of changes. Using these new and modified methods, the project will quantify and characterize materials disposed by Californians. The project will primarily be facility-based, rather than being conducted at the sources of generation. The project will also estimate how much of the state's waste stream originated in each of four main sources: the residential sector, the commercial/industrial sector, and the self-haul sector, as well as from pre-processed sector (material recovery facilities [MRFs] and other similar operations.) The project will characterize each sector separately and then combine the data into an overall statewide waste composition that is statistically representative. The completed study will produce an accurate composition for waste actually disposed in California, after all processing and recovery activities have taken place.

This study will be conducted differently from past CalRecycle studies. CalRecycle staff will recruit facilities to be sampling sites, perform statistical analysis of data, and produce a final report. The contractor will be responsible for the study design, coordinating field work with sites, and setting the sampling schedule. In addition, the contractor will perform all field work for sampling and sorting of waste, vehicle surveys at sampling sites, data entry, and data quality assurance/quality control.

The approach to developing the study design will also be different from past studies. For CalRecycle's 2014 study, the study design repeated that of the 2008 statewide waste characterization study. Some of the resulting data, such as statewide tonnages for the various sectors, seemed to be anomalous in comparison with historical data, possibly due to significant changes in the statewide waste management system and infrastructure as it has evolved over time. Therefore, CalRecycle seeks a new or modified approach to collecting statewide waste characterization data, which includes an approach to better determine sector tonnage estimates, select sampling sites, and distribute samples to sites and sources to obtain the best representative data. For example, sampling sites and samples may need to be allocated by different criteria to best represent California's waste stream at the statewide level without necessarily generating statistically representative results for each region. In past studies, samples were distributed evenly amongst five regions and evenly amongst each sector in each region, to obtain representative data for each region. CalRecycle staff is reevaluating this approach and preliminary analysis indicates that samples may need to be concentrated in certain areas of the state, and in certain sources, to better represent the statewide waste stream; the sample allocation and stratification could take tonnage amounts, variability, and other factors into account. For example, more samples may be needed in one sector than in others, and more samples may be needed in large urban areas and fewer samples in rural areas.

The contractor should use their expertise, experience, and creativity to develop a method which may encompass new, innovative approaches or use a modified approach, possibly using ideas from other studies. The method should address the issues encountered in the 2014 study and other challenges characterization studies commonly encounter. This new method should:

- result in representative data on the state's current waste stream
- account for evolving trends and waste flows so it is flexible enough to use for future studies
- provide data that can be compared to past CalRecycle studies (even if the methods differ from the 2018 study) to assess trends such as changes in sources and types of waste

Based on preliminary considerations by CalRecycle staff, some ideas that could be considered include:

- Developing new or different regions
- Eliminating the use of geographic regions altogether
- Use of other geographic factors such as urban, suburban, or rural characteristics of an area
- New ways to distribute samples to regions (if used), sectors, and sampling sites, such as focusing on sites receiving high tonnage
- New or modified methods to better determine tons of waste disposed by different sectors/sources
- Addressing sites with multiple activities such as direct transfer, processing, composting, etc.
- Addressing situations where there may be no, low, or high levels of on-site processing so that data is collected on materials actually disposed
- New or modified criteria for selecting, recruiting and screening sampling sites – for example, past studies required sites to meet certain criteria for receiving waste in certain amounts from each sector
- Selecting or focusing on landfills receiving high tonnage from other facilities delivered in transfer trucks, and tracing back "upstream" to sample materials at the source facilities, as well as sampling direct-haul loads at these sites.

The contractor may use their knowledge and experience with waste management systems and waste characterization studies to propose other or additional ideas to achieve the project goals.

Over time, more materials continue to flow to processing facilities such as MRFs. Process residuals from MRFs were previously characterized in a CalRecycle study separate from the statewide waste characterization study. The final major difference from past CalRecycle studies is that process residuals will be characterized as part of the overall study, and their composition and tonnage will be incorporated into the overall statewide composition.

It is desired that the composition and tons of process residuals be assigned to a sector as much as possible. Depending on operations at various sites this may be problematic. The study design shall propose methods to address this issue. One approach might be to capture samples of residual streams at MRFs so that the type of source and type of processing can be identified, but the contractor can propose alternative methods that meet the goals of the study. Within the pre-processed sector, the

statewide tonnage amounts for disposal will be broken down into subsectors based on the different processing methods, such as clean MRFs, mixed waste processing facilities, and C&D processing, and other types of processing. For the pre-processed sector, characterization data will be determined at the sector-level statewide, and will not require statistically representative data for each subsector.

Part 2: Outline of Project

CalRecycle anticipates the following:

- The study will encompass sampling of waste at landfills, transfer stations, and material recovery facilities (MRFs) such as "clean MRFs", mixed waste processing facilities ("dirty MRFs"), construction and demolition (C&D) materials processing facilities, etc. If the contractor believes an alternative approach for sampling waste from the pre-processed sector would provide comparable data, then the proposal should provide sufficient details to evaluate the alternative. Information on these facilities can be found at http://www.calrecycle.ca.gov/SWFacilities/Directory/search.aspx and http://www.calrecycle.ca.gov/FacIT/.
- In order to characterize the statewide waste stream, the number of sites to be used for sampling is anticipated to be comparable to or exceed the number used in past studies of similar size and budget. Since some of the work performed by the contractor in past studies will now be performed by CalRecycle staff, more of the budget should be available for a robust number of sampling sites. Reports for past CalRecycle studies can be found at https://www2.calrecycle.ca.gov/WasteCharacterization/Study and overall project budgets are found inside the front cover.
- Sites will be distributed throughout the state but may be mostly located in large urban areas, with very few sites in rural areas, which should reduce some costs for field travel and logistics.
- For sampling of waste at landfills and transfer stations, samples will be taken from vehicles bringing waste to facilities from single-family residential sources/routes, commercial/industrial sources/routes, self-haulers, and possibly transfer trucks.
- Multi-family residential samples will be collected at the site of the generator (near sampling sites) and sorted at the related sampling site. CalRecycle staff will recruit the multi-family sites and provide logistical information for sample collection by the contractor. If the contractor believes an alternative approach for multi-family sampling would provide comparable data, then the proposal should provide sufficient details to evaluate the alternative.
- For sampling of MRF residuals, in order to fully characterize materials disposed, samples will most likely be collected at multiple ejection points.
- The overall number of samples characterized is anticipated to be comparable to or exceed that used in past studies of similar size and budget. Since some of the work performed by the contractor in past studies will now be performed by CalRecycle staff, more of the budget should be available for sample collection and sorting.
- Samples of solid waste and residuals will be hand-sorted by the contractor into approximately 80 material types. Samples collected from garbage trucks will weigh at least 200 lb.

- As many vehicles as possible will be surveyed at each sampling site to best gather data to determine the sectors of waste coming into the site for disposal.
- Sampling will occur during calendar year 2018, will result in data representative of the annual waste stream. Sampling will occur during at least 2 sampling periods several months apart.

The contractor will be responsible for:

- coordinating and communicating with the Contract Manager throughout the study on at least a weekly or bi-weekly basis
- producing a study design in consultation with CalRecycle staff, which may incorporate approaches included by the contractor in their proposal
- coordinating with and setting up final logistics with all sampling sites recruited by CalRecycle staff
- scheduling field work during appropriate sampling seasons
- all field work including selecting samples, sorting sampled waste, vehicle surveys, and recording of field data
- having a health and safety plan, and ensuring it is followed by all field personnel
- preparing for and dealing with special logistical needs for sampling at MRFs (which may have multiple processes and complex operations) in order to best characterize only materials destined for disposal and assign sampling compositions and tons to the appropriate sector as much as possible
- preparing for and dealing with special logistical needs for sampling at transfer stations that may have material recovery activities, and landfills that may have special diversion programs
- preparing and implementing contingency measures to deal with logistical, equipment, weather, or other problems encountered in the field, including refusal of cooperation by facilities, or other unforeseen circumstances. These measures may include conducting make-up days to collect required data if necessary.
- coordinating all field activities to maximize efficiency and minimize cost
- coordinating with CalRecycle staff who may perform supplemental data collection related to the study such as additional vehicle surveys
- data entry, data quality assurance and quality control (QA/QC), and submission of final field data to CalRecycle in a format and process approved by the Contract Manager
- periodic status reports (such as monthly or weekly as appropriate) submitted to the Contract Manager.

Part 3: Detailed Description of Tasks

This description is based on methods and techniques used in past studies, but methods may evolve over time. The contractor may propose modifications or alternatives to these methods and techniques but must demonstrate that the modifications or alternatives still meet the objectives of the study.

<u>Task 1 – Study Design including Field Sampling Methodology and Plan</u>

The contractor will consult with CalRecycle staff to develop a detailed study design which may incorporate approaches proposed by the contractor in its proposal. The contractor shall prepare a study design document describing the work that will be performed to achieve the objectives of the study.

The study design shall include:

- sampling plan including number of sites to be used, and number of samples allocated to sectors and sites
- plan to obtain representative samples of MRF residuals that may process multiple types of streams and/or have complex operations, including allocation of samples among multiple ejection points
- plan to address sampling problems that may be encountered in rural areas
- vehicle gate sector survey plan
- data entry and management plan, including QA/QC measures to ensure accuracy of data
- quality control procedures for all parts of the study.

The contractor shall prepare a field methodology and plan including the following:

- how field personnel will coordinate activities with the facilities used for the study
- number of field staff and supervisors to be on-site, and role of each
- training and supervision of sorters and surveyors
- how representative samples (including multi-family) will be selected and collected, including how adequate sample weights will be achieved, and how random and/or stratified samples will be chosen
- how other necessary field data will be collected and recorded
- how samples will be sorted using proper sorting and weighing techniques and accurate scales
- measures to be taken to ensure the accuracy of the data, including how data will be recorded and checked in the field
- general contingency plans to address unforeseen circumstances that may delay or adversely affect the study such as logistical, equipment, or other problems encountered in the field
- a list of equipment expected to be used and examples of field sheets that could be used for the project.
- health and safety measures to be used, and a description of how to ensure they will be followed
- projected schedule of field work, including start-up tasks, logistical arrangements, training, travel, set-up, sorting, data entry, and data quality control for each field day.

CalRecycle staff will provide a final list of material types to sort by, with definitions and additional guidance as needed to ensure accurate sorting.

The contractor shall prepare and submit the Study Design including Field Sampling Methodology and Plan to the Contract Manager as soon as possible, not to exceed 45 calendar days after contract approval. CalRecycle staff will review this design for compliance with the proposal and the objectives of the study, and provide additional feedback and edits as needed. The contractor shall make required

changes in the final design, if any, and submit to the Contract Manager within 15 days of receiving comments.

Task 2 – Coordinate with Sampling Sites and Determine Field Schedule

- CalRecycle staff shall recruit sites and gather pertinent logistical information to facilitate field work at each site. The contractor will review each site's information at least 30 days before beginning field work, to ensure efficient field work, and shall inform CalRecycle staff within 10 days if additional information is needed, which will then be obtained by CalRecycle staff within 10 days of receiving the request for more information.
- When scheduling sampling activities at sites, the contractor shall incorporate information on variations in operations, variations in waste flows from sectors, on-site processing/handling, and other relevant information that may affect materials disposed, in order to ensure representative sampling at each site.
- The contractor shall provide a tentative schedule of which sites will be used in each season at least 30 calendar days before field work begins for the first season. Subsequently, for each season, the contractor shall submit the list of facilities and scheduled field days at each site at least 30 calendar days prior to the beginning of field sampling. This document shall include an overall schedule for fieldwork, describing start-up tasks, travel, set-up, and sorting days, and number of samples from each sector/subsector to be characterized at each site (in coordination with the Study Design). The Contract Manager will review these documents and the contractor shall address any questions or concerns the Contract Manager may have.
- The contractor is responsible for final coordination and logistical arrangements with each site.

Task 3 – Perform Field Work

The contractor shall perform all field work including selecting and sorting samples, weighing waste samples, conducting vehicle surveys, and recording and checking field data as described in the study design and field sampling plan.

3A – Field Sampling and Sorting

- Samples of waste shall be collected from garbage trucks and self-haulers at disposal facilities (landfills, transfer stations), from residual output points at MRFs, or at the site of generation for multi-family waste, and sorted into CalRecycle's stipulated material types. The residential waste stream shall be sub-divided into single family and multi-family sources.
- For each load sampled at a disposal facility, the contractor shall collect data on the jurisdiction and sector of origin, truck type, whether the load is from a construction/demolition source, and any notes or unusual circumstances. For self-haul loads, the subsector of origin shall also be determined to be residential, general commercial/industrial, construction and demolition, roofing, landscaper, or other.
- Only one sample shall be taken from each truck selected for sampling.

- All composition samples shall be physically sorted, except where impractical and visual sorting is more appropriate (for example, some construction and demolition waste, or for health and safety considerations). If visual sorting is used, those samples shall be clearly identified and the methods used shall be well documented.
- The contractor shall record all field-sorting data for each sample (weight of each material type in the sample) and total sample weight, and implement QA/QC measures in the field to ensure the accuracy of the data collected.
- For each load sampled at disposal facilities, all samples shall weigh at least 200 pounds and any samples weighing less than 200 pounds will not be accepted as fulfilling the contract (except as described below for self-haul samples). The Contract Manager will have the discretion to withhold an appropriate amount of payment for each underweight sample, not to exceed the marginal sample cost for this task. Because self-haul loads vary greatly in size, what constitutes a "self-haul" sample depends on the size of the load brought in by the self-hauler. If the load weighs over 250 pounds, then a sample of at least 200 pounds shall be collected and sorted. If the total load weighs from 175 to 250 pounds, the entire load shall be sorted as a sample. This is the only circumstance in which samples less than 200 pounds will be acceptable. If the total load weighs less than 175 pounds (as do many passenger car loads), additional loads from the same class of vehicle and type of origin must be collected until the total weight exceeds 200 pounds. The combined small vehicle loads shall then be counted as one sample.
- Multi-family samples shall weigh at least 200 pounds and shall be collected at the site of generation (e.g., apartment buildings).
- For multi-family generator sampling, all bins at the site shall be inspected to determine whether any substantial differences exist among bins, and if so, subsamples shall be taken to ensure a representative sample. Sample volume shall also be measured. Information shall also be collected at multi-family sampling sites to develop a statewide multi-family disposal rate (tons per unit per year). This shall include confirmation of number and size of waste bins at the site, collection frequency, visually estimating fullness of bins, sample collection and bin observations on an appropriate day to obtain representative data, confirmation of number of occupied units, and other pertinent information as determined during study development.
- For samples collected at MRFs, the weight of the samples from most residual ejection points will be a minimum of 125 pounds. Sample weights for some materials such as fines may be less than 125 pounds. Samples will represent only materials destined for disposal. The MRF sampling shall result in data which allows the contractor to produce an overall composition for residual disposal that accurately represents the proportions from the different ejection points (e.g. pre-line removal, overs, unders, and other materials separated for disposal).
- The contractor shall take a digital photograph of each sample before sorting and, if needed, break open plastic garbage bags to obtain an adequate picture of the materials in the sample. For not more than 10 material types to be selected by CalRecycle, in not more than 10 percent of the samples, the contractor shall take a digital photograph showing the individual items in that type (i.e., a picture of the contents spread out on the ground).

- The contractor will provide all equipment needed for fieldwork, including health and safety equipment.
- Sampling shall be conducted during a minimum of 2 periods, several months apart.
- CalRecycle staff will provide a list of material types to be used for sorting. The base list of approximately 80 material types will be similar to those used in past studies, but some material types will be added, subtracted, or modified.
- CalRecycle staff and possibly other interested parties will observe some of the sorts.

3B – Vehicle Surveys

Through vehicle surveys and any other data collected from sample sites, the contractor shall determine the percentage of the waste stream that is from single-family residential, multi-family residential, commercial/industrial, self-haul and pre-processed sectors. These surveys of incoming vehicles shall be conducted at the gate of each facility used for composition sampling, on the same days as sampling.

- The contractor shall plan for and employ a sufficient number of surveyors to ensure that large facilities with multiple gatehouses or scales are representatively surveyed at each scale (for example, using 1 surveyor at each scale where there are multiple gates or scales).
- The contractor shall further classify the self-haul sector into residential, construction and demolition (C&D), roofing, landscaper, general commercial/industrial (other than C&D, roofing, and landscaper), and possibly other sub-sectors as identified by CalRecycle staff.
- Additionally, all vehicles determined to be disposing construction and demolition materials shall be further surveyed for tonnage and activity that generated the debris. The activities are defined as used in CalRecycle's Targeted Statewide Waste Characterization Study: Detailed Characterization of Construction and Demolition Waste (http://www.calrecycle.ca.gov/Publications/Detail.aspx?PublicationID=1185).

Task 4 – Data Entry and Data QA/QC

- The contractor shall provide field-sorting data for each sorted sample (weight of each material type in the sample) and total sample weight.
- The contractor shall provide vehicle survey data for all sites surveyed.
- The contractor shall perform all data entry, and follow all quality control measures in its plan to ensure the accuracy of the data entered. Any errors or discrepancies in data discovered during quality control activities shall be resolved by the contractor.
- The contractor shall enter all data collected into electronic spreadsheets or a database compatible with CalRecycle's computer system, with format and software to be approved by the Contract Manager. All final data shall be submitted to CalRecycle in electronic format.
- Data to be submitted include for each sample: sample ID number, facility, date, sample weight, weight of each component, truck type, sector/subsector and jurisdiction of origin and any notes on special circumstance or other information, as applicable, and photo.
- Data submitted will be final and correct, after review and QA/QC procedures are complete

- The Contract Manager will review the submitted data to ensure it is complete, understandable, and usable in the analysis procedure, and the contractor will respond to any questions and address any problems or discrepancies found by Contract Manager.
- At least 30 calendar days prior to commencement of data entry for the first season, the contractor shall submit sample printouts displaying database and/or spreadsheet format to the Contract Manager for approval.

Task 5 – Submit Field Data and Summary Reports to CalRecycle

- At a minimum, the contractor shall submit regular monthly progress reports and interim data to the Contract Manager during the project.
- During field sampling operations, the contractor shall prepare and submit to the Contract Manager weekly reports containing the following:
    - Final schedule/sampling plan for the upcoming week
    - Summary of sampling completed during the previous week, including numbers and locations of samples characterized for each sector and/or subsector and number of vehicle surveys completed
    - Copies of all field sheets and photographs taken for the previous week's work
    - Reports of any problems, contingency measures taken, or significant findings encountered
    - Recommendations for adjustments for field procedures, sites, or general study design, if needed
- Not more than 30 calendar days after the end of field operations for each season, the contractor shall prepare and submit to the Contract Manager a report summarizing all samples completed, including numbers and locations of samples characterized for each sector and/or subsector, number of vehicle surveys completed, and a description and explanation of any differences between the final sampling plan and actual field sampling performed.
- Not more than 45 days after the end of each field season the contractor shall submit the final field data for that season that has been reviewed and corrected as needed.
- Not more than 60 days after the final field season the contractor will submit a brief final summary report including a brief summary of the field work completed, final sampling distributions and vehicle surveys completed, description of any unusual circumstances, lessons learned, and recommendations for future studies.

Part 4: Methodology to Include in Proposal

The proposal must describe the draft approach proposed by the contractor and the reasoning behind it, including a description of how the objectives will be met and the methods the contractor will use. The description must include not only what work will be performed, but how it will be performed. The approach and methodology must be described in sufficient detail to allow CalRecycle staff to evaluate the methods and must address all tasks and items in this Scope of Work.

This Scope of Work outlines a general approach for meeting the requirements and includes ideas that could be used to meet the project objectives; however, the contractor may propose alternative, modified, or new approaches that meet or exceed the requirements of the project objectives. These approaches must be defensible, proven through statistical or data analysis or other means, and the proposal must adequately demonstrate that the objectives will be met.

Key questions the proposal should address are:

- How to obtain representative composition and tonnage data for each sector/source of waste, including process residuals;
- How to aggregate data to get residential, commercial, and self-haul sector compositions (incorporating process residuals if possible) and an overall statewide composition
- How to address issues impacting the determination of sector tonnage amounts at the statewide level
- How to obtain data on process residuals considering that processing facilities may have complex operations

Key items the proposal should address include:

- a draft approach for the sampling strategy (or possible strategies), including strategy and criteria for selecting areas of the state and/or sites for sampling;
- preliminary recommendations for the number of samples assigned to each source (single-family residential, multi-family residential, commercial, self-haul, and pre-processed sectors) and how samples should be distributed among sampling sites;
- reasoning behind the sampling strategy and number of samples assigned to sources and sites;
- strategy for adequately characterizing MRF residuals from various streams and processing methods, including number of samples, how to capture them, how to address sites processing multiple streams and/or sites with complex operations;
- training and supervision of sorters and surveyors;
- number of staff on-site, and role of each.

Although no work orders/changes are anticipated to be issued against this contract, CalRecycle, in agreement with the Contractor, may modify work plans, within reason, based on new information gathered during the contract term and agreed to by mutual consent of the contracted parties. The contractor shall prepare contingency measures to deal with logistical, equipment, weather, or other unforeseen circumstances encountered in the field.