

CHESTER COUNTY WASTE COMPOSITION STUDY

Request for Proposal

Chester County Solid Waste Authority is seeking proposals from qualified firms to conduct a countywide Waste Composition Study.

SCOPE OF WORK FOR WASTE COMPOSITION STUDY

1. Purpose

Chester County Solid Waste Authority is seeking an experienced and qualified consulting company (consultant) to determine the composition and weight of materials generated in Chester County and sent for disposal. The County Solid Waste Authority wishes to award a single contract and for work to be completed by the end of 2015. The County Solid Waste Authority reserves the right to award all or a portion of this RFP.

The study will be used to estimate the amount and type of material discarded as waste from Chester County residents and businesses each year, the percent of Chester County's "waste" stream that could be diverted away from disposal, and which specific discards from the residential and commercial sectors make up that potential diversion percentage.

2. Project Scope

Consultants are asked to propose their systems for delivering the following services, detailed below:

- Develop a sampling plan and rationale for a four-season waste composition analysis for Chester County.
- Develop a methodology and conduct a physical analysis (waste sort) of the waste stream that includes rural, urban and suburban sectors in Chester County.
- Analysis and four reports on material streams.

Sampling plan and rationale

Chester County's approximately 500,000 residents are served by many collection companies that

deliver to one of eight County-approved in-State transfer or disposal facilities. For municipal waste, the subject of this characterization study, there are two landfills serving two distinct service sectors in the county, including:

- Lanchester Service Area (400,000 residents)
- Southeastern Chester County Refuse Authority Service Area (100,000 residents)

The Consultant will be required to collect samples at Chester County's two landfills. The plan should aim to provide statistically valid data for the following generator profiles:

- Single and multifamily;
- Commercial, segregated by sectors as the budget allows (e.g., industrial, institutional, health care, hotels, manufacturing, offices, retail, wholesale, transportation and / or mixed);
- Garbage self-haul to the two landfill sites in the Chester County;
- Construction and demolition materials going to disposal.

In the preliminary sampling plan submitted with this proposal, the consultant will indicate the locations where sampling might take place, the number of samples to be collected and sorted at each location and facility, and the number of days and the seasons in which each location/facility would be sampled. While detailed development of this information will be conducted by the successful applicant, the proposal shall indicate approach to program design and sampling rates / frequencies are likely to prove statistically relevant.

The successful consultant will work with Chester County's Recycling Coordinator and private collection companies and businesses to obtain the necessary information to create the final sample design, fine-tune field forms and field procedures, apportion samples, and select sampling days and sample truckloads. In addition, data is available from both the SECCRA and Lanchester Landfills which classify the incoming traffic by hauler, vehicle type, generator (residual wastes), origin, customer and weight.

The final sampling plan and schedule, together with an explanation of the sampling methodology used and any other information related to the sampling plan, should be submitted for approval by Chester County's Recycling Coordinator before sampling begins.

After the first season of sampling, the consultant will evaluate where the project is in relation to the original sampling plan and will submit any revisions suggesting where changes would be made to meet project goals. This information will be included with the first project report,

detailed below, and due by December 5, 2014.

Methodology for conduct of physical analysis

Within the parameters of the agreed upon sampling plan, the consultant will provide a suggested methodology for determining the weight of up to 45 materials categories currently going to the landfill. Materials and categories to be measured might include, but not be limited to those listed in Appendix A. Provide a rationale for materials selected.

Methodology might vary according to generator stream. Construction materials, in particular, might be grouped when part of the residential stream or broken down into segments for C&D analysis.

The methodology must specify how weights will be determined and what quality-control measures will be taken to ensure the accuracy of the data gathered. Inaccurate weight due to rain events will not be accepted; consultant should specify steps to be taken to prevent exposure of collected materials to excess moisture during data analysis. Vehicle weigh scales with an accuracy to +/- 20 pounds are available at both landfill sites and will be made available for the consultant.

The study will include a sufficient number of samples for meaningful and statistically reliable estimates (minimum 90% confidence interval). Indicate how proportions would be determined and how data would be weighted, as necessary, at the end of the study.

Consultant will be responsible for compiling, checking, and entering data into a waste composition study database developed for this project. All sampling information will be stored in the database, and a copy will be submitted to Chester County Solid Waste Authority with the final report. The County Solid Waste Authority will also be provided with pertinent database documentation, including a data dictionary and description of queries. For ease of comparison with other reports, Chester County Solid Waste Authority requests all data be measured and recorded in decimal pounds. The database used must also be able to export data to a format usable in a meaningful way by Microsoft's Access and Excel programs.

The consultant will organize and conduct all waste sampling, including coordination with collection staff, making sure to give all affected parties ample notice and reminders of when and how sampling will occur.

Existing samples of data sheets, Excel and Access Files as well as training / safety protocol submitted with this application will contribute to a stronger proposal.

Analysis and Reports on Material Streams

Describe the statistical analysis of the materials streams to be employed how it will be consistent with standard industry protocol.

Reporting on the sampling will extrapolate the results of the sampling to the total material tonnage and discuss any statistical issues that arise when this is done. All composition tables will include tonnage and percentage breakdowns for the mean and confidence level endpoints whenever possible.

A first season project report will be submitted to Chester County Solid Waste Authority no later than December 5, 2014, and provide preliminary waste composition information, including:

- A summary of waste sort study methods that defines the waste sectors and explains the methodology used to design and implement the primary data collection portion of the study;
- the distribution of first-season waste tonnages and percentages by sectors;
- first-season waste composition results and preliminary findings for each of the waste sectors will make up the first report.

The final report, due no later than December 18, 2015, should be comprehensive and again describe the sampling procedures (including a discussion of statistical validity and any weighting adjustments), material category definitions, and final waste composition tables. In addition, the final report should identify material categories and sectors with high potential for additional diversion, recovery or reuse.

The final report must include the following:

- The percent of Chester County’s “waste” stream that could be diverted away from disposal,
- Which specific discards from the residential and commercial sectors make up that potential diversion percentage.

The consultant shall allow time for review and comment on draft document prior to finalization of report and develop a timeline for providing the final report to Chester County Solid Waste Authority no later than December 18, 2015.

All reports shall be submitted in electronic format along with two unbound, double-sided hard-copies printed on paper with 100% recycled content.

3. Equipment and Safety

Proposals submitted in response to this RFP will include the respondent’s health and safety plan. A site-specific health and safety plan shall be submitted the SECCRA and Lanchester Landfills at least 10 business days prior to commencement of field work.

The consultant is expected to provide all necessary materials for the study, including, but not limited to:

- An appropriately calibrated scale designed to operate in field conditions,
- All health and safety-related equipment,
- All equipment and supplies necessary for sorting, containerizing, weighing and recording samples.

After sorting, all materials not otherwise collected for detailed sample analysis will be properly disposed or recycled / composted. The two landfills in Chester County have recycling or composting on site, and those materials that may be clean enough to be recycled (such as some scrap metal), will be recycled. Dirty or contaminated materials will be disposed of in the landfills.

4. Consultation

Chester County Solid Waste Authority reserves the right to negotiate a modified statement of work with the selected consultant to best carry out the purposes of the study within the available

budget.

All data collected in this study will become the property of Chester County Solid Waste Authority. Confidential and proprietary information must be clearly marked as outlined in the Chester County Solid Waste Authority Consulting Services Agreement. The consultant will not publish results from this study, in any form, without prior approval of the County Solid Waste Authority.

The consultant will be prepared to respond to any questions or uncertainties Chester County Solid Waste Authority might have about the completed data forms or other reporting, and to give other information, as requested, about the wastes sorted.

5. Supplementary Materials

○

Budget

- Costs to complete each element of the scope of work and the total project cost – Attachment 3 of the RFP to Update Chester County’s Municipal Waste Plan.

Schedule

- Proposed schedule for completing each element of the scope of work, including but not limited to the mid-project and final reports.

Appendix A – Materials List

Materials and categories to be measured might include, but be not limited to:

Paper:

- Newsprint
- High-grade office paper
- Shredded paper
- Magazines / catalogs
- Corrugated Cardboard
- Boxboard
- Recyclable mixed paper including junk mail
- Aseptic cartons
- Unrecyclable mixed paper

Plastic:

- PET bottles
- HDPE bottles
- Tubs
- Other small plastic containers (3-gallons or smaller)
- Large plastic containers (3-to 55-gallons)
- Plastic bags
- Stretch wrap
- Other plastic film
- Styrofoam block / peanuts
- Other plastics

Metal:

- Aluminum containers – cans, pie tins
- Other aluminum - foil
- Ferrous containers – steel cans
- Other ferrous
- Other non-ferrous
- Other household appliances (computers will be included with “electronics”)

Glass:

- Clear glass bottles and jars
- Other glass containers – green, amber, etc.
- Plate glass
- Non-recyclable glass

Organics:

- Mixed yard waste including small branches
- Grass
- Small branches / slash – roughly less than 2-inch diameter
- Large branches / limbs – roughly more than 2-inch diameter
- Food waste
- Treated or painted wood
- Pallets
- Clean dimensional lumber
- Other untreated wood
- Other organics

Problem materials:

- Electronics – computers, monitors, TV, Microwave and other
- Batteries
- Textiles
- Carpet and pad
- Used Drywall
- Rubber
- Tires
- Furniture / bulky items
- Diapers and sanitary products
- Other non-hazardous items
- Latex paint & finishes
- Automotive fluids
- Fluorescent tubes and bulbs
- Pharmaceuticals and syringes
- Other hazardous materials including oil paint and finishes and pesticides

Construction and Demolition Debris:

- Aggregates, concrete, asphalt, ceramics, brick, stone, etc.
- Asphalt shingles
- Usable durable items, surplus materials (appliances, cabinets, doors, lights and other fixtures, hardware, windows, major appliances)
- Unusable durable items
- New drywall
- Other construction material

Permitted solid waste landfills receiving waste from Chester County:

Lanchester Landfill: 7224 28th Division Hwy., Narvon, PA 17555; Executive Director –
Bob Watts 484 796-4040 BWatts@ChesterCSWA.org

Southeastern Chester County Refuse Authority: 219 Street Rd., West Grove, PA 19390;
General Manager - Scott Mengle (610) 869-2452 x117 Scott@SECCRA.org