



**DATE:** February 22, 2017

**TO:** Waste Management Authority

**FROM:** Wendy Sommer, Executive Director

**BY:** Meghan Starkey, Senior Program Manager

**SUBJECT:** Waste Characterization 2017: Contractor Recommendation

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## **SUMMARY**

As part of the FY16/17 Agency budget, the Waste Management Authority approved funding for a waste characterization study. This type of study identifies predominant materials in the current waste stream and changes over time, supporting the Board-adopted guiding principle of collecting data for the purpose of making informed decisions. The results will be used by StopWaste and member agencies to help refine programs and evaluate progress towards long-term goals. Staff issued an RFP in November, 2016, and is recommending selection of SCS Engineers to conduct the study for a not-to-exceed total of \$347,000.

## **DISCUSSION**

Similar to past studies in 1995, 2000 and 2008, the 2017 Waste Characterization Study methodology will focus on physical sampling by hand-sorting and weighing materials, visual sampling to estimate material weight for loads not suitable for sorting and weighing, and additional data collection from haulers. As in previous studies, the 2017 study will break down the results in five generator sectors/delivery methods: single family, multifamily, commercial, roll-off and self-haul. The study period is calendar year 2017, with results available early 2018.

The last study was conducted in 2008 as a prelude to the 2009 strategic planning process. While the basic approach is similar, the study has been scoped with several modifications, which offer significant cost savings over previous studies.

- Results from the benchmark metrics will be used to estimate material quantities for the single family and multifamily sectors.
- The number of materials sampled will be cut in half, focusing primarily on the Agency's target materials (readily recyclable materials). See Attachment for specific list and comparison to previous years.

- The study will be conducted on a countywide basis only, rather than for each member agency.

The primary reasons for countywide level only are that the benchmark study provides more relevant data to the member agencies and that past studies have shown no significant statistical difference between the individual member agencies and the countywide results. Since sampling for an individual jurisdiction costs up to \$50,000 extra per jurisdiction, for the reasons outlined above, staff does not believe the extra work is warranted. Member agencies were offered the option to “add on” to this contract, so that if they wished a characterization study for their own jurisdiction, they could pay only for the cost of additional sampling, and get a study at a much lower cost than they could otherwise. However, member agency staff chose not to take advantage of this option, since they will be able to rely on countywide numbers and benchmark data, or conduct studies on their own.

An additional change is that the study will also sample post-processing residuals at Material Recovery Facilities (MRFs). As more Alameda County material is sent over processing lines, it is important to understand the composition and quantity of what is not recovered through these facilities.

Staff issued an RFP in November 2016. Three firms submitted proposals: SCS Engineers, Cascadia Consulting and Louis Berger. Cost proposals ranged from a low of \$297,500 (Cascadia) to a high of \$464,000 (Louis Berger). Staff evaluated the proposals and interviewed all three proposers, and determined that SCS offered the best mix of responsiveness to the RFP, expertise, methodology and value.

#### Discussion at the Programs & Administration Committee

Committee member questions and staff responses are summarized below:

Q. Why are we sampling MRF residuals as part of this study, and have we audited MRFs before?

A. An increasing amount of material, including MSW solid waste and mixed dry loads, is passing over MRF lines. In order to get an accurate view of our progress to goals, we need a picture of what is going to disposal from this source and not just material directly sent to landfill. The Davis St. Dry MRF was audited as part of the Mandatory Recycling Ordinance Phase One implementation, and the City of Oakland requires audits of the CWS facility. We plan to use these results as part of the study, as applicable.

Q. Why are there differences in cost between proposals, and why are we selecting a contractor who did not submit the lowest bid?

A. The lowest bid submitted contained fewer samples than the SCS Engineers bid, hence the lower cost. We did not feel the number of samples in the Cascadia bid was adequate, and would have requested additional samples (at an additional cost) had we chosen them. SCS will offer more robust results with their sampling plan. SCS also has superior expertise in statistics and will meet our need for analysis better.

Q. Where is the firm located?

A. Local offices are in Santa Rosa, CA, and sorting employees will be drawn from Alameda County.

Q. How does this relate to the inspectors under the MRO project?

A. Inspectors under the MRO are simply looking for the presence of covered materials in the garbage bins of covered accounts. This study will sample and quantify a longer list of materials and use data from the haulers to get a picture of the entire waste stream, and not just the covered accounts under MRO.

Q. How does this study relate to the benchmark study?

A. We will not directly sort and weigh material from the single family and multifamily streams as part of this study, but will apply the benchmark results instead. This study will also sample the entire commercial stream, as well as roll-off and self-haul streams, which are not covered by the benchmark study.

Q. Are we confident that a countywide study is adequate and that we should not do city specific studies?

A. Yes. Past studies have shown there to be no significant difference between individual city results and countywide results, i.e., differences between the member agencies and the county fall within the confidence interval. After much discussion on specifics, member agency staff members have agreed with our assessment. Member agencies need different types of studies to inform their local policies and programs, and some are undertaking these independently.

Q. How many days are we sampling?

A. The plan is to sample daily for three weeks, eight hours a day, in each of two seasons. This is a cost-saving feature over the four-season sorts performed for prior studies.

Q. The study scope refers to the 10% goal, and are there consequences for not meeting this goal?

A. The 10% goal is aspirational rather than required by the Authority. The City of Oakland does include a 10% goal in the franchise and there are consequences for the hauler to miss this goal. Other cities also have specific requirements in their franchises.

Q. Why are we reducing the material categories? Will we be able to compare to previous studies? Which categories are we including? Are we sampling textiles?

A. We are eliminating categories that do not meet policy or program needs. For example, distinguishing between five different types of paper when they are all handled the same way is not compelling in light of the cost. The new material categories are based on the previous list, with some categories collapsed but still comparable when aggregated. Since hazardous materials need to be handled carefully, those will also be sampled. The specific list is in the attachment to this memo. Material categories will be reviewed again and finalized before field work. We are sampling textiles and carpet.

Q. When will results be available?

A. Early 2018.

**RECOMMENDATION**

The Programs & Administration Committee recommends that the Authority Board authorize the Executive Director to enter into a contract with SCS Engineers for a total of \$347,000.

Attachment: List of Material Categories

Attachment: Proposed 2008 Waste Characterization Material Types (Commercial, Roll Off, Self-Haul Disposal)

Material Group	Material	Previous WCS Material Number/ Description	
Paper	Uncoated Corrugated Cardboard	1	Uncoated Corrugated
	Recyclable Paper	2, 3, 4	High Grade Paper, Newspaper, Mixed Recyclable Paper
	Compostable Paper	5	Compostable paper
Plastics	Bottles and Plastic Containers	7, 8, 9	HDPE #2, PETE #1, Other Plastic Containers
	Plastic Bags	10	Plastic Bags
	Other Film	11	Other Film
Glass	Recyclable Glass Bottles/Containers	15	Recyclable Glass Bottles/Containers
Metals	Aluminum Cans	17	Aluminum Cans
	Steel Food and Beverage Containers	19	Steel Food and Beverage Containers
	White Goods*	21	White Goods
Compostable Organics	Yard Waste	22, 23	Leaves/Grass/Chips; Branches/Stumps/Prunings/Trim mings
	Food Waste	24	Food Waste
Compostable Organics - Wood	Untreated lumber*	26	Untreated lumber
	Pallets*	27	Pallets
Textiles/Other	Textiles/Leather	29	Textiles/Leather
	Carpet*	30	Carpet
	Tires*	25	Tires
	Treated Wood Waste*	28	Treated Wood Waste
Inerts	Crushable Inerts	34	Crushable Inerts
	Gypsum Boards*	36	Gypsum Boards
HHW	Paints/Adhesives & Vehicle/Equipment Fluids **	38, 39	Paints/Adhesives; Vehicle/Equipment Fluids
	Universal Hazardous Waste**	40	Universal Hazardous Waste
	Medical Waste**	41, 42	Medical waste; Medicine
	Other hazardous waste**	45	Other hazardous waste

	Covered E Waste; Other E Waste	43, 44	Covered E Waste; Other E Waste
Special	Brown Goods*	46	Brown Goods
Everything else	Materials not specified above	See list below of discontinued material categories	
		6	Other paper
		9	Other plastic containers
		12	Expanded polystyrene blocks
		13	Mixed rigid plastics
		14	Other plastics
		16	Other Glass
		18	Other non-ferrous
		20	Other ferrous
		31	Diapers
		32	Manure
		33	Other organics
		35	Other inerts
		37	Asphalt Roofing
		47	Composite bulky items
		48	Other special waste

\*Due to material size, additional cost of sampling in this category is negligible

\*\*Due to hazardous material handling requirements, additional cost of sampling in this category is negligible