

DEPARTMENT OF
PUBLIC WORKS

GOVERNMENTAL CENTER

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COUNTY OF SANTA CRUZ

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September 24, 1998

SANTA CRUZ COUNTY BOARD OF SUPERVISORS

701 Ocean Street
Santa Cruz, California 95060

SUBJECT: WASTE CHARACTERIZATION STUDY

Members of the Board:

On June 16, 1998, your Board accepted a report from Public Works regarding a Waste Characterization Study (WCS) that would identify the composition and source of refuse that continues to enter the County landfill. The results of this work will enable the County to focus its resources and diversion efforts on those particular components of the waste stream in order to achieve the 50% landfill disposal reduction mandate of Assembly Bill 939. Your Board, on that date, also approved an agreement with the California Integrated Waste Management Board (CIWMB) to fund a portion of the cost of the study. The CIWMB grant funds are being provided in exchange for the data generated to be made available to the CIWMB for a statewide database. The CIWMB funds also cover the costs of sampling to be conducted in Santa Clara County to provide data from that type of urban setting.

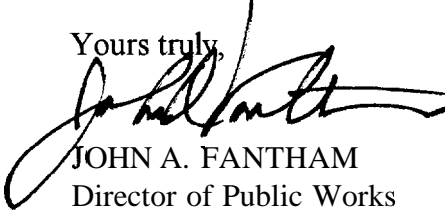
A copy of the proposed Request for Proposals (RFP) is attached to this letter for your Board's consideration. The study will primarily emphasize commercial and self-haul waste as the new franchise recycling system is performing as expected within the residential section. The RFP provides for collection of data on the amount and composition of waste disposed which originates in the unincorporated county only. The research will also obtain data on the total amount of diversion (i.e., recycling, composting and source reduction) taking place within the unincorporated county. Together, these two quantities will establish an accurate picture of the level of disposal reduction the County has achieved in relation to the AB 939 mandate. The study will also include recommendations on additional diversion programs that can be instituted to help meet the mandate.

It is therefore recommended that the Board of Supervisors take the following actions:

1. Approve the Request for Proposals for a Waste Characterization Study and authorize Public Works to issue the RFP. ..

2. Direct Public Works to complete the selection of a contractor and return with a contract and Scope of Work to conduct the Waste Characterization Study.

Yours truly,

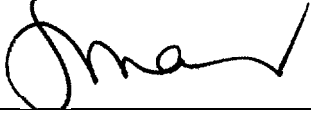


JOHN A. FANTHAM
Director of Public Works

DdG:bbs

Attachment

RECOMMENDED FOR APPROVAL:



County Administrative Officer

copy to: Santa Clara County Environmental Resources
Public Works, Solid Waste Division

REQUEST FOR PROPOSALS
FOR
WASTE CHARACTERIZATION SERVICES

COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS

OCTOBER 1998

**County of Santa Cruz
Department of Public Works**

**Request for Proposals for Waste Characterization Services
October 1998**

SECTION I INTRODUCTION

This Request for Proposal (RFP) solicits proposals from contractors qualified to complete an AB 939 Solid Waste Characterization Study for the County of Santa Cruz and to conduct limited sampling of specific commercial generators within the County of Santa Clara to provide data for the California Integrated Waste Management Board Statewide (CIWMB) Database. (The database can be viewed on the Internet at www.ciwmb.ca.gov/wpe/wcab/chardb/rundb/dbmain.htm). This project is partially funded by the California Integrated Waste Management Board and will use the Board's Uniform Waste Characterization Method protocol.

This Solid Waste Characterization Study is a cooperative project of the California Integrated Waste Management Board, the County of Santa Cruz Department of Public Works and the County of Santa Clara Integrated Waste Management Program. Contractor will work with a specific liaison in each county. The County of Santa Cruz Department of Public Works is responsible for all financial arrangements and for the final approval of work plan.

The County of Santa Cruz wishes to estimate the volumes and types of solid wastes disposed and diverted by businesses located in the unincorporated county and by self-haul users of the County's Buena Vista Landfill and Ben Lomond Transfer Station. (Self-haul waste is delivered to disposal facilities by vehicles other than franchised refuse collection service.) In addition, the County is seeking a concise but accurate characterization of residential packer waste (franchise hauled residential waste) from the unincorporated county to be used for collection program evaluation and public education purposes.

The Santa Cruz County Solid Waste Characterization Study must target all "subpopulations" (i.e., business groups) in the commercial/industrial sectors with specific focus and additional detail required for subpopulations in the commercial and industrial sectors that generate a substantial portion of the waste stream. Sampling of self-haul users will be taken from all generator types: residential, commercial and industrial.

"Subpopulations" are groups of businesses that have similar waste generation characteristics. "Subpopulations" are defined by specific groupings of businesses classified by the Standard Industrial Classification (SIC) Code. The Contractor will be provided a computerized run showing the largest subpopulations in the unincorporated County of Santa Cruz. The County of Santa Cruz will make available a business database listing for the commercial and industrial sector. "Sector" means all generators within each respective fraction of the waste stream: commercial, industrial or residential.

In Santa Clara County, the contractor will coordinate with CIWMB and County of Santa Clara staff to determine types of businesses to be sampled. Once types of businesses have been selected, County staff will assist contractor in deciding which sites to sample.

SECTION 2 PROPOSAL FORMAT

Submittal Reauirements

Submittal Deadline: Friday, October 30, 1998 at 5:00 p.m.

Submittal Address: Dan deGrassi
 County of Santa Cruz
 Department of Public Works, Solid Waste Division
 701 Ocean Street, Room 410
 Santa Cruz, CA 95060

A mandatory pre-proposal meeting will be held on Thursday, October 15, 1998 at 10:30 a.m. to answer questions on this RFP. The pre-proposal meeting will held at the following address:

County of Santa Cruz
 Department of Public Works, Solid Waste Division
 701 Ocean Street, Room 4 10
 Santa Cruz, CA 95060
 Telephone: (831) 454-3 102

All proposals must be received by Friday, October 30, 1998 at 5:00 p.m. Proposals received after this time and date will be returned unopened. Postmarks will not be accepted as proof of receipt. The County of Santa Cruz will not be responsible for any delays or missed deadlines for proposals not delivered.

Proposers must submit an original and 5 copies of their proposal. Proposals must be stapled or bound, typed and copied on both sides of 8-1/2" x 11" recycled paper.

The contract is a firm fixed price contract. The scope of work will be structured such that proposers shall provide a cost estimate by subtask, and a total project estimate, so that the County may select some but not necessarily all of the subtasks described below if it so chooses. The fixed budget available for Part 3, Subtasks A of Section 4 of the Scope of Work described below is \$40,000. Additional work as described in Part 3, Subtask B is not included in the budgeted \$40,000. All costs of preparing and responding to this RFP are to be borne by the proposers.

Proposals shall be concise, and shall use the following format:

Cover Letter

The dated proposal cover letter must state the name of the proposer(s) and specify a contact person for the County of Santa Cruz to call regarding the proposal. In addition, the cover letter must state that the fixed price quoted is valid for a period of ninety days from the last day designated for receipt of proposals..

Proposer(s) Listing(s)

Name of Company or Individual (Prime Contractor)

Address, City, and State, Zip Code

Name of Contact and Title

Phone Number, fax number, and e-mail

List of Subcontractors

Address, City, and State, Zip Code

Name of Contact and Title

Phone Number, fax number, and e-mail

Proposer's Qualifications and Relevant Experience

A. Relevant Experience:

Provide a general description of solid waste characterization experience. Describe any experience with generator based sampling and surveying work. Experience with waste reduction and recycling audits should be described. Diversion surveying and quantification experience for AB 939 Solid Waste Generation Studies should be described. The proposer can provide copies of previous reports or documents as examples of related work. Copies of reports will not be returned.

B. Key Personnel:

List the key personnel who will be utilized for the project. Show the time commitment level for each of the key personnel. A short resume (1-2 pages) of proposer's key personnel should be provided.

Contractor's Proposed Work Plan and Technical Approach

Detail description of proposed methodology for Santa Cruz County and Santa Clara County separately. For each county, estimate number of samples by sector and subpopulations as described in this RFP and provide description of methodology to account for seasonality. Please allow flexibility in the characterization design. Show how proposed methodology is consistent with CIWMB Uniform Waste Characterization Method guidelines.

References

Please provide three references (previous clients) for each proposal team member. Provide a brief description of relevant project experience and payment received for contracted services. Provide a contact name and telephone number for each reference so the County of Santa Cruz can call for information.

Additional Information

Provide other information or materials that you consider essential to the evaluation of your proposal.

Proposal Cost

The proposal must include a statement that the firm fixed price is valid for a period of ninety (90) days from the last day designated for receipt of proposals. Provide separate cost estimates for each Part of Section 4, Scope of Work and for each Subtask in Parts 2 and 3. The Proposal Cost Section should also include a separate price schedule for optional additional work for Santa Clara County, Part 4, Subtask 2; Contractor will be compensated directly by Santa Clara County for this work. All work, including the price of the optional additional work, should be shown by subtask as hourly charges on a time and materials basis and include an estimate of hours required to complete each subtask.

SECTION 3 OBJECTIVES OF STUDY

The following objectives have been established for this study:

In Santa Cruz County:

- A. Estimate the types and quantities of materials being disposed by the target waste stream fractions (commercial, industrial, self-haul and residential packer) of the unincorporated County of Santa Cruz.
- B. Estimate the types and quantities of materials being disposed by the target subpopulations of the commercial and industrial fraction of the unincorporated County of Santa Cruz waste stream for inclusion in the California Integrated Waste Management Board Statewide Database.
- C. Estimate the total diversion quantity by material type and program or activity for the unincorporated County.
- D. Collect accurate information on waste amounts disposed and diverted in 1998 for unincorporated Santa Cruz County in order to establish 1998 as the new base year for unincorporated Santa Cruz County's adopted Source Reduction and Recycling Element (SRRE), and ensure CIWMB approval of the new base year generation numbers.
- E. Evaluate the effectiveness of the current residential curbside recycling program by determining the volumes and types of materials currently being disposed by those residential households currently serviced by the curbside recycling program.
- F. Identify potential diversion programs for the commercial/industrial and self-haul sectors that would enable the County to achieve the 50% disposal reduction mandate of AB 939 and estimate (quantify) their effectiveness.

In Santa Clara County:

- A. Conduct sampling of specific commercial generators within Santa Clara County. The results of these generator based waste composition studies will be utilized in the development of various reference databases for the CIWMB.

- B. Optional additional work.** Evaluate existing diversion programs for each generator sampled. Identify additional diversion programs which could be implemented by each generator to achieve additional disposal reduction.

The following documents are attached as part of this Request for Proposals:

- 1) Sample County of Santa Cruz, Independent Contractor's Agreement
- 2) CIWMB Final Uniform Waste Disposal Characterization Method
- 3) CIWMB Material Type Classifications (November 19, 1996 version)
- 4) CIWMB/EPA Waste Reduction and Recycling Audit Form (Test Version 1.02)
- 5) Scope of Work for CIWMB/ County of Santa Cruz Waste Characterization Agreement
- 6) CIWMB Draft Health and Safety Standards
- 7) CIWMB Commercial Waste Stream Business Subpopulation, Uninc. Santa Cruz County

SECTION 4 SCOPE OF WORK

Part 1: Methodology

1. The contractor shall utilize the Uniform Waste Characterization Method adopted by the CIWMB unless approved otherwise by the CIWMB and respective county. Materials type classification protocols and other protocols of the Uniform Waste Characterization Method shall be followed. For each business sampled, the contractor will also collect information to estimate the annual amount of waste disposed, and verify the number of employees at the business and the SIC code of the business. The samples required for each subpopulation may be split between the seasonal sampling periods.
2. The contractor shall also conduct density measurements for each of the collected generator based samples. A container of a fixed size (e.g., one-cubic yard, 90-gallon cart, etc.) shall be used to weigh the various samples so that a density conversion factor (in pounds per cubic yard or gallon) can be calculated.
3. The November 19, 1996 version of the Draft CIWMB Uniform Material Type Definitions shall be utilized for the study. The contractor shall utilize the CIWMB "Long List of Materials Types" as the level of material type classifications for this characterization.
4. The contractor is responsible for all labor, training, supplies, safety equipment, and other materials needed for this contract.
5. The Contractor must follow, as a minimum, the CIWMB recommended draft Health and

Safety Standards for waste characterization studies. Since the risks posed by every waste characterization study are different, the selected contractor must evaluate their proposed characterization methodology and establish appropriate training, procedures, and safeguards. A copy of the draft health and safety standards is attached for reference by the Contractor in development of a Health and Safety Plan.

Part 2: Santa Cruz County

Subtask A: Waste Characterization Study

1. The selected contractor shall conduct a waste characterization study to determine the volume (tonnage) and composition (by material type) of municipal solid waste (MSW) disposed and diverted by the residential and commercial/industrial sectors of the unincorporated areas of the County of Santa Cruz. Seasonal variation should be taken into account in the sampling plan. Contractor's work on this subtask shall be consistent with the attached "Scope of Work - Waste Composition Data Collection for Waste Characterization Database Maintenance" agreement between the CIWMB and the County of Santa Cruz.

For the commercial/industrial sector the contractor shall use a generator-based sampling and characterization methodology as described in the CIWMB Uniform Waste Characterization Method. For the self-haul and residential packer sector the contractor shall use a landfill-based sampling and characterization methodology as described in the CIWMB Uniform Waste Characterization Method. Sampling of the residential packer sector shall be limited to the minimum number of samples necessary.

Statistical analyses must follow the standard data analysis methods described in the Uniform Waste Characterization Method. Simpler variations of the formula are acceptable depending upon the availability of data. The Contractor is required to calculate the mean, variance, standard deviation and 90 percent confidence level for each of the subpopulations sampled for the commercial/industrial sector and for the overall waste composition for the residential sector and for the commercial/industrial sectors. The resulting data should also estimate the amount and composition of the unincorporated County's waste stream originating from the residential, commercial/industrial and self-haul sectors.

Waste characterization data for each individual generator will be treated as confidential material. Data for each sample shall be reported to the County without business names, addresses or other identifying features.

The contractor shall work cooperatively with the County's franchised waste collector (Waste Management of Santa Cruz County) during the study to coordinate sampling times, dates and locations. Copies of draft reports and analyses submitted to the County for review and comments shall also be submitted to the franchisee for review and comments.

Subtask B: Inventory of Existing Diversion Activity

1. The Contractor shall compile an inventory of existing diversion (recycling, source reduction,

composting) activity occurring within the unincorporated County of Santa Cruz. The inventory shall address all government sponsored and private business recycling collection, composting, and in-house source reduction and recycling activity.

2. The inventory shall provide quantitative estimates of amounts recycled, composted and source reduced by material type. Quantitative data from individual businesses shall be kept confidential and reported to the County only in aggregate form.

The Contractor shall develop a methodology, to be approved in advance by County, for estimating quantities collected by private local and regional recyclers which can be assigned to unincorporated County residents and businesses. The Contractor shall obtain and report data in a manner consistent with CIWMB regulations such that County can use said data to establish a new base year generation number.

Subtask C: Survey of Existing Commercial Diversion Practices

1. Conduct a survey of existing recycling and source reduction practices for each generator in the commercial/industrial sector sampled in a manner which would enable the quantification of existing recycling and source reduction by material type.
2. Develop an estimate of the additional potential recycling and source reduction volumes, which can be reasonably obtained by implementation of new or additional waste reduction and recycling programs.
3. Contractor shall make a calculation of a predictive “correlative factor” (e.g., tons per year per employee) for disposal, source reduction, and recycling, by materials type and by subpopulation based on information from the survey and audits.
4. Contractor shall make a determination of the recycling and source reduction participation rate for each of the major subpopulations. In addition to the audits/surveys completed for the sampled generators for which waste characterization samples were obtained, the Contractor shall perform any additional surveys and/or waste reduction and recycling audits needed to complete this task.

The source reduction practices of sampled generators should be quantified using the methodologies contained in the U.S. EPA, Business Waste Prevention Quantification Methodologies, Business User’s Guide. A copy of the document is available from the County of Santa Cruz, Department of Public Works, Solid Waste Division. The contractor can use the recommended CIWMB/EPA Waste Reduction and Recycling Audit Form (included in attachments) or the contractor can develop a survey form to quantify existing recycling (including scavenging) and source reduction practices of the sampled generators. If the contractor develops its own form, the form must be approved by the County of Santa Cruz before use.

Subtask D: Identify Additional Diversion Potential

1. Based on the results of Subtasks A-C, identify possible new diversion programs for the

commercial/industrial and self-haul sectors that would enable the County to achieve the 50% disposal reduction mandate of AB 939 and estimate the potential diversion quantity of each program. **243**

2. Using the composition data from Subtask A, evaluate the effectiveness of the current residential curbside recycling program, identify possible modifications, if any, that would increase the program's contribution to meeting the 50% disposal reduction mandate of AB 939 and estimate the diversion quantity of each.

Part 3 Santa Clara County

Subtask A: Waste Characterization Study

1. The selected contractor shall conduct a generator based waste characterization study to determine the volume (tonnage) and composition (by material type) of municipal solid waste (MSW) disposed by selected subpopulations within the commercial/industrial sectors of the County of Santa Clara. Subpopulations to be sampled will be identified by County staff, CIWMB staff and contractor. It is anticipated that approximately 170 samples will be characterized from individual businesses. All tasks described in the attached "Scope of Work - Waste Composition Data Collection for Waste Characterization Database Maintenance" agreement between CIWMB and the County of Santa Cruz must be performed. The contractor shall use the generator-based method for sampling and characterization as described in the CIWMB Uniform Waste Characterization Method.

Once sampling sites have been identified, contractor will provide for training, labor, safety requirements, equipment and feasible sorting sites within Santa Clara County, obtain samples, physically sort samples, record data on field sheets and enter data into an electronic spreadsheet or database. Other data gathered from sampling sites will include SIC code of the business, number of employees, and annual amount of waste disposed. A measurement of the density of the waste sample will also be taken. Contractor will be responsible for maintaining quality control on data entry. All field sheets and databases associated with data collection for this contract will be provided to, and become property of CIWMB. Contractor will not be responsible for data analysis.

Waste characterization data for each individual generator will be treated as confidential material. Data for each sample will be submitted to and become property of the CIWMB, but business names, addresses, and other identifying features will not be submitted to the CIWMB, but will be kept confidential by the Contractor. The Contractor is required to calculate the mean, variance, standard deviation, and 90 percent confidence level for each of the subpopulations sampled the County of Santa Clara. Provide Santa Clara County Integrated Waste Management Program with copies of field sheets and databases associated with data collection in Santa Clara County; business names, addresses or other identifying features will not be included if requested by the business being sampled.

The contractor shall work cooperatively with the waste collectors in the selected study areas of Santa Clara County during the study to coordinate sampling times, dates and locations.

Subtask B: Diversion Analysis and Program Recommendation

1. **Optional additional work.** For each generator sampled, survey existing recycling and source reduction practices. Quantify existing recycling and source reduction by material type. Using data from waste characterization analysis and information on existing diversion programs, recommend additional recycling and source reduction programs which could be implemented by each generator. Estimate potential volumes of material by type which could be diverted by recommended programs.

Part 4: Final Report Format

Santa Cruz County

1. Executive Summary
2. Waste Composition and Volumes
Information is to be provided in graphical form (charts, diagrams, etc.) and in text/numeric format. Side-by-side comparison of significant seasonal differences for the major subpopulations in volume and characterization composition shall be shown.
 - a) Overall jurisdiction composition and volumes (generation = disposal + diversion)
 - b) Sector composition and volumes (generation = disposal + diversion)
 - c) Major subpopulation composition and volumes (generation = disposal + diversion)
3. Waste Diversion Practices
 - a) Overview of existing diversion practices found in the County of Santa Cruz
 - b) Estimated amounts diverted by material type and existing program for each sector and overall total, using both graphical and text format.
 - c) Diversion amounts and participation rates for residential and major subpopulations
 - d) Evaluation of effectiveness of curbside program
 - e) Recommended potential diversion programs for the residential, commercial and industrial sectors with estimated quantities.
4. Description of Technical Approach and Methodologies
Provide a detailed description of the methodologies used in the selection of the samples and the procedures used in the characterization study. Show examples of the statistical formulas used for data extrapolation.
5. Project Documentation
Five (5) copies of the final report (4 bound typed and copied on both sides of 8-1/2" x 11" recycled paper, 1 unbound copy-ready original typed on recycled paper)
One copy of the final report on disk (in MS Word / MS Excel) PC Format
A hard copy of all sample sheets (material treated as confidential)
A disk of all individual sample data in MS Excel format (Version 5.0 or higher)
A hard copy of generator surveys/audits (material treated as confidential)
Copies of significant reference materials used in study.
Copies of field sheets (with confidential business information removed)

1. Executive Summary
2. For each business sampled:
Name and location of business, SIC code, number of employees, current waste diversion practices, waste composition and volume by material type, volume of recyclable materials in waste stream by material type, recommendations for programs which could be implemented to reduce disposal and/or increase diversion, potential volume of material by type which could be diverted with recommended programs.
3. For each SIC code sampled:
Summary of data for subpopulation. Recommendations for source reduction and recycling programs applicable to the subpopulation.
4. Project Documentation
Two copies of the final report, typed and copied on both sides of 8-1/2" x 11" recycled paper and one unbound copy-ready original.
One copy of the final report on disk in Mac format
Copies of field sheets and databases provided to the CIWMB for waste characterization studies in Santa Clara County

SECTION 5 EVALUATION OF PROPOSALS

Each proposal will be evaluated and ranked according to the criteria described below.

The County of Santa Cruz may elect to hold oral interviews with proposers for additional input and/or clarification of different issues. If the County of Santa Cruz elects to hold oral interviews, selected proposer(s) will be contacted for an appointment. The highest ranked proposer will be invited to negotiate a contract with the County of Santa Cruz. If an agreement with the County of Santa Cruz cannot be reached, the County of Santa Cruz can elect to pursue to negotiate a contract with the next highest ranked proposer. The County of Santa Cruz reserves the right to cancel this proposal at any time and not award the project.

The County of Santa Cruz will use a weighted point system in the evaluation and selection of the contractor. The County of Santa Cruz will use the following guidelines in the evaluation of the proposal.

1. Contractor Qualifications and Relevant Experience (30%)

The County of Santa Cruz will evaluate the proposer's substantive experience in providing AB 939 solid waste generation (waste characterization) studies and generator surveys. Experience with CIWMB Uniform Waste Characterization Methodology and generator-based sampling techniques as well as experience with statistical analysis on generator based studies will also be evaluated. References will be checked to obtain an evaluation of satisfaction with past work.

General solid waste and AB 939 experience	10%
Specific generator based sampling and characterization experience	20%

2. Contractor's Proposed Work Plan and Technical Approach (40%)

Contractor's understanding of the goals and objectives of the study. The contractor will be evaluated on their consistency of the technical approach with the generator-based method needed by the County. The overall flexibility of contractor's proposed work plan to meet potential changes in the work scope, within reason, will be of primary importance.

Proposed Work Plan / Technical Approach	30%
Flexibility of Approach	10%

3. Cost of Proposal (30%)

Fixed price quote amount	25%
Cost of additional services	5%

The County reserves the right to select only some or all of the work tasks requested through this Request For Proposals and contract solely for that work. The County also reserves the right to cancel this Request For Proposals and contract negotiations at any time and not award the project.

Project Contact:

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 Department of Public Works
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 e-mail: dpw180@co.santa-cruz.ca.us