

Bids/RFP's

Organics Processing Facility Feasibility Analysis

Department: City Manager's Office, Public Works
Category: Request For Proposal, Request For Qualification
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City of Davis
Request for Proposals
for an
Organics Processing Facility Feasibility Analysis

Proposal Submittal Deadline: 4:00 p.m. PDT on March 28, 2017

Contact Person:
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Environmental Resources Manager
Public Works Department
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Davis, CA 95616
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A. Introduction

The City of Davis is undertaking a feasibility analysis to assess options for processing of organics materials in two potential scenarios:

Scenario 1: Organic materials are processed a currently available site (at the Yolo County Central Landfill -- YCCL)

- a. The feasibility analysis shall thoroughly investigate the current and proposed methods of organics processing at YCCL.
- b. The analysis will examine the costs (tipping fees, operational, and maintenance) for hauling and processing organic materials at an existing facility.

Scenario 2: Organic materials are processed after the construction of a new organics facility on City owned property (at the Davis Wastewater Treatment Plant or at the Old Davis Landfill).

- For the City-owned property assessment, site and technology options shall be evaluated and a qualitative analysis of options comparison will be applied including transportation impacts; land use impacts; greenhouse gas emissions; and air quality impacts. New and potential technologies for composting including, but not limited to co-composting wastewater bio-solids with municipal organic wastes, and digestion shall be considered. Other alternatives such as using organics as feedstock for energy production should also be considered.
- b. The analysis will examine the potential options and costs (capital, operational, and maintenance) for an organics processing facility on city land.

To increase the City of Davis' waste diversion, any system considered must accept all types of organics, inc but not limited to: meat, bones, fish, dairy products, soiled paper products, food scraps, non-expanded-

polystyrene take-out containers and compostable utensils, as well as yard materials, sod and other land-clearing debris. The goal of the feasibility study is to inform the City's decision on the most economic and environmental solution for diverting organic waste. The study should also keep in mind overall acceptance to customers, with minimal service changes to the current 3-cart system (garbage, organics, split-recycling-cart) and should consider overall economic and environmental impacts to neighboring cities.

B. Background

In order to meet the City's 75% waste diversion goal and the greenhouse gas emission reduction goals, the City of Davis is looking at ways to increase waste diversion and minimize the amount of waste transported long distance haul (greater than 20 miles' roundtrip.) A system that efficiently processes organic waste in a local facility is a possible solution and its product may provide economic value.

In July 2016, the City of Davis began a city-wide organics composting program. All residents and businesses in Davis now have access to food scrap and yard material recycling service. The organics program includes a combined collection of yard materials and food scraps in the same container as well as occasional collection of loose yard materials in on-street piles. Details about the city-wide organics composting program is posted here: <http://cityofdavis.org/city-hall/public-works/solid-waste-and-recycling/compost/organics-program>.

At present, the City's franchised waste hauler, Davis Waste Removal (DWR), bring all organics collected from customers in Davis to the YCCL green waste facility, where it is mixed with other organics, packed onto large shipping trucks and brought to the Napa Recycling composting facility in Zamora. Yolo County is currently in the process of applying for a permit to build and operate an anaerobic digestion facility on-site at the landfill. It is likely that Yolo County will seek some kind of commitment from the City of Davis, possibly in the form of a waste flow agreement, to send all the City's organic wastes to the County's digester. Before committing to such an arrangement, the City wishes to review any and all alternative options for the management of organic wastes.

The City's Wastewater Treatment Plan (WWTP) is located next door to the YCCL. When the WWTP upgrade is completed in Fall 2017, 170 acres will be available for City to consider alternative uses for that land. In addition to the WWTP, The Old Davis Landfill site is a closed landfill currently used for road debris/spoils storage and rented out for recreational activities. Both sites may be available for the City to consider building and operating an organics processing facility. This facility would need to service the City of Davis and have the potential to service the entire Yolo County region.

C. Qualifications

The ideal consultant/project team will have experience with compost facility design and operation and the various methods and technologies available for composting within California. The consultant should have knowledge of:

- Compost facility design and operation.
- Anaerobic digestion facility design and operation.
- Organic waste management and infrastructure.
- Compost and digestate sale and distribution.
- New technology research and development.
- Combined stream optimization.
- WWTP biosolids characteristics and production
- Biogas utilization technology, particularly for energy production
- Innovation and commitment to sustainability.
- Assessment experience with the above items

D. Objectives of The Study

The intent of the feasibility analysis is to produce a report so City can assess options for processing of organic materials at a currently available site (at the YCCL) versus the construction of a new organics facility on City owned property (at the WWTP or at the Old Davis Landfill). The team selected will provide the City of Davis with

the information required to determine the most environmentally and economically preferred destination for delivering organic material for processing. If an organics processing facility were to be built at a City owned facility, the team selected will provide a ranking matrix of the most environmentally and economically preferred processing technology to use at that site.

1. Technical evaluation of available and potential composting, anaerobic digestion and organics energy production systems and providing a report so City can determine the most environmentally and economically suitable option, including:

- a. Study of the mix of local feedstocks (including potential local agricultural feedstocks) to determine process requirements for control of carbon/nitrogen ratio, moisture, oxygen and temperature factors.
- b. Study the range of amendment options including, but not limited to, recycling streams, e.g. newsprint, mixed paper, yard materials, ground construction waste and wood waste.
- c. Control of public health and other identified nuisance factors.
- d. Capacity-technology-manpower options analysis.
- e. Identification of finished compost quality based on applicable standards.
- f. Capital cost ranges for preferred options.
- g. Operating and maintenance costs for preferred options.
- h. Design must be energy efficient and capitalize on opportunities to increase the energy efficiency of the entire operation.
- i. Opportunities to harness the energy (e.g. the generation and use of bioenergy to power processing equipment or other systems).
- j. Opportunities to recover heat.
- k. Ability to monitor fuel and electricity use associated with the system (i.e. measure the GHG emissions emitted as a result of the composting operation).
- l. Opportunities to lower and capture GHG emissions (CO₂, SF₆, CH₄, N₂O, HFCs, PFCs).
- m. Ability to weigh tonnages (feedstock and finished compost).
- n. Mechanisms to control leachate/runoff.
- o. Mechanisms to control emissions.
- p. Mechanisms to control odors.
- q. Potential end uses of any compost, leachate, supernatant, digestate, CNG or other end of process materials.
- r. For compost systems, a mechanism to ensure finished compost is weed free.

2. Review of potential sites and provide a ranking matrix of best technology, including (for example: scenario 1a vs 1b vs scenario 2x, etc.):

- a. Evaluate and choose an appropriate location (WWTP or Davis old landfill).
- b. Determine the space requirement for the chosen system.
- c. Determine the zone of influence for the chosen system.
- d. Determine impacts to surrounding land use and land users.
- e. Determine environmental and financial impacts to surrounding communities and the county.
- f. Identify manpower and equipment requirements; identify synergies with existing transfer site operations.
- g. Identify costs (capital, operational and maintenance) associated with each location.
- h. Identify GHG emissions associated with each candidate location and identify opportunities for reduction.

3. Identify market opportunities and economic uses for finished compost and/or digestate, leachate, and other by-products.

- a. Consider and present feasibility of selling finished product (i.e. compost, digestate, etc.)
- b. Consider and present feasibility of distribution of compost.
- c. Consider utilization of biogas, especially for energy production.

E. Scope of Services & Deliverables

This Study, as a minimum, will include analysis of the following possibilities:

- 1. City of Davis owned, operated or subcontracted anaerobic digestion and/or composting facility, possibly located at the WWTP or Old Davis Landfill.
- 2. The City's participation via waste flow agreement in the Yolo County anaerobic digestion facility at YCCL.
- 3. The City's participation in other local anaerobic digestion facilities.
- 4. The viability of the current organics disposal system, including customer satisfaction (how current collection system works with each chosen technology or compatibility of technology with current system).
- 5. Any other organics disposal options that may be available to the City of Davis.
- 6. The use of organics for energy production.

F. Submittal Instructions

Due Date: Proposals are due no later than 4:00PM (pacific time), March 28, 2017. Questions may be submitted by email to Richard Tsai at RTsai@cityofdavis.org until March 21, 2017. Questions submitted after this date will not be answered. Responses to questions will be published and distributed to applicants.

Proposal Contents: The proposal shall contain the following sections:

Section	Contents	Restrictions
Cover letter	Transmittal and declaration of conflict(s) of interest	1 sheet maximum
1	Project team and organization chart	2 sheets maximum
2	Reference Projects	1 sheets maximum per reference
3	Scope of services	3 sheets maximum
4	Project schedule	1 sheet maximum (11X17 allowed)
5	Resumes	2 sheets each maximum
Separate Envelope	Fee estimates and rate schedules	Length as necessary, only one hard copy
Electronic file	Summarized comments on standard agreement referenced by page number and section	Submit comments only

A sheet is a single piece of paper – it may be printed on both sides. Sheets shall be 8.5 x 11, with an exception for the schedule and fee estimate. Minimum font size is 11 point.

Mail or Deliver To:

City of Davis, City Clerk's Office
23 Russell Boulevard, Suite 1
Davis, California 95616
Subject: Organics Processing Facility Analysis RFP Submittal

Number of Copies: Submit 1 electronic copy (1 USB drive) plus 3 original hard copies.

Pre-Proposal Meeting: There will be no pre-proposal meeting.

SECTION CONTENT DETAIL:

Cover Letter: Teams/firms submitting proposals in response to this RFP must disclose any actual, apparent, direct or indirect, or potential conflicts of interest that may exist with respect to the firm, management, or employees of the firm or other persons relative to the services to be awarded pursuant to this RFP. If a team/firm has no conflicts of interest, a statement to that effect shall be included in the cover letter

1. Project Team and Organization Chart

Provide an organization chart, and for each key team member, provide the following:

- Qualifications and their experience on similar studies
- Role and responsibilities for this study
- Home office location
- Estimate of time allocation to the study (averaged over the duration of the project).

If sub-consultants will be used, provide names, qualifications, experience, location, and role of each sub-consultant.

2. Reference Projects: Provide references for studies that demonstrate proposer's qualifications and experience for performing the requested services. Provide names, addresses, phone numbers, and email addresses for at least two previous clients who have received similar services from the team/firm (no more than five). Also provide the approximate consultant fee for each project (include any basis for comparison such as components included in study and year the study was completed). The reference projects should be linked to the staff shown in Section 1.

3. Scope of Services: This section shall present a specific Scope of Services for this Study as described in the Study Description of this RFP.

This section shall present the proposed Study process and the consultant's specific tasks for performing the work. This section should convey the consultant's understanding of the Study, and demonstrate specialty experience, management, and other features that lead to successful achievement of Study goals.

Include a list of deliverables. Deliverables should match milestones shown in the proposed schedule.

4. Project Schedule: This section shall provide a schedule (Gantt chart) for completion of the Study.

5. Resumes (optional): Provide brief resumes for project team members.

SEPERATE ENVELOPE:

6. Fee Estimate and Rate Schedule (provided in a separate, sealed envelope): Compensation will be on a time and expense basis, with a not-to-exceed total cost limit. Allowable markups will be 10% on sub-contractors and other direct costs.

In a separate envelope provide:

- Estimated fee by task (tasks should match scope of services section)
- Hourly billing rate schedule for all proposed staff
- Types and estimated amount of expenses to be billed to the project
- Fees by sub-consultant, by task

Only one hard copy is required. No sheet limit. May be on 11x17 paper.

ELECTRONIC FILE:

7. Comments on Standard Agreement

City's Standard Agreement is attached to this RFP as Attachment A.

The consultant shall provide a list of any comments, objections, and recommended changes to the standard agreement as a separate electronic document. The due date of the comments is the same as the proposal. The proposer must provide comments as tracked changes in the provided document.

The City reserves the right to reject the proposer's recommended changes.

G. Selection Process

Proposals will be reviewed to determine if the Proposer meets the minimum qualifications necessary to complete the Scope of Services required for the Project. Proposals not meeting minimum qualifications will be disqualified from further consideration at the sole discretion of the City. The City may seek written clarification from any or all Proposers in order to better understand and evaluate the proposed solutions. This process may not be used as an opportunity to submit missing documentation or to make substantive revisions to the original proposal.

The City of Davis will appoint an evaluation team that will review and evaluate the proposals and will make a final recommendation based on the provided materials and references contacted. Interviews may be conducted if needed. The criteria used to rank project proposals can be found in the table below.

Criteria	Points Possible
Project team experience and qualifications	25
Methodology and understanding of scope of services	45
Cost	25
Davis Local Provider Preference	5
Total points	100

* In computing bids or quotations on all materials, supplies, and services to be purchased by the city, preference may be granted to responsible local vendors by an amount equal to five percent of the net bid. The granting of this vendor's preference shall be based on a determination by the purchasing agent that quantity and quality of the local product is equal to that of the next lowest bidder. This local vendor preference is expressly made inapplicable to bids for public projects, as defined by Public Contracts Code Sections 20161 and 22002. (Ord. 1433 § 3).

H. Schedule

The table below shows the anticipated schedule for consultant selection, contracting, and project delivery. This schedule may be adjusted at any time.

The City anticipates negotiating a final scope of services and reasonable fee with the chosen team. The

negotiations will include a presentation of the proposed scope of services and solicitation of input from the City's Natural Resources Commission (NRC) and Utility Rate Advisory Commission (URAC).

Anticipated Schedule

Date	Milestone
March 21, 2017	Last date to submit questions and request electronic copy of Standard Agreement
March 28, 2017	Proposals due
April 2017	Consultant selection
May 2017	Negotiate final scope of services and fee
May 2017	City Council approves selection and authorizes City Manager to execute contract
June - August 2017	Feasibility Study analysis
September 2017	Draft Report (including presentation to Commissions)
October 2017	Final Report

A full version of the Request for Proposals, including Attachment A: The City of Davis Standard Agreement for Professional Services, is available for download as a PDF: [Davis Organics Processing Facility Feasibility Analysis RFP](#)

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