

STAFF REPORT

DATE: April 23, 2018

TO: Natural Resources Commission

FROM: Richard Tsai, Environmental Resources Manager
Jennifer Gilbert, Conservation Coordinator

SUBJECT: Organics Processing Facility Feasibility Analysis Update

Recommendations

1. Receive and comment on the draft Organics Processing Facility Feasibility Analysis
2. Offer feedback on what type of GHG analysis the commission would like to see.

Background and Analysis

The city contracted with Clements Environmental Corporation (Clements) in June 2017 to conduct an organics processing facility feasibility analysis. The feasibility analysis assesses final destination options for handling organics materials and creates a matrix to rank available technologies. The overall goal of the study is to determine the most environmentally preferred solution of diverting organic waste while minimizing the cost to customers. The study also examines environmental and economic impacts to the region with each option.

Clements provided a draft analysis that was reviewed and edited by staff. The draft Executive Summary was presented to the Natural Resources Commission (NRC) at their February 26 meeting. The commission provided edits, comments and feedback, which staff sent back to Clements. The revised full analysis was sent to the NRC Zero Waste Subcommittee (ZWSC) mid-March for review. The Utility Rate Advisory Commission (URAC) reviewed the Executive Summary of the analysis at their March 21 meeting.

The most recent draft of the Organics Processing Facility Feasibility Analysis is included as Attachment 1 to this report.

Edits and comments received from both the NRC and the URAC indicated a desire for more extensive analysis on several items in the report, including the Yolo County organics projects, the purchase of DWR by Recology, and a more in-depth GHG analysis. Some of these requests fall under the current project scope, others do not (see Attachment 2).

Please note that Attachment 1 is the same draft that was sent to the ZWSC—their comments and edits have not yet been incorporated into this draft. Based on all of the comments received, staff is working with Clements on making substantial edits to the draft analysis. Potential updates to the analysis may include:

- More detailed information about the Yolo County Central Landfill projects and the possibilities involved with Davis using their facility/facilities
- More detailed information about the Recology facility/facilities and the possibilities involved with Davis using their facility/facilities
- Perform a comparative GHG emission reduction analysis.

- Two teleconference meetings—one with the Natural Resources Commission and one with the Utility Rate Advisory Commission

Although the draft analysis does include a brief summary of the GHG emissions relating to different composting options, the NRC ZWSC members requested a more extensive look at GHG effects associated with each potential organics facility scenario. In order to accomplish this, Clements has requested details on what specifically the Commission is looking for. A few potential options that Clements can look at include:

- Use of WARM Model (EPA Waste Reduction Model) to determine baseline and alternative waste management practices emissions – 1) all organics to landfill; 2) all organics to composting; 3) digestible organics to an AD system with remaining to composting system;
- Use of Compost-Planner tool to estimate GHG reductions from compost product application. Alternative projects' minimum compost product and maximum compost product produced will be used;
- Determine AD system energy requirements and energy production for both plug-flow and batch type AD systems, and electricity and CNG production
- Calculate estimated fugitive emissions from AD systems and convert to CO₂ equivalent
- Calculate estimated emissions from static and aerated composting systems and convert to CO₂ equivalent

After city staff receive some direction from the NRC on the additional analysis priorities, particularly the GHG emissions component, staff will work with Clements on increasing the scope of the project so that work can begin on the additional analysis requested.

Attachments

1. Draft Organics Processing Facility Feasibility Analysis
2. Summary of comments received by the NRC ZWSC and URAC