



A Proposed Concept for an EBMUD/ACWMA Food Waste Partnership

January 2007

Presentation Overview

- ◆ EBMUD and Food Waste – a brief history
- ◆ Food Waste to Energy Program Benefits
- ◆ Conceptual Proposal

East Bay Municipal Utility District

- Regional water and wastewater public agency serving the east San Francisco Bay
- Drinking water system serves 1.3 million people
- Wastewater system serves 630,000 people



EBMUD's Wastewater Treatment Plant

- 💧 Centrally located in Oakland with easy access to freeways.
- 💧 Secondary treatment for up to 170 MGD.
- 💧 Currently, treating 86 MGD.
- 💧 Significant excess capacity.



EBMUD's Food Waste Pilot

- Commercial food waste is collected, pre-sorted, and ground by hauler before delivery
- Pilot receives up to 1-2 loads/day (20-40 tons)
- Material is discharged into underground tanks, processed through a pulper, and anaerobically digested
- Food waste pilot started in 2004

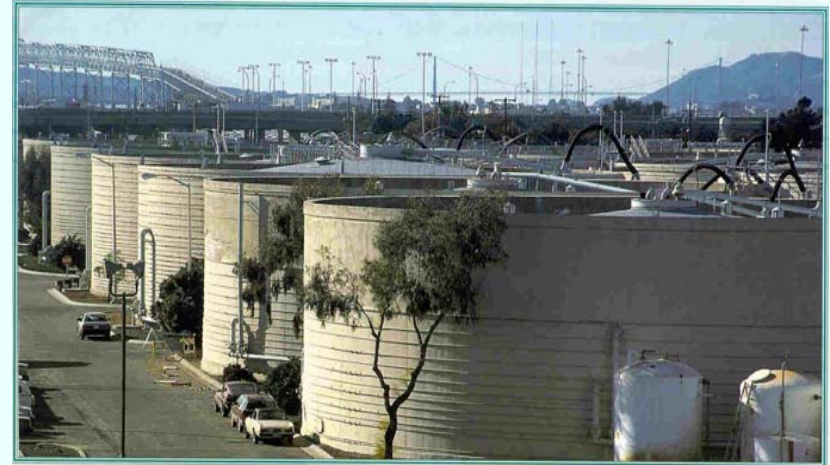


Food Waste Delivery



EBMUD's Food Waste to Energy Process

- ◆ Organic-rich food waste is added directly to existing digesters to increase methane production
- ◆ Methane gas, a renewable form of green energy, fuels an existing 6-megawatt on-site power plant
- ◆ Provides robust waste treatment and efficiently produces energy from organic materials
- ◆ Utilizes the community's existing waste treatment infrastructure



EBMUD's

Food Waste to Energy Concept

A Piece of the Solid Waste Puzzle

- ◆ **Targets commercial food waste**
- ◆ **Generates high-grade products
(renewable green energy)**
- ◆ **Regional solution with local benefits**
- ◆ **A key piece of the Authority's
recycling portfolio**

Benefits of EBMUD

Food Waste to Energy Proposal

- Uses existing EBMUD facilities
 - Anaerobic digesters
 - Gas recovery & energy generation
- Ideally situated in an easy access industrial location that requires no additional site permitting
- Biological digester extracts energy without incineration

Benefits of EBMUD

Food Waste to Energy Proposal

- Reduces volume of waste materials by 90%
- Supports movement toward zero waste, green power, and oil independence
- Provides for methane destruction and associated green house gas emission credits

4 Key Elements of Proposed Food Waste Program

- ✓ Sorting technology
- ✓ Pretreatment
- Waste stream (sourcing)
- Capital investment

Next Steps

- 💧 Work with ACWMA staff to:
 - Define/develop roles of stakeholders
 - Develop framework for a regional food waste to energy project
- 💧 Obtain capital funding
- 💧 Identify & secure reliable food waste stream
- 💧 Construct facilities & implement program