

EBMUD Food Waste Initiative

EPA Sustainable Materials Management

March 12, 2015

Presentation Overview



- Background
- Why Food Waste?
- Food Waste Pre-processing
- Regulatory Oversight
- Next Steps

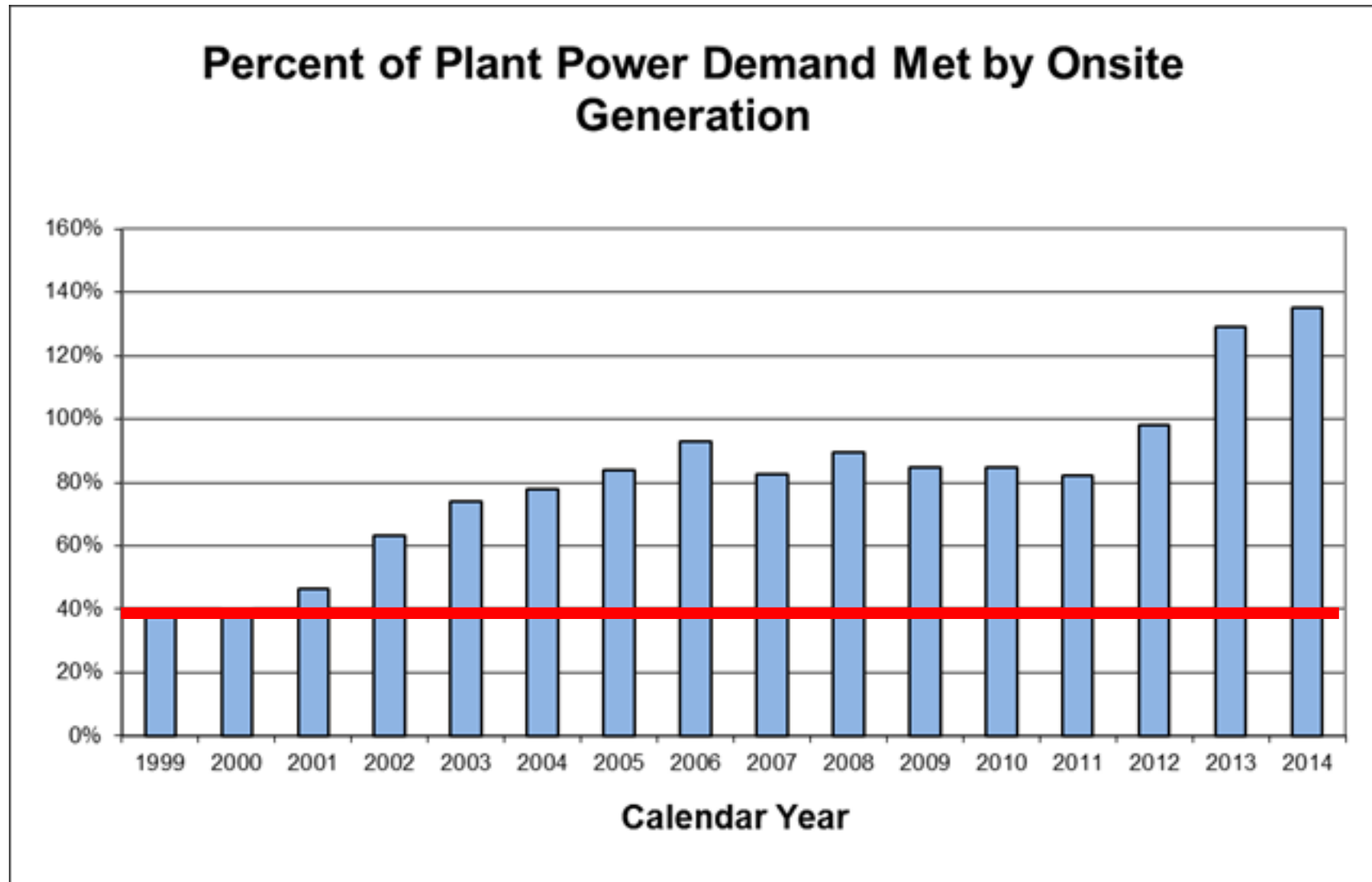
Background



- EBMUD has excess digester capacity
 - Plant originally designed to accept waste from 20 canneries in the service area
 - Now there are zero canneries
 - Capacity to treat 168 million gallons/day
 - Average influent flow is 60 million gallons/day



Background: Power Production



Background: Changing Market Conditions



- Increasing energy prices
- Government subsidies/incentives for renewable energy initiatives
- Political focus on GHGs and Climate Change

Increased recognition from potential competitors of the energy value of organic wastes

New rates for grease haulers!

The Napa Sanitation District has a new rate structure for grease haulers: the more you haul, the less you pay!

New rates: (Beginning with February 2013)

Tier 1	50,000 gallons or more per month	No charge
Tier 2	25,000 to 49,999 gallons per month	\$0.03/gallon
Tier 3	2,500 to 24,999 gallons per month	\$0.07/gallon
Tier 4	Less than 2,500 gallons per month	\$0.10/gallon

Hours & location:

- Monday - Friday, 7:30 a.m. to 3:30 p.m.
- Soscol Water Recycling Facility, 1515 Soscol Ferry Road in Napa.

Help us turn your waste into renewable energy!
Introducing the "Leftovers to Lights" Biogas Enhancement Project

Sacramento Municipal Utility District (SMUD) and the Sacramento Regional County Sanitation District (SRCSD) received American Recovery and Reinvestment Act funding from the Department of Energy to help construct a co-digestion facility for fats, oils, grease and liquid food processing waste at the Wastewater Treatment Plant in Elk Grove.

Why Food Waste?

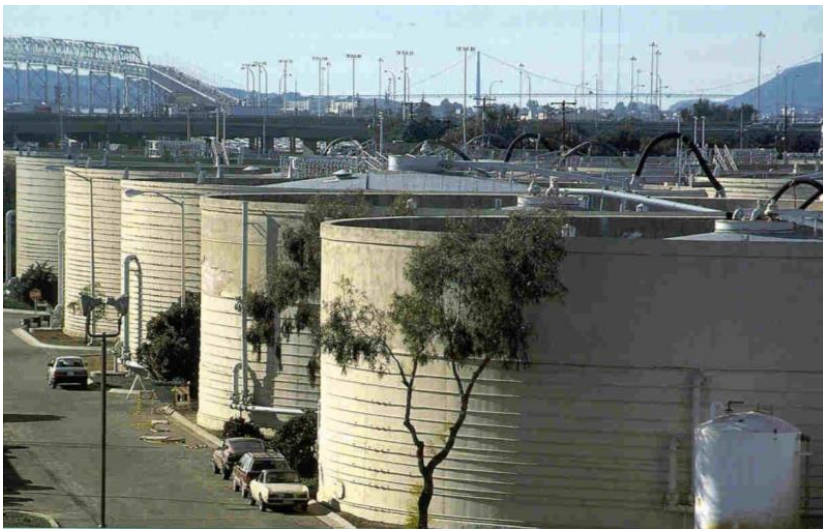
- High energy potential
- Represents a large percentage of solid waste stream to landfill
- Diversion from landfill through food waste digestion
- Digestion may be the highest and best use of food waste



1 truck/day will power 260 homes

Why Food Waste?

- 💧 One digester can process ~ 200 ton/day of food waste
- 💧 Digester gas to be converted into renewable energy
- 💧 200 ton/day of food waste \approx 2 MW of energy



Energy
Generation
→



EBMUD Food Waste Pilot History



- 2005: Begin to accept small amounts of food waste
- 2006: Reliable acceptance of 20 tons of food waste per week



- 2011: Contract signed with Recology
- 2014: Oakland votes to send commercial food waste to EBMUD

Benefits of Food Waste Digestion



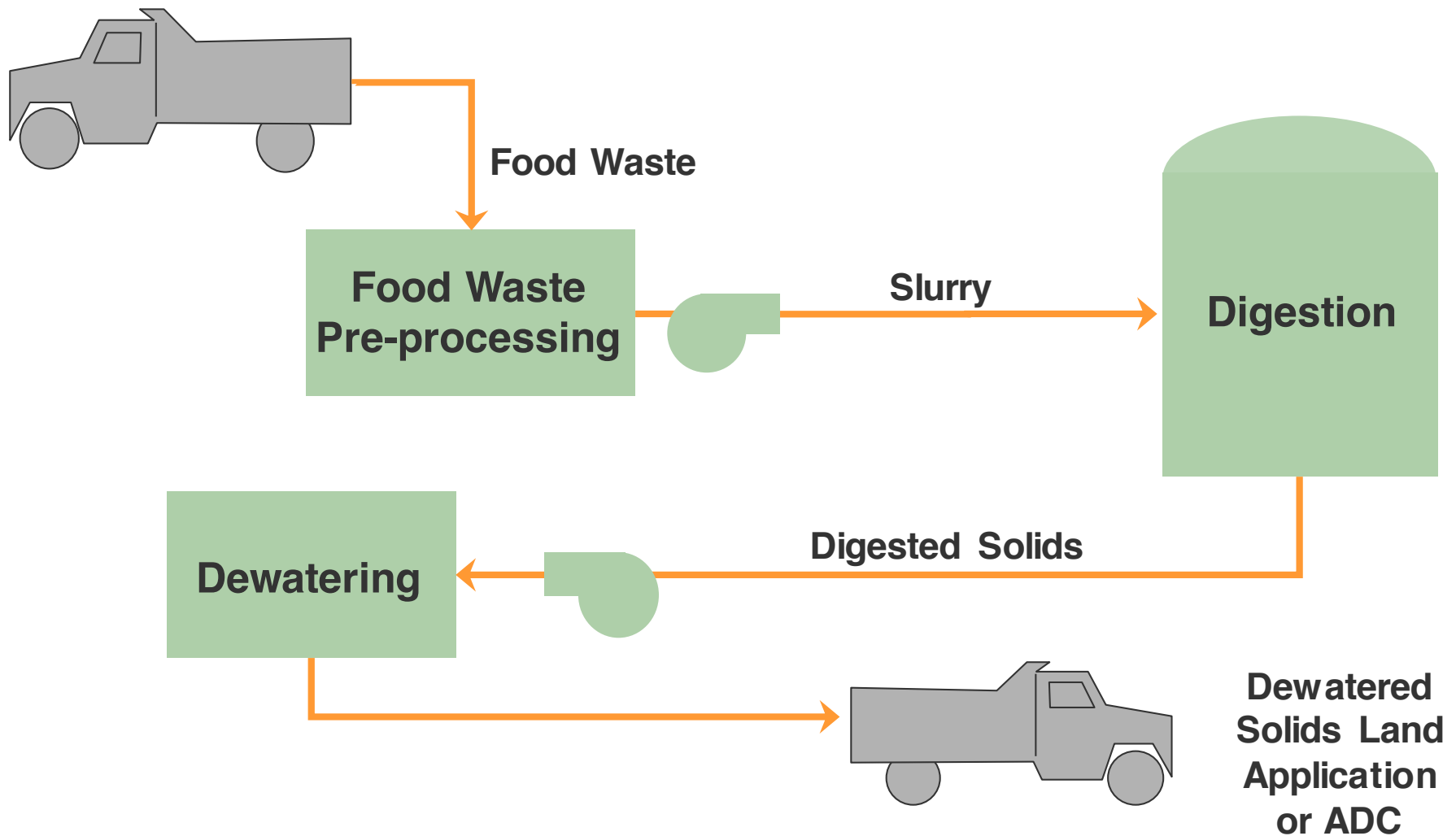
- Local and sustainable digester feed stock
- A renewable energy source
 - High energy value: 1 truck/day (i.e. 20 tons/day) will power 260 homes
 - Potential renewable energy and greenhouse gas credit opportunities
- Supports state goals:
 - CARB / AB 32 - GHG emission reductions
 - CPUC and CEC - Renewable Portfolio Standard
 - CalRecycle - Zero Waste California

Food Waste Challenges

- Contaminants
 - Nature of contamination
 - Variability in control of the waste stream
- Processing technology still evolving
- Permitting
 - No existing regulations fit
 - Current best fit: Biosolids Composting at POTW



Food Waste Processing Schematic



Pre-Processing System



- Near Term – 10 tons/day clean ground CCCSWA material ; RFP process underway for large scale facility
- Long Term - larger scale pre-processing facility ~ 200 tons/day
- Pre-processing system will produce an organic food waste slurry material for digestion and dewatering

Segregation of Food Waste



- Value in segregation of food waste from municipal biosolids
 - Polymer use
 - Isolation of impacts
 - Re-use alternatives for remaining solids
- Near Term Co-Digested Biosolids Uses
 - 50% to land application
 - 50% to ADC

Regulatory Oversight



- Acceptance of new waste types has exposed EBMUD to regulatory oversight by new agencies—CA Dept. of Food and Agriculture (CDFA) for FOG wastes and CalRecycle/Local Enforcement Agency for food waste.
- EBMUD is working, along with others in the state, to address appropriate regulatory pathway.
- EBMUD operations are currently regulated under an existing NPDES program framework administered by the State Regional Water Boards.

The Future - Food Waste



- Commercial Food Waste
 - Bay Area generates approximately 1,700 tons/day
 - Sustainable, local, high methane value feed stock
 - Working to expand pilot with long-term (10+ year) contracts
 - Significant interest from local communities in regards to landfill diversion and renewable energy
 - Potential for green house gas emission credits via destruction of methane gas (as compared to alternative)

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