



# **EBMUD/Recology Case Study**

Presented to  
**Anaerobic Digestion Workshop**  
**April 12, 2010**

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# Agenda

Company Profile

Project History

Project Approach

Accomplishments

Questions

# Company Profile

Rebranding

## New Identity

- Launched April 27, 2009
- Symbolizes company's leadership –  
Shift from garbage collection to resource recovery and optimization
- “Re” – Reuse, reduce, recycle and rot  
“Ecology” – Improve planet  
“WASTE ZERO” – Rallying cry

# Company Profile

## Rebranding



Recology™

WASTE ZERO

*People • Service • Environment*  
NORCAL WASTE SYSTEMS, INC.  
*Proud to be Employee Owned*

# Company Profile

## Service Locations & Operations

### Provides Integrated Services

- 600,000 households
- 50,000 commercial businesses
- 60 communities served in CA, NV and OR

### Operates Transfer and Recycling Facilities

- 11 Transfer Stations
- 9 MRFs
- 6 Organic Processing Facilities
- 7 Landfills



LEGEND	
■ Administration / Collection	● Contract Operated Landfill
◆ Material Recovery Facility	● Special Wastes Disposal
★ Transfer & Transport	● Compost Facilities
▲ Owned & Operated Landfill	★ Contract Operated Transfer Stations
▼ Contract Operated Material Recovery Facility	

# Company Profile

## Recology Oregon

### Salem

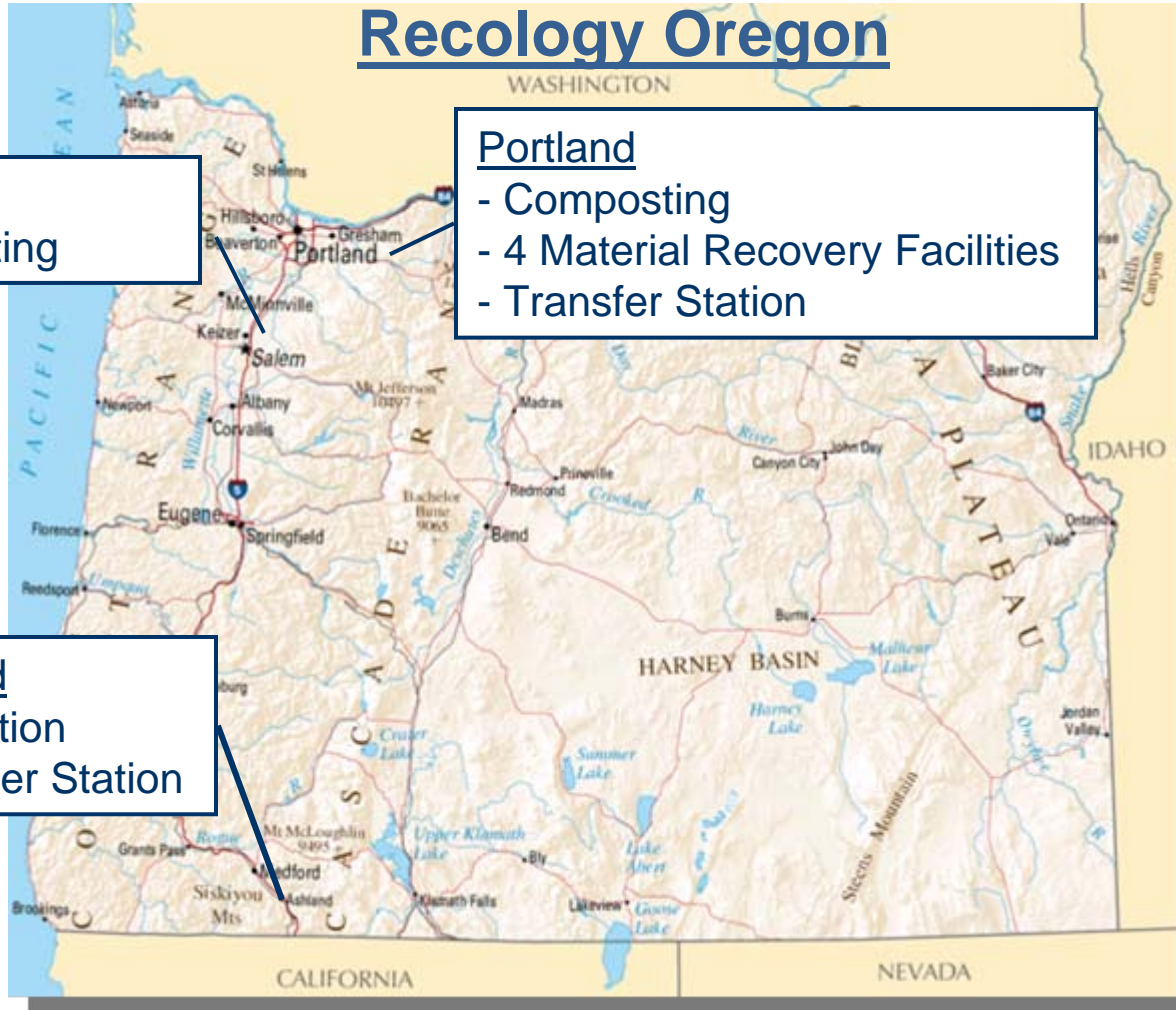
- Composting

### Portland

- Composting
- 4 Material Recovery Facilities
- Transfer Station

### Ashland

- Collection
- Transfer Station



# Project History



Commercial & Residential Food Scraps

# Project History

- 1995 Green waste composting requested by City of Dixon
- 1996 Composting green waste implemented in Dixon
- 1998 Fantastic 3 – Pilot program developed in S.F.  
- Expanded Jepson Prairie Organics for composting
- 1999 Commercial collection implemented for S.F. pre- & post-food waste
- 2001 Fantastic 3 – S.F. residential collection roll-out

# Project History

- 2001 Commercial collection implemented for Oakland pre- & post-food scraps
- 2002 Demonstration project startup food scraps digestion
- 2008 Partnership agreement between EBMUD and Recology approved
- 2009 Phase I startup— material processed and shipped from JPO to EBMUD

# Project History

- 2009 SF's mandatory recycling ordinance approved
- 2009 RFI for food scraps pre-processing facility to be located at EBMUD issued
- 2010 Food scraps pre-processing facility project awarded to Recology

# Project History

## SF Recycling and Disposal, Inc.

- Location: San Francisco, CA
- Municipalities Served: City and County of San Francisco
- Feedstock: Green waste, residential and commercial collected food scraps
- Permit Capacity: 600 tpd<sup>7</sup>



# Project History

## Jepson Prairie Organics

- Location: Vacaville, CA
- Municipalities Served: Vacaville, Dixon, San Francisco & Oakland
- Feedstock: Green waste, residential food scraps and Commercial collected food scraps
- Permit Capacity: 400 tpd7



# Project History

## East Bay Municipal Utility District (EBMUD)

- Location: Oakland, CA
- Municipalities Served: San Francisco & Oakland
- Feedstock: Commercial collected food scraps
- Permit Capacity: 200 tpd5



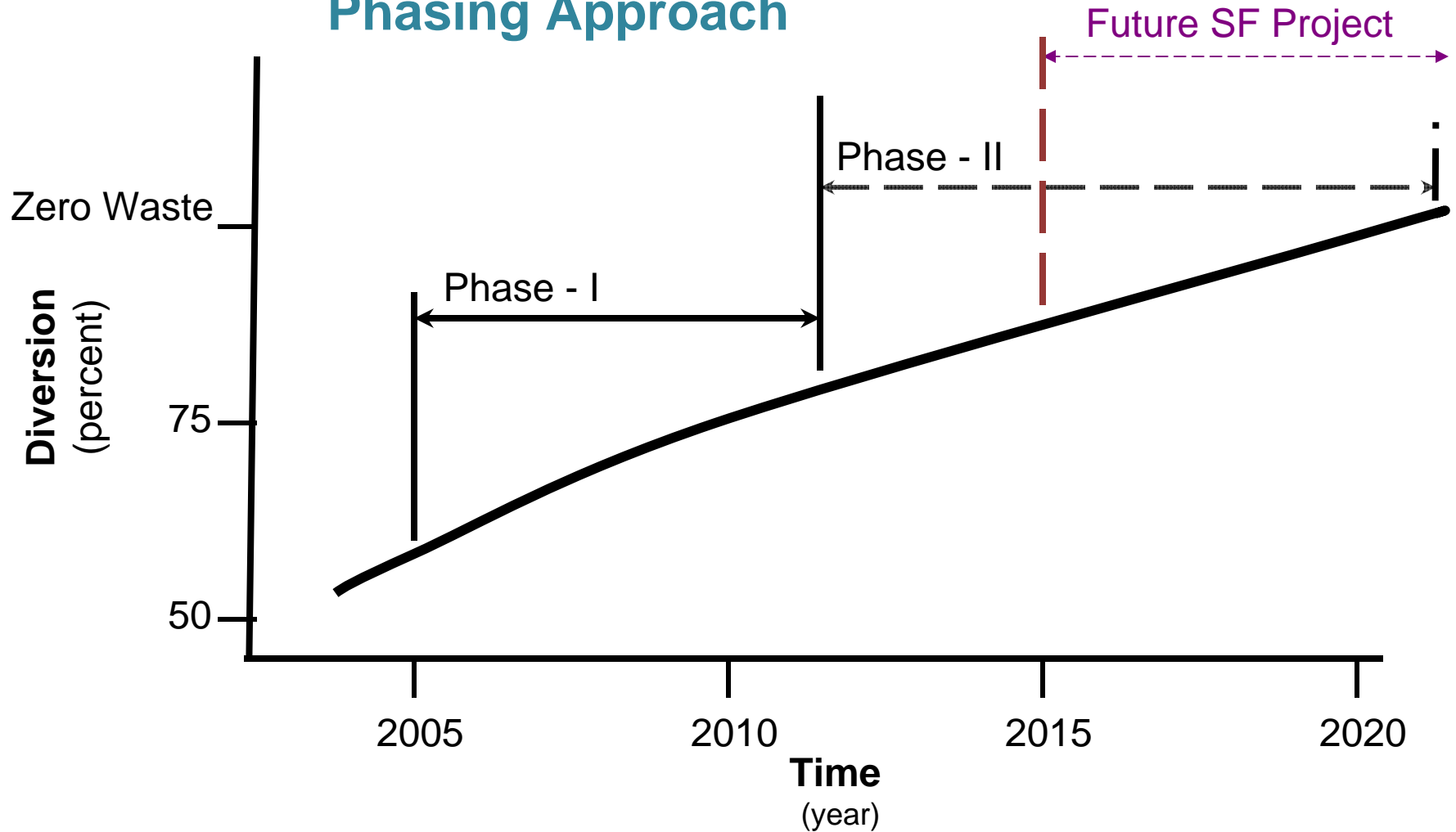
# Project Approach

## Project Objectives and Constraints

- Commercial food scraps digestion
- Preferred method is still composting
- Determine if AD is part of Recology's composting system
- Use AD as environmentally-preferred method of controlling VOCs

# Project Approach

## Phasing Approach



# Project Approach

## Collection

- **Purpose:**  
Source separated commercial and residential food scraps
- **Processing Capacity** 550 tons per day



# Project Approach

## Preprocessing and Transfer

- **Purpose:**  
Removal of large contaminants (cardboard & plastics)
- **Processing Capacity:** 120 tons per day



# Project Approach

## Digestion and Power Generation

- **Purpose:**  
Convert Food Waste to Biogas  
Biogas to Electrical Power
- **Capacity:** 150 tons per day per digester  
2 mega watts load per digester



# Accomplishments

- Working partnership agreement between Recology and EBMUD; research-based agreement
  - Established governance for the project
  - Project team is developing transitional agreement
  - Steering committee meets once per month/quarterly – as needed
  - Both organizations have committed capital (human and monetary)
- Continues operation for nine months
- Successful 100 tpd test; know we can do it

# Accomplishments

- Executed agreement between EBMUD and Central Contra Costa Waste Management Authority
- Negotiation of Phase II, between Recology and EBMUD in process
- Preparation of a programmatic EIR in process
- 2 years off from Phase II, receiving and preprocessing facility located at EBMUD

# Questions?

