

Conversion Technology and the San José Zero Waste Initiative

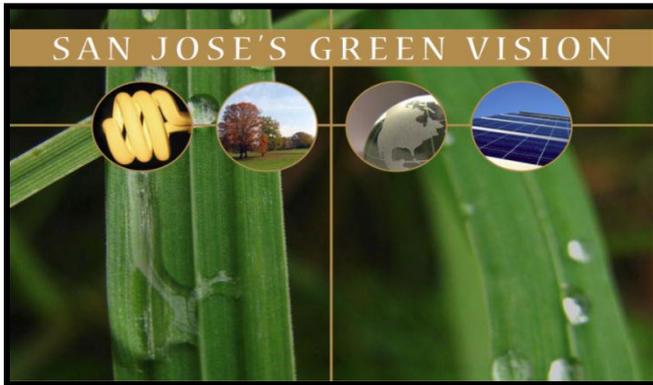


DOE Webinar – April 16, 2013

Michele Young - Organics Manger - City of San Jose

Integrated Strategic Planning

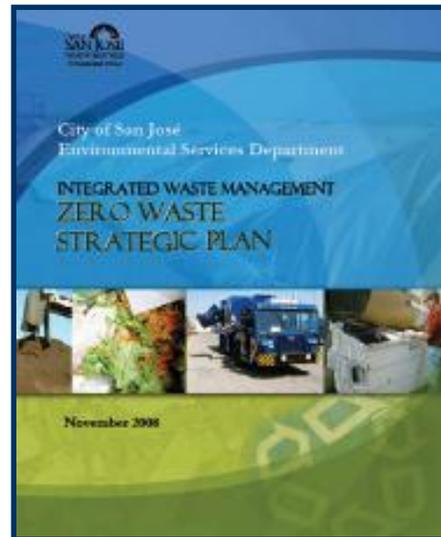
San Jose's Green Vision



Plant Master Plan



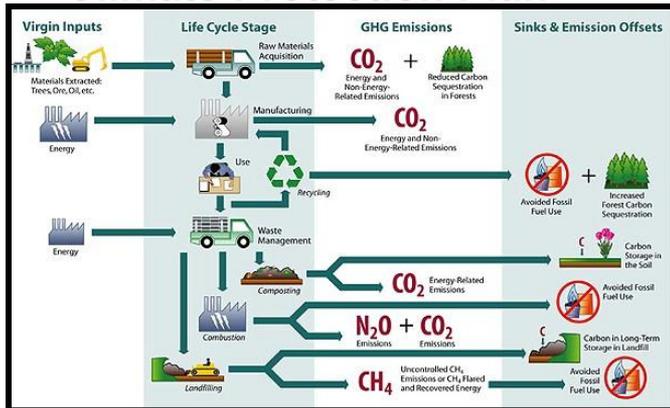
Zero Waste Strategic Plan



Organics-to-Energy Strategic Work Plan



Climate Protection Plan



San José Green Vision

Renewable Energy



100% Renewable by 2022

100% Green City Fleet by 2022

Zero Waste



Zero Waste by 2022

75% Diversion by 2013

Renewable Energy from Organic Waste

Infrastructure – Technology Type - Processing costs



Feedstock – Digestate Management – Gas Utilization



Feedstock Drivers

- Characterization Studies – 33% Organic
- Wood Waste transported to Co-gen
- Biosolids used as ADC



Commercial Agreements – July 2012

1. Collection



2. Organics Processing

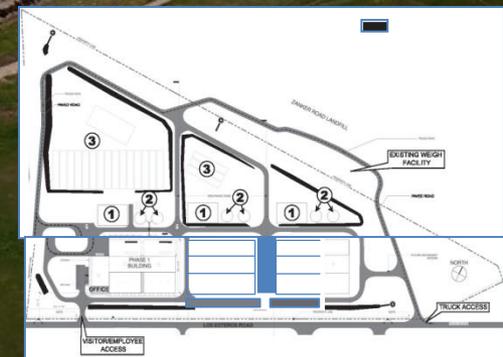


Zero Waste Energy Development Integrated AD/Composting

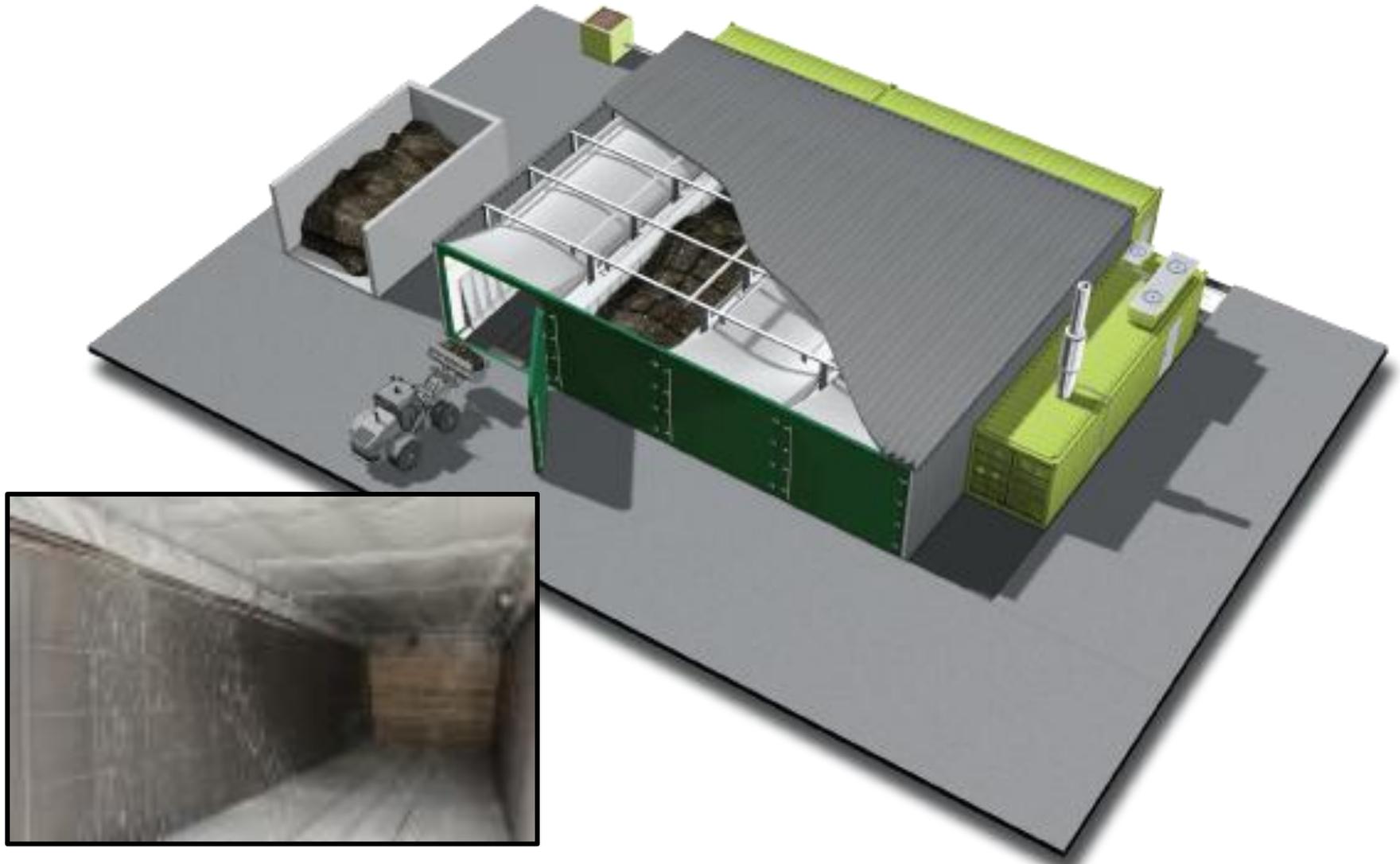
- High Solids Dry Fermentation AD
 - Kompoferm -Field-Tested German System
 - Compost trenches for digestate
 - Low BTU material to ZBest compost facility
- Odors and GHG Emissions
 - Managed in Enclosed System
- ZWED Experienced with Innovation in San Jose
 - Partnering with Bulk Handling Systems
 - Zero Waste Energy



AD Project Site



Digester Units



Site Construction and Feedstock Analysis - Experimentation



Site Development



Marina Reference Facility



Gasification Pilot Project

- Demonstration Policy
- Grant Partnership
- Two Phase Process
 - Feasibility
 - Demonstration
- Regional Collaboration



Gasification Project Site



Technology Analysis

- Massive amount of analysis being done
- Need Modification for Specific Conditions
- Technology companies rapidly changing
- Data not available from NA models
- Evaluation Criteria are Key
- Expert Review and Peer Review



Supporting Conversion Technology Development

- Siting and Permitting Support
- Land Leases
- Directing waste to facilities
- Collection for separation of materials
- Risk-Benefit sharing
- Collaborating on Grant Proposals
- Compost Marketing
- Policy Drivers



Dialog and Collaboration

- Share Questions, Considerations, Experiments
- **Cal Recycle** – Conversion Technology Site
 - Programmatic EIR, Conversion list serv
 - Forum Proceedings, Case Studies
- **Biocycle Renewable Energy** – S.D.– April 2014
- **CRRA/ CORC** – Pasadena – August 2013
- **US Composting Council** – Oakland 2014
- **California Biomass Collaborative**
- **Bioenergy Association of California**

Thank You



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