

# **Permitting Compostable Material Handling and Anaerobic Digestion Facilities in California**

## **Zone Works**

Capitol Plaza Holiday Inn Sacramento

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Department of Resources Recycling and Recovery (CalRecycle)

# Permitting Process: Regulatory Agencies

Planning department

Building department

City or county health department (Local Enforcement Agency)

CalRecycle

Air District

Regional Water Quality Control Board

# CalRecycle Compostable Material Handling Regulatory Tiers

Excluded

Enforcement Agency Notification

Full Permit

# **Tier Placement Based On:**

Material Type

Volume to be Processed

# Material Type (Feedstock)

Agricultural Material

Green Material

Biosolids

Food Material

Mixed Solid Waste

# Volume to be Processed

## Compost

Excluded	500 yd <sup>3</sup> or less material generated on site
Notification	12,500 yd <sup>3</sup> or less green material
Full Permit	>12,500 yd <sup>3</sup> green material and/or other material

## Chip and Grind

Notification	< 200 tons per day
Registration	200 to 500 tons per day
Full Permit	> 500 tons per day

# Compostable Material Handling Regulatory Tiers

Excluded Tier	Enforcement Agency Notification Tier	Registration Permit Tier	Full Solid Waste Facility Permit
<p>Agricultural material derived from an agricultural site and returned to the same site</p> <p>Vermicomposting</p> <p>Mushroom farming</p> <p>Small-scale composting (500 yd<sup>3</sup> or less material generated on site)</p> <p>Refer to Section 17855 for complete list</p>	<p>Agricultural Material Composting Operations</p> <p>Green Material Composting Operations (&lt; 12,500 yd<sup>3</sup>)</p> <p>Biosolids Composting Operations at POTWs</p> <p>Research Composting Operations</p> <p>Chipping and Grinding Operations (&lt; 200 tpd)</p>	<p>Chipping and Grinding Facilities (200 tpd &lt; x &lt; 500 tpd)</p>	<p>Composting Facilities (all) (e.g. biosolids, food material, mixed material)</p> <p>Green Material Composting Facilities (&gt; 12,500 yd<sup>3</sup>)</p> <p>Chipping and Grinding Facilities (&gt; 500 tpd)</p>

# California's New Goal: 75% Recycling (AB 341)

- Increasing the recycling infrastructure
- Targeting organic materials

Anaerobic Digestion shows up prominently in these recommended focus areas

# Anaerobic Digestion (AD)

Promising technology for managing organic material



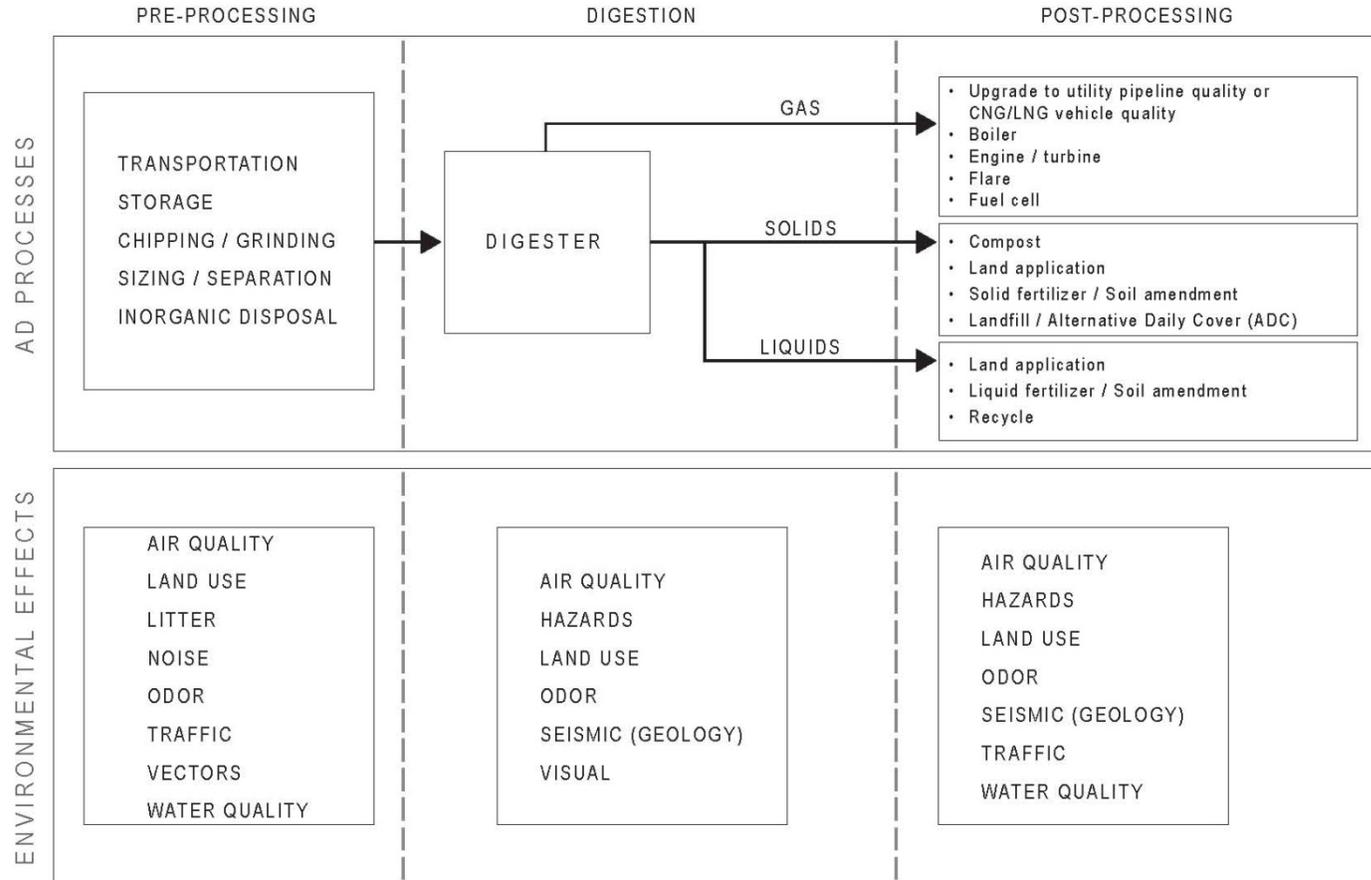
What are the environmental impacts?

# **CalRecycle Program Environmental Impact Report (EIR)**

Provide program level impact analysis of AD facilities as a starting point for local jurisdictions in preparing CEQA compliance

Analyze potential environmental impacts, mitigation measures, and CEQA project alternatives

# AD Program EIR



## **AD Program EIR - Summary**

All potential environmental impacts at a program level could be mitigated to a less-than-significant level with implementation of mitigation measures.

# CalRecycle AD Regulations

If feedstock is compostable material, the facility is regulated as a compostable material handling facility.

If feedstock is not compostable material, the activity is regulated as a transfer and processing facility.

# Revising Compostable Materials Handling Regulations

Previous rulemaking: 2003

Current informal rulemaking

- Address issues not completed in 2003
- Address priority issues based on policy goals and stakeholder feedback

# **Stakeholder Workshops & Developing Draft Text**

Staff held 16 workshops from October 2011 through May 2013 to obtain stakeholder input on these 14 regulatory issues

Staff completed revisions to the draft regulations based on written stakeholder comments in August 2013

## **Formal Rulemaking**

At the October 15, 2013 public meeting, the Director requested CalRecycle staff to submit the regulatory packet to the Office of Administrative Law to initiate the formal rulemaking process

# Revisions to Title 14 & Title 27 – 14 Issues

Anaerobic Digestion

Food material definition

Small-scale composting exclusions

Physical contaminants in compostable material

Land application: disposal defined

Odor

# Anaerobic Digestion

CalRecycle staff:

View AD as a process in between Transfer/Processing and Compostable Materials Handling

Intended to develop draft regulatory text for AD

Became aware of several in-vessel digestion technologies that do not utilize AD

Propose to broaden the scope of regulations to cover other types of “in-vessel” digestion activities, including AD

## **Proposed In-Vessel Regulations: Combination of Transfer/Processing & Compostable Material Handling**

Handling of feedstock and residual waste materials will be subject to transfer/processing requirements.

End products will be subject to compostable material handling requirements.

# Proposed In-Vessel Digestion Regulatory Tiers

Excluded	EA Notification	Registration Permit	Full Permit
Anaerobically digestible materials at POTW	Limited Volume	Medium Volume	Large Volume
Ag material derived from ag site & returned to same site	Research		
Less than 100 cubic yard on-site capacity	Dairy Operation		
Subject to more stringent Federal or State law	Distribution Center Operation		

# Food Material Definition

Current Food Material definition is general

Does not distinguish between various food waste types

Food material composting requires a full permit



# Proposed Food Material Composting Regulations

Expands food material definition; adds “vegetative food material”

Allows composting of vegetative food material at a “Vegetative Food Material Composting Facility”

Food material composting still requires a Compostable Materials Handling Facility Permit

# Proposed Compostable Material Handling Tiers

Excluded Tier	Enforcement Agency Notification Tier	Registration Permit Tier	Full Solid Waste Facility Permit
<p>Agricultural material derived from an agricultural site and returned to the same site</p> <p>Vermicomposting</p> <p>Mushroom farming</p> <p>Small-scale composting (&lt; 100 yd<sup>3</sup> or 500 sq. feet)</p> <p>Refer to Section 17855 for complete list</p>	<p>Agricultural Material Composting Operations (all)</p> <p>Green Material Composting Operations (&lt; 12,500 yd<sup>3</sup>)</p> <p>Biosolids Composting Operations at POTWs (all)</p> <p>Research Composting Operations</p> <p>Chipping and Grinding Operations (&lt; 200 tpd)</p>	<p><b>Vegetative Food Material Composting Facilities (&lt; 12,500 yd<sup>3</sup>)</b></p> <p>Chipping and Grinding Facilities (200 tpd &lt; x &lt; 500 tpd)</p>	<p>Composting Facilities (all) (e.g. biosolids, food material, digestate, mixed solid waste)</p> <p>Green Material Composting Facilities (&gt; 12,500 yd<sup>3</sup>)</p> <p><b>Vegetative Food Material Composting Facilities (&gt; 12,500 yd<sup>3</sup>)</b></p> <p>Chipping and Grinding Facilities (&gt; 500 tpd)</p>

# Small-Scale Composting Exclusions

Current regulations:

Green material generated on-site:  $\leq 500 \text{ yd}^3$ ,  $\leq 10\%$   
food material,  $\leq 1,000 \text{ yd}^3$  given away or sold annually

Within-vessel composting ( $< 50 \text{ yd}^3$ )

Noncommercial composting provided all compostable  
material is generated and used on-site,  $< 1 \text{ yd}^3$  food  
material

## Proposed Small-Scale Composting Exclusion

Activity is excluded if total amount of feedstock & compost on-site at any one time **does not exceed 100 cubic yards & 500 square feet.**



# Physical Contaminants in Compostable Material

Current regulations do not contain a limit for physical contaminants in compostable material products.



# Proposed Regulations: Physical Contaminants in Compostable Material

Require **compost** to contain **no more than 0.1% by weight of physical contaminants** prior to leaving a compost facility

0.1% physical contaminant limit would also apply to **all compostable material that is land applied**

# Land Application of Compostable Materials

Application to agricultural land is beneficial use if it meets CA Department of Food & Agriculture requirements.

Need better method to determine when land application is considered disposal.



# Proposed Land Application Regulation

0.1% physical contaminant limit

Maximum metals concentrations

Pathogen density requirements

Standards for application frequency and depth

# Odor Management

Approaches to verification of odor complaints at compost sites are not consistent statewide.



# Proposed Odor Regulation

Minimize odor impacts so as to not cause a “nuisance”.

In situations where there are consecutive or chronic odor violations, the EA may require the operator to:

- Prepare an Odor Best Management Practice Feasibility Report, &
- Employ additional reasonable and feasible measures to minimize odors.

## **Next Steps**

Economic & Fiscal Analysis

Initial Statement of Reasons

Submit proposed regulations to Office of Administrative Law  
(Summer 2014?)

# Information on the Rulemaking Process

## **Compostable Materials, Transfer/Processing Rulemaking**

[www.calrecycle.ca.gov/Laws/Rulemaking/Compost/default.htm](http://www.calrecycle.ca.gov/Laws/Rulemaking/Compost/default.htm)

## **CalRecycle: Compostable Materials, Transfer/Processing Rulemaking Listserv**

[www.calrecycle.ca.gov/Listservs/](http://www.calrecycle.ca.gov/Listservs/)

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