

# CalRecycle Informal Workshop on Draft Regulatory Revisions to Title 14 and 27

Wednesday, December 21, 2011  
Cal/EPA Building,  
Conference Room 550  
1001 I Street  
Sacramento, CA

# Issue 1

Current food waste definition is general & does not distinguish between various food waste types. All food waste composting requires a full permit.

## **Potential Approach**

- Define sub-categories of food waste
- Establish varying degrees of handling protocols
- Allow some types of food waste to be co-composted at Notification tiered sites

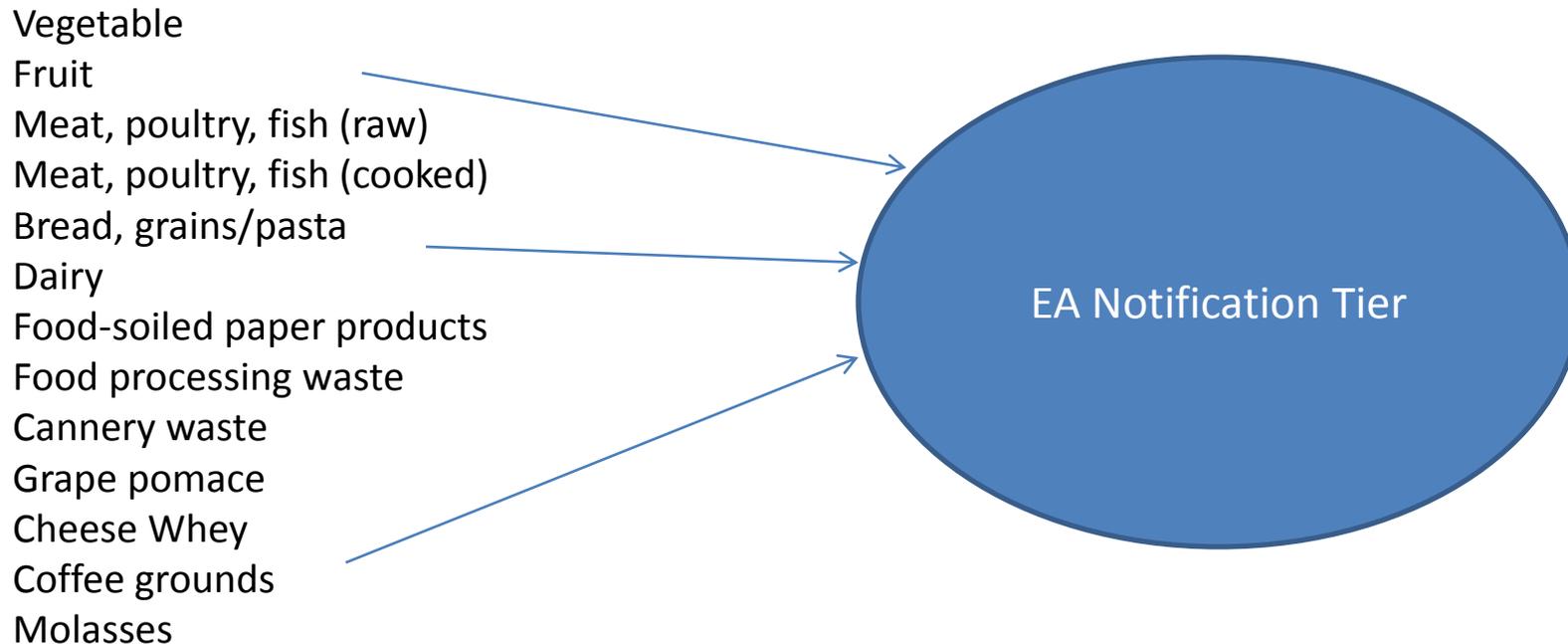
# Define Potential Food Material Subcategories?

**Pre-consumer** - material that does not meet the definition of “agricultural material” and is generated at farmers markets, food manufacturing facilities (canneries, coffee production, wine production, etc.), grocery stores, retail stores, and restaurants during the process to produce food for human or animal consumption. Primarily vegetative material.

**Postconsumer** - material generated at residences, restaurants, retail stores, grocery stores, and institutions after being provided for human consumption. May include meat scraps, fish and poultry, and dairy.

**Animal-Derived** - material that does not meet the definition of “agricultural material”, generated at residences, grocery stores, retail stores, restaurants, cheese and dairy production, institutions, but not at slaughter houses or meat processing facilities, during the process to produce meat, fish, poultry and dairy products for human or animal consumption.

# Allow Certain Types of Food Material to be Co-Composted with Green Material in EA Notification Tier



# Food Material Type Subcategories

Example: Vegetables

Raw

Cooked

Fresh (not putrefying)

Old (putrefying)

Food processing by-products

Farmers Market (with fruits, nuts, flowers, etc.)

Residential curbside (with green & other food material, soiled paper, contaminants)

Restaurant (with other food material, soiled paper, plastics, biodegradable plastics, contaminants)

Institutions (with other food material, soiled paper, plastics, biodegradable plastics, contaminants)

Grocery Stores (with other food material, waxy cardboard, shrink wrap, etc.)

# Allowable Food to Green Material Ratio Options in EA Notification Tier

10:90 food to green

20:80 food to green

25: 75 food to green

30:70 food to green

# Proposed Approach

Types of food waste allowed in EA Notification Tier

Maximum allowable ratio of food (pre- and post-consumer, not animal derived) to green material

Require additional design & operating standards (potential BMPs)

- Process incoming food material loads daily
- Temporarily cover food material feedstock with tarps
- Construct smaller feedstock storage piles
- Spread green material or wood chips on ground, surround area with horseshoe-shaped berm of green material/wood chips, dump incoming food material directly into area
- Incorporate food material into windrows the same day
- Incorporate food material with high carbon material
- Apply compost blanket or compost “overs”
- Revise OIMP to address new food waste stream
- Install litter fences
- Other?

## **Issue 2**

Current regulations identify application of compostable materials, compost, and ash to agricultural land as beneficial use if it meets CDFA requirements. Need a clearer way to determine when land application is disposal and not beneficially used.

### **Potential Approach**

- Work with agencies to establish criteria for determining disposal.
- Criteria could include: area, application depth, frequency, storage time, contaminant limits,
- Also allow case by case determinations.

# Proposed Approach

## Defining Disposal

(Based on concepts from Ventura County Ordinance  
& does not refer to fertilizers )

Application of organic material that exceeds an average of 12 inches in total depth

Application of organic material that exceeds 0.1% physical contamination level

Storing or stockpiling of organic material onto land for greater than six months

LEA may consult with other agencies to determine if application of organic material is disposal

# Proposed Approach (cont.)

## Exceptions

Application of organic material on land may exceed average depths of 12 inches upon receipt of prior written approval by a local fire district, county agricultural commissioner, or LEA.

Does not apply to the storage and application of organic materials in quantities of less than 200 cubic yards per parcel

## **Issue 3**

Agricultural material and green material composting operations are limited to 12,500 cubic yards of off-site-generated green material being stored on-site at any one time.

### **Potential Approach**

Exclude stable compost from calculation of the 12,500 cubic yard for Notification sites that meet storage criteria

## **1a. Proposed Approach**

Stored stable compost that has undergone PFRP is excluded from 12,500 cubic yards calculation for EA Notification sites if:

Proscribed requirements are met, the requirements would include :

- Pile size,
- Temperature monitoring,
- Pile separation,
- Pile setback from facility boundary.

## **1b. Proposed Approach**

Operator submits a Fire Prevention, Control and Mitigation Plan for review and approved by the LEA.

## **Issue 4**

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

### **Potential Approach**

- Develop an odor verification/complaint protocol for operators to be included in OIMP.
- Use similar protocols employed by other regulatory entities and include verification and complaint protocols and possibly utilize odor measuring technologies.

# Proposed Approach

1. Establish odor baseline/threshold in OIMP for each site
2. If an odor event causes the facility to exceed the baseline/threshold, the operator is required to implement additional monitoring and data collection
3. Based on monitoring and data, design and/or operational changes are proposed, and if approved, implemented

# Baseline and Monitoring

Operator monitors and logs the following :

## 1. Complaints

- Number and summary of complaints within given time frame (day, month)
- Date, time, complaint was received and complaints were investigated

## 2. Intensity of odors

- Site specific methods and scale
- Odor instruments

## 3. Odor characteristic spectrum

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*Floral Fruity Vegetable Earthy Medicinal Chemical Fishy Offensive*

*(Putrid, Rancid, Fecal, Garbage)*

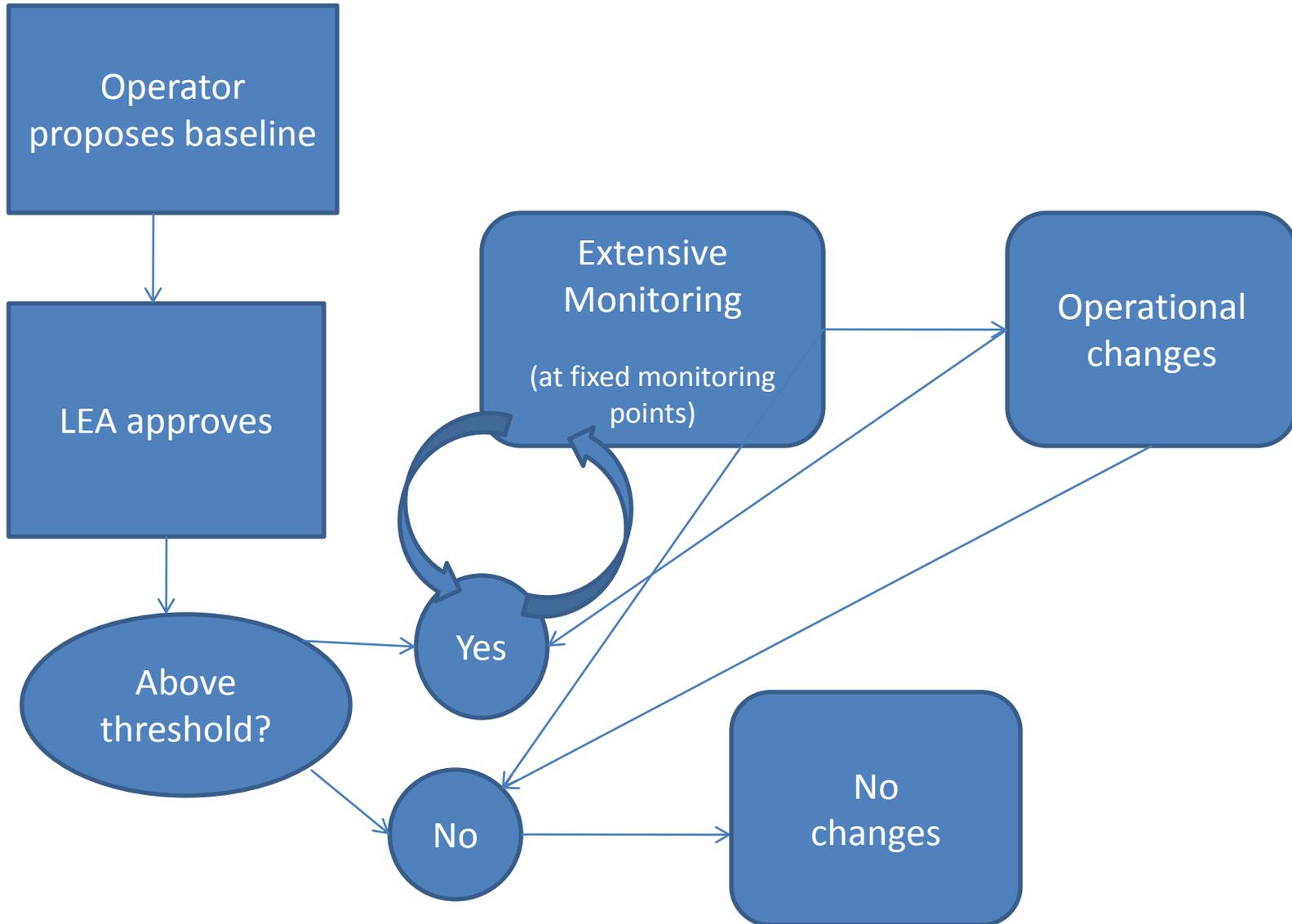
## 4. Duration of odors (hours, days, weeks, months)

## 5. Changes to design and operation during monitoring and data collection

LEA & operators use same criteria to evaluate and document odors & complaints

Operator provides data & proposed operational changes quarterly to LEA, or other designated timeframe in OIMP

# OIMP Monitoring Flowchart



## **Issue 6**

Current regulations require green material to contain no greater than 1.0% physical contaminants by weight.

### **Potential Approach**

- Increase the maximum inorganic physical contamination limit for green material received
- Add maximum inorganic physical contamination limit for material leaving site

# Proposed Approach

Increase maximum inorganic physical contamination limit for green material received from 1.0% by weight to 0.1 % by weight

Operator samples finished product before material leaves site

Illinois Pollution Control Board method

-Material dried 24 hours

-Measure contamination level in sample:

*Weigh each sample and pass through a four millimeter screen. Inspect material remaining on the screen, and separate and weigh man-made materials. Calculate percent man-made materials relative to the total dry weight of the sample prior to screening.*

Maximum physical contaminant level by weight = 0.1%, or other 0.1%

If sample is above 0.1% maximum physical contamination level, finished product must be reprocessed or disposed

## **Issue 7**

Anaerobic digestion is currently regulated under the compostable materials handling or transfer/processing regulations, depending on the nature of the feedstock and how it is handled.

## **Potential Approach**

Revise regulations to identify AD as a type of transfer processing activity.

# Proposed Approach

**PRC 40116.1 “Composting means the controlled or uncontrolled biological decomposition of organic wastes. Anaerobic Digestion is composting by statute.**

CalRecycle proposes to define AD as a type of compostable material handling

- Change definition of Anaerobic Decomposition in Compostable Materials Handling Operations and Facilities Regulatory Requirements in 17852 (a)(8), **OR**
- Add definition of Anaerobic Digestion Operation and Anaerobic Digestion Facility in 17852

Compostable material handling and transfer/processing design and operational requirements would be applied

# AD Operations & Facilities

Chapter 3.1: Compostable Materials Handling Operations and Facilities  
Regulatory Requirements

17855.2. Prohibitions

17863.4 Odor Impact Minimization Plan

Chapter 3: Minimum Standards for Solid Waste Handling and Disposal

Article 6.0. Transfer/Processing Operations and Facilities Regulatory  
Requirements.

Article 6.1. Siting and Design Sections 17406.1-17406.2

Article 6.2 Operating Standards Sections 17407.1-17413

Article 6.3 Record Keeping Requirements Section 17414-17414.1

Article 6.35 Additional Operating Requirements for Facilities Only  
Sections 17415.1-17419.2

## **Issue 9**

Maximum Metal Concentrations in current regulations do not match US EPA biosolids regulations (503 CFR).

Regulations are not clear on when an operator must ensure that a compost product meets the required limits for metals and pathogens.

## **Potential Approach**

- Revise Maximum Metal Concentrations in current regulations to match Maximum Metal Concentrations in 503 CFR.
- Require composters to obtain test results showing the material meets requirements prior to materials leaving the site.

# Proposed Approach

Revise Maximum Metal Concentrations in § 17868.2 to match Maximum Metal Concentrations in 503 CFR

**Table 2**  
Maximum Acceptable Metal Concentrations

Constituent	Concentration (mg/kg) on dry weight basis
Arsenic (As)	41
Cadmium (Cd)	39
Chromium (Cr)	1200
Copper (Cu)	1500
Lead (Pb)	300
Mercury (Hg)	17
Nickel (Ni)	420
Selenium (Se)	36
Zinc (Zn)	2800

Table 3 of §503.13—Pollutant Concentrations

Maximum Acceptable Metal Concentrations	
Constituent	Concentration (mg/kg) on dry weight basis
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Arsenic (As)	41
Cadmium (Cd)	39
Chromium (Cr)	1200
Copper (Cu)	1500
Lead (Pb)	300
Mercury (Hg)	17
Nickel (Ni)	420
Selenium (Se)	<del>36</del> <u>100</u>
Zinc (Zn)	2800

## Proposed Approach (cont.)

Revise § 17868.1 to ensure metals & pathogen test results are received by operator ***before*** compost leaves the site.

a) Operators shall verify that compost meets the maximum acceptable metal concentration limits specified in section 17868.2, and pathogen reduction requirements specified in section 17868.3. Verification of maximum acceptable metal concentration limits and pathogen reduction requirements shall occur **before** ~~the at the point where~~ **compost is sold and removed from the site**, bagged for sale, given away for beneficial use and removed from the site or otherwise beneficially used

## **Issue 11**

Current regulations do not address small-scale composting of food material at community gardens, or associated with restaurants, cafeterias, and other businesses that provide food service to employees.

## **Potential Approach**

Revise the excluded tier to address newly identified activities that are similar to existing excluded activities.

# Proposed Approach

Revise exclusion language in 17854(a)(5)(4) to allow small-scale composting of food material.

Handling of green material, feedstock, additives, amendments, compost, or chipped and ground material is an excluded activity if 500 cubic yards or less is on-site at any one time, the compostable materials are generated on-site and if no more than 1,000 cubic yards of materials are either sold or given away annually. The compostable material may also include up to 10% food material by volume generated on-site or off-site.

## **Issue 13**

The current definition of vermicomposting is general which may make it difficult for LEAs to determine vermicomposting activities.

## **Potential Approach**

Consult with vermicomposters and other stakeholders to determine how regulations need to be adjusted to better determine what is or is not vermicomposting.

# Information on the Rulemaking Process

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

<http://www.calrecycle.ca.gov/Laws/Rulemaking/Compost/default.htm>

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

<http://www.calrecycle.ca.gov/Listservs/>

**Send Written Comments to:** [compost.transfer.regs@calrecycle.ca.gov](mailto:compost.transfer.regs@calrecycle.ca.gov).

**Staff contact:** Ken Decio at (916) 341-6313 or [Ken.Decio@CalRecycle.ca.gov](mailto:Ken.Decio@CalRecycle.ca.gov)