

The following was developed under the auspices of the Board for specific workshop presentation and is posted as a reference document for the local enforcement agencies, solid waste facility operators, waste management consultants and other industry stakeholders who attended one of the workshops. It is not intended to stand alone as informational or training materials.

If you require assistance in obtaining access to the presentations, call the Public Affairs Office at (916) 341-6300 or Ken Decio.

# Stakeholder Workshop on Strategic Directive 8.3



July 28, 2009

Cal EPA Headquarters

1001 I Street

Sacramento, CA

California Integrated Waste Management Board

# What We Hope to Accomplish....

- “Fact check” of guidance document & white papers
- Gather input from various points of view
- Validate list of issues....or add to them
- Validate list of options....or add to them
- If time allows
  - Prioritize the issues and options
- Set up for additional comments and input

# Workshop Agenda

Introductions, workshop format 9:05 AM

Anaerobic Digestion Guidance Document 9:15 AM

Break 10:15 AM

Food Waste Compost Draft White Paper 10:30 AM

Lunch 12:00 PM

Alternative Daily Cover Draft White Paper 1:00 PM

Wrap up/next steps 2:45 PM

Adjourn 3:00 PM

# Workshop Format

- Introduction
- SD 8.3 overview
- Presentation and discussion of AD Guidance document
- Presentation and discussion of Draft ADC & food waste composting White Papers:
  - Background info & analysis: accurate, complete, missing data, etc.
  - Issues/Options: understandable, relevant, complete, anything missing
  - Establish priority issues and options

# **Strategic Directives: Adopted 2007**

- **SD-3. Minimize Waste**
- **SD-4. Landfill Management**
- **SD-5. Producer Responsibility**
- **SD-6. Market Development**
- **SD-7. Customer/Local Assistance**
- **SD-8. Enforcement/Permitting**
- **SD-9. R&D: Technology**
- **SD-10. Fiduciary Responsibility**
- **SD-11. Public Outreach & Environmental Ed**
- **SD-12. Training and Development**

## Strategic Directive 8.3

*Review regulations to ensure that they are:*

- grounded in the best available science,
- address changing market conditions, and
- take advantage of developing technologies
- *6 Priority Areas (Mostly Organics)*
  - **Alternative Daily Cover (ADC)**
  - **Composting - Food waste**
  - **Emerging Technologies (anaerobic digestion)**
  - **Three Part Test/Green Material Contamination**
  - Farm and Ranch Composting
  - Beneficial use issues (Re: agriculture)

# Agenda: Anaerobic Digestion

Overview of Guidance Document 9:15 AM

Comments from audience (at microphone) 9:30 AM

And comments from webinar e-mail

Additional Comments/Next Steps 10:00 AM

# GUIDANCE DOCUMENT

## HOW ANAEROBIC DIGESTION FITS CURRENT BOARD REGULATORY STRUCTURE

# Draft Anaerobic Digestion Guidance Document

- Description of Anaerobic Digestion
- Statutory Definitions for Regulation of Facilities
- Tiered Regulatory Structure
- Factors Affecting Requirements for AD

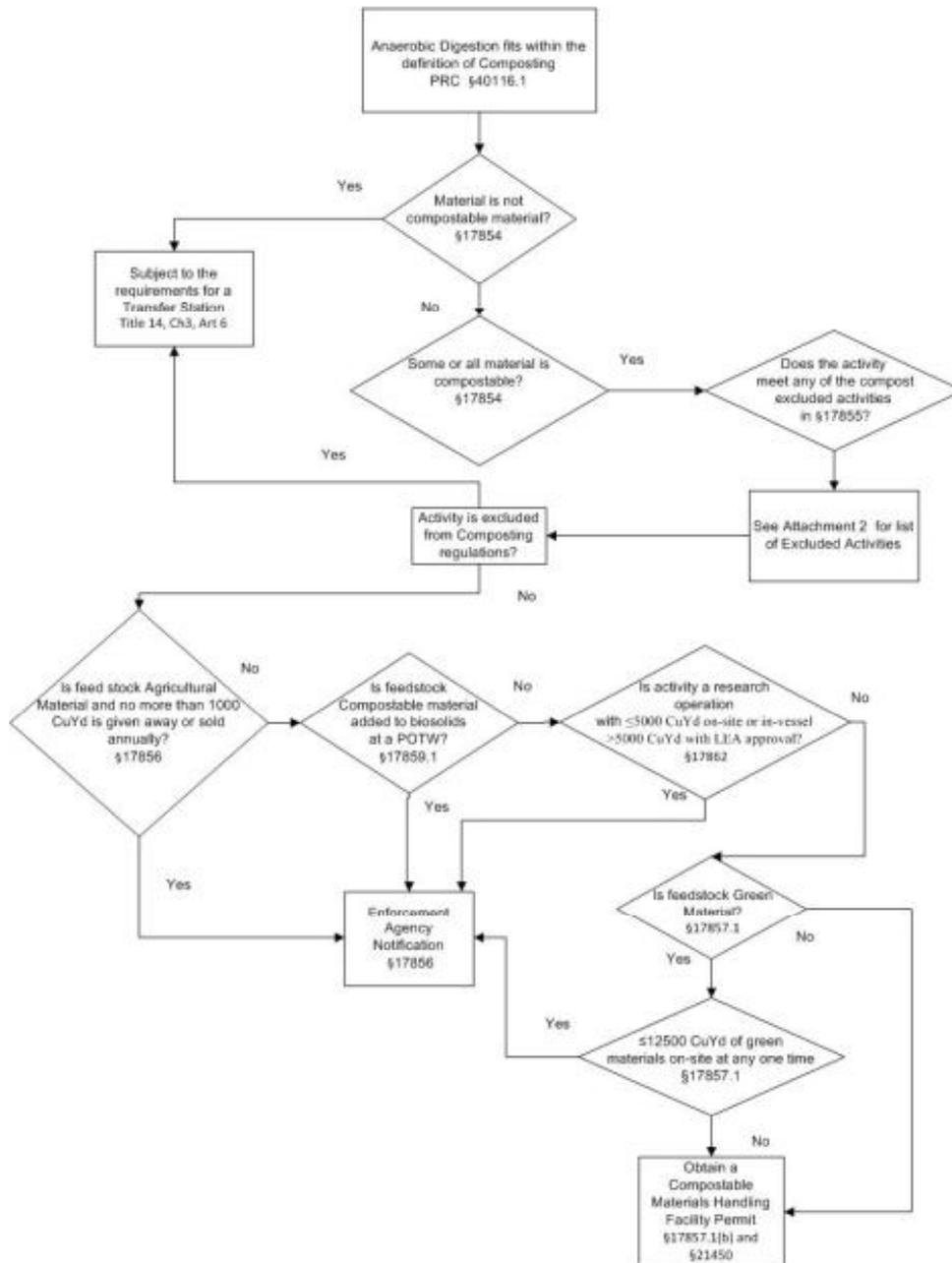
# THREE TIERED REGULATORY STRUCTURE:

- Excluded Activity
- EA Notification
- Full Permit

# FACTORS AFFECTING REQUIREMENTS For ANEROBIC DIGESTION

1. Type of Feedstock
2. Quantity
3. Location

**Attachment 1**  
**Decision Diagram for Anaerobic Digestion**  
 Draft June 30



# TIER REGULATORY PLACEMENT FOR AD (BY FEEDSTOCK)

TYPE OF FEEDSTOCK	EXCLUDED	EA NOTIFICATION	FULL PERMIT
BIOSOLIDS	STORAGE ON SITE OF A POTW	BIOSOLIDS ONLY SEPARATE FROM NORMAL TREATMENT AT A POTW	
GREEN MATERIAL	≤500 CU YDS ONSITE ≤1000 CU YDS GIVEN AWAY OR SOLD ANNUALLY	≤12, 500 CU YDS	>12,500 CU YDS, OR GREEN MATERIAL WITH OTHER WASTE INCLUDING FOOD
AGRICULTURAL MATERIAL (INCLUDES MANURE)	≤1000 CU YDS GIVEN AWAY OR SOLD ANNUALLY	ONLY AG MATERIAL	WHEN MIXED WITH OTHER WASTE INCLUDING FOOD
RESEARCH	<50 CU YDS	≤5000 CU YDS ON-SITE OR IN-VESSEL (>5000 CU YDS WITH LEA APPROVAL)	
FOOD WASTE	≤10 % FOOD WASTE, ONLY WITH GREEN MATERIAL ≤500 CU YDS, ON-SITE AND ≤1000 CU YARDS GIVEN AWAY OR SOLD ANNUALLY	ONLY WHEN ADDED TO THE TREATMENT OF BIOSOLIDS AT A POTW	ALL OTHER SITUATIONS

# ANAEROBIC DIGESTION: Comments on Guidance Document

- Are statements **ACCURATE**?
- Is document **CLEAR**?
- Is document **USEFUL**?
- Is summary chart by feedstock useful?
- What other tools could be added to increase usefulness?

Please send comments to: [regreview@ciwmb.ca.gov](mailto:regreview@ciwmb.ca.gov)

# Agenda: Anaerobic Digestion

Overview of Guidance Document 9:15 AM

Comments from audience (at microphone) 9:30 AM  
and comments from webinar e-mails

Additional Comments/Next Steps 10:00 AM

# Break



# Agenda: Food Waste Composting

**Overview of draft white paper** **10:30 AM**

Comments from audience (at microphone) 10:45 AM  
and comments from webinar e-mails

Additional Comments/Next Steps 11:30 AM

# Draft Food Waste Composting White Paper

- Composting regulations history
- Organics processing infrastructure in CA
- Compost product safety requirements in CA
- Compost quality
- Food waste composting in CA
  - Air/water quality issues
- Food waste composting regulatory issues/options

# Food Waste Composting Background/Analysis

- Is composting regulatory history accurate & complete?
- Is composting analysis accurate & complete?
- Data, research studies, etc. missing?
- Misstatements?
- Typos/grammar

# Food Waste Composting Issues

1. Requiring a full permit may be too stringent
2. Food material definition is vague
3. Food material contaminants may impact facility operations and product quality
4. Potential negative environmental impacts have not been fully researched
5. Current regulations may not comprehensively address compost safety issues

# ***1. Requiring a full permit may be too stringent***

Option 1: Continue to require a Compost Materials Handling Facility **Permit** for food waste composting and allow current exclusions

Option 2: Establish a statewide “green material-to-food material” **ratio** for Green Material Composting Operations (GMCO)

Option 3: Establish a statewide “green-to-food ” **ratio for GMCO & increase inspections** from quarterly to monthly

Option 4: Place GMCO that compost food waste into the **Registration Tier** instead of EA Notification.

Option 5: Allow food waste to be composted at GMCOs (EA Notification) & require **specific handling procedures & BMPs** to reduce odors, etc.

Option 6: Place **in-vessel food material composting** in **EA Notification or Registration**

# Impacts Matrix

Impact	Green Material 12,500 yd3	Add Food Material to Green Material	Examples of Permit Requirements for Food Material	Regulation Status
Odors	Sec. 17867 and Sec. 17863.4 (OIMP)			
Noise	Section 17867			
Vectors	Section 17867			
Litter	<b>Section 17867</b>	<b>Increase</b>		<b>Current regs. may be sufficient</b>
Air emissions	Section 17863.4 (OIMP) and local air district regulations			
Water quality	Sec 17867 (2) (12) and regional water quality control board waste discharge requirements			
Compost safety	Sec. 17868.1. (sampling); Sec. 17868.2.(Max. metals) Sec. 17868.3. (pathogen reduction)			
Physical Contaminants	Sec.17867 (a) (13) and Sec. 17868.5. (a)			

# Examples of Permit Requirements for Food Material: Litter

- No grinding & screening operations during high wind conditions & be conducted in a manner that will not create off-site impacts.
- Fugitive litter shall be collected and disposed of daily.
- Site shall operate in a manner as to not become a public nuisance.
- The EA reserves the right to suspend or modify waste receiving & handling operations when deemed necessary due to an emergency, a potential health hazard, or the creation of a public nuisance.

## 2. Food material definition is vague

Option 1: Change definition to distinguish between pre-consumer & post-consumer food material. Allow GMCO to compost pre-consumer food material (**EA Notification tier**)

Option 2: Change definition to distinguish between pre-consumer and post-consumer food material. Allow GMCO to compost pre-consumer food material (**EA Notification tier**) and require **BMP's**

Option 3: Change definition to distinguish between vegetable food material & food material that contains **dairy and meat products**. Allow GMCO to compost vegetable material (EA Notification tier)

Option 4: **Revise definition of agricultural material** to include organic materials generated during pre-consumer manufacturing process, such as coffee grounds, cannery waste, etc.

Option 5: **Retain the current definitions** of food material and agricultural material

### **3. Food material contaminants may impact facility operations and product quality**

Option 1: Define in regulations a maximum physical contamination level **by weight** for food material

Option 2: Define in regulations a maximum physical contamination level **by volume** for food material

Option 3: Define in regulations a maximum physical contamination level by volume or weight in **the finished compost product**

Option 4: Do not define a maximum physical contamination level in food material

## 4. Potential negative environmental impacts have not been fully researched

Option 1: **CIWMB researches** the potential negative environmental impacts of food waste composting.

Option 2: **CIWMB provides BMPs** through training courses for food waste compost operators & facilities to reduce potential negative environmental impacts

Option 3: **CIWMB partners** (e.g. with U.S. Composting Council) to develop & implement a Compost Operator Certification Training Program to educate operators on reducing negative environmental impacts

## ***5. Current regulations may not comprehensively address compost safety issues***

Option 1: Lower maximum metal concentrations in 17868.2 to more closely **match European standards**

Option 2: Require finished compost to **meet quality standards**, such as the Seal of Testing Assurance Program

Option 3: CIWMB partners with the SWRCB's Workgroup for Compost Use on Crops for Human Consumption & other **technical advisory groups** to establish standards & guidelines.

Option 4: **CIWMB provides BMPs** through courses for compost operators & facilities to improve compost safety and quality.

Option 5: **CIWMB partners** (e.g. with U.S. Composting Council) to develop & implement a Compost Operator **Certification Training Program** to educate operators on compost safety issues.

Option 6: Leave current compost safety regulations **as is**.

# Food Waste Composting Issues/Options

- Issues stated clearly?
- Issues/options accurately identified?
- Additional issues/options?
- Pros/cons
- Impacts Matrix—fill in blanks
- Priorities

# Agenda: Food Waste Composting

Overview of draft white paper 10:30 AM

Comments from audience (at microphone) 10:45 AM  
and comments from webinar e-mails

Additional Comments/Next Steps 11:30 AM

# LUNCH



# Agenda: Alternative Daily Cover

Overview of draft white paper	1:00 PM
Comments from audience (at microphone) and comments from webinar e-mails	1:20 PM
Additional Comments/Next Steps	2:15 PM

# ADC Draft White Paper

- ADC regulations history
- ADC types & specifications
- ADC in other states
- ADC use in California
  - Total use by material type, region
  - Green waste use
- Organic materials processing structure
- ADC regulations issues/options

# ADC Background/Analysis

- Is ADC regulatory history accurate and complete?
- Is ADC analysis accurate & complete?
- Any missing data, research, etc.?
- Any misstatements?

# ADC Regulations Issues

1. Optimum amount, depth, and quality of ADC not adequately researched
2. Evaluating ADC compliance is difficult; ADC misuse can go undetected
3. ADC often contains materials that are not allowed in regulation
4. Site-demonstration projects for new ADC materials lack guidance, which makes it difficult to test new ADC types, such as MRF and C&D fines
5. Definition of Green Material is different than Processed Green Material
6. Green waste ADC is considered diversion, not disposal, which is a disincentive to keep green material out of the waste stream
7. Using organic materials to reduce greenhouse gas emissions at landfills is currently being researched
8. DTSC is re-examining Auto Shredder Waste. Reclassification as a hazardous waste would disallow its use as ADC

# **1. Optimum amount, depth, and quality of ADC have not been adequately researched**

Option 1: Require **landfill operators to research** the optimum amount, depth, and quality of ADC materials.

Option 2: CIWMB staff **partners with LEAs and operators to research** the optimum amount, depth, and quality of ADC materials

Option 3: **CIWMB conducts research** on the optimum amount, depth, and quality of ADC materials

## 2. Evaluating ADC compliance is difficult; ADC misuse can go undetected

Option 1: Establish **refuse-to-ADC ratio** at landfills.

Investigate high refuse-to-ADC ratios or require operators to record working face size/ADC use to enable LEAs to determine overuse or underuse.

Option 2: Leave thickness requirements at current levels and **improve methods for monitoring**

Option 3: **Tighten** requirements in the **Report of Disposal Site Information** so that operators provide better ADC information

### 3. ADC often contains materials not allowed in regulation

- Option 1. **Redefine** ADC types to account for material variance
- Option 2. Base **contamination level** thresholds **on volume** instead of weight
- Option 3. CIWMB sponsors a **study** of additional ADC material types
- Option 4. **Retain definition of C&D ADC.** Continue to require demo projects to ensure C&D ADC **with gypsum wallboard** meets minimum cover standards and does not generate hydrogen sulfide
- Option 5. **Change definition of C&D ADC** to include gypsum wallboard
- Option 6. CIWMB **researches hydrogen sulfide** generation in landfills that receive C&D materials

## **4. Site-demonstration projects for new ADC materials lack guidance which makes it difficult to test new ADC types, such as MRF & C&D fines**

Option 1: Develops **guidance document** on ADC demo projects

Option 2: **Retain** current demonstration **guidelines** in regulation

Option 3: **Revise regulations** to specify requirements on how to conduct ADC demo projects

Option 4: Establish **grain size specifications** for MRF & C&D fines to reduce visible contaminants

Option 5: Require **testing for asbestos & other hazardous materials** as part of ADC demo projects & report findings.

Option 6: Require operators to conduct **demo projects** to ensure C&D ADC with **gypsum wallboard can meet minimum standards & not generate hydrogen sulfide**

## 5. Definition of Green Material is different than Processed Green Material

Option 1: **Retain** the current definitions of green material and processed green material in regulation.

Option 2: Change the definition of Processed Green Material in the ADC regulations to **match** the Green Material definition in the compostable materials handling regulations

**6. Green waste ADC is considered diversion and not disposal, which is a disincentive to keep green material out of the waste stream and conflicts with SD 6.1**

Option 1: **Monitor results of ADC Policy Working Group & CIWMB's life cycle assessment of organics diversion alternatives to determine how regulations are affected**

Option 2: **Research the economic impacts of green material ADC on the compost industry (PRC Section 41781.3)**

Option 3: **Research the impacts of soil vs. organic material ADC on landfill gas recovery and quantify the amount of landfill gas generated**

## **7. Using organic materials to reduce greenhouse gas emissions at landfills is currently being researched**

CIWMB will **await the results** of these studies to help develop regulations and Best Management Practices to mitigate landfill gas emissions.

**8. DTSC is re-examining Auto Shredder Waste.  
Reclassification as a hazardous waste would  
disallow its use as ADC**

CIWMB continues to **monitor progress** between  
DTSC and the ASW industry.

# ADC Issues/Options

- Issues: understandable, relevant, complete, anything missing
- Options: understandable, relevant, complete, anything missing
- Pros/cons
- Additional issues/options?
- Priorities

# Agenda: Alternative Daily Cover

Overview of draft white paper 1:00 PM

Comments from audience (at microphone) 1:20 PM  
and comments from webinar e-mails

Additional Comments/Next Steps 2:15 PM

## Wrap Up/Next Steps

- **Send comments by August 19 to:**  
[regreview@ciwmb.ca.gov](mailto:regreview@ciwmb.ca.gov)
- Workshop PPT & questions/comments from July 28 workshop posted on web
- Next workshop/webinar: August 13  
Riverside
- Revisions to white paper based on input
- Present findings at Sept. Board meeting