Land Application of Compostable Materials

Joint Education and Outreach Meeting
July 2016

PRESENTED BY:
CRIS CARRIGAN/MELISSA HALL - STATE WATER BOARD
LESLIE GRAVES/SCOTT COUCH - STATE WATER BOARD
MARK DE BIE/BOB HOLMES/KEN DECIO - CALRECYCLE
Introduction

- Who Is Involved

- Land Application = final deposition of material to land

- Distinguish disposal from beneficial use

- Some activity has been occurring, but certain drivers suggest potential for increase in activity

- Open to input on our enforcement approach
LEA = Local Enforcement Agency
- Designated by local governing body
- Certified and reviewed by CalRecycle
- All the authorities and duties to administer and enforce State solid waste law (Public Resources Code and California Code of Regulations)
- Typically the county or city Environmental Health department
- Currently 61 LEAs statewide (CalRecycle is the enforcement agency in an additional 7 jurisdictions)
Who Is Involved

- RWQCB = Regional Water Quality Control Board
  - The State Water Board has jurisdiction throughout the state.
  - Nine regional water boards exercise rulemaking and regulatory activities by basins:
    - Region 1 – North Coast
    - Region 2 – San Francisco Bay
    - Region 3 – Central Coast
    - Region 4 – Los Angeles
    - Region 5 – Central Valley
    - Region 6 – Lahontan
    - Region 7 – Colorado River Basin
    - Region 8 – Santa Ana
    - Region 9 – San Diego

- Regional Water Board Directory: www.waterboards.ca.gov/about_us/contact_us/rwqCBS_directory.shtml
Who Is Involved

- CalEPA
- CalRecycle
- SWRCB
- CDFA
- CARB
- Jurisdictions
- Haulers
- Processors
- Land owners
- Brokers
- And more….
Disposal or Not Disposal?
Past

- Regarding activity that had been occurring:
  - Agencies observed combination of:
    - Regulations that did not fully address activity
    - Lack of knowledge/understanding of the requirements
  - Some counties took their own action
  - Some Regional Water Boards took their own action
State Water board adopted a Compost General Order in August 2015. In its resolution, the Board directed staff to convene interagency work groups with CalRecycle on land application issues. Interested stakeholders may include ARB, CDFA, CalEPA, and the compost industry.

CalRecycle adopted revised compostable materials regulations in August 2015. The regulations, which became operative on Jan. 1, 2016, contain new land application requirements.
In response:

- State Water Board and CalRecycle set out to provide training and education on the rules that apply to land application.
  - First Phase – Joint training for Regional Water Boards and LEAs (Jan-Feb 2016)
  - Second Phase – Deliver same message to regulated community and other involved/interested parties.

- Separate and Ongoing Opportunities – Deliver message in other venues (e.g. BioCycle Conference, SWANA Western Regional Symposium, CEHA Annual Education Symposium, CalRecycle Training)
Main Objective

- Everyone hears the same message so everyone will be better able to ensure compliance with the rules.
Disposal or Not Disposal?

Disposal of compostable materials does not include Land Application.
Land Application Definition

- Land application means the final deposition of compostable material and/or digestate spread on land. The material must meet limits on:
  - Effective January 1, 2016:
    - maximum metals concentrations and pathogen density
    - application frequency and depth
  - Effective January 1, 2018:
    - physical contaminants
Metals & Pathogen Limits

- Maximum metals concentrations
  - Same as existing compost requirements: Arsenic, Cadmium, Chromium*, Copper, Lead, Mercury, Nickel, Selenium*, and Zinc

- Pathogen density limits
  - Same as existing compost testing requirements: fecal coliform and Salmonella sp.
  - Does not require time/temperature requirements (e.g. 131 °F for 15 days)
## Frequency and Depth Limits

<table>
<thead>
<tr>
<th>ZONING</th>
<th>FREQUENCY</th>
<th>DEPTH</th>
<th>ALTERNATIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land <strong>NOT</strong> zoned only for agricultural uses</td>
<td>≤ 1 per 12-month period</td>
<td>≤ 12 inches accumulated on surface</td>
<td>X</td>
</tr>
<tr>
<td>Land zoned only for agricultural uses</td>
<td>≤ 3 per 12-month period</td>
<td>≤ 12 inches accumulated on surface</td>
<td>X</td>
</tr>
</tbody>
</table>

* CalRecycle coordinates EA requests for consultation

*RWQCB*  
*CDFA*
Verification

- Verification of compliance with the requirements must be provided to the EA upon request.
Physical Contaminants

Human-made inert material including glass, metal, and plastic.
Physical Contaminants
Physical Contaminant Limits

- 0.5% by weight
- Film plastic - no more than 20% of 0.5% (0.1%)
- Regulation becomes effective on January 1, 2018
Exceptions

- Compost (produced in compliance with regulations)
- Gardening or landscaping on a parcel of land 5 acres or less
- Federal, State, or local government entity land application
- Beneficial reuse at landfill
- Agricultural by-products material as authorized by SWRCB or RWQCB
- Beneficial reuse of biosolids per Federal and State requirements
What are some types of Compostable Materials?

- **Green materials**
  - Leaves
  - Clippings, cuttings
  - Grass trimmings
  - Shrubbery, bushes, trees
  - Garden waste
  - Untreated wood waste (chipped/ground to mulch)
**What are potential impacts from Land Application of Compostable Materials?**

<table>
<thead>
<tr>
<th>Composted Materials = POTENTIAL BENEFIT</th>
<th>Uncomposted Materials = POTENTIAL THREAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Beneficial microorganisms</td>
<td>▪ May contain harmful pollutants</td>
</tr>
<tr>
<td>▪ Increase soil-water holding capacity</td>
<td>▪ Nitrates, salts, metals, pathogens</td>
</tr>
<tr>
<td>▪ Reduces run-off</td>
<td>▪ Impacts to surface and groundwater</td>
</tr>
<tr>
<td>▪ Reduces pests and pathogens</td>
<td>▪ Physical Contaminants</td>
</tr>
<tr>
<td>▪ Reduces landfilling</td>
<td>▪ Trash, plastic, food, glass, metals, pet waste</td>
</tr>
<tr>
<td></td>
<td>▪ Harbor damaging insects</td>
</tr>
<tr>
<td></td>
<td>▪ Fires</td>
</tr>
</tbody>
</table>
The Water Code requires anyone who discharges waste or proposes to discharge waste that could affect the waters of the state to file a “report of waste discharge.”

- Waste Discharge Requirements, (WDRS), conditional waivers, or other orders (e.g., General Orders)
- Enforcement
  - Cris Carrigan, Office of Enforcement Director will discuss enforcement issues
Potential Impacts to Surface Water & Groundwater
Mixed compostable materials
Trash remains (years) after material settles
Potential Spread of Pests
Impact from Excess Land Application: Fire
Interagency Work Group and Goals

- Review regulatory oversight of land application
- Launch education and outreach program
  - Informational presentations
  - Publications, brochures
  - Website
- Take enforcement action
  - As needed to address potential threats
- Report to State Water Board
  - Status updates
  - Progress Reports
Enforcement Overview
LEA Solid Waste Enforcement Authority

- **Inspect & Enforce**: Regulatory Standards & Permit Conditions
- **Issue & Enforce**:  
  - Compliance Orders  
  - Corrective Action Orders  
  - Cease & Desist Orders

- **Civil Penalties**: Public Resources Code (PRC) §45010  
  - $5,000 a day  
  - Illegal dumping not remedied by a corrective action order  
  - Fines may be imposed administratively

- More remedies provided in LEA Enforcement Program Plan (EPP)  
- Abatement at illegal disposal sites followed by fines & civil liabilities
Water Boards’ Enforcement Authority

- Cleanup & Abatement of Waste, issued by executive order, not necessarily a right to pre-deprivation hearing.
  - Discharge could affect waters of the State;
  - Discharge is taking place or threatening to take place;
  - Discharge subject to administrative liabilities;
  - Discharge & Cleanup Abatement Orders (CAO) violations subject to $10,000 a day & $10 per “gallon” of waste.

- Administrative process for civil liabilities is well developed & quick- (90 days)
- Hearing before regional boards: 90% of the cases settle for 80 cents on the dollar.
Progressive Enforcement

- Water Boards’ policy is **progressive enforcement**: Compliance Assistance followed by escalation.
- Similar to PRC requirements for LEAs.
- Verbal warning, written warning, Notice of Violation (NOV), CAO, Administrative Civil Liability (ACL).
- Different in concept – severity of violation & threat to water quality dictates “skipping steps.”
Enforcement Coordination & Cooperation

- **Mutual objective:** safe handling & disposal;
  - Allow composting with safe diversion to land;
  - New regulatory programs: compost general order & CalRecycle;
    Regulations work hand-in-hand;
- Water Boards, LEAs have different jurisdiction, tools & standards.
Enforcement Coordination & Cooperation

- Identify the problem/or issue with disposal to land;
- Look for a possible threat to water quality;
- Work together to develop the evidence or case;
  - Communicate: Notice to other agency
  - Coordinate: Possible joint inspection
  - Collaborate: Pick a forum (OE, Regional Boards & Counties)

- LEA inspectors as witnesses:
  - “Live” witness
  - Affidavit
  - Inspection report
Contacts

- **LEA/CalRecycle**
  - Local Enforcement Agencies:
  - CalRecycle - Permitting and LEA Support, Single Point of Contact:
    - http://www.calrecycle.ca.gov/LEA/CountyAssign.asp

- **Water Boards**
  - Locate your Regional Water Board Contacts:
  - Regional Water Board Office Locations:
    - www.waterboards.ca.gov/about_us/contact_us/rwqCBS_directory.shtml
  - Regional Water Board Enforcement Coordinators:
Questions?