



## Organics Processing in Riverside County

Compostable organic materials account for nearly one-third of the total waste disposed of in Riverside County landfills. As the State is moving towards phasing out organics from landfills, more organics processing facilities will be needed to meet the State's escalating diversion and recycling goals. The following was prepared to assist applicants with the permitting process in Riverside County as it relates to organics processing facilities, such as compost and/or chip and grind operations.

Please note that all Federal, State, and local entitlements and/or permits, to include local land use approval, must be obtained *prior to beginning operations, and that compliance with the guidelines does not guarantee approval of a project.*

### **General Guidelines**

- 1) Contact the Riverside County Planning Department (Planning).
  - a. Planning will determine if the proposed operation is an allowable use, and if applicable, identify the permit required- Conditional Use Permit (CUP), Plot Plan, etc.
  - b. Obtain appropriate land use entitlement/permit. This includes completion of environmental documentation (CEQA) and Board of Supervisors/Planning Commission approvals.
  - c. Comply with the Best Management Practices (that will be applied as Conditions of Approval) and Financial Assurance requirements, as attached.
- 2) Contact the Riverside County Environmental Health Department- Local Enforcement Agency (LEA)
  - a. LEA will determine the permitting pathway- EA Notification, Registration Permit, Full Permit, etc.
  - b. Obtain appropriate LEA permits or approvals.
- 3) Contact other Regulatory Agencies
  - a. Obtain all necessary approvals or permits from the Regional Water Quality Control Board (RWQCB), the South Coast Air Quality Management District (AQMD), and any other regulatory agency with jurisdiction over organics processing.
- 4) Start operation once **all** required approvals or permits are acquired.

<b>Riverside County Best Management Practices</b>	
Applicability	The County BMPs shall be applied to all composting and chip and grind operations undergoing the entitlement process for a Conditional Use Permit (CUP), Plot Plan, or other land-use entitlements.
Feedstock (F)	<ol style="list-style-type: none"> <li>1. Acceptable feedstock materials include: <ul style="list-style-type: none"> <li>• Greenwaste as defined in Title 14 CCR</li> <li>• Agricultural materials as defined in Title 14 CCR</li> <li>• Food Material that meets the definitions in Title 14 CCR</li> <li>• Manure as defined in Title 14 CCR</li> <li>• Paper products</li> <li>• Restaurant grease and oils</li> <li>• Digestate (if permissible under Title 14 CCR)</li> </ul> </li> </ol>
Additives (Ad)	<p>If applicable:</p> <ol style="list-style-type: none"> <li>1. Mix additives with feedstock or active compost to create favorable composting conditions.</li> <li>2. The amount of additives added shall be consistent with applicable regulatory requirements or prevailing industry standards</li> <li>3. Additives do not include septage, biosolid, or compost feedstock.</li> <li>4. Additives shall undergo random load-checking for physical contaminants and refuse.</li> </ol>
Amendments (Am)	<p>If applicable:</p> <ol style="list-style-type: none"> <li>1. Add amendments to cured or stabilized compost to provide attributes for the products.</li> <li>2. The amount of amendments added shall be consistent with applicable regulatory requirements or prevailing industry standards.</li> <li>3. Amendments do not include septage, biosolids, or compost feedstock.</li> <li>4. Amendments shall undergo random load-checking for physical contaminants and refuse.</li> </ol>
Feedstock Preparation (FP)	<ol style="list-style-type: none"> <li>1. Feedstock load-checking operations shall be conducted in accordance with the standards set forth in Title 14 CCR.</li> <li>2. Removal of physical contaminants and refuse (overs/trash) shall be removed from the facility in accordance with Title 14 CCR, or within seven (7) days of screening, whichever date is sooner.</li> <li>3. Greenwaste shall be processed/ground within the timeframes provided in Title 14 CCR.</li> <li>4. Foodwaste and manure shall be covered with ground greenwaste, or unscreened or screened compost within 3 hours of receipt and incorporated into an active pile within 48 hours of receipt to minimize odor generation and attraction to vectors.</li> <li>5. Incorporate wet or odiferous feedstock loads directly into actively composting windrows or aerated static piles, where practical.</li> <li>6. Mix odiferous feedstock materials with appropriate amount of bulking agent, high carbon amendments, or finished compost and then moisture conditioned to reduce odor releases.</li> <li>7. Manure shall not exceed 20% by volume.</li> <li>8. Restaurant grease and oils shall not exceed 5% by volume.</li> <li>9. Application of restaurant grease and oils shall comply with the following standards: <ol style="list-style-type: none"> <li>a. Apply to processed feedstock or an active windrow/pile at the time of receipt.</li> <li>b. Mix with processed feedstock prior to or during pile formation.</li> <li>c. Once grease trap liquids have been applied to a windrow, the windrow will be</li> </ol> </li> </ol>

	<p>turned immediately to incorporate the liquid into the windrow feedstock.</p> <ul style="list-style-type: none"> <li>d. At no time shall grease trap liquids will be stored onsite in tanks or ponds.</li> <li>e. Grease trap liquids will not be applied in a manner that results in ponding around the windrow/pile.</li> <li>f. No direct application to an active windrow that still has a compost cover for emissions control, as required by SCAQMD Rule 1133.3.</li> <li>g. Directly apply to an active windrow that no longer requires a compost cover, or to an active static pile that is aerated under negative pressure and uses an emissions control device, as required by SCAQMD Rule 1133.3.</li> </ul> <p>10. Grinding of odiferous feedstock materials should be accompanied with the application of misting water or other odor control measures approved by the DEH/LEA.</p> <p>11. Feedstock composition must be adjusted to achieve a high carbon to nitrogen ratio (30:1), proper moisture contents, and good porosity, all of which are conducive to aerobic decomposition and odor minimization.</p> <p>12. Reduce material mixing activities in unfavorable weather conditions (stagnant air or windy) to minimize odor generation.</p>
Active Composting (AC)	<ul style="list-style-type: none"> <li>1. Static pile composting method is prohibited for facilities that will contain more than 5,000 cubic yards of material (including feedstock, additives, amendments, chipped/ground material, and compost) at any one time.</li> <li>2. Active composting shall be by means of either the windrow method, aerated static pile, extended aerated static pile, or an alternative technology approved by the LEA/DEH.</li> <li>3. Where feasible, the active composting pad location and windrow/pile configuration and orientation should be such that wind-driven off-site exposures of receptors to composting odors can be minimized.</li> <li>4. Daily monitoring of windrow moisture content and temperature shall be conducted to ensure continuous aerobic composting and detect overheating so as to avoid spontaneous combustion.</li> <li>5. All windrows and piles aerated with positive or negative pressures shall be covered with a layer of finished compost, or other covering methods as approved by LEA/DEH, immediately after windrow and/or pile formation.</li> <li>6. Moisture conditioning of active windrows and piles during the rainy season should be coordinated with weather forecasts. The composter should use his best judgment on the degree of watering to be carried out when rainfall is forecasted. As a good practice, no moisture conditioning should be carried out during rainfall or when there is a 60% or greater chance of rainfall in the next day or two.</li> <li>7. When heavy or extended rainfalls are forecasted, the composter should take the appropriate measures to protect active windrows and piles from saturation with water, including but are not limited to: cover windrows and piles with tarps; add dry feedstock or compost on top of windrows and piles; and increase positive drainage on side slopes of windrows and piles by making the slopes steeper or covering them with tarps.</li> <li>8. The active composting pad shall be graded and maintained to prevent ponding and transmit any free liquid laterally to containment structures on-site. The composting pad and containment structures shall be designed and constructed in compliance with all applicable water quality control regulations.</li> <li>9. All windrows shall be turned regularly to ensure continuous aerobic composting, or according to applicable regulatory requirements pertaining to achieving pathogen reduction and odor minimization standards.</li> <li>10. Avoid windrow turning in unfavorable weather conditions.</li> </ul>

	<p>11. Where applicable, construct smaller windrows to increase the surface to volume ratio, thus aeration efficiency.</p>
Compost Curing (CC)	<ol style="list-style-type: none"> <li>1. Curing of compost shall be conducted away from the active composting area to avoid cross-contamination and facilitate separate odor monitoring.</li> <li>2. Curing compost that have temperature exceeding 122°F, or are seeping leachate, and/or emitting odors on a consistent basis shall be re-composted in the active composting area.</li> <li>3. Long-term storage of finished compost shall be limited to no greater than one year to avoid it becoming a fire hazard.</li> <li>4. Screen compost to facilitate aeration and expedite the curing process.</li> <li>5. Avoid screening of compost in unfavorable weather conditions, or apply misting water or other odor reducing measures, as approved by the LEA/DEH during screening to lessen odor emissions.</li> </ol>
OIMP Implementation (OI)	<ol style="list-style-type: none"> <li>1. The facility shall have a designated full-time staff in charging of implementation of the facility's Odor Impact Minimization Plan (OIMP) and handling of odor complaints and investigations. This person shall also be responsible for regular reviewing and updating of the OIMP in pace with changes in composting operation or procedures.</li> <li>2. The composting staff shall be well acquainted with and adequately trained to implement the OIMP.</li> <li>3. If the facility receives an infraction (Area of Concern and/or Notice of Violation) during monthly inspections from the LEA/DEH involving odors, in addition to addressing the LEA/DEH, the operator shall submit a Report to the Riverside County Department of Waste Resources and the TLMA Planning Department, documenting the source of the odor and both propose and implement mitigation measures which may include installation of wind barriers, such as contiguous tall vegetation, misting systems, or other odor reducing measures, to the County's satisfaction.</li> <li>4. If after 15 days of implementing mitigation measures, as stated in the Report submitted to the Department of Waste Resources and Planning Department, the odor issues have not been resolved, as verified by the LEA, the operator shall immediately remove the odiferous material offsite for disposal in accordance with all applicable local, State, and Federal laws, ordinances, and regulations.</li> </ol>
Facility Maintenance (FM)	<ol style="list-style-type: none"> <li>1. On-site dust control shall use domestic water, non-potable reclaimed water, or dust suppressants, as identified in SCAQMD Rule 403.</li> <li>2. Site drainage design shall prevent run-on onto the active composting area, feedstock storage area, compost curing area, and finished compost storage area.</li> <li>3. Surface run-off from all compostable materials processing, treatment, and storage areas shall be contained on-site, in compliance with applicable water quality control regulations.</li> <li>4. All wastewater conveyance and containment facilities shall be periodically inspected to ensure performance and assess their capacity to attract vectors and generate odors and to effectively collect and contain wastewater.</li> <li>5. Use compost filter berms to filter stormwater entering the containment structure. The compost filters can be reintroduced back to the composting process.</li> <li>6. Re-circulate retained wastewater into the composting process.</li> </ol>

Characteristics	Tier 1	Tier 2
Total Facility Capacity at Any One Time	<25,000 cy (all allowable materials received, processed, and stored: feedstock, amendments, active and curing composting, and finished products )	≥25,000 cy (all allowable materials received, processed, and stored: feedstock, amendments, active and curing composting, and finished products )
Allowable Feedstock <sup>1</sup>	Agricultural material, green material, paper material, vegetative food material, or a combination of this feedstock, including anaerobic digestate derived from the acceptable feedstock.	Tier 1 feedstock plus biosolids, or food materials, or manure, or grease waste, or a combination of these feedstocks.
<b>Bond Amount Calculation Methodology</b>		
Base Bond Amount ( <b>BBA</b> )	\$250,000 or Apply Formula	APPLY FORMULA
Cleanup Activities Covered	Material Loading + Transportation + Disposal + Testing + Administration (assuming 7.5%)	
Material Loading Cost <sup>2</sup>	\$8 per ton	
Transportation Cost <sup>2</sup>	0.0041 cent per ton per vehicle-mile-traveled (VMT), assuming 22 tons/truck load	
Total Disposal VMT ( <b>TVMT</b> )	Total onsite Storage Capacity ( <b>TSC</b> ) ÷ 22 tons/load x roundtrip VMT to landfill	
Disposal in Riverside County	At current fees: Unprocessed Greenwaste ( <b>GW</b> ) @ Greenwaste Rate ( <b>GR</b> ) (e.g., \$45.80 in 2014) Active compost, biosolid, and grease waste @ Hard-to-Handle Rate ( <b>H2H</b> ) (e.g., \$47.73/ton in 2014) Finished compost and ground clean greenwaste @ Beneficial Refuse Rate ( <b>BR</b> ) (e.g., \$10/ton in 2014)	
Administration Fee ( <b>AF</b> )	7.5% of the sum of material loading and transportation costs	
Material Testing ( <b>MT</b> )	\$5,000	\$10,000
Maximum Total On-site Storage Capacity (ton or cy) <sup>3</sup>	Feedstock Receiving Area: Maximum Greenwaste ( <b>GW</b> ) capacity Active Composting Area: Maximum Active Compost ( <b>AC</b> ) capacity Curing & Product Storage Areas: Maximum Finished Compost ( <b>FC</b> ) capacity <b>TSC = GW + AC + FC</b>	
Conversion Factors	<b>GW:</b> 0.5 ton/cy <b>AC:</b> 0.65 ton/cy <b>FC:</b> 0.4 ton/cy	
Formula	$\{[(\text{TSC} \times \$8/\text{ton}) + (\text{TSC} \times \text{TVMT} \times 0.0041 \text{ cent}/\text{ton}/\text{mile} \times 1 \text{ dollar}/100 \text{ cent})] \times (1 + 7.5\%)\} + (\text{GW} \times \text{GR} + \text{AC} \times \text{H2H} + \text{FC} \times \text{BR}) + \text{MT};$ or <b>BBA</b> , whichever is greater.	
Annual Bond Adjustment	Due to the long CUP life of composting facilities, the bond value need be adjusted according to the CPI during its annual update. Adjustable values include: <b>BBA</b> , material loading cost (\$8/ton), transportation cost (0.0041 cent), <b>MT</b> , and <b>AF</b> . In addition, disposal fee needs be updated, as warranted.	

<sup>1</sup> A composting facility is a Tier 2 facility regardless of its total facility capacity, as long as it composts food materials, or manure, or grease waste.

<sup>2</sup> Material loading and transportation unit costs are derived from the Department of Waste Resources unit costs for CalBioMass cleanup.

<sup>3</sup> Materials are assumed to be stored in windrows (trapezoids) 12' wide at the base and 8' tall with 8-foot aisles space between windrows