

**FARM AND RANCH COMPOSTING
COMPOSTABLE MATERIAL
STORAGE VOLUME LIMITATIONS**

Discussion Draft



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**Permitting and LEA Services Division
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Farm and Ranch Composting / Compostable Materials Storage Volume Limitations
Issue Paper

The California Integrated Waste Management Board (Board) directed staff to review Board regulations to ensure they are grounded in the best available science, address changing market conditions, and take advantage of developing technologies. Board staff have focused on several prioritized regulatory areas for review as part of its support of the Board's [Strategic Directives](#) adopted in February 2007 and the associated [Organics Roadmap](#). Strategic Directive 6.1 calls for a reduction of the amount of organics in the waste stream of 50 percent by 2020.

As part of Strategic Directive 8.3, one of several compostable material regulatory issues selected for review was the maximum amount of off-site-generated green material which may be handled by an agricultural material operation that uses this green material as feedstock in addition to agricultural materials without requiring a Compostable Materials Handling Facility Permit [California Code of Regulations, Title 14, Chapter 3.1, § 17856.(c)(2)].

Background

This review was spurred by concern regarding the regulatory appropriateness of certain volume limitations that apply to on-farm composting operations. During the Permitting and Compliance Committee meeting on Nov.6, 2007, Board member Wesley Chesbro asked staff about restrictions placed on the “storage of finished product” at agricultural composting sites. After some discussion, Board legal counsel suggested that this issue could be added to the draft list of regulatory issues being assembled for the periodic rulemaking calendar presentation scheduled for January 2008. The issue was subsequently added to the list of SD 8.3 regulatory review areas with the following description:

“Title 14, Chapter 3.1, Composting—Another issue relative to the composting regulations is in regard to the tiering limits placed on farms and ranches that produce compost feedstock and also receive compostable material from other sources. The regulations do not account for the seasonal variation in the receipt and use of material in agricultural operations.”

Board staff contacted LEAs and operators regarding Board member Chesbro's specific concern. A Southern California operator confirmed that he had spoken to the Board member regarding the challenges presented by the 12,500 cubic yard volume limitations that apply to his operations and the seasonal demand for materials from the agricultural soil amendment market. The operator stated that he was unable to meet seasonal demand for his product as a consequence of the regulatory restrictions on accumulated materials that applied to his operation. Further, he relayed that his interest was in the storage of materials that had accomplished pathogen reduction and were prepared for market, rather than accepting more feedstock or expanding processing capacity. The operator expressed concern about Board actions that would ultimately encourage the accumulation of improperly or incompletely processed materials by California operations.

California Code of Regulations, Title 14 (14 CCR), Chapter 3.1, Section 17856.(c)(2) limits agricultural material composting operations to 12,500 cubic yards of off-site green material (including feedstock, compost, or chipped and ground material) on-site at any one time if that operation sells or gives away more than 1,000 cubic yards of material per year and has provided enforcement agency (EA) notification. The regulatory threshold of 12,500 cubic yards was derived from an expansion of the earlier 10,000 cubic yards threshold for the “registration tier” with an additional 25 percent to accommodate additional compostable materials regulated as a consequence of a definitional adjustment related to compost products.

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The broad definitions of the Public Resources Codes (PRC) for “compost” and “composting” have been somewhat problematic to subsequent associated regulation development. “Compost” is any product “resulting from the controlled biological decomposition of organic wastes that are source separated from the municipal solid waste stream, ...” (PRC 40116). “Composting” is simply “the controlled or uncontrolled biological decomposition of organic wastes” (PRC 40116.1). The Board’s statutory authority covers all biological decomposition: “the board shall adopt and revise regulations which set forth minimum standards for solid waste handling, transfer, composting, ...” (PRC 43020).

14 CCR Chapter 3.1 regulations endeavor to refine the scope of regulatory authority. There are currently provisions in regulation for agricultural material composting operations that do not sell or give away more than 1,000 cubic yards of material per year to handle greater than 12,500 cubic yards of off-site green material (including feedstock, compost, or chipped and ground material) with EA approval [14 CCR 17856.(c) (1)]. These Chapter 3.1 regulations do not set any material handling limits and do not require a permit with site specific conditions for agricultural material composting operations that sell or give away more than 1,000 cubic yards of material per year, but do not take any off-site “green material” [14 CCR 17856.(b)].

Title 14 regulations do not define “finished product” or “finished compost,” but “stabilized compost” is defined [14 CCR 17852.(a) (36)]. “Stabilized compost” is material that has completed a pathogen reduction (133°F and above) process and has reduced biological activity demonstrated by lower temperatures (below 122°F) and/or respiration rates than active compost. “Active compost” is compost feedstock that is biological active as indicated by the temperature (122°F and above) or respiration rate of the material [14 CCR 17852.(a)(1)].

The “stabilized compost” definition is consistent with certain composting activities that are excluded from regulatory requirements [14 CCR 17855.(a)(5)(J)]. Regulations also define as “excluded” from the Board’s regulatory requirements those activities that handle agricultural materials derived from and returned to the same agricultural site and do not sell or give away more than 1,000 cubic yards of material per year [14 CCR 17855.(a)(1)].

Additionally, there are applicable definitions in Chapter 3.1, Section 17852(a) for “Agricultural Material,” “Agricultural Material Composting Operation,” “Chipping and Grinding Operations and Facilities,” “Compostable Material,” “Feedstock,” and “Green Material” (see attachment A).

Discussion

Within the current regulatory framework, there is no provision for expanded composting operations due to seasonal production regardless of the agricultural designation. Although “agricultural material composting operations” have no regulatory limitation specified for the amount of agricultural material on-site, these operations are limited to 12,500 cubic yards of off-site-generated green material (including feedstock, compost, or chipped and ground material) being on-site at any one time if that operation sells or gives away more than 1,000 cubic yards of material per year and has provided EA notification. In circumstances where the agricultural material composting operation exceeds the 12,500 cubic yard green material regulatory threshold, the operation would no longer qualify as an “agricultural material composting operation” and would be required to reduce the amount of green material on-site or obtain a Compostable Materials Handling Facility Permit with similar requirements of the solid waste facility permit.

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The EA notification tier limitation of 12,500 cubic yards applies to on-site “feedstock, compost and chipped and ground material.” 14 CCR Section 17852(a) does not provide a definition for “compost,” but, as referenced above, the PRC does. The PRC definition for “compost” broadly describes materials resulting from “controlled biological decomposition,” adequately encompassing both “active compost” and “stabilized compost.” “Active compost” is compost feedstock that is biological active as indicated by the temperate or respiration rate of the material. “Stabilized compost” is material that has gone through pathogen reduction and has reduced biological activity demonstrated by lower temperatures and respiration rates than active compost. Potential negative impacts from the storage of “stabilized compost” would be anticipated to be significantly less than the storage of unprocessed “feedstock” or partially processed “active compost” or variably processed “chipped and ground material.”

Current regulations exclude certain activities that handle materials in a specific manner that results in less potential for negative impacts. These 14 CCR “excluded activities” received this “below-regulatory-concern” status due to determinations in previous rulemakings regarding the nature and magnitude of probable associated impacts. The storage of “stabilized compost” at temperature below 122°F and readily identifiable as separate from other composting activities is allowed in current regulation [14 CCR 17855.(a)(5)(J)]. The storage methods required for operators to comply with this temperature threshold have not been fully explored to date.

In prior applicable rulemaking efforts, the intent of limitations on the amount of material on-site at any one time has been to correspondingly limit the impacts of an operation on the surrounding area. Impacts from odor, noise, dust, litter, traffic, site abandonment/restoration, and many other concerns have been found to relate proportionally to the amount of material accumulated and the handling of that accumulation. Additionally, materials with excessive contamination offer many challenges with regard to appropriate handling and regulatory oversight. The existing 12,500 cubic yard regulatory threshold for all EA notification operations was established to address this issue.

Lastly, considering the wider set of compostable material handling issues, several technical investigations and rulemaking endeavors are in process. Airborne emissions, pathogen deactivation in mammalian tissue, and best management practices studies are currently collecting data and/or developing reports. Regulatory agencies with responsibilities for air and water are involved in significant rulemakings. The results of these efforts may have a profound effect on the regulatory adjustment necessary to address this “finished product storage” concern.

Possible Options

1. Initiate an informal rulemaking to add a new excluded activity seasonal storage of stable compost at Agricultural Composting Operations if specific criteria, best management practices, are met.
2. Initiate an informal rulemaking process to exclude stable compost from the calculation of the limit of 12,500 cubic yard regulatory threshold for green material at Agricultural Material Composting Operations if specific criteria, best management practices, are met.
3. Initiate an informal rulemaking process to exclude stable compost from the calculation of the limit of 12,500 cubic yard regulatory threshold for all Green Material Composting Operations and Agricultural Material Composting Operations if specific criteria, best management practices, are met.

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Attachment A
Applicable Statute and Regulation

Public Resources Code:

40116. "Compost" means the product resulting from the controlled biological decomposition of organic wastes that are source separated from the municipal solid waste stream, or which are separated at a centralized facility. "Compost" includes vegetable, yard, and wood wastes which are not hazardous waste.

40116.1. "Composting" means the controlled or uncontrolled biological decomposition of organic wastes.

43020. The board shall adopt and revise regulations which set forth minimum standards for solid waste handling, transfer, composting, transformation, and disposal, in accordance with this division, and Section 117590 of, and Chapter 6.5 (commencing with Section 25100) of Division 20 of, the Health and Safety Code. The board shall not include any requirements that are already under the authority of the State Air Resources Board for the prevention of air pollution or of the state water board for the prevention of water pollution.

Title 14, California Code of Regulations, Chapter 3.1:

Section 17852.(a).

(1) "Active Compost" means compost feedstock that is in the process of being rapidly decomposed and is unstable. Active compost is generating temperatures of at least 50 degrees Celsius (122 degrees Fahrenheit) during decomposition; or is releasing carbon dioxide at a rate of at least 15 milligrams per gram of compost per day, or the equivalent of oxygen uptake.

(5) "Agricultural Material" means material of plant or animal origin, which result from the production and processing of farm, ranch, agricultural, horticultural, aquacultural, silvicultural, floricultural, vermicultural, or viticultural products, including manures, orchard and vineyard prunings, and crop residues.

(6) "Agricultural Material Composting Operation" means an operation that produces compost from green or agricultural additives, and/or amendments.

(10) "Chipping and Grinding Operations and Facilities" means an operation or facility that does not produce compost that mechanically reduces the size or otherwise engages in the handling, of compostable material and:

(A) The site does the following:

1. The site handles only material, excluding manure, allowed at a green material composting operation or facility as set forth in section 17852(a)(22); and
2. Each load of green material is removed from the site within 48 hours of receipt. The EA may allow a site to keep green material on-site for up to seven days if the EA determines that the additional time does not increase the potential for violations of this Chapter.

(B) If the site fails to meet the definition of green material because it exceeds the contamination limits in section 17852(a)(21), the site shall be regulated as set forth in the Transfer/Processing Regulatory requirements (commencing at section 17400).

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(C) If the site fails to meet the definition of this section because the green material remains on-site for a longer period of time than allowed, then the site shall be regulated as a compostable material handling operation or facility, as set forth in this Chapter.

(11) “Compostable Material” means any organic material that when accumulated will become active compost as defined in section 17852(a)(1).

(19) “Feedstock” means any compostable material used in the production of compost or chipped and ground material including, but not limited to, agricultural material, green material, food material, biosolids, and mixed solid waste. Feedstocks shall not be considered as either additives or amendments.

(21) “Green Material” means any plant material that is separated at the point of generation, contains no greater than 1.0 percent of physical contaminants by weight, and meets the requirements of section 17868.5. Green material includes, but is not limited to, yard trimmings, untreated wood wastes, natural fiber products, and construction and demolition wood waste. Green material does not include food material, biosolids, mixed solid waste, material processed from commingled collection, wood containing lead-based paint or wood preservative, mixed construction or mixed demolition debris.

(36) “Stabilized Compost” means any organic material that has undergone the Process to Further Reduce Pathogens (PFRP), as described in section 17868.3, and has reached a stage of reduced biological activity as indicated by reduced temperature and rate of respiration below that of active compost.

Section 17855. Excluded Activities.

(a) The activities listed in this section do not constitute compostable material handling operations or facilities for the purposes of this Chapter and are not required to meet the requirements set forth herein. Nothing in this section precludes the EA or the Board from inspecting an excluded activity to verify that the activity is being conducted in a manner that qualifies as an excluded activity or from taking any appropriate enforcement action.

(1) An activity is excluded if it handles agricultural material derived from an agricultural site, and returns a similar amount of the material produced to that same agricultural site, or an agricultural site owned or leased by the owner, parent, or subsidiary of the composting activity. No more than an incidental amount of up to 1,000 cubic yards of compost product may be given away or sold annually.

(2) Vermicomposting is an excluded activity. The handling of compostable material prior to and after use as a growth medium is not an excluded activity and is subject to the requirements of this chapter. Handling of agricultural material on the site of a vermicomposting activity, for use as a growth medium on that same site, is an excluded activity if it complies with section 17855(a)(1).

(3) Mushroom farming is an excluded activity. The handling of compostable material prior to and after use as a growth medium is not an excluded activity and is subject to the requirements of this chapter. Handling of agricultural material on the site of a mushroom farm, for use as mushroom bedding on that same site, is an excluded activity if it complies with section 17855(a)(1).

(5) The handling of compostable materials is an excluded activity if:

(E) the activity is part of an agricultural operation and is used to temporarily store or process agricultural material not used in the production of compost or mulch; or

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(F) the activity is part of an operation used to chip and grind materials derived from and applied to lands owned or leased by the owner, parent, or subsidiary of the operation; or

(G) the activity is part of an agricultural operation used to chip and grind agricultural material produced on lands owned or leased by the owner, parent, or subsidiary of the agricultural operation, for use in biomass conversion; or

(H) the activity is part of an animal food manufacturing or rendering operation.

(J) the materials are handled in such a way to preclude their reaching temperatures at or above 122 degrees Fahrenheit as determined by the EA.

(9) Beneficial use of compostable materials is an excluded activity. Beneficial use includes, but is not limited to slope stabilization, weed suppression, alternative daily cover, and similar uses, as determined by the EA; land application in accordance with California Department of Food and Agriculture requirements for a beneficial use as authorized by [Food and Agricultural Code section 14501](#) et seq.; and reclamation projects in accordance with the requirements of the Office of Mine Reclamation of the Department of Conservation as authorized by [Public Resources Code section 2770](#) et seq.

Section 17856. Agricultural Material Composting Operations.

(a) All agricultural material composting operations and chipping and grinding operations shall comply with the Enforcement Agency Notification requirements set forth in Title 14, California Code of Regulations, Division 7, Chapter 5.0, Article 3.0 (commencing with section 18100), except as otherwise provided by this Chapter. Agricultural Compostable Materials Handling Operations shall only be subject to the requirements of section 17863.4 if the EA makes a written determination that the operation has violated the requirements for odor impacts of section 17867.

(b) Compost produced by an agricultural material composting operation or chipping and grinding operation which uses only agricultural material may be sold or given away in unrestricted quantities. These operations shall be inspected by the EA at least once annually.

(c) Compost produced by an agricultural material composting operation which uses agricultural material and/or green material, as specified in section 17852 (a)(21), may be sold or given away in accordance with the following restrictions.

(1) Those sites that do not sell or give away more than 1,000 cubic yards of material per year shall be inspected by the EA at least once annually when actively composting. If more than 12,500 cubic yards of green material, including feedstock, compost, or chipped and ground material, is to be handled on-site of productive farmland as defined in [Government Code section 51201](#), the operator shall give advance notice to the EA. The EA shall only prohibit the on-site storage of additional materials, or impose a greater inspection frequency, if the EA makes a written finding that it will pose an additional risk to public health and safety and the environment. The EA shall forward a copy of the request and approval to the Board.

(2) Those operations that sell or give away more than 1,000 cubic yards of material per year, shall have not more than 12,500 cubic yards of green material, including feedstock, compost, or chipped and ground material, on-site at any one time and shall be inspected by the EA once every three (3) months.

(3) These sites shall record the quantity received of green material.