



Sustainable Solutions, LLC
3525 Del Mar Heights Road #922
San Diego CA 92130
Phone: 858-220-6642
info@sustainablesolsd.com

December 5, 2014

Mr. Ken Decio
Waste Permitting, Compliance, and Mitigation Division
California Department of Resources Recycling and Recovery
P.O. Box 4025
Sacramento, CA 95812-4025

Re: Formal Comments on CalRecycle's Proposed Regulations Concerning Composting Operations

Dear Ken,

My company Sustainable Solutions is focused on the power of compost. As you may well know, but I think it is worth mentioning again, proper composting can solve many of the world's environmental problems. It can allow us to grow plants without the need for toxic chemicals, greatly reduce our water demand in time of drought, and not only prevent releasing dangerous greenhouse gas emissions from organic materials rotting away in landfills, but also empower us to prevent severe climate change scenarios by using the power of compost to grow healthy plants that take carbon from the atmosphere and store it back into the soil through photosynthesis. Quite simply, composting should be an integral part of any sustainability strategy if we are to be responsible stewards of the planet.

When done properly, composting is an amazing biological technology that is educational, practical, and inspirational. Our company is focused on providing intelligent composting systems at schools, businesses, and communities, mostly all in the urban areas of San Diego. As the current State composting regulations are written, our services are mainly limited to on-site composting only. As we have seen time and time again, there are drawbacks to this approach. In many cases, there simply is no room for on-site composting, such as in a downtown commercial center. The availability of alternate composting locations, such as permitted facilities accepting food waste is greatly limited throughout San Diego County (currently only The City of San Diego's Miramar Greenery accepts food waste from commercial operations).

Therefore, we advocate for the changes in this letter below to the State's proposed composting regulations, especially pertaining to expanding the opportunities for small-scale regional composting. We have seen several successful small-scale composting operations in the United States and globally. Concerns regarding public health and safety can be addressed properly, just as have been considered in operations conducted in other states. If similar operations are implemented in California, they will create green jobs and ensure that our State remains the leader in technological innovation and environmental sustainability. Plus, we will know that by utilizing this powerful technology of composting, we will have addressed the environmental challenges of our day and will leave a better planet for future generations.

Kindest regards,
Jeff Bishop, MPIA
Director
Sustainable Solutions



PROPOSED RECOMMENDATIONS TO CURRENT PROPOSED REGULATIONS

We strongly recommend the following changes or additions:

- Increase footprint allowance for small, excluded sites
Specific to S 17855(4), CalRecycle deletes the 50 sf. restriction for small, excluded activities and incorporates a burden of proof clause applicable to all activity in the State.
- Expand source allowances and inputs at farms and community gardens
CalRecycle revises and clarifies the language so it is transparent that 1) agricultural sites can compost any volume of agricultural material, 2) agricultural sites using compost onsite are exempt from permit while agricultural sites selling compost would require at least an EA Notification, and 3) agricultural sites may import an accessory volume green, vegetative/ food material feedstock as part of the permit exemption or EA Notification.
- Clarify permitting of in-vessel facilities
Calrecycle clarifies the language that facilities may conduct onsite curing, and/or apply immediate beneficial use of the compost/solid digestate so long as the in-vessel technology meets temperature and residence time requirements, and meets pathogen destruction and metals requirements.
- Provide guidelines for small- to mid-scale operations
CalRecycle or its partners develop a framework for local jurisdictions to institute trainings, licenses, or guidance programs to ensure that small and on-farm operations produce compost in accordance to typical composting BMPs and uphold a standard of care. This could be simple and similar to low-cost food-handlers licensing programs.

CalRecycle has an important responsibility to ensure proper management of composting facilities through education, outreach and enforcement with local authorities. Local rules already cover the majority of potential problems associated with facilities' operations. It is also equally important that enforcement mechanisms in place to reduce unnecessary risks don't impose undue burdens on smaller efforts.

We want to address some of the potential public safety issues raised by CalRecycle staff by directing them to the attached article (BioCycle, *Supportive Rules for Small-Scale Composting*, June 2012, pgs. 21-24). Other states and several cities across the US have implemented responsive regulations that increased properly managed composting. The risks that were feared have simply not developed and thus states are moving to expand opportunities for urban sites and on-farm composting.

During this rulemaking process, has CalRecycle researched "model rules" and reached out to other states that recently revised their rules, such as the eleven states mentioned in the BioCycle article?ⁱ Did CalRecycle apply "model rules" to develop its proposed regulatory revisions?

We have expanded on the recommendations in the following section, citing best practices and local needs where applicable.

RECOMMENDATIONS AND RATIONALE

1. Increase the footprint allowance for the small, excluded sites

Background:

CalRecycle has appropriately proposed to exclude small scale composting operations, with no restrictions on feedstocks or use of finished compost. This concept of community composting enable us to create closed-loop nutrient cycles locally. Small sites will have the ability to add soil nutrients directly back to their neighborhoods and gardens, demonstrating first-hand the benefits that compost provides.

However, the 500 square foot (sf) footprint is too restrictive and will not adequately serve sites that have the capacity to compost. A footprint allowance for small sites in California would not work because CalRecycle's existing and proposed regulations do not contain any intermediary permitting mechanisms for sites the "next size up."

We calculate that site with small equipment would compost a maximum volume of 35-55 cubic yards, with no accommodation for feedstock processing or working space. Excluded composting sites may or may not have the ability to process 100 cubic yards of material, and that will be determined on case-by-case basis within our own local zoning and jurisdictional approvals. The State of Ohio instituted performance-based permitting mechanisms that enable and encourage urban and community composting activities at larger scales.

Proposed Solution:

Specific to S 17855(4), we request that the 50 sf. restriction be deleted and the language be implemented as follows for small, excluded activities:

Composting green material, food material, and vegetative food material is an excluded activity if the total amount of feedstock and compost on-site at any one time does not exceed 100 cubic yards.

Conveniently, SS17867(a) already defines general operating standards that CalRecycle could require excluded sites to comply as a condition of permit exclusion, or some variation. This will give assurance that excluded sites will not be mismanaged or otherwise pose a risk to public health. The State of Massachusetts includes a burden of proof clause in their composting regulations that applies to all activities (see endnote)ⁱⁱ. Incorporating similar language into the proposed regulations would help further ensure that all composting in California is conducted with a certain standard of care while still encouraging composting activity to occur.

2. Expand source allowances at farms

Background:



The proposed regulations do not contain any intermediary permitting mechanisms for composting of vegetative/food material that accounts for the size or relative risk of the activity to the surrounding environment and public health. We have a major opportunity to develop on-farm composting capacity; this would easily amplify organic waste diversion in the region where agricultural enterprises are often located near communities that generate organic wastes.

Siting new facilities becomes less of an obstacle when we can take advantage of our expansive agricultural infrastructure. As Massachusetts found, since the organics landfill ban was introduced, 70% of their new composting capacity has occurred at farms composting small volumes of food while exempt from the commercial composting facility permits.¹

Has CalRecycle researched on-farm composting opportunities in California? Has CalRecycle asked farmers how much material they need to import to produce enough compost to meet their needs? What were the responses? typical small farm in San Diego would need to import roughly 50-60% of their feedstocks (between growing seasons). Off-site feedstocks are also needed to produce the carbon:nitrogen balance for composting.

Proposed Solution Implement an intermediary allowance for accessory on-farm composting, especially for those farms intending to use their compost onsite. For example, Massachusetts allows farms to import up to 3 tons per day, or 10 tons per week of approved materials, including food.

This appears to be the intent in SS1785 (1), excluded agricultural activities:

SS1785(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.

Somehow people interpret this section to mean farms can only compost their own material derived from onsite. However, we interpret it to mean that **farms can compost agricultural material so long as the compost is used on the site where the composting occurred, or compost can be used on the site where the agricultural material was derived.**

Please clarify the meaning and revise the text. Moving forward, the only material difference between excluded agricultural sites and agricultural site requiring an EA Notification is whether they use their compost onsite or if they sell/give away more than 1000 cubic yards per year.

Proposed Solution:

We've developed alternatives to the language that if implemented, will clarify and expand on-farm composting allowances. Please consider and implement one of the following alternatives:

Alternative A, Offsite feedstock allowance is based on the farm's size and ability to handle the material:

¹ *Assessing Organics Processing Capacity In Massachusetts, October 2014, BioCycle*



SS1785 Excluded Activities

~~(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. If their feedstock is limited to agricultural material, the agricultural site may handle an unlimited quantity of agricultural material. Up to 25% by volume of feedstock onsite at any one time may consist of green material, food material and vegetative food material derived from offsite. No more than an incidental amount of up to 1,000 cubic yards of compost product may be given away or sold annually.~~

SS17856. Agricultural Material Composting Operations:

(c) If their feedstock is limited to agricultural material, agricultural material composting operations may handle an unlimited quantity of agricultural material on the site and may sell or give away any or all compost they produce. Up to 25% by volume of feedstock onsite at any one time may consist of green material, food material and vegetative food material derived from offsite. These operations shall be inspected by the EA at least once each calendar year at a time when compostable material on the site is active compost.

Or Alternative B, Offsite feedstock allowances capped at 50 cubic yards:

SS1785 Excluded Activities

~~(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. If their feedstock is limited to agricultural material, the agricultural site may handle an unlimited quantity of agricultural material. Up to 500 cubic yards of green material, food material, and vegetative food material feedstock received from offsite may be onsite at any one time. No more than an incidental amount of up to 1,000 cubic yards of compost product may be given away or sold annually.~~

SS17856. Agricultural Material Composting Operations:

(c) If their feedstock is limited to agricultural material, agricultural material composting operations may handle an unlimited quantity of agricultural material on the site and may sell or give away any or all compost they produce. Up to 500 cubic yards of green material, food material, and vegetative food material feedstock received from offsite may be onsite at any one time. These operations shall be inspected by the EA at least once each calendar year at a time when compostable material on the site is active compost.

Similar amendments to S (d) should be implemented for agricultural operations accepting high volumes of green material. Likewise, SS17857.1 and SS 17857.2 should be amended to allow the specified volumes of vegetative/ food material feedstock.

We are confident that CalRecycle already has the safeguards and assurances in place to ensure properly managed agricultural composting. Agricultural operations in the EA Notification tier that sell or give away more than 1000 cubic yards per year of compost are already required to follow pathogen destruction and other standards outlined in SS17868.1, 17868.2, 17868.3 and 17868.3. Agricultural sites should be given a chance. If sites are found underperforming, they will be shut down or required to enroll in a higher permit tier.

If CalRecycle disagrees with our assessment or determines an on-farm allowance different than ours presented, please provide data, calculations, case studies or evidence to support your

findings. We welcome any further discussions with CalRecycle to help develop on-farm composting capacity for California.

3. Clarify permitting of in-vessel facilities

Background:

Please clarify requirements for small to medium in-vessel facilities composting or curing the digestate it produces. The language is unclear. Aerobic in-vessel technologies, along with many anaerobic digesters, typically produce compost, or solid digestate similar to compost, after processing the material at designated temperatures and residence times. Furthermore, solid digestate from aerobic in-vessel digestion is compost by design and typically requires no further processing other than curing.

Proposed Solution:

Please clarify that facilities may conduct onsite curing, and/or apply immediate beneficial use of the compost/solid digestate so long as the in-vessel technology meets temperature and residence time requirements, and meets pathogen destruction and metals requirements. Facilities should follow the sampling protocol and meet the standards outlined in SS17868.1, 17868.2, 17868.3 and 17868.3.

4. Provide guidelines for small- to mid-scale operations

We recognize that composting is a process that requires knowledge, management and care. Composting is also the catalyst to solve so many of our environmental and social problems. We do not want the risk of mismanaged activities to tarnish the reputation of composting or cause nuisance or harm.

In tandem with this rulemaking process or as soon as possible, we request that CalRecycle itself, or its partners, develop a framework for local jurisdictions to institute trainings, licenses, or similar programs to ensure that small and on-farm operations produce compost in accordance to typical composting best performance measures. This could be simple and similar to low-cost food-handlers licensing programs. As one example, composters could register their activity in a database and complete a simple online tutorial. This database could collect information regarding feedstocks (from offsite or onsite), intended use of finished compost, capacity, etc. While this information is available in permit records, it will not be readily available from excluded sites. The database will provide CalRecycle, LEAs and interested persons with valuable information regarding the types and scales of composting activities taking place in California, while giving the public and regulators assurance that even small sites follow a standard of care.

SUCCESSFUL PRACTICES IN OTHER REGIONS

New York City's history with composting demonstrates that sustainable projects are not necessarily defined as capital intensive, large, centralized facilities. Facilities can be good neighbors in urban areas, as demonstrated in Boston, MA. A recent piece of NPR² highlighted the City Soil composting project in urban Boston. City Soil has even been helping develop on-

² <http://www.npr.org/blogs/thesalt/2014/11/04/361198951/massachusetts-food-waste-ban-goes-down-easy>



farm composting capacity in response to the state's food waste landfill ban. The State of Massachusetts allows farms to accept up to 30 tons per day off approved feedstocks, including food material. Programs have developed in states and cities across the USA due to favorable rules that encourage composting. Examples of such exciting programs are provided in the endnotes.ⁱⁱⁱ California is known to be a leader in the environmental movement; however, our own rules make it extremely difficult to start such exciting programs of our own.

CONCLUSION

As we move forward to integrate composting into our healthy community and sustainable food systems, we recognize that CalRecycle is an important and vital ally to our movement. We look forward to State-level rules that enable us to work within our local frameworks to create our own unique composting systems. We are very excited to be submitting these comments to you and thank you very much for the effort and dedication you've put into this process. We would be happy to further this discussion with your staff.

ⁱ (BioCycle, *Supportive Rules for Small-Scale Composting*, June 2012, pgs 21-24)



Table 2. Thresholds for off-site generated food discards at permit-exempt composting facilities (11 states surveyed)

<i>State</i>	<i>Feedstock</i>	<i>Threshold Limit</i>
Maine	Food residuals	5 tons at a time with C:N ratio of between 25:1 to 15:1
	Fish residuals	5 tons at a time with C:N ratio of less than 15:1
Massachusetts	Food material	10 cubic yards (cy) or 5 tons/day ¹
	Preconsumer vegetative material	20 cy or 10 tons/day ¹
New York	SS food waste	1,000 cy/year (yr)
	Yard waste	3,000 cy/yr
Ohio	Food scraps	No amount-based limit for 300 sq ft maximum facility. 300 sq ft and above facilities must provide a daily maximum amount ¹
Oregon	SS nonvegetative food and meat scraps	20 tons/yr
	SS nonvegetative food and meat scraps	40 tons/yr if in-vessel
	SS vegetative food scraps (including industrially produced and DEQ approved)	100 tons/yr
Pennsylvania	SS food scraps	1,000 cy or 500 tons/yr, 5 acre maximum facility ²
Rhode Island	Presorted vegetative residues	10 tons/day
	Presorted food by-products	1 ton/day
	Unprocessed meat and fish wastes	1 ton/day
Washington	SS preconsumer vegetative food wastes	40 cy on-site at any one time (if distributing finished compost off-site, max. of 250 cy at any one time allowed, with annual analysis and report required)
	SS preconsumer vegetative food wastes	1,000 cy on-site at any one time, when material is generated off-site and if vermicomposting
	All SS food wastes generated on-site All SS food wastes generated on-site	10 cy on-site at any one time if in-vessel No limit on-site if vermicomposting
West Virginia	Kitchen scraps, coffee grounds, fish and poultry carcasses	12,000 tons annually (includes all organic material), 5 acre maximum farm
Wisconsin	SS compostable material	5,000 cubic yards on-site at any one time. 10,000 cubic yards for farms. License required for all non-farm facilities with volume larger than 50 cubic yards ¹

SS = source separated. All threshold limits assume compliance with applicable environmental standards.
¹Requires registration and/or license, ²Requires general permit but not full permit. Source: Institute for Local Self-Reliance, 2012.

ii **Composting Regulations from State of Massachusetts:**



31 CMR 16.00: REGULATIONS FOR SOLID WASTE MANAGEMENT FACILITY SITE ASSIGNMENT AND RECYCLING, COMPOSTING, AND CONVERSION PERMITS

16.01 (7) Burden of Proof In every proceeding, the owner and operator bear the burden to persuade the Department that the activities or operations being conducted pursuant to 31 CMR 16.00 d not create public nuisance conditions and d not pose a significant threat to public health, safety or the environment.

16.04: General Permit for Recycling, Composting or Aerobic and Anaerobic Digestion

Operations.

(1) Applicability The following operations are eligible for a general permit and do not require a site assignment, a facility permit pursuant to 31 CMR 19.000 or a recycling, composting, or conversion permit pursuant to 31 CMR 16.05, provided the operation meets the requirements of 31 CMR 16.04:

- (a) recycling operation that receives no more than 250 tons per day of recyclable materials, not including paper;
- (b) composting operation that:
 - 1. receives no more than 105 tons per week and no more than 30 tons per day of Group 2 organic materials, listed at 31 CMR 16.04(3)(b): *Table 1. Examples of Organic Materials*, or other organic materials with a carbon to nitrogen ratio of 30:1 or less;
 - 2. contains less than 5,000 cubic yards of organic materials per acre; and
 - 3. has less than 50,000 cubic yards of organic materials on site at any one time; or
- (c) an aerobic or anaerobic digestion operation that receives no more than 100 tons per day of organic material from on or off site, based on a 30 day rolling average.



310 CMR 16.04(3)(b): Table 1. Examples of Organic Materials

Table 1 Examples of Organic Materials			
Group 1 Organic Materials		Group 2 Organic Materials	
Example Materials	C:N ratio	Example Materials	C:N ratio
Clean wood	100-1300:1	Vegetables	11-19:1
Cardboard	560:1	Food material	14-16:1
Paper and paper products	125-850:1	Grass clippings	17:1
Leaves	40-80:1	Green plant material	15-19:1
Straw	60-80:1	Fish waste	2-5:1
Corn stalks	60-75:1	Manure	6-14:1
Shrub trimmings	50:1	Solid and liquid digestate from aerobic and anaerobic digestion processes	Variable

Source: U.S. Composting Council, Best Management Practices (BMPs) for Incorporating Food Residuals Into Existing yard Waste Composting Operations, p. 20. found at <http://compostingcouncil.org/admin/wp-content/uploads/2010/09/BMP-for-FW-to-YW.pdf>.

NOTE: The general permit is not a compost facility permit, but a simple permit that outlines the expected performance measures that all composting and in-vessel technologies in the state shall conform to.

iii Programs Developed in Other States and Cities in the USA.

Oregon has enacted performance based rules that favor experienced operators, promote and exempt small facilities and remove limitations on the feedstocks agricultural composters may use. Iowa allows a Permit exemption for up to 2 tons food scraps per week from offsite sources.



Rhode Island requires Registration (but not a full permit) for agricultural composters if they accept less than: 1 tons/day presorted produce or vegetable scraps; 1 ton/day presorted kitchen, restaurant, municipal food scraps; ½ ton/day unprocessed meat/ fish waste. Some examples of new, exciting entrepreneurial or on-farm driven compost programs include:

- Detroit Dirt, whose mission is to “To become an engine for the urban farming movement by regenerating waste into the resources that will reshape Detroit. “
- Lower East Side Ecology Center, New York City: This organization operates food waste-into-compost system at Farmers Markets. At its facility in a City park, they process 6-7 tons per week collected from residents at the Markets into compost, which is then sold back to residents at Farmers Markets.
- Compost Cab, Washington, DC: collects residential and commercial food scraps and delivers to urban farms for composting.
- Compostwheels, Atlanta, Georgia: operates a closed loop system for compost pick up. Organic waste is composted within the surrounding neighborhood, helping to achieve their goal of creating a standard of soil used in each community served.
- Farmer D Organics, Atlanta, Georgia: Compost is made from a combination of green waste from the prepared food and produce departments of Whole Foods Markets and byproducts from pine forests, cotton gins, peanuts, chicken litter, granite dust and biodynamic soil preparations. "This is not just any compost! This was the first certified Biodynamic Blend compost on the market, made from 40,000lbs/week of Whole Foods Market green waste, which was previously headed to the landfill!"
- The Compost Crew, Silver Spring, Maryland: collects residential and commercial food scraps and delivers to urban farms for composting.
- Compost Mobile, Miami, Florida- non-profit organization was awarded a microfinance grant to initiate a program that collects residential food scraps from particularly low-income neighborhoods and delivers to urban farms and community gardens for composting.