



ACP System Outline for Building Sustainable Recycled Organics Markets in California:

A detailed outline of ACP's recommendation to CIWMB Board Meeting, March 18, 2008, AGENDA ITEM 7: "Discussion And Request For Direction On Green Material Alternative Daily Cover"

By

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1 PURPOSE:

In a letter to the California Integrated Waste Management Board from the Association of Compost Producers (ACP),¹ dated March 26, 2008, ACP Board recommended that “the *Waste Board initiate an ongoing, sustainable, coordinated composting and bioenergy market channel development system*, including sufficient standards, capacities and end use market information. This would be a “cradle to cradle” management model for California organics generation and sustainable reuse. We could call this new system, or tool, a “**Local Organics Advocacy & Marketing” System (LOAM System).**”

This “white paper” is an outline of such a sustainable market development system to be initiated by the State Waste Board and used by all organics stakeholders (especially local jurisdictions and private organics management companies). The purpose of the system is to manage the orderly diversion of *all* organic resources from ending up in landfills, and being beneficially reused for building healthy soil, recycled organic building materials or biomass energy generation.

2 BACKGROUND – THE PROBLEM TO SOLVE

The Waste Board desires to phase out all organics going into landfills. However, the industry in various parts of the states believes this will be detrimental not solely to landfill owners and managers, but could have a deleterious effect on compost and mulch markets locally. This is due to at least the following concerns:

- Low numbers or overly expensive compost processing capacity
- Low quality material that will be costly to process, and
- Flooding local organics markets with poor quality material.

However, we believe a public/private local organics advocacy and marketing system, to replace and go well beyond the current system of waste diversion reporting systems currently required and used by local municipalities/jurisdictions, will solve these and many other organics market development problems. As stated in the letter to the Board, the purpose of this system would be to:

- **Enhance the States use of compost to build healthy soil ecosystems** (i.e. integrated biomass/organics, such as plant material carbon, water resources, watershed resources, *and* air-shed management).
- Move toward ever-more **FULLY Integrated resource & environmental planning and implementation** (an ongoing journey from where we are today).
- Base planning on:
 - “**Net environmental benefits” and Economies of Scope** for natural capital management (product resources, process resources and environmental service resource integrity);
 - **Collaborative rule making and governance** across resource and environmental arenas; and

¹ See full text of the letter in Appendix X.1

- **Full Life cycle analysis** (cradle to cradle, EPR, circular economic, triple bottom line, by whatever name) becomes standard operating procedures for ALL organics policy, management and functional implementation.

3 “LOAM” SYSTEM

What kind of data capture and market intelligence system could be created and implemented that would solve the above organics management problems in our state? We begin to point to such a system in this section.

3.1 Elements and Functions

When choosing management options for any organic material, the environmental impacts and GHG emissions resulting from hauling greater distances, and the overall costs, must be taken into consideration. As stated in our previous letter, to avoid negative consequences of such a policy change, especially dumping of sub-standard, poor quality and contaminated organic bioproducts on to unsuspecting end-use markets, ACP recommends that a new system could be developed. For purposes of discussion we’re calling it the “LOAM System”. This system should have at least the following elements:

1. Use true cost accounting and pricing practices for landfills as well as composting, recycled building material and bioenergy product markets,
2. Support the defining, permitting and encouragement of the use of quality compost and bioenergy feedstock manufacturing and distribution facilities, and
3. Development of local, county by county, compost and bioenergy market development strategies and tactics based on newly developed *true cost economics* system/tool.

The functions would include local jurisdictions and local organics management and processing industry to handle:

- Organics generation, processing & end-use application (market) reporting, both internally and to the Waste Board
- “Beneficial reuse”, or “recycling” is calculated as an *outcome* of the local market development models, and *not based statewide averages*
- Landfill fees to become based on full/life-cycle cost analysis of long term landfill management costs, calculated for each jurisdiction, again, *not based on statewide averages*

This implies that the data/information management system would have to, at a minimum:

- Be available to any California organics management personnel and professionals
- Include data input portals for daily data input (continuous reporting)
- Be useful to data input users to manage their local operations and jurisdictions
- Provide daily, ongoing reports (dashboards) to local users as well as local jurisdictions, the Waste Board, and security authorized stakeholders.

3.2 What Kind of System?

The above conceptual specifications beg the question, “What kind of system can handle this information and market development process?” It turns out that such market development and tracking systems are *already in wide use by companies around the globe*. A customized system could be accessed by the Waste Board and its local jurisdiction and private industry partners for pennies on the dollar compared to the current reporting system. Proving universal access, reporting and utility.

One such system, a leading internet based CRM (customer relationship management, http://en.wikipedia.org/wiki/Customer_relationship_management) system is www.Salesforce.com. This system is already being used to spawn other similar applications in the sustainability market development space, e.g. www.stakeware.com. These systems are often part of, or “plugged in” to existing larger ERP systems (enterprise resource planning, http://en.wikipedia.org/wiki/Enterprise_resource_planning), and are already very robustly configured, in their inherent information management structure, to handle the current task of quantifying, managing and building local organic markets.

In addition, there are emerging modules, also internet based, that could be added at any time that is appropriate that could add in, often necessary on the ground, local, permitting and ecological data, e.g. www.EcoLayers.com.

The key to these systems is not merely their relatively low cost data entry and management capabilities. Rather, it is their real time reporting and dash board systems for management at both the local (distributed, functional) and central (state, strategic, policy management) levels. Also, they are *not* “software” in the conventional sense, hosted on individual computers. Rather they are internet-based and can be accessed 24/7 from any internet device and connection in the world. This is the new approach to real time information management and reporting. In fact the www.Salesforce.com system even uses a symbol of “circle slash” over the “software” world, indicating that this *isn't traditional software as we normally think about this*.

4 A NEW ENTERPRISE MODEL REQUIRED?

It's entirely possible and reasonable that a new type of entity or system management model may be necessary in order to implement this collaborative market reporting and analysis system.

Public/private partnership arrangement between the State and a private internet software provider could be established that would be managed by the Board, but paid for by a combination of the Board and the local public and private users of the system, on a subscription, pay as you go basis. The system would benefit from years, and \$100's of millions of investment and building by established, reputable companies and be

maintained by them for a fraction of the cost of trying to maintain a Waste Board only system.

This could be run by an independent “organics management market development enterprise”, e.g. a “LOAM, Inc.”, much like an informational version of an EcoCycle, Inc. (www.ecocycle.com). Another is the Climate Action Registry (www.climateregistry.org). These entities should be collaborated with in order to develop the LOAM System.

DRAFT

5 APPENDIX:

5.1 Letter to the Waste Board Regarding ADC From ACP



**ACP Comments on Green Material ADC Policy
CIWMB Board Meeting, March 18, 2008, AGENDA ITEM 7:
"Discussion And Request For Direction On
Green Material Alternative Daily Cover"
(Including references to ETAAC Report and SWICS Responses)**

March 26, 2008

Margo Reid Brown, Chairman
California Integrated Waste Management Board
1001 I Street, CalEPA Building
Sacramento, CA 95814

Dear Ms. Brown,

This letter provides comments by the Association of Compost Producers on CIWMB Board Meeting, March 18, 2008, AGENDA ITEM 7: "Discussion And Request For Direction On Green Material Alternative Daily Cover".

ACP's Big Picture Perspective

As described in more detail in ACP's "**Roadmap for the Development of Compostable Bioproducts in California**" that the Waste Board received prior to the Boards "Organics Summit, October 11, 2007, "we envision a sustainable California that integrates all the critical resources required for robust and abundant life and livelihood. This includes *fully renewable and resource efficient*:

- Water Resource and Watershed Quality Management
- Energy Self Sufficiency
- Fertile Productive Soils
- Lush Landscapes
- Robust Agricultural Economy
- Sustainable Resource Utilization

- GHG emissions reduction

Recycled organics, both composted and woody residuals, play a key role in achieving each of these sustainable resource scenarios. Also, in any given locale, management of organics requires a balanced, multi-faceted approach. The best management approach must be selected based on the characteristics of the organic material itself (BTU value, contaminant levels, and moisture content, for example), as well as external factors such as location of origin, cost, existing vs. future infrastructure, overall environmental impacts, and marketing strategies and channels.”

We believe that any Alternative Daily Cover (ADC) policy, like all organics management decisions for California, requires this same approach. As such, the best management approach *must be selected for each locale* (jurisdiction) based on the characteristics of the organic materials needing recycling.

We understand that such a robust organics management system does not currently exist. However, in this letter we outline a path toward this new approach for California’s organics management, starting with this ADC policy discussion. This, of course, is but one element of the developing Organics Policy Roadmap (see Board Meeting, Dec. 11, 2007, Agenda Item 15). The Waste Board can then use this ADC policy change as a stepping stone to put California on a new, more economically, environmentally and socially sustainable organics management path.

Policy Option Comments

While the policy options as stated in the report are all possible:

- bans/phase-outs;
- changes to diversion credit;
- disposal fees and surcharges; and
- increased inspection and enforcement.

We believe that prior to deciding on the ultimate long term policy options, the Waste Board should step back and look at ADC policy decisions within a total organics, bioenergy and soil management context. This is *necessary* since ADC is merely *one*, albeit important, management option for organics in any given locale or region.

This novel and expanded approach to view ADC policy will likely entail the Waste Board’s Disposal Reporting Section (DRS) and Waste Compliance and Mitigation Program (WCMP) staff do more than simply “determine potential overuse” of ADC. Rather, they will need to continuously engage with the public and private organics management industry to ensure that organics are managed in a sustainable manner that is *optimized for each local organics market condition*. This optimization will require a *very flexible approach that entails ongoing monitoring of the market conditions –again with close, ongoing, industry and local municipality participation–*of the determinants of sustainable resource (water, air and solids/soils) management, including especially:

- Energy production and consumption by organics resources, including:
 - *Actual* recoverable energy from organics feedstocks, including all available “conversion technologies”, and

- *Actual* transportation requirements to transport organics from collection, to processing, and to local markets, including:
 - Fuel consumption (renewable & nonrenewable) and
 - Pollution (GHG) production from those fuel uses
- Local soil nutrient, water and energy needs, for all landfill and non-landfill applications of organics other than energy including:
 - Soil vs. other ADC materials at each landfill
 - Landscape markets (current & potential)
 - Agricultural markets (current & potential)
 - Environmental storm water, erosion, restoration, etc. markets (current & potential).

The Waste Board, starting with the Organics Life Cycle Assessment data derived from the current and additional studies, could develop an online model (algorithm) that would be used, and updated annually, by local jurisdictions to determine local organics management options that *optimize* resources and financial sustainable economics for each jurisdiction. See ACP Recommendations below for further discussion of this future organics market management tool.

Staff Suggestion Comments

The Waste Board Staff suggestions were:

- Increase fees on green material ADC use;
- Define green material ADC use as disposal, not beneficial reuse; and
- Continue emphasis on inspection and enforcement to address ADC overuse and misreporting, especially green material.

While we agree in principle with these recommendations, we would also recommend that the Waste Board:

1. Pursue a *phased-in* approach, so as to minimize local market shocks and increase predictability of investment planning by both the public and private sector; and
2. Pursue an *integrated sustainable organics market development model (tool development)* approach that would be administered by the Waste Board, but be managed using annually updated local market data and conditions.

ACP Recommendations

ACP believes that, as with composting and bioenergy projects, use of greenwaste (and other organics) as alternative daily cover (ADC) of open working landfill operations, has a role in the overall scheme of organics management. Since composting or bioenergy facilities are not currently available locally for all communities, diverting organics to be used locally as ADC may be one of the only economically-viable and locally based management options available. Also, the infrastructure of an active greenwaste collection program designed for ADC use has been shown to create opportunities to expand the greenwaste collected for use at compost sites, as well, thereby supporting

entire infrastructure development. As the demand for compost increases, this existing infrastructure becomes even more valuable.

As composting and bioenergy facilities come on line in the future, and local landfills reach their permitted capacity and close, opportunities will open up for use of the more advanced, capital intensive technologies of composting and bioenergy production. When choosing management options for any organic material, the environmental impacts and GHG emissions resulting from hauling greater distances, and the overall costs, must be taken into consideration. Another important factor to consider is that not all organics are well-suited to composting or bioenergy as they are presently collected. For example, some curb side collected green waste may have contaminants such as plastics, glass, and other inert materials that would become problematic for either composting or bioenergy facilities. Therefore, if *true cost pricing is applied evenly between landfills*, compost and bioenergy manufacturing and distribution channels, as indicated above, and as compost utilization becomes ever more a part of the landscape, agriculture and watershed protection applications, ACP believes that the role for ADC should, and will naturally, diminish, as sustainable local organics economies continue to develop.

If the Waste Board decides to stop granting “waste diversion credits” to organics used for ADC, in order that organics can be truly recycled out of landfills, this will likely have the effect of driving more feedstock toward composting (soil) and bioenergy (fuel and power) markets. To avoid negative consequences of such a policy change, especially dumping of sub-standard, poor quality and contaminated organic bioproducts, ACP recommends that the Waste Board:

4. Engage in true cost accounting and pricing practices for landfills as well as composting and bioenergy product markets,
5. Continued defining, permitting and encouraging the use of quality compost and bioenergy feedstock manufacturing and distribution facilities, and
6. Develop local, county by county, compost and bioenergy market development strategies and tactics based on newly developed *true cost economics* system/tool.

In effect, concomitant with making any ADC policy change, ACP recommends that the *Waste Board initiate an ongoing, sustainable, coordinated composting and bioenergy market channel development system*, including sufficient standards, capacities and end use market information. This would be a “cradle to cradle” management model for California organics generation and sustainable reuse.

We could call this new system, or tool, a “Local Organics Advocacy & Marketing” System (LOAM System):

Purpose would be:

- **Enhance the States use of compost to build healthy soil ecosystems** (i.e. integrated biomass/organics, such as plant material carbon, water resources, watershed resources, *and* air-shed management).
- Move toward ever-more **FULLY Integrated resource & environmental planning and implementation** (an ongoing journey from where we are today).

- Base planning on:
 - **“Net environmental benefits” and Economies of Scope** for natural capital management (product resources, process resources and environmental service resource integrity);
 - **Collaborative rule making and governance** across resource and environmental arenas; and
 - **Full Life cycle analysis** (cradle to cradle, EPR, circular economic, triple bottom line, by whatever name) becomes standard operating procedures for ALL organics policy, management and functional implementation.

Functions would include Local Jurisdiction Based:

- Organics generation, processing & end-use application (market) reporting
- “Beneficial reuse” calculated as an *outcome* of the local model, *not statewide averages*
- Landfill fees to be based on full/life-cycle cost analysis of long term landfill management costs, calculated for each jurisdiction, *not statewide averages*

Thank you for the opportunity to respond to your ADC Policy Discussion as well as your consideration of our recommendations.

Sincerely,



Dan Noble, ACP Executive Director

