



November 2014

Sustainable Organics Recycling

The Perfect Storm for Compost Use

Climate change is here with drought, bare soil, and extreme weather. Climate change policies are here with greenhouse gas (GHG) reduction strategies (AB 32 Scoping Plan), cap-and-trade revenue, and GHG grant programs. Organic material supply is here with mandatory commercial collection of food waste (AB 1826, 2014), phasing out alternative daily cover as landfill diversion credit (AB 1594, 2014), and facilitating the operations of biomass conversion facilities making biochar (SB 498, 2014).

Composting is here with proven anaerobic digestion and covered aerated static pile technologies, specifications, and new regulations. Sustainable agricultural is here with organic labeling of input materials, decreased water use, and increased value of the organic crops. The Perfect Storm for Compost Use is here for the California Compost Coalition to be promoting the Compost Initiative for 2015.

It took over ten years to pass legislation (AB 1594, 2014) to phase out green waste ADC as recycling five years from now. It will have taken six years to add meaningful commercial food waste diversion (AB 1826, 2014) to the mandatory commercial recycling regulations (AB 341, 2011). Still unresolved after 20 years, CALTRANS was required to use compost in place of, or to supplement, petroleum based commercial fertilizers in the state highway landscapes maintenance program (SB 1322, 1989) starting in 1991.

SB 1322 implementation languished for decades. SB 1345 attempted to fulfill the promise of SB 1322 by requiring CALTRANS to use a minimum of 1,000,000 tons per year but failed in 2006 due to the increases in costs (see page 3). AB 921 would have enacted the Agricultural Water Efficiency with Compost Use and Greenhouse Gas Reduction Act

of 2011, but failed due to lack of funding (see page 3). The compost industry has been on a trail of tears for over 20 years with failed legislation, lack of funding and delayed implementation. With the Perfect Storm in place, now is the time for an Organic Revival.

The California Compost Coalition is gearing up with the Compost Initiative for 2015 to capture the opportunities of this Perfect Storm. Our CCC lobbyist, Justin Malan of EcoConsult (with his deep green connections), has authored the *Three-Phase Campaign Key Points* (page 2) which focuses on expanding compost use in agricultural and urban landscapes to rebuild soil, retain water and augment nutrient management, and to support the green infrastructure for erosion control and stormwater management.

*2015 will bring the Compost
Reign on California to address
climate change.*

Cap-and-trade revenue will increase from the current \$850 million to an expected \$3 billion next year (page 4). The water efficiency grants of just \$10 million could triple next year where funding for the failed AB 921 concept of Agricultural Water Efficiency with Compost Use could finally be realized. The \$30 million in grants for waste diversion and composting this year could increase to \$150 million once it shown that anaerobic digestion to renewable natural gas and covered composting are the most cost-effective greenhouse gas reduction measures.

The Perfect Storm for Compost Use has finally arrived in the form a drought to force water savings and with extreme weather to employ erosion control measures. There will be a supply push of organics coupled with a demand pull for compost use – with grant funding, emerging technologies, and regulations in the middle – where 2015 will bring the **Compost Reign on California** to address climate change.

Time for an Organic Revival!

by Justin Malan

"No civilization has outlived the usefulness of its soils. When the soil is destroyed, the nation is gone."

– Lloyd Noble, renowned benefactor of agriculture, 1949

After centuries of intensive agricultural production, decades of unsustainable urban transformation and hard engineering "fixes" in managing natural processes, Californians are recognizing the urgent need to rebuild our soil, enhance urban landscape resilience, and promote green infrastructure. All this will involve widespread compost application and better organics management.

Several factors have merged to create a perfect opportunity for our federal, state, and local policy makers to act now and act decisively:

- California's drought poses a huge threat to our agricultural viability. There is an urgent need for enhancing water retention by rebuilding humus - the "sponge" in soils that enables the ground to hold water.
- Increasingly our planners are recognizing the reduced costs and increased environmental benefits of soft plumbing alternatives – such as bioswales, gabions, and living walls - over hard-plumbed flood and stormwater management and erosion control.
- Vegetated buffers are being used more extensively as natural and more cost effective water quality remediation in residential, industrial, and agricultural sectors.
- Evidence of significant opportunities is mounting for carbon capturing or sequestration through restoring carbon take-up in soils and plants.

- Food producers are reinvesting in practices that reverse generations of soil mineral and nutrient depletion through soil health enhancement with organic inputs.
- Rather than "sterilizing" the soil, farmers are using fully processed compost to build complex healthy soils that in turn reduce harmful pathogens and cut our dependence on synthetic pesticides.
- Many neighborhoods are turning to sustainable drought resistant alternatives to lawns that reduce urban water use, provide carbon recycling, encourage pollinators, enhance water quality, and provide other co-benefits to their communities.
- Broader application of compost and processed organic matter in agricultural, commercial and residential settings will offer local governments a sustainable pathway to meeting California's 75% "waste" recycling goals and the recent legislative mandate to phase out landfilling of organic materials.
- On-site or localized organic inputs stimulate localized jobs and California-based economic development as well as reduce cost and dependency of imported

synthetic soil enhancements.

The California Compost Coalition is seeking partners for collaboration in a three-phase campaign over the next several years (see inset below). We will be seeking policy incentives and funding for research, pilot studies and commercial deployment of proven practices through engagement with state and local government agencies and the legislative and budget process.

Targeted sources of funding could include Cap and Trade revenues for carbon sequestration, Prop 1 water bond allocation for urban water conservation and agricultural water efficiency, food and other organic waste recycling through CalRecycle program grants, green infrastructure funding through stormwater and transportation revenues, and soil rebuilding through federal and state resource conservation, rural development and agricultural commodity block grants.

CCC sees an unprecedented prospect to collaborate with a vast cross-section of agricultural, business, local government, labor, and environmental stakeholders in "closing this carbon loop", and we welcome ideas and opportunities to work together with allied individuals and organizations.

Three-Phase Campaign Key Points

1. Expand use of compost in California agriculture to rebuild soil, retain water, and augment nutrient management.
2. Enhance urban landscape resilience by promoting food and organic material recycling back into urban neighborhoods through drought tolerant plants, promotion of reused or recycled water and ocean, bays and river friendly landscapes.
3. Support more green infrastructure to replace hard engineered approaches with vegetated retaining walls, embankments and erosion control, and bio-based storm and flood water management and pollution control.

Failed Compost Bills of Yesteryear

AB 921 (Allen)

In 2011, CCC sponsored AB 921 (Allen), which would have enacted the Agriculture Water Efficiency with Compost Use and Greenhouse Gas Reduction Act of 2011. The bill would have required the California Department of Food and Agriculture (CDFA), in conjunction with the California Department of Water Resources (DWR), to quantify water use efficiency in relation to use of compost in agriculture (Ag). Specifically, the bill:

- Required CDFA, in conjunction with DWR, to measure and monitor increases in agricultural water efficiencies resulting from the use of compost.
- Required CDFA to oversee a study or studies, through existing programs and conducted by the University of California Extension Service (Extension), in partnership with local water districts, farmers, growers, and compost producers.
 - Required the Extension's studies to measure increases in Ag water use efficiency through the use of compost and other potential benefits from using compost, as it related to climate change.

The bill addressed the desire for a more comprehensive examination of the use of compost, as it relates to water conservation, by authorizing CDFA to oversee studies on this issue. The bill died in Assembly Appropriations due to the potential costs associated with oversight of the study work and CDFA reluctance to participate.

SB 1345 (Chesbro)

In 2006, CRRC sponsored SB 1345 (Chesbro) which would have:

- Increased the percentage of materials in recycled compost and mulch from 80% to 90%.
- Required Caltrans to also maintain specifications for the purchase of compost by the state.
- Required Caltrans to use compost in place of fertilizer as follows: 500,000 tons in 2007, 750,000 tons in 2008, and 1,000,000 tons in 2009, more than 1,000,000 tons in 2010 and following years.

The bill died in Senate Appropriations amid concerns and outright Caltrans opposition over increased costs for landscaping and potential change to existing practices.

TITLE 14/27

TOPIC: Revision to Compostable Materials & Transfer/Processing Regulations

CalRecycle is updating regulations to address a broad list of topics, mainly related to the expanding diversion of organic materials from landfills. Addition of new language regarding anaerobic digestion, and feedstock definitions, odors, permitting tiers, etc. at composting facilities. Allowable contamination in compost and mulch products remains the largest remaining unresolved issue.

STATUS: Final draft regulations have been published in October 2013. Economic analysis is completed. Final formal rulemaking package released on October 10, 2014; final comments due December 5, 2014.

WASTE DISCHARGE REQUIREMENTS

Formal rulemaking has begun by the State Water Resources Control Board (SWRCB) to implement statewide Waste Discharge Requirements (WDRs) for composting facilities.

SWRCB intends to adopt a general order that would assist their regional boards in the regulation of composting facilities, which they have deemed a substantial threat to water quality.

STATUS: Final draft regulations have been published in August 2013. Economic analysis has been completed. The EIR process is underway, with release of a DEIR and General Order expected in Fall 2014.

Other Historical Organics Legislation

SB 1778 (Alarcon)

TOPIC: Solid waste:
Alternative Daily Cover
STATUS: 5/25/06 –
Suspense
LOCATION: Senate
Appropriations

AB 2640 (Huffman)

TOPIC: Solid waste:
Compostable Organics
Management
STATUS: 8/7/08 –
Suspense
LOCATION: Senate
Appropriations

AB 2670 (Chesbro)

TOPIC: Solid waste:
Recycling: Diversion:
Green Materials.
STATUS: 8/23/12 –
Hearing canceled at
the request of author.
LOCATION: Senate
Floor

CALRECYCLE PACKAGING WORKSHOP

On Nov. 13, CalRecycle presents potential policy approaches for packaging to help meet California's statewide goal of 75% source reduction, recycling, and composting by 2020. A background paper will be made available for review in advance of the workshop. <http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1327&aiid=1203>
Cal/EPA Building, 1001 I Street, Sacramento. 9:00AM to 2:30PM



Cap-and-Trade Billion Dollar Update

The California Compost Coalition (CCC) is a registered Lobbying Coalition with the Fair Political Practices Commission (FPPC), created in 2002 by a group of compost operators in response to demands for increased recycling of organic materials and production of clean compost and bioenergy.

The California Compost Coalition represents member organic material recyclers and compost operators with a unified statewide voice on many issues: product safety and standards, government regulations, environmental planning, and marketing.

Members

Agromin
Atlas ReFuel
Caglia Environmental
California Wood Recycling
Cold Canyon Compost
Marin Sanitary Service
Mt. Diablo Recycling
Napa Recycling Compost
Northern Recycling Compost
Organic Waste Solutions
Phoenix Energy
Quackenbush Mt. Compost
Sonoma Compost
Tracy Delta Compost
Upper Valley Recycling
Zanker Road Resource Management
Z-Best Compost Facility

Executive Committee

Bill Camarillo
Agromin
Greg Kelley
Northern Recycling Compost
Will Bakx
Sonoma Compost
Christy Pestoni Abreu
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www.californiacompostcoalition.org

Cap-and-trade raised \$850 million for the 2014-2015 budget with \$30 million allocated to recycling and composting, \$200 million to low carbon transportation, and \$20 million to agricultural efficiencies (see insert). The allocation was based upon the investment priorities set by the Governor and his Climate Action Team which promoted three key sectors to reduce greenhouse gases: Sustainable Communities & Clean Transportation, Energy Efficiency & Clean Energy, and Natural Resources & Waste Diversion.

Anaerobic digestion with composting is the only program that intersects all three key sectors and should receive greater allocation in the future. On November 7, 2014, CARB will be holding a public workshop on the development of the 2015-2016 budget to allocate cap-and-trade proceeds towards low carbon transportation. This is the kick-off to the Governor's budget due in early January 2015 that will allocate an expected \$3 billion to \$5 billion in cap-and-trade revenue.

On January 1, 2015, the cap-and-trade program will expand to include transportation and natural gas suppliers, placing these fuels under the cap. With legal challenges to both the low carbon fuel standard (LCFS) and the cap-and-trade program being upheld, CARB will be re-adopting the LCFS in early 2015 and reaffirm their cap-and-trade program. The carbon intensity of transportation fuels will need to be 10% less in 2020 from a 2010 baseline, where allowances will need to be purchased starting in 2015 to comply with the LCFS. There will be at least \$3 billion in proceeds coming soon.

The California Legislative Analyst Office (LAO) reviewed the \$850 million 2014-2015 budget and determined that it was important that proceeds be invested in a way that maximizes GHG emissions reduction given the level of

spending, thereby putting downward pressure on the price of allowances. The LAO concluded that the budget lacked a coordinated approach with metrics and oversight in order to evaluate programs and their co-benefits. Plus, the LAO understood that there was no specific guidance on how to compare GHG emissions reductions, as each state department had their own process. The LAO recommended that the Governor may want to increase or decrease funding for specific programs in the future that will maximize GHG emission reductions.

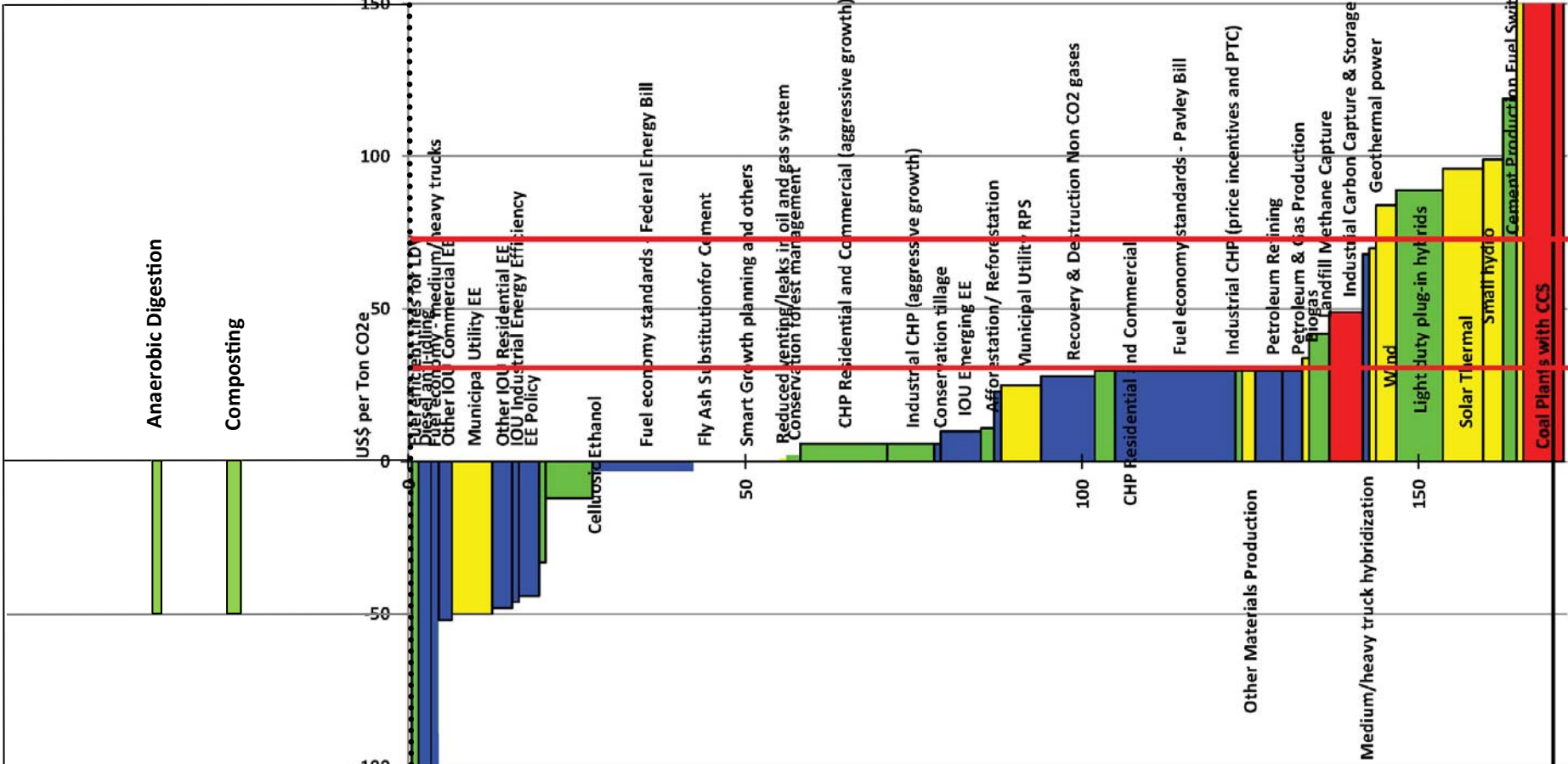
A Cost-effectiveness Analysis of AB 32 Measures authored by Stanford University in 2008, prepared the GHG Reduction Supply Curve, comparing various programs in a marginal abatement cost analysis in order to assist CARB in adopting rules and regulations to achieve "*the maximum technologically feasible and cost-effective greenhouse gas emissions reductions*", as stated in AB 32. Over 40 programs with 175 million metric tons of GHG reductions were evaluated finding energy efficiency programs were the best (at negative \$50/ton per GHG reduction) and coal plants were the most expensive (at positive \$150/ton). However, anaerobic digestion to RNG and covered compost were not evaluated since those types of programs had not developed at the time. With projects in place and the recent CalRecycle and CEC grant process providing GHG metrics, Edgar & Associates has determined that anaerobic digestion and covered compost have a marginal abatement cost of negative \$50/ton per GHG reduction (see insert).

Being one of the most cost-effective GHG reduction measures, we believe the allocation percentage of just 3.5% for waste diversion in the 2014-2015 budget, or \$30 million of the \$850 million in proceeds, should increase to 5% and allocate \$150 million for waste diversion in the upcoming \$3 billion 2015-2016 budget.

CARB Workshop on Low Carbon Transportation Greenhouse Gas Reduction Investments was held on November 7, 2014 at Cal-EPA.

To view the presentation, visit
<http://www.arb.ca.gov/msprog/aqip/aqip.htm>.

CO2 Reduction Supply Curve



AB 32 Scoping Plan First Update
 (with respect to CO2 Reduction Supply Curve Model)

- 2MMTCO2 Anaerobic Digestion
- 5MMTCO2 Composting

Marginal Abatement Cost Analysis
 by
 Edgar & Associates, 2014

Total CO2 Reductions (Million Metric Tons CO2 Equivalent)

■ More Certain
 ■ Uncertain
 ■ Very Uncertain

Source: Prof. James Sweeney, Precourt Institute for Energy Efficiency, Stanford University:
 "Analysis of Measures to Meet the Requirements of California's AB 32"