



Healthy Soils

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Sustainable Organics Recycling

CASH CROPS FUNDING COMPOST COMPLIANCE

The call for market development for compost is again harkening in the Sacramento halls, with the current SB 1383 workshop and implementation of AB 1045 that is supposed to promote compost use. It feels like Groundhog Day, as the same initiatives get listed and people continue to think 'there ought to be a law'. Well the state compost procurement laws have been on the books since 1991; it just takes execution by the state agencies to walk the talk, and then show the way to local government to set up buy-back programs. With CalRecycle focus on governmental procurement solutions to close the loop locally, greater opportunities lie within the agricultural sector with the Healthy Soils Initiative, where there is both a value and volume market to move 7.5 million new tons by 2030. The sequestering of carbon in the tranquil agricultural sector could be bigger than in the protocolled forest sector.

Compost use on irrigated croplands is the largest current market, estimated at over 1,000,000 acres per year, using an average of 7.5 tons per acre, utilizing 7.5 million tons of compost. This would represent only 11% of the current irrigated cropland using compost, but it has not been included in the latest CARB AB 32 Scoping Plan model despite its huge potential. The California Compost Coalition remains vigilant to have irrigated crop land included in these models and have provided the metrics and co-benefits to meeting the state mandates to mitigate methane and create healthy soils that coalesce around compost use as the foundation of the most cost-effective greenhouse gas reduction programs. Including a management scenario of adding 80,000 new acres per year into compost use would increase the irrigated crop land to 2 million acres by 2030, doubling down, amounting to just 22% of total irrigated cropland, and use of another 7.5 million new tons of compost to accommodate the SB 1383 tons, which require 75% of all organics diverted from landfill by 2025. The transition towards sustainable and organic farming is creating a more valuable market for organic compost products under the CDFA's Organic Input Material Program which registers fertilizing materials to be used in organic crop production.

The agricultural sector has both value and volume markets. If compost was listed as an agricultural commodity in the California Crop Report, it would rank number 43, between cantaloupe and olive production, at an estimated \$150 million per year in sales. There is another 63 million acres of rangeland that could sequester carbon to mimic the good work of the Marin Carbon Project. Having vast low volume markets on the rangeland and in the orchards is important to move the million tons of organic materials needed over time. However, it is the local value markets today that infuse cash flow now to fund the cost of compliance for the new General Waste Discharge Requirements and the complex air district permits. The regulators may think that compost is black gold as they heap on expensive rules, but they are really treating compost like dirt, as the revenues are not keeping up with the cost of compliance. There is a disconnect with assigning value to the vast co-benefits of compost and the price that is being received. The cash crops of California are keeping compost on a life-line for now as the next wave of regulations could swamp out some facilities.

Composters have been serving the grape market for decades. It is #3 in commodity value and is estimated at over \$6 billion per year in commodity sales with high-end and organic compost. Nurseries have been an important market (#5), valued at \$2.8 billion. Agromin has developed special substrates for the strawberry market (#6), valued at over \$2.4 billion, to replace methyl bromide. With the cannabis market valued at approximately \$7 billion per year, this cash crop will become #2 in California in the next year. Agromin and Phoenix Energy are leading the charge in developing potting soils (see page 4) to tap into this budding market.

CARB will be adopting the 2017 Scoping Update in December where they need to include irrigated croplands. CalRecycle is taking comments for the SB 1383 regulations that will be adopted in 2018. CalEPA is idling on AB 1045. Now is the time to shake up this joint, and have Sacramento value the agricultural markets and make soils healthy again with compost use, while cashing in on the emerging cannabis market to pay for compliance.

Cap-and-Trade Dollars get A-listed & B-listed

CalRecycle just awarded \$24 million in grants to 10 compost and anaerobic digestion projects on the A-list throughout California, including several CCC members. CalRecycle created a B-List including \$33 million of eligible projects to be considered for future funding. With a robust quarterly Cap-and-Trade Program Auction on August 15, 2017, due to the passage of AB 398 (Garcia), carbon was sold at a high of \$14.55/ton, generating about \$640 million in revenue.

AB 398 (Garcia) was signed into law on July 25, 2017 and extended California's Cap-and-Trade program to 2030 with several suggestions on the criteria for allocating Cap-and-Trade revenues. One of the bills that was part of the Cap-and-Trade deal, AB 617, shifted significant air pollution burdens to local air districts. In response, the President pro Tem of the state Senate, Kevin de León, proposed a Clean Air Initiative that would allocate \$1 billion to phasing out diesel powered vehicles. That became a major focus of Cap-and-Trade revenue allocation in the last few weeks of the legislative session. On the last day of the legislative session, the Senate and Assembly passed bills to allocate \$1 billion in Cap-and-Trade revenues, which included \$40 million to CalRecycle for waste diversion and recycling programs; \$140 million for zero and near-zero emission freight equipment; \$140 million for the clean vehicle rebate program; and \$100 million for fleet modernization.

With another \$40 million to CalRecycle this budget year, the B-list projects could be funded in early 2018. CalRecycle will need to reevaluate the Disadvantaged Community portion of the applications, due to new laws. CalRecycle will hold a workshop to consider the impacts and benefits to DACs. There could be over \$10 million in grant money for CCC members on the B-list soon. Plus we are working on CARB to fund increase vouchers for CNG trucks that include the near-zero NOx engines with a phased-in RNG use.

Healthy Soils Program

The **Healthy Soils Program (HSP)** was established by CDFA (<https://www.cdfa.ca.gov/oefi/healthysouils/>), which has just concluded a grant application period, on September 19, 2017, for demonstration projects and incentive projects to expend a large proportion of the \$7.5 million budgeted for the Healthy Soils Initiative (HSI), one of Governor Brown's pillars. The **HSP** identifies two opportunities for grant funding: through the HSP Incentives Program, where farm and ranch landowners are able to secure up to \$50,000 in funding for the implementation of any of a multitude of eligible agricultural practices, which improve soil organic matter content; through an HSP Demonstration Project the landowner could partner with academic or other non-profit entities to secure up to \$250,000 in funding for implementation, study, and sharing of knowledge for these same eligible practices, providing an opportunity for development and outreach of real-world information.

In conjunction with this action plan, the Environmental Farming Act Science Advisory Panel (EFA SAP) conducted the development of "**Compost Application Rates for California Croplands and Rangelands for a CDFA Healthy Soils Incentives Program**" (https://www.cdfa.ca.gov/oefi/efasap/docs/CompostApplicationRate_WhitePaper.pdf), largely a scientific literature review, which is designed to provide the initial structure under which incentive funding for compost application, only one of the many eligible practices in the **HSP**. We are hopeful that many new demonstration projects will be funded which utilize compost application and provide new information to firm up confidence that compost is a part of the solution – and not a contributor to nutrient (particularly nitrates) migration into surface or ground water.

CDFA engaged with CARB to develop a Quantification Methodology tool (<https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/cdfahsfinalqm16-17.pdf>) to analyze the greenhouse gas reductions from the various eligible practices, which may be employed in the development of healthy soils through the **HSP**.

An additional \$10 million has been approved in the most recent flurry of bills approved by the legislature and Governor, so we look forward to additional progress in developing healthy soils for cash crops.

AB 398 (Eduardo Garcia)

TOPIC: This bill would extend the Cap-and-Trade regulation that establishes a system of market-based declining annual aggregate emissions limits for categories of sources that emit greenhouse gases, to December 31, 2030 and require CARB to include specified price ceilings, price containment points, offset credit compliance limits, and industry assistance factors for allowance allocation, and other critical components.

STATUS: **Approved by the Governor on July 25, 2017**

AB 109 (Ting)

TOPIC: The Budget Act of 2017 made appropriations for the support of state government for the 2017–18 fiscal year. This bill would amend the Budget Act of 2017 and would take effect immediately as a Budget Bill. It amends the 2017 Budget Act to include provisions for the 2017 Greenhouse Gas Emission Fund Expenditure Plan and other technical changes to the budget act. Specifically, this bill will allocate; 1) \$40 million to CalRecycle for waste diversion and recycling programs; 2) \$99 million to CDFA for dairy and agricultural GHG reductions; 3) \$220 million to CalFire for forest fuel removal, healthy forests and biomass to energy; and 4) \$60 million to the California Energy Commission for R&D programs, among other allocations totaling \$750.4 million of additional appropriations from special and federal funds.

STATUS: **Approved by Governor on September 16, 2017.**

AB 134 (Committee on Budget)

TOPIC: The Budget Act of 2017 made appropriations for the support of state government for the 2017–18 fiscal year. This bill would amend the Budget Act of 2017 and take effect immediately as a Budget Bill for Greenhouse Gas Reduction Funds. Specifically, this bill: 1) Appropriates \$900 million to CARB for an array of programs including: a) \$250 million for Carl Moyer program funding for the South Coast, San Joaquin Valley, and Bay Area Air Quality management districts; b) \$180 million for Hybrid and Zero-Emission Truck and Bus Voucher Incentive Program, of which: i) At least \$35 million is allocated for zero-emission buses, and ii) Requires CARB to consider technology innovations in heavy duty trucks, like natural gas vehicles, that reduce diesel truck emissions. c) \$140 million for the Clean Vehicle Rebate Program for light-duty vehicles.

STATUS: **Approved by Governor on September 16, 2017.**



Regulation Madness

Following a growing trend of states legalizing marijuana, California voters approved Proposition 64: The Adult Use of Cannabis Act of 2016 during our last General Election. California government maintains three separate organizations to regulate separate aspects of the production of cannabis and associated products: 1) The Bureau of Medical Cannabis (housed within the Department of Consumer Affairs and overseeing testing labs, transporters, distributors, dispensaries, and microbusinesses); 2) CalCannabis Cultivation Licensing (housed within the Department of Food and Agriculture and licensing cannabis cultivators and establishing a tracking system); and, 3) the Office of Manufactured Cannabis Safety (housed within the Department of Public Health and licensing the manufacture of cannabis products, such as edibles). Additionally, the State Water Board is working toward adoption of a General Order for Waste Discharge for Cannabis Cultivation at their October 19 Board Meeting. This policy requires compliance with environmental rules and ensures measures are taken to avoid damage associated with cannabis cultivation activities, which could be compost use to mitigate erosion and use of biochar to save water. Prop 64 required the regulatory infrastructure to be in place for launching sales to the public (aged 21 years and older) on January 1, 2018. Party on Garth!

Of particular interest to most of our readers – you know who you are – is the management of cannabis waste generated by the cultivators under CDFA rules. Previous draft regulations required cultivators (licensees) to “render the cannabis into cannabis waste by grinding and incorporating the cannabis with other ground material so that the resulting mixture is at least 50 percent non-cannabis material by volume”. Given that there was no description of what that non-cannabis material might be, a significant portion of the materials was likely to be mixed with non-compostable waste and require landfilling. Following some persuasive industry lobbying, the next set of regulations will remove these provisions, easing collection and transport to composting facilities across the state, which would be a new type of ‘AB 939 drug diversion’ program.

WEED ‘EM AND REAP

Applying for land use entitlements and CEQA documents in California is getting competitive, as all County and City Planning Departments are overtaxed with gearing up for recreational marijuana, leaving many other land use projects delayed. The 58 California counties are currently updating and establishing local policies on Cannabis retail, manufacturing and cultivation laws with frequency, on nearly a daily basis, and could raise over \$1 billion in new taxes, so they are making it a priority. As California counties implement new Medical Marijuana laws and the viability of Recreational Cannabis emerges, it is important to be aware of how the winds of change affect your county with respect to residual management and composting. Incorporated cities may have their own local policies for regulating commercial cannabis activities separate from county regulations. Facilities already operating in compliance with local ordinances and other laws on or before Jan 1, 2018 may continue to operate until such time as their license is approved or denied.

COMPOST GENERAL ORDER PERFORMANCE REPORT

On August 4, 2015, the State Water Resources Control Board adopted General Waste Discharge Requirements for Composting Operations, and committed to work with representatives of the Regional Water Boards, CalRecycle, CARB, CDFA, the compost industry, and other interested stakeholders to develop performance measures related to the implementation of the Composting General Order. A Progress Report of performance measures and the status of enrollment and compliance with the Composting General Order was discussed on Sept. 16, 2017 at the SWRCB. Chair Felicia Marcus wanted a follow-up report within 6 months on land application enforcement and a more robust report when staff reports back next year. The assessment for implementation costs will be ready in the fall of 2018.

2017 SCOPING PLAN UPDATE

The proposed 2017 Climate Change Scoping Plan Update was released on Inauguration Day, January 20, 2017. It sent a message to the President that California will double down on setting the greenhouse gas reduction target to 2030, which was placed in statute with the passage of SB 32 (Pavley, 2016). CARB planned to consider adoption and certification of the CEQA document in April 2017 and then in June 2017, but it was held up to 2030 with the Cap-and-Trade reauthorization deal and the passage of AB 398 (Garcia). CARB plans to continue the EJAC hearings and consider adopting the Scoping Plan at their December 2017 Board meeting. CCC will double down on our previously submitted comments by advocating for doubling the compost use on agricultural lands, to meet SB 1383 mandates requiring 75% diversion by 2025. With just 11% of irrigated crop lands using compost, doubling the compost use to 22%, will create demand for another 7.5 million tons of compost, generated from 12 million tons of organic waste. The Proposed Plan is available here: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf

SB 1383 - CALRECYCLE REGULATIONS

CalRecycle held its fifth topical workshop on September 20, 2017, which included regulatory concepts related to market development and recycling capacity planning. CalRecycle should follow the County Integrated Waste Management Plan format to identify 15-years of organic processing capacity, use the Compost Component to develop programs, use the Funding Component to pay for it, and “*party like its AB 939.*” Policies should be placed in the local Climate Action Plan to support the organic processing programs for covered compost, bioenergy, anaerobic digestion, and RNG development. Comments are due at the end of the month. Draft regulatory language will be ready for the next workshop slated for October 30, 2017 in Sacramento, which will include a panel on Prop 218 issues.



Compost and Biochar Potting Soils



The California Compost Coalition 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 & production of clean compost, bioenergy, renewable natural gas, and biochar.

CCC Members

Agromin
Atlas Disposal
Burrtec Waste Industries
Caglia Environmental
California Wood Recycling
CleanFleets.net
Clover Flat Compost
Cold Canyon Compost
GreenWaste Recovery
Harvest Tulare
Harvest Lathrop
Marin Sanitary Service
Mt. Diablo Recycling
Napa Recycling Compost
Northern Recycling Compost
Organic Waste Solutions
Phoenix Energy
Quackenbush Mt. Compost
Recology Blossom Valley Organics
Recology Feather River Organics
Recology Jepson Prairie Organics
ReFuel Energy Partners
Soiland Co, Inc.
Sonoma Compost
Tracy Delta Compost
Upper Valley Recycling
Vision Recycling
Zanker Road Resource Management
Z-Best Compost Facility
Zero Waste Energy Development
Zero Waste Energy, LLC

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Christy Pestoni Abreu, *UVR Compost*
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Rick Moore, Peer Review Engineer
Monica White, Sustainability Advisor
Sean Edgar, Fleet Advisor

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Justin Malan, EcoConsult
Neil Edgar, Edgar & Associates Inc.

Agromin is celebrating its 45th anniversary in the business of developing and producing sustainable organic soil and mulch products through effectively and efficiently processing organic waste materials into eco-friendly soil products. With vision, technology, social responsibility, determination, and flexibility, we continue to develop and market our products to multiple distribution channels. This allows us to complete the organics recycling loop while at the same time constantly expanding new markets for these products and maintaining our competitive advantage and leadership in the industry.

This year has been the most interesting with producing high-quality custom soil blends for the cannabis industry. Organic products are highly sought after by this industry sector, but cannabis growing requires more than OMRI listed compost by itself. Agromin has been working with its cannabis customers to develop scientifically-formulated soil and substrate products for growing plants. The criteria for formulating these products is customer driven as they are determining that the soil product has a direct impact on the plant product quality. Agromin is also experimenting with compost/biochar blends parlaying their knowledge gained on developing Turf Rescue which maintains a greener turf with less water.

Additionally, transferring payments has been an interesting challenge, but Agromin has been able to establish a good protocol allowing the processing of payments. So far, every transaction has been pre-pay 50% up front to make the custom blend and the remaining 50% required before delivery. As this industry continues to evolve, we expect to see more growers looking for organic based soil products due to the positive impact on the finished product.

Marijuana growing currently carried out in California can be environmentally destructive, generating a carbon footprint. But it need not be. Cultivation of cannabis can be done in an environmentally benign manner. Environmentally conscientious growers are helped by the fact that cannabis is a hardy plant, but there needs to be regulations for water use and erosion control, as well as composting of the residual organics. Carbon emissions are an unavoidable consequence of the cannabis production process. Nevertheless, some growers think that their operations can be carbon neutral or even carbon negative with the key to carbon sequestration being accomplished by biochar and compost use.

Biochar is a name for charcoal when it is used for particular purposes, especially as a soil amendment. Like all charcoal, biochar is created by pyrolysis of biomass such as occurs at Phoenix Energy facilities throughout the state. Biochar thus has the potential to help mitigate climate change, via carbon sequestration. Independently, biochar can increase soil fertility, increase agricultural productivity, and provide protection against some foliar and soil-borne diseases. Biochar is a stable solid, rich in carbon and can endure in soil for thousands of years. The cannabis industry has been embracing biochar use.

Greg Stangl of Phoenix Energy has found that biochar sales to a value market, such as to the cannabis industry, has been able to gain unanticipated revenue over the years. Phoenix Energy is now positioning biochar as a valuable commodity with stable pricing for project development and financing, while participating in studies to determine that biomass gasification is a carbon negative solution for the cannabis industry.