



December 2015

Sustainable Organics Recycling

Top 10 for 2015

- 10 CalRecycle at Five Years
- 9 AB 199 Tax Incentives
- 8 Healthy Soils Initiative
- 7 RPS 50% by 2030
- 6 LCFS Carbon Negative
- 5 15-Year Capacity and AB 1826
- 4 Biomass ~~Energy~~ Emergency
- 3 Organics Ban by 2025
- 2 Compost Regulations
- 1 GHG Governor Brown

Infrastructure: We Can Build This!

The Top Ten Stories of 2015 in the compost world are about innovation meeting investments and incentives to develop the infrastructure needed in implementing the new laws, regulations and policies regarding organic waste. This is a repeat performance of the 1990s with the AB 939 challenge, “We Built This” infrastructure for AB 939 and we can build it for mandatory organic waste collection to 2020 and zero organic waste by 2025.

There will be a supply push of over 8 million tons of organic waste, with the implementation of AB 1826, by 2020, and a total of 14.5 million tons of organic waste by 2025 with CARB’s draft Strategic Plan, to effectively eliminate the disposal of organics. With the passage of AB 876, local governments must identify the organics processing infrastructure to achieve these goals to 2030, where there will need to be 100 new or expanded facilities by 2020 and another 100 by 2025. With the certainty of organic material diversion, supply contracts can be executed to assist in funding the needed infrastructure.

Investments were made in 2015 with CalRecycle and CEC grants being the seed money to inspire innovation and develop the infrastructure. Blue Line Biogenic Energy Park was awarded the Merchant Facility of the Year and the CEC held special Technical Peer Review workshops on operating this community-scale business model. With the cap-and-trade revenue proceeds generating billions of dollars, there will be greater amounts of investment by the state to replicate this type of model. AB 199 will exempt sales taxes for composting and bioenergy equipment to assist in funding the infrastructure.

The Governor kicked off the year with Five Pillars to position our industry at the nexus of GHG programming and ended up in Paris on the global stage. The Governor is showing how the California model works that can increase economic activity while decreasing greenhouse gases as the community-scale business model places our industry in-front and center.

Technology has down-sized to community-scale applications with proven anaerobic digestion. Technology is here and now where the capital investment recovery is off-set by not buying diesel, utility grid power, and long hauling with tip fees at landfills, but instead provides revenues with source-separated organic tonnage tip fees and carbon credits for carbon negative fuel. **We Can Build This** like We Built AB 939.

2015 Top 10 Stories

10 CalRecycle at Five Years

The day the California Integrated Waste Management Board died with AB 939 achievement, CalRecycle was born into the new AB 32 era on January 1, 2010. After Carroll Mortensen defined AB 341 and what 75% diversion really means, Scott Smithline was appointed the new Director in July 2015. Scott has been instrumental in coordinating with the Governor's Office and CARB on keeping organics out of the landfills and securing cap-and-trade grant dollars. Even with AB 341 and AB 32, California has backslid on statewide diversion going from 4.3 PPD in 2012, to 4.4 PPD in 2013, and 4.5 PPD in 2014. The State of Disposal, The State of Recycling, and the Waste Characterization Study were all released in 2015 but could not explain this increase in disposal as the road to 75% diversion, at 2.7 PPD in 2020, will be a much steeper climb. EPR was further launched in 2015 with carpet care, paint care and mattress recycling.

9 AB 199 Tax Incentives

Governor Brown signed AB 199 (Eggman) into law, which includes compost and biomass equipment that processes or utilizes recycled feedstock under the existing Sales and Use Tax Exclusion Program operated by the California Alternative Energy and Advanced Transportation Financing Authority. This is the type of incentive needed to build the required infrastructure to further divert organics from the landfills and follows on the heels of the successful program that has benefited anaerobic digestion facilities. AB 199 was a good victory in 2015 and we look forward to clarifying the taxability of compost sales in 2016 with AB 1247 (Irwin).

8 Healthy Soils Initiative

The **International Year of Soils 2015** kicked off with world leaders considering soil security as one of the great global issues of our time – and with Governor Brown stating the importance of California soils to be sustainable and resilient to climate change. The Healthy Soils Initiative was then created, led by the California Department of Food and Agriculture. CDFA is developing a strategy and prioritizing policy goals through their Environmental Farming Act Science Advisory Panel which establishes both short- and long-term actions for enhancing soil health and compost is front and center of several elements. With over 25 million acres of California farming, this Initiative will create a demand pull for the 15 million tons of compost that will need to have agriculture as the future volume market.

7 RPS 50% by 2030

SB 350 (DeLeon) was signed into law this year increasing the Renewable Portfolio Standard (RPS) to 50% by 2030. California is on track to meet the 33% RPS by 2020 with the major deployment of solar and wind. It will take biomethane development and biomass energy to get to 50% by 2030. With the need to divert 14.5 million tons of organic waste from landfills by 2025, there will be 3.1 million new tons of wood waste for bioenergy and over 6 million new tons of food waste that can be anaerobically digested into biomethane to generate renewable energy. Community-scale distributed generation is being recognized by the California Energy Commission for grant funding – a perfect fit for our industry. The Bioenergy Action Plan needs to be updated for biomass.

6 LCFS Carbon Negative

CARB readopted the Low Carbon Fuel Standard (LCFS) on September 25, 2015, which requires that the carbon intensity of transportation fuel be reduced by 10% in 2020. This will add regulatory and financial certainty to the LCFS while withstanding the Big Oil lawsuits. A carbon-negative fuel was adopted for high-solids dry fermentation anaerobic digestion producing a renewable natural gas (RNG) at minus 22.9 g CO₂e/MJ. Going from diesel to CNG is now a 15% reduction in carbon intensity. The big winner is RNG from dry anaerobic digestion where a “carbon negative fleet” can now be verified by CARB. The Blue Line Biogenic Energy Facility is the first operating dry AD project in the world implementing this program and was praised by the CEC during their Technology Merit Review.

5 15-Year Capacity and AB 1826

On and after January 1, 2016, local jurisdictions must have an AB 1826 Organic Waste Recycling Program in place to phase in the collection of commercial organic waste, and will also need to identify 15 years of organic processing capacity per the recently signed AB 876 (McCarty). There will be over 14.5 million tons of organic waste coming onto the market statewide by 2025 that need a home that will require 100 new or expanded facilities by 2020, and another 100 by 2025, thus the need for AB 876. CalRecycle has been rolling out robust AB 1826 tools and generation models, but will not really require any planning document be submitted or approved or be part of the County IWMP, other than the Annual Report checklist. As proactive communities go forth, enforcement could lag on the other communities.

4

Biomass ~~Energy~~ Emergency

The biomass market had been averaging 600 MW of operating capacity generated by 33 biomass plants utilizing five million tons of wood chips from the urban, agricultural, and forest sectors. While bioenergy had planned to increase four to eight times by 2020, five plants have instead shut their doors, totaling 85 MW. With expiring power purchase agreements, another 10 plants representing 276 MW and approximately three million tons in wood chips, or about one million tons of urban sector wood chips, could close by 2020. AB 590 (Dahle), now held in committee in 2015, had proposed to use cap-and-trade revenue to keep these plants open – let alone developing new capacity to implement the Governors' Clean Energy Jobs Plan that was supposed to increase bioenergy. With 3.1 million tons of new urban biomass coming on the market by 2025, these plants must be kept open to have markets for current biomass tons. AB 590 must pass in 2016 to avoid a biomass emergency.

3

Organics Ban by 2025

In light of the climatological impact of short-lived climate pollutants (SLCP) and Governor Brown's leadership, CARB has declared several SLCP reduction measures that will be included in CARB's SB 605 Report to the Legislature and be placed in the upcoming AB 32 Scoping Plan for 2016. "For landfills, CARB will work with CalRecycle to develop a regulation by 2018 to progress towards existing State targets for landfill diversion by 2020, and effectively eliminate organic disposal in landfills by 2025", and "Effectively eliminate the disposal of organics in landfills by 2025, by diverting at least 75 percent of the organic materials from landfills by 2020, and 90 percent by 2025".

2

Compost Regulations

A generational shift in composting policy happened in 2015: Title 14/27 compost regulations, having been in effect for 13 years were updated; General Waste Discharge Requirements, which had largely been waived for over 25 years, are now in play and Storm Water Pollution Prevention Plans, some having been in effect for 18 years, had to be re-filed. It's been a huge change, with new regulations coinciding at a time more food waste is coming on the market with AB 1826, with an effective organic waste ban coming in 2025.

Fortunately, AB 1045 (Irwin) was passed in 2015 to encourage permit streamlining at Cal-EPA. Title 14/27 regulations add clarity and new standards which should be considered a win for the compost industry. The regulations will impose more stringent contamination limits starting in 2018 and will allow for a more robust odor plan when needed. In-vessel digestion has a new permitting process and increased finished compost may be seasonally stored at some operations. Thanks to the SWRCB, managing water (some as wastewater) at compost facilities is on the verge of taking a quantum leap in a completely different direction and it will undoubtedly mean a significant increase in the cost of doing business.

Starting July 1, 2015, the new General Permit for Storm Water Dischargers Associated with Industrial Activities (IGP) brings a host of new requirements. The new statewide Waste Discharge Requirements (WDRs) regulates the water running off of compost operations areas largely as wastewater. A Technical Report to implement the WDRs will be required with a schedule of improvements, which may extend for up to 6 years with justification. With food waste feedstocks and new requirements from water and air boards, aerated static pile is now the best available composting technology to comply with both.

TITLE 14/27

TOPIC: Revision to Compostable Materials & Transfer/Processing Regulations

CalRecycle has completed updating the Title 14/27 regulations to address a broad list of topics, mainly related to the expanding diversion of organic materials from landfills.

The final version of proposed language contained no new revisions addressing the many issues raised, including extending the implementation deadline for physical contaminant limits for compost beyond January 2018. Additionally, limits on land application of green waste to agricultural sites continue to allow up to three applications of twelve inches each annually.

The regulations, along with the corresponding Negative Declaration required under CEQA, were officially approved by Director Scott Smithline on August 5, 2015. The final regulations package has been approved by the Office of Administrative Law, with the regulations taking effect on January 1, 2016.



WASTE DISCHARGE REQUIREMENTS REGULATORY UPDATE

The State Water Resources Control Board (SWRCB) has concluded its efforts to establish statewide regulations for composting facilities. The SWRCB adopted the WDRs at their August 4, 2015 Board Meeting. The SWRCB officially released final language on August 31, 2015, which can be found on the Board's composting website.

Existing composting operations, except those with individual WDRs, general WDRs, or conditional waivers of WDRs are required to seek coverage under this General Order by submitting a complete Notice of Intent (NOI), and a Technical Report with information requested in the General Order. The NOI and Technical Report must be submitted by August 4, 2016 and shall include a proposed schedule for full compliance which must be as short as practicable but may not exceed 6 years from the date of the NOI.

All composters should be developing a Technical Report by working with a qualified engineer.



I GHG Governor Brown

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, bioenergy, renewable natural gas, and biochar.

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
Burrtec Waste Industries
Caglia Environmental
California Wood Recycling
CleanFleets.net
Cold Canyon Compost
CT Bioenergy Consulting LLC
Marin Sanitary Service
Mt. Diablo Recycling
Napa Recycling Compost
Northern Recycling Compost
Organic Waste Solutions
Phoenix Energy
Quackenbush Mt. Compost
Recology
Sonoma Compost
Tracy Delta Compost
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Z-Best Compost Facility
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www.californiacompostcoalition.org

The Governor launched 2015 promoting his vision of the Five Pillars, where composting is at center stage, and then met with Pope Francis on the good of greenhouse gas reductions. Defiantly taking on Big Oil over 50% petroleum reduction by 2030, removed from SB 350, CARB re-adopted the Low Carbon Fuel Standard and started the AB 32 Scoping Plan process four years early to set 2030 goals, embedding the Five Pillars vision anyway. After meeting with the United Nations, the President of China, and the Prime Minister of India, he gallivanted over to Paris – and the global stage – to serve up California as the model of economic growth while reducing greenhouse gases.

With AB 32 as a strong foundation, Governor Brown unveiled his Five Pillars vision in his 2015 inaugural address, stating that, by 2030, California will: (Pillar 1) reduce today's petroleum use in cars and trucks by up to 50 percent;

(Pillar 2) increase from one-third to 50 percent our electricity derived from renewable sources – CCC No. 7 story; (Pillar 3) double the efficiency savings from existing buildings and make heating fuels cleaner; (Pillar 4) reduce the release of methane which includes eliminating organics from the landfill by 2025 – CCC No. 3 Story; and (Pillar 5) manage farms and rangelands, forests and wetlands so they can use compost and store carbon – CCC No. 8 story. SB 350 (DeLeon) was signed into law this year addressing two of the pillars by increasing renewable energy to 50% by 2030 and double energy efficiency. The governor's office is now hosting

a series of Pillar Symposiums – 2030 Climate Change Commitments – to build all of the Five Pillars into the AB 32 Scoping Plan Update to 2030 which will be ready for adoption in fall 2016.

Composting is the mortar that binds these pillars together. Eliminating organics from the landfills will mitigate methane generation as a short-lived climate pollutant (Pillar 4) and instead create biomethane at anaerobic digestion facilities to generate more renewable energy (Pillar 2) and carbon negative fuel for the CNG fleet that collects the organics (Pillar 1) to replace diesel. The diverted food waste and digestate can be composted to sequester carbon and promote healthy soils (Pillar 5). Composting is at the nexus of cost-effectively reducing

GHG while keeping it local at the community scale of implementing the Governor's distributed generation model for energy.

The Paris Climate talks will garner the biggest GHG accords since Kyoto in 1997

and Rio in 1992. Governor Brown is expanding a coalition of nations, subnations, and states to sign onto his Memo of Understanding which is a global pact to reduce GHGs, with methane mitigation as a huge target. The California model – with 50% renewable energy by 2030, the LCFS and the cap-and-trade program raising billions has our Governor beaming past the moon.

“Our message in Paris is simple: Tackling climate change is good for the environment and good for the future,” said Governor Brown. *“California has cut carbon pollution and grown its economy at the same time - and so can the rest of the world.”*

