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Sustainable Organics Recycling

It will take the War on Methane, being initiated by

CARB and propelled by the Aliso Canyon gas leak, to

Pollutant Report being released by CARB in April is

landfills by 2025 starting with regulations in 2018.

get organics out of the landfills. The Short-Lived Climate

recommending to effectively eliminate organic waste from

Tracking the Food Chain

The food fight began when the Federal EPA flipped the waste pyramid in 2012 and initiated the Food Waste Challenge with a new Food Recovery Hierarchy. Renderers were pitted against the solid waste industry over the meat buckets, and the wastewater treatment plants slurped the fats oils and greases (FOG) from the renderers, and now

everybody is fighting over the disposition of food waste.

The dairies want the codigesting of food waste without a solid waste facility permit and wastewater treatment plants want the bulk of the cap-and-trade revenue to fund their projects. Grants will fund food rescue programs in disadvantaged communities and there will be \$10 million for food prevention programs. However, animal feed gets no respect.

As sectors jockey for regulatory position and preferred funding schemes, food waste is supposed to start magically appearing on April 1, 2016 as AB 1826 phases in with large quantity generators. AB 1826 is turning into an **April Fool's Day** joke as the generators, those without a program already in place, see no enforcement on the mandates and are not subscribing to collection services.

Most jurisdictions have not prepared their plans since there is no accountability until August 2017 when their Annual Reports are due. Local government and large landfills are blinking, as the composting industry is developing the organic waste processing capacity. On January 1, 2017, all major sit down restaurants will need to subscribe to recycling services, and it is doubtful much will happen then. Adopting local ordinances, coupled with franchise funded programs, are needed to implement AB 1826.

Food Recovery Hierarchy

Source Reduction Reduce the volume of surplus food generated

Feed Hungry People Donate extra food to food banks, soup kitchens and shelters

> Feed Animals Divert food scraps to animal feed

Industrial Uses vide waste oils for rendering and al conversion and food scraps for digestion to recover energy Composting Create a nutrient-rich soil amendment Landfill/ Incineration Last resort to disposal The

By 2019, when AB 1826 kicks in for all fast food chain restaurants and with CARB stepping in, the supply of organic waste will be pushed out to the facilities that are now being permitted and grant funded. There will be 8.0 million tons that need to be diverted by 2020 and 14.5 million tons by 2025. Note that one ton of organic waste can generate enough biomethane to produce about 13 diesel gas equivalents of renewable natural gas; 1,000 tons of organic waste can fuel the collection vehicle for a year.

The CalRecycle Waste Characterization Study determined that 265,000 tons of food waste was being collected at the curb in 2014, and another 929,000 tons are being self-hauled, somewhere, somehow. AB 1826 proposes another 3.3 million tons of food waste will need to be diverted by 2020 where there is little accountability today.

Though AB 901 will adopt regulations by 2018 to track compost and materials leaving a permitted facility, it will not track in-bound food waste tons, and definitely not track food waste tons from the generator. AB 1103 (Dodd) proposes to have a consistent food waste definition and track the food chain from the generator to the facility to the market, implementing the Federal EPA Food Recovery Hierarchy with accountability up and down the food chain, and fulfill the accounting gaps of AB 901.

Bill Watch

Legislative Update

Biomethane is Major Focus of 2016

The Capitol is full of good biomethane these days. Legislators have introduced more than half a dozen new bills that focus specifically on biomethane and bioenergy development.

Many other bills are directly related to biomethane, including several bills to allocate cap and trade revenues and bills to promote clean vehicles and fuels. The Bioenergy Association of California is sponsoring three important bills this year:

 SB 1043 (Allen) – requires the California Air Resources Board to adopt a policy to significantly increase renewable gas production and use to provide specific benefits to California's environment. The bill also corrects definitions of biogas and biomethane to be technology and application neutral. And it requires ARB to coordinate with CalRecycle to ensure that the policy furthers the waste diversion and other goals in the Short-Lived Climate Pollutant Strategy.

- AB 2206 (Williams) requires the California Public Utilities Commission to hire the California Council on Science and Technology to reassess the pipeline biogas standards for minimum heating value (BTU) and siloxanes, and requires the CPUC to give due deference to the recommendations of CCST.
- AB 2313 (Williams) will require the CPUC to revise the existing incentive program for pipeline biogas interconnection to increase the per project cost cap on the incentive and may make other changes to interconnection cost allocation.

- Other Key Bills -

AB 1103 (Dodd) - Current bill language would establish statutory definition of food waste create a tracking, reporting, and vehicle registration system for any entity hauling food waste, whether it is a commercial entity or a self-hauler. New draft language is expected in April.

SB 1350 (Wolk) - This bill would increase the number and gualifications for members of the CDFA Environmental Farming Science Advisory Panel. It would further require the CARB to consult with CDFA Secretary and the EFSAP in developing the quantification methods to demonstrate and quantify on-farm greenhouse gas emissions reductions. The bill would require CDFA, in consultation with the panel, to establish and oversee a Healthy Soils Program to provide incentives, including loans, grants, research, and technical assistance, or educational materials and outreach, to farmers whose management practices contribute to healthful soils and result in net long-term on-farm greenhouse gas benefits.

SB 970 (Leyva) – This bill would require CalRecycle to work with CARB and the Energy Resources Conservation and Development Commission to develop a pilot demonstration program to award matching grant funding for food waste-to-energy or fuels projects at existing wastewater treatment plants (WWTP). The program would seek to award matching funds of up to \$10 million (not to exceed 50% of the project cost) for three to five projects.

This bill follows up on a letter to the Governor's office from CASA which pushed for \$40 million of CalRecycle's \$100 million GGRF funding to be carved out for WWTPs. The bill language makes the questionable claim that WWTPs can codigest up to 75% of all the food waste to be recovered from landfills; it says nothing about all of the cost of collection, processing, and transportation that would have to occur upstream of their facilities to meet the limited tolerance for contamination in their digesters.

AB 1103 (Dodd)

TOPIC: This bill would establish statutory definition of food waste create a tracking, reporting, and vehicle registration system for any entity hauling food waste, whether it is a commercial entity or a self-hauler.

STATUS: Held in Senate Environmental Quality Committee. **SUPPORT**

SB 1350 (Wolk)

TOPIC: This bill would make modifications to the CDFA Environmental Farming Science Advisory Panel. It would further require CARB and CDFA to cooperate in developing methodology for demonstration and quantification of on-farm greenhouse gas emissions reductions. The bill would require establish statue for Healthy Soils Program and recommend \$20 million be budgeted for allocation towards achieving its goals.

STATUS: To be heard in Senate Environmental Quality Committee on April 4, 2016. **SUPPORT**

<u>SB 1383 (Lara)</u>

TOPIC: Would require CARB to approve and implement Short-lived Climate Pollutants strategy to achieve 40% reduction in methane, 40% reduction of hydrofluorocarbon gases, and a 50% reduction in anthropogenic black carbon below 2013 levels, by 2030.

STATUS: To be heard in Senate Environmental Quality Committee on April 4, 2016. **SUPPORT**

AB 1063 (Williams)

TOPIC: This bill would increase the solid waste tipping fee from \$1.40 per ton to \$4 per ton beginning 1/1/2017 until 1/1/2022 CalRecycle required to use a minimum \$1.50 per ton to promote infrastructure development, which could develop up to \$30 million in grants and loans to develop composting facilities and other market incentive programs that promote the highest and best use of recovered materials. The bill would also establish a generator charge to augment the existing disposal fee which funds CalRecycle administrative costs.

STATUS: Held in Senate Environmental Quality Committee. **WATCH**

AB 1826 (Stone)

TOPIC: This bill would reduce overly complex and duplicative requirements of existing law for the distribution and sale of organic products.

STATUS: To be heard in Senate Agriculture Committee on April 13, 2016. **SUPPORT**

Regulatory Affairs

Regs Watch

AB 901 Regulations

With AB 901 signed into law, CalRecycle will start tracking tons in 2018 for all material leaving a Facility, but plans not to track in-bound tons or generators tons. AB 1103 (Dodd) proposes to track food waste tons leaving the generator that may or may not go to a facility. According to the 2014 CalRecycle Waste Characterization Study (Table 32 for the commercial sector is provided herein), 265,000 tons of food waste was collected by an organic waste hauler at the curb and most likely went to a permitted facility for further processing. Another 929,000 tons of food waste was backhauled or self-hauled from the generator without any tracking mechanism in place. With AB 1826 proposing to divert another 3.3 million tons of food waste by 2020, where will these tons go and will the vehicles be registered? AB 1103 plans to address what AB 901 does not.

AB 1063 (Williams) proposes to increase the disposal fee up to \$4 per ton, and had proposed some type of generator fee. With AB 901 tonnage tracking, there are no plans for state fees on diversion tons. If passed, however, there could be \$50 million for five years to develop the diversion infrastructure and help fund the **Bale Out**.

AB 1826 Update

On and after January 1, 2016, each jurisdiction shall implement an organic waste recycling program. CalRecycle will be requiring all jurisdictions to file a plan. *April Fool's Day*...there will be no filing of a plan or any enforcement until well after August 2017 when the Annual Reports are filed by each jurisdiction to report to CalRecycle on the progress achieved in implementing its organic waste recycling program. What's in your AB 1826 plan?

On and after April 1, 2016, a business that generates eight cubic yards or more of organic waste per week shall arrange for recycling services. Some generators are calling April Fool's Day on haulers offering to provide services since there is no enforcement. Gearing up to January 1, 2017 for the next phase affecting almost all sit-down chain restaurants, the push back is already being heard. Very few AB 1826 plans have been prepared as the cities and generators are in an impasse on recycling the carrots since there are no sticks. AB 341, mandatory commercial recycling, has been in place since 2012, and each year since then the disposal tons have increased from 4.3 PPD. to 4.4 PPD, to 4.5 PPD.

Aliso Canyon Methane Mitigation Plan

On March 31, 2016, CARB released a mitigation program for the Aliso Canyon natural gas storage facility to achieve full mitigation of the climate impacts of the Porter Ranch natural gas leak. This leak at a Southern California Gas Company facility emitted almost 100,000 tons of methane. A Mitigation Fund would be established which could raise over \$100 million in carbon fees for local organic waste programs, where there is now a big push back by Southern California Gas Company.

CARB is focusing on viable mitigation measures including organic waste diversion from landfills, developing the biomethane infrastructure, and anaerobic digestion facilities. The eligible project focus is on methane, have a substantial nexus with climate impacts with transformational qualities while benefiting disadvantaged communities. There will be a robust program development for eligible projects with a screening process. http://www.arb.ca.gov/research/aliso_canyon/arb_aliso_ canyon_methane_leak_climate_impacts_mitigation_program.pdf.

AB 901 Facility Regulations

Waste, recycling, and compost facilities, as well as exporters, brokers, and transporters of recyclables or compost will be required to submit information directly to CalRecycle on the types, quantities, and destinations of materials that are disposed of, sold, or transferred inside or outside of the state. CalRecycle also gains enforcement authority to collect this information. This will be a controversial regulatory process with the reporting starting in the first quarter of 2018. Workshops scheduled for April 19 and 26, 2016.

Organics Ban Regulations

The California Air Resources Board released the Draft Short-Lived Climate Pollutant (SLCP) Reduction Strategy on September 30, 2015, calling for a landfill ban of organic waste in ten years. The Final Plan should be released in April 2016 and be considered by CARB in June 2016.

There has been a big push back from the landfills and local government to slow down this ban. CARB will be working with CalRecycle to develop a regulation by 2018, noting the progress towards existing targets for landfill diversion by 2020 with AB 1826, and will effectively eliminate organic disposal in landfills by 2025.

The Global Warming Potential for methane could increase to 84 times carbon dioxide, from 28 times, as the impacts over a 20 year period (as a short-live climate pollutant) is fully assessed. AB 876 (McCarty) passed in 2015 requires all jurisdictions demonstrate 15 years of organic waste processing capacity. Now is the time to prepare "The Plan before the Ban" as California will need to divert 8.0 million tons of organic wastes by 2020 and 14.5 million tons by 2025.



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 ReFuel Burrtec Waste Industries Caglia Environmental California Wood Recycling CleanFleets.net **Clover Flat Compost** Cold Canyon Compost CT Bioenergy Consulting LLC 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** 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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CCC Members News

Welcome Harvest Power!

Harvest's Vision

Harvest's vision is to revolutionize organic wastes in North America, transforming them into renewable energy, beautiful landscapes, and rich soils for agriculture. More than 33 million tons of organic waste gets sent to landfills in North America each year. There is a better way.

Footprints in California and Beyond

In California, with composting operations and offices in Lathrop, Tulare, Hemet, and Fresno, Harvest serves the Central Valley with organics recycling capabilities and top guality, OMRI-Listed soil products. Throughout North America, the company operates at more than 25 locations and sells more than 35 million bags of organic products to consumers through its retail partners. In addition, its award-winning energy gardens use anaerobic digestion to turn organic materials into local, renewable, clean energy.

Improving Soils Through Top **Quality Products**

Harvest helps reset the organic balance of soils in California by:

- Supporting a network of over 800 agricultural customers
- Distributing to customers farming from a few hundred to over 40,000 acres
- · Covering tens of thousands of acres with our compost and custom blends each year
- · Supplying store shelves with locallyavailable bagged products

Innovating with Food Waste Management

Harvest led the "The Food Waste Frontier" panel at SXSW-Eco and provides thought leadership at conferences across North America with its organics sustainability platform. The company composts food scraps in Tulare and Lathrop, and looks to





Harvest's composting facility in Lathrop, CA.



Harvest's award-winning energy garden that uses anaerobic digestion to turn organic waste from theme parks, restaurants, and businesses in to clean energy and natural fertilizers.



Harvest's delivery of a custom blend in the Central Valley.

support food waste recycling initiatives across the state.

Accolades

Harvest has grown rapidly since its founding in 2008, garnering awards for its business of organic recycling, energy generation and soil revitalization. The company has been named to the Global Cleantech 100 six years running, received Bloomberg's 2013 New Energy Pioneer Award and was named one of Fast Company's 50 Most Innovative Companies in the World.

Learn more at www.HarvestPower.com

Table 32. Composition Summary: Overall Commercial Sector

	Disposed		Curbside Recycle		Curbside Organics		Other Diversion		Total Generation	
Material	EST. %	ESt. Tons	ESt. %	Est. Tons	ESt. %	Est. Tons	EST. %	Est. Tons	EST. %	Est. Tons
Paper Upcoated Corrugated Cardboard	2 6.7%	4,415,748	78.6% 51.2%	1,5/3,662	1.1%	18,057 3 108	36.1%	2,052,884	31.1% 12.8%	3 322 222
Paper Bags	0.4%	62.235	0.6%	12.318	0.0%	39	0.0%	296	0.3%	74.889
Newspaper	2.0%	337,096	1.9%	38,121	0.1%	857	0.0%	2,096	1.5%	378,170
White Ledger Paper	1.6%	268,245	6.4%	127,555	0.0%	48	0.6%	34,770	1.7%	430,618
Other Office Paper	1.8%	293,207	4.8%	95,814	0.0%	414	0.3%	16,999	1.6%	406,435
Magazines and Catalogs	0.7%	115,761	3.7%	74,131	0.0%	0	0.0%	1,966	0.7%	191,859
Other Miscellaneous Paper Compostable	0.0%	5,777	0.0%	957	0.0%	7 099	0.0%	2 226	0.0%	0,874
Other Miscellaneous Paper - Other	0.5%	493 669	2.0%	105 709	0.5%	622	0.1%	3,220	0.0%	778 968
Remainder/Composite Paper - Compostable	10.1%	1.673.592	0.8%	16.981	0.2%	3.978	0.2%	12,989	6.6%	1.707.540
Remainder/Composite Paper - Other	3.6%	593,991	1.1%	21,490	0.1%	914	0.0%	970	2.4%	617,365
Glass	2.0%	329,185	5.2%	104,797	0.8%	13,898	1.4%	80,370	2.0%	528,250
Clear Glass Bottles and Containers	0.9%	143,197	2.5%	50,649	0.3%	5,051	0.4%	21,140	0.8%	220,037
Green Glass Bottles and Containers	0.4%	61,533	1.8%	36,710	0.4%	7,325	0.3%	16,192	0.5%	121,759
Other Glass Colored Bottles and Containers	0.2%	1 091	0.0%	305	0.1%	1,522	0.0%	43,032	0.4%	1 395
Flat Glass	0.2%	32,008	0.0%	6	0.0%	Ő	0.0%	Ő	0.1%	32,014
Remainder/Composite Glass	0.3%	51,210	0.1%	1,450	0.0%	0	0.0%	7	0.2%	52,667
Metal	3.6%	601,182	1.6%	32,370	0.1%	1,117	29.6%	1,685,302	8.9%	2,319,971
Tin/Steel Cans	0.5%	81,495	0.8%	16,866	0.0%	639	0.1%	3,263	0.4%	102,263
Major Appliances	0.0%	5,239	0.0%	0	0.0%	0	0.0%	0	0.0%	5,239
Other Ferrous	0.0%	1,742	0.0%	5 409	0.0%	55	22.0%	1 302 028	0.0%	1,742
Aluminum Cans	0.3%	27 497	0.3%	5 381	0.0%	84	0.1%	7 432	0.2%	40 394
Other Non-Ferrous	0.7%	121.719	0.2%	3.278	0.0%	334	4.4%	251.361	1.5%	376.693
Remainder/Composite Metal	1.3%	209,964	0.1%	1,436	0.0%	4	2.1%	121,218	1.3%	332,622
Electronics	0.8%	131,818	0.1%	2,401	0.0%	13	1.2%	68,519	0.8%	202,751
Brown Goods	0.2%	32,602	0.0%	0	0.0%	0	0.0%	1,689	0.1%	34,291
Computer-related Electronics	0.0%	4,772	0.1%	1,853	0.0%	0	1.1%	63,018	0.3%	69,644
Video Display Devices	0.0%	3,877	0.0%	548	0.0%	13	0.0%	137	0.0%	4,575
Plastic	12 9%	90,567 2 131 488	8.7%	173 986	0.0%	3 795	0.1%	3,075 45 584	9.1%	94,241 2 354 854
PETE Plastic Containers	0.5%	90.682	1.5%	29.391	0.0%	597	0.2%	13.660	0.5%	134.330
HDPE Plastic Containers	0.5%	76,674	1.0%	19,276	0.0%	78	0.0%	1,764	0.4%	97,792
Miscellaneous Plastic Containers	0.3%	49,683	1.4%	27,073	0.0%	298	0.1%	3,871	0.3%	80,925
Plastic Trash Bags	2.4%	389,709	0.3%	5,514	0.0%	188	0.0%	935	1.5%	396,345
Plastic Grocery and Other Merchandise Bags	0.2%	32,264	0.4%	7,256	0.0%	42	0.0%	8	0.2%	39,570
Non-Bag Commercial and Industrial Packaging Film	0.6%	107,244	0.9%	18,306	0.0%	138	0.1%	7,512	0.5%	133,200
Other Film - Other	2.5%	407 559	0.1%	15 406	0.0%	1 983	0.1%	4,303	1.6%	426 689
Durable Plastic Items - #2 and #5 Bulky Rigids	0.2%	34.842	0.8%	16,595	0.0%	1,000	0.0%	2,179	0.2%	53.617
Durable Plastic Items - Other	1.1%	175,506	0.4%	8,823	0.0%	57	0.1%	3,332	0.7%	187,719
Remainder/Composite Plastic	4.6%	764,779	1.2%	24,419	0.0%	388	0.1%	6,279	3.1%	795,865
Other Organic	38.8%	6,420,296	3.7%	73,494	97.8%	1,666,288	25.6%	1,459,333	37.1%	9,619,411
Food	24.4%	4,035,748	1.7%	34,272	15.6%	265,021	16.3%	928,965	20.3%	5,264,007
Leaves and Grass	3.2%	524,559	0.0%	416	80.6%	1,372,233	2.6%	146,752	7.9%	2,043,959
Branches and Stumps	0.4%	64 366	0.3%	0,209	0.0%	20,412	0.3%	10 260	2.0%	101 3/0
Manures	0.1%	14.884	0.0%	0	0.0%	0	0.0%	13,200	0.1%	14.884
Textiles	2.3%	374,010	0.2%	3,990	0.0%	622	0.1%	7,536	1.5%	386,157
Carpet	0.8%	134,528	0.3%	6,989	0.0%	0	0.0%	17	0.5%	141,534
Remainder/Composite Organic	6.0%	997,614	0.2%	3,835	0.0%	0	0.0%	2	3.9%	1,001,452
Inerts and Other	13.3%	2,198,596	1.7%	34,948	0.0%	310	5.1%	291,642	9.7%	2,525,497
Concrete Asphalt Paving	0.7%	122,482	0.0%	0	0.0%	0	0.0%	/18	0.5%	123,200
Asphalt Roofing	0.3%	61 718	0.0%	50	0.0%	0	0.0%	0	0.2%	61 768
Clean Dimensional Lumber	0.7%	113,949	0.5%	10,668	0.0%	Ő	0.0%	2,830	0.5%	127,447
Clean Engineered Wood	0.6%	107,458	0.0%	0	0.0%	0	0.0%	0	0.4%	107,458
Clean Pallets & Crates	4.4%	735,005	0.9%	18,139	0.0%	0	4.4%	249,857	3.9%	1,003,001
Other Wood Waste	2.3%	387,705	0.0%	176	0.0%	0	0.0%	434	1.5%	388,315
Gypsum Board	0.6%	99,223	0.0%	537	0.0%	210	0.0%	64Z	0.4%	100,403
Rock, Soli and Fines Remainder/Composite Inerts and Other	2.1%	351 881	0.0%	5 378	0.0%	310	0.6%	J2,000 4 275	0.0%	203,943
Household Hazardous Waste	0.2%	34.884	0.0%	734	0.0%	14	0.0%	2,564	0.1%	38.196
Paint	0.1%	9,094	0.0%	0	0.0%	0	0.0%	_,	0.0%	9,094
Vehicle and Equipment Fluids	0.0%	6,707	0.0%	0	0.0%	0	0.0%	0	0.0%	6,707
Used Oil	0.0%	343	0.0%	404	0.0%	0	0.0%	0	0.0%	747
Batteries	0.0%	2,268	0.0%	266	0.0%	14	0.0%	2,530	0.0%	5,077
Remainder/Composite Household Hazardous	0.1%	16,473	0.0%	64	0.0%	0	0.0%	35	0.1%	16,571
Ash	0.2%	207,163	0.1%	1,799	0.0%	0	0.1%	4,005	0.8% 0.1%	213,628
Treated Medical Waste	0.2%	5 849	0.0%	347	0.0%	0	0.0%	0	0.1%	6 195
Bulky Items	0.9%	153.016	0.0%	715	0.0%	0	0.1%	4.665	0.6%	158.396
Tires	0.0%	3,884	0.0%	40	0.0%	0	0.0%	0	0.0%	3,924
Remainder/Composite Special Waste	0.1%	14,017	0.0%	698	0.0%	0	0.0%	0	0.1%	14,715
Mixed Residue	0.4%	66,303	0.2%	3,481	0.0%	0	0.0%	60	0.3%	69,843
Totals	100.0%	16.536.664	100.0%	2.001.671	100.0%	1,703.492	100.0%	5,690.924	100.0%	25,932,751
Streams Sampled	840		338		41		720		1,939	
TPEPY	1	.13	0).14	().12	Ċ	.39	1	.77
Percentages for material types may not total 100% due to rounding	1									

Tables detailing the composition for all 82 materials can be found in Appendix E: Detailed Composition Tables