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Sustainable Organics Recycling

Caltrans Detours from the Road to Recovery

California is seeing a significant influx of new revenue to invest in the state and local street and road system from <u>Senate Bill 1 (Beall and Frazier, 2017)</u>, a landmark transportation funding package. This measure was in response to California's significant funding shortfall to maintain the state's multimodal transportation network, which is the backbone of the economy and critical to the quality of life in the Golden State. SB 1 increased several taxes and fees to raise over \$5 billion annually in new transportation revenues, including a \$0.12 per gallon gasoline tax and a \$0.20 per gallon diesel tax. The *California Voter Approval for Gas and Vehicle Taxes Initiative* may appear on the ballot in California as an initiated constitutional amendment on November 6, 2018 to repeal SB 1.

The Road to Recovery should be on the Organic Highway (see next page). Transportation has 39% of all greenhouse gas emissions where the carbon intensity of transportation fuels should be 10% less by 2020 and 18% less by 2030 from a 2010 base year. CARB will dole out \$435 million for clean vehicles using cap-and-trade funds in the proposed budget. <u>AB 617 (Garcia, 2017)</u> plans to reduce criteria pollutants. However, Caltrans and the State Agency Buy Recycled Campaign are not living up to their mandates.

SB 1 has a provision for 'Material Recycling' for Road Maintenance and Rehabilitation Programs, requiring Caltrans to the extent possible and cost effective to use material recycling techniques that reduce the cost of maintaining and rehabilitating the streets and highways, and that exhibit reduced levels of greenhouse gas emissions through material choice and construction method. Caltrans should be using more Compost, Mulches, Recycled Aggregate Base Rock, Recycled Aggregate Concrete and Tire-Derived Aggregate in all of their road construction as the life-cycle benefits far outweigh virgin materials in meeting the SB 1 criteria. Zanker Recycling has been at the forefront of producing recycled market products for construction projects using innovative technology and was instrumental in adding the 'Material Recycling' provision to SB 1. The call for market development for compost is again harkening in the Sacramento halls, with <u>SB 1383 (Lara,</u> <u>2016)</u> regulations and implementation of <u>AB 1045 (Irwin,</u> <u>2015)</u> that is also supposed to promote compost use and has not. The Fourth Assessment of California's Compost Infrastructure will soon be underway, following the 2000, 2003, and 2008 studies to provide current data. However, it feels like Groundhog Day, as the same state 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 1989; 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.

In 2006, SB 1345 (Chesbro) would have 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. This procurement practice could have trickled down to local government where millions more tons could be used. Instead of the typical trees and weeds Caltrans landscaping program, wood chip mulches should be specified as part of their Stormwater Pollution Prevention Plans to mitigate erosion, suppress dust and weeds, and filter run-off water. With SB 1383 being phased in, 2.6 million tons of new wood waste will need to be diverted by 2020 and 3.9 million tons of new wood waste could be on the market in 2025. However, SB 1383 workshops have left wood waste market development out of the equation. The urban wood waste is piling up and will be left in the landfill with limited bioenergy market contracts and government procurement.

The Road to Recovery has detoured from the Organic Highway to a 12-step program where Caltrans continues to remain in denial and where the state pushes mandates for diversion without promoting commensurate market development programs, which have been their responsibility for decades.

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GREEN PROCUREMENT on the Organic Highway

2025

SB 32 requires a 40% reduction of methane by 2030.

> by 48 to 73 tons per day by 2030.

The use of recycled aggregate can save money

for local governments and other purchasers, create

additional business opportunities, save energy when

recycling is done on site, conserve diminishing resources

of urban aggregates, and help local governments meet the

To reduce short-lived climate

pollutants, 75% of all organics need to be recovered by 2025 amounting to over 13 million tons of material and 5.8 million metric tons of CO2e reductions.

Sustainable

Freight Action Plan is a joint agency strategy, developed to improve freight efficiency, transition to zero emission technologies, and increase the competitiveness of California's freight system.





diversion goals of AB 939.

SWPPP / MULCH

RAC, RAB, Compost, and Mulch use paves the way on the Organic Highway Lifecycle analysis has RAC more cost effective than traditional Asphalt Concrete

> In 2015, 7.6 million tires were used in crumb rubber production and 1.2 million tires used in civil engineering

California State Auditor releases audit that Caltrans does not track the use of RAB and cannot show that it is neeting AB 939.

RA

RECYCLED AGGREGATE BASE ROCK (RAB)

→ Be CALIFORNIAN Buv **RECYCLED**

The State Agency Buy Recycled Campaign is a joint effort between the CalRecvcle and the Department of General Services to implement State law requiring State agencies and the Legislature to purchase recycled-content products (RCP) and track those purchases. An Annual Report detailing state agencies' annual RCP purchase is due to CalRecycle by October 31 of each year. In past CalRecycle assessments, Caltrans used just 40,000 tons per year of compost, or just 1% of the market use, at a time where SB 1383 requires CalRecvcle to bolster markets for recvcled organic products through regulations, to the extent possible. Public Resource Code 42240 adopted in 1989, requires the Caltrans to use compost in place of, or to supplement, petroleum-based commercial fertilizers in the state's highway landscape maintenance program. Caltrans should also be using Recycled Aggregate Base Rock, Recycled Aggregate Concrete and Tire-Derived Aggregate in all of their road construction, as the life-cycled benefits far outweigh virgin materials.

Public Resource Code 42005 requires CalRecycle to develop a comprehensive market development plan using existing resources that will stimulate market demand in the state for postconsumer waste material and secondary waste material generated in the state. Existing law requires each state agency to ensure that at least 50% of reportable purchases are recycled products. SB 2675 (Lowenthal, 2014) requires each state agency to ensure that at least 75% of reportable purchases are recycled products on and after January 1, 2020, except for paint, antifreeze, and tires, which would remain at the 50% requirement.

SB 1 (Beall, 2017) has a provision for "Material Recycling" for Road Maintenance and Rehabilitation Programs requiring Caltrans to the extent possible and cost effective, and where feasible, to use advanced technologies and material recycling techniques that reduce the cost of maintaining and rehabilitating the streets and highways, and that exhibit reduced levels of greenhouse gas emissions through material choice and construction method.

LCFS is Use 10 18% less million CI by 2030. new tons of compost from 2010 by 2030, to base year.

fulfill SB 1383.

Caltrans com-

post specifications

to trickle down to

local governments for

green procurement of

compost by county/city

roads and Parks & Rec

up to a potential of 2 to

3 million tons by 2025, or

15%-20% of the market.

Continue to develop and com mercialize clean transportation fuels through renewable energy integration goals, tax incentives, research investments, support for project demonstration, public outreach, setting procurement standards, including updating State and local procurement contracts.

Biogas made from organic waste is the lowest carbon fuels of any kind. In fact, they are the only fuels that are carbon negative and can provide 2 to 6 times greater carbon reductions than electric vehicles running on the California power grid. They can also provide those carbon reductions much more cost- effectively than electric vehicles.

Biofuels currently provide 89% of the state's Low Carbon Fuel Standard compliance. Biomethane alone provides more carbon reductions that electric vehicles in California. Without biofuels, the LCFS would be failing terribly, since the LCFS is a critical part of the state's overall climate strategy.

Low carbon fuel standard adopted to reduce the carbon intensity (CI) of transportation fuels by 10% by 2020, from 2010 base year.

SB 1383 requires CalRecycle to the extent possible to bolster markets for recycled organic products through regulations that are to be adopted in 2019.

> Caltrans has 230,000 acres of roadside where just one inch of compost over the 25,000 acres that are maintained by Caltrans could use up 1.3 million tons of compost.

> > AB 1045 from 2015 requires Cal-EPA to promote the appropriate use of compost throughout the state and report annually, which has not occurred!

> > > post in 2010 - just 1% of market.

SB 1345 (Chesbro) would have required Caltrans to use 1,000,000 tons of compost in 2010.

LOW CARBON FUELS

COMPOST

Caltrans used 40,000 tons of com-

Reduce NOx RAC paving could use up to 6 million tires per year.

2030



AB 32 set California's

first GHG target, which called on the state to reduce emissions to 1990 levels by 2020. California is on track to exceed its 2020 climate target. To reduce short-lived climate pollutants. 50% of all organics need to be recovered by 2020 amounting to over 9 million tons of material and 4 million metric tons of CO2e reductions.

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AB 617 requires CARB. by October 1, 2018, to

prepare a plan regarding technologies or monitoring criteria air pollutants and toxic air contaminants and the need for and benefits of additional community air monitoring systems. It would require CARB to select, based on the monitoring plan, the highest priority locations in the state for the deployment of community air monitoring systems. The bill would require an air district containing a selected location, by July 1, 2019, to deploy a system in the CALIFORN

selected location.

28,350 tons used in RAC paving in 2015

RAC

AB 338 (Levine) passed in 2005 requiring Caltrans to increase the use of RAC to 50% of asphalt pavement used after 2007 and before 2015.

B

RECYCLED ASPHALT CONCRETE (RAC)



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 Resource Recovery 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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CCC Member News

All Roads Lead to Zanker Recycling

Zanker Recycling in San Jose is a full service, resource management, composting/recycling facility and landfill for residents and commercial businesses. The Zanker management team recognized that as landfill space was becoming scarce, there was a growing opportunity to recover valuable materials from the mixed construction and demolition debris (C&D) waste stream.

The facility is divided into operational areas handling special types of waste materials. These areas include: Demolition Debris Recycling, Concrete Recycling, Wood Waste/Brush Recycling, Asphalt Shingle Processing and its new DM Reduction System. The facility is also home to the Zanker Landscape Materials Yard. zanker recycling which sells over 90 landscape and construction products, as well as other

landscape supplies. These products include aggregates, composts, mulches, fertilizers, sands, and soils.

Demolition Debris: In 2015, Zanker designed and constructed a new demolition recycling operation that is currently processing over 80 tons per hour with an average 76% diversion rate. This facility consists of a patented combination of conveyors, screens, magnets, and air separation equipment that separates the materials into manageable and marketable products. These products are then directed to other recycling operations on site or shipped directly to end product users.

Concrete Recycling: concrete and other aggregates are loaded into a primary crusher where it is crushed and processed. After the primary crusher, the material passes under a belt magnet where steel is removed before moving to a secondary crusher that further reduces the particle size. The material is then screened to remove oversized pieces which are

recirculated back through the crushing circuit. During the entire process, employees and machinery remove non-aggregate materials that would compromise the products value.

Wood Waste and Brush Recycling: The wood waste generated from other operations or accepted from customers is ground and then screened to create wood chips for biomass and wood fines or is used in the production of our wood mulch. The Wood Waste plant consists of an electric Peterson Pacific grinder, an electrically powered trommel screen and a series of electrically powered

feed, transfer and stacking conveyors.

> Asphalt Shingle Processing: Zanker Recycling accepts

and processes clean, separated loads of composite asphalt roofing shingles. The company sorts

rethink. reinvent. renew.

and cleans the old shingles and transports them to Oakland where they are processed into dry, granular asphalt pieces known as "RAS" (recycled asphalt shingles) that is shipped to other East Bay manufacturers to make "hot mix asphalt" used to build roads throughout the region.

Zanker newest operation, the DM Reduction System, processes miscellaneous debris from incoming customers (furniture & bulky items) or loads with minimal recyclables. Residuals from our other recycling operations are also brought to the DM Reduction System to be processed. The system grinds all the materials and sorts the materials to remove recyclable products.

What's next for Zanker? Zanker Recycling will be getting into robotics with the installation of its newest sortline, projected for October 2018.

Through its aggressive recycling efforts, Zanker diverts more than 86% of waste they receive from landfilling.