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 Senate Bill 1 (Beall and Frazier, 2017), 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. AB 617 (Garcia, 2017) 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 SB 1383 (Lara, 2016) regulations and implementation of AB 1045 (Irwin, 2015) 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.
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.

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 used 40,000 tons of compost in 2010 - just 1% of market.

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

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.

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 diversion goals of AB 939.

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

SB 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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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, which sells over 90 landscape 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 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.

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