Beyond Waste

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AB 939 was an ambitious state mandate in 1989, with 50% of solid waste needing to be diverted from landfills by the year 2000. California had proclaimed victory over AB 939 in 2005 with a landfill diversion rate of 52%, with an eye on making zero waste happen. Today, California is at a 65% landfill diversion rate with a new statewide goal of 75% by 2020, as legislated in 2011 within AB 341 (Chesbro). CalRecycle will be submitting a report to the Legislature on or before January 1, 2014 that provides strategies to achieve the state's policy goal that not less than 75% of solid waste generated be source reduced, recycled, or composted by 2020. On May 15, CalRecycle released the discussion paper, ***"California's New Goal: 75% Recycling"***. The paper is a bold and brave initiation for the next 20 months of workshops and meetings to frame-up strategies that will be sent to the Legislature recommending statutory and regulatory changes to implement the desired strategies. With the report due in 2014, any legislative changes or regulatory activity coming from the final report that could be successfully adopted would probably not start until 2016, giving just 4 years to get to 75% by 2020. As Caroll Mortensen, the new CalRecycle Director states, *"The process will be exciting and thought-provoking. It will have blasts from the past and déjà vu moments. It will be frustrating at time, tempered with times of clarity. I am not sure what the final products are going to look like bit I'm confident they will reflect the potential California has to make changes that will move us towards a more sustainable future. We look forward to getting this process started. We have learned much from nearly 25 years of implementing our program. Let's use that knowledge to move us into our new paradigm"*. At this early stage, CalRecycle wants comments on ideas that may have been missed. However, some discrete concepts found in their draft 75% Plan may find their way into the legislative process before the final report is submitted.

Ms. Mortensen, one of the chief architects of AB 341, is poised and honest in her approach to move us into the next era that redefines what "recycling" means in California. Today's 65% landfill diversion number would translate into a 49% real recycling rate. Landfill-based landfill diversion, such as alternative daily cover and beneficial reuse, would no longer count as landfill diversion. Landfill-based landfill diversion would not be considered recycling and would no longer be a paradox.

When AB 939 was passed in 1989, there were 29.1 million people in California disposing 44 million tons of waste, equating to 8.2 pounds per person per day (PPD) of disposal, with an estimated 10% recycling rate at the time. AB 939 set a mandate to divert 25% of waste by 1995, and 50% by the year 2000. During the 1990's, AB 939 was cleaned up and clarified, amended and redefined, and recycling morphed into landfill diversion. In 2000, the population grew to 29.1 million people, disposing of 38.1 million tons of waste, equating to 6.3 PPD of disposal, with an estimated 42% landfill diversion rate. AB 939 has been amended with SB 1066 to allow

time extension and alternative diversion rates and rural exemptions to provide more time to get to the 50% mandate. By 2006, California peaked out with waste generation, cut disposal to 6.1 PPD with a 54% landfill diversion rate, and a victory over AB 939 was proclaimed. California had achieved the AB 939 50% landfill diversion rate with waste generation inflation of over 12 pounds per person per day, and landfill-based landfill diversion. AB 939 was amended in 2006 with SB 1016 to change the AB 939 calculation from a complicated landfill diversion rate, to a simple disposal indicator based upon population and actual landfill disposal, where a 6.2 PPD statewide disposal indicator was determined to be the equivalency of 50% landfill diversion rate. Using the current accounting system, a 75% landfill diversion equivalency rate in 2020 would require California to decrease their disposal to 3.1 PPD by 2020, and would appear to be in reach, as shown on the green line in the chart attached as compared to the red line that represents waste disposal in all of America. The dashed green line represents the disposal target of the 75% Recycling Plan needing to get to 2.7 PPD by 2020, from a 5.4 PPD in 2010.

The new paradigm of recycling accounting would lower the disposal indicator to 2.7 PPD, and would count 6.6 million tons of what was landfill diversion as disposal, making the 75% goal more ominous. A comparison of the proposed system, if even legislatively possible, would not be in place until 2016:

AB 939	AB 341
Jurisdictions	Statewide
50% Mandate	75% Goal
Currently at 65% Landfill Diversion	Would be 49% Recycling today
Landfill Diversion Accounting includes use of materials in a landfill and transformation	Recycling Accounting
Base Generation (2003-2006) 4 –year peak used in SB 1016 at 12.6 PPD	Base Generation (1990-2010) 20-year average at 10.7 PPD
9 million tons of additional diversion to reach 75% landfill diversion rate	19 million tons of recycling to reach 75% recycling rate

New Math: Measuring 75% "recycling" requires new math for the BASE, the TARGET, and what counts. The BASE is considered waste generation where we had to divert 50% in the past, and we now have a goal to recycle 75%. The BASE had been determined during the SB 1016 process, where the average from 2003 to 2006 was used to get to 12.6 PPD. This was built on years of waste generation inflation studies, coupled with the peak boom years of California construction activity. CalRecycle is proposing to average the waste generation over 20 years to suggest a more reasonable 10.7 PPD figure to be used as the BASE. Comparing this to the United States, and including both MSW and C&D referencing Federal EPA numbers, the average American generated only 7.6 PPD. Lowering California's waste generation from 12.6 PPD to 10.7 PPD, while America is at 7.6 PPD, is a more honest approach. According to a new study, *"Recycling gone bad: When the option to recycle increases resource consumption,"* consumers who are presented with the option to recycle may increase their resource usage compared to those who don't have that option. With all the recycling in California, maybe we do generate more material. A déjà vu moment on all of those waste generation calculator compliance studies of yesteryear.

The TARGET to recycling 75% of the waste generated would now require California to recycle 75% of the BASE, or 8.0 PPD, and allow no more than 2.7 PPD to be disposed of. The Edgar Institute had calculated that disposal target to be 3.1 PPD based upon the old math.

Disposal-Related is not Landfill Diversion: California disposed of 30.4 million tons of waste in 2010. The following landfill diversion activity, totaling another 6.6 million tons also occurred in 2010, which would be considered disposal-related operations and not count as recycling. The new disposal amount would now total 37 million tons.

Landfill Diversion to be considered Disposal-Related	Tons
MSW Transformation – 3 Waste to Energy Plant	800,000
Alternative Daily Cover – all types	3,500,000
Alternative intermediate Cover	100,000
Beneficial Reuse at Landfills	2,100,000
Used Tires used as Waste to Energy	70,000
Total	6,570,000 tons

What's missing: At this early stage of development, CalRecycle really wants to know what is missing. The 63-page document is full of ideas and concepts, and the 17-page Public Review Comment Form is ready to be filled out. This is the time to suggest the bigger concepts. The following four comments have already been voiced to CalRecycle:

- ***Greenhouse Gas Reduction Benefits and Job Creation*** - The 5-year update of the AB 32 Scoping Plan will be tracking on the same schedule as the AB 341 75% Recycling Plan. The benefits of GHG reduction and job creation are essential to be calculated at the same time, as many of the concepts in the 75% Recycling Plan could be placed in the AB

32 Scoping Plan update, such as what happened in 2008. The Edgar Institute has calculated that over 18 million metric tons of GHG would be avoided and over 40,000 green jobs could be created, based upon 9 million tons of landfill diversion at a 3.1 PPD target in 2020. With over 19 million tons needing to be recycling to get to a 2.7 PPD, the 75% Recycling Plan should translate all suggested programs in GHG reduction benefits and job creation.

- ***Lumber*** - in 2008, 14.5% of landfill disposal was lumber, or about 5.7 million tons were buried. Lumber is currently bundled under "inerts" in the charts within the report without a focused plan. Lumber to biomass energy should be specifically mentioned and be tied to the Governor's BioEnergy Action Plan to promote distributed green energy from the conversion of wood chips.
- ***Landfill Capacity***: For the first time in 10 years, CalRecycle noted the amount of remaining state permitted landfill capacity, which is 1.5 billion tons. The Edgar Institute has tracked landfill capacity for years (Beyond Waste – November 2011), and has recognized that the glut of landfill capacity is leading to lower tip fees at a time when new emerging technology facilities are opening. Will cheap tip fees stymie the development of new facilities needed to reach the 75% goal?
- ***Inert ADC from C&D Fines***: Screened fines from C&D processing has no other reuse potential other than ADC use. Screen fines compose of 15% to 20% of mixed C&D, and are critical for facilities to document at least a 75% recycling rate to maintain the maximum points for LEED platinum certification. Inert ADC from C&D fines should receive "reuse" status since there is no other possible use.

Reducing the waste generation BASE from 12.6 PPD to 10.7 PPD, and increasing the disposal-related tonnage by 6.6 million tons, the 65% landfill diversion rate of 2010 would translate to a 49% recycling rate today, which is closer to the truth about how recycling is measured in most other places. CalRecycle is moving **BEYOND WASTE** by wanting to count recycling activity beyond a landfill. This process will take the next 20 months where we can call out what is missing today, and dial in on the programs and incentives needed to get to 75% by 2020, and towards zero waste, or 90% by 2025, that many California communities have already set their goals on.

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