
Beyond Waste



A Regulatory and Market Report by Edgar & Associates, Inc. November 1, 2013



“This is the city: Los Angeles, California. I work here. I’m a garbage cop, but not the MRF police”.....This is Sergeant Joe Friday here, reporting on garbage in this big flat city, and boy, did we have a lot of garbage in this city in my day. My Mayor Sam Yorty rode into the office in 1960 by offering convenient collection with one can, and got rid of smoky backyard burn cans and that peaky separated food waste collection. Garbage Can Sam made it easy to clean up this city and haul our trash out to the Hills. That was over fifty years ago. Today, November 1, 2013, the Puente Hills Landfill will be closed forever, ending Sam Yorty’s legacy. Downtown says we will go back to collecting food waste separately. I’ve heard the city is

still looking at this big waste-to-energy burner. They are talking about franchising the commercial waste and squeezing out the small Armenian haulers. I’ve heard that waste-by-rail transfer station to the desert Mesquite Landfill past Salton Sea is dead for now, and that Eagle Mountain Landfill lost the landfill race to a tortoise. This is the city at the garbage crossroads once again, but this time without Sam Yorty or Sam Egigian.

The city of Los Angeles and the state of California are at the crossroads where AB 32, greenhouse gas reduction strategies, and AB 341, mandated commercial recycling and higher recycling goals, could propel the state towards energy independence, domestic recycled-content manufacturing, and green job creation. The AB 341 75% Recycling Plan Report to the Legislature will be delivered by January 1, 2014. The AB 32 Scoping Plan Update for 2013 could be adopted by the California Air Resources Board this December. We need 10% less carbon in our transportation fuels, 33% renewable energy, and 75% recycling, all by 2020. Los Angeles is straddling the rail between the City’s RENEW LA plan of advanced thermal technologies and Los Angeles



Sanitation District (LA SAN's) plan of mixing out-of-County waste-by-rail exportation with conversion technologies. As state-permitted remaining landfill disposal capacity has increased to over three billion cubic yards, the demand for disposal has dropped by millions of tons – from 42 million tons being buried in 2006 to 29 million tons in 2012. The landfill capacity glut has been leading to new landfill pricing strategies at a time when emerging organic technologies are trying to compete. *“Less Tons, More Capacity – Tastes Cheap, Less Filling”*.



LA SAN posts a highly informative quarterly publication with lots of facts, and just the facts: *“Status Report on the Development of a Waste-By-Rail System and the Evaluation of Alternative*

Technologies”. The Report provides the on-going efforts on the implementation of waste-by-rail development, and preparing for the closure of Puente Hills Landfill today. Mesquite Landfill has been ready to receive waste-by-rail and by-truck. The state oversight agency, CalRecycle, approved a Permit Revision where up to 4,000 TPD (of the permitted 20,000 TPD) could be trucked in from LA to Imperial County instead of transferred only by rail, and the landfill capacity at Mesquite will increase from 970 million cubic yards to 1.1 billion yards based on a new "software" program, tipping the state-permitted available capacity to over 3 billion cubic yards. Mesquite picks up 130 million tons of capacity, while Puente Hills will be leaving 10 million tons of remaining permitted capacity on top of the hill, or about five years of capacity. The October 31, 2013 closure date was based on an input rate of about 8,000 TPD, well above the 5,100 TPD to 6,800 TPD that was buried from 2010 to 2013. If you take 10 million tons of potential disposal and book a charge of \$30 per ton at a discounted rate, you are talking about \$300 million in potential revenue over the next five years. LA SAN estimated the financial impacts of closure over the next five years to be an additional \$75 million in increased gate fees to tip at the Puente Hills MRF, an additional \$15 million to move from green waste ADC to off-site markets, an additional \$160 million loss in green power production, and a loss of \$60 million to a variety of County and community programs.

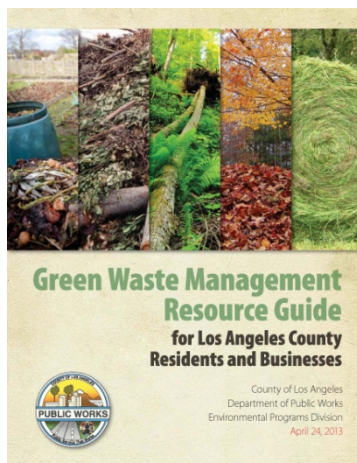
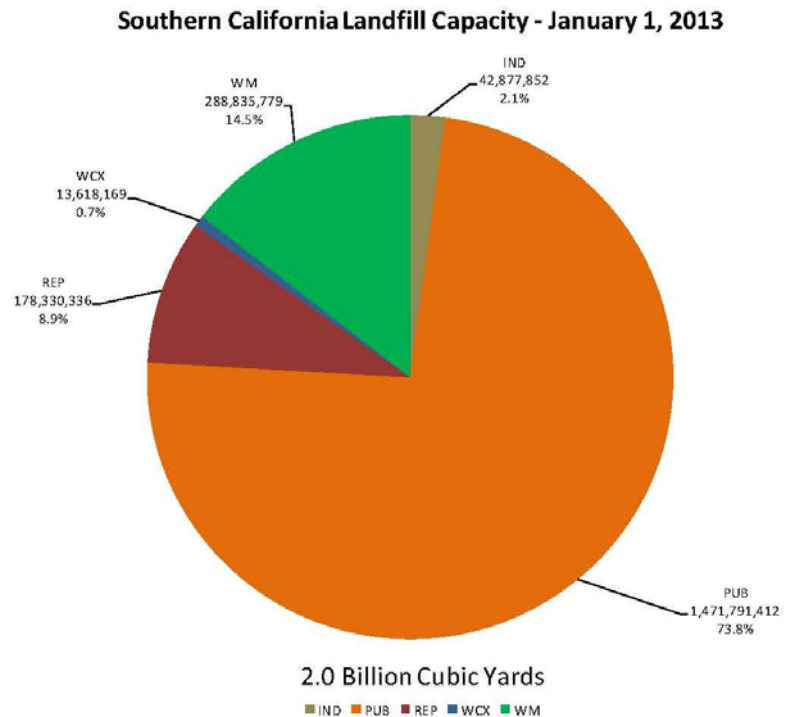
LA SAN has been in a Cost Transition Program, anticipating their new waste-by-rail system costs about \$80 per ton to operate. The tip fee has increased from under \$20 per ton in 2000, up to \$29.42 per ton in 2008, to \$38.41 per ton in 2013. With County's landfill system waste disposal down by 41% overall since 2005 with Puente Hills is off 56%, LA SAN lost a potential of over \$139 million in tipping fees just at Puente Hills, and will leave another \$300 million in unused capacity. A new tiered volume discount was introduced in January 2012, offering discounted tipping fees as low as \$28.43 per ton, to attract the disappearing tonnage, in which tonnage increased from a low of 5,150 TPD in 2011 to 7,000 TPD in 2012. It has been a race to the bottom in landfill pricing as technology is now available to raise the bar.

Even with the closure of Puente Hills landfill today the market is over saturated with capacity and is extremely competitive. Southern California has two billion cubic yards of remaining state permitted disposal capacity that could easily last the next 100 years at current disposal rate. The LA SAN reports the ability of private companies to “internalize” their collection and landfill operations by utilizing their own capacity to maximize their revenues, but the public sector

landfills is stepping up and fighting for revenue. El Sobrante Landfill has over 131 million yards of capacity and Sunshine Canyon has about 100 million yards, and could easily suck up Puente Hills tons. It is the Orange County Landfill system with over 165 million yards of capacity in waiting and the San Bernardino County Landfill system with over 172 million yards of capacity that have entered the market. Chiquita Canyon to the north is smart to hold the line on pricing and wait for the market to stabilize later.

With both the private and public sector stepping in to offer cheap landfill capacity, the long anticipated \$450 million LA SAN waste-by-rail system has been shuttered for now. The ***Weapons of Mass Disposal*** have been found at El Sobrante Landfill with over 135 million yards, Orange County landfills with 165 million cubic yards and San Bernardino County landfills with 172 million cubic yards, have derailed LA SAN's plan and could even thwart the development of organic processing facilities. The trash train should have left the station by now, but has been mothballed.

LA SAN is not *really* giving up on waste-by-rail; it has just been delayed until landfill capacity stays significantly below the \$80 per ton tip fee that it will cost to waste-by-rail which will be decades from now. With the LA SAN benchmark pricing of \$80 per ton, anaerobic composting in-town and in-vessel could compete, where biomethane would be available in 30 days, instead of over 30 years at a landfill.



LA SAN has done a great job developing mega-landfills, waste-by-rail systems, transfer stations, biosolids co-composting facilities, and exporting mechanisms, but as a region has failed to adequately plan for the handling of green waste and the possibility of managing co-collected residential green waste and food waste. Puente Hills has been using 720 TPD of green waste as Alternative Daily Cover (ADC) as landfill-based landfill diversion to cover a landfill, totaling over 4.4 million tons since 1988. LA SAN has evaluated the absorption capacity within the county and in surrounding counties, and they claim there is sufficient transfer facility capacity within close proximity of the Puente Hills Landfill to manage all of the 720 TPD green waste that will have to be

transported to facilities and sites in neighboring counties. Their conclusion is confirmed by the **Green Waste Management Resource Guide** issued in April 2013 where there are more than 50 facilities listed in Los Angeles County alone to process and transfer green waste. The Guide claims that there is 6,155 TPD of chipping and grinding capacity and 9,676 TPD of composting capacity in the southern California five-county region. If true, the myth of composting capacity scarcity in Southern California has been debunked.

As noted on an earlier map, LA plans had planned to dump a majority of their green waste on surrounding counties as agricultural land application. Ventura County passed an ordinance establishing standards pertaining to land application of mulch, as LA has dumped too much contaminated, processed green waste on their agricultural lands. Kern County has been dumped on for too many years. Valued compost markets have been developed in these counties, and the dumping of green waste corrupts the progress



the compost industry has achieved in setting quality standards for sustainable and organic farming practices. Broadcasting uncomposted processed green waste around the counties also propagates the expansion of both plant and animal pathogens. California is laced with quarantine zones to curtail the spread of Sudden Oak Death Syndrome, Light Brown Apple Moth, Asian Citrus Psyllid, and the European Grapevine Moth to name a few. Composting is a treatment method for many of the plant and animal pathogens and needs to be utilized, not bypassed, on the organic highway. Starting Nov, 1, 2013, let's see the 720 TPD of green waste ADC go to one of the composting facilities with the 9,676 TPD of capacity, and not be carelessly land applied. CalRecycle has just released proposed regulations to set standards for land application of green waste to protect the organic markets that have been developed.



Using green waste for ADC or land application blocks the ability to add residential food waste to residential green waste to generate compost and/or anaerobic digestion (AD) feedstocks. With a co-collected residential organic stream, commercial organics can be added to mix loads with up to 60% food waste for a dry fermentation AD process. Costs for covered aerated static pile composting systems in a complex air district could go up to \$50 per ton, while AD could cost from \$60 per ton to \$80 per ton at the gate for the in-town in-vessel facility. With the LA SAN waste-by-rail system operational at \$80 per ton as planned, the future of green waste and food waste could have been local AD facilities competing against a waste-by-rail system or an expensive waste-to-energy facility at over \$100 per ton. Instead,

viable sustainable alternatives are fighting against the weapons of mass disposal with cheap landfill gate rates. At a time when technologies such as anaerobic digestion and covered aerated static pile compost systems are being scaled down and commercialized to develop the local infrastructure, the landfill glut has bypassed the scarcity myth, with demand down and supply up to over three billion cubic yards in California, with two billion cubic yards in the Southern California market alone. Discounted landfill pricing is being offered at a time when new organics processing options are launching, potentially stymieing their further development. California has simultaneously over-prepared for waste disposal, while under preparing for waste prevention and has established a dual system that is not compatible in Los Angeles, which proves an Einstein corollary – which one must not simultaneously prevent and prepare for waste.

Landfills are at a tipping point in time. The three billion cubic yards of remaining capacity translates into about 1.5 billion tons of garbage that can still be buried. The amount of garbage already buried to date in California landfills is also about 1.5 billion tons. Landfills are a dirt technology where it takes over 30 years in a dry tomb to capture a disputed amount of landfill gas. Anaerobic digestion is today's technology that takes only 30 days to convert organics to an extremely low carbon fuel, renewable energy and compost.



Garbage Can Sam Yorty got rid of backyard burning, and got us on one can collection with the advent of sanitary landfills. Looks like Sam Yorty did a great job in his time and in his place. Sam Yorty promoted a vision that closes out over 50 years later on November 1, 2013, leaving his legacy truly in place forever and ever. We are now stuck with a lot of cheap landfill capacity, as the city claims to be looking at alternatives ***Beyond Waste***. With the closure at the once-largest



landfill in the United States, the city is toying with waste-to-energy and the County is mothballing the 20-year-in-the-making waste-by-rail system. The city needs a new Sam Yorty, a man who can take a vision that could last the next 50 years in this time and in this place. A vision that holds each community accountable for their own waste stream, by keeping the organic materials in-town and in-vessel, by generating extremely low carbon fuel, renewable energy and compost, for the community. As the garbage issues burn, the city should not be fiddling with waste-to-energy or cheap landfills, but should be promoting local sustainability by converting our organics into distributed low carbon energy products and using our recyclables as feedstocks for domestic manufacturing. ***"This is the city: Los Angeles, California. I work here. I recycle. I am looking for the facts, just the facts."***