**2013 WHITE PAPER**
**LEGISLATIVE TASK FORCE FOR SWANA CALIFORNIA CHAPTERS**

# 75 Percent Diversion and Beyond: The State's Role in Development of New Solid Waste Management Infrastructure and Diversion Programs in California

California has led the nation in creating integrated solid waste management programs that place a priority on diverting waste materials away from landfills. In 2011, California diverted 65 percent of the 86 million tons of municipal solid waste generated statewide, far exceeding the requirements of AB 939 (Sher). This was possible, in large part, because local governments and solid waste management companies across the state have made significant financial investments over the years to develop and implement waste diversion programs as well as constructing and operating recycling facilities.

With the passage of AB 341 (Chesbro) in 2011, a new state goal was established where, by the year 2020, 75 percent of the solid waste generated in the state would be managed solely by source reduction, recycling, and composting. CalRecyle is currently developing a plan for achieving this new statewide goal, herein referred to as the "75% Plan," that will be submitted to the Legislature by January 1, 2014.

In March 2010, the Legislative Task Force (LTF) for the California Chapters of the Solid Waste Association of North America (SWANA) developed a white paper outlining the fundamental strategies and essential tools necessary for achieving greater waste diversion in California. This white paper addresses the new paradigm contemplated by CalRecycle to implement the provisions in AB 341 related to a statewide 75% recycling goal for managing solid waste.

## Proposed Framework for Achieving Higher Diversion

The LTF asks that CalRecycle support local governments across the state in their efforts to add to the diversion infrastructure and programs developed thus far, rather than change to a totally new solid waste management paradigm.

CalRecycle is proposing sweeping changes on how solid waste diversion is measured in its plan to achieve a 75 percent "recycling" goal. "Recycling," in this case, is comprised of source reduction, recycling, and composting. In the 75% Plan, CalRecycle proposes to establish a new metric for measuring progress towards this goal, whereby all landfill diversion programs including alternative daily cover (ADC), alternative intermediate cover (AIC), and transformation (waste-to-energy) would be considered disposal. Additionally, CalRecycle proposes to change the time period in which the per capita disposal baseline is calculated, arbitrarily modifying the baseline from 12.6 to 10.7 pounds/resident/day. This would force jurisdictions to divert more than 75% because their starting point (baseline) is artificially lowered.

We believe that this new construct, if enacted through legislation and implemented by regulation, would waste investments already made in existing diversion programs, force local jurisdictions to a state-preferred infrastructure that usurps local control, and prevent

implementation of environmentally and fiscally sustainable pathways towards greater diversion. Furthermore, the new diversion infrastructure required for this plan cannot be built by 2020 (only 8 years from now) given the extensive permitting process, regional siting difficulties, lack of markets for end products, and the severe municipal budget constraints across the state. Lastly, while CalRecycle views this new construct as a measurement system separate from AB 939, we believe that if enacted and implemented, it will become the new mandated metric and it will replace the system originally enacted by AB 939 and SB 1016 for jurisdictions.

CalRecycle's proposed plan should move from a prescriptive to a performance-based plan. Rather than mandating technologies and disregarding others, the 75% plan should allow local jurisdiction to select technologies and programs that are best suited and most sustainable for their communities. For example, composting may work well in many rural areas but may not be suitable for most urban areas. By streamlining goals, legislation, and regulations to allow local jurisdictions to implement innovative and sustainable programs, the goals established by AB341 can be achieved with fewer unfunded mandates on local jurisdictions.

The LTF proposes a phased approached towards greater diversion, which is performance-based rather than state prescribed. The first statewide goal should be 75% diversion, as currently defined in statute, and based on the existing per capita baseline. Once 75% diversion is achieved, additional forms of diversion can be explored in a deliberate and measured manner in collaboration with local jurisdictions and private industry. This phased approach has the advantage of applying the successes and lessons of the first phase to next, and allowing the infrastructure and programs from the first phase to gain their financial footing. Additionally, a phased approach would adhere to the Legislature's intent (indicated in AB 341) of sustaining the existing diversion infrastructure and preserving the broad discretion conferred to local agencies regarding the management of municipal solid waste. The LTF's proposed strategies for achieving 75% diversion are summarized in the following table and discussed below:

| Strategy Proposed by SWANA LTF | Estimated Statewide Diversion After Implementation |
|---|---|
| **ACHIEVING 75% DIVERSION (Currently 65%)** | |
| **Strategy 1**: Allow Full Implementation of Mandatory Commercial Recycling Regulations | 69% |
| **Strategy 2**: Facilitate the Development of Diversion Infrastructure for Food Waste | 75 % |
| **Strategy 3**: Expand Product Stewardship and Extended Producer Responsibility Programs | Source reduction and markets for recyclables |
| **75% DIVERSION AND BEYOND** | |
| **Strategy 4**: Utilize Lifecycle Analysis to Select Sustainable Diversion Options and Technologies | 75% and beyond |
| **Strategy 5**: Support Continued Operations of Environmentally-Protective, Well-Designed Landfills and Diversion Programs at Landfills | Manages residuals and recycles waste materials |

## STRATEGIES FOR ACHIEVING 75% DIVERSION

### Strategy 1: Allow Full Implementation of Mandatory Commercial Recycling (MCR) Regulations to Achieve 69% Diversion

**Background.** The MCR regulations adopted by CalRecycle on January 17, 2012, are intended to divert 2 to 3.5 million tons of the estimated 27.6 million tons of commercial waste disposed of every year in order to achieve a reduction in greenhouse (GHG) emissions of 5 million metric tons of carbon dioxide ($CO_2$) equivalents. The MCR regulations took effect on July 1, 2012. Businesses, public agencies, and multifamily dwelling of five units or more are now required to source separate materials from solid waste or subscribe to a recycling service.

**Implementation**. Evaluate the effects of the full implementation of the MCR regulations prior to adding additional programmatic burdens. According to CalRecycle's estimates, this measure potentially could increase statewide diversion to nearly 69% based on the 86 million tons of waste generated in 2011.

### Strategy 2: Facilitate the Development of Diversion Infrastructure for Food Waste to Achieve 75% Diversion

**Background.** According to CalRecycle's Organics Roadmap IV (2011), food waste is the largest fraction of compostable materials disposed of statewide, comprising of 5 million tons annually. In diverting this amount of food waste to technologies such as anaerobic digestion and composting, statewide diversion could reach 75 percent when coupled with MCR.

Local discretion, however, needs to be exercised in order for the technologies and facilities that are best suited, most cost-effective, and sustainable for each region of the state to be selected. For example, the amount of food waste and its share of waste stream vary throughout the state. Additionally, the land use and air quality permitting constraints that exist in highly urbanized areas make it very unlikely that new composting infrastructure will be developed in these areas in foreseeable future. Consequently, food waste management needs to be tailored to each region of the state. If performance standards or best management practices are established for food waste management programs, they should not restrict the local jurisdiction's ability to select a program or technology.

Finally, products derived from food waste will need markets to make this new infrastructure financially and environmentally sustainable. Some regions of the state have vast agricultural lands where compost can be used. However, in highly urbanized areas, this is not the case. CalRecycle can play an important role in creating markets for these new products and in reducing regulatory constraints so that innovative programs and technologies can be economically viable.

**Implementation in Urban Areas**. In highly urbanized areas, anaerobic digestion may be the best technology for managing food waste. This could be achieved in separate anaerobic digesters dedicated to food waste or comingled with sewage sludge in wastewater treatment plant anaerobic digesters. In most urban areas of the state there are wastewater treatment plants with anaerobic digesters that process sewage sludge, an essential step in producing

biosolids. Biosolids are beneficially used for soil amendment, whether in compost or in direct land application. CalRecycle should:

- Work with sanitation agencies to remove legislative and regulatory impediments to use of excess anaerobic digestion capacity for processing food waste. In utilizing existing anaerobic digestion facilities, it avoids the difficult and costly permitting process involved in siting new facilities, particularly in urban areas. CalRecycle could fund pilot studies to determine the optimum digestion or co-digestion conditions for food waste, and what the cost per ton would be to process food waste.
- Fund pilot programs where jurisdictions have identified the commercial sources of food wastes willing to participate, developed agreements with hauling companies for food waste collection, and have partnered with sanitation agencies for the processing of the food waste.

**Implementation in Rural Areas**. ~~In rural areas, c~~Composting facilities are more ~~prevalent~~ likely to be sited ~~-~~in rural areas, ~~-~~which could be in remote parts of urban or rural counties. ~~and a~~Agricultural lands are a significant potential ~~avenue~~end market for ~~where~~ composted material ~~could be used are more likely to be present~~. Transportation of food wastes is an added cost that needs to be considered. CalRecycle should work with existing composting facilities on how food waste could be added to their feedstock, and continue to remove regulatory barriers for siting and permitting facilities. CalRecycle should also work with agricultural trade organizations to expand compostable organics programs in agricultural lands. In certain rural areas, ~~application of biosolids,~~ anaerobic digestion and other technologies may be feasible and should be explored.

**Implementation of Market Development**. The State needs to support the development of robust markets for waste-derived products in order for food waste diversion to be financially sustainable. CalRecycle should assist in this endeavor by:

- Promoting development of local markets
- Coordinating with various state agencies to streamline overlapping or contradictory regulations
- Working to develop specifications for compost material used by state agencies, such as Caltrans, to include a minimum percentage of food waste or green waste in the compost mix
- Establishing a program where diversion credits could be given to local jurisdictions that use compost derived from food waste or green waste

**Strategy 3: Expand Product Stewardship and Extended Producer Responsibility (EPR) Programs to Reduce Wastes**

**Background.** Preventing waste from ending up in a landfill should start with the initial product itself and continue with those involved in the lifecycle of that product. Local government's public outreach can facilitate reducing, reusing and recycling to a certain

extent, but ultimately products need to be recyclable to have a complete reuse cycle. Producers should be responsible for designing, manufacturing, and packaging a sustainable recyclable product. Distributors and retailers should also be involved in establishing and managing end-of-life systems for difficult-to-recycle products as an integral part of their marketing and customer service. Product stewardship can be achieved in California but it requires a new approach, such as legislation that incentivizes manufacturers to make an investment in redesigning products that promote environmental sustainability while establishing a convenient way for consumers to return used or unwanted products to the manufacturer. Without legislative incentives to drive this shift in responsibility, many products will continue to be sent to a waste disposal facility at the end of their useful lives, placing the task of their final handling, diversion or disposal on local government, which is not always the most practical and cost effective approach.

**Implementation**. Recent legislative efforts to establish EPR programs for paints, carpets, batteries, and mattresses, are examples of the types of programs the LTF has supported in concept and hopes will continue. Thoughtful and collaborative legislation will be necessary so that unfunded burdens are not inadvertently placed on local governments. It is also important to carefully craft the programs such that the funds earmarked for recycling or EPR programs won't be diverted to other purposes by the Legislature.

Consideration should be given to establishing recognition-based EPR programs. For example, it is our understanding that the wine industry has historically opposed a surcharge to wine bottles to fund a statewide buyback recycling program. The state could work collaboratively with the wine industry to develop an alternative program that incentivizes consumers to return the empty bottles for processing and reuse, such as a discount on new purchases in exchange for returning used empty bottles or providing wine club members with prepaid postage so that they can return to the empty wine bottles in the same shipping box. The State could recognize wine industry participants with "green awards" and publicity.

## BEYOND 75% DIVERSION

### Strategy 4: Utilize Lifecycle Analysis to Select Sustainable Technologies and Options That Will Achieve Greater Diversion

**Background.** Lifecycle analysis is a technique used to assess the environmental and cost impacts associated with all the stages of a product's life from cradle to grave. It includes raw material extraction, materials processing, manufacture, distribution, use, repair and maintenance, recovery, recycling, and disposal. A robust lifecycle analysis can also be used to select new technologies that manage, recycle, or convert wastes based on understanding their net environmental benefits and costs.

To achieve a statewide diversion greater than 75%, alternatives, including emerging technologies that convert post-material recovery facility (MRF) wastes or source separated waste residuals into usable products, renewable energy, or non-fossil fuels, need to be carefully evaluated to determine their sustainability. If they are determined to be viable, given existing conditions, then legislation and regulation need to allow their implementation. Otherwise, these end-of-the-line wastes will be landfilled and the opportunity for

environmentally-beneficial uses will be lost. Local jurisdictions should also be allowed to select and implement new technologies at any time, irrespective statewide diversion level.

**Implementation**. The LTF asks that CalRecycle:

- Finalize the June 2009 Draft Report titled "Life Cycle Assessment and Economic Analysis of Organic Waste Management and Greenhouse Gas Reduction Options" and use it as a starting point for analyzing new technologies and options for managing wastes.
- Provide diversion credits to technologies or facilities that produce renewable energy or fuels from solid waste.
- Secure a Cap-and-Trade exemption for diversion-related technologies and facilities producing renewable energy or fuels
- Work with the Legislature to remove the zero emissions criteria for renewable energy technologies and merely make them subject to the same air quality regulations as all other technologies, including landfills.

**Strategy 5: Support Continued Operations of Environmentally-Protective, Well-Designed Landfills to Manage Residuals and Post-MRF Wastes, and Diversion Programs at Landfills**

Although the state's priority for waste management is diversion of wastes from landfills, some fraction of waste will still require disposal. Therefore, it is essential that environmentally protective, cost effective landfills be included in the alternatives for waste management. Because of the desire to divert recoverable materials from landfills, landfills have often been mischaracterized as being unsafe and even unnecessary. However, until sufficient infrastructure, markets, funds, and public and political support are in place to divert all wastes, landfills will continue to serve a critical role in managing solid waste in California. Today's landfills are integrated facilities that are not just long-term repositories for solid waste that cannot be recycled. They are designed to protect the environment and public health, serve as a recycling alternative for beneficial reuse of waste materials, and allow production of significant renewable energy from methane capture. Adequate landfill capacity must continue to be a key component of any integrated waste management program.

**Implementation**. CalRecycle should:

- Support critical diversion programs that occur at landfills, such as the beneficial reuse of green waste, asphalt, and other materials, which reduce the need for virgin materials and soils. Many jurisdictions have invested in these diversion programs and rely on them for complying with AB 939 goals.
- Focus on market development for C&D wastes. As the economy recovers, more markets will be required.

**Closing Remarks**

The diversion, recycling and disposal infrastructure in place today were selected and financed by local jurisdictions. The SWANA LTF is concerned that this infrastructure will be supplanted by a state-imposed diversion system which may not be environmentally and economically sustainable, and may have unintended long-term consequences should it fail (e.g., illegal disposal, wasted financial investments by local jurisdictions on unsustainable or inappropriate mandated programs). This concern needs to be part of the decision-making process in the development of new infrastructure and programs. The strategies proposed herein by the SWANA LTF expands upon the existing infrastructure and programs rather than take away or eliminate the diversion tools needed by local jurisdictions to achieve greater diversion.

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