**Attachment A**

**Comments of the Solid Waste and Recycling Industry on the Proposed Short-Lived Climate Pollutant Reduction Strategy**

1. **CalRecycle Recent Estimates Regarding Compost and AD Capacity (“State of Recycling in California” - March 2015)**

There is some very interesting information provided in CalRecycle’s “State of Recycling in California” report released in March 2015. It does not appear that the Draft Strategy considers several key factors delineated in the CalRecycle report. Several key extracts of that report are included below:

**Composting and AD Capacity**

*“If all of the currently disposed organic material were instead recycled, the state’s composting, chip and grind, and AD facilities would have to process an additional 12 million tons of organic material each year. As California moves toward greater organics processing, it is critical to consider whether the state has sufficient physical infrastructure to process this additional material. Most organics processing facilities run at levels close to capacity; at most, current facilities could support an additional roughly 1.5 million tons of material per year. Figure 21 shows the estimated available capacity of composting and AD facilities across the state. Not only is capacity limited, but most of the facilities with moderate levels of additional capacity (more than 60,000 tons per year) are not located near population centers.” (Page 45)*

**Composting**

*“****There are currently 169 active permitted composting facilities in California that process approximately 5.7 million tons of material per.*** *Due to updated Department estimates, the throughput of composting facilities is slightly smaller than what is reported in FacIT. The 12 largest composting facilities in California account for 50 percent of the current throughput, while roughly a third of active facilities manage 5,000 tons or less of organic material each year. Most of the high-throughput facilities are located in the Central Valley and are distant from population centers that can generate large amounts of compostable material. It is likely that some of these composting facilities also accept feedstock from agricultural sources.” (Page 41)*

***“The total number of permitted composting facilities in California has grown substantially from fewer than 10 in 1995 to almost 250 in 2014 (only 161 of these facilities are actively operating).*** *This growth has been steady except for around 2006 and 2008, when existing facilities were closing at the same rate that new facilities were being added. However, it is difficult to track exactly when the composting facilities closed or to identify the reason behind their closure.” (Page 43)*

**Anaerobic Digestion**

*“California currently has 13 permitted, active facilities that process approximately 187,000 tons of material annually (see Figure 19). Another dozen or more AD facilities are planned or in the permitting process. The choice between traditional composting and AD is dependent on local regulations for facilities, type of organic material, and cost.” (Page 43)*

Therefore, the important takeaway from this information is that 75% of all organics equals about 9 million tons of organics annually. The current infrastructure is woefully inadequate and is operating at near capacity but could manage an additional 1.5 million tons. Nevertheless, much of that additional capacity is located far from urban areas where most organics are generated.

In addition, existing composting and AD capacity processes less than 6 million tons/year. The existing AD and composting capacity has been added primarily since 1995. Therefore, we have added about 13 active AD facilities and 169 active composting facilities in the past 20 years.

Regarding AD facilities, we have roughly 13 facilities processing 187,000 TPY. According to CalRecycle data, there are about 12 more in various stages of siting. If we assume that all of these 12 new facilities are somehow sited, permitted and operating by 2020, we will have 25 AD facilities operating in 2020. The average processing capacity of the 13 existing facilities is about 14,400 TPY. If we assume that the average processing capacity will increase by 25% for these 25 AD facilities by 2020, than the 25 AD facilities would account for only 500,000 TPY of organics processing capacity in 2020. Therefore, by 2020, the vast majority of the 9 million tons of organics will need to be handled by new composting infrastructure.

1. **Feasibility of Adding Organics AD or Composting Infrastructure**

One of North America’s largest AD project is in Southern CA. The facility is not yet operating, but currently plans to have a throughput of 300,000 tpy in 2020 and near term 80,000 TPY at a reported cost of roughly $50M.

Another “large” AD facility, ZWED in San Jose, which is operating today, has a planned throughput of 90,000 tpy.

Existing large AD facilities currently operating or under construction represent less than 200,000 TPY in capacity. This is significantly less than the total AD capacity that would be required to handle 75% of the estimated 12 million tons of organic waste currently disposed in landfills. In fact existing AD and composting capacity represents about 35% of the total AD or composting capacity that would be required to beneficially use 11 million tons of organic waste per year – necessary to achieve a 90% organic diversion capability. The Draft Strategy would require the solid waste industry to create three times that capacity in just nine years

Since other conversion technologies or incineration capacity is strongly discouraged in California, there are no other options available right now for organics processing except compost or AD. With no new technologies likely in California, particularly by 2020, the more likely outcome, if compost and AD facilities are not built, will be diversion of organics to direct land application of green materials and export of food waste and other organics for disposal to Nevada and Arizona, which should not be considered an option.

The one exception to land application and export might be the use of excess municipal wastewater treatment anaerobic digestion capacity, but progress has also been slow on that front because of concerns over the purity and uniformity of feedstock and impact on those anaerobic digesters. However, with proper investments, these facilities may be utilized to fill that early gap of needed infrastructure for organics management.

California has only added 159 new compost facilities since 1995 (10 operational facilities in 1995 to 169 operational facilities in 2015 or over a 20 year span) and those 169 facilities currently operating, process around 5.7 million tons of compost/year.

So in order to realistically implement the 75% and 90% targets in the Draft Strategy, we are looking at building on the existing 5.7 million tons/year of compost capacity with some small amount of added AD capacity.

Assuming that we can compost any amount of food waste (which is highly unlikely because of odor and compost quality issues), California must add 135-150 new composting operations in 4 years by 2020 and expect those facilities to process 8.5 million ton/year of compost (9 million minus the roughly 500,000 of organics processed by AD). Will the final SLCP Strategy be able to demonstrate and explain the feasibility of permitting and siting this level of organics processing infrastructure?

1. **What is the cost of adding organics infrastructure?**

The Draft Strategy calls for diversion of 75% of organics by 2020, which will require 9 million additional tons of organics diversion capacity statewide by 2020—four years from now. This equates to an additional 135-150 compost operations and 12-15 more AD facilities over the next four years. Using a low-end estimated cost of $10 million per facility, the 135 - 165 composting and AD facilities will require an investment of $1.35 to $1.65 billion in four years. This does not include the substantial additional costs to collect, process and deliver the organics to the facilities. Nor does it include the $100 million-plus in added funding that will be needed to comply with the Compost General Order ($30 M for the current 121 facilities and $30 M for the new capacity plus a doubling for pads.)

It is important to note that a vast majority of the costs of expanded organics infrastructure will be funded through rate increases on residential and commercial customers. The process for raising those rates is often dictated by local contracts and franchises and often takes years to accomplish. What will be the source(s) of this funding and how can the money be raised in so short a period of time?

1. **SWRCB Compost General Order**

Compost General Order: *“The proposed General Waste Discharge Requirements for Composting Operations (Order) will impose (additional) compliance costs on the compost industry that will increase the total cost of operations and decrease net returns****. The proposed Order will require initial capital investments of approximately $25.2 million in retention ponds, monitoring wells, and drains. Annual investment costs will be about $2.2 million, and annual monitoring and maintenance will be an additional $1 million.*** *Although these amounts seem large when expressed in relative terms or in units of production, the effect on compost operators will be manageable. The industry has 121 facilities subject to the proposed Order that processes about 7.8 million cubic yards of compost annually.*

*Coalition Letter to SWRCB: Furthermore, the economic analysis assumes “initial capital investment of approximately $25.2 million in retention ponds, monitoring wells, and drains”; this analysis disregards the reality that a significant number of compost facilities will be required to install operating pads in order to meet water quality objectives, at a total cost many multiples higher than the low estimate provided. It is a significant oversight to have concluded that there will be no economic impact from construction of operating pads due to these new standards.”*

The $28 M assumes 121 impacted existing facilities and it is fair to assume that these new standards will apply to all new facilities as well and actual costs will be significantly higher than the SWRCB analysis. Meeting a 90% reduction in landfill organics will require approximately 100 to 300 new or expanded facilities. How will the Draft Strategy cover these additional costs will be

1. **Are Suggested Methane Reduction Levels accurate and realistic?**

The ARB has not been clear on what are exactly the assumptions and data that have gone into projecting the methane reduction that are anticipated due to the diversion of organics from landfills.

The ARB still appears to relay on 12-year-old assumptions that landfills, on the average, only collect 75% of the methane produced within the landfill and only 10% of the remaining 25% of uncontrolled methane gets oxidized in landfill cover and cap materials.

The 75% number is based on an informal survey of landfill operators that indicated a collection range of between 50 and 95% -- with the average being 75%. If these numbers are to be believed, it demonstrates that some landfills are able to achieve a very high degree of methane control. That is certainly the objective of the signers of this letter. It is our view that the LMR Early Action measure was intended to raise the bar on all landfills to ensure maximum control of methane.

We will be submitting for your review more recent studies on this topic and we look forward to working with ARB and CalRecycle staff to develop an updated analysis of the positive GHG impacts that have been generated by the LMR.