Solid Waste Industry Group
Solid Waste Industry for Climate Solutions

California State Association of Counties
County Sanitation Districts of Los Angeles County
Inland Empire Disposal Assn
League of California Cities
Los Angeles County Waste Management Assn
Monterey Regional Waste Management District
Orange County Waste and Recycling
Republic Services, Inc.
Rural Counties' Environmental Services JPA
Solid Waste Association of North America, Calif. Chapters
Solid Waste Assn of Orange County
Waste Connections
Waste Management

July 12, 2013

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California Air Resources Board
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Via Email:

Subject: Comments - Waste Management Sector Plan for the 2013 Scoping Plan Update

Dear Ms. Mortensen and Ms. Nichols:

Thank you for the opportunity to provide comments on the proposed Scoping Plan elements related to the Waste management sector that has been prepared by CalRecycle and the Air Resources Board (ARB). The Solid Waste Industry Group (SWIG) and the Solid Waste Industry for Climate Solutions (SWICS) –referred to herein as the Coalition – represent a cross section of local governments and private companies that have financed and built much of the solid waste management and diversion infrastructure in the state. Our goal is to work collaboratively with CalRecycle and ARB on the 2013 Scoping Plan Update (SPU) to achieve a practical, feasible, and financially sustainable framework for greater waste diversion and additional greenhouse gas (GHG) reductions.

PROPOSED ELEMENTS WE SUPPORT

The Coalition has reviewed the Overview of the waste management sector Plan, the Implementation Plan and the five sector specific White Papers that were the subject of the June 18, 2013 Workshop. We are strongly encouraged by the Waste management sector Plan because it recognizes that solid waste management is an integrated system that should be analyzed through life cycle approaches. In our review, we have found that we can support many of the actions proposed in the Implementation Plan. In fact, the proposed actions related to Permitting, Infrastructure, Offsets, Funding/Incentives, Markets/Quality of Products, and Public Education/Acceptance are not only reasonable, but they are absolutely necessary to ensure that the waste management sector can develop and expand the solid waste and recycling infrastructure necessary to achieve the goals of the waste management sector Plan.

To accomplish these goals will require a strong public-private partnership. The draft White Papers acknowledge that more than $3 billion of public and private sector investment will be needed to fund the infrastructure and market enhancements necessary to increase recycling. This is particularly true given the White Papers reliance on diverting 7.5 million tons annually of landfilled organics to composting and anaerobic digestion to achieve the GHG reduction goals of the SPU and waste management sector Plan.

The Coalition signatories would like to be supportive partners in this endeavor to help insure that the goals are reasonable, scientifically supported, technically feasible and economically viable. As a general rule, the Coalition believes that any diversion targets should be phased in over time to allow markets for the finished products to develop and for local governments and private companies to secure the necessary capital to build new infrastructure and develop and implement the new programs (including adoption of state regulations, local ordinances, new or modified service contracts, etc.).

The Coalition wishes to make clear that it is not trying to avoid its obligations under AB 341 or AB 32. On the contrary, we have more than complied with AB 32 to date and we are committed to continuing to reduce GHG emissions from the sector.

AREAS OF CONCERN

That said, the Coalition has serious concerns regarding the viability of the source reduction, recycling, and composting projections that are being used in the White Papers to support extremely large estimates of GHG reductions as proposed in the SPU for the waste management sector. The dramatic actions needed to achieve the reported GHG reductions in fact come shortly after the waste management sector has successfully implemented the early action methane emission control measure and when the waste management sector is making the significant capital investments necessary to implement mandatory commercial recycling.

The Coalition is also very concerned about language in the Sector Plan and White Papers that suggests bringing landfills or waste-to-energy into the cap-and-trade program. The Coalition is proposing to work with CalRecycle and ARB in a strong partnership to achieve the state's goals to minimize landfilling of waste that could otherwise be recycled, reused or utilized as a renewable energy source, all of which builds on the successes achieved under AB939.

As indicated above the Coalition has also worked with ARB to implement the most stringent landfill methane reduction measure in the world. This work has already achieved significant GHG reductions. However, ARB and CalRecycle should recognize that the cap-and-trade program under AB32 is in place to develop a market price for fossil carbon, as well as establish a trading system to reduce CO2e. Waste management is not a fit under this program because as shown in Attachment A, carbon flows from other sectors (e.g., energy sector as discussed below) into products that, following the product's useful life, are recycled into new products, utilized back into energy or become waste carbon.

Also, one of the requirements of participating in cap-and-trade is accuracy in GHG measurements. The interdependent relationship of carbon flowing in this system coupled with difficulties in accurate direct measurements (e.g., measuring emissions from landfills) further argue for not including waste management facilities in the cap-and-trade program. With a strong partnership and guided by tools such as life cycle analysis, further reductions in GHG emissions can be accomplished more effectively in a targeted fashion, while achieving the waste diversion and recycling goals of the state.

Challenges to achieving these goals will be significant. Throughout the White Papers, staff recognizes that there are daunting complexities and hurdles posed by inadequate organics management programs and infrastructure, insufficient recycling and recycling market infrastructure, chronically unpredictable recycling markets, permitting limitations, undefined capital financing capacity and slowly emerging recycling technologies.

We believe these difficulties are exacerbated by two foundational errors:

1. CalRecycle has looked past current law by (a) seemingly assuming that AB 341 established a 75% recycling mandate when, in fact, the law established a goal, and (b) classifying specific materials and activities (ADC, waste to energy, and waste tires) as disposal and "disposal-related" when they are, as a matter of law and accepted practice, recycling or "recycling-related." The former confers an aura of inevitability on proposed reduction targets that is not conferred by AB 341 itself. The latter unjustifiably inflates the volume of materials that must be recycled, composted or source reduced in order to meet the 75% goal to an additional 22.8 million tons of currently disposed material.
2. CARB has used CalRecycle's inflated recycling target (22.8 million tons) to justify proposing dramatic increases (22 million tons CO2e, almost 300% above the original Scoping Plan) in GHG emission reductions from the waste management sector.

REVISIONS NEEDED TO THE WASTE MANGEMENT SECTOR PLAN

Because of the above-mentioned complexities and hurdles, the Coalition believes that it is imperative that the ARB and CalRecycle staffs revise the waste management sector Plan as follows:

- ***AB 341 75% Goal.*** AB 341 is clearly the most important single element of the waste management sector plan for reducing GHG emissions. However, before effectively laying out what must be done to achieve this goal, a clear baseline must be established. ARB and CalRecycle are relying on an incorrect interpretation of AB 341 to determine the assignment

of responsibility for source reduction, recycling and composting that is to be used to approach the 75% goal. In addition, the Overview of the waste management sector Plan includes the following statement: "AB 341 established a clear mandate to achieve a 75% recycling goal (and associated GHG reductions) by 2020." This statement is simply inaccurate. When AB 341 was legislated, everyone agreed that this target was a goal, not a mandate. In fact, AB 341 enacted Section 41780.01 of the Public Resources Code, which states that "The Legislature hereby declares that it is the **policy goal** of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter." The legislation intentionally avoided the term mandate, and indeed, included language specifically stating that the 75% goal was not to be interpreted as an enforceable diversion or recycling mandate on local governments.

- ***Landfill Methane Emissions.*** The Waste Sector Landfill White Paper overestimates the impact of landfill methane emissions to conclude that Landfills are a "significant" source of GHG emissions without providing any citations to support this statement. The Landfill White Paper acknowledges that landfill emissions are "difficult to estimate and are subject to substantial uncertainty". The early action measure adopted by ARB must be fully evaluated and a reasonable and reliable estimate of GHG impacts from landfills should be derived before imposing additional restrictions on landfills.
- ***Solid Waste and Recycling Sector GHG Reduction Potential.*** The Coalition believes that the White Papers unreasonably overestimate the GHG reduction potential from the Solid Waste and Recycling Sector to be 22 MMCO2e of reductions by 2020.
- ***Fuels and Energy from Post-Recycled Waste Materials.*** CalRecycle and ARB staffs have not given adequate consideration to the role that fuels and energy from post-recycled waste materials can play to help achieve GHG reductions and to achieve AB 341 Goals.
- ***Proposed Course of Action – Moving Forward.*** The basis for achieving new Waste Sector reductions for 2020 in the SPU should be implementation of a sensible and rigorous commercial organics recycling program, and any additional actions should hinge upon evaluation of the effectiveness of the early action landfill methane emission reduction measure, full implementation of mandatory commercial recycling, and the additional implementation of a commercial organics recycling program.

The following comments expand on each of these points:

AB 341 75% Goal

Because of CalRecycle's proposed interpretation of the 75% goal in AB 341, our Coalition believes that a much higher bar is being set for new source reduction, recycling and composting programs and infrastructure than can reasonably be achieved through available private sector and public sector capital. Indeed, under our calculations proposed in Attachment B, California would still be faced with a difficult challenge in meeting a 75% source reduction, recycling and composting goal. However, under our Coalition proposal, instead of having to find a home for 22.8 million tons of newly recycled materials, California will still be faced with having to find a home for about 16.2 million tons of newly recycled materials by 2020. Of this total 16.2 million tons, 6.5 million tons would require new recycling capacity simply to maintain California's existing diversion rate of about 66% -- at a capital cost estimated to be $0.65 billion ($100/ton-

year). About 9.7 million tons would be "new" recycling beyond business-as-usual, which will require almost $1 billion of additional new investment dollars ($100/ton-year). This is still a significant, albeit somewhat more reasonable approach than that proposed by the SPU. The Coalition strongly requests that ARB and CalRecycle consider the proposed revised approach outlined in Attachment B.

This approach is consistent with the framework recently proposed by the Legislative Task Force for SWANA California Chapters (SWANA) in their 2013 White Paper, "75 Percent and Beyond: The State's Role in the Development of New Solid Waste Management Infrastructure and Diversion Programs in California." The SWANA White Paper (Attachment C) offers the following key recommendations:

1. Allow Full Implementation of Mandatory Commercial Recycling (MCR) Regulations to Achieve 69% Diversion. According to CalRecycle's own estimates, this measure could potentially increase statewide diversion to nearly 69%.
2. Facilitate the Development of Diversion Infrastructure for Food Waste to Achieve 75% Diversion. The Coalition supports SWANA's recommended strategy to have different implementation programs for urban and rural areas of California.
3. Expand Product Stewardship and Extended Producer Responsibility (EPA) Programs to Reduce Waste. The primary focus of these programs should be to focus on toxic and hard to handle materials in the waste stream.
4. Utilize lifecycle analysis (LCA) to select sustainable technologies and options that will achieve greater diversion. Such a LCA must be conducted objectively with the best information in the published literature, and consistent with national and international protocols.
5. Support continued operation of environmentally protective, well-designed landfills to manage residuals and post-MRF wastes, including diversion and responsible beneficial use programs at landfills.

Landfill Methane Emissions, and Solid Waste and Recycling Greenhouse Gas Emissions

The waste management sector has had more success in reducing overall GHG emissions over the past 30 years than any other sector (See Attachment D describing the accomplishments of our sector). When the previous Scoping Plan was prepared, total GHG emissions charged to the solid waste and recycling sector was approximately 6 MMTCO2e per year –with a smaller portion of this amount (approximately 1 MMTCO2e) attributable to estimated landfill emissions based upon an assumed collection efficiency of 75% and overall estimated control efficiency of 77.5% using US EPA criteria and assumptions. This represented less than 2% of the total GHG emissions in California in 2010 – a rather small amount (originally ARB estimated about 1% and has not provided supporting data to substantiate the newer 2% estimate). Other than landfill emissions, the next largest source of GHG emissions in the solid waste sector is from our collection and transport vehicles. However, reductions from this source are not allocated to our sector. Rather, the ARB is addressing these emissions separately through the incorporation of vehicle fuels under the Cap and Trade program beginning in 2015.

The first scoping plan evaluation resulted in the development of an early action control measure to further limit landfill GHG emissions through a lowering of allowable landfill surface methane concentrations. The ARB estimated this would result in approximately an additional 25% reduction in landfill GHG emissions raising the overall estimated methane control efficiency to about 83%. Of the approximately 6 MMTCO2e of landfill emissions estimated from this sector in 2010, we believe the landfill early action control measure has led to reduction of emissions to about 4.5 MMTCO2e.

The waste management sector has fully implemented these new standards and, as far as we are aware, is maintaining an exemplary compliance record. Contrary to statements articulated in the draft Scoping Plan documents; we have every reason to believe that emissions from landfills are being further reduced rather than increasing. As an example, we believe ARB has not fully accounted for the recession period where for a number of years waste generation and waste disposal was reduced significantly. ARB needs to fully reassess these estimates utilizing the increased landfill gas capture that is being achieved because of the early action measure. Attachment E (SWICS GHG White Paper) to this letter further describes the state of the art in understanding GHG emissions from the waste management sector with a focus on landfill methane emissions and their control.

We ask that CalRecycle and ARB staffs recognize in their landfill emissions and GHG reduction estimates the successful efforts made by our sector over the past 30 years and the compliance with the early action measure adopted by ARB to further limit landfill methane emissions.

Further GHG Reductions Attributed to the Solid Waste and Recycling Sector

The SPU, based upon full implementation of the AB 341 as defined thus far by CalRecycle, has targeted 22 MMTCO2e from the waste management sector by 2020. The Coalition has two issues with this target. First, ARB has indicated that they are on track to meet the AB 32 2020 goals, so the new estimate of a 22 MMTCO2e reduction is not needed for the 2020 goal, but is really part of the 2050 long-range goal. So, it is unclear to us why the SPU includes such a push to treat the AB341 goal as a "mandate." Second, as far as the Coalition is concerned, the math simply does not add up. To this point, we have not received any detailed explanation of how this number was derived from ARB or CalRecycle staffs. Our limited understanding has led us to believe that CalRecycle is somehow using an overall life-cycle assessment (LCA) of materials management that are associated with solid waste and recycling as exemplified by the US EPA chart in Attachment A.

If this is the case, we believe that CalRecycle and ARB staffs are trying to assign GHG reductions that are not under the control of our sector. As articulated in the attached ICF report prepared for Waste Management in 2008, the GHG reductions associated with the use of recyclable materials cannot be claimed by the solid waste and recycling sector (Attachment F). Rather, most of these emission reductions are due to energy savings of the manufacturing sector that uses recycled materials rather than virgin raw materials as part of the manufacturing process.

Only the bottom portion of Attachment A (US EPA Chart) depicts GHG emission sources and sinks directly associated with solid waste and recycling (Landfills, WTE, and Composting). Emission sources and sinks, due to transportation fuels, are handled by ARB under the Fuels and Transportation Sector. The upper half of Attachment A shows GHG emission reductions that are

more closely tied to the manufacturing sector – not the Solid Waste and Recycling Sector. Assigning these "upper" emission changes to the Solid Waste and Recycling Sectors will result in double counting.

As can be seen from the attached ICF White Paper (Attachment F), recycling LCA GHG reductions are very difficult to quantify and assign to the solid waste and recycling sector for the following reasons:

- ***Determining Additionality.*** Meeting additionality requirements can be a difficult hurdle for existing recycling mills, recycled steel or aluminum plants, if they have been operational prior to the existence of GHG accounting protocols. Similar problems exist for recycling conducted pursuant to state or local mandates.
- ***Measurement.*** It is very difficult to apportion GHG reduction among all the parties associated with recycling: from generators, collectors and processors to final remanufacturers. This is further complicated if any of these activities take place outside of California.
- ***Double Counting.*** Because California is capping the use of electricity and assigning that to the electricity sector, any reduction in GHG emissions from reduced energy use due to recycling should be credited to the electricity sector, not the solid waste and recycling sector.

Under existing international protocols, energy reductions achieved by the manufacturing sector by the use of recycled materials are credited to that sector. Our Coalition is very concerned that the approach that ARB and CalRecycle is taking to somehow assign these credits to our sector will result in double counting and, as a result, cannot and will not result in the level of GHG reductions projected.

Fuels and Energy from the Solid Waste and Recycling Sector

As can be seen from Attachment A and the US EPA document from which it is excerpted (http://www.epa.gov/climatechange/wycd/waste/downloads/fullreport.pdf) and discussed in the last section, significant GHG reductions can be achieved from energy and fuels produced from post-recycled waste materials that result in reduced use of fossil fuels. Unfortunately, CalRecycle's draft AB 341 Report (dated May 2012) has proposed to disallow recycling credit for existing energy that is already being recovered as part of AB 939 using existing transformation facilities. Further, CalRecycle has not provided a pathway for the expanded use of post-recycled waste materials for energy and fuel use to meet the 75% "Source reduction, recycling, and composting" goals of AB 341. The Coalition strongly requests and suggests that ARB and CalRecycle consider the expanded use of post-recycled waste materials to produce energy and fuels as a means to achieve the 75% source reduction, recycling and composting goal.

Proposed Course of Action – Moving Forward

The Coalition respectfully requests that ARB and CalRecycle rethink the approach contained in the Waste Sector Management Plan, including implementation of AB 341, and partner with us to develop a practical and sustainable pathway towards meeting the goals of AB 32 and AB 341.

We recommend the following:

- **CalRecycle's 75% Plan Needs to be Consistent with Current State Law** -CalRecycle should revise their currently proposed AB 341 75% math. Instead of the proposed approach, state the goal within a framework similar to, and consistent with, AB 939 and current law as follows:
    - Under existing law, the use of ADC and other beneficially used waste-derived materials is a form of recycling (PRC 41781.3) and should not be classified as "disposal-related."
    - Under existing law, 10% of a jurisdiction's 50% diversion requirement can be met by using waste materials to generate energy (PRC 41783). WTE is thus a form of diversion, and is more closely related to recycling than disposal.
    - Waste tires used for energy recovery is also a form of diversion, and thus is more closely related to recycling than disposal.
- **Support Legislation to Implement Sensible and Rigorous Commercial Organics Recycling** – This Coalition supports legislation aimed at increasing large generator organic waste diversion and recycling, including meat waste – primarily in large metropolitan areas that have a practical density of large organic waste generators – with a modified program for rural areas of the state. Further, we believe that a commercial organics program should be implemented at a local level consistent with the existing mandatory commercial recycling program and should include program flexibility so that jurisdictions can tailor the program to meet local needs and conditions.
- **Incentivize and Encourage Reduced Reliance on Green Material ADC** - As new organic waste management infrastructure is developed, green material and other compostable organic wastes should be increasingly diverted to composting, anaerobic digestion, and other forms of energy recovery and use. This Coalition supports the development and use of alternative non-green material forms of ADC such as MRF fines.
- **Do not assign anticipated GHG reductions associated with the transportation and manufacturing sectors to the solid waste and recycling sector** - The end use of recycled materials or source-reduced materials should be assigned to the manufacturing sector in which these activities take place.
- **Create pathways for energy production from post-recycled waste materials** – New technologies can contribute to achieving the 75% goal by 2020 in accordance with strict California environmental standards.
- **ARB AB 32 authority should not to be used to implement new waste sector programs** -The Scoping Plan Update should instead reflect our mutual understanding of the above goals.

The Coalition appreciates bringing these concerns and recommendations to your attention. We are very interested in scheduling a meeting in the near future to discuss these concerns and our recommendations. Please feel free to contact any one of the undersigned if you have any questions regarding this letter and attachments. A representative of our Coalition will be contacting you in the near future to schedule a meeting to discuss this matter.

Sincerely,

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Attachments:

Attachment A: EPA Solid Waste GHG Assessment

Attachment B: Coalition 75% Analysis

Attachment C: SWANA White Paper

Attachment D: Weiss, Thornaloe and Zannes publication on GHG achievements of Waste Sector

Attachment E: SWICS GHG White Paper

Attachment F: ICF White Paper: Greenhouse Gas Offsets from Recycling

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