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Greg Kester – Director of
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September 1, 2015

Mary Nichols, Chair
California Air Resources Board
1001 "I" Street
Sacramento, CA 95814

Submitted electronically:

[http://www.arb.ca.gov/lispub/comm2/bcsubform.php?listname=investplan2015-
ws&comm_period=1](http://www.arb.ca.gov/lispub/comm2/bcsubform.php?listname=investplan2015-
ws&comm_period=1)

Re: California Wastewater Climate Change Group and California Association of
Sanitation Agencies Comments on the Cap-and-Trade Auction Proceeds Draft Concept
Paper for the Second Investment Plan (Fiscal Years 2016-17 through 2018-2019)

Dear Chairman Nichols and Board Members:

The California Wastewater Climate Change Group (CWCCG) and California Association of Sanitation Agencies (CASA) appreciate the opportunity to comment on the Cap-and-Trade Auction Proceeds Draft Concept Paper for the Second Investment Plan. The CWCCG and CASA are statewide groups of municipalities that collect and treat over 90 percent of municipal wastewater in California, many of whom also provide recycled water services and actively participate in the beneficial use of biosolids and biogas. Our joint mission is to address climate change policies, initiatives, and challenges through a unified voice advocating for wastewater community perspectives. Our members are focused on helping the State achieve its multiple mandates and goals by 2020 (and beyond to 2030 and 2050), including:

- Reducing carbon dioxide equivalent emissions to 1990 levels
- Reducing carbon intensity of transportation fuel used in the State by 10 percent
- Providing 33 percent of the State's energy needs from renewable sources
- Recycling 75 percent of the solid waste generated in the State
- Increasing the carbon in soil under the Healthy Soils Initiative
- Reducing short-lived climate pollutant (SLCP) emissions (which is a key theme of the Second Investment Plan)

As stated in the SLCP Reduction Strategy, CWCCG and CASA agree that publicly owned (wastewater) treatment works (POTWs) are part of the solution. We strongly support the inclusion of wastewater related projects as part of the Second Investment Plan, and recommend that wastewater projects (and their co-benefits) be made more explicit in the listed Investment Concepts. We provide examples of projects to consider as Investment Concepts, as well as recommended text edits to the Concept Paper.

The primary focus for POTWs is water quality and providing an essential public service; however, the wastewater sector can "maximize resource recovery from a wide array of waste streams and potential end-products." Of tremendous importance is the fact that

POTWs can do this largely by utilizing existing infrastructure (e.g., anaerobic digesters), with minor modifications. This makes wastewater projects immediate, cost effective, and extremely competitive candidates for funding through Cap-and-Trade auction proceeds.

Anaerobic digestion (AD) is a typical part of the wastewater treatment process employed at many POTWs across the state. More than 90 percent of wastewater flow in California is treated at POTWs that have AD as the solids treatment process. The AD process produces biomethane, which is converted into power at the majority of these POTWs. This power production generally provides between 40 and 70 percent of the POTW's energy needs, significantly reducing demand from the grid and offsetting the need for fossil-fuel based power with a renewable energy source. The acceptance of hauled-in organic waste such as fats, oils and grease (FOG), food waste (source separated), vegetative food waste (cannery, food processing, etc.), and others for anaerobic digestion at POTWs is a steadily increasing practice, and an important management option for this valuable waste stream. The addition of these feedstocks into the AD system leads to the production of more biomethane (and hence, additional power production) and simultaneously diverts organics from landfills. Some wastewater entities have been able to meet 100 percent of their power needs by taking advantage of these processes and are now able to produce excess renewable energy that could potentially be fed back to the grid. The biomethane produced (or a portion of it) can, if cost effective, be processed into low carbon intensity transportation fuel or used for pipeline injection. This may especially be attractive in air districts certified as being in severe nonattainment for ground level ozone standards under the Clean Air Act. Allocating a portion of Cap-and-Trade auction proceeds to POTW's is essential to making many of these projects cost effective. Some of the investments that POTWs can make include:

- Upgrading AD systems (improved mixing, heating, etc.) to increase biomethane generation
- Constructing receiving facilities to accept hauled-in organic waste for co-digestion to increase biomethane generation
- Upgrading power generating and heating systems to convert biomethane into usable energy
- Addition of emission controls to power generating equipment (as may be required in some Air Districts) thereby allowing continued production and utilization of biomethane opposed to flaring it
- Development and implementation of systems designed to process biomethane into low carbon fuel
- Construction of facilities to condition biomethane for pipeline injection (offsetting natural gas use)
- Increasing biosolids land application which minimizes the use of fossil fuel based inorganic fertilizer, sequesters carbon in the soil, and significantly enhances soil health and crop production

This is an extensive, though certainly not exhaustive, list of the types of multi-benefit projects that POTWs could engage in with Cap-and-Trade auction proceeds. Additionally, there are many opportunities for POTWs to partner with other sectors (e.g., forestry, transportation, agriculture, etc.) to realize significant air quality improvements.

The SLCP Reduction Strategy correctly states that POTWs are capable of contributing toward multiple statewide goals in a single project (e.g., co-digesting organic waste with wastewater solids):

- Significantly reducing emissions of methane by maximizing the use of existing anaerobic digesters through the receipt of hauled-in organic waste for co-digestion
- Increasing the productive use of the captured biomethane through power generation, pipeline injection, or conversion to transportation fuel

- Sequestering carbon in soil and avoiding use of fossil fuel-intense inorganic fertilizer while improving soil health through the application of biosolids to agricultural land and increasing the soils water holding capacity

Furthermore, biosolids can also be used to reclaim superfund mine sites and fire ravaged land, reducing the potential severity of future wild fires (the primary source of black carbon).

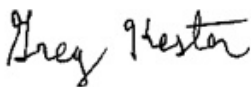
In addition to the co-benefits listed above, many POTWs are located near or in the midst of disadvantaged communities - improvements to increase efficient operation, reduce flaring (wasting) a renewable resource (biomethane), and contribute to other greenhouse gas emissions reducing projects will directly benefit these communities.

Specific edits to the Concept Paper and recommendations for your consideration are provided in Appendix A attached.

Support and funding are needed to advance practices which constitute the “low hanging” fruit in the reduction of greenhouse gas emissions (including SLCs). We recommend allocation of cap-and-trade auction proceeds to the State Water Resources Control Board as a key source of funding for POTW projects.

Please contact us if you have any questions at (916) 446-0388 or via email at gkester@casaweb.org and sdeslauriers@carollo.com. We welcome the opportunity to further discuss the wastewater community's position and help ARB proactively achieve the commendable State goals and mandates for 2020 and beyond.

Sincerely,



Greg Kester
CASA Director of Renewable Resources Program



Sarah A. Deslauriers, P.E.
CWCCG Program Manager

cc: Ryan McCarthy – ARB
Fran Spivey-Weber – Board Member, SWRCB
Dorene D'Adamo – Board Member, SWRCB
Scott Smithline – Director, CalRecycle
Karen Ross – Secretary, CDFA
Jenny Lester Moffitt – Deputy Secretary, CDFA
Julia Levin – Executive Director, BAC
Greg Kester – Director of Renewable Resource Programs, CASA
Bobbi Larson – Executive Director, CASA

Appendix A

Category	CWCCG/CASA Comments/Recommendations
General	POTWs are referenced inconsistently (and at times erroneously) throughout the Concept Paper as water agencies, water utilities, sanitation agencies, waste agencies, wastewater treatment facilities, water treatment plants, etc. We recommend they be referenced as Publicly Owned Treatment Works (POTWs) throughout the Concept Paper to eliminate confusion.
Page 20, 3rd Paragraph	The third and fourth sentences contain incorrect information. We recommend rewording the sentences to correct it: "Addressing this need will require redirecting organic matter originally sent to municipal waste facilities (such as landfills) to compost and anaerobic digestion facilities (including sanitation agencies) that can use it to generate useful products, such as biogas and digestate (i.e., agricultural soil amendment). Biogas can generate renewable energy onsite, be used as a local low-carbon transportation fuel, or be injected into a pipeline for use in other locations."
Page 20, Last Paragraph	Remove "...or water treatment" from the first sentence. Organic waste should be diverted to sanitation agencies (or "water treatment" as it is referred to in the original sentence) for processing and generating useful byproducts. The new sentence should read: "There are also additional opportunities for achieving greenhouse gas reduction from utilizing the resources from the organic waste, whether it is generated from natural and working lands or diverted from landfills."
Transportation & Sustainable Communities	Figure 3 (Page 12), under Alternative Fuels and Infrastructure, POTWs should be listed as Potential Recipients for incentives for in-State production of low carbon intensity renewable fuels and fueling infrastructure.
Clean Energy & Energy Efficiency	Figure 5 (Page 17), under Low-Carbon Water System, POTWs should be listed as Potential Recipients for incentives for renewable energy generation, improved energy efficiencies (including pumps, turbines, and existing desalination plants), and reduced demand for carbon-intensive water.
Natural Resources & Waste Diversion	Figure 7 (Page 21), under Protect and Grow Carbon Stocks on Natural and Working Lands, POTWs should be listed as Potential Recipients for incentives to: – Improve management and restoration activities on public and private natural and working lands to improve carbon sequestration. – Support for net greenhouse gas reductions and carbon sequestration on agricultural and working lands, including healthy soil practices.
	Figure 7 (Page 21), under Reduce Methane Release from Organic Waste, POTWs should be listed as Potential Recipients for incentives to: – Create compost from organic byproducts of anaerobic digestion. Edit: This should also be listed under the Waste-to-Fuel category, not only the Landfill category. – Equipment and infrastructure to create transportation fuel from digester biogas. Edit: The Waste-to-Fuel category investment concept should list wastewater biogas. We suggest rewording the statement to read - "Equipment and infrastructure to create transportation fuel from wastewater digester, dairy digester, biomass, and existing landfill biogas to fuel on-site heavy duty trucks." While not in the jurisdiction of POTWs, communities served by septic tank systems looking to convert to centralized systems or potential expansion of municipal systems to install collection systems for areas using septic systems could also be considered in this category of Investment Concept. The co-benefits of these types of projects include: decrease in vented methane from septic tanks; increase in digested solids leading to an increase in biogas generation for onsite power generation, pipeline injection, or conversion to transportation fuel; increase in production of biosolids which are a soil amendment that can be land applied to improve soil health resulting in carbon sequestration in the soil below and offset the use of fossil fuel intense inorganic fertilizer.