CALIFORNIA ASSOCIATION of SANITATION AGENCIES
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July 9, 2021

Mr. Richard Corey, Executive Officer
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: California Association of Sanitation Agencies Comments on the Public Workshop Series to Commence Development of the 2022 Scoping Plan Update

Submitted online via: https://www.arb.ca.gov/lispub/comm2/bcsubform.php?listname=sp22-kickoff-ws&comm_period=1

Dear Mr. Corey:

The California Association of Sanitation Agencies (CASA) appreciates the opportunity to comment on the Public Workshop Series to Commence Development of the 2022 Scoping Plan Update (Workshop Series).

CASA is an association of local agencies, engaged in advancing the recycling of wastewater into usable water, as well as the generation and use of renewable energy, biosolids, and other valuable resources. Through these efforts we help create a clean and sustainable environment for Californians. Our members are focused on helping the state achieve carbon neutrality by 2045, including the interim 2030 greenhouse gas (GHG) emissions reduction goals, which include:

- Reducing short-lived climate pollutant (SLCP) emissions.
- Effectively diverting organic waste from landfills.
- Providing 60 percent of the state's energy needs from clean and renewable sources.
- Reducing carbon intensity of transportation fuel used in the state.
- Increasing soil carbon and carbon sequestration under the Healthy Soils Initiative, Forest Carbon Plan, and Natural and Working Lands Climate Change Implementation Plan.

CASA supports the approach the California Air Resources Board (CARB) presented June 8th in its kick-off presentation with respect to developing scenarios for achieving GHG emissions reduction, to:

- Work in concert with existing and emerging air quality programs.
- Be consistent with existing legislative mandates and executive orders, as well as leverage key reports referenced, including:
  - AB 74 - Transportation Carbon Neutrality
    - Driving California's Transportation Emissions to Zero
    - Enhancing Equity While Eliminating Emissions in California's Supply of Transportation Fuels
  - AB 398 Report - Putting California on the High Road: A Jobs & Climate Action Plan for 2030
  - SB 100 Joint Agency Report - 100% Renewable & Zero-Carbon Electricity
  - Achieving Carbon Neutrality in California
  - Forest Carbon Plan and Wildfire and Forest Resilience Action Plan
- Support cost-effective and flexible compliance.

While CASA supports the approach and collective goals for achieving GHG reductions, we have a growing concern that state agencies are not coordinating the development of their respective programs, specifically those presented in CARB's June 8th presentation on SLCP reduction. A lack of coordination can result in conflicting objectives, thereby threatening the implementation of projects, for example, to divert organic waste and utilize the renewable biogas and biosolids produced. We strongly recommend

that CARB continue to provide incentives for the use of biogas through the Low Carbon Fuel Standard (LCFS), pipeline injection, and onsite utilization. The wastewater sector can help achieve the objectives of Senate Bill 1383 (SB 1383) by co-digesting diverted food waste but only if there is cost effective market assurance for the products of digestion (biogas and biosolids).

While CARB appears to strongly support CalRecycle and the SWRCB in their efforts to implement SB 1383 regulations (incentivizing the increased production of biogas for use as a transportation fuel or for onsite power and heat production), CARB is also moving forward with Advanced Clean Vehicle Regulations to fully electrify vehicles. While this promotes biogas to be converted to power, it disincentivizes the immediate and long-term opportunities for development of biogas into a low carbon fuel even though the technology is already available and local air pollutant reductions can be achieved today. Furthermore, electrification with renewable and clean resources is stated as a key objective in SB 100's Joint Agency Report, but the report does not consider biogas from publicly owned treatment works (POTWs), citing there is not enough information on cost and supply for power production even though the production of biogas has been shown it can play a significant role in offsetting the electrical demand of the sector and complement California's renewable energy portfolio. When POTWs satisfy their own power needs from biogas, it reduces demand from the grid, and helps achieve multiple state objectives which are also not considered. We provide more detail in the sections below and in previously submitted comment letters referenced (links provided in the Electricity and Transportation Sector section).

The remainder of our comments are organized into sections by workshop focus area, which also provide feedback responding to some of the example questions posed during the Workshop Series[1]. We welcome the opportunity to discuss our comments.

Electricity and Transportation Sector

CASA submitted comments December 18, 2020 (on the draft SB 100 Joint Agency Report), April 2, 2021 (on the proposed Advanced Clean Fleet Rulemaking workshop presentations March 2nd and 4th), and June 22, 2021 (on the June 2nd SB 100 workshop presentation), addressing the importance of including renewable biogas and biomethane derived from anaerobic digestion in the resources considered for and implementation of SB 100 and as a low carbon transportation fuel. As SB 1383 is implemented, significantly more renewable biogas will be produced at POTWs through the co-digestion of wastewater residuals with organic (food) waste diverted from landfills. As quantified in the SWRCB's Co-Digestion Capacity Analysis (released by the Governor's office in August 2020), POTWs can utilize their existing infrastructure in the form of anaerobic digestion to co-digest the divertible food waste across the state thereby removing a major source of fugitive methane from landfills (which account for ~20 percent of the state's methane). Both the Joint Agency Report and June 2nd presentation state the SB 100 mandate is achievable with existing technologies; however, renewable biogas has been omitted from consideration. Even when POTWs satisfy their own power needs from biogas, it reduces demand from the grid, and helps achieve multiple state objectives, but is also not considered in the Report. The

[1] Example questions the 2022 Scoping Plan should address, as posed to the attendees during the June 8th Workshop in CARB's closing presentation:
- What approaches to carbon neutrality exist that are technologically feasible, cost-effective, and have minimal impacts to households and jobs? How quickly can sectors transition?
- How can we maximize air quality and public health benefits for vulnerable communities?
- Given potential limits to electrification, how do we best use renewable natural gas and hydrogen, and what are the infrastructure needs to further reduce/replace fossil fuels?
- What are the environmental and economic trade - offs of NWL actions and how do these actions intersect with other sectors (i.e., electricity/fuels, land - use, etc.)?
- What lessons from the current public health and economic situation should apply to the strategies/pathway for emission reductions?

omission contradicts the June 2nd presentation, which suggests California retain some level of gas capacity for resilience.

The PATHWAYS model has projected (and assumed) that California will continue to rely on gas to some extent, and utilities have expressed the need to do so for reliability (emergency) purposes. To be consistent with SB 100 objectives, the gas should be biogas, biomethane, and hydrogen as they originate from Renewable Portfolio Standard eligible feedstocks. Our December 18th comment letter provides links to the needed biogas cost and supply information, and we also support the Report's recommendation to further research clean energy technologies, including biogas/biomethane produced by POTW anaerobic digesters.

With respect to the development of the Advanced Clean Fleet Regulation, we have detailed our membership's concerns with the concepts presented March 2nd and 4th in a comment letter submitted to CARB April 2nd. One of those concerns is the proposed definition of near-zero emission vehicles (NZEV) prohibiting the use of ultra-low emission natural gas engines for on-road heavy duty vehicles, such as the Cummins-Westport engines. However, our members have been purchasing ultra-low emission natural gas engine powered on-road heavy duty vehicles to comply with restrictive local air quality regulations (e.g., SCAQMD Rule 1196). These vehicles emit 90 percent fewer nitrogen oxide (NOx) emissions relative to current standards for heavy-duty vehicles – comparable to emissions from an equivalent all-electric heavy-duty vehicle, if the emissions associated with the electricity production are taken into account. When powered by renewable natural gas (RNG), the Cummins-Westport ISX12N engine can provide even larger GHG emissions reductions by reducing the emissions from renewable waste sources. CARB's Low Carbon Fuel Standard aims to decrease GHG emissions by incentivizing the use of low carbon fuels. CARB assesses the life cycle GHG emissions of various fuels, expressed as a fuel's carbon intensity (CI), and incentivizes adoption of fuels with a lower CI than the standard. The CI value considers the direct emissions from the production, transportation, and use of the fuel but also includes significant indirect reductions, such as those related to uncontained emissions from organic waste as it decomposes[2].

Some of our members have recently invested significant capital in co-digestion and biogas conditioning infrastructure to produce RNG, an onsite fueling station, as well as RNG vehicles – all in support of state mandates for achieving GHG emission reductions by 2030. In fact, one of our members received multiple grant incentives through state and local organizations, including:

- California State Revolving Fund Green Project Reserve
- California Energy Commission (CEC) GFO-18-601 Community-Scale & Commercial-Scale Advanced Biofuels Production Facilities (under Alternative & Renewable Fuel & Vehicle Technology Program)
- Carl Moyer Program Alternative Fuel Infrastructure Grant (Placer County Air Pollution Control District)

The RNG vehicles do not meet the ZEV or NZEV definitions as proposed or the restrictive requirements of the proposed regulation, yet they have been the target of state and local air district regulations and incentive programs. If the proposed regulation continues with the definitions as is, they and other members with similar plans, will have invested ratepayer funds for infrastructure and vehicles that do not meet requirements.

Our members are extremely concerned that CARB appears to be excluding RNG derived from wastewater treatment anaerobic digestion as a viable solution to our climate and ozone attainment in California. CASA would like to highlight that the use of RNG with ultra-low emission engines will not only

[2] https://ww2.energy.ca.gov/2019publications/CEC-500-2019-002/CEC-500-2019-002.pdf

reduce NOx emissions more rapidly than solely relying on electrification, but it will lower the GHG emissions to a greater extent.

Air Quality Requirements

In California, mobile sources of pollution are responsible for approximately 80 percent of smog-forming NOx, about 50 percent of greenhouse gas and more than 95 percent of toxic diesel particulate matter emissions[3]. While we are supportive of ZEV technology to address our air quality challenges, the infrastructure and required vehicles are not readily available and is currently very costly. As noted above, our members have invested in RNG trucks and infrastructure, which is clean, cost-effective, reliable, and available now. Relying solely upon ZEV technology will undermine existing RNG infrastructure and lead to stranded assets. Such an action will also cause consumers to abandon plans to invest in existing near-zero RNG infrastructure and cause a greater demand for diesel trucks until electric infrastructure and trucks become available and cost-effective.

Many of our members are located in areas of extreme nonattainment for ozone, which requires the South Coast and San Joaquin Valley air basins to drastically reduce NOx emissions within a few years or face sanctions as specified in Sections 179 and 185 of the Clean Air Act. These provisions include significant financial penalties upon major stationary sources, increases offset ratios and withholds federal highway funding. The imposition of these penalties will take away federal funding that could otherwise be used to further California's clean air goals and would penalize stationary sources, which are only a minor portion of the NOx inventory. Despite Executive Order N-79-20's directive to be consistent with state and federal law, CARB has indicated that the USEPA will not enforce Clean Air Act penalties in the event these air basins do not attain the federal standard. We respectfully disagree and request that CARB comply with the federal Clean Air Act by supporting actions that will achieve clean air as quickly as possible. These actions must rely on all tools in our toolbox, which includes the continued use of near-zero RNG trucks.

Natural and Working Lands

In October of 2020, the Governor issued Executive Order N-82-20, directing state agencies to advance strategies that will conserve at least 30 percent of California's lands and waters by 2030 as a way to combat the climate crisis, conserve biodiversity, and boost climate resilience. While CARB has been collaborating with the California Department of Food and Agriculture (CDFA), California Natural Resources Agency (CNRA), and California Environmental Protection Agency (CalEPA) on the Healthy Soils Initiative to quantify carbon sequestration benefits of land applying compost and other organic amendments to the soil, CASA strongly encourages CARB to also work with the State and Regional Water Boards and consider including biosolids and biosolids compost as an eligible soil amendment in the Healthy Soils Initiative, Natural and Working Lands Climate Change Implementation Plan, and Forest Carbon Plan. There is a significant body of research from across the U.S. already completed which demonstrates the many co-benefits from land application of biosolids, including local research recently completed by Dr. Rebecca Ryals on California soils out of UC-Merced. In addition to achieving carbon sequestration, there is strong evidence of increased soil carbon leading to increased water retention capacity resulting in reduced need for irrigation, improved soil tilth, and increased crop yields, enhancing crop stress tolerance and growth in drought conditions.[4,5] Additionally, the Climate Action

[3] Letter to the Legislature, May 24, 2021, South Coast Air Quality Management District, San Joaquin Valley Air Pollution Control District, Bay Area Air Quality Management District

[4] Zhang, Xunzhong. et al. (2009) Impact of Biosolids on Hormone Metabolism in Drought-Stressed Tall Fescue. Crop Science, Vol 49: 1893-1901.

[5] Zhang, Xunzhong. et al. (2006) Biosolids Impact on Tall Fescue Drought Tolerance. Journal of Residuals Science & Technology, Vol 3, No 2: 87-94.

Reserve adopted its Soil Enrichment Protocol in September 2020, acknowledging biosolids as an eligible soil amendment. CASA would like to work with CDFA, CNRA, CalEPA, CalRecycle, the State Water Board, and Regional Water Boards to include biosolids as an eligible organic soil amendment that can help satisfy each of the goals being pursued by the Healthy Soils Initiative, Natural and Working Lands Climate Change Implementation Plan, and Forest Carbon Plan.

CASA greatly appreciates the opportunity to provide comments on the 2022 Scoping Plan Update Workshop Series presentations and looks forward to reengaging with the Environmental Justice Advisory Committee. We want to emphasize that the wastewater sector and individual members/ POTWs can provide cross-sector benefits in perpetuity by:

- Supplying a renewable organic soil amendment in the form of biosolids and being environmental stewards of our natural and working lands by restoring our soils
- Supplying a renewable low carbon fuel for use in the transportation and electricity sectors
- Supplying a sustainable (drought-proof) water supply

Each of these can significantly contribute toward the scenarios for achieving statewide carbon neutrality by 2045 and overall community resilience. In most cases, all that is lacking is the market certainty for use of products (biosolids, biogas, recycled water) and funding to develop the additional infrastructure, to make these projects a reality.

Thank you for considering our comments. Please contact me if you have any questions at (925) 705-6404 or via email at sdeslauriers@carollo.com. We look forward to working together as partners on the many shared objectives.

Sincerely,

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CASA Climate Change Program Manager

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