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**Re: California Association of Sanitation Agencies Informal Comments on the Proposed Advanced Clean Fleets Rulemaking**

To Whom it May Concern:

The California Association of Sanitation Agencies (CASA) appreciates this opportunity to comment on the Proposed Advanced Clean Fleets Rulemaking (Proposed Rulemaking) as presented by the California Air Resources Board (CARB) during the March 2<sup>nd</sup> and 4<sup>th</sup> workshops. 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 its 2030 mandates and goals for greenhouse gas (GHG) emissions reductions, which include:

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

As essential public service providers and fellow dedicated environmental stewards, CASA members provide reliable wastewater treatment to protect public health and the environment. Specific comments are provided below describing our support for, as well as our concerns and recommendations related to, the Proposed Rulemaking for your consideration:

***Provisions for essential public services (like wastewater conveyance and treatment) to maintain operations and associated levels of service.***

CASA members are public, local agencies that are responsible for providing wastewater conveyance and treatment to over 90 percent of the sewerage population across California. We provide reliable treatment and management of wastewater in an environmentally responsible manner and at the lowest practical cost. While our primary mission is to reliably and safely treat wastewater, CASA's members are also positioned to help the state meet its clean vehicle goals. That said, our members collectively have concerns about achieving compliance with this Proposed Rulemaking while reliably maintaining core functions and levels of service, as well as meeting increasingly frequent mutual aid and critical response demands during and after natural disasters and other types of emergencies.

Our members operate diverse fleets that consist predominantly of medium-and heavy-duty vocational trucks that perform maintenance and repair operations that may require them to travel long distances, or on rough terrain, and include extended operation of auxiliary equipment via power-take off (PTO) devices at project

sites. It is critical to not only consider the miles and fuel/energy required to travel to worksites, but also the energy required and hours of operation for long periods of time while at worksites and the need for certain trucks to be outfitted with equipment such as at PTO devices. Vehicles are often called upon to tow equipment such as generators or pumps, perform welding operations, power onboard welding machines and air compressors, and other tasks that require long duty cycles.

As CARB memorializes the Advanced Clean Fleet Regulation, CASA has concerns that the Proposed Rulemaking would challenge the wastewater agencies' abilities to maintain established levels of service due to unique vehicle specifications, constraints on clean vehicle availability, significant investments within a compressed timeline to implement charging infrastructure to support ZEVs (may experience issues with materials and labor due to high demand), and the proposed regulatory timelines for complete conversion. CASA encourages CARB to provide the necessary flexibility and exemptions to avoid unintended consequences to wastewater systems that may limit their availability to convey, treat and deliver treated effluent water. At this time, we do not have confidence that the replacement zero-emission vehicles (ZEVs) will meet our duty-cycle specifications for use or be available to our sector within the targeted timeline, nor do we expect the needed supporting vehicle charging infrastructure be in place in the remote locations our sector must service during critical response events. A few additional specific concerns are summarized below:

- Emergency response from utility providers is not limited to natural disasters, but can occur from downed power lines, ruptured pipelines or other instances that are frequently caused by a third party, etc. It is critical to have vehicles on hand that are capable of responding immediately in any geographic location that can perform or aid in the repair to the infrastructure for extended periods of time in all weather conditions.
- There are over 1,100 wastewater collection systems in California that rely on specialized high-capacity pumping and vacuum equipment to clean, maintain, and respond to emergencies that can be a threat to public health and safety. This specialized equipment requires powerful engines to meet pumping pressure and vacuum suction lift demands. This equipment must be ready for deployment at any time of night or day in all weather conditions. Due to the unique suction capabilities of this equipment, fire and rescue responders occasionally call on the equipment for assistance. The major manufacturer for this equipment, Haaker, has indicated there are no current technologies for zero emission wastewater pumping/vacuum equipment.
- When considering replacement of construction related trucks, members need trucks to be capable of traversing steep hills fully loaded with dirt, pulling backhoes or drilling rigs, holding fuel or charge long enough to be in the field for multiple days – and need access to infrastructure that can charge within minutes.
- Members have expressed concern on the need to have a “try before you buy” period from ZEV manufacturers. This would allow the purchaser sufficient time to fully test zero-emission specialty vehicles on varying road conditions, remote location reliability, and extended duty cycle capabilities.

***Wastewater biogas as a low carbon transportation fuel to support critical response events.***

As regulations adopted under SB 1383 are implemented, significantly more renewable gas will be produced at publicly owned wastewater treatment plants (POTWs) through the co-digestion of wastewater residuals with methane producing organic waste diverted from landfills. Co-digestion is a proven approach of economically producing renewable energy/fuel and producing a soil amendment to improve California's soil ecosystem.

More than 94% of the state's wastewater flow is treated through anaerobic digestion which generates biogas. 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 inventory). Utilizing co-digestion, California's POTWs can significantly increase biogas production to provide, among other benefits, a source of low carbon fuel, onsite renewable energy, or flexible generation renewable power under the BioMAT.

While CASA supports the collective goals of state agencies, we have a growing concern that state agencies are not coordinating the development of their respective programs, resulting in conflicting objectives, thereby threatening the implementation of projects to divert organic waste and utilize the biogas produced. For example, while CARB strongly supports CalRecycle and the SWRCB in their efforts to implement Senate Bill 1383 regulations (incentivizing the production of biogas from co-digestion, especially for use as a transportation fuel), the Proposed Advanced Clean Fleet Rulemaking is moving forward in complete support of electrifying municipal vehicles and eventually all passenger vehicles. While this promotes biogas to be converted to power, it disincentivizes the long-term opportunities for development of biogas into a low carbon fuel and its importance being kept as an RNG to meet critical response events. Furthermore, electrification with renewable and clean resources is a key objective of [SB 100's Joint Agency Report](#), but the report does not consider biogas to power from 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.

***Develop exemption process with a timeline that is feasible for essential public services to implement while maintaining operations and critical response capabilities.***

CASA recommends developing an exemption process that accounts for the challenges public fleets face in performing core functions of essential wastewater services. CASA member agencies understand and support the long-term goal of the Proposed Rulemaking; however, CASA has concerns regarding the proposed timeline considering the remaining useful life of existing assets and responsible use of public funds. The exemption pathway should consider specialty and critical response vehicle availability, cost of replacement, charging infrastructure accessibility and electrical grid reliability, and the ability to maintain core services and mutual aid during and following natural disasters and other types of emergencies. For example, if a sewer lift station loses power (and does not have a backup generator) or has some other type of mechanical/control failure, a pumping/vacuum or combo truck is utilized to bypass the station in order to move wastewater from the wet well to a downstream location. There are no current electric combo trucks. Challenges of electrification include sufficient power to operate the equipment, sufficient operation time between charges (current estimates are 30 to 45 minutes), and DOT weight limitations. In a prolonged power outage, sewer spills and resulting public health threats and environmental damage could be inevitable.

Some members are working early to electrify fleets where operational needs can also be met by the available truck options. We appreciate that CARB discussed development of an exemption process (during the March workshops) with some proposed justifications. CASA recommends the development of an exemption process to enable adoption of clean vehicles as it is feasible, while maintaining a pathway for fleets that do not yet have ZEVs available that can also meet fleet needs.

***CASA supports the normal replacement cycle of vehicles within public fleets and a delayed start date (2027) for low population counties.***

While the focus of the Proposed Rulemaking is on new purchases, CASA recommends providing the needed degree of flexibility in vehicle fleet planning to allow for assessing the cost, location and feasible timing of new acquisitions. This approach will help mitigate member concerns regarding the replacement of current public fleet vehicles (that have significant remaining useful vehicle life) with new, more costly ZEVs that may not operate at the performance level of traditional internal combustion vehicles. In addition, by allowing fleet

owners and operators a flexible fleet transition schedule, it is likely to better align with the charging infrastructure implementation timeline, particularly in remote locations that require more time to fully construct.

Furthermore, members have mentioned concern about the limited availability of vehicle stock from manufacturers due to the high demand of many public and private entities competing to comply with the Proposed Rulemaking. Public fleets should not be penalized for being outbid by higher-resourced entities. There should be a process that acknowledges when eligible models are unavailable for purchase due to oversubscription.

***CASA supports purchases of near zero-emission vehicles (NZEVs).***

CASA would like to take this opportunity to express concerns about CARB's definition of NZEVs. As denoted on slide 29 of CARB's March 2<sup>nd</sup> and 4<sup>th</sup> Workshop presentations, NZEV will be defined in the regulation. The regulation defines NZEV as either "an on-road plug-in hybrid electric vehicle" or "an on-road hybrid electric vehicle that has the capability to charge the battery from an off-vehicle conductive or inductive electric source and achieves all-electric range". This definition would prohibit the use of ultra-low emission natural gas engines for on-road heavy duty vehicles, such as the Cummins-Westport engines.

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 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 combined with 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 lifecycle GHG emissions of various fuels, expressed as a fuel's carbon intensity (CI), and incentivizes adoption of fuels with 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<sup>1</sup>.

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 CNG vehicles – all in support of state mandates for achieving GHG emission reductions by 2030. One of our members received multiple grant incentives through state and local organizations, including:

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

The CNG 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 as a viable solution to our climate and ozone attainment problems in California. CASA would like to highlight that the use of RNG with ultra-low emission engines will not only reduce NOx emissions more rapidly than solely relying on electrification, but it will lower the GHG emissions to a greater extent.

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<sup>1</sup> <https://ww2.energy.ca.gov/2019publications/CEC-500-2019-002/CEC-500-2019-002.pdf>

CASA supports allowing NZEVs fueled with RNG to be purchased beyond 2035 to give essential public service providers a reliable clean fuel source for the future. Our members remain concerned that current ZEV models, including specialty and critical response vehicles necessary to meet wastewater critical infrastructure and operational needs, will not be ready within the timeline of the Proposed Rule. Wastewater specialty and critical response vehicles include, but are not limited to, hammer, vactor, pumping/vacuum maintenance/construction service trucks, stake trucks with cranes, water filtration trucks, dump trucks, vacuum trucks, mobile crane trucks, water trucks, and stake bed trucks.

The prospect of having multiple vehicles on hand (to replace one traditional vehicle) without a guarantee of meeting operational needs is a concern for members. Specialty and critical response vehicles must be able to travel long ranges that include but are not limited exclusively to the individual service territory but also to assist with regional and remote disaster efforts, and other types of emergencies. Thus, the use of RNG vehicles would allow for near-term emissions reductions while meeting demands reliably across larger regions.

***Regulatory timeline should reflect the need for flexibility in planning for necessary investments in and the potential impact of high demands on implementation of charging infrastructure.***

The addition of ZEVs to public fleets requires that the necessary charging infrastructure to “fuel” ZEVs be in place prior to converting the fleets. The high demand for infrastructure (both for the general public and for fleets) runs the risk of shortages for necessary materials and qualified labor to build the necessary charging infrastructure. Additionally, ZEVs require a reliable electrical grid that can support the additional load of fleet charging needs. Public Safety Power Shutoffs and other events may interrupt supplies and present a challenge to public agencies’ ability to maintain critical services. Reliance on backup power is an issue that has been explored in other recent and ongoing regulatory proceedings and serves as a reminder of the added challenges that come with electrification for a very diverse array of public agencies often at the behest of load serving entities who have competing priorities to prevent wildfires.

***Stranded Assets***

Our members and other waste industries have proactively purchased low-emitting clean fuel vehicles. For example, Waste Management operates the largest vocational heavy-duty fleet in North America, with more than 6,800 of its trucks operating on natural gas. Local air quality regulations<sup>2</sup>, such as SCAQMD Rule 1193 requires fleet operators to purchase alternative-fuel refuse collection heavy-duty vehicles when procuring or leasing these vehicles for governmental agencies. These existing vehicles could be fueled using RNG, which would substantially reduce GHG emissions. CARB’s proposed Advanced Clean Fleet requirements would not only forego GHG emission reductions but would negatively impact those who have attempted to reduce their GHG footprint and comply with local regulatory requirements. CARB’s proposal will, at minimum, create a significant amount of stranded assets for the waste industry. We respectfully request that those who have purchased clean fuel vehicles in good faith be allowed to continue to use these vehicles, if fueled using RNG.

***Cost considerations should be included as part of the exemption process.***

CASA requests that cost considerations for essential public services be included as part of the exemption process. This request is consistent with public comments raised during the March Workshops suggesting that costs be included as a consideration to provide managers of public fleets to have a longer time horizon for integrating clean vehicles. Public agencies have a lengthy budget planning/approval process for approving modifications of rates and/or fees. Since zero emission technologies are still evolving, and organizations cannot with all certainty determine what technology mix will fit their operations best at this time, it is

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<sup>2</sup> <https://www.act-news.com/news/rng-waste-californias-next-gold-rush/>

challenging to budget for purchases and operations. This is a unique challenge to public service providers and we recommend that CARB provide regulatory flexibility to align with rate and/or fee approval processes.

With high capital costs of procuring clean vehicles being passed on to water/wastewater customers, public agencies will have to balance those costs with other critical investments due to climate-related changes in hydrology, as well as needs associated with population growth and aging infrastructure. Additionally, the COVID-19 pandemic has resulted in significant financial impacts on California's water systems. CARB needs to consider the associated costs of the Proposed Rulemaking in light of COVID-19 impacts to budgets and the funding gap that already existed due to aging infrastructure, to provide the needed flexibility to essential public services with respect to cost and implementation timeline.

***Develop a pathway for early action credits that provide public fleets additional flexibility to manage the overall purchases of ZEVs.***

We ask that CARB consider including a provision in the Proposed Rulemaking that recognizes fleets taking early action by purchasing an increased percentage of ZEVs ahead of compliance requirements. Such an approach has been taken in the existing CARB Truck and Bus Regulation (Title 13 CCR § 2025 (j)). For example, if an agency purchased 70 percent of its total fleet with 2024-2026 model year vehicles (i.e., during the first phase of requirements), which is 20 percent more than the required 50 percent purchase, then that additional (early) 20 percent purchase could be used to reduce or delay the requirement to purchase 100 ZEVs by 2027 (e.g., only 80% of fleet would need to be replaced with newer model years by 2027). An additional consideration could be providing early action credit for public fleets that can downsize (i.e., eliminate a diesel vehicle without replacement), if that is possible.

Such early action credit can provide public fleets with increased flexibility to manage their longer-term purchases, as well as allow additional time for the vehicle technologies to mature and demonstrate their ability to provide for public fleet operational needs.

We greatly appreciate the opportunity to comment on the Proposed Advanced Clean Fleets Rulemaking, and further appreciate your willingness to consider our recommendations. Please contact me at [sdeslauriers@carollo.com](mailto:sdeslauriers@carollo.com) if you have any questions.

Sincerely,



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