CALIFORNIA ASSOCIATION of SANITATION AGENCIES

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June 1, 2022

To: Alameda County Board of Supervisors

Re: Compost facility approval

The California Association of Sanitation Agencies (CASA) and the Bay Area Clean Water Agencies (BACWA) are pleased to provide comments in support of the proposed compost facility on Jess Ranch in Alameda County. CASA is an association of local agencies performing essential public services – cleaning wastewater to protect public health and the environment while advancing community resilience through the recovery of renewable resources (water, energy, fuel, biosolids, nutrients, etc.). Through these efforts we help create a clean and sustainable environment for Californians. BACWA is a joint powers agency whose members own and operate publicly-owned treatment works (POTWs) and sanitary sewer systems that collectively provide sanitary services to over 7.1 million people in the nine-county San Francisco Bay Area. BACWA members are public agencies, governed by elected officials and managed by professionals who protect the environment and public health.

For the successful implementation of the landfill diversion requirements of Senate Bill 1383 (SB 1383) which include procurement requirements for jurisdictions throughout California, many more compost and co-digestion projects are required. SB 1383 was adopted to mitigate devastating climate change impacts we are experiencing across California. It requires a 40% reduction in methane emissions by 2030 and the diversion of 75% of organic waste away from landfills by 2025. To achieve these essential objectives, CalRecycle estimates the need for 100 additional compost facilities across the state as well as maximizing existing infrastructure in the form of anaerobic digestion at publicly owned wastewater treatment plants. Additionally, Alameda County must procure 11,750 tons of products produced from their organics diversion based upon its population each year beginning in 2022. Eligible products for procurement include compost and beneficial uses of biogas produced from co-digestion.

The benefits of biosolids and compost, both for climate change mitigation by avoiding the landfill, and for soil health through land application are well known, and have been researched and realized for decades[1,2,3]. Biosolids are the nutrient rich byproduct of wastewater treatment and this project would co-compost biosolids with green waste and other organic residuals to provide a valuable soil amendment. Biosolids and compost improve soil's ability to retain moisture in turn reducing the need to irrigate which is invaluable during our ongoing and

[1] Chambers, B. J., Nicholson, F. A., Aitken, M., Cartmell, E., & Rowlands, C. (2003). Benefits of biosolids to soil quality and fertility. *Water and Environment Journal*, *17*(3), 162-167.
[2] Neilsen, G. H., Hogue, E. J., Forge, T., & Neilsen, D. (2003). Surface application of mulches and biosolids affect orchard soil properties after 7 years. *Canadian journal of soil science*, *83*(1), 131-137.
[3] Vergara Cid, C., Ferreyroa, G. V., Pignata, M. L., & Rodriguez, J. H. (2020). Biosolid compost amendment increases soil fertility and soybean growth. *Journal of Plant Nutrition*, *44*(8), 1131-1140.

unprecedented drought[4,5]. They improve soil health by providing vital micro and macro nutrients, microbes, organic matter and carbon, which in turn increases crop yields. Such land application simultaneously offers additional climate benefits through carbon sequestration and the avoidance of fossil-fuel intense inorganic fertilizer[6,7,8]. The County needs to work collaboratively to advance such beneficial uses of our waste streams such that they can be recycled and kept out of the landfill in accordance with our climate mitigation goals.

While PFAS were mentioned as a concern the State Water Resources Control Board (SWRCB) has executed an investigative order that required many entities, including publicly owned wastewater treatment facilities across the state, to conduct analyses for PFAS in influent, effluent, and biosolids. They have concluded that nothing of concern has been found in the biosolids data, as stated in public forums[9]. It should be noted that significantly greater (at times orders of magnitude greater) concentrations of PFAS are found in everyday consumer products such as cosmetics, cookware, clothing, carpeting, and food packaging[10,11,12,13]. Studies have shown that PFAS levels in biosolids-amended soils are generally similar to those without a history of biosolids application[14,15]. The overall benefit of biosolids composting and land application for the soil and climate far outweigh the risks. CASA strongly encourages the County to approve this facility and is available to provide further information and to answer any questions the Supervisors may have.

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[4] Tsadilas, C. D., Mitsios, I. K., & Golia, E. (2005). Influence of biosolids application on some soil physical properties. *Communications in soil science and plant analysis*, *36*(4-6), 709-716.

[5] Gardner, W. C., Broersma, K., Naeth, A., Chanasyk, D., & Jobson, A. L. (2010). Influence of biosolids and fertilizer amendments on physical, chemical and microbiological properties of copper mine tailings. *Canadian Journal of Soil Science*, *90*(4), 571-583.

[6] Villa, Y. B., & Ryals, R. (2021). *Soil carbon response to long-term biosolids application* (Vol. 50, No. 5, pp. 1084-1096).

[7] Torri, Silvana I., Rodrigo Studart Corrêa, and Giancarlo Renella. "Soil carbon sequestration resulting from biosolids application." *Applied and Environmental Soil Science* 2014 (2014).

[8] Tian, G., Chiu, C. Y., Franzluebbers, A. J., Oladeji, O. O., Granato, T. C., & Cox, A. E. (2015). Biosolids amendment dramatically increases sequestration of crop residue-carbon in agricultural soils in western Illinois. *Applied Soil Ecology*, *85*, 86-93.

[9] State Water Resources Control Board Meeting (April 5, 2022). Item 5, Per- and Polyfluoroalkyl Substances (PFAS) Statewide Investigation Update.

[10] Whitehead, H. D., Venier, M., Wu, Y., Eastman, E., Urbanik, S., Diamond, M. L., ... & Peaslee, G. F. (2021). Fluorinated compounds in North American cosmetics. *Environmental Science & Technology Letters*, *8*(7), 538-544.

[11] Schaider, L. A., Balan, S. A., Blum, A., Andrews, D. Q., Strynar, M. J., Dickinson, M. E., ... & Peaslee, G. F. (2017). Fluorinated compounds in US fast food packaging. *Environmental science & technology letters*, *4*(3), 105-111.

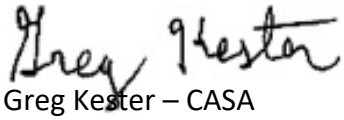
[12] van der Veen, I., Hanning, A. C., Stare, A., Leonards, P. E., de Boer, J., & Weiss, J. M. (2020). The effect of weathering on per-and polyfluoroalkyl substances (PFASs) from durable water repellent (DWR) clothing. *Chemosphere*, *249*, 126100.

[13] Wu, Y., Romanak, K., Bruton, T., Blum, A., & Venier, M. (2020). Per-and polyfluoroalkyl substances in paired dust and carpets from childcare centers. *Chemosphere*, *251*, 126771.

[14] Pepper, I. L., Brusseau, M. L., Prevatt, F. J., & Escobar, B. A. (2021). Incidence of Pfas in soil following long-term application of class B biosolids. *Science of The Total Environment*, *793*, 148449.

[15] Vedagiri, U. K., Anderson, R. H., Loso, H. M., & Schwach, C. M. (2018). Ambient levels of PFOS and PFOA in multiple environmental media. *Remediation Journal*, *28*(2), 9-51.

Sincerely,



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Additional information can be found at the following links:

www.casaweb.org/priorityissues/biosolids
https://www.bayareabiosolids.com/
www.bacwa.org