

2021 UC ANR CE Position Template (Advisor/Specialist)

Position Title: Organic Materials Management Area Advisor

Position: The CE Advisor in this position will focus their efforts on the diversion of organic waste from landfills into alternative end markets. The Advisor will at least hold a M.S. in soils, environmental science, environmental engineering, or similar related field of study with a demonstrated commitment to applied research and a strong extension program. The position will be strategically located at the South Coast Research and Extension Center to mainly serve Orange, Los Angeles, and San Diego counties; three coastal counties responsible for a significant percentage of California's organic waste production.

Justification: With the passage of a series of organics and diversion state legislation, specifically SB 1383 and AB 1594, counties and municipalities must develop robust strategies to reduce the volume of organic waste entering landfills. Previous legislation, AB 939, allowed municipalities to divert green waste to landfills to be utilized as Alternative Daily Cover (ADC) and count this volume towards diversion credits. AB 1594 beginning in 2020 no longer allows this to be counted as diversion, instead counting as disposal. SB 1383 requires organic waste disposal to be reduced 50% below 2014 levels by 2020, 75% below 2014 by 2025, and by 2025 recover at least 20% of disposed edible food. Prior to the enactment of SB 1383, Orange County hauled more green waste to its landfills than any county in the state, with Los Angeles and San Diego Counties close behind. As a result of this required diversion, new markets for composted green waste are critical as the product produced and diverted from landfills far exceeds the current uses, especially local uses.

In addition to green waste management, the production of biosolids by sewage treatment facilities continues to be an area of organic materials management requiring innovative research and extension approaches to ensure its use in land applications, soil amendments, and fertilizers does not result in the unintended contamination of soil and water systems. It will also become more critical to identify methods of disposal and/or uses of biosolids locally to reduce the impact of hauling and subsequent land application hundreds of miles from its original source. There is also a significant need to address the public's adverse response to the use of biosolids as a soil amendment and fertilizer in food production. Scientific research to address these concerns continues to evolve as new potential contaminants emerge, such as pharmaceuticals and perfluorooctane sulfonic acid (PFOS).

To meet these challenges, especially in large metropolitan areas of California, new technologies in processing organics will need to be developed, the product's safe use will need to be researched, and new markets identified.

Extension: This position will provide counties with technical oversight and development of related education materials in areas where UCCE has a particular expertise (e.g., composting and use of soil amendments), partnering with UCCE volunteer programs such as Master Gardeners (focused on compost education), Master Food Preservers, and 4-H Youth Development STEM projects, where appropriate. Provide education and training to professionals impacted by organic waste diversion regulations and engage this same clientele in development and implementation of waste management practices. Through sound science build the public's confidence in the use of organic wastes, especially biosolids.

Research: Areas of potential research include the use of organic materials as soil amendments, land cover applications of both compost and biosolids, innovative processing technologies, adoption of management practices (behavior changes), identification and management of chemical contaminants in organic wastes, and innovative markets for diverted and processed organic waste products.

ANR Network: The position would complement the CE Area Waste Management and Agri-Food System Advisor being proposed for serving Santa Clara County, the Bay Area (Alameda, Contra Costa, San Mateo/San Francisco counties) and the Central Coast Region (Santa Cruz, Monterey and San Benito counties). This position

would also be expected to collaborate with specialists and advisors with complementary programs, such as regional climate smart technical assistance providers, regional small farm, urban agriculture and food systems advisors, and nutrient and soil management specialists at UC Davis, UC Merced, and UC Riverside. In addition, this position would expect to collaborate, where appropriate, with the new Woody Biomass and Bioenergy Advisor serving Riverside and San Bernardino counties. Previously ANR's network in organic waste management relied on a retired CE specialist at UC Riverside and a few environmental horticulture advisors with an expertise in the use of organic materials in landscape environments (e.g. compost and mulch). Advisor positions working on organic materials and serving much of California's coast will position UC ANR to provide scientific solutions to waste management issues directly to large population of Californians.

Network External to ANR: The position will interact with individual municipalities, counties, and members of the waste management community to bridge the gap between regulations and best available science in waste management. Specifically in Orange County, Orange County Waste and Recycling, the OC Agriculture Commissioner, Irvine Ranch Water District, Orange County Sanitation District, and Tierra Verde Industries represent critical partners this position will need to engage with to research and implement innovative technologies and markets for organic materials. On a statewide level the position will need to closely work with CalRecycle and its representatives.

Support: South Coast REC will provide office space, telephone, and basic administrative support. Funding for travel within each county will be provided by the respective county. Research conducted by the advisor at South Coast REC will receive funds to offset full cost research recharge rates.

Other support: This position will have the support of local water districts with sewage treatment facilities and permitted solid waste facility businesses handling green waste and food waste. Funding is also available from local, state and federal sources including CalRecycle, CDFA, US EPA and USDA to address many of the research and extension topics identified.

Headquarters and Coverage Area: The position will be based at South Coast REC providing service to Orange County. Service will also be provided to Los Angeles and San Diego counties, where appropriate, to expand the opportunities to reduce the regions contribution to organic materials entering landfills.

Developed and proposed by:

Darren L. Haver, Water Resources Advisor, South Coast REC Director

Darren Ross, Tierra Verde Industries

Tom Koutroulis, Orange County Waste & Recycling

Mark Tettemer, Recycled Water Development Manager

Oli Bachie, County Director, San Diego

Keith Nathaniel, County Director, Los Angeles