

**Position Title: Bay Area Environmental Horticulture
& Water Resource Management Advisor**

Position Description: The Environmental Horticulture (EH) Advisor will serve the San Francisco Bay Area (SFBA) counties of Contra Costa, Alameda, Santa Clara, and San Mateo / San Francisco through development of an applied research and education program for the professional landscape industries (landscape managers /gardeners, park and school districts, landscape architects, etc.) and UCCE Master Gardener (MG) Programs. The Advisor will provide research-based landscape management expertise in support of climate change mitigation and water conservation/soil health, water pollution prevention through reducing fertilizer and pesticide overuse. Proper landscape plant selection, placement, and management including turf-alternatives-based and turf landscapes maximizing ecosystem benefits and community health will also be prioritized. This position requires a minimum of a Master's degree in horticulture or a related field. Relevant experiences working with the landscape industry, irrigation, water conservation, recycled water, turf, drought tolerant landscape plants, and composting are desirable. The position will be housed in Alameda County, contingent upon applicant and will report to that unit's County Director.

Justification:

Conserving water in urban landscapes: Over five million people reside in the five-county SFBA. Commercial and municipal landscapes, public service districts, and other research needs will all fall within the scope of this position. The area also includes 1.13 million housing units - mostly landscaped - with thousands more built yearly. Landscape irrigation has traditionally accounted for over 50% of residential water use, creating a burden on water supplies. Water restrictions, in place since 2013, have sometimes resulted in damaged landscapes, economic and carbon sequestration losses, and a diminished quality of life. Low water use landscapes are growing in prevalence because of water utility rebate programs (EBMUD, SFPUC) and drought and climate change-related water scarcity and restrictions.

This position supports regional water conservation while enhancing urban landscape sustainability by helping clientele transition to more drought tolerant landscapes via better plant selection, improved irrigation management, increased use of recycled water, and improved soil quality via recycling of organic waste.

Managing turf alternatives and and water management in turf: The Urban Landscape Advisor will help reduce water use in turf landscapes such as playing fields, golf courses, and office parks by improving and implementing best practices in irrigation management and species selection, guiding turf replacement and providing information about best management of turf alternatives in various landscape settings.

Improving landscape management industry practices: The landscaping and landscape management industries provide nearly 14,000 Bay Area jobs, generating over \$1 billion in annual revenue. The Advisor will help improve professional landscape management practices such as fertilizer and pesticide applications in order to reduce negative impacts on the environment, especially surface water contamination of the San Francisco Bay.

Enhanced composting and greenwaste recycling: The SFBA counties have recently initiated or expanded large scale landscape and food waste recycling projects to keep urban organic waste out of landfills and reduce global warming. This position would help the counties maximize the landscape waste-to-compost stream, improve facility processes, product quality assurance/output, and economically utilize the resulting compost in local landscapes. This position may collaboratively partner with the proposed Santa Clara/Bay Area Organic Materials Management Advisor position.

Integrated Management for Weeds/IPM: With increasing limitations in use of some common herbicides, there is increasing demand for technical advice on practical sustainable management of weeds in urban landscapes.

Extension: This position will extend timely, relevant research-based information for professional landscape managers, designers, architects, planners, community development directors and other professionals in the region, and SFBA Master Gardener Program Volunteers. The sustainable landscape management emphasis consists of drought tolerant plants, water conservation, irrigation management, landscape waste composting, and appropriate fertilizer and pesticide-use. The advisor will actively engage professional organizations to foster collaborations, education, and research; and extend information to clientele via workshops, field days, tours, demonstrations, newsletters, web conferences and various social media.

Research: the Advisor will conduct research, demonstration projects, and other creative activities to address specific local needs and promote sustainability in our landscapes, including assessments of:

- Drought tolerant plants suitable for local microclimates that maximize ecosystem benefits (cool urban heat islands, sequester carbon, reduce air and water pollution, support habitat and pollinators, etc.)
- Improved irrigation scheduling techniques and tools
- Use of recycled water and rainwater harvesting in urban landscapes
- Landscape management techniques that protect environmental resources such as water and natural habitats by reducing water use, runoff and fertilizer/pesticide inputs
- Composting and waste management methods that reduce water use, plant-pest infestations and maintenance costs while promoting carbon sequestration in urban landscapes
- Reduced-risk pest management for new and existing pests within urban landscapes

The Advisor will present research findings at landscape professional meetings and workshops, published in research/trade journals, newsletters, and via various electronic means (web, blog, social media venues, etc.).

ANR Network: This is one of eight positions included in the Environmental Horticulture Program Team cohort due to its statewide as well as local importance and its strong potential for meaningful impacts across all five Strategic Initiatives. It Robust and comprehensive urban horticulture, agriculture and food systems extension programs serving the needs of urban populations are critical to maintaining an effective UCCE presence in this heavily urbanized region and adding to statewide relevance and program delivery in these areas. This position focuses on turf alternative and low water use landscape horticultural management, and perfectly complements the programs of the existing Urban Forestry Advisor (San Mateo / San Francisco Bay Area) centered on urban forestry and tree-pit stormwater management, and Urban Agriculture & Food Systems Advisors in Alameda / Contra Costa / San Francisco and Santa Clara, San Mateo), whose scope also includes urban and community orchardry. Across disciplines, the Bay Area Advisors agreed on this position to expand local landscape management extension programs and services to address current and emerging regional needs.

This position is primarily aligned with the Water Quality, Quantity, and Security Strategic Initiative. The Advisor will develop relationships with ANR advisors and specialists statewide and contribute to local, regional, and statewide projects and workgroups relating to Environmental Horticulture, water resource management, compost, turfgrass, landscape horticulture, and urban horticulture. This position may also collaborate with the UC IPM, Urban Ag & Food Systems and Statewide Master Gardener Programs.

External Network: The previous horticulture advisors established excellent working relationships with many public and private entities, setting an excellent foundation for the new advisor. This network includes landscape managers in city and county departments, regional school districts, golf courses, arboreta/botanical gardens, demonstration gardens, and local professional organizations such as the Landscape Supervisors Forum and the Golf Course Superintendents' Association, the East Bay Regional Parks and Area Recreation and Parks Districts.

Location/Support: The Headquarter County of Alameda will provide office, storage, and conference room space, office supplies and equipment, telephone, internet, administrative support and transportation. This position would be housed in the UCCE Alameda, and also serves Contra Costa, Santa Clara and San Mateo/San Francisco.

Other support: The incumbent will be expected to secure funding for research projects and cross-county/regional travel. Potential funding sources may include California Association of Nurseries and Garden Centers, UC California Institute for Water Resources and the landscape horticultural and open space management industries. Significant potential research and extension grant funding exists from California Water Resources Board.

Proposed by: Frank McPherson, SF Bay Area County Director, with support from Rob Bennaton (Urban Ag & Food Systems Advisor), Sheila Barry (CD Santa Clara), Igor Laćan (Bay Area Urban Forestry Advisor), Andrew Sutherland (Bay Area IPM Advisor), with the support of local parks utility districts, and the ANR Environmental Horticulture, Water and IPM Program Teams.

Ref: <http://www.bayareacensus.ca.gov/>