

## Environmental Horticulture Cohort Position Overview and Rationale

The Environmental Horticulture cohort will greatly expand and strengthen research and education that supports the environmental, social, and economic benefits plants provide while conserving and protecting natural resources required for their production, use, and care.

Position	Title	Counties/Area	Official Supporters
Advisor	Environmental Horticulture Area Advisor	Fresno, Madera, <b>Tulare</b> , Kings	Karmjot Randhawa, EH Program Team #1 Priority
	Production Environmental Horticulture Area Advisor	Santa Barbara, <b>Ventura</b>	Annemiek Schilder, Katherine Soule
	Environmental Horticulture Area Advisor	Bay Area ( <b>Alameda</b> )	Frank McPherson
	Environmental Horticulture & Forestry Area Advisor	<b>Placer</b> , Nevada	Dan Macon
	Horticulture & Specialty Crops Area Advisor	<b>Humboldt</b> , Del Norte	Yana Valachovic
Advisor	Urban Watershed Resilience Area Advisor	<b>Orange</b> , Los Angeles, Riverside, and San Bernardino Counties	Darren Haver
Specialist	Urban Forestry & Climate Adaptation Specialist (if chosen by the campus to move forward)	<b>UCR</b> /statewide	Darrel Jenerette
	Community Landscapes and Resilience (if chosen by the campus to move forward)	<b>UCD</b> /statewide	Claire Napawan

Research and education provided through the cohort is aligned with the following ANR public value statements: Protecting California’s natural resources; building climate-resilient communities and ecosystems; promoting healthy people and communities; developing a qualified workforce; and, developing an inclusive and equitable society. It is also relevant to all five ANR Strategic Initiatives.

### Critical issues addressed by the cohort and current ANR EH academics:

**Reducing Impacts of Climate Change in Our Cities.** Properly selected and maintained urban trees and other plants cool urban heat islands, reduce energy use, provide shade, sequester carbon, reduce air and water pollution, and provide other ecosystem and societal benefits. Members of low-wealth communities are at high-risk of experiencing health-related consequences due to low tree canopy cover.

**Conserving Water in Commercial, Public, and Residential Landscapes.** Determining minimum water needs of landscape plants and optimizing irrigation uniformity and efficiency conserves water while ensuring that adequate water is available to maximize ecosystem benefits of trees and other plants.

**Reducing Overuse of Pesticides and Fertilizers in Commercial, Public, and Residential Landscapes.** Urban landscapes are now the single greatest source of non-point pesticide pollution of California waterways. Providing research-based information to the workforce and the public on pest management stressing prevention is critical to reduce waterway pollution and related health impacts.

**Preventing and Controlling Pests and Diseases in Commercial Nurseries/ Greenhouses/ Controlled Environments and Landscapes.** Protecting California’s horticulture production industry from the threat of pests and diseases by developing and extending science-based practices that prevent and control pests is essential for maintaining a biodiverse functional urban ecosystem.

**Improving Water Quality and Conserving Water in Nurseries/Greenhouses/Controlled Environments.** Developing long-term groundwater sustainability plans that mitigate groundwater pollution requires a reduction in the overuse of fertilizers and pesticides. Developing strategies that result in adequate water to produce and maintain healthy landscape plants and expand the use of high quality recycled water is also critical.

**Enhancing Human Health and Well-being/Quality of Life.** Work through the cohort will improve the health and quality of life of all Californians through ecosystem and benefits products and services provided by the green industry. Numerous studies document the myriad ways that landscapes enhance our physical, psychological, sociological, and emotional well-being.

**Providing ANR MGP Oversight/Research and Extension.** Ensuring that research-based information is developed and extended to over 6,000 ANR MGP volunteers who, in turn, use this information to teach the public how to landscape more sustainably is critical.

**Developing a Qualified “Green Collar” Workforce for California.** The cohort will provide front-line education for the green industry due to their familiarity with local issues. A knowledgeable workforce is essential for the long term sustainability of California’s urban green infrastructure.

**Greenwaste Reuse and Recycling.** The cohort will work with CalRecycle and local recycling and waste management departments and districts to ensure that greenwaste generated through landscape maintenance and production practices is consistent with new statewide requirements and to that enhances the health of soils and plants.

**Collaborations/Partnerships:** The cohort will work closely with current EH Advisors and Specialists and other UC colleagues to ensure that statewide as well as local issues are identified and prioritized. The cohort will also play a vital role in multidisciplinary work with statewide Program Teams (Environmental Horticulture, Water Resources, Climate Change, and California Communities) and Statewide Programs (IPM, MGP, Cal Naturalist, SAREP) and related Workgroups that address the health and well-being of Californians, our communities, and our environment. The cohort will also partner and collaborate with multiple external organizations and agencies such as CA Dept. of Water Resources, CalRecycle, Resource Conservation Districts, and others.

**Expected Outcomes:** Contributions of the cohort will bolster measurable condition changes such as improved water-use efficiency, improved water-supply security, improved water quality, improved access to positive built and natural environments, improved health for all, improved air quality, improved community health and wellness, protected and conserved soil quality, increased ecological sustainability of landscapes, improved community health and wellness, improved access to positive built and natural environments, improved workforce retention and competency, increased preparedness and resilience to extreme weather and climate change, and improved health and well-being for all Californians.

Cohort proposal developed by Janet Hartin (on behalf of the UC ANR Environmental Horticulture Program) and Missy Gable (UC ANR Master Gardener Program Director). The UC ANR Climate Change, Water Resources, and California Communities Program Teams have all expressed overarching support of this cohort due to the multidisciplinary research and education opportunities it offers across the state among the respective Program Teams. Positions supports themes within the “Building California’s Urban Community” and “Health Resilience” Networks.