

Position Title: Area Environmental Horticulture Advisor (EH)
Stanislaus & Merced Counties

Position: Briefly describe: (1) Position will primarily focus on Environmental Horticulture with an emphasis sustainable landscapes and arboriculture/urban forestry; (2) requiring a minimum of a master's degree in horticulture, arboriculture, or plant science. Familiarity and experience with the landscape industry would be beneficial; and (3) This position will provide technical expertise in sustainable landscape practices (water conservation and water quality protection, integrated pest management, greenwaste recycling, etc.) to public and private landscapers, arborists, parks and school district groundskeepers and nursery personnel and provide oversight of the Master Gardener program in Stanislaus and Merced Counties. This position will collaborate with regional and statewide UC ANR environmental horticulture advisors and specialists as well as with the IPM program, and the statewide Master Gardener program,

Justification: Urban forests provide critical ecosystem services by lowering energy use, storing carbon, inducing air pollutant uptake, intercepting rainfall and increasing property values. California's 9.1 million street trees save 684 GWH of electricity annually, equivalent to the amount required to air condition 530,000 California households each year. In addition, 7.78 million metric tons of carbon dioxide emissions are stored in the state's street trees. In 2014, nursery crops were valued at \$ 138,884,000 with 2,244 acres in production. The Brown Marmorated Stink Bug and the Asian Citrus Psyllid have both been found in Stanislaus in 2015. Both of these insects have been found to be highly destructive to high valued agricultural crops and harbor in residential areas. There is a huge potential for extreme economic damage in both counties. There is no UC ANR environmental horticulture advisor currently assigned to either county.

There are over 163,000 households in Stanislaus County and 73,000 in Merced County along with a variety of other types of multiple housing units, all of which contribute to the utilization of important resources such as water and energy or use pesticides and fertilizers. Master Gardeners serve the urban and suburban residents engaged in home horticulture in Merced County. However, these volunteers require the subject matter expertise of an environmental horticulture advisor. Stanislaus County is one of the few counties without a Master Gardener program and currently does not have the staff to service urban clientele. Local organizations have expressed tremendous interest in community vegetable gardening. In consultation with the EH advisor, UC Master Gardeners will extend appropriate educational resources.

Extension: The EH Advisor will develop and extend research based information in sustainable landscape practices stressing water conservation, water quality, integrated pest management, and greenwaste recycling to the landscape and nursery industry in the two county area. The Advisor will organize workshops, seminars, and conferences with UC ANR colleagues and industry leaders. The Advisor will provide support for existing professional organizations to foster collaboration, education and research. Advisor will extend knowledge and information to clientele by way of newsletters and articles in professional journals, ANR publications and electronic and social media. Advisor will provide the academic oversight for the over 50 UC Master Gardener volunteers in Merced County as well as work with Stanislaus County 4-H Jr. Master Gardeners and facilitate a new Master Gardener Program in Stanislaus County, serving both as a resource and guide to program development.

Research: The advisor will develop a research program based on a needs assessment of the landscape and nursery industry in both counties. Potential projects include conducting research in collaboration with other EH Advisors to determine the minimum irrigation of a wide variety of landscape trees and to determine the efficacy of new species of sustainable climate-ready trees. The advisor will be expected to evaluate and assess the impact of projects and their benefits to local communities. The research areas to be addressed focus on the Strategic Initiatives and include:

- **Improved Water Quality, Quantity and Security:** Irrigating landscape plants based on their specific water requirement and reducing unnecessary fertilizer and pesticide applications conserves water and reduces waterway pollution. Planting and maintaining climate-ready drought tolerant trees that perform well under harsh environments also conserves resources and preserves water quality.
- **Endemic and Invasive Pests:** Maximizing alternative management strategies for key pests in the area. Focused research in collaboration with the citrus industry relative to urban residential citrus growers' responses to Asian Citrus Psyllid/HLB and other newly introduced pests and diseases.
- **Enhance the Health of Californians:** Street trees provide critical ecosystem services by lowering energy use, storing carbon, inducing air pollutant uptake, intercepting rainfall and increasing property values, among other benefits.

ANR Network: The strong and active network of UC ANR Environmental Horticulture advisors and specialists coupled with UC ANR academics working in collateral areas provides excellent academic linkages and support for this position. The Environmental Horticulture Program Team and related landscape and nursery workgroups strongly endorse this position as do initiative leaders in IPM, and Endemic and Invasive Pests and the statewide Master Gardener program. This advisor will also form strong connections with the California Communities Program Team which includes, Urban Food Systems advisors, Small Farms advisors, Nutrition, Family and Consumer Science advisors, local USDA and UC ASI/SAREP staff, as well external partners as appropriate.

Network External to ANR: There is strong support from the public and private landscape industry, wholesale and retail nursery industries and water districts.

Support: The supporting unit is UC Cooperative Extension in Stanislaus and Merced Counties. All costs associated with an academic position including office space, laboratory space, secretarial support, Internet access, office supplies and intra-county transportation are provided by the units. The advisor is expected to secure grant funds for research and extension related opportunities.

Other Support: Stanislaus County has budgeted for a Master Gardener Coordinator to be hired in the 2016 fiscal year. This position will start up and oversee the Master Gardener Program (MGP) in Stanislaus County. Merced County currently has a MGP hosting over 200 active volunteers.

Location: The Stanislaus County seat has the largest population base in the two county area (Modesto) and is the proposed location to house the advisor.

Developed and proposed by: County Directors – Theresa Spezzano (Stanislaus) and Scott Stoddard (Merced), Ed Perry (retired CD & EH Advisor) and EH Program team