2026 UC ANR Cooperative Extension Position (Advisor)

Developed and proposed by: This proposal was developed with the Water and Climate Science Program Teams, with assistance from Area Director Karen Warburton in defining the regional scope, need, and alignment with input from local farm bureaus. External stakeholder support is anticipated from growers, irrigation and water districts, Groundwater Sustainability Agencies, Resource Conservation Districts, regulatory agencies, and other water stakeholders. These groups face increasing challenges in irrigation efficiency, groundwater sustainability, managed aquifer recharge, climate variability, water quality, and water policy implementation. Their need for research-based information and practical decision-support tools will shape program priorities and ensure outcomes remain relevant to regional needs.

Position title: Area Irrigation and Water Resources Advisor (UCCE Advisor)

Headquarter location and coverage area: The position will be headquartered in the Yolo County UCCE office and will serve Sacramento, Solano, and Yolo Counties. Yolo County offers office space, staff, operating, communications, vehicle, and shared lab support in a central location where irrigation management, groundwater sustainability, and regulatory implementation are linked across county lines. The position will complement existing crop-focused programs by adding irrigation and water resources expertise and improving coordination and technical depth across the Capitol Corridor.

Position overview, briefly describe: The advisor will provide expertise in irrigation engineering, hydrology, agricultural water management, water resources engineering, or related fields. A minimum of a master's degree in one of these areas or a closely related field is required. The advisor will work with crop advisors, county units, relevant Program Teams and other UC ANR academics to build an applied research and extension program focused on irrigation efficiency, groundwater sustainability, recharge, and resilience.

Justification: The Capitol Corridor supports a diverse agricultural economy including processing tomatoes, almonds, walnuts, wine grapes, seed crops, rice, and specialty crops that depend on efficient water management. SGMA implementation, recurring droughts, and flood extremes, and growing competition for water have made irrigation and water management a fundamental challenge for agricultural viability, environmental stewardship, and rural economic resilience. This position will address three issues central to agricultural viability in the Capitol Corridor: on-farm irrigation efficiency under tightening supplies, SGMA adaptation and groundwater sustainability planning, and integration of recharge and drought resilience strategies with production systems. Growers face increasing pressure to make sound irrigation and cropping decisions under variable water supplies, evolving groundwater requirements, and expectations for efficient, defensible resource use. These challenges sit at the intersection of agriculture, natural resource management, climate resilience, and regulatory compliance.

Water management decisions directly affect profitability, productivity, groundwater sustainability, energy costs, and long-term agricultural viability in the Capitol Corridor. In Yolo County alone, nearly 190,000 acres of farmland are irrigated, about 40 percent of all cropland, and Sacramento County agriculture generates more than $536 million annually, much of it from water-dependent perennial and specialty crops, underscoring the scale of irrigated agriculture needing timely local expertise. County-based advisors often rely on irrigation and water expertise from colleagues outside the region. This reliance limits timeliness, reduces continuity, and pulls crop-focused academics away from their core commodities. Because irrigated agriculture accounts for roughly one-fifth of California's working lands and more than $50 billion in statewide farm revenue, the Capitol Corridor's irrigated acres represent a critical share of the state's water-dependent agricultural economy, and growers here will be on the front

lines of SGMA implementation and groundwater recharge. A dedicated advisor would fill this expertise gap by serving as a regional resource on irrigation system performance, water use efficiency, SGMA-related planning, groundwater recharge, and hydrologic constraints affecting crop and rotation decisions. This role will improve support for growers and strengthen the ability of existing advisors to focus on production and cropping systems.

The Water Program Team ranked this position as a top priority because no dedicated irrigation and water resources advisor currently serves the Capitol Corridor, despite growing demand for expertise in irrigation efficiency, groundwater sustainability, recharge, drought resilience, water quality, and water policy. Water management issues affect virtually every agricultural commodity in the region and have become a major constraint to long-term productivity, profitability, environmental stewardship, and resilience. Establishing this position would create a regional center of expertise to support growers, water agencies, groundwater sustainability entities, and UC ANR academics while advancing Strategic Vision 2040 priorities related to climate adaptation, sustainable water management, working landscapes, and agricultural resilience.

This position aligns strongly with UC ANR Strategic Vision 2040 priorities for sustainable water management, climate adaptation, working landscapes, and resilience. The position also supports interdisciplinary collaboration across Agriculture and Food Systems, Natural Resources, Climate Change, and Regulations, Policy, and Compliance. Support from both the Water and Climate Science Program Teams reflects the relevance of irrigation and water resources expertise to UC ANR's mission and the need for integrated, science-based solutions addressing water scarcity, groundwater sustainability, environmental stewardship, and agricultural productivity.

Expected outcomes include increased extension offerings, documented changes in irrigation and water management practices, development and adoption of decision-support tools, improved water use efficiency, and greater adoption of recharge and drought resilience practices. Over time, this position will contribute to improved water supply security, greater ecological sustainability, stronger resilience to extreme weather and climate change, and increased stability and profitability of farming systems. In the longer term, success will be reflected in stronger regional capacity to respond to water scarcity and regulatory complexity, more resilient cropping systems, and better hydrologic and agronomic decision-making.

Extension: The advisor will develop an extension program focused on irrigation management, surface and groundwater resources, SGMA-related groundwater sustainability, recharge, and water management in crop selection and rotation decisions. Outreach methods will include grower consultations, on-farm demonstrations, workshops, meetings, decision-support tools, and written and virtual outreach. These activities will provide practical guidance on irrigation scheduling and efficiency, technology evaluation, groundwater and recharge issues, and adaptation strategies for agricultural operations.

Key clientele will include growers, agricultural land managers, crop advisors, and other stakeholders involved in irrigation and groundwater planning. The advisor will also serve as a resource to county-based crop advisors and staff by supporting water-related problem solving across commodities and integrating water management into broader production recommendations. Because the region's water challenges are both technical and policy-oriented, the extension program will support immediate decisions and longer-term adaptive capacity, including communication with agencies and regional partners involved in groundwater sustainability, drought response, and water-use efficiency.

Research: The advisor will lead an applied research and extension program focused on irrigation efficiency and technology, SGMA adaptation and groundwater sustainability, and integrating recharge

and drought resilience practices with agricultural production systems. Research may include irrigation scheduling and system performance, field-scale water management under constrained supplies, crop and rotation effects on water management, and recharge practices compatible with agriculture. The research and extension program will generate practical findings for growers and agencies while contributing to scientific understanding and adoption of improved agricultural water management under changing climatic, hydrologic, and regulatory conditions.

Over the next 20 years, irrigated agriculture across the Sacramento–Solano–Yolo Capitol Corridor and the Sacramento–San Joaquin Delta is likely to face continued water supply variability, drought and flood extremes, greater demand for recharge, evolving SGMA implementation, and pressure to improve efficiency and water quality. The advisor's research should therefore be solutions-oriented, adaptive, and multidisciplinary, connecting hydrology, agronomy, technology evaluation, and policy-relevant management. Findings will be shared through UC ANR outreach publications and peer-reviewed outlets in agricultural water management, irrigation science, hydrology, and applied environmental management.

UC ANR network: This position will strengthen the UC ANR network by adding irrigation and water resources expertise in a region where water issues cut across commodities and counties. The advisor will function as a shared regional resource for crop-focused advisors, improving integration among research, extension, and stakeholder engagement on water management, and resilience. This is important because the current network lacks a Capitol Corridor academic focused on irrigation and agricultural water resources.

The position fits strongly within Water Program Team priorities and complements the Climate Science Program Team by linking agricultural water management with climate resilience, applied hydrology, and adaptation. The advisor will collaborate with agricultural advisors working with crop systems in Sacramento, Solano, and Yolo Counties, and with other UCCE advisors and specialists whose work intersects with irrigation, agronomy, orchard and field crop production, soil and water management, and climate-related adaptation. The advisor will also collaborate closely with statewide programs including the California Institute for Water Resources (CIWR) and CIWR's Climate Smart Agriculture program housed in the Yolo County office. By filling a recognized gap in water quantity, quality, and security expertise, the position will improve consistency of advice, regional coordination, and reduce reliance on ad hoc support from outside the area.

Network external to UC ANR: The advisor will collaborate with growers, agricultural water users, agencies, and other regional stakeholders involved in groundwater sustainability, recharge, irrigation management, and drought resilience. This network will include water managers and organizations engaged in agricultural water planning, implementation, and compliance, as well as community and industry partners affected by evolving hydrologic and regulatory conditions. These relationships will keep the program grounded in stakeholder needs and improve adoption of research-based practices and tools

Support: Confirmed support for this position includes office space in Yolo County, staff and operating support, a small shared lab, communications support, and vehicle access. These resources provide a strong base for a multicounty applied research and extension program and support field-based work, stakeholder engagement, and education across the three counties.

Other support: The position will pursue external funding for irrigation efficiency, groundwater sustainability, recharge, and climate resilience projects, including partnerships related to applied agricultural water management. As the program develops, support is likely to come from agencies and organizations focused on agricultural water management, groundwater sustainability, and climate adaptation.