

2026 UC ANR Cooperative Extension Position Proposal

Cooperative Extension Specialist in Tribal Water Stewardship and Climate Resilience

Developed and proposed by: The following academic and community leaders co-created and drafted this position proposal: **MK Youngblood** — UC ANR Native American Advisory Council Member, Chief Officer of Emergency Management & Board Chair, CalTerra, Haslett Basin Band of Holkama Mono; **Adina Merenlender** — PhD, CE Specialist, Co-Chair, UC ANR Native American Community Partnerships Program Team, UC Berkeley; **Chris J. McDonald**, PhD — Inland and Desert Natural Resources Cooperative Extension Advisor, Co-Chair, UC ANR Native American Community Partnerships Program Team; and **Francesca Hopkins**, PhD — Associate Professor of Climate Change & Sustainability, Department of Environmental Sciences, UCR. A broad network of ten technical collaborators in Water Science, Hydrology & Engineering, Climate Science & Geospatial Extension, and Education, and Policy & Community Engagement contributed to the scoping of this position and represent immediate, actionable opportunities for research, extension, and program delivery integration. Institutional and campus supporters include Gerald L. Clarke Jr. — Professor, Ethnic Studies Department and Special Advisor to the Chancellor on Native American Relations, UCR, and a broad range of faculty across the Departments of Environmental Sciences, Botany and Plant Sciences, and History, the School of Public Policy, and the Center for Conservation Biology, and regional partners at Loma Linda University.

Headquarters location and coverage area: This statewide UC ANR Specialist position will be based at UC Riverside (UCR), with a primary focus on serving the over 30 federal and state recognized Tribal Nations and Indigenous communities in Southern California while supporting collaborations statewide. UCR has a longstanding commitment to Native American communities, and is home to the California Center for Native Nations, which serves as a bridge between UC and California Tribal Nations. UCR's Environmental Sciences department focuses on physical, chemical, biological, and human components of the Earth System, and serves the community through research and education across the fields of atmospheric sciences, environmental chemistry & ecotoxicology, hydrologic sciences, and soil & water sciences. They are currently engaging Tribes in the region through education & outreach on tribal lands. This position brings together these institutional strengths in a region with need for developing Tribal science capacity.

Position Overview: The successful candidate will hold a PhD with an emphasis on environmental science, hydrology, watershed management, water policy, climate adaptation, Native American studies, or a closely related field, and have experience working collaboratively with Tribal and/or local communities on environmental problem solving. Experience with watershed management, drinking water quality and security, water infrastructure, and climate adaptation planning is desirable, as is knowledge of Tribal water issues, Indian water law, and the intersection of Tribal sovereignty with California water law and policy. The position will emphasize development of respectful, long-term partnership with Tribal communities to co-address critical challenges related to water security, infrastructure capacity, drought, flood resilience, and disaster preparedness, in support of culturally informed watershed stewardship. The Specialist will co-develop applied research and provide technical assistance to Tribal communities in water systems, groundwater access, drinking water security, and climate adaptation planning, while also navigating state and federal water programs and the complexities of Tribal water rights.

Collaboration with Tribal leadership, water districts, community organizations, state and federal agencies, and UC ANR programs will advance applied research, outreach, and technical assistance to inform ways of improving Tribal water security, reducing flood risk, protecting water quality, and providing added resilience to drought and climate-related hazards. The Specialist will contribute to the California Institute for Water Resources, as well as UC Climate Stewards and California Naturalist courses by sharing Tribal perspectives on climate and watershed stewardship to augment existing educational efforts and expand delivery to California Indian country. In addition to engaging with the Native American Community Partnerships Program Team, this Specialist will connect with the Water Quantity, Quality, and Security, Climate Science and Ecosystem Impacts, and Systemic Inequities Program Teams.

Justification: Water is life, as demonstrated by the many rituals practiced by Indigenous peoples that focus on fresh water. At the same time, Tribes face many challenges exacerbated by climate change such as decreased water availability, poor water quality, and inadequate water infrastructure. For example, in Riverside County, longstanding groundwater rights and water management challenges affect many Tribal communities, including the Agua Caliente Band of Cahuilla Indians in the Coachella Valley and communities in the Anza/Cahuilla Valley, where groundwater use has often exceeded recharge rates. Tribal communities have interest in projects to increase safe and quality water supplies and their resilience in a changing climate.

A successful specialist will provide leadership in water quality and quantity monitoring that can benefit every Tribe in California. Goals include implementing EPA mandated programs and developing new initiatives to address water security in Tribal communities; nonpoint-source pollution of water supplies, and the need for adaptive watershed stewardship.

Outcomes/Impact: This position directly advances UC ANR's public value framework by contributing to "improved water quality" and "improved water use efficiency and water supply security" through applied research and extension focused on Tribal water systems and watershed stewardship. The position will also support greater disaster preparedness and climate resilience through climate adaptation planning and technical assistance to Tribal communities. In addition, it will contribute to ecological sustainability by integrating Indigenous stewardship practices and traditional ecological knowledge into water management, restoration, and resilience planning. It closely aligns with UC ANR's Strategic Vision 2040 by partnering with historically underserved Tribal communities to advance "thriving communities" and "resilient ecosystems." By supporting meaningful engagement with Tribal communities and learning from different ways of knowing and doing, the position will help build environmental and community resilience across California.

A successful Specialist will be recognized by Tribal communities across Southern California for their expertise and potential to assist with water management, conservation, and restoration. They will develop strong funding support to advance research and applications that benefit Tribal communities. Tools developed by the Specialist will be widely used by Tribes to advance water sovereignty across the state. Long-term success will be measured through water quality, groundwater sustainability, and watershed health metrics. Equally important will be establishment of long-term trusted partnerships between UC ANR and Tribal communities to increase Tribal capacity to secure and manage water resources, and implement Tribal-led restoration projects.

Extension: The Cooperative Extension Specialist in Tribal Water Stewardship and Climate Resilience will develop and deliver a statewide extension program that advances Tribal capacity in water quality monitoring, groundwater and surface-water management, drinking water protection, watershed restoration, and climate adaptation. Extension activities will include conducting workshops, field training, demonstration projects, technical webinars, community-based monitoring programs, and development of practical decision-support tools related to water quality assessment, groundwater management, source-water protection, climate adaptation planning, restoration design, and water governance. The Specialist will collaborate closely with Tribal environmental departments, Tribal councils, water managers, cultural practitioners, youth stewardship programs, and Tribal colleges to co-develop educational programs that integrate Indigenous knowledge systems with contemporary hydrology, watershed science, and climate adaptation approaches. Extension products may include water monitoring protocols, restoration planning guides, climate adaptation toolkits, groundwater education resources, invasive species management guidance, and culturally relevant curricula that support Tribal water stewardship and water sovereignty.

Research: The Specialist will develop a research program in one or more aspects of addressing societal and ecological demands for freshwater, water reliability, and/or climate impacts (e.g., adaptation and mitigation). Examples could include integrated assessment modeling of hydrology and water resources, observations of contaminant transport (e.g., heavy metals, nonpoint-source pollution) in tribal source waters, governance and policy options for improved water security and climate adaptation, groundwater

and surface water restoration methods, and implementation. The interdisciplinary nature of the problem of water stewardship, mitigation of climate change impacts, and adaptation requires that the Specialist develop an interdisciplinary research program and take a leadership role in building collaborative efforts to leverage the pool of relevant capacity that exists in ANR, UCR, and California scientists more broadly. Possible publication outlets include those within ANR (e.g., *CA Agriculture*), and external outlets, including *Environmental Science and Policy*, *J. American Water Resources Association*, *Water Policy*, and *Water Resources Mgmt*.

UC ANR network: The Specialist would collaborate closely with an interdisciplinary network of UC ANR academics and campus-based researchers. A list is available as an addendum to this position description. The position fills several well-recognized gaps within the UC ANR network. First, there is currently no Cooperative Extension academic whose primary clientele are Tribal governments and Tribal environmental departments working on water-related issues, despite increasing Tribal engagement in groundwater sustainability planning, drinking water protection, watershed restoration, climate adaptation, and water governance. Second, while UC ANR has substantial expertise in agricultural water management, climate science, and hydrology, its capacity is limited in community-scale water systems, Tribal water quality programs, drinking water management and quality, and water sovereignty. Third, no existing position serves as a sustained bridge connecting Indigenous knowledge systems and stewardship practices with water science, climate adaptation, and extension programming.

Network external to UC ANR: A unique contribution of this position will be its ability to strengthen relationships among Tribal governments, UC ANR, and the diverse agencies that influence water management and stewardship in California. The Specialist will be expected to work closely with Tribal environmental departments, Tribal councils, and Tribal natural resource programs while also serving as a trusted technical partner to federal, state, regional, and local agencies. Key collaborators may include the Bureau of Indian Affairs, Indian Health Service, U.S. Geological Survey, U.S. Environmental Protection Agency, Bureau of Reclamation, USDA Natural Resources Conservation Service, California Department of Water Resources and the Integrated Regional Water Management efforts, State Water Resources Control Board, Regional Water Quality Control Boards, Groundwater Sustainability Agencies, Governor's Office of Land Use and Climate Innovation, Resource Conservation Districts, and local water districts. Through these partnerships, the Specialist will help Tribes access scientific information, funding opportunities, technical assistance, and collaborative planning processes related to drinking water quality, groundwater sustainability, watershed restoration, climate adaptation, water infrastructure, and environmental stewardship. The position will enhance UC ANR's role as a trusted source of science-based information while helping agencies better understand and incorporate Tribal priorities, Indigenous stewardship practices, and Tribal ecological knowledge into water management and restoration efforts.

Support: Environmental Sciences at UC Riverside will provide office space, lab space if relevant, and work with UCANR to ensure the Specialists' needs are met. Environmental Sciences is a multidisciplinary department in the College of Natural and Agricultural Sciences at UCR with undergraduate and graduate programs. Physical resources of the department include a full environmental analytical laboratory, including for water quality analyses, including metal detection (ICP-OES), ions, carbon, and nitrogen analyses in liquid, solid, and gas samples.

Other support: There is a strong funding landscape which this Specialist could access. Many Tribal environmental departments engage with the U.S. EPA Clean Water Act Section 106 grants. The Specialist will assist Tribes in developing monitoring programs, interpreting water-quality data, building technical capacity, and leveraging Section 106 and related funding opportunities to advance drinking water protection, watershed restoration, and water infrastructure projects. Other agencies that support this work include Bureau of Indian Affairs, EPA Tribal Programs, USDA-NIFA, NOAA adaptation programs, U.S. Geological Survey, California Department of Water Resources, State Water Resources Control Board, and FEMA resilience initiatives.