Position Title: Area Livestock and Natural Resources Advisor, Central Sierra Multi County Partnership

Position: This advisor will serve clientele in the Central Sierra Multi-County Partnership (El Dorado, Amador, Calaveras and Tuolumne counties) with a general disciplinary focus on livestock production systems including grazing management, pasture management, nutrition, herd health, animal husbandry, genetic selection, reproduction, harvesting/processing and marketing. The successful applicant will have a minimum of an MS degree in animal science, range management or a closely related field. Ideally the applicant will have one degree in animal science and one degree in range management or have the minimum course work to be a Certified Rangeland Manager. This position will report to the Central Sierra Multi-County Partnership (MCP) Director and will interact internally with the UC Davis Dept of Animal Science and the following ANR Program Teams; Meat Production and Food Safety, Forest and Rangeland Systems, and the Diversified Farming and Food Systems.

Justification: Livestock production continues to be one of the leading agricultural commodities in the region. Livestock production is the number one agricultural commodity in both Tuolumne and Calaveras counties and ranks second in both El Dorado and Amador counties. The majority of livestock is cattle, with goats, sheep, poultry and swine also being represented. Nearly all the cattle produced in the region consists of cow/calf operations which operate on a complex and diverse land ownership basis. Livestock production on annual rangelands accounts for 800,000 acres in the region and is mostly private ownership that is either owner operated or leased. A portion of the annual rangeland is publicly owned either by Federal, State or local government and a number of utility districts. In addition to annual range, many livestock producers utilize forestlands for summer grazing. The Stanislaus and El Dorado National Forests account for 589,000 acres of grazing land with an additional 168,000 acres of private forestland used for grazing. A number of producers also utilize irrigated and non-irrigated pastures in other parts of California or out of state. As a result of the diversity in ecosystems and magnitude of acreage and diversity of ownership, the issues that arise in this production system are just as varied and diverse.

Over the last decade, several producers in the region have begun to experiment in direct marketing to consumers either through direct sales or through restaurants, grocers, or other retail outlets. Advantages of direct marketing include increased profit margins, new customer base, diversified income, improved local sustainability and food security, and education of local agriculture, but the roadblocks in this process include a lack of federal inspected harvesting and processing facilities in the region; navigating through the vast number of specialty meat marketing claims including; organic, natural, grass-fed and grain-fed. The pandemic of 2020 and then the June 2021 ransomware attack on JBS (the world’s largest meat processor) provide ample evidence that concentration of the meat supply chain is a bad idea. These disruptions led to the closure of large meat processing plants that account for most meat supply across the nation. Yet, long before COVID-19 and ransomware, small- and mid-scale producers of meat have been constrained by market structures, policies, and a rugged-individualist culture among many that values autonomy and independence over collaboration, including collective action in marketing and distribution. As a result, lack of access to slaughter, limited capacity of cut and wrap facilities, and concentration of marketing channels create conditions in which small- and mid-scale farms and ranches struggle to stay in business. Meat is a critical part of the American diet. Moreover, meat processing plants are the top source of food manufacturing jobs in the nation. In July 2021, President Biden signed an executive order promoting competition in the American economy. Part of that order will empower family farmers and increase their incomes by strengthening the Department of Agriculture’s tools to stop the abusive practices of some meat processors. Locally, there is a strong effort to create a small harvest and processing unit for poultry and other livestock. The area is primed for a strong Animal Scientist from UCCE to step in and create extension and research projects to help grow this burgeoning enterprise, taking leadership with county departments to benefit local producers as well as the socio-economic footprint in these rural counties. This position can evaluate value-added opportunities that could result in a higher net return for local ranchers and provide a secure food system locally. The advisor will work with new and existing producers to develop educational outreach programs and research projects to address these challenges to help support the diverse livestock community.
Other Animal Science issues in the area include a vast number of production centric issues such as animal performance, genetics, animal health, and marketing. These will especially be important for producers who choose to locally market their livestock, to pair performance with the environment and produce the desired end product.

Local food systems are also dealing with reduction in food wastes to reduce carbon footprints. This position can play an important role in education and research on how livestock production can play a role in the reduction, or recycling, or upcycling of local food wastes into meat production.

Rangeland issues are also an issue in the four county area, with fuels management a leading issue. The region has had some of the largest and most destructive wildfires in California’s history including the Caldor, Donnell, Rim, King and Butte fires. There is currently very little post fire grazing research available in the literature making the need for this information extremely important.

The Central Sierra is the headwaters to a number of major watersheds including the American, Consumnes, Mokelumne, and Tuolumne. More than 60% of California’s developed water supply originates in the Sierra Nevada serving end users throughout the State. Further, up to 50% of the flow into the Sacramento-San Joaquin Delta (Delta) comes from the Sierra. The Delta is the hub of California’s water system, providing water to more than 25 million Californians and 3 million acres of agricultural land. Specifically, Hetch Hetchy Reservoir in Tuolumne County provides 85% of San Francisco’s total water needs. The Mokelumne River in Amador/Calaveras counties provides more than 90% of the East Bay’s water. With livestock grazing as the largest agricultural land use throughout the region, producers face numerous issues pertaining to water quality. The myriad land management strategies employed on oak woodlands, forestlands, and brushlands have a wide range of effects on water quality and quantity, which have implications for numerous beneficial uses of water downstream from these systems. One of the prime perceived threats to water quality is livestock. There are currently a number of significant water related issues threatening livestock producers that this position could immediately address. In addition, producers are dealing with increased scrutiny from regulatory agencies including the State Water Resources Control Board that recently proposed the Grazing Regulatory Action Project. There are a number of other regulations that are of significant importance to producers including the Irrigated Lands Regulatory Program, Nitrogen Management Plan and the Statement of Water Diversion and Use. This position will work with producers, govt., non-govt. orgs, and community groups to address water quality concerns as it relates to livestock operations.

**Extension:** This position will extend science-based information to clientele on livestock management practices to enhance production efficiency and ranch profitability and help minimize any negative impacts associated with livestock production. Managing ecosystems, while not a new opportunity, is an area where UC is well positioned to provide leadership and generate success. Key clientele groups include livestock producers, public resource management agencies (NRCS, California Fish and Wildlife, US Forest Service, Bureau of Land Management, and RCDs), nonprofit conservation organizations (such as The Nature Conservancy, fire safe councils, local watershed councils, land trusts and other non-government organizations) and a number of youth groups (4-H, FFA, and Grange). Collaboration with these groups will identify issues and opportunities for extension of livestock and land management information using seminars, workshops, field days, internet resources and producer-oriented and peer-reviewed publications.

**Research:** This advisor, collaborating with other CE advisors and specialists, AES faculty, and clientele will help implement management practices that improve livestock production in the region and will address production, animal health, food safety, meat processing and marketing, water quality, soil quality, and ecosystem health. Species that will be emphasized will be cattle, sheep, goats, and small scale poultry. Publication outlets include agriculture journals and natural resource journals such Rangeland Ecology and Management, and California Agriculture. Research will be synthesized and popularized in ANR publications, Rangelands, the internet, and other outlets as appropriate.

**ANR Network:** The advisor is expected to develop strong programmatic ties with Livestock, Plant Science, and Natural Resource advisors in the Central Sierra region, neighboring counties and across the division. This position will have a strong animal husbandry focus and will contribute to a more complete and balanced team throughout the MCP and the neighboring counties. There are no livestock, range, or animal science advisors in the region. Having an advisor that is a Certified Rangeland Manager that also has a strong background in animal science would be a significant asset to the MCP and the region. This position will be supported by CE Specialists and AES researchers at UCD (Animal Science; School of
Veterinary Medicine; Plant Science; Agriculture Economics; and Wildlife, Fisheries and Conservation Biology), the UC Berkeley Dept of Environmental Science, Policy and Mgmt., and Specialists housed at UC Riverside, specifically for livestock entomology. There are immediate opportunities to collaborate with these campus-based colleagues on existing projects. CE Specialists Ken Tate and Leslie Roche all have new and established research projects in the area examining annual rangeland restoration, grazing post fire, and water quality. The advisor could immediately collaborate and contribute to these studies. In addition, the region has an ongoing 20-year annual forage production study that the advisor would participate in immediately. There is also a long standing Oakdale Livestock Forum that has traditionally been for a four county area, Stanislaus, San Joaquin, Tuolumne and Calaveras. This advisor would be able to collaborate on the Livestock Forum as well as other projects with neighboring Advisors. In addition to the support of Specialists and neighboring Advisors, a Livestock Advisor in the MCP will create a strong collaborative team and bring unique expertise with other advisors already housed in the MCP. Susie Kocher, Scott Oneto and the recently approved Food Systems Advisor along with a Livestock Advisor will create a team like no other area has and will allow them to have more impact on issues across the MCP.

Network External to ANR: The external stakeholders for this position include; landowners and land managers, government agencies including USDA Natural Resources Conservation Service and Farm Service Agency, County Agricultural Departments, water districts including East Bay Municipal Utility District; NGOs including Farms of Amador, El Dorado Farm Trails, CalaverasGrown, Farms of Tuolumne County, Mother Lode Land Trust, Tuolumne Land Trust, and California Rangeland Trust; private industry including California Cattlemen’s Association, California Cattlewomen’s Association, and California Wool Growers, and the general public. Cattleman’s Association, the Farm Bureau and other agricultural and conservation organizations strongly support this position.

Support: Support for this position, including office space, travel, communication (telephone, internet), clerical support, and office supplies are provided from the MCP through direct county support.

Other support: Local financial support can be supplemented by federal and statewide grant programs, e.g. CDFA Value-Added Block Grants, Rural Development Block Grants. In addition, there are a number of internal UC funding sources including the ANR Competitive Grant Program and the Rustici Endowment. The advisor will also work on an existing 5-year funded project with a local water district examining their range program.

Location: The advisor would be housed in Calaveras County. Although the geographic responsibility consists of four counties, it is only a 2-hour drive to reach the opposite end of the assigned area.

Developed and proposed by: the Meat Production and Food Safety Program Team and Central Sierra Nevada County Director.