TUOLUMNE COUNTY NATURAL RESOURCES ADVISORY COMMITTEE

REGULAR MEETING AGENDA

2025 Strategic Priorities

- Support our local water utility partners in their effort to modernize and improve water supply infrastructure and mitigate risk.
- Maintain awareness of pertinent State and Federal legislation regarding natural resources, land use, water, and water rights.
- Maintain awareness of Tuolumne County Federal land use policy, planning, and implementation and provide recommendations and advocacy as appropriate.
- Promote landscape and watershed resilience through innovative solutions and capacity building.

Date/Time: Wednesday, March 5, 2025 at 10:00 AM
Location: A.N. Francisco Bldg. 48 Yaney Ave. 3rd Floor Committees & Commissions Rm., Sonora, 95370
Contact: Sean Hembree at shembree@co.tuolumne.ca.us (209)533-5554

Chair/Vice Chair
Supervisor Anaiah Kirk

Supervisor Mike Holland

Agency Representatives
Tuolumne Me Wuk
Diana Beasley

Chicken Ranch Me Wuk
Stephanie Suess

Tuolumne Utilities District
Don Perkins

Groveland CSD
Pete Kampa

Hetch Hetchy
Adam Mazurkiewicz

Fish and Game Preserve Fund
Jim Maddox

Agricultural Advisor
Dick Gaiser

Tuolumne Co. RCD
Jim Phelan

At Large Member
Chris Trott

Staff
Water & Natural Resource Analyst (CAO)
Sean Hembree

I. **CALL TO ORDER**

II. **ROLL CALL (*5 minutes*)**
Introductions during roll call
Confirm quorum requirements are met (*Quorum = 6 members)*

III. **PUBLIC FORUM (*15 minutes*)**
The public may speak on any item, not on the agenda. No action may be taken by the Committee
Public Comment (limited to 3 minutes per person)

IV. **APPROVAL OF MINUTES FOR MEETING FEBRUARY 5, 2024 (*5 minutes*)**

V. **PRESCRIBED GRAZING FOR WILDFIRE RESILIENCE REPORT BY LESLIE ROCHE, PH.D., U.C. DAVIS/U.C.C.E. AND DISCUSSION OF LOCAL OPPORTUNITIES**

VI. **PARTNER AGENCY UPDATES *(15 minutes)***

VII. **COMMITTEE BUSINESS:**
- **a. Staff Reports and Recommendations**
  - **i. Pinecrest overuse actions update**
  - **ii. SNC Board Meeting in Calaveras County March 6**
  - **iii. Biomass JPA proposal workshop March 24**
  - **iv. USFS Withdrawal of Old Growth Forest Proposal**
  - **v. Sustainable Rural Schools status**
  - **vi. H.R. - 471 Fix Our Forests Act**
- **b. Committee Member Reports**

VIII. **ADJOURNMENT**
The Next meeting will be held on April 2, 2025

Tuolumne County Natural Resources Advisory Committee Minutes

For the Meeting on February 5, 2025

2025 Natural Resource Members (*or assigned delegates*)	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Anaiah Kirk		✓										
Mike Holland		✓										
Don Perkins		✓										
Pete Kampa		✓										
Joy Mellera		E										
Dianna Beasley		✓										
Dick Gaiser		✓										
Chris Trott		E										
Jim Maddox		✓										
Jim Phelan		E										
Present = ✓ Absent = **A** Excused = **E**												

1. CALL TO ORDER: Chair Kirk called the meeting to order at 10:00 A.M. and confirmed a quorum was present.

2. MEMBERS PRESENT: Chair Kirk, Vise Chair Holland, Tony Diaz on behalf of TUD, Pete Kampa, Dick Gaiser, Jim Maddox, Laura Hiler on Behalf of Tuolumne Me Wuk and Sean Hembree, Robbie Bergstrom, and Caitlin Henry (staff)

3. PUBLIC FORUM: (*The public may speak on any item not on the printed agenda. No action may be taken by the Committee. The amount of time allocated for the public forum is limited to 15 minutes.)*

   Note: At the beginning of the public forum section an announcement was made to clarify that the biomass update under the staff reports section of the February agenda is a discrete action from any proposed biomass facilities including the proposed Golden State Natural Resources Pellet Plant. That plan will not be considered by this committee due to an anticipated quasi-judicial hearing before the County Board of Supervisors at a later date.

   Several members of the public commented on the proposed Golden State Natural Resources Pellet Project citing concerns including public health and air quality, pellet plant water demand, and impacts on local road conditions. Others cited the value in facilitating removal of excess biomass as a mitigation for wildfire risks to local forests and communities.

4. APPROVAL OF MINUTES:
   In consideration of approving the minutes of the meeting held on November 6, Jim Maddox made a motion to approve the minutes. The motion was seconded by Pete Kampa. The minutes were approved unanimously 6-0

5. DISCUSSION OF FIRE-HARDENED TRAILS AND VEGETATION MANAGEMENT CORRIDORS (proposed by Sierra Butte Trail Stewardship - https://sierratrails.org/)
   a. Stanislaus National Forest Public Affairs Officer, Ben Cossel Asked if recreation equity proponents such as Patagonia were participating. He recommended contacting Outdoor Alliance. Cossel further noted that there is no current Stanislaus Forest staff capacity to support NEPA requirements without a public-private partnership to bear the cost.

   b. Pete Kampa stated that the Hetch Hetchy Railroad Trail has been considered for a similar framework.
   c. Chair Kirk requested that we invite Yosemite Stanislaus Solution to consider this proposal. Sean Hembree to relay request.

6. PARTNER AGENCY UPDATES:
   a. CAL FIRE: Unit Forester, Gary Whitson stated that a January 24 meeting with State Assembly Representatives Alverado-Gill and Tangipa to highlight fuel management successes further such tours and events could bear fruit to help decision-makers understand the challenges and opportunities we face.

7. COMMITTEE BUSINESS:
   a. Staff Reports and Recommendations:
      i. MSA Administrative Analyst, Caitlin Henry, shared an update on recent and planned fuel treatment reforestation work.
      ii. Economic Development Administrative Analyst announced a planned Biomass Utilization Workshop Planned for March 24 at Mother Lode Job Training Center 197 Mono Way Ste. B Sonora, CA.
      iii. Administrative Analyst, Sean Hembree reported on the status of the Pinecrest Parking Actions.
      iv. Additional Staff Report items were postponed in the interest of time.

   b. Committee Members Reports:
      i. Tony Diaz (TUD) announced the approval of a fire hardening project to protect TUD tank and water treatment station infrastructure. Diaz also indicated finalization of raw water utilization for the fire protection plan will go before the TUD Board of Directors for final approval soon. The Plan was developed to identify fire-water draft points in conjunction with County/CAL FIRE Prefire planning staff.
   c. Public Comment: A member of the public commented on the Pinecrest actions and consideration of fee-based parking. Another commented that winter congestion also needs to be addressed.
   d.

8. ADJOURNMENT: The meeting was adjourned at 11:10 by Chair Kirk. The next meeting will be held on March 5, 2025

Expanding prescribed grazing for wildfire resilience in California: Opportunities and strategies for effective fuels management

Leslie Roche, *UC Davis/UCCE, Professor of Cooperative Extension in Rangeland Management*
Dan Macon, *UCCE, Central Sierra Livestock and Natural Resources Advisor*

California's recent history of catastrophic wildfire underscores the urgent need to leverage every available tool to adapt to changing conditions and build wildfire resilience. Prescribed livestock grazing—the planned management of livestock to achieve resource goals [1–3]—offers a cost-effective, landscape-level tool for region-specific fuels management and post-fire recovery across the state[4]. This overview highlights **opportunities**, **considerations**, and **key actions** for integrating prescribed grazing into broader fuels management strategies.

Opportunities for leveraging prescribed grazing to build wildfire resilience

As state and federal agencies scale up efforts to treat a combined one million acres annually, prescribed livestock grazing offers significant potential to help enhance community protection of life and property, support ecological goals, create local economic opportunities, and advance the goals of California's Wildfire and Forest Resilience Action Plan. Livestock grazing is the most widespread land use activity in California, covering ~30 million acres[5,6], and is already frequently used to achieve multiple conservation goals on private, state, and federal lands[7–11]. This presents significant opportunities to integrate grazing into broader fuels management and restoration strategies to mitigate wildfire intensity and frequency and build post-fire resilience.

Livestock grazing (cattle, sheep, and goats) is increasingly recognized as a cost-effective tool for reducing wildfire risk, while also providing a range of other ecosystem benefits [12,13]. Planned grazing can support multiple ecosystem services—including food and fiber, biodiversity and habitat, carbon sequestration and security, and water flow and supply[14]. In terms of fuels management, grazing can reduce flammable shrubs—including those that ignite easily and contribute to ember cast—break up continuous fine fuels and decrease overall fuel biomass[12,13,15–19]. These changes to fuel profiles can alter fire behavior by slowing its spread and reducing intensity, which helps create defensible space. Additionally, grazing can play key roles in maintaining and restoring landscapes post-fire[20]. See **Box 1** for additional information on the spectrum of grazing management strategies.

Different vegetation treatments, such as prescribed burning, mechanical thinning, and grazing, provide distinct benefits that can complement each other in joint strategies for effective land management[21]. Integrating prescribed burning and grazing can enhance effectiveness of both treatments: prescribed grazing reduces flammable plant material that could otherwise intensify fire behavior, while prescribed burning improves forage for livestock and wildlife. For post-fire reforestation efforts, prescribed grazing can assist with site-preparation, helping to restrict shrub encroachment and other competitive vegetation[15,22]. Prescribed grazing can also be an effective tool in addressing fuel-loading near wildland-urban interfaces (WUI) and within urban and suburban communities, especially where other fuels management tools, such as herbicides or prescribed fire, may be restricted.

Livestock grazers have well-documented expertise in managing fuel loads and mitigating wildfire risks[23] and are uniquely positioned to contribute to coordinated regional strategies across land ownership boundaries. Establishing and maintaining regional partnerships to support joint strategies will require sustained funding, streamlined regulations, and access to technical support resources. Several federal and state agencies–including USDA-USFS, USDI-BLM, and CDFW– are actively collaborating with stakeholders on expedited procedures for implementing fuels reduction projects. These efforts represent significant opportunities for expanding the use of grazing across public and private lands.

Considerations and guidance for successful prescribed grazing

Effective prescribed grazing strategies for managing fuel loads in fire-threatened communities must integrate environmental, economic, and social considerations. While land management is inherently site-specific, evidence-based principles for successful grazing management[24] provide key guidelines, outlined below.

- **Ecological Health and Sustainability**
  Well-planned grazing can support biodiversity, soil health, and other critical ecosystem services while ensuring protection for sensitive species and habitats. Prescriptions must consider the needs of both target and non-target plants to perform critical functions (e.g., photosynthesis, reproduction), and should be timed accordingly to maximize effectiveness[1,2]. Both local knowledge and science-based technical information are essential for understanding a site's potential for reaching management objectives.
- **Livestock Management and Well-being**
  Ranch-level trade-offs between livestock production and fuels management goals are a critical consideration, especially with more intensive prescriptions (**Box. 1**). For example, the optimal timing for managing fuels may coincide with declines in forage palatability and nutrition, which can impact animal productivity[1,2]. Therefore, a comprehensive herd health program is essential for maintaining animal health, performance, and the long-term sustainability of livestock operations.
- **Adaptive Management and Planning**
  Successful grazing strategies depend on adaptive management and flexibility. Local managers need to proactively develop written plans[24,25] that address timing, intensity, duration, frequency, and distribution of grazing to achieve ecological health and livestock production goals. Grazing plans should also incorporate monitoring, checkpoints and strategic triggers, and protocols for making necessary adjustments.

Region-specific grazing strategies must be collaborative, context-specific, and outcome-based. These efforts should focus on identifying local goals, challenges, and opportunities using multiple information sources—such as monitoring data, technical support, and local experiential knowledge— throughout the decision-making process. Proactive planning will help manage uncertainties and trade-offs, while also enabling partners to more effectively resolve potential conflicts.

Key Actions

Map and prioritize grazing projects for fuel reduction, post-fire resilience, and community protection

- Inventory current grazed acreage across the management spectrum (see **Box 1**), including:
  - Fuel reduction as an incidental benefit of grazing (e.g., permitted grazing on federal allotments)
  - Fuel reduction as a grazing co-benefit (e.g., grazing leases on recreational, municipal watersheds, or other public/quasi-public lands providing livestock forage while reducing fuel loads)
  - Fuel reduction as a primary focus of grazing (e.g., targeted grazing prescriptions to establish fuel breaks, address WUI fuel loads, or to protect strategic resources or infrastructure)
- Prioritize landscapes where grazing can strategically protect vulnerable communities, human health and safety, critical infrastructure, and high-risk ecosystems
  - Develop map-based analysis to identify high-risk fuel areas, integrating constraints and opportunities for prescribed grazing

Support long-term investments in grazing infrastructure, economic activity, and workforce development

- Provide technical training and support to help prescribed grazing operators meet regulatory requirements, including supporting training and development opportunities for California Certified Rangeland Managers
- Provide support for business training and workforce development to help new and existing livestock grazers shift from a production model to a service model
- Increase lease terms on agency-managed grazing lands (e.g., 5-year minimums) and expand cost-share opportunities for permanent infrastructure development to help grazers recover investments, ensure economic viability, and support sustainable grazing practices

Enhance policy and regulatory support for prescribed grazing projects

- Develop regional guidelines and grazing management plans (currently in development by the Board of Forestry and Fire Protection's Range Management Advisory Committee)
- Streamline CEQA permitting process for state-funded prescribed grazing projects, including updating CalVTP to encompass a broader range of qualifying project sites
- Facilitate streamlined NEPA analyses for prescribed grazing efforts on federal lands
- Reduce insurance rates for homeowners and communities using prescribed grazing for fuels reduction

Expand monitoring and applied research activities

- Support development of standardized contract performance metrics and vegetation removal criteria to quantify the amount of fuels removed or modified
- Incorporate total acres grazed and associated fuel reduction benefits (i.e., incidental, co-benefit, or primary; **Box 1**) into state and national target reporting, as permitted by agency guidelines
- Provide funding for applied research on scaling up prescribed grazing as part of regional, integrated strategies for fuels management, ecosystem resilience, and local economic opportunities
- Support applied research on how strategies across the grazing management spectrum (**Box 1**) can be used to build fire-smart landscapes

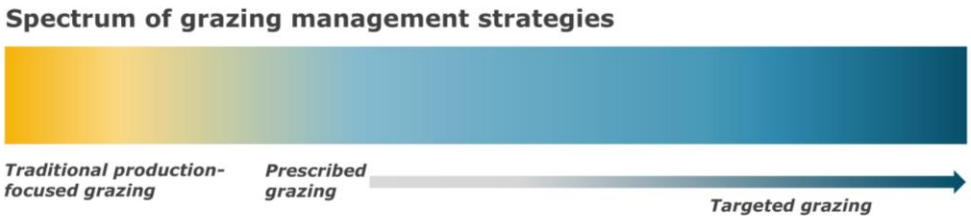
Accelerate community engagement and cross-boundary collaborations

- Integrate prescribed grazing across the California's Wildfire and Forest Resilience Action Plan goals
- Fund regional prescribed grazing coordinator positions to enhance capacity for collaboration across state, federal, and private land boundaries
- Provide funding to expand outreach and education for resource professionals, policy decision-makers, and other stakeholders on integrating prescribed grazing into joint strategies at regional scales

Prescribed Grazing Work Group Members

Beth Brenneman, *USDI Bureau of Land Management, Central CA District Fire/Fuels, Project Manager*
Alan Bower, *USDA Natural Resources Conservation Service, State Rangeland Management Specialist*
Cole Bush, *Range Management Advisory Committee member and southern CA practitioner*
Diana Craig, *USDA Forest Service, Pacific Southwest Region*
Bart Cremers, *Range Management Advisory Committee member and northern CA practitioner*
Katie Delbar, *CA Board of Forestry and Fire Protection, range/livestock member*
Lynn Huntsinger, *UC Berkeley, Professor of Rangeland Ecology and Management*
Jenny Jayo, *USDA Forest Service, Pacific Southwest Region*
Devii Rao, *UCCE, Sonoma/Marin Livestock and Natural Resources Area Advisor*
Julea Shaw, *CA Department of Fish and Wildlife, Lands Program, Environmental Scientist*
Laura Snell, *UCCE, Modoc County Livestock and Natural Resources Advisor*

BOX 1. Grazing can be adaptively managed by adjusting the number and type of animals (e.g., cattle, sheep, and goats), as well as the timing, intensity, duration, frequency, and spatial distribution of grazing. This results in a spectrum of management strategies, ranging from extensive to intensive, each of which offers opportunities to positively impact fuel loads and wildfire resiliency. At one end of the spectrum, traditional, production-based management focuses on optimizing grazing to support meat, fiber, and milk production, which can yield incidental benefits such as an annual reduction in fine fuels. With increasing management intensity and planning, livestock grazing can also be prescribed to deliver conservation co-benefits, such as reducing fuel loads, managing invasive plants, and promoting biodiversity and wildlife habitat. More intensive targeting prescriptions ("targeted grazing") focus on specific vegetation goals as the primary objectives. While all livestock grazing contributes to fuels reduction, this spectrum of strategies enables managers to address diverse regional needs for fuels management and post-fire resilience.



Literature Cited

1. Bailey, D.W. *et al.* 2019. Targeted livestock grazing: prescription for healthy rangelands. *Rangel. Ecol. Manag.* 72, 865-877.
2. Launchbaugh, K., Walker, J. 2006. *Targeted Grazing: A Natural Approach to Vegetation Management and Landscape Enhancement*. (American Sheep Industry Association).
3. CA Assembly Bill 297. 2023. *Wildfires: local assistance grant program: prescribed grazing*. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202320240AB297.
4. Svejcar, T. *et al.* 2014. Western land managers will need all available tools for adapting to climate change, including grazing: A critique of Beschta et al. *Environ. Manage.* 53, 1035–1038.
5. Roche, L.M. *et al.* 2015. Sustaining working rangelands: insights from rancher decision making. *Rangel. Ecol. Manag.* 68, 383-389.
6. California Department of Forestry and Fire Protection. 2018. *California's Forests and Rangelands 2017 Assessment*. https://www.fire.ca.gov/Home/What-We-Do/Fire-Resource-Assessment-Program.
7. Davy, J.S. *et al*. 2015. Introducing cattle grazing to a noxious weed-dominated rangeland shifts plant communities. *Calif. Agric.* 69, 230-236.
8. Derose, K.L. *et al.* 2020. Riparian health improves with managerial effort to implement livestock distribution practices. *Rangel. J.* 42, 153-160.
9. Michaels, J.S., Tate, K.W., Eviner, V. 2022. Vernal pool wetlands respond to livestock grazing, exclusion and reintroduction. *J. Appl. Ecol.* 59, 67-78.
10. Roche, L.M., *et al*. 2012. Cattle Grazing and Conservation of a Meadow-Dependent Amphibian Species in the Sierra Nevada. *PLOS ONE* 7, e35734.
11. Huntsinger, L., Oviedo, J.L. 2014. Ecosystem Services are social–ecological services in a traditional pastoral system: the case of California's Mediterranean rangelands. 19, 1-13.
12. Huntsinger, L., Barry, S. 2021. Grazing in California's Mediterranean multi-firescapes. *Front. Sustain. Food Syst.* 5, 715366.

13. Rouet-Leduc, J. *et al.* 2021. Effects of large herbivores on fire regimes and wildfire mitigation. *J. Appl. Ecol.* 58, 2690-2702.
14. Society for Range Management. 2023. *Rangeland Ecosystem Services: Connecting Nature and People*. https://rangelands.org/rangelands-provide-five-ecosystem-services.
15. Nader, G. *et al*. 2007. Planned herbivory in the management of wildfire fuels. *Rangelands* 29, 18-24.
16. Davies, K.W. *et al*. 2010. Effects of long-term livestock grazing on fuel characteristics in rangelands: An example from the sagebrush steppe. *Rangel. Ecol. Manag.* 63, 662-669.
17. Davies, K.W. *et al*. 2015. Dormant season grazing may decrease wildfire probability by increasing fuel moisture and reducing fuel amount and continuity. *Int. J. Wildland Fire* 24, 849-856.
18. Ratcliff, F. *et al.* 2022. Cattle grazing reduces fuel and leads to more manageable fire behavior. *Calif. Agric.* 76, 60-69.
19. Starrs, G.I. *et al*. 2024. Quantifying large-scale impacts of cattle grazing on annual burn probability in Napa and Sonoma Counties, California. *Ecol. Soc.* 29, 10.
20. Little, J.M. *et al*. 2023. Rapid user guide: postfire grazing on California's intermountain rangelands. *UC ANR Publications*. 8730.
21. Batcheler, M. *et al*. 2024. Assessing silvopasture management as a strategy to reduce fuel loads and mitigate wildfire risk. *Sci. Rep.* 14, 5954.
22. Tsiouvaras, C.N., Havlik, N.A., Bartolome, J.W. 1989. Effects of goats on understory vegetation and fire hazard reduction in a coastal forest in California. *For. Sci.* 35, 1125-1131.
23. Pinzón, N. *et al. In Press*. Farming and ranching through wildfire: Producers' critical role in fire risk management and emergency response. *Calif. Agric*.
24. Jablonski, K.E. *et al.* 2023. Principles for successful livestock grazing management on western US rangelands. *Rangelands*.
25. Kellogg, E.M. 2019. *Prescribed Grazing Plan: Daley Ranch Jamul, CA*. https://www.rcdsandiego.org/files/4b634ef4a/Rancho-Jamul_Prescribed-Grazing-Plan_04Feb2020-Final.pdf.