



April 6, 2022

The Honorable Toni Atkins
Senate President pro Tempore

The Honorable Bob Wieckowski
Chair, Senate Budget Subcommittee 2

The Honorable Nancy Skinner
Chair, Senate Budget Committee

Re: Request \$8 million for Prescribed & Targeted Grazing Infrastructure for Wildfire Prevention and Biodiversity Enhancement, FY 22-23

Dear Senate pro Tem Atkins and Chairs Skinner and Wieckowski:

As herders, ranchers, land managers, conservationists, scientists and sustainable agriculture organizations who study and steward California's rangelands, we have been on the front lines of

wildfires in California. We request \$8 million in FY 22-23 for the California Department of Food and Agriculture (CDFA) to invest in prescribed and targeted grazing infrastructure such as portable and stationary fencing, corrals, water tanks, troughs, pumps, and trailers for livestock transportation. This relatively small investment in infrastructure can scale up a proven and effective strategy for wildfire prevention and severity reduction across our diverse regions as well as improve a variety of ecosystem services.

Grasslands account for approximately 10% of California's total land area, and oak woodlands and coastal scrublands, in which grasses make up a key part of the understory, account for another 8% of California's land area.¹ In addition to food and fiber, grasslands provide many ecosystem services, including wildlife habitat, water filtration and storage, and carbon sequestration. In fact, California's grasslands are a more reliable carbon sink than trees.² California's current grassland ecosystems are dominated by non-native annual grasses which, left unmanaged, grow profusely and degrade habitat for native plants and animals while increasing wildfire risks.³ In this context, grazing (or another disturbance like prescribed fire) is necessary to manage these grasslands for conservation and wildfire risk reduction purposes.⁴ While people tend to imagine "forest fires" when they hear about wildfires, a large portion of the state's wildfires actually occur in grasslands, oak woodlands, and coastal scrublands. Moreover, most wildfire ignitions start in grasses and then spread from the ground up into taller vegetation ("ladder" fuels), which is why fuel reduction efforts often target grasses. Prescribed and targeted grazing is an important and growing tool to reduce wildfire risks on these landscapes.

Prescribed and targeted grazing – the application of livestock at a specific season, duration, and intensity to accomplish defined vegetation or resource management goals – is a natural, biological vegetation management practice that reduces wildfire risk and provides multiple benefits, including enhanced biodiversity and carbon sequestration.⁵ Grazing also naturally cycles nutrients and removes fine fuels more effectively than mowing (which can spark fires⁶) and herbicide treatments – the two most common vegetation reduction alternatives.

Grazing reduces flame length and fire intensity, and can therefore shift grasses from a highly flammable and effective fire *spreader* into a natural fire *barrier*, which has both ecological and safety benefits. For example, researchers at the UC Hopland Research and Extension Center have observed that sheep grazing in the Center's oak woodlands prior to the Mendocino Complex Fire in 2018 reduced the fire intensity, which resulted in less tree damage, higher tree

¹ *Ecosystems of California* by Harold Mooney & Erika Zavaleta. (2016) Available at: <https://www.ucpress.edu/book/9780520278806/ecosystems-of-california>

² "Grasslands More Reliable Carbon Sink Than Trees" (2018). Available at: <https://climatechange.ucdavis.edu/climate/news/grasslands-more-reliable-carbon-sink-than-trees>

³ "The Benefits of Livestock Grazing California's Annual Grasslands" (2015). Available at: <https://anrcatalog.ucanr.edu/pdf/8517.pdf>

⁴ Ibid

⁵ "Targeted Grazing: A Natural Approach to Vegetation Management and Landscape Enhancement" (2006). Available at: <https://www.webpages.uidaho.edu/rx-grazing/Handbook.htm>

⁶ CalFIRE's Equipment Use site: <https://www.readyforwildfire.org/prevent-wildfire/equipment-use/>

survival rates, and less seed mortality.⁷ Recent fire behavior modeling done by UC researchers predicts that grazing fine fuels to 1225 pounds per acre on flat ground in dry summer conditions will keep flame lengths below eight feet with winds up to 15 miles per hour – a critical threshold that allows firefighters to use direct measures (such as heavy equipment) on the ground to fight fires.⁸ For this reason, grazing is often used as a complimentary tool both before and after prescribed burns.

Prescribed and targeted grazing have gained recognition as effective fire mitigation strategies in state policy in recent years. In 2015, the Board of Forestry and Fire Protection's Range Management Advisory Committee released a white paper outlining the benefits, limitations, best management practices, and CEQA considerations for "prescribed herbivory" projects.⁹ Prescribed herbivory was subsequently included in the 2019 Vegetation Treatment Program (CalVTP) Environmental Impact Report (EIR), which recommends prescribed herbivory be used to treat a minimum of 25,000 acres per year.

To meet the growing demand for prescribed and targeted grazing from cities and counties, utilities, homeowner associations, and a variety of public and private land managers, California will need more experienced grazing managers and more targeted grazing service businesses with both permanent and portable infrastructure.

One of the key barriers to scaling up prescribed and targeted grazing is the initial capital cost of infrastructure necessary to manage grazing animals in a way that maximizes ecological and climate benefits, as well as animal health and safety. A startup grazing service business, for example, needs approximately \$220,000 to purchase 500 sheep or goats (\$100,000) and infrastructure necessary to operate the business (\$120,000), including fencing, water tanks and pumps, and trailers.¹⁰

An investment of \$8 million in FY 22-23 in this type of infrastructure would enable more professional livestock managers to start and/or scale up grazing services. As folks on the frontlines of California wildfires who study and steward our state's cherished rangelands, we stand ready to expand and advocate for effective multi benefit solutions and management strategies.

Sincerely,

Brian Shobe
Associate Policy Director

⁷ CA Fire Science Consortium's webinar on "Wildland Fuels: A Primer for Concerned Citizens and Grazers" (2020). Available at: <https://www.cafiresci.org/events-webinars-source/category/rmac>

⁸ "Cattle Grazing Reduces Fine Fuels and Wildfire Flame Lengths in California Rangelands." Ratcliff, F.; Rao, D.; Barry, S.; Dewees, S.; Moritz, M.; Macaulay, L.; Peterson, R.; Larsen, R.; Shapero, M.; Forero, L. (In Press). California Agriculture. Accepted 10/18/2021

⁹ "Prescribed Herbivory for Vegetation Treatment Projects" (2015). Available at: <https://bof.fire.ca.gov/media/7208/white-paper.pdf>

¹⁰ "Targeted Grazing Survey Report to the Range Management Advisory Council." (2022). Available at: https://bof.fire.ca.gov/media/cu4f2cof/5-cwga-2021-targeted-grazing-survey-report-to-rmac_ada.pdf

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