



**AG + OPEN SPACE**  
SONOMA COUNTY

**Date:** May 9, 2024  
**To:** Sonoma County Board of Supervisors  
**From:** Misti Arias, Sonoma County Agricultural Preservation & Open Space District  
**Subject:** Report on Prohibition on Concentrated Animal Feeding Operations

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Sonoma County Agricultural Preservation & Open Space District (Ag + Open Space) is providing this report in response to the Board of Supervisor's request on April 16, 2024.

### Background

Ag + Open Space is a Special District of Sonoma County that preserves natural and working lands for future generations. Our work is funded through a ¼ cent sales tax approved by voters. For over 30 years, Ag + Open Space has worked with willing landowners to conserve working farms and ranches throughout Sonoma County, especially those most at risk for conversion to non-agricultural uses. We do this by purchasing conservation easements over the land to protect its agricultural values, in addition to any scenic or natural resource values on the property. The easements also restrict subdivision and development on the property forever. Conserving the multi-generational farms and ranches throughout our region ensures that our community members can enjoy locally produced food and the scenic views of rolling grasslands and pastures that are so unique to Sonoma County. Ag + Open Space has invested approximately \$126 million in local sales tax dollars to conserve more than 90 farms and ranches totaling nearly 60,000 acres.

In 2018, Ag + Open Space conducted a case study of "The Value of Conserving Grasslands and Rangelands" (see attached) in Sonoma County through our "Healthy Lands Healthy Economies" initiative. The study reported that, "Sonoma County estimated that the ecosystem services provided by grasslands, including carbon sequestration, water quality and supply, pollination, biological control, and habitat, total up to \$2.4 billion per year." Sonoma County is home to approximately 313,000 acres of rangeland, which accounts for over 60% of all agricultural lands (Sonoma County Department of Agriculture/Weights and Measures 2017, 2018). These grasslands are critical to local agricultural production, and they support our local economy and community by providing local food, jobs, and revenue. Research also shows that often these grasslands provide the best remaining habitats for threatened and endangered species including wintering birds, invertebrates, and mammals.

### Analysis of the proposed Prohibition on Concentrated Animal Feeding Operations

Ag + Open Space staff have reviewed the proposed ordinance for the Prohibition on Concentrated Animal Feeding Operations (CAFOs). It is difficult to fully assess the impacts of the proposed ordinance without knowing exactly which properties would be affected. Sixteen of our agricultural conservation

easements are dairy operations or support these operations. Most of the year these dairy cows graze on high-quality pasture and can move between the barn and pasture. However, during winter months when the ground is too wet and soft, the cows spend more time in the barn for their well-being and preservation of the pasture. Further, 85% of Sonoma County dairies are certified organic, which requires that animals have, "access to the outdoors, shade, shelter, exercise areas, fresh air, clean water for drinking, and direct sunlight." There is potential that seven of the eight active dairy operations that we have protected could be impacted by this proposed ordinance. We are also working with landowners to protect six rangeland properties and five of them are active dairies that have the potential to be impacted. It is important to note that the number of properties that could be impacted by the proposed ordinance may be fewer depending on how the definitions of Animal Feeding Operations (AFOs) and CAFOs are interpreted and applied. One of the primary purposes for protection of these properties is their agricultural resources. Our conservation purpose will not be fully realized if agricultural production is no longer viable on these properties. In addition, Ag + Open Space has conserved less than 15% of grasslands in Sonoma County. The remaining grasslands are more threatened by subdivision and development when agriculture is no longer possible. Therefore, the proposed ordinance has the potential to increase the threat to the remaining grasslands throughout the county.

Sincerely,

  
Jennifer Kuszmar (May 9, 2024 10:48 PDT)

Jennifer Kuszmar, *Acquisition Manager*  
on behalf of Misti Arias, *General Manager*

Enclosure(s): Case study: "The Value of Conserving Grasslands and Rangelands"



# The Value of Conserving Grasslands and Rangelands

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THE HEALTHY LANDS AND HEALTHY ECONOMIES INITIATIVE

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CASE STUDY

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## CONTEXT

Sonoma County rangelands support local productive agriculture, including dairying, hay, silage, wool, milk and cheese production and myriad other agricultural products. These rural open space lands support our local economy and community by providing local food, jobs, and revenue. Grasslands are critical to agricultural production in the state, providing **75% of California's livestock forage**. In addition to their contributions to agricultural productivity and the Sonoma County economy, these rangelands provide other important ecosystem services that provide benefits and values to the larger community. For example, research shows that in many cases ranches provide the best remaining habitats for threatened and endangered species, including wintering birds and waterfowl, invertebrates, and mammals. Protecting rangeland is one of the many benefits that the voters of Sonoma County sought to protect when they created Ag + Open Space in 1990. Since then, Ag + Open Space has worked with willing landowners across **more than 200 properties** in Sonoma County to conserve **almost 33,000 acres** of grassland throughout Sonoma County.

Eighty-eight percent of grasslands in California are privately owned, and they are being converted to other land uses at a high rate. Each year, **20,000 acres** of private ranch land in California are lost to development, with 10% of private lands fragmented into parcels of less than 20 acres. When grasslands are converted or developed, we lose important agricultural lands and the ecosystem services they provide, including protection of our water supply, soil retention and formation, carbon sequestration, pollination, and habitat for rare and endangered species. In addition, fragmentation and conversion to non-ag uses can make it more difficult for neighboring ranchers to stay in business, creating a snowball effect where development and conversion leads to increased development and conversion, and the loss of supporting services that make working agriculture viable.

Statewide, grasslands are a critical component of the state's biodiversity, providing habitat for **90%** of state-listed rare and endangered species, while also regulating water flow and water quality, and storing carbon. By providing habitat for native pollinators and honeybees, the rangelands surrounding California's croplands provide an estimated **\$2 billion** worth of pollination services alone. Grasslands are also habitat for the animals that provide biological control of pest organisms, and contain habitat and migratory corridors for large mammals, birds, reptiles, and amphibians, including rare and endangered vernal pool species.

Grazed rangelands can provide enhanced ecosystem service benefits, including a reduction in invasive species and reduced fuel loading.

A recent study completed in Sonoma County estimated that the ecosystem services provided by grasslands, including carbon sequestration, water quality and supply, pollination, biological control, and habitat, total up to **\$2.4 billion** per year.

Research has demonstrated that rangeland owners who have conservation easements are more motivated to manage their land in a manner that protects and enhances the ecosystem services that rangelands provide. Ag + Open Space works with Sonoma County's agricultural community: farmers, ranchers, and organizations such as the Farm Bureau and the Farmer's Guild/Community Alliance with Family Farmers, to support the economic vitality of working farms and to conserve productive agricultural land throughout the county. Statewide, other organizations such as the California Rangeland Trust and the California Rangeland Conservation Coalition are working in partnership with ranchers to conserve both the agricultural heritage of the state and to conserve these important grassland ecosystems and the services they provide for future generations.

The University of California Cooperative Extension (UCCE) examined the conservation value of Ag + Open Space protected land through an analysis using InVEST, an open-access software package developed by the Natural Capital Project. Using this tool, they quantified biophysical values for carbon storage, sediment retention, nutrient retention, and water yield on land protected by Ag + Open Space conservation easements, compared to adjacent private and public lands. They found that for all four services measured, Ag + Open Space protected land had a **higher conservation value** than similar unprotected land in the county.

These results suggest that land protected by the taxpayers of Sonoma County via Ag + Open Space conservation easements provides ecosystem services that benefit all county residents. As we develop more sophisticated tools to analyze the conservation value of available land, we will continue to improve our ability to identify those conservation opportunities that will provide the highest possible ecosystem services for all the residents of Sonoma County. Our understanding of the values provided by rangelands and their risk of conversion allows us to continually evaluate and improve our land conservation efforts, ensuring that taxpayer dollars are used to protect properties that retain land in productive agriculture while providing returns on the community's investment.





# Ag + Open Space has protected over 33,000 acres of rangeland in Sonoma County

## RANGELAND CONSERVATION IN CALIFORNIA

California is fortunate to have many organizations working to protect our grasslands and rangelands. The California Rangeland Conservation Coalition brings together over 100 organizations who are interested in preserving ranching as a way of life and the landscapes required to do so. The California Rangeland Trust conserves rangeland throughout the state – over **318,000** acres since 1998. Organizations like these ensure that the ecosystem services provided by rangelands throughout California will continue to benefit future generations.







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Sonoma County Ag + Open Space permanently protects the diverse agricultural, natural resource and scenic open space lands of Sonoma County for future generations. We are responsible for the perpetual protection of over 116,000 acres of land throughout our region. These agricultural and open space lands are protected through a quarter-cent sales tax approved by voters in 1990 and reauthorized in 2006. For more information, please visit [www.sonomaopenspace.org](http://www.sonomaopenspace.org).



#### THE HEALTHY LANDS AND HEALTHY ECONOMIES INITIATIVE

The Healthy Lands and Healthy Economies Initiative documents the economic value and community benefits of natural and working landscapes. This research helps to show that Sonoma County's investments in land conservation pay real dividends, now and into the future. This Initiative would not have been possible without contributions from the Gordon and Betty Moore Foundation, the S. D. Bechtel, Jr. Foundation, and the California State Coastal Conservancy.

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To learn more, visit [www.sonomaopenspace.org/HLHE](http://www.sonomaopenspace.org/HLHE)

Back cover by **Judy Bellah** ([www.bellahphotography.com](http://www.bellahphotography.com)). All other photos provided by **Ag + Open Space**.

**FULL REPORT:** Butsic, V, Shapero, M, Moanga, D, Larson, S. 2017. Using InVEST to assess ecosystem services on conserved properties in Sonoma County, CA. UC Cooperative Extension.

**AVAILABLE AT:** [www.bit.ly/2Q4u7oo](http://www.bit.ly/2Q4u7oo)