California Air Resource Board (CARB) Staff Feedback on SB 675 Guidance for the Rangeland Management Advisory Committee (RMAC)

Thank you for the opportunity to provide early input on the forthcoming local and regional grazing guidance pursuant to SB 675. As the lead agency responsible for state air pollution control efforts and climate change mitigation strategies in California, CARB has statutory mandate and responsibility to facilitate climate action on natural and working lands, achieve carbon neutrality, and promote community and ecosystem health and resilience. It is through this lens that feedback is provided on prescribed grazing, which is named as an important nature-based solution (NBS) in the State's Scoping Plan, Climate Smart Land Strategy, and AB1757 NBS Climate Targets.

In addressing the individual required components of SB 675 below, the NRCS definition of prescribed grazing (CPS 528) is assumed: "Managing the harvest of vegetation with grazing and/or browsing animals with the intent to achieve specific ecological, economic, and management objectives." This practice is most commonly used to support or enhance natural resource management and "may be applied to all lands where grazing and browsing animals are managed." Because prescribed grazing can occur through leases, licenses, and shorter-term contracts – which serve different purposes and have unique operational considerations – the RMAC is encouraged to consider developing guidance that is tailored for each of these scenarios. Furthermore, critical evaluation of the distinct socio-economic drivers that influence decision-making in each context will enable the development of more practical, effective, and targeted recommendations. Where applicable, specific feedback is provided for each distinct type of land tenure arrangement below.

1) ***Best practices for identifying and selecting priority areas for prescribed grazing****.*

Decisions about where to prioritize prescribed grazing are often most effective when made by local or regional authorities and landowners who have on-the-ground knowledge of site-specific conditions, resource needs, and land management goals. Where appropriate, it is recommended that the RMAC encourage regional efforts that incorporate environmental justice considerations and prioritize investments in prescribed grazing for fuels reduction or other public benefits near communities that are at risk, have been historically underserved, or that may benefit from associated health and environmental co-benefits. To support effective implementation at both local and regional scales, the RMAC could encourage landowners and other implementing authorities to draw on well-established planning frameworks, such as NRCS Conservation Planning or Carbon Farm Planning, to identify resource concerns and guide spatial decision-making for prescribed grazing.

The RMAC could also consider supporting the development of, and encouraging use of, mapping and scheduling tools that visualize forage availability, resource concerns, and grazing opportunities within and across different regions of California. These tools could provide valuable support for land management decisions at landscape scales and enable more efficient use of prescribed grazing, including contract grazing. Contract grazing is typically implemented through a fee-based economic model that prioritizes vegetation management over livestock production, and is therefore especially well-suited for achieving focused ecological objectives related to fuels reduction and invasive species control. Indeed, contract grazing offers a uniquely flexible approach to graze in priority areas that are interconnected or otherwise not typically grazed, and can complement or enhance other measures for natural resource management.

To maximize the benefits of contract grazing across priority areas, the RMAC could consider supporting the development of regional grazing networks or cooperates that actively facilitate the strategic seasonal movement of livestock across the landscape. These networks can offer efficient ways to graze across broad spatial scales while matching livestock needs with forage production cycles and ecological objectives (e.g., invasive species control or fuels reduction). To operationalize these benefits, shared communication platforms and planning tools could help streamline contract development inclusive of multiple neighboring properties, transportation, and logistics within and between regions.

2) ***Best practices for developing project plans and metrics for applying, monitoring, and evaluating the effectiveness and impacts of prescribed grazing****.*

For state lands or state-funded grazing projects, the RMAC might consider guidance that requires or encourages data management/sharing clauses whereby the grazer records and discloses standardized management information to the state for tracking and reporting purposes. At minimum, this could include spatial information that relates to fuels reduction and grassland management, as outlined in the AB 1757 NBS Climate Targets. Livestock type, stocking density, and grazing strategy are some examples of grazing metrics that could be helpful to collect. Metrics to monitor outcomes and effectiveness would depend on the goal(s) of the prescribed grazing activity itself. If this is pursued by the RMAC, the list and format of disclosed information would benefit from collaborative development in consultation with key state agencies, including CARB, CNRA, CDFA, and others.

In the case of leased lands, the RMAC might consider promoting a collaborative approach whereby the landholder and lessee develop a grazing plan that includes clear SMART goals and monitoring protocols, which could be appended to the lease. Leased lands often are challenging when it comes to promoting long-term ecological benefits, due in part to short lease terms and misaligned priorities. This makes it especially important to establish shared expectations and transparency for leased lands up front. A written grazing plan, appended to the lease and

updated annually, can help ensure that grazing supports both livestock production and ecological health. This plan could be accompanied by language in the lease agreement outlining shared values, high-level goals, and monitoring and reporting requirements to ensure alignment and accountability. Where appropriate, lease agreements might also specify what actions will be taken if the lessee does not meet the stated goals, helping to reinforce performance standards and protect the ecological integrity of the land.

In the case of contract grazing, the RMAC might consider recommending best practices for planning and evaluation that reflect the unique nature of these short-term, targeted agreements. Because contract grazing often occurs in areas where grazing is not the primary land use and is applied for limited durations to achieve specific ecological outcomes, formal written grazing plans may be impractical and offer limited utility. Instead, the RMAC could recommend grazing contracts themselves (and language therein) be guided by clearly defined, locally contextualized outcomes that are tied to specific goals of the grazing activity. The grazing contract could also include requirements for monitoring approaches that are aligned with the outcomes of interest, recognizing that monitoring across different temporal scales (e.g., intraseasonal versus interannual) could yield different insights. In addition, the RMAC might recommend including language in the contract that clearly outlines what constitutes a breach, such as failure to meet agreed-upon outcomes or the occurrence of unintended consequences (e.g., negative impacts to water quality for a fuels reduction project), and what actions will be taken in response. This could include financial penalties, termination of contract, or other measures to ensure accountability and safeguard against trade-offs.

3) ***Best practices for using prescribed grazing to increase the diversity and abundance of native species and decrease the abundance of invasive species, including through adaptive management, exclusion areas, wildlife-friendly fencing, and monitoring***.

No feedback.

4) ***Recommendations for securing sufficient land and resources, including forage, needed to pasture livestock when not engaged in a prescribed grazing project***.

The RMAC could consider exploring the applicability of “grassbanks”, which are designated areas where producers can graze their livestock for a reduced fee in exchange for implementing conservation practices on lands they manage or steward. While “grassbanks” have traditionally supported cattle producers, they could also conceivably support contract grazers, such as sheep or goat herders, in exchange for, or in recognition of, the ecological services they provide elsewhere throughout the state. Indeed, some contract grazing operations may lack secure land tenure to house their herds between grazing contracts; facilitating access to public lands or other “grassbanks” could help support the growth and stability of California’s contract grazing

industry. One example of an existing “grassbank”, is the Nature Conservancy’s Matador Ranch in Montana, which offers 60,000 acres of forage to participating ranchers who agree to adopt practices that support habitat restoration and sustainable land management on their home ranch. Similar models in California could help ensure grazing operations have necessary access to forage during off-project periods while simultaneously promoting ecosystem health and resilience across multiple properties. Important to this model is careful planning, monitoring, and use of the “grassbank” land itself.

In addition to “grassbanks”, at broader landscape and regional scales, strategically moving herds via contract grazing (sometimes referred to as transhumance) can help extend rest periods for pastures and provide critical support during periods of forage scarcity, such as the dry summer months. Together, if recommended by the RMAC, these strategies could help provide practical, scalable solutions for securing the land and forage needed to sustain livestock operations across California.

5) ***Best practices for building community support and engaging with public and private landowners to improve the implementation and outcomes of a prescribed grazing plan****.*

To the extent possible, consider encouraging peer-to-peer learning among ranchers and herders, as well as facilitating field days, educational events, and/or advertising campaigns for the public. Seeking input on this question from on-the-ground operations and organizations like The Santa Lucia Conservancy, which are responsible for grazing livestock within housing developments, is also recommended.

6) ***Methods to identify opportunities to house and maintain shared grazing infrastructure****.*

Consider seeking input on this question from on-the-ground technical assistance organizations such as the Resource Conservation Districts.

7) ***Best practices to use prescribed grazing to support and enhance prescribed burns and other vegetation management projects****.*

When integrated into broader landscape-scale strategies, prescribed grazing can supplement other vegetation management activities such as prescribed burning by, for instance, altering the continuity of the herbaceous fuelbed or keeping shrub regrowth at bay. To promote these synergies, the RMAC could provide guidance that fosters collaboration between livestock producers, contract grazers, and other land managers, with a focus on identifying opportunities for mutual benefit, synchronizing the timing of treatments, and increasing the efficiency of vegetation management projects.

Operationally, grazing plans or contracts could clearly define the livestock species (e.g., cattle, sheep, goats) and grazing activities needed to meet pre-defined vegetation management

objectives such as fuel reduction, invasive species control, or post-treatment maintenance, keeping in mind other treatments that have or will occur in the same area. Requiring the curation of spatial treatment information, such as maps of prescribed grazing and prescribed burn efforts, into existing (e.g., Prescribed Fire Information Reporting System) or forthcoming platforms could help land managers and communities prepare for and implement coordinated, land-scape scale fuel reduction and other vegetation management projects.

Several specific opportunities exist to enhance collaboration and associated outcomes, which the RMAC might consider promoting in guidance documents. For example, grazing can be used to proactively reduce live biomass before it dries out, thereby decreasing the volume of dead fuel and potential emissions during a subsequent burn. Grazing can also support prescribed burns by helping to establish or maintain strategic features, such as fire lines or anchor points, especially in larger-scale projects. In addition, prescribed grazing of grasslands can serve as an intermediate treatment between periodic burns, providing the disturbance needed to maintain these disturbance-dependent ecosystems from conversion to shrublands or forests. With that said, while grazing can complement prescribed burning in many contexts, it cannot replace prescribed burning completely, as it does not reproduce the full range of ecological functions or outcomes that fire provides across diverse landscapes.

8) ***Best practices for use of prescribed grazing for reducing wildfire risk in and near fire-threatened communities, as that term is defined in paragraph (2) of subdivision (b) of PRC Section 4124.5****.*

Prescribed grazing can play an important role in reducing fuels and mitigating wildfire risk for fire-threatened communities, including the broader landscapes in which those communities are embedded. To ensure investments in prescribed grazing are effective, the RMAC could provide guidance, support spatially explicit mapping, and promote coordination to align grazing projects with spatial and temporal conditions that are needed to meaningfully reduce wildfire risk. This might include ensuring that financial support for prescribed grazing is available at the appropriate time of year and in locations where grazing is most likely to reduce hazardous fuel loads (e.g., in the wildland-urban interface where prescribed burning may not be feasible).

The RMAC may also consider providing guidance to ensure that prescribed grazing for fuels reduction is implemented in a way that avoids unintended negative impacts on other ecosystem services, such as water quality, soil health, or biodiversity. To support this, the RMAC could recommend the use of adaptive grazing plans that identify multiple resource objectives and incorporate site-specific thresholds or safeguards. For instance, minimum residual dry matter (RDM) levels could be required to prevent overgrazing. Combined, this guidance could help promote strategic, well-timed grazing efforts that deliver measurable benefits for community protection with minimal trade-offs.

9) ***Other recommendations to increase the pace and scale of prescribed grazing at the local or regional levels, where appropriate***.

The RMAC might consider looking into the availability of, and need for, livestock processing facilities as a potential barrier to scaling prescribed grazing. This includes both organic certified and non-certified facilities.