

***2022 RANGE MANAGEMENT
ADVISORY COMMITTEE***

**ANNUAL REPORT
AND WORKPLAN**



**STATE BOARD OF FORESTRY AND FIRE
PROTECTION**

Approved: March 8, 2023

Chair: Dr. Marc Horney

Vice-Chair: Rich Ross

February 23, 2023

EXECUTIVE SUMMARY

The Range Management Advisory Committee (RMAC) Annual Report and Workplan (Report) is updated and approved by the Board of Forestry and Fire Protection (Board) annually and is intended to catalogue the yearly accomplishments and status of ongoing RMAC efforts. The Report provides an update of current RMAC membership and staffing, summarizes RMAC activities and progress toward Annual Priorities and Objectives for the previous calendar year, details the Annual Priorities and Objectives for the upcoming calendar year, and highlights constraints and challenges for the committee in completing its Annual Priorities.

I. RMAC PROCESS SUMMARY

The Range Management Advisory Committee (RMAC) is an advisory body to the Board of Forestry & Fire Protection (Board), statutorily authorized by Public Resources Code (PRC) § 741. A California range policy advisory body has existed in some form since 1945, when the Board of Forestry and Fire Protection requested the appointment of the Range Improvement Advisory Committee (RIAC). The RIAC was established in 1946 to advise the Board on rangeland matters. In 1967 the RIAC was reconstructed and chartered with 11 voting members and nine non-voting technical consultants. The RIAC slipped into a period of dormancy and was reactivated and re-chartered as the RMAC in 1975. Legislation was introduced in 1984 to make the RMAC a statutory advisory body of the Board and the California Natural Resources Agency (CNRA). Additional legislation in 1996 expanded the advisory role to include the California Environmental Protection Agency (CalEPA) and the California Department of Food and Agriculture (CDFA). The Secretaries of the CNRA, CalEPA, and CDFA are required to notify, and encouraged to consult with, the RMAC on rangeland issues.

The RMAC envisions a resilient rangeland landscape in California that provides a diversity of ecosystem services to support the state's ecological and human health. To do so, the RMAC may consider issues related to California's rangeland resources, provide recommendations on addressing them, facilitate strong relationships with local, state, and federal agencies and develop solutions that are based on environmental, social, and economic information that is current, data-driven, and considers diverse perspectives.

The RMAC reports on its activities in a variety of ways. The RMAC Strategic Plan (RMAC 2020) is a formal document that guides the activities and longer-term (5-year) goals of the RMAC and is revised on a 5-year interval. The RMAC conducts open meetings a minimum of four times per year (quarterly) to conduct RMAC business, although meetings generally occur 6 to 8 times per year. Meetings are utilized to conduct RMAC business in the public eye and may include reports on progress toward goals and objectives of the RMAC, final reports on RMAC endeavors or other range-related efforts, and other presentations or discussions on range-related issues or other research. The RMAC Chair or Board staff also report on the RMAC's activities via verbal updates at Board meetings throughout the year and will begin providing longer informational presentations on range-related issues under the purview of the Board in the coming 2023 year.

The RMAC has also historically provided the Board with a short summary of its goals and activities for inclusion in the Board's annual report (e.g., Board 2022). At the September 16, 2022 meeting, the RMAC decided to additionally provide a more comprehensive, stand-alone Annual Report and Workplan (this 'Report') to the Board after the close of each calendar year. This report provides information on RMAC

membership, documents progress towards the Committee's 2022 annual priorities, lays out the Committee's 2023 annual priorities, and details other annual accomplishments and ongoing RMAC efforts.

II. CURRENT APPOINTED RMAC MEMBERS AND STAFF

In 2022, the Committee had one Chair, one Vice-Chair, and an additional 9 members, including three members of the public, one member from the California Resource Conservation Districts, seven members appointed from organizations representing rangeland owners, and one Board-appointed, non-voting, ex-officio member (see **Table 1**).

Table 1. Current RMAC Membership and Support Staff

Name	Seat Type	Affiliation	Term End
Marc Horney, Ph.D., Chair	General Public	California Polytechnic State University, San Luis Obispo	01/2023
Richard Ross, Vice-Chair	Range Organization	California Cattlemen's Association	01/2023
Billie Roney	Range Organization	California Cattlemen's Association	01/2024
Taylor Hagata	Range Organization	California Farm Bureau	06/2024
Bart Cremers	Range Organization	Wildlands	01/2023
Stephanie Larson, Ph.D.	Range Organization	University of California Cooperative Extension	01/2026
Cole Bush	Range Organization	California Wool Growers Association	01/2026
Andrée Soares	Range Organization	California Wool Growers Association	01/2026
Paul Starrs, Ph.D.	General Public	Professor Emeritus, University of Nevada, Reno	01/2026
Lance Criley	General Public	United States Forest Service	01/2026
Joel Kramer	California Resource Conservation Districts	San Diego Resource Conservation District	01/2026
Katie Delbar	Board-appointed ex-officio member*	Industry Representative, Board of Forestry & Fire Protection	n/a
Support Staff			
Edith Hannigan	Executive Officer	Board of Forestry and Fire Protection	n/a
Deniele Casarubbia	Staff Services Analyst	Board of Forestry and Fire Protection	n/a
Kristina Wolf, Ph.D.	Environmental Scientist	Board of Forestry and Fire Protection	n/a

* The Board member shall have no vote in Committee actions except in the case of a tie

The Chair and Vice-Chair are appointed on an annual basis; Chair Dr. Marc Horney and Vice-Chair Rich Ross were reappointed to those positions for an additional year through January 2023. Member Lance Criley was reappointed to a four-year term to their seat representing the U.S. Forest Service in January 2022.

Four new members were appointed to the RMAC for four-year terms beginning in January 2022:

- Dr. Stephanie Larson, Director of U.C. Cooperative Extension in Sonoma County, joined the RMAC as a member of an organization that represents rangeland owners;
- Cole Bush, member of the California Wool Growers Association and owner-operator of Shepherdess Land & Livestock, also joined the RMAC as a member of an organization that represents rangeland owners;
- Dr. Paul Starrs, professor emeritus of Geography at University of Nevada, Reno, joined the RMAC as a representative of the Public; and,
- Joel Kramer, Regional Agricultural Specialist for the Resource Conservation District of Greater San Diego County, joined the RMAC as a representative of California Resource Conservation Districts.

All RMAC seats were filled in 2022, and a quorum was achieved at five of six meetings.

III. SUMMARY OF RMAC ACCOMPLISHMENTS

In 2022, the RMAC accomplished the following:

- The RMAC **met six times** in open, virtual or hybrid public webcast meetings to conduct business, and a quorum was reached at five of these meetings. Meeting activities included approval of meeting minutes; membership updates, recruitment, and seat appointments; legislative and partner organization updates; and public education and outreach presentations by rangeland and natural resource representatives, professionals, and practitioners.
- **Re-appointed** Dr. Marc Horney as Chair and Member Rich Ross as vice chair to one-year appointments and Lance Criley to a four-year term, and **welcomed four new members** to four-year appointments on the RMAC, all beginning in January 2022.
- The **State Lands Grazing License and Land Management (SLGLLM) subcommittee** met for the first time in January 2022 and began developing templates for grazing agreements.
 - Members of the SLGLLM subcommittee are as follows:
 - Lance Criley: Rangeland Management Specialist, U.S. Department of Agriculture (USDA) United States Forest Service (USFS), RMAC representative
 - Jeanette Griffin: Environmental Scientist, California Department of Fish & Wildlife (CDFW)
 - Richard M. Ross: Attorney, Ross Ranch, RMAC representative
 - Kevin Conway: State Forest Program Manager, Jackson State Demonstration Forest
 - Tony Psihopaidas: Assistant Chief, State Owned Leasing and Development, State Department of General Services (DGS) (through June 2022)
 - Lawrence Ford: Certified Range Manager, owner-operator LD Ford Rangeland Conservation Science
 - Bart Cremers: Certified Rangeland Manager, Biology and Rangeland Specialist, Wildlands, RMAC representative
 - Tracy Kay Schohr: Livestock and Natural Resources Advisor, Plumas, Sierra, and Butte counties, UCCE/UC ANR

- Katie Delbar: County Executive Director, USDA Farm Service Agency
- A public comment period was opened from July 22 through August 26, 2022 to solicit additional public and stakeholder comment on the draft grazing license, land/grazing management plan, and guidance booklet developed by the subcommittee.
- The original timeline tentatively estimated draft deliverables to be produced by June 2022, but the retirement of the DGS representative and related product interdependencies resulted in a delay, and DGS representative replacements were confirmed in November 2022. The deliverable timeline will therefore be revised at the first meeting of 2023.
- The Department of Forestry & Fire Protection (CAL FIRE) and the Wildfire Prevention Grants Program partnered with RMAC to plan a January 18, 2023 workshop, **Applying for a Wildfire Prevention Grant**, with a focus on prescribed grazing projects. The grant application opened December 14th, and representatives from UCCE/UC ANR and CAL FIRE will speak at this virtual workshop to assist graziers interested in applying for this grant funding to support grazing projects for fuel reduction.
- An **Educational Workshop Series Action Team** was formed at the July RMAC meeting and began planning for a winter-spring (2023) annual RMAC Workshop Series on grazing agreements with a focus on prescribed grazing, vegetation management, and fuels reduction.
 - Partnered with California Polytechnic State University, San Luis Obispo (CPSLO), Swanton Pacific Ranch (SPR), and the California Fire Science Consortium (CAFSC) to cosponsor, fund, and implement three virtual learning sessions and four in-person field days planned tentatively from January through March 2023 across California (East Bay Regional Parks, Paso Robles, Ojai Valley, and San Diego). Funding from other partners, including a SPR grant for public education on fuels reduction, resources of the California Rangeland Conservation Coalition (CRCC), was leveraged to support this effort.
 - Partnered with the CRCC to provide a co-sponsored Joint Rangeland Management Conference planned for February 2023, with the option to attend in person or virtually. This will be a two-part workshop and summit held at the Stockton Agricultural Center: Part 1) Navigating the Application and Permitting Process for Wildfire Fuels Treatment Using Targeted Grazing, RMAC's no-cost workshop, and Part 2) CRCC Summit: Working Rangelands: Graze to Reduce the Blaze.
 - Slated speakers at workshops or field days include representatives from:

<ul style="list-style-type: none"> ▪ UCCE/UCANR ▪ CDFW ▪ California Department of Transportation (Caltrans) ▪ Vollmar Natural Lands Consulting ▪ Natural Resources Conservation Service (NRCS) ▪ Butte Fire Safe Council ▪ Shepherdess Land & Livestock ▪ Ventura Brush Goats 	<ul style="list-style-type: none"> ▪ Ojai Valley Fire Safe Council ▪ Ojai Land Conservancy ▪ U.C. Berkeley ▪ LD Ford Rangeland Consulting ▪ East Bay Regional Parks District ▪ Star Creek Land Stewards ▪ Cal Poly San Luis Obispo ▪ The Goat Girls ▪ Paso Robles Fire Department ▪ Althouse & Meade ▪ San Luis Obispo Fire Safe Council
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For more information, visit the RMAC webpage for meeting and event information, and visit the Swanton Pacific Ranch educational series webpage.¹

- The process of revising the 2022 and 2023 Annual Priorities, Goals, and Objectives began in 2022.
 - In compliance with Public Resources Code (PRC) § 741, the RMAC formally solicited agency priorities from the Board, California Natural Resources Agency (CNRA), the California Environmental Protection Agency (CalEPA), and the California Department of Food and Agriculture (CDFA) for review and integration into the priorities and goals of the RMAC. Board staff Dr. Wolf worked to incorporate these advised agencies' annual priorities into the development of RMAC's current (2022) and 2023 Annual Priorities.
- Appointed members and support staff to teams working under advised agencies and other organizations with synergistic goals:
 - Member Kramer and Member Bush were appointed as RMAC representatives to the **Healthy Soils Initiative** under the CDFA.
 - As a member of the CWGA and the **CWGA's Targeted Grazing Committee**, Member Bush will liaise with that committee to develop two work products: 1) an educational pamphlet for Prescribed Fire to be shared with CAL FIRE, and potentially added to the current 2021 **CAL FIRE Fuels Reduction Guidance** (CAL FIRE 2021) or incorporated into future versions of this guidance, and 2) an authoritative white paper describing the science behind prescribed grazing, and technical guidance for incorporating prescribed grazing alone or in combination with other vegetation management efforts and/or fuels reduction treatments. Members Paul Starrs, Dr. Stephanie Larson, and Joel Kramer will also contribute to these efforts.
 - Board staff Dr. Wolf joined the **Natural Working Lands Science Team** under the CNRA to work with and provide input to the team for integration of range-related resource issues into climate-smart strategies. Members of this team work to inform and review modeling and analyses for natural and working lands, advise state agencies on implementation strategies and standardized accounting, and provide recommendations on addressing barriers to efficient implementation of climate action in natural and working lands.
- Several speakers provided **presentations to the RMAC** audience at public meetings to provide information on and discuss potential needs and solutions for rangeland issues in California. Speakers and topics included:
 - Dr. Pelayo Alvarez, California Program Director for Audubon, led a discussion of **AB-252**, and the Department of Conservation's **Multi-benefit Land Repurposing Program**.
 - Roger Ingram of the **CWGA Wildfire and Grazing Ad Hoc Committee** presented survey results of targeted grazing providers in California.
 - Jennifer Norris, Deputy Secretary for Biodiversity and Habitat at the CNRA, provided an introduction to and led a discussion on **Pathways to 30x30: Accelerating Conservation of California's Nature**.

¹ <https://spranch.calpoly.edu/fuels>

- Kristan Norman, Area 2 Rangeland Specialist, and Chris Zimny, State Forester—both of NRCS—gave an informational presentation on the **Environmental Quality Incentives Program (EQIP)** for rangeland managers.
- Brian Shobe, Associate Policy Director at **California Climate and Agriculture Network (CalCAN)**, spoke about the organization’s advocacy efforts for state investments in research and assistance for farmers and ranchers in California to become more climate resilient.
- Dean Kelch, who leads the Permits and Regulations Program at the CDFA, provided a presentation on **CDFA Programs** and opportunities for synergistic collaborations with the RMAC.
- Dr. Susan Marshall, professor of Rangeland Resources and Soils at California Polytechnic State University, Humboldt, presented on the current state of **Certified Rangeland Managers (CRM) in California** and constraints and challenges in workforce development efforts, and provided information on a grant proposal submitted to support educational programs for comprehensive and collaborative CRM training, more clear and accessible program requirements, and greater access to training and testing for individuals wanting to take the CRM exam. The CRM license is required for professional practice of rangeland management on non-federal forested landscapes as a specialty authorized under a modification of the Professional Foresters Licensing Act (AB 1903) that requires the Registered Professional Forester license for the practice of forestry.
- Cole Bush, owner-operator of Shepherdess Land & Livestock (and member of the CWGA) updated the RMAC on the **Community Supported Grazing Summit**, a workshop by the Ojai Valley Fire Safe Council and Community Environmental Council of Santa Barbara, and announced the launching of a new **Bilingual Grazing Manager Training**.
- Bre Owens, Stewardship Coordinator at the **Western Landowners Alliance (WLA)**, provided background information on efforts for the WLA to apply for a **Grazing Lands Coalition Initiative Grant**, and worked to garner RMAC support for that effort and the potential for joint WLA-RMAC collaborations for future adult education efforts in range resources and management in California.
- Stacey Sargent Frederick, Coordinator for the CAFSC, and Maurica Fitzgibbons, Fuels and Vegetation Management Training Coordinator for CPSLO and SPR, spoke to the RMAC about educational webinar and workshop efforts.

IV. **ANNUAL PRIORITIES**

Annual priorities are generally reviewed in the fall, developed in the winter, and voted on at the first RMAC meeting of each year to guide the activities of the committee. The 2022 priorities were carried over from previous years (2020 and 2021) due to continued relevancy, and limited time to revise priorities and take actions due to constraints introduced by the covid-19 pandemic. The vision and mission of RMAC are supported by the long-term priorities outlined in the RMAC Strategic Plan (RMAC 2020) and in the often more targeted, shorter-term Goals and Objectives.

The RMAC’s vision and mission guide its overall Priorities (**Table 2**), and annual goals and objectives are developed to fulfill these long-term Priorities. The RMAC’s Priorities are longer-term priorities of the RMAC

that require actions on multiple fronts, often over multiple years, to accomplish. The Strategic Plan outlines four main Priorities, but the priority associated with the CDFA Noxious Weeds Program is not included in this Annual report and Workplan as the future of that program is uncertain at this time due to a period of inactivity. The RMAC will follow any changes in the program activity to determine if it should be addressed in future years' goals and objectives.

Table 2. Range Management Advisory Committee Long-Term Priorities

Priority I.	Consider matters related to California's rangeland and forested rangeland resources that are under consideration by the Secretaries, the Board, or Federal agencies (as appropriate given the Board's role in representing State interests in Federal timberlands), offer advice and consultation, and recommend appropriate policy measures or administrative actions
Priority II.	Share information and educational opportunities to Certified Range Managers and government agency rangeland and forestry staff to grow professional knowledge in this field.
Priority III.	Monitor for issues in rangeland science and management and convene groups of relevant professionals to address these issues

The annual goals and objectives of the RMAC are established, as appropriate, on an annual basis to address more time-sensitive, current issues and needs in range resource management in California, and fall under the RMAC Priorities, above. The RMAC began revising objectives and goals to meet its Priorities in 2022, based on continuing or planned actions in the 2022 and 2023 calendar years. The finalized goals and Objectives for 2022, and continuing into 2023, are as follows (see **Table 3** for information on leads, partners, and proposed completion dates):

GOAL 1: Promote appropriate grazing for fuels management and multiple ecosystem services.

Purpose: To make prescribed grazing a practical option for state land management agencies where it is appropriate and suitable for accomplishing ecological, environmental, and cultural objectives and can be managed to produce results consistent with requirements of environmental regulatory agencies.

Objectives:

- a. Develop standard template/form(s) with a guidance document for constructing grazing license agreements for use by state agencies. Template(s)/form(s) must:
 - i. meet requirements of state agencies that may potentially use them, including Dept. Fish & Wildlife, State Parks, State Forests, with provision for allowing modification subject to review to accommodate special requirements of any others which may request them;
 - ii. be approved for this use by General Services; and,
 - iii. follow standards of good practice recommended by UCCE/UC ANR and CRMs.
- b. Develop or approve informational publications which agencies can use for:
 - i. conducting site inventories and assessments specific to the ecological site(s) on the management unit and their management objectives,
 - ii. developing adaptive management plans detailing the general use and specific objectives for the management unit, and
 - iii. producing detailed grazing plans that will form the basis for grazing licenses. These will be developed from general management unit plans and should be consistent with the content and purpose of the UCCE/UC ANR Ranch Water Quality Planning Curriculum.

- c. Coordinate with state agencies and major public landowners to facilitate an inventory of existing land management plans to assess which elements required for the grazing plan are already available.

GOAL 2: Support workforce development for CRMs, and increase collaboration and joint educational opportunities for RPFs and CRMs

Purpose: There are less than 80 CRMs left in the State. RMAC needs to promote using that expertise where appropriate or required, including within CAL FIRE for developing burn plans and conducting prescribed burns. There is a need to integrate and coordinate Registered Professional Foresters (RPFs) with Certified Rangeland Managers (CRMs) for the purpose of developing effective fuels management treatments from their different but complementary professional backgrounds, for example via combined training programs with both RPFs and CRMs to develop burn plans.

Objectives:

- a. Establish an RMAC subcommittee to develop ongoing, working relationships with the California Licensed Foresters Association and the Certified Rangeland Managers Panel with the purpose of establishing annual fuels management trainings for both CRMs and RPFs to participate in together.
- b. Initiate a public demonstration project for a group of CRMs and RPFs to collaborate on a project where multiple, integrated fuels treatments requiring application of both forest and rangeland ecology practices are required.
- c. Work with Professional Foresters Registration to explore points within the registration/licensing processes where CRM and RPF requirements and exam contents could be intentionally coordinated.
- d. Promote existing efforts to develop a statewide training program for potential CRMs.
- e. Invite CAL FIRE representatives to discuss state requirements for planning and conducting prescribed burns as a CAL FIRE employee or private “burn boss” at RMAC meetings.
- f. Meet with CRM Panel and CalPac-SRM leadership to discuss other methods of promoting CRM utilization and/or further development of the program.

GOAL 3: Develop educational opportunities and outreach for prescribed herbivory, fuel reduction methods integrating prescribed herbivory, and rangeland resource management in general.

Purpose: Establish appropriate guidance for grazing following wildfire on California rangelands. Ensure that livestock policies required by state lands managers are consistent with the best available science identified by UCCE/UC ANR and in state efforts to mitigate the effects of climate change in the Natural and Working Lands Climate Smart Strategy. Grazing is also a fuel reduction method in the State’s Wildfire Resilience Action Plan, but few professionals in the state have the necessary experience to develop feasible grazing plans for this purpose. State-wide training and demonstrations in methods of reducing fine fuels using grazing is necessary to implement this practice at scale. Educational effort should include recommendations

for evaluating and mitigating site-specific grazing treatment impacts on wildlife habitats, water quality, and fuel bed characteristics.

Objectives:

- a. Establish appropriate guidance for grazing following wildfire on California rangelands, with an emphasis on state-managed lands. Produce an authoritative peer-reviewed publication explaining what is known about requirements for post-burn “rest” from defoliation and its application to the major grassland ecotypes in California (annual grasslands, blue oak savannas, coastal perennial prairie grasslands, Great Basin sagebrush-steppe). This review must consider not only impacts on forage production, but also potential impacts on wildlife habitats, water quality, and fuel bed characteristics - and recommendations for evaluating and mitigating them on a site-by-site basis.

Potential Alternatives:

- Request publication from UCCE/UC ANR
 - Facilitate production of publication from faculty/students at CSUs (Cal Poly SLO, Chico, Humboldt) and/or UCs (Berkeley or Davis).
 - Organize an RMAC subcommittee to produce publication.
- b. Continue to conduct and promote annual educational workshop series on the use of grazing for fine fuel reduction in collaboration with CAL FIRE, UCCE/UC ANR, USDA-NRCS, and others.
 - c. Work with UCCE/UC ANR to identify needs for technical and training information and establish a plan for producing them.

GOAL 4: Increase collaborations with advised and related agencies, Native American tribes, and other administrative bodies, solicit and prioritize current California rangeland management research priorities, and monitor and develop or promote planning to address rangeland concerns.

Purpose: Broaden RMAC’s connections and interactions with organizations involved in large-scale management of rangelands in California that have not historically or recently been part of its formal stakeholders. Circulate and elevate practical needs for rangeland management research from land managers and agency staff to research organizations in California with the technical skill and capacity to properly investigate them. Monitor regulatory initiatives on surface water pollution and ground water management. Remain in position to provide constructive feedback to agencies on the scientific merit and practicality of regulatory efforts meant to protect water quality and sustain its availability and affordability.

Objectives:

- a. Regularly solicit requests for investigations of rangeland management topics.
- b. Where appropriate, initiate proof-of-concept projects or small-scale collaborative investigations utilizing CDFA mandates.
- c. Extend invitations for periodic public reports on their activities and current issues to the UC California Natural Reserve System, the California Rangeland Trust, the California Rangeland Conservation Coalition, the Central Coast Grazing Coalition, and others.

- d. Extend invitations for input on RMAC priorities, synergistic efforts surrounding shared goals, and periodic public reports on their activities and current issues to advised agencies, including the Board, CalEPA, CNRA, and CDFA and their respective departments, as appropriate.
- e. Appoint an RMAC representative to track water quality issues in the State.
- f. Establish an annual schedule for representatives from the State and Regional Water Quality Control (WQCBs) make presentations or submit reports to RMAC on their activities that may impact grazed lands in the state. Coordinate with state and regional board staffs to develop an annual report template to facilitate communication between State and regional Water Quality Control Boards.
- g. Establish an annual schedule for staff from DWR to make presentations or submit reports to RMAC on groundwater management plans under development that may impact grazed lands in the state.
- h. Monitor county-by-county implementations of the Livestock Pass program and inter-county coordination. Agendize topic for future RMAC meeting, and invite CAL FIRE, the Farm Bureau, or UCCE/UC ANR staff who have knowledge of the state-wide implementation of the LPP program.

1 Table 3. 2022–2023 Annual Goals and Objectives to meet RMAC Priorities.

<i>Goals, Objectives, Leads & Partners, and Proposed Completion Dates</i>				<i>Relationship to RMAC Priorities</i>		
Goal	Objective	<ul style="list-style-type: none"> • Lead(s) • Proposed Partner(s) 	Completion Date	I – Advise the Board & state agencies	II – Education & Workforce Development	III – Monitor & address range issues
1. Promote appropriate grazing for fuels management and multiple ecosystem services.	a. Develop standard template/form(s) with accompanying guidance document for constructing grazing agreements for use by state agencies.	<ul style="list-style-type: none"> • SLGLLM • UCCE/UC ANR, USFS, CAL FIRE, DGS, CDFW, JDSF, others 	11/2023	X		X
	b. Develop or approve informational publications and technical guidance for public/agency use.	<ul style="list-style-type: none"> • SLGLLM • CWGA, CA FSC 	Ongoing, 12/2023	X		X
	c. Coordinate with state agencies and major public landowners to facilitate an inventory of existing land management plans.	<ul style="list-style-type: none"> • SLGLLM • Various state agencies 	10/2023	X		X
2. Support workforce development for CRMs, and increase collaboration and joint educational opportunities for RPFs and CRMs.	a. Establish an RMAC subcommittee to develop relationships with the CLFA and the CRM Panel to establish joint CRM-RPF annual fuels management training.	<ul style="list-style-type: none"> • RMAC • CLFA, CRM Panel 	02/2023		X	X
	b. Initiate a public demonstration project for a select group of CRMs and RPFs to collaborate on a project with integrated fuels treatments requiring forest and rangeland ecology practices.	<ul style="list-style-type: none"> • RMAC 	09/2023		X	X
	c. Coordinate CRM and RPF requirements and exam contents where appropriate.	<ul style="list-style-type: none"> • RMAC • OPFR, Cal-Pac SRM CRM Panel 	05/2023		X	

Goals, Objectives, Leads & Partners, and Proposed Completion Dates				Relationship to RMAC Priorities		
Goal	Objective	<ul style="list-style-type: none"> Lead(s) Proposed Partner(s) 	Completion Date	I – Advise the Board & state agencies	II – Education & Workforce Development	III – Monitor & address range issues
	d. Promote existing efforts to develop a statewide training program for potential CRMs.	<ul style="list-style-type: none"> • RMAC • <i>OPFR, Cal-Pac SRM CRM Panel</i> 	Ongoing, 06/2023		X	
	e. Invite CAL FIRE representatives to discuss state requirements for planning and conducting prescribed burns as a CAL FIRE employee or private “burn boss” at a public RMAC meeting.	<ul style="list-style-type: none"> • RMAC • <i>CAL FIRE</i> 	01/2023		X	
	f. Meet with CRM Panel and Cal-Pac SRM leadership to discuss other methods of promoting CRM utilization and/or further development of the program.	<ul style="list-style-type: none"> • RMAC • <i>Cal-Pac SRM CRM Panel</i> 	03/2023		X	
3. Develop educational opportunities and outreach for prescribed herbivory, fuel reduction methods integrating prescribed herbivory, and rangeland resource management in general.	a. Establish appropriate guidance for grazing following wildfire on California rangelands, with an emphasis on state-managed lands.	<ul style="list-style-type: none"> • RMAC • <i>UCCE/UC ANR, UCB, UCD, CPSLO</i> 	09/2023	X		X
	b. Conduct and promote a collaborative annual educational workshop series on the use of grazing for fine fuel reduction.	<ul style="list-style-type: none"> • RMAC • <i>UCCE/UC ANR, NRCS, CAL FIRE</i> 	03/2023	X	X	X
	c. Identify needs for technical and training information and establish a plan for producing educational workshops.	<ul style="list-style-type: none"> • RMAC • <i>UCCE/UC ANR</i> 	Ongoing, 12/2023	X		X

Goals, Objectives, Leads & Partners, and Proposed Completion Dates				Relationship to RMAC Priorities		
Goal	Objective	<ul style="list-style-type: none"> Lead(s) Proposed Partner(s) 	Completion Date	I – Advise the Board & state agencies	II – Education & Workforce Development	III – Monitor & address range issues
4. Increase collaborations with advised and related agencies, Native American tribes, and other administrative bodies, and solicit and prioritize current synergistic California rangeland resource priorities	a. Regularly solicit requests for investigations of rangeland management topics.	<ul style="list-style-type: none"> RMAC Board, advised agencies 	11/2022	X		X
	b. Where appropriate, initiate proof-of-concept projects or small-scale collaborative investigations utilizing CDFA mandates under the FAC 7271 and 7273	<ul style="list-style-type: none"> RMAC CDFA 	05/2023	X		X
	c. Extend invitations for periodic public reports on their activities and current issues to institutions relevant to California rangelands.	<ul style="list-style-type: none"> RMAC UC NRS, CRT, CRCC, CCRC 	Ongoing, 12/2023			X
	d. Extend invitations for input on RMAC priorities, synergistic efforts surrounding shared goals, and periodic public reports on their activities and current issues to advised agencies.	<ul style="list-style-type: none"> RMAC, Board, CalEPA, CNRA, CDFA 	Annually in October	X		X
	e. Appoint an RMAC representative to track water quality issues in the State.	<ul style="list-style-type: none"> RMAC S/RWQCB, DWR 	02/2023	X		X
	f. Establish an annual schedule for representatives from the State and Regional WQCBs to report to RMAC on activities that may impact grazed lands in the state. Coordinate with board staffs to facilitate communication.	<ul style="list-style-type: none"> RMAC S/RWQCB 	09/2023			X

Goals, Objectives, Leads & Partners, and Proposed Completion Dates				Relationship to RMAC Priorities		
Goal	Objective	<ul style="list-style-type: none"> Lead(s) Proposed Partner(s) 	Completion Date	I – Advise the Board & state agencies	II – Education & Workforce Development	III – Monitor & address range issues
	g. Establish an annual schedule DWR present or submit reports to RMAC on groundwater management plans under development that may impact grazed lands in the state.	<ul style="list-style-type: none"> RMAC DWR 	09/2023			X
	h. Monitor county-by-county implementations of the Livestock Pass program and inter-county coordination and agenda for future meeting.	<ul style="list-style-type: none"> RMAC CAL FIRE, CFBF, UCCE/UC ANR 	11/2023			X

Key: Board = CA State Board of Forestry and Fire Protection; CA = California; FSC = CA Fire Science Consortium; CalEPA = CA Environmental Protection Agency; CAL FIRE = Department of Forestry and Fire Protection; Cal-Pac SRM = CA Pacific Section of the Society for Range Management; CCRC = Central Coast Rangeland Coalition; CRCC = CA Rangeland Conservation Coalition; CDFW = CA Department of Fish & Wildlife; CFBF = CA Farm Bureau; CLFA = CA Licensed Foresters Association; CNRA = CA Natural Resources Agency; CDFA = CA Department of Food & Agriculture; CPSLO = CA Polytechnic State University, San Luis Obispo; CRM = Certified Rangeland Manager; CRT = CA Rangeland Trust; CWGA = CA Wool Growers Association; DWR = CA Department of Water Resources; DGS = CA Department of General Services; JDSF = Jackson Demonstration State Forest; NRCS = Natural Resources Conservation Service; OPRF = Office of the Professional Forester Registration; RPF = Registered Professional Forester; RMAC = Rangeland Management Advisory Committee; SLGLLM = State Lands Grazing License & Land Management, a subcommittee of the RMAC; S/RWQCB = State/Regional Water Quality Control Board; UC ANR = University of CA Division of Agriculture and Natural Resources; UCB = University of CA, Berkeley; UCCE = University of CA Cooperative Extension (UC ANR); UCD = University of CA, Davis; UC NRS = University of CA Natural Reserve System; USFS = United States Forest Service.

V. RANGELAND RESOURCE CONCERNS AND PROGRESS

Throughout the course of conducting its annual business at open public meetings, RMAC members, members of the public, and other interested stakeholders may bring issues related to rangelands to the attention of the RMAC. To address issues needing discussion or other actions, Board staff and RMAC members work to secure speakers to bring information to the public, facilitate discussions about issues and potential solutions, and bring these issues to the attention of the Board as appropriate. Topics of concern related to rangeland resources that were discussed at public RMAC meetings, and potential actions taken to address the challenges, are summarized below.

- Access to suitable grazing land is a perennial challenge for many producers in California. Dr. Pelayo Alvarez described **AB-252**, the Department of Conservation's **Multi-benefit Land Repurposing Program**², which seeks to increase regional capacity to repurpose agricultural land to reduce reliance on groundwater while providing community health, economic wellbeing, water supply, habitat, and climate benefits. This program would support alternative land uses for degraded lands coming out of agriculture (e.g., cropland, reclaimed mines) to minimize economic, social, and environmental impacts from the transition of agricultural lands in areas of groundwater overdraft to less water intensive land uses while providing benefits to local and regional communities. Some of these lands may be appropriate to convert back to rangeland. Activities under this program could include replantation, outreach, education and training, and research and monitoring. Such a program may represent an opportunity in some cases to expand access to grazing land, while providing co-benefits such as groundwater recharge, wildlife habitat, carbon sequestration, and agricultural productivity.
- As prescribed grazing³ receives increased attention and potential funding sources to support fuels management across the state, partner organizations and stakeholders have brought a variety of concerns to the attention of the RMAC. Roger Ingram, Chair of the **CWGA Wildfire and Grazing Ad Hoc Committee**, presented survey results of targeted grazing providers in California.⁴ Top challenges facing surveyed targeted graziers included:
 - Labor – the passage of AB 1066 (2016)⁵, which designated shepherd work weeks as comprising 168 hours (24 hours per day, 7 days a week) due the on-call nature of the work, will result in an estimated 50% increase in wages.
 - Grazing Agreements – finding project opportunities, navigating the Request for Proposal process, developing grazing contracts, the common need for concentrated timing of treatments

² <https://www.conservation.ca.gov/dlrp/grant-programs/Pages/Multibenefit-Land-Repurposing-Program.aspx>

³ For the purposes of this report, the terms “prescribed grazing” and “targeted grazing” are used interchangeably, with recognition that these terms may be used in more specific manners depending on the context. We use this term here to convey the concept of grazing management in which animals are strategically timed to graze a particular area for a defined set of goals, often including fuels reduction or other vegetation management purposes, and generally outside of the operator’s home base, if there is one.

⁴ <https://californiawoolgrowers.org/wp-content/uploads/2022/03/2022-Targeted-Grazing-Survey-Report-CWGA-Final.pdf>

⁵ https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160AB1066

- across large landscapes, contracting requirements around liability insurance, and difficulty with communication among all parties constitute only some of the challenges that come with developing and implementing successful grazing agreements.
- Animal Performance – when animals are utilized for grazing projects, meat and fiber production are not the primary goal; as such, animal performance may suffer and impact a producer’s profitability.
 - Public and Agency Perception – public and agency understanding around the impacts of grazing and management processes was perceived to be low, including knowledge around the need for ongoing maintenance and the logistics of livestock management, including animal welfare concerns.
 - Scale, Infrastructure, and Operations – limited access to capital and challenges with increasing operation size may reduce business viability, while difficulties with securing a reliable home base for which to adequately support animals when they are not in use on projects are a substantial challenge for prescribed grazing operators. Infrastructure at grazing sites is often inadequate to support the grazing project, and must be provided by the producer. Coupled with vandalism and theft, infrastructure is a significant cost.
 - Government Regulations – unwieldy or confusing procedures often make it difficult to meet contract requirements or agency needs.
 - Predator control, theft, vandalism, scheduling and logistical challenges, communication, and marketing were additional substantial concerns facing targeted grazing managers in California.
- Concerns regarding the consideration of rangelands in the Pathways to 30x30 Draft Strategy were raised at an RMAC meeting. Jennifer Norris, Deputy Secretary for Biodiversity and Habitat at the CNRA, spoke to the RMAC directly at a public meeting, and described the program **Pathways to 30x30: Accelerating Conservation of California’s Nature**⁶, which promotes climate smart strategies, pollinators, healthy soils, and accelerated ecological restoration, and makes the commitment to conserve 30% of lands and coastal waters by 2030. This strategy is a part of much broader Nature Based Solutions Executive Order⁷, signed in late 2020. The executive order also directed the CNRA to coordinate with other state agencies and diverse partners to achieve conservation goals. Collaborators therefore include regional stakeholders, working groups, Tribal councils, and a variety of agencies including CNRA departments. Ms. Norris described the various agencies involved in developing and implementing the 30x30 Strategy, and introduced attendees to an online web application, CA Nature⁸, which describes lands that already meet the definition of “Conservation Areas” and identifies areas that might also qualify. Attendees learned more about how rangelands were being considered, and the 30x30 team was alerted to the expertise existing in the membership and stakeholders of the RMAC and may consider reaching out for future efforts that may benefit from their input.

⁶ <https://www.californianature.ca.gov/pages/30x30>

⁷ <https://www.gov.ca.gov/wp-content/uploads/2020/10/10.07.2020-EO-N-82-20-.pdf>

⁸ <https://www.californianature.ca.gov/pages/ca-nature>

- High infrastructure capital and maintenance costs are often a barrier to management improvements or development of grazing projects. While funding for the installation of permanent infrastructure is often challenging, Rangeland Specialist Kristan Norman and State Forester Chris Zimny of NRCS provided a detailed presentation on the **Environmental Quality Incentives Program**⁹ (EQIP) and Conservation Stewardship Program (CSP) with a focus for rangeland managers. The EQIP is a financial and technical assistance program funding both project planning and implementation, with funding provided through the Farm Bill¹⁰. While EQIP is more focused on vegetative and structural practices, the CSP focuses more on ramping up existing conservation efforts. Both programs cover soil, water, air, and animal resource concerns.
- Policy advocacy efforts are a common behind-the-scenes component of the legislative process. RMAC stakeholders are interested in learning more about upcoming and current legislation and may highlight concerns that potential policy changes may alleviate. To shed light on recent activities in this realm, Brian Shobe, Associate Policy Director at **California Climate and Agriculture Network**¹¹ (CalCAN)—a coalition of sustainable and organic farming organizations—spoke about the organization’s advocacy efforts for state investments in research and assistance for farmers and ranchers in California to become more climate resilient. Mr. Shobe provided an update on three recent advocacy efforts:
 - AB 125 (Rivas, 2021; Equitable Economic Recovery, Healthy Food Access, Climate Resilient Farms, and Worker Protection Bond Act): This \$3.3 billion bond measure sponsored by the Food and Farm Resilience Coalition failed to pass in 2021, but the coalition successfully advocated for \$2 billion in one-time budget investments in the food and farm system in 2021 and 2022.¹²
 - In 2022, the Food and Farm Resilience Coalition developed an \$8 million budget request for Fiscal Year (FY) 2022/23 to support prescribed grazing. Fourteen legislators signed on, and stakeholders supported the budget request. The legislature ultimately included “prescribed wildland grazing and prescribed grazing infrastructure” as an eligible investment in the Wildfire Prevention Grants Program, which received \$120 million in FY 2022/23.
 - SB 977 (Laird) 2021/22, Conservation Ranching Incentive Program to support grazing and habitat on private rangelands.

There continues to be substantial need for new and ongoing support of grazing when and where appropriate, both in terms of increasing understanding within public and agency perceptions, and in terms of resources, including funding for supporting projects.

- The Food and Agriculture Code FAC mandates that the CDFA consult with the RMAC in regards to their Noxious Weeds Program. CDFA is charged with managing funds received for the Noxious Weed Management Account, and in Article 1.7. Noxious Weeds Management of the Food and

⁹ <https://www.nrcs.usda.gov/programs-initiatives/eqip-environmental-quality-incentives>

¹⁰ Most recently, The Agriculture Improvement Act of 2018 (2018 farm bill; P.L. 115-334, H.Rept. 115-1072); <https://www.congress.gov/115/plaws/publ334/PLAW-115publ334.pdf>

¹¹ <https://calclimateag.org/>

¹² <https://calclimateag.org/robust-state-funding-for-climate-smart-ag-drought-relief-farmworker-housing-healthy-food-access-more/>

Agriculture Code (FAC), § 7271(c)(2)(A), states “Twenty percent shall be made available toward research on the biology, ecology, or management of noxious and invasive weeds; the mapping, risk assessment, and prioritization of weeds; the prevention of weed introduction and spread; and education and outreach activities. These moneys shall be made available to qualified applicants through a grant program administered by the department. Proposals shall be evaluated in consultation with the Range Management Advisory Committee, established pursuant to Section 741 of the Public Resources Code, with an emphasis placed on funding of needs-based, applied, and practical research.” In addition, FAC § 7273(a), states that the CDFA “... shall designate and provide staff support to an oversight committee to monitor this article and shall consider input from weed management areas, county agricultural commissioners, and the Range Management Advisory Committee.” The Noxious Weed Program at CDFA has had a history of dormancy and re-engagement and there are current efforts to investigate reviving this program. In regards to incorporation of CDFA’s annual priorities into RMAC’s priorities, Mr. Kelch suggested that RMAC have an internal meeting with CDFA to discuss this going forward, as the CDFA and RMAC have a statutory nexus to address Noxious Weeds. To further increased engagement with the CDFA, RMAC Members Kramer and Bush were appointed as RMAC representatives to the **Healthy Soils Initiative** under the CDFA at the November 2022 RMAC meeting.

- Workforce Development continues to be a significant challenge in the rangeland management world, with a relatively small number of professionals with rangeland expertise or certification working in the State, and less than 80 currently licensed Certified Rangeland Managers (CRM) across California, of which fewer than perhaps 30 CRMs provide rangeland consulting services. The CRM license is required for professional practice of rangeland management on non-federal forested landscapes as a specialty authorized under the Professional Foresters Licensing Act that requires the Registered Professional Forester license for the practice of forestry. Dr. Susan Marshall, professor of Rangeland Resources and Soils at California Polytechnic State University, Humboldt, presented information on the current state of **Certified Rangeland Managers (CRM) in California** and constraints and challenges in workforce development efforts. This information was largely based on a survey of CRMs, which included 65 responses out of the confirmed 78 CRMs at that time, for a response rate of 83% from active CRMs. Per the survey, CRMs wanted to see progress made in the areas of improved information on the Cal-Pac Society for Range Management (SRM)¹³ webpage, more support from CAL FIRE, and clear continuing education requirements and curriculums, along with increased opportunities for practical ranch experience and educational outreach.

Dr. Marshall also reviewed information on a grant proposal to support the above needs, as well as educational programs for comprehensive and collaborative CRM training, more clear and accessible program requirements, and greater access to training and testing for individuals wanting to take the CRM exam. The proposal was sent to the U. S. Department of Agriculture (USDA) and NIFA (National Institute for Food and Agriculture) grant programs. The proposals were spurred on by conversations with Audubon, and the establishment of their Conservation Ranching Program. Various academic and government agencies, NGOs, and private landowners were involved in developing, supporting, and promoting the proposal, which was a one-time \$30,000 grant to

¹³ <https://calpacsrn.org/>

support travel to scientific meetings (booths and listening sessions), and research to identify strengths/weakness in California range curricula. Ultimately, that grant was awarded, and the RMAC Chair and Board staff continue to monitor the status of this grant and endeavor, and the RMAC will support and publicize the efforts of the related efforts to support workforce development for CRMs in the state. Dr. Marshall will provide an update on the workforce development grant efforts in early 2023 at the first RMAC meeting of the calendar year. A crosswalk of CRM educational requirements and universities with range programs, a CRM study guide, and technical documents and literature to support range education can be found at the Rangelands Gateway website¹⁴. A panel will be developed to create learning tools for the CRM exam. Lastly, the grant will support development of a pilot place-based learning cohort in partnership with a working ranch and would be utilized to assist prospective CRMs.

- Local area support for grazing efforts to support community-wide goals, including vegetation and fuels management, can be built via grassroots efforts such as community-supported grazing programs which position trusted community members in key roles to coordinate and support to manage resources that affect the larger community. By ensuring that everyone in a community is privy to the fire safety benefits of such a program, effectiveness of grazing is felt on contiguous acres, rather than in scattered patches, providing greater levels of protection from wildfire—among other potential benefits—on a larger scale. RMAC Member Cole Bush, owner-operator of Shepherdess Land & Livestock and member of the CWGA, updated the RMAC on the **Community Supported Grazing Summit**, a workshop by the Ojai Valley Fire Safe Council. The Ojai Valley has developed a community supported grazing program with multiple stakeholders, stitching together parcels throughout the community to manage vegetation with prescribed grazing in the corridor of the town. In response to increased demand and need across the state, they have been working on developing a transferable framework that could be used by other communities to adapt to their situations for a similar kind of community-supported grazing programs. The April 8th Summit¹⁵ brought together over 30 managers, individuals from land conservancies, tribal members, and grazing practitioners to continue working on development of this program and make it transferable for other regions and communities, with the goal of increasing local capacity for funding and implementing local and regional projects to manage vegetation for wildfire mitigation and risk reduction, particularly in areas critically needing treatment. The program focuses on economic development, public education, ecological restoration, community resilience, and promoting fire-safe communities.
- A limited number of herders reside in California and the greater United States to manage grazing animals. Of the interested few, most lack experience and require extensive training to become effective animal managers. Historically most targeted grazing services have dealt with this by utilizing the H2A Temporary Agricultural Employment of Foreign Workers program¹⁶. However, as previously mentioned, AB 1066 removed the overtime herder exemption. Training programs through, for example, a community college, would have the potential to work if they could recruit enough people to take course. Curriculum development, hands-on experiential labs, and

¹⁴ <https://docs.rangelandsgateway.org/>

¹⁵ https://cecsb.org/blog/grazing-summit?utm_source=CEC+Supporters&utm_campaign=0e444b6840-Newsletter-2022-05&utm_medium=email&utm_term=0_d09a19fbeb-0e444b6840-247746328

¹⁶ dol.gov/agencies/whd/agriculture/h2a

internships with existing targeted service grazing businesses would develop knowledge, skills, and experience with grazing animals. Member Cole described one effort to support such training needs with the launching of a new **Bilingual Grazing Manager Training**^{17, 18}. This is a pilot program series specifically to address the needs for bilingual training of practitioners for sheep and goats (but also cattle), as they implement targeted grazing projects. Topics will also include ecological considerations such as native plants identification and business and leadership acumen.

- The RMAC has faced challenges over the years at conducting business absent an operational budget. To ameliorate this, the RMAC often partners with renowned rangeland and environmental organizations with like goals and missions to co-support like efforts and increase reach across organizations to improve outreach, education, and information needs of the California public and other interested stakeholders. In that vein, Bre Owens, Stewardship Coordinator at the **Western Landowners Alliance** (WLA), provided background information on efforts for the WLA to apply for a **Grazing Lands Coalition Initiative Grant**, with the hope that the RMAC would support that effort, which if awarded, would include the potential for joint WLA-RMAC collaborations for future adult education efforts in range resources and management in California. The Chair of the Board of Forestry & Fire Protection voiced their support for such valuable professional partnerships. As such, the RMAC voted to support the grant proposal, and hopes to leverage such resources in the future for outreach and education. In a similar effort, the RMAC has partnered in the past with Stacey Sargent Fredericks of the California Fire Science Consortium to leverage resources for the development and implementation of an annual RMAC educational series. In the previous two years, these workshops were conducted virtually to allow for social distancing in acknowledgement of the Covid-19 pandemic. As partnerships at the CA FSC were in flux in the latter half of 2022 due to management changes, the RMAC partnered with the Fuels and Vegetation Management Education (FAVE) program at Cal Polytechnic State University, San Luis Obispo's (CPSLO) Swanton Pacific Ranch. In the previous three years, the RMAC has developed a three-webinar series focused on grazing management in California, often with a focus on prescribed grazing. While the educational series was not conducted in calendar year 2022, a larger effort is in development in partnership with the FAVE, with three webinars and four in-person field tours planned for the early months of 2023. The three webinars will revolve around the entire prescribed grazing contracting process, including navigating the request for proposals, putting together a grazing license, and developing and implementing a grazing management plan. The efforts of the SLGLLM sub-committee spurred the development of this educational series, and as such, the three webinars will revolve around these three main aspects of grazing agreements with a focus on public lands, but with applications to all land-ownership and management types. Additionally, four field workshops across the state will provide site- and context-specific information from livestock practitioner and agency perspectives, and will include tours in the East Bay, Ojai Valley, Paso Robles/Salinas River, and San Diego areas.
- A variety of fuel management activities are commonly used throughout California, including mechanical and manual treatments, prescribed fire, and herbicide application. While livestock grazing is increasingly at the forefront of vegetation management discussions, it still lags in use

¹⁷ https://bof.fire.ca.gov/media/uzck0mtp/6-bilingual-grazing-mgr-training-project-overview_ada.pdf

¹⁸ <https://bof.fire.ca.gov/media/svvpctze/6-capacitacion-de-pastores.png>

across the state for a variety of reasons, including many of those discussed above. CAL FIRE published Fuels Reduction Guidance in 2021¹⁹ which included most of these vegetation management activities, except grazing. The RMAC received several inquiries from stakeholders as to why CAL FIRE did not include information on prescribed grazing as a fuels management tool, and in response, the RMAC offered to produce an informational pamphlet addendum and a more in-depth white paper addressing prescribed herbivory as a fuels management tool for use alone or in combination with other tools. CAL FIRE has received the draft copy of the pamphlet addendum, and is considering whether to include this information, or information about prescribed grazing in some form, in future versions of their Fuels Reduction Guidance.

- Other challenges raised over the year during public RMAC meetings included issues related to the Livestock Pass Program, water quality and grazing in riparian areas, prohibition of gas engines, and post-fire landscape management. The RMAC will be working to secure speakers and develop activities to provide additional information to stakeholders, and will investigate avenues to fill these potential needs, including education and outreach, online resources, workshops, and recommendations for policy changes if warranted.

VI. CONCLUSION

The RMAC has substantially renewed efforts in the past two years to establish or re-establish collaborations with related agencies and organizations to better leverage the various resources, expertise, and efforts of these institutions to collectively support improved rangeland resource conditions across the State. The bulk of planning and coordination efforts occurred in 2022, with the majority of workshops and deliverables shifted to 2023. Efforts have included renewed collaborations with state agencies, internal state departments, and task forces, as well as local and state-wide range-related organizations. RMAC is partnering with organizations to present additional workshops and educational outreach opportunities regarding prescribed herbivory, fire in rangelands, and integration of fuels treatments through collaborations with CAL FIRE, University of California and California State universities, Swanton Pacific Ranch, and U.C. Cooperative Extension, among others. RMAC and Board staff representatives have been established to liaise with advised agencies, departments, and task forces. In addition, RMAC is increasing coordination with outside organizations to support the development of technical guidance, literature reviews/white papers, and pamphlets to support range resource management from the level of the individual up to the state agency.

¹⁹ <https://www.fire.ca.gov/media/4jqerfjh/fuels-reduction-guide-final-2021-interactive.pdf>

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