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Via email

May 18, 2016

Chairman and Members of the Board,

The Range Management Advisory Committee (RMAC) is a statutorily derived committee (Public Resources Code § 741) which advises the Board of Forestry and Fire Protection, the Natural Resources Agency, the California Environmental Protection Agency, and the California Department of Food and Agriculture on rangeland resources. It is the only committee in State government that specifically addresses range issues. The mission of RMAC is to be an advocate for the sustained management of California's rangeland through the promotion of scientifically and economically sound regulation and policy.

The Range Management Advisory Committee has reviewed the Draft Vegetation Treatment Program Programmatic Environmental Impact Report (VTP EIR) and would like to provide comments to improve the practical value and utility of this program, especially regarding the utilization of prescribed herbivory for fuels reduction and ecological management. The use of animals to reduce fuel loads has grown in acceptance for its low impact, and especially to maintain projects once initial treatments are completed. The purpose of the VTP EIR is to provide a framework that can facilitate projects undertaken to manage wildland fuels in WUIs and similarly critical areas statewide. The Committee recognizes the need for this program, and unequivocally supports the ambition of it.

An RMAC report titled "Status and Recommendations Regarding the Department of Forestry and Fire Protection Vegetation Management Program" was submitted on June 22, 2005 and outlined the committee's views on implementing a statewide vegetation treatment program. RMAC submitted a public comment letter on February 25, 2013 that expanded on the themes from that report and directly linked those concerns to the VTP as proposed at that time . RMAC believes many of those overall themes remain relevant to the ongoing fuels issue in California and barriers to implementing vegetation management projects, and provides the following comments on the 2016 Draft VTP EIR to support fuels management and ecological health throughout California.

1. Use of Prescribed Herbivory as a treatment activity

"Prescribed" grazing is a management practice whereby herbivory and animal activity is managed to accomplish specific ecological and/or production objectives. Controlling invasive weeds is one, but so also is managing for certain habitat structures or conditions required by wildlife species, or managing for certain population densities or seasonal biomass densities of edible shrubs (aka fuels management, particularly ladder fuels). Animals can be concentrated and moved as necessary as vegetation on a site progresses through its seasonal changes to achieve the desired fuel reduction or project maintenance objectives. The Committee believes there is a significant opportunity to utilize prescribed herbivory in

all three project types (WUI, fuel break, and ecological restoration) to achieve the target objectives of the VTP with no significant environmental impacts at the project level. However, the Committee is concerned that unfamiliarity with implementing prescribed herbivory projects and the nuances between different grazing and browsing species will limit the use of this tool in project types other than ecological restoration.

To this end, the Committee proposing the following revisions to the VTP EIR:
1.a In Section 4.1.6.4 Prescribed Herbivory Activities, page 4-70, add the following language:

> Prescribed herbivory can offer a variety of benefits in comparison to other types of vegetation treatments. Herbivory is a historic, natural way of removing biomass and can yield a quality protein product for commercial benefit. Herbivores are essentially a "biological masticator" that can reproduce themselves and turn unwanted biomass into a consumable product. In addition to fire prevention benefits, carefully managed grazing can provide important environmental benefits such as increased soil organic matter, control of invasive species, and improved plant and wildlife habitat.
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> Consider using prescribed herbivory as a low-impact treatment when the following concerns arise:
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> - Air quality, when compared to the use of prescribed fire.
> - Noise, when compared to mechanical and some manual treatments.
> - Proximity to structures, when compared to risks of using prescribed fire or mechanical treatments.
> - Steep slopes, when compared to prescribed fire, manual, or mechanical treatments.
> - Soil compaction and surface disturbance, when compared to mechanical treatments.
> - Noxious weed control, when compared to manual or mechanical treatments.
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> When considering a fuel reduction or ecological restoration project, it may be helpful to utilize the Range Management Advisory Committee's *Prescribed Herbivory for Vegetation Treatment Projects* document, which provides information about different plants and animal species compositions; developing and contracting a prescribed herbivory project; and best management practices. This document is online at http://bofdata.fire.ca.gov/board_committees/range_management_advisory_committee/policy_and_reports/ as "Prescribed Herbivory for Fuel Reduction." *Planned Herbivory in the Management of Wildfire Fuels* may also help project proponents determine when best to use herbivory (https://journals.uair.arizona.edu/index.php/rangelands/article/view/12320/11609).
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> Two publications from the University of California Agriculture and Natural Resources's *Understanding Working Rangelands* series: *Grazing Systems Management* (http://anrcatalog.ucanr.edu/pdf/8529.pdf) and *Cattle, Sheep, Goats, and Horses: What's the difference for Working Rangelands?* (http://anrcatalog.ucanr.edu/pdf/8524.pdf) may provide implementation assistance once a project proponent decides to initiate a prescribed herbivory project, along with the *Targeted Grazing Handbook*, from the University of Idaho (http://www.webpages.uidaho.edu/rx-grazing/handbook.htm).

1.b The VTP EIR uses the terms "prescribed herbivory," "prescribed grazing," and "grazing" but only defines "prescribed herbivory." RMAC recommends a close review of when those terms are used in

the document and revising the language choices when necessary, and adding "prescribed grazing" and/or "grazing" into the glossary if needed. The VTP EIR talks extensively about grazing in several sections (page 44-145, page 5-11, et al) but does not relate those discussions back to the use of prescribed herbivory for fuel reduction nor how grazers might utilize other treatment activities, such as prescribed fire, for ecological benefit. *"Planned Herbivory in the Management of Wildfire Fuels,"* by Glenn Nader, Zalmen Henkin, Ed Smith, Roger Ingram, and Nelmy Narvaez (https://journals.uair.arizona.edu/index.php/rangelands/article/view/12320/11609), provides information that may be helpful in connecting the two issues in, for example, Section 4.1.3 Rangeland Base and Ownership and page 5-11, part of Section 5.3.1.2 Related Past Projects, as well as Section 4.1.6.4 Prescribed Herbivory Activities.

1.c Prescribed herbivory is a treatment activity appropriate for WUI, fuel break, and ecological restoration treatment types as well as grass, shrub, and tree vegetation formations. The Committee is concerned that the VTP EIR, as written, implies that prescribed herbivory is only appropriate for ecological restoration projects and disregards the fuel reduction and ecological benefits that grazing can provide if used for WUI or fuel break treatments. The Committee recommends adding brief language about how prescribed herbivory or grazing may accomplish WUI or fuel break goals into 2.2.2.2.1 Wildland-Urban Interface (WUI) and 2.2.2.2.2 Fuel Breaks, similarly to how it's mentioned in 2.2.2.2.3 Ecological Restoration on page 2-29. It is also suggested a discussion of the use of prescribed herbivory be added to pages 4-38 and 4-54, in the discussion of how WUI (Section 4.1.5.1.2) and fuel break treatments (Section 4.1.5.3.2) might be accomplished.

1.d In Section 4.1.3 Rangeland Base and Ownership, as well as 4.1.6.4 Prescribed Herbivory, RMAC suggests a discussion of the utility of prescribed herbivory in all three stages of fuels management – pre-fire vegetation management, project maintenance, and post-fire recovery. Prescribed herbivory is a management tool that can be ideal throughout the entire fire ecological cycle, and RMAC believes the VTP EIR provides an opportunity to emphasis the benefits of prescribed herbivory throughout this cycle.

2. Inaccurate or Outdated Statistics

There are several places the VTP EIR could use improvement in regards to improving inaccurate or outdated statistics.

2.a On page 4-12, "Condition of Non-Federal Grasslands," there is a reference to the 2003 FRAP report on the condition of annual grasslands. The writer explained the "poor" rating (the 2003 report actually stated "fair to poor") as being due to applying methods for perennial grasslands to annual grasslands. That's somewhat right. What they meant was that NRCS (in the 1980s) did not directly evaluate the health of rangelands in terms of soil surface condition, water retention, productivity, etc. but instead against a long out-of-date method of identifying 'seral' ecological stages on the basis of the relationship of the species present to some hypothetical idea of what the ideal plant community composition should be. That particular result was fairly meaningless, and the Committee believes its inclusion in the EIR is bound to confuse readers. RMAC suggests the Board contact the NRI rangeland programs director, Lori Metz, for a simplified NRI report on conditions of California annual grasslands.

2.b Another section, "Grazing Capacity Estimates" on page 5-14, describes animal unit months (AUMs) inaccurately in important regards. **An AUM is the amount of forage (dry basis) that a 1,000 pound herbivore will eat in 30 days.** Most primary references give it as 780 pounds of dry matter, but the USDA estimates it as 1,000 pounds to be 'conservative' as possible and make the math very slightly easier. In addition to adjusting the AUM discussion, RMAC suggests this section include AUMs for goats and sheep, as those animals are likely to be used in prescribed herbivory projects under this

VTP. A fact sheet provided by the Utah State University Cooperative Extension, *Determining Your Stocking Rate*, by Mindy Pratt and G. Allen Rasmussen (attached) provides the following table, which RMAC recommends inserting on page 5-14 as a "quick reference" for VTP project proponents, along with a reference to the document:

TABLE 1: Commonly used Animal Unit Equivalents

CLASS OF ANIMAL	*ANIMAL UNIT EQUIVALENT*
Cow, 1000 lb, dry	0.92
Cow, 1000 lb, with calf	1.00
Bull, mature	1.35
Cattle, 1 year old	0.60
Cattle, 2 years old	0.80
Horse, mature	1.25
Sheep, mature	0.20
Lamb, 1 year old	0.15
goat, mature	0.15
Kid, 1 year old	0.10
Deer, white tailed, mature	0.15
Deer, mule, mature	0.20
Elk, mature	0.60
Antelope, mature	0.20
Bison, mature	1.00
Sheep, bighorn, mature	0.20

(from USDA NRCS National Range and Pasture Handbook)

RMAC members are available to Board staff to provide any additional information or data the Board deems appropriate. We are glad for the hard effort that has gone into this, and look forward to a final document that will facilitate a substantial increase in locally-developed projects that protect residents, improve productivity, and contribute to the quality and sustainability of the ecological wealth of California.

Thank you,

Marc Horney, PhD, CRM
Lesa Osterholm
Co-Chairs, Range Management Advisory Committee

Attachment: *Determining Your Stocking Rate*, Utah State University Extension, Mindy Pratt and G. Allen Rasmussen, 2001.