



8. Improved air quality because of reductions in the number of large wildfires that contribute massive amounts of pollution
9. Improved public and fire fighter safety due to reduced numbers of large wildfires
10. Increased utilization of vegetation management tools other than fire
11. Development and use of better vegetation management methods
12. Improved cooperation with other state and federal funding programs
13. Utilization of VMP as a fire fighter training tool
14. Increased emphasis by CDF on natural resource management

The current RMAC members still feel those concerns are valid ones. The five below are approximate restatements and expansions of several major themes from the 2005 report that establish a context for our comments on the VTP EIR which follow:

1. Fuels are accumulating across the state in WUI areas, SRAs and LRAs, increasing threats to lives and property in many communities. Such management actions as have been undertaken in the last three decades, while useful, have been on a scale much too small to address accumulations of vegetative fuels across much of the state. We recognize that CalFire is well aware of these conditions, and through this new program is attempting to create a means for expanding these management actions.
2. Many, perhaps most, counties have continued to allow residential developments in high risk environments that are difficult and dangerous to defend, and/or have allowed dispersed developments that are intrinsically hard to protect, creating serious risks to residents and firefighters alike. In the face of those policies, CalFire must continue to seek for ways to protect its crews and the public they serve in these circumstances which often do not favor their success.
3. Over the last several decades, the staffing and budget in CalFire have been increasingly invested in firefighting rather than land management. The members of RMAC believe that land management which reduces fire frequency and severity is a better mechanism for improving public safety and controlling expenses than is fighting increasingly severe and costly wildland fires, although both are necessary. This change has occurred over a period where the practice of land management has evolved to require considerably more technical skill and knowledge than formerly. Because of the complexity of the many simultaneous public expectations for land management (personal health and safety, environmental protection and quality, commercial productivity and efficiency, recreational opportunities, etc.), it has become absolutely necessary to not only understand the management of "fuels," but appreciate how to manage these fuels in ways that protect and sustain local ecosystems and their associated plant and animal communities, as well the many public and private uses of these landscapes. This is an enormous task that can't be accomplished with just a "fire-fighting" point of view. It will require the development of a deep collaborative framework across CalFire's entire organizational structure, from CalFire Units and their local community partners, to the state administrative office and its connections to other state and federal agencies, institutions, and organizations. Fortunately, these relationships already exist in places, thanks to the personal initiative of staff and administrators, but more are needed and a means for threading them together.
4. One reason for the large acreages proposed under the VMP, and now even more expanded under the VTP, is that human occupation and use of these wildland landscapes alters them in ways that often disable the natural maintenance functions of the ecosystems that would help remove fuel accumulations. Therefore, some degree of regular human intervention is necessary to keep them

in a state that approximates the local community's preferred condition for them (reduced threat of uncontrollable fire, and measures of ecosystem health and productivity). By occupying and using these landscapes, the public has assumed responsibility for their management. CalFire's responsibility in this is specifically that of protecting the public from wildfire, but this cannot be accomplished separately from the other management objectives and actions being undertaken by these communities. CalFire needs to recognize that it will need to become more engaged as a fellow participant in bodies whose interests extend well beyond fuels and fire management.

With respect to the Vegetation Treatment Program Environmental Impact Report, we offer the following comments:

1. California Department of Fish & Wildlife's Wildlife Habitat Relationship (WHR) vegetation types were used in the EIR (e.g. "coastal scrub," "montane chaparral," and "valley foothill hardwood" habitats) to describe environments with particular wildland fuels characteristics. This is consistent with state agency practice, and is adequate for the immediate purpose. However, at the federal level (USDA-NRCS) those are being replaced by the "ecological site" (ES) system. The virtue of the Ecological Site system is that it is intended to eventually produce predictive ecological models for each site, mapping out how different sites would be expected to change following a variety of likely events, including high/low intensity fires, brush thinning, grazing, etc. These are to serve the purpose of planning and monitoring land management projects like those envisioned under the VTP. While too late to tie into this current program, it may be useful for CalFire staff to open discussions with USDA-NRCS with a view towards tying into it as the ES system matures. The USDA-NRCS information could be of great use to the VTP, and doubtless CalFire's expertise with wildfire could greatly improve NRCS' efforts to develop a useful ecological management system for the state.
2. Mentions and descriptions of "Prescribed Grazing" in the document
  - a. "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/conditions required by wildlife species, or managing for certain population densities or seasonal biomass densities of edible shrubs (fuels management). Animals can be concentrated and moved as necessary as vegetation on a site progresses through its seasonal changes to achieve the desired objectives. These aspects of prescribed grazing did not seem to quite come through in the document. We refer staff to Glenn Nader's materials found at <http://www.extension.org/pages/29051/targeted-grazing-for-fuel-reduction>, his 2007 article in Rangelands at <http://californiarangeland.ucdavis.edu/Publications%20pdf/CRCC/herb.mgt.fuel.pdf>, and Erika Campbell and Charles Taylor's chapter 9 and Charles Taylor's chapter 12 in the Targeted Grazing Handbook ([http://www.webpages.uidaho.edu/rx-grazing/Handbook/Chapter 9 Targeted Grazing.pdf](http://www.webpages.uidaho.edu/rx-grazing/Handbook/Chapter%209%20Targeted%20Grazing.pdf); [http://www.webpages.uidaho.edu/rx-grazing/Handbook/Chapter 12 Targeted Grazing.pdf](http://www.webpages.uidaho.edu/rx-grazing/Handbook/Chapter%2012%20Targeted%20Grazing.pdf)).
  - b. Section 2.5.5 comments
    - i. This short section makes a number of technically correct statements about the uses of grazing animals, but misses the big picture. Cal Fire has at several points in its history made much of the value of grazing (chiefly of cattle) for controlling fine

fuels in grasslands and shrublands. Current Cal Fire staff would do well to recognize the extensive acreage managed as a regular course of business by private ranches across the state. That has a significant impact in extensively reducing fuels that Cal Fire might otherwise have to address. The specific case of “targeted” or “prescribed” grazing might best be considered an extension of those contributions by livestock managers, aimed at treating potential fuels that might be only marginally valuable for livestock production (although they may have the potential to be under the right circumstances). The treatment of targeted grazing in the EIR should have addressed things like strategies for using animals for suppressing shrub encroachment, for helping in the maintenance of fuel breaks of different types, and their use in combination with prescribed fire and mechanical treatments (see the references above). In the EIR, the total area of land that might be treated with grazing was given as 37,958,200 acres (Table 3.4/3.6). “Prescribed herbivory” was proposed at levels of 24% (Alt 4), 10% (Alt 2/3) or 0% (Alt 1). In the EIR it states that, “Herbivory treatments will be reserved almost exclusively for removal of invasive plants and maintenance of previously treated areas such as firebreaks.” We think this is an unreasonable restriction. As the references above (and more can be supplied) indicate, “prescribed herbivory” can be used in much more extensive ways also, especially in coordination with other treatments. In certain vegetation types, it may be useful for lengthening the intervals between prescribed burns or mechanical treatments in brush control. These practices could increase the land treatment from grazing considerably.

3. “Cattle and horses primarily eat grass, and occasionally cattle also eat some shrubs and forbs. Sheep consume many forbs, as well as grasses and shrubs, but tend not to graze an area uniformly. Goats will typically commonly eat large quantities the leaves, shoots, and newer bark of woody vegetation many shrubs and trees, as well as some forbs and grasses and tend to eat a greater variety of plants than sheep. Goats and sheep are effective control agents for leafy spurge, Russian knapweed, toadflax, other weed species, and some types of shrubs.” (p. 2-19)
  - a. This statement is very broadly correct, but it is an oversimplification of the reality. All grazing animals can be useful for vegetation management. Each species has its own strengths and weaknesses, and special management requirements. A great deal depends on the particular population of animals (genetic characteristics, the geographic areas they grew up in, other geographic areas they have visited for extended periods, specific behavioral training, management practices used by the owner/herder, etc.). And still more depends on the characteristics of the local site that a project is being planned for (water availability, mix of plant species that are available, terrain characteristics, season of year, etc.). (appropriate references to be supplied to BOF)
4. “Typical prescribed herbivory costs range from \$500 to \$1200 per acre.” (p. 2-20)
  - a. Citation for this? Doubtless reasonable in some circumstances, but likely higher than necessary in many others – especially if mechanisms for revenue generation can be established.
5. Goal #5 is “Maintain or improve long term air quality through vegetation treatments that reduce the severity of large, uncontrolled fires that release air pollutants and greenhouse gases.” (p. 3-22)
  - a. Alternative 4 acknowledges that prescribed burns themselves can be major contributors of atmospheric particulates and CO<sub>2</sub>, and may become even less viable as a means of fuels

management. Alternative 4 seems written so as to essentially assert that “If fuels can’t be treated with prescribed fire because of air quality concerns, then they just won’t be treated.” If that is the honest implication, perhaps it should be expanded upon and explained why fuels management becomes impossible without the use of prescribed fire on the scales proposed under the VTP. If that reading of the statement isn’t what was meant, then maybe it might be re-stated. We recommend that the Board of Forestry should seriously engage in some public conversations about how fuels could be managed if prescribed burning is eventually lost as a primary management tool, which certainly looks possible, if not likely. The public needs to be engaged in that discussion, and understand the consequences that this eventuality may leave them with.

6. *None* of the VTP treatment methods have shown themselves to be sustainably effective in satisfying the nine goals listed in the Executive summary of the EIR Review. Some of the reasons are given below. In the EIR, CalFire staff make several statements indicating their awareness of this, and indicate that a desirable strategy would be using combinations of these practices together over time. Obviously that would defeat any attempts to allocate acreages among the different practices, but how necessary is that? We encourage CalFire staff to re-work the VTP so as to emphasize the coordinated use of these different practices. In some cases they might be used simultaneously (hand-clearing near residences, with a fire conducted a safe distance away), while in others they may be separated in time but on the same project (mechanical brush clearing, followed by grazing in subsequent years to slow shrub re-establishment across a critical area). *All of the practices* require follow-up and maintenance. Some annually, others every few years, and perhaps every decade or more for a smaller subset. That should be clearly stated.
  - a. Prescribed fire – Tremendous difficulty in meeting air quality standards during burn “windows” when green standing chaparral will effectively burn in a mosaic pattern.
  - b. Crush and burn fuel breaks – Very effective in establishing defensible space, however is not sustainable due to rapid re-growth and is relatively costly.
  - c. Hand crews – Effective in the short-run, but treated areas must be maintained and therefore expenses mount over time.
  - d. Herbicides – Have environmental concerns, resistance may develop in some species, can be very expensive on mature chaparral stands, and may leave a significant fuel source behind.
  - e. Prescribed Herbivory – Most effective on herbaceous or immature woody species. Acquiring and maintaining enough animals to provide full suppression across an area may be difficult, especially in steep chaparral. May afford more opportunity to be self-supporting than other alternatives through sale of livestock and products. May also be useful for leveraging with other treatment methods.
7. Monitoring section (Chapter 7)
  - a. The monitoring section of the EIR, while it lists the broad types of monitoring information that might be collected for a project it only actually describes “implementation” monitoring – administrative information. This is the easiest type of monitoring to conduct, and is necessary, but it is the least informative about the on-the-ground impacts of the actual practices. We would like this section developed better, preferably with the assistance of some with experience in monitoring practices. We suggest contacting UC Cooperative Extension for assistance with or review of drafts (Dr. Ken Tate, UC Davis; Dr. James Bartolome, UC Berkeley).

- b. We agree that the monitoring of the effects of fuels treatment practices is a critical element of land management practices. We recommend that guidance be provided as to proper baseline monitoring practices, and “effectiveness” measures that would be considered appropriate after treatment. One possible source for ideas and guidance is the FIREMON database and monitoring tools maintained by the USFS Rocky Mountain Research Station (<http://www.firelab.org/science-applications/science-synthesis/74-firemon>).
- c. Effects of fuels management practices are *not* limited to fuels conditions in the project area. Ecological health and vegetative productivity of the site will also be impacted. We recommend encouraging Unit leaders to collaborate with those in their communities who have appropriate expertise and interest to assist with those metrics (local UC Cooperative Extension natural resource advisors would be a good beginning place for most).

RMAC members are ready to make themselves available to Board staff if we can help with these or other elements of the EIR. Again, we are glad for the hard effort that has gone into this, and look forward 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.

Sincerely,

Marc R. Horney, Ph.D.  
Co-Chair, Range Management Advisory Committee

Lesa Osterholm  
Co-Chair, Range Management Advisory Committee

Cc: George Gentry  
Tom Sandlin