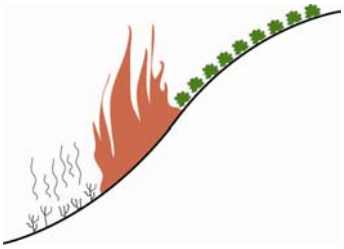
The California Chaparral Institute

…the voice of the chaparral



August 19, 2008

Jeff Murphy
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County of San Diego
5201 Ruffin Road
San Diego, CA 92123

Jeff,

Thank you for encouraging participation in the ongoing discussion of San Diego County's Vegetation Management Report Draft. Both Ken Miller's and your efforts to facilitate the collaborative process have been exceptional.

The Forest Area Safety Task Force (FAST) has done an excellent job identifying areas in the County that need fuel treatments around communities. While there still needs to be refinement in some of the details, such buffer zone distances and how these zones will be managed within shrubland ecosystems, the Fuel Management Priorities established by FAST offer a workable solution to one component of the fire-risk reduction equation.

Unfortunately, as the Draft now stands, the objective of improving fire safety in the County is lost due to the inclusion of scientifically unsupportable speculations about ecosystem health, historical fire regimes, and the efficacy of prescribed burning. These speculations are unnecessary distractions and do not contribute to satisfying the objectives set forth by the Board of Supervisors. In fact, if these speculations remain (as identified in our previous comments and those of Jon E. Keeley, Anne Fege, Wayne Spencer, Dan Silver, Kay Stewart, and Carrie Schneider), it is likely the County will be embroiled in unnecessary controversy and litigation for years to come.

To avoid these consequences, we would like to reiterate the solution several of us offered during the meeting last Thursday, August 14:

1. The Fuel Management Priorities as described in Section III of the Draft (with supporting maps) should be submitted to the Board to satisfy their May 14, 2008 request.

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2. Section I should be completely dropped from the report, including its attachement as a supplemental document.

3. Section II could be included in the report to the Board, but needs to restrict itself to a discussion of available fuel management tools. Statements that could be judged as assumptions or scientifically questionable need to be eliminated.

If these changes are not made and are incorporated into the Final Vegetation Management Report to the Board, the following consequences are likely:

1. **Legal challenges** to any actionable Board policy that is derived from the Vegetation Management Report.

2. **Claims made against the County by land conservancie**s to pay for the impacts of prescribed burning or other vegetation management activities on their properties. This would include control of invasive weeds, mitigation for habitat loss, and yearly vegetation maintenance.

3. **Compromising the integrity of the County's MSCP program** resulting in legal challenges to the program that could led to the reconciliation of new land development within the MSCP Area with the conservation and protection of covered species.

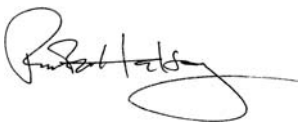
4. **Violating CEQA:** If the County is adopting any rule, policy, or plan element that would put identified protected species of plants and animals at risk on public lands under the County's administration, it must follow the CEQA process and develop a legally viable environmental analysis.

5. **Misrepresentation:** Legal challenges by scientists whose work have been misrepresented in the Report (please see addendum and attached letters).

6. **Active opposition** from many in the scientific and conservation communities to the County's approach to fire-risk mitigation.

We are hopeful the County will continue in its efforts to create a collaborative document that will help keep our communities and natural resources safe from the ravages of wildfire.

Sincerely,



Richard W. Halsey
Director

Addendum: Misinterpretation of Scientific Research

The second draft of the Vegetation Management Report seriously misinterpreted the conclusions of cited scientists. This resulted in leaving the impression that these scientists supported landscape-scale prescribed burns or believed that mixed-fuel-aged mosaics are either the natural condition or would be effective in preventing catastrophic wildfires. In fact, the cited scientists reached the exact opposite conclusions.

A similar problem occurred in the County's 2003 Mitigation Strategies for Reducing Wildland Fire Risks report to the Board. This is why the Board removed the report from the County's website in August of 2004.

1. Mensing, Michaelsen and Byrne (1999). On page 3, the second Draft reads,

"Mensing, Michaelsen and Byrne (1999) state that their charcoal core data indicates small fires created a fine grained mosaic however, large scale fires also occurred."

We have been in contact with Dr. Scott Mensing and he stated that this statement is incorrect and is a misinterpretation of the conclusions he and his colleagues reached. Their study of the charcoal record showed clear evidence of regular, very large natural fires over the past 560 years and did not provide any evidence whatsoever that *"small fires created a fine grain mosaic."* **See Attachment I, Letter of Explanation from Dr. Mensing.**

2. Witter and Taylor (2008). In quoting from Witter and Taylor (page 7), the second Draft utilizes statements that in isolation appear to support prescribed burning on a landscape-scale to create mixed-aged mosaics. Citing the *"concepts from the Santa Monica Mountains"* derived from Witter and Taylor, the Draft states,

"The proposal for these regions, the heart of the Chaparral and the source of many of the fires that do occur, is to apply prescribed fire as the main management tool."

This is exactly the opposite recommendation Witter and Taylor reached. What they said was,

"In the SMM (Santa Monica Mountains) National Recreation Area the concept of using prescribed burning to create a landscape mosaic of varying aged chaparral stand has been abandoned as a viable or effective fire management strategy." **Please see Attachment II, Letter of Explanation from Witter and Taylor.**

3. Conard and Weise (1998). In citing the fire management objectives of Conard and Weise (page 7), the Draft again fails to mention that the scientists concluded that

"landscape mosaics are impractical, unnecessary, and probably not particularly effective" in creating a strategic approach to fuel and fire management in chaparral.

4. Keeley (2004a). The second draft also suggested that Keeley (page 3) supports the notion that mixed-aged mosaics are the natural condition. The draft stated,

"The forest vegetation would have had a more open character due to the periodic fires thinning the understory (Keeley, et al, 2004; Minnich et al, 1995) and the chaparral and coastal sage scrub vegetation would have existed with a variety of age classes including some older areas but also very young (Keeley, 2004a; Minnich and Bahre, 1995)."

This is a complete misrepresentation of Dr. Keeley's conclusions. In fact, the publication cited (a summary of a larger paper) by the second Draft actually addressed how Native Americans through artificial burning had converted "a large part of California's coastal landscape from shrubland to grassland." This is the exact kind of ecological damage the County's proposed prescribed burning program will increase, the elimination of native shrublands and their conversion to non-native grasslands.

Keeley concluded by writing "Woody vegetation was likely the natural dominant cover over large stretches of landscape, including areas that today are grasslands dominated by non-native species."

Native Americans may have performed frequent prescribed burns in some areas in the past, but the ecological effects of managing land like that today would be very different because many new exotic invasive plant species are now present. Specifically, the exotic grasses that are creating extreme fire hazards through vegetation type-conversion across the western US are recent arrivals that have completely changed the rules of fire ecology in our native landscapes. The environmental impacts and fire hazards of type-converting native shrublands to exotic grasslands are now well documented.

By misinterpreting or ignoring contrary data, promoting hypotheses no longer supported by the scientific community, and failing to adequately address concerns raised by those who oppose the County's Vegetation management plan (while incorporating a significant number of comments from those who do), **the County's second Vegetation Management Report Draft is indefensible and makes the County vulnerable to expensive mitigation and litigation in the future.**

Cited References

Conard, S. G. and D. R. Weise. 1998. Management of fire regime, fuels and fire effects in southern California chaparral: lessons from the past and thoughts for the future. Pages 342-350 in T. L. Prudend and L. A. Brennan eds. Fire in ecosystems management: shifting the paradigm from suppression to prescription. Tall Timbers Fire Ecology Conference.

Keeley, J.E. 2004a. Native American impact on fire regimes. Fire Management Today 64: 15-16.

Mensing, S. A., J. Michaelsen, and R. Byrne. 1999. A 560-year record of Santa Ana fires reconstructed from charcoal deposited in the Santa Barbara Basin, California. Quaternary Research 51: 295-305.

Witter, M. and R. Taylor. 2008. A case study in fire management and conservation from the Santa Monica Mountains. In Halsey, R.W. ed. Fire, Chaparral and survival in Southern California Revised and Updated. Sunbelt Publications, El Cajon, CA pp 109-115.

Attachment I

Letter of Explanation from Dr. Scott Mensing regarding: Mensing, S. A., J. Michaelsen, and R. Byrne. 1999. A 560-year record of Santa Ana fires reconstructed from charcoal deposited in the Santa Barbara Basin, California. Quaternary Research 51: 295-305.

Whenever we use the term large fires we are referring to historic fires that burned > 20,000 ha – so it is important to point out that our focus was very large conflagrations.

"Wildland fires consume thousands of hectares annually throughout California. Periodically, large fires burn > 20,000 ha. In southern California, such fires typically occur in late summer and early fall during Santa Ana conditions, characterized by low relative humidity, high temperatures, and strong northeasterly winds (Davis and Michaelsen, 1995)." Pg 295

Our results clearly show that large fires have always been present in southern California (particularly Santa Barbara where our study was conducted) and that fire practices had no seeming effect on the occurrence of these very large fires.

"Large fires occur in every century, with the longest period between fires being 75 yr (Table 2). The record has been divided into three cultural periods representative of different attitudes toward fire. Period 1 (A.D. 1900–1985) represents the period of active fire suppression and historic fire records (Minnich, 1983; USFS Santa Barbara fire data). Period 2 (A.D. 1770–1900) encompasses the early period of Spanish and American occupation characterized by a policy of fire suppression, but with little means of enforcement (Barrett, 1935). Period 3 (A.D. 1425–1770) represents the Chumash period during which fires were purposely set along the coastal plain (Timbrook *et al.,* 1982). The average interval between large fires for each period is 23, 29, and 21 yr, respectively ..." Pg 301

Our conclusions clearly state that large fires have occurred naturally under all land use conditions.

"The charcoal record indicates that large fires are part of the natural fire regime in this region." Pg 303

"the average time between large fires has remained relatively consistent throughout the record, with no large differences between the three cultural periods. Large fires occurred in every century. Neither the Chumash practice of setting fires nor the modern practice of suppressing fires appears to control the periodic occurrence of conflagrations in the region." Pg 303

We speak of the potential for fine-grained vegetation mosaics in this paragraph in response to Minnich's argument, but the following sentence clearly points out that there is no evidence from our study to support the conclusion that such a mosaic prevented Santa Ana conflagrations. Any claim that we state that a fine-grained vegetation pattern was the only pattern or that this had any effect in preventing very large fires from burning under Santa Ana climatic conditions is a misinterpretation of our results and our published work.

"Background levels of both large and small charcoal suggest that small fires are also common. Fires at this scale may have created a fine-grained vegetation mosaic in portions of the landscape, as suggested by Minnich (1983). However, there is no evidence that such a mosaic acted to prevent Santa Ana conflagrations. Such fires would have converted large portions of the landscape to an even-age, coarse-grained structure, possibly contributing to the importance of seedling-obligate chaparral taxa, such as some species of *Adenostoma* and *Ceanothus* (Keeley, 1977)." Pg 303

We conclude that Santa Ana fires are instrumental in helping maintain chaparral and that more frequent fires could actually convert chaparral into grassland. Our pollen evidence does not show any increases in grasses over time, leading us to conclude that the large fires maintained chaparral over time.

"Frequent low-intensity fires should have favored grasses over chaparral and resulted in an expansion of grassland (Dodge, 1975; Timbrook *et al.*, 1982; Zedler *et al.*, 1983); however, the pollen record shows a decrease in grass pollen over time. In an environment where Santa Ana fires are common events, chaparral is maintained." Pg 304

In comparing our data with tree-ring based climate reconstructions we clearly conclude that climate exerts greater control on the fire regime than do land use practices.

"Climate exerts an important control over the fire regime by increasing potential fuel loads in wet periods and providing ideal conditions for large fires in dry periods." Pg 304

"Oscillations between wet and dry phases over this period appear to contribute to large fires on a regular basis, regardless of changes in land use practices." Pg 304

Our concluding paragraph leaves no doubt that even if there was a fine-grained vegetation pattern present, this did not prevent large fires when the climatic conditions were right. Our results provide evidence that fire suppression has not significantly altered the fire regime.

"Our reconstruction suggests that between A.D. 1425 and 1900 there were at least 20 large fires in this area. The average time between fires ranges between 20 and 30 yrs and is strongly controlled by precipitation patterns, with large fires generally occurring at the end of wet phases and the beginning of droughts. If small fires created a fine-grained vegetation pattern on the landscape, this does not appear to have prevented periodic large fires. Changes in land use practices associated with the arrival of the Spanish and the introduction of fire suppression also have not significantly altered the fire regime. Fire suppression may contribute to large fires by allowing more fuel accumulation; however, fire suppression alone does not create this type of fire. The fuel and weather conditions necessary for large fires were present prior to fire suppression and are a natural part of chaparral ecology in a Mediterranean climate." Pg 304

Dr. Scott Mensing
8/19/08

Attachment II

Letter of Explanation from Witter and Taylor regarding: Witter, M. and R. Taylor. 2008. A case study in fire management and conservation from the Santa Monica Mountains. In Halsey, R.W. ed. Fire, Chaparral and survival in Southern California Revised and Updated. Sunbelt Publications, El Cajon, CA pp 109-115.

In our Fire Management Plan (FMP) we specifically rejected landscape level mosaic burning as being logistically impossible to implement, unacceptably damaging to resource values in the native plant communities to be treated, and not able to produce demonstrable reductions in wildfire hazards.

The FMP model for selecting strategic fuel modification locations was a PRELIMINARY SUGGESTION on how to approach the problem. The use of vegetation type, age of vegetation, and slope was based on our Management Officer's recommendations. This was never meant to be the final word on strategic fuel modification locations. We also had a decision tree to assess the long term utility and impacts of a specific project.

Strategic fuel modifications are problematic in general because they require a lot of assumptions about where fires will start and which way they will spread in order to conclude that they would have much value. By definition they are well away from both the assets they are supposed to protect and the assumed ignition locations of the future wildfires they are supposed to help contain. Wildfire spreads very quickly and fuel modifications are only useful if firefighters have time to go there and use them for tactical advantage to limit fire spread.

To have any relevance for fire suppression, strategic fuel modifications need to work in extreme fire weather, which is especially difficult. In fact most strategic fuel modification projects subjected to the kind of rigorous analysis we propose would fail to demonstrate much real reduction in fire hazard to specific assets at risk. It is hard to demonstrate that strategic fuel modification projects actually work as intended in the kind of extreme fire weather that burns most of our area.

By contrast, well-designed defensible space around a structure will confer demonstrable tactical advantages to firefighters in defending that structure no matter where the fire starts or comes from. No specific assumptions and imaginative storytelling about fire spread are necessary to demonstrate their value.

Dr. Marti Witter
Dr. Robert Taylor
8/18/08