



Conservation Biology Institute San Diego Office

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Planning Commission
County of San Diego
Attn: Cheryl Jones
5201 Ruffin Road, Suite B
San Diego, CA 92123

January 5, 2009

Subject: Vegetation Management Report, Fourth Draft, 12/23/08

Dear Planning Commissioners:

The Conservation Biology Institute is a nonprofit research and planning institution that provides scientific guidance to help jurisdictions like the County of San Diego in their efforts to conserve and manage lands for natural resources. I commented on a previous draft of this vegetation management report, and I participated in the two workshops involving fire scientists and practitioners that were convened by the Planning Commission to develop consensus recommendations concerning vegetation management.

Although this fourth draft is an improvement over previous drafts, it reflects partial and piece-meal updating based on various submitted comments and the workshop discussions rather than the comprehensive re-write that is necessary. This results in the report being internally inconsistent, confusing, and often self-contradictory. Moreover, despite scientific facts and logic presented to the county by numerous individuals, the report continues to perpetuate disproved myths about fires and fire management in southern California. It fails to support or justify most recommendations, assumptions, or conclusions with the large body of highly relevant scientific information that is available, much of it previously submitted to the county for consideration.

Although the report makes an attempt to summarize consensus points from the workshops, this summary is incomplete, in some cases inaccurate, and generally misleading concerning the most prominent and important points of consensus. Most



importantly, those points on which there was strong consensus are not adequately integrated into report sections and recommendations, which often contradict the consensus points.

I have attached the draft report with comments inserted using “track changes.” Below I summarize some key concerns.

Areas of Consensus

Some of the most important points of consensus that emerged from scientists and fire practitioners have been omitted, or are obscured by how the summary is presented.

- One of the strongest points of consensus, which was raised repeatedly by many participants during the workshops, was that *a fire management strategy must be comprehensive and integrated*, considering how all the available tools work together to reduce risks to homes and natural resources. Vegetation management, on its own or considered in isolation of other factors, will not effectively reduce fire risks, but must be part of an integrated strategy that also addresses urban/suburban fuels (e.g., landscaping, fences, decking, woodpiles), retrofitting of homes to reduce ember intrusion (e.g., attic vents), land-use planning, education, and ignition reduction. It was agreed at the workshop that this “whole equation” or “integrated solution” consensus point would be emphasized in the introduction of the report, but it is not.
- A second strong consensus recommendation, again voiced repeatedly by workshop participants, was that *the highest priority, “no regrets” locations for vegetation management actions must be at the WUI (near existing homes in high-risk areas)*. Although we did not agree to what the full scope of “strategic” placement may entail (this requires more analysis), there was I believe universal agreement that placing treatments near homes, where they provide firefighters with defensible space and anchor points for backfires, has the highest probability of reducing home loss. These locations should therefore be treated first, while approaches for delineating other strategic treatment locations (e.g., firebreaks that may limit “flanking fires”) are fleshed out.

Contrary to the consensus summary in the report, there was *not* consensus on the following points:

- *Using Baja Vegetation to Establish Reference Conditions for San Diego County*. This concept was raised by a single participant at the workshops, but was considered by most participants to be impractical, irrelevant, and potentially contrary to local fire-management goals in light of site-specific differences, drought, climate change, and other factors.
- *Emphasis on Coastal Sage Scrub (CSS) as Sensitive to High Fire Frequency*. Although participants did agree that CSS is susceptible to degradation by overly frequent fires, we also agreed that focusing attention on this single vegetation



community was inappropriate because it suggests that other communities, especially chaparral, are not also sensitive. Chaparral is *equally or potentially even more susceptible to ecological degradation and invasion by weedy annual plants with repeated fire* than CSS. Type conversion of chaparral to weedy conditions is happening on a large scale in San Diego County, increasing the potential frequency of fires even more due to the lengthened fire season and “flashy” fuels created by these weedy plants.

- “*Limited Knowledge*” concerning *Consequences of Large-scale Treatments*. Contrary to this statement in “Consensus Issue 4,” there is actually abundant information in the peer-reviewed scientific literature and many other sources (including the personal experiences of most participants in the workshops) concerning the adverse consequences of vegetation management treatments of the types being considered. Many examples were discussed during the workshops. Moreover, the County has been provided with many pertinent papers, abstracts, summaries, and citations of this literature over the months, almost none of which are cited or even acknowledge in the report. This consistent dismissal of the most pertinent scientific literature is very troubling, and was the primary motivation for scheduling the workshops. It is especially ironic that the second workshop was scheduled during, and in the same venue as, the annual conference of the California Association of Fire Ecology (CAFÉ). Numerous talks and posters were presented at this important 3-day conference on this very issue!

Although some of the consensus points are captured in the summary, the way they are characterized is often inaccurate, unclear, or not particularly useful (see comments inserted in the draft report for details.) For example:

- *Addressing the Ember Issue*. There is strong consensus (and lots of forensic evidence) that most homes lost during recent firestorms were ignited by flying embers, *especially from urban fuels* (e.g., palm fronds, other houses) rather than convective or radiant heat from wildland fuels. The way this consensus item (#8) is presented in the report completely misses the most important point by emphasizing scientific uncertainties about the complex processes of ember production and transmission. What we do know is that the most effective strategy for reducing home losses due to embers is to “harden” houses against ember entry using boxed eaves, attic vents, etc. Although it is true we have little quantitative data on costs and benefits of alternative actions, I believe there was general consensus that every dollar spent on attic vents would likely save many more homes than equal dollars spent on vegetation management. Fire practitioners also pointed out repeatedly that urban fuels, such as palm trees, are amongst the biggest ember culprits and need to be addressed.
- *Strategic Placement of Vegetation Treatments*. Yes, there was consensus that the placement and nature of fuels treatments must be planned very strategically, because random, scattered, or landscape-level treatments are simply not effective, economical, or even possible. All participants agree that strategic placement must



include, at least, “no regrets” treatments *near homes*, where all agree the greatest reduction in home ignition risks will be attained. We did *not* agree on what other sorts of locations, especially far from homes, may also significantly reduce risks.

Use of Science

As mentioned above, the failure to appreciate and apply existing scientific knowledge in this report has been troubling. This fourth draft continues to use non-scientific phrases and opinions to justify actions not supported by best available science. Here are just two examples of concepts that should be edited out of the report and replaced with more objective and defensible ones (others are in my comments on the report itself):

- “*Vegetation health.*” This phrase is used repeatedly in contexts implying that shrubland communities “need to burn” for their “health.” As participants at the workshops have repeatedly pointed out, this is non-scientific, untrue, and leads to indefensible recommendations.
- “*Invading Chaparral shrubs.*” This phrase is used to describe the increase in *Ceanothus* shrubs in the Cuyamacas following the burning of forest cover in the Cedar fire, to justify shrub removal and tree planting. *Ceanothus* (and other chaparral shrubs) are native plants that naturally increase following forest fires as a step in a natural process called ecological succession. *Ceanothus* plays an especially important role in recovering the burned landscape by fixing nitrogen in the soil and minimizing erosion. There is abundant literature on post-fire succession and restoration actions that should be consulted, rather than relying on personal opinion. Moreover, workshop participants pointed out that removing shrubs and planting trees may be futile in the face of extended drought, climate change, and other factors; and that attempting to remove the shrubs (at great cost) may only increase weeds.

In several places the report cites MSCP documents as justification for using fire to “restore vegetation health” or otherwise benefit covered MSCP species and communities. The MSCP documents being cited were produced before abundant new scientific information emerged that is contradictory to these assumptions. The MSCP management and monitoring documents must be updated in keeping with the NCCP Act requirement to use adaptive management to revise management recommendations based on new information. Citing outdated plan documents to justify actions not supported by scientific fact and logic is not acceptable.

Strategic Fire-Management Approaches

Statements in the report that “scientists did not recommend any theoretical models for strategic planning” are inaccurate or at least misleading. Some participants at the workshop tried to steer the discussions toward a fruitful discussion of how to design a systematic, objective process for identifying and prioritizing strategic treatment locations and actions. We also attempted to discuss a wide array of existing scientific information,



models, and decision-support tools to assist with this process. Unfortunately, those discussions were not facilitated toward fruitful conclusions.

The Santa Monica Mountains Fire Management Plan, which is mentioned in the report, is but one highly relevant and useful example of an objective process for identifying strategic vegetation management actions. Unfortunately, the description of that process in the report is not very informative or accurate. For one thing, the Santa Monica Mountains plan most certainly does *not* recommend prescribed fire in shrubland communities to “provide resource enhancement.”

I believe there is still room for designing a strong, objective, approach to strategic vegetation management for San Diego County. Perhaps such a process can be applied in preparing plans within each of the designated “Priority Areas” (see below).

The Nine “Priority Areas”

There was no consensus in the workshops concerning designation of the nine “priority areas” delineated by FAST, mostly because so little information was provided on how these were developed, and because the map delineating them was so broad-brush as to not provide a meaningful planning tool. The descriptions of each area justifying the priority status are very gross and contain numerous unsupportable statements. See comments in the report for examples.

The scoring system for ranking these priority areas, as described in Section III of the report, does have merit, but I noted at least one major flaw in the system that appears to reflect the unjustified bias throughout the report that shrubland vegetation “needs to burn” to be “healthy” (Criterion #7-- Ecological Sensitivity) and that older shrublands are “unhealthy” or “not viable.” Ecological sensitivity is defined in the report as the “need of habitats and species requiring fuel treatment for manipulation of the fire cycle in order to maintain ecological values.” An area received a high score (3) for Ecological Sensitivity if it supports, for example, threatened or endangered species or sensitive vegetation types. It is unclear from the description of this criterion whether “manipulation of the fire cycle” means “speeding up” or “slowing down” the fire cycle, but since a high score increases the priority ranking of an area to receive vegetation manipulations (e.g., prescribed fire) it seems to imply that the intent is to add more fire to areas with the most sensitive resources. In most cases, this is just the opposite of what should occur. For example, the “I-8 Laguna Fire” priority area received the highest score of 3, apparently because FAST members believe that this “large swath” of shrublands that hasn’t burned since 1970 “needs to burn” to be “healthy,” which is not true. Thus, the fact that this area supports a diversity of sensitive biological resources seems to be used as one more justification for introducing more (prescribed) fire in an area that should actually be protected from disturbance as it recovers to rare, “old-growth” status. This criterion should be removed or altered in how it is applied, particularly in light of the very coarse scale at which these priority areas are mapped. Scoring for priorities to reduce risks to human communities should be completely separated from scoring for ecological values so that cost-benefit



tradeoffs are clear to decision makers. Mixing these issues in one priority score only muddies the decision-making process.

Effects and Effectiveness of Treatments

The descriptions of costs and benefits of the various types of vegetation treatments in the report are also rather cursory, biased toward logistic rather than effectiveness or ecological concerns, and do not reflect numerous points raised by workshop participants. For example, there was consensus amongst ecologists as well as fire practitioners that burning outside the natural fire season has bad ecological consequences, although it is often necessary for prescribed fires to be scheduled outside this season for safety reasons. Likewise, there was general consensus that grazing by livestock, such as goats, is *not* as benign as implied in the report. Moreover, studies were cited during the workshop that found grazing by goats to be costly and not particularly effective at reducing fire risks.

Conclusions

I hope that the Planning Commission will help the Board of Supervisors understand that protecting human lives and property, and protecting what remains of our county's incomparable natural heritage, will require a more thoughtful, systematic, and science-based approach to planning than has thus far been used. I remain hopeful that there will be further opportunities for scientists and fire practitioners to work together to design such an approach for the citizens of San Diego County.

Sincerely,

A handwritten signature in blue ink that reads "Wayne D. Spencer". The signature is fluid and cursive, with the first and last names being more prominent.

Dr. Wayne D. Spencer
Senior Conservation Biologist

cc: Chandra Wallar, LUEG
Eric Gibson, DPLU
Tom Oberbauer, DPLU
Jeff Murphy, DPLU