CALIFORNIA CHAPARRAL INSTITUTE
...the voice of the chaparral

California Native Plant Society

October 27, 2015

California Board of Forestry and Fire Protection
Attn: Edith Hannigan, Board Analyst
Email: VegetationTreatment@bof.ca.gov

Re: Vegetation Treatment Program (VTP)

Dear Ms. Hannigan and Board Members,

We have been contributing to the development of a new Vegetation Management Program since 2005.

While we believe the current draft being developed is a vast improvement over previous attempts, it still contains significant contradictions and scientifically unsupportable statements that compromise the achievement of our common goal: protecting life, property, and the natural environment from wildland fire.

Thank you for the opportunity to provide the following comments and recommendations.

1. Ecological Restoration/resource goals
There are very few ecological communities or resource values that can be improved with the sorts of treatments the current Draft EIR proposes, with the exception of some mid-elevation (under 7,000 feet), mixed coniferous and pine forests where past logging, over grazing, and fire suppression have had impacts and altered ecological conditions outside the natural range of variability. Solid scientific justification, by experts in ecology and restoration, must be required for any project purporting to further natural resource goals.

2. Acres Treated rather than need
Project justification still appears to be based more on acreage quotas rather than actual need. The Draft EIR should ensure a "project justification process" that starts with a clear need to reduce risks, rather than the attainment of a certain number of treated acres. The 2013 San Felipe Valley prescribed burn provides an example of why this issue needs to be clearly addressed. Not only were the justifications for the project invalid, but the ecological damage caused by the burn's escape was significant. Details on this escaped burn can be found on the Chaparral Institute's website here:
http://www.californiachaparral.org/threatstochaparral/dprescribedfire.html

3. Citizen Oversight lacking within the WUI
Although the Draft EIR attempts to cover this issue with Objective #5 and indicating that the "Unit/Contract County CEQA Coordinators would seek public input and engage with stakeholders," such engagement is not spelled out other than saying the local Units will be doing it. What will the exact role be for interested stakeholders? Will they be able to see how their influence is reflected in the final plan? After the plan is finalized, is there a mechanism that will allow stakeholders to provide additional input or to object?

The Draft EIR also states that, "Each vegetation treatment project proposed would require the preparation of a Project Scale Analysis (PSA) that would document the project's consistency with the requirements and findings of this Program EIR."

However, we could not find any opportunity for the public at large to review these PSAs unless the project falls outside the 1.5 mile wide WUI. The Draft EIR dismisses concerns that this is too large an area because Cal Fire staff heard USFS representatives on the Cleveland National Forest suggested a 6-mile-wide WUI buffer (4-30). We consider this inadequate support for one of the fundamental principles that is apparently guiding the document.

The explanation as to why the 1.5-mile-wide WUI is necessary is based on the approximate distance embers can be carried from the fire front (4-29). We suggest the Board refer to USFS scientist Jack Cohen's work. His conclusions do not support such a rationale.

4. Public Meetings for projects outside the WUI?
The Draft PEIR says the "project proponent" will provide a public meeting for projects outside the WUI. What role will Cal Fire play in making sure a meeting will occur, how it will be organized, and how comments made during the public meeting will be (or not) considered. The document also does not make clear how much State Responsibility Area is actually outside the 1.5 mile wide WUI that would require a public meeting (2-46).

To satisfy the goal of full transparency, CalFire needs to maintain a **CEQA type website that lists the proposed projects** in each Unit, a general description, and the date of any stakeholder meeting, including those projects on state parks/CA Fish and Wildlife lands (2-46).

5. High-severity fire - all forests are not the same
One of the Draft EIR's key program objectives is to reduce the potential for high-severity fire within "appropriate vegetation types" (2-8). The document appears to mean "many forests in California" and only cites Thomas Bonnicksen's political testimony to Congress in 2003 to support this objective.

The document states,

"Coniferous forests in California have long been subject to frequent low-intensity fires, which played an important role in reducing hazardous fuels and maintaining ecosystem processes." (2-9)

The Draft EIR makes no distinctions for forest types. Presumably projects could thin lodgepole pine forests that do not have unnaturally high vegetation build-ups because they have natural fire return intervals over 100 years.

6. Contradictions concerning the chaparral fire regime

Although the Draft EIR recognizes the chaparral's natural fire regime as being characterized by infrequent, high-intensity fires, the author's later contradict themselves.

For example, the document first correctly indicates that chaparral species are lost at short fire return intervals (immaturity risk), then reverses itself by incorrectly stating that chaparral is resilient to short fire return intervals.

"*Over time, instances of the loss or significant reduction of species that were victims of immaturity risk began to accumulate. In addition, the study of chaparral ecosystems began to reveal that chaparral,* ***in addition to being resilient to fire at shorter intervals****, was also resilient to fire at long intervals (Sampson, 1944; Horton and Kraebel, 1955).*" (4-12)

Later in the document, after again recognizing the problems with short fire return intervals in chaparral, the document suggests that science may yet find that short fire returns are not a problem by misrepresenting Keith Lombardo's research (2009).

"... chaparral does not need more fire, it needs less (Safford and Van de Water, 2014). However, new scientific information could modify that conclusion in the future as it becomes available. For example tree-ring data collected by Lombardo et al. (2009) in bigcone Douglas-fir stands surrounded by chaparral indicate that both extensive and ***smaller fires were present in historical time****."*(4-14)

We are attaching the statement from Dr. Lombardo that we also submitted during the August, 2015, Board of Forestry meeting that makes clear his research was being misrepresented. His research does NOT suggest that short fire return intervals in chaparral were typical in historical time.

7. Erroneous Ecological Restoration treatments for northern chaparral

The Draft EIR falsely claims that chaparral in northern California is different enough from the south that the *"****ecological rationale*** *for fuel treatments"* can be used (4-15).

There is NO research that supports this claim. In fact, a study just released by the Joint

Fire Science Program indicates that there are indeed ecological trade-offs in reducing chaparral fire hazard in northern California (Wilkin, et al. 2015). Clearance of chaparral has also been recently suspected of increasing the spread of Lyme disease in vertebrates (Newman et al. 2015).

The Draft EIR also appears to be assuming that climate change will not modify northern California in a way that will replicate increased fire patterns found in southern California chaparral. This is in opposition to USFS research. Safford and Van de Water (2014) suggest chaparral type conversion is spreading northward into the northern Santa Lucia Range and may likely continue to spread as climate change and population growth increase the potential for ignitions.

8. Biased Case Studies/Faulty Generalization

It is critical that the Draft EIR does not ignore contrary data. The current draft does so by selecting only affirming case studies, rather than objective research, to prove a particular point.

For example, using the one-year-old prescribed burn conducted at Poppet Flats to demonstrate control of the 2006 Esperanza Fire (2-55) illustrates a failure to recognize that it is not practical to establish and maintain black ground around every vulnerable community.

The Esperanza Fire was able to be controlled at the referenced location. However, vegetation grows back, and it did in the Esperanza area, leading to the 2013 Silver Fire that re-burned a huge portion of the Esperanza scar (destroying 24 homes in the process).

Additional details concerning the 2013 reburn can be found here:
http://californiachaparral.org/wordpress1/2013/08/12/silver-fire-defies-popular-beliefs-about-wildfire/

The Draft EIR must use research that examines the entire picture and how *all the fuel treatments* impact fire spread. Anecdotal stories and cherry picking data lead to faulty generalizations - a fallacy of defective induction. The following research offers a more comprehensive approach.

Home Loss

Syphard, AD, JE Keeley, A Bar Massada, TJ Brennan, VC Radeloff. 2012. Housing arragement and location determine the likelihood of housing loss due to wildfire. PLoS ONE 7(3): e33954. doi: 10.1371/journal.pone.0033954

Rather than examining a narrow set of case studies, Syphard and her coauthors gathered data on 700,000 addresses in the Santa Monica Mountains and part of San Diego County. They then mapped the structures that had burned in those areas between 2001 and 2010, a time of devastating wildfires in the region.

The authors found:
- Nearby vegetation was not a big factor in home destruction.
- Grasses that often sprout in areas cleared of native habitat like chaparral could be more of a fire hazard than the shrubs.
-Geography is most important — where is the house located and where are houses placed on the landscape.

Defensible Space
Syphard, A.D., T.J. Brennan, and J.E. Keeley. 2014. The role of defensible space for residential structure protection during wildfires. International Journal of Wildland Fire 23:1165-1175.

The authors found:
- The most effective measures to reduce structure losses are to "reduce the percentage of woody cover up to 40% immediately adjacent to the structure and to ensure that vegetation does not overhang or touch the structure."
- There is no additional structure protection provided by clearing beyond 100 feet, even on steep slopes, and the most important treatment zone is from 16-58 feet.
- The amount of cover reduced is as important as the fuel modification distance; however complete removal of cover is not necessary. The term "clearance" should be replaced with "fuel modification" to emphasize this fact.

Fuel Breaks
Syphard, A.D., J.E. Keeley, T.J. Brennan. 2011. Comparing fuel breaks across southern California national forests. Forest Ecology and Management 261: 2038-2048.

The authors found:
- A substantial number of fuel breaks are never intersected by fires.
- Firefighter access — to fuel breaks for backfires and other control measures — was the most important determinant of their effectiveness.
- Among the forests studied, only 22% to 47% of fires stopped at fuel breaks, even when firefighters could access them.

9. Green House Gases
The Draft EIR fails to establish a reasonable/accurate way to measure greenhouse gas (GHG) emissions for treatment projects. The assumption that treated sites would create less GHG emissions than if burned in a wildfire, and thus sequestering carbon (meaning projects have no impact), is questionable.

Instead, the VTP needs to use a 100-year timeline for greenhouse gas (GHG) emissions. We recommend a 100-year timeline in part because carbon offset projects by groups such as the Climate Action Reserve run on 100-year timelines, and because it is our understanding that CalFire and the Board of Forestry are partially responsible for

California's carbon sequestration efforts. To us it makes sense to calculate the GHG impacts of the VTP using the same metrics that are used to calculate carbon sequestration by other projects overseen by CalFire.

An example in how a 100-year timeline is used follows.

- On the project impact side, the total GHG emissions are calculated from a project over a 100-year time span. To determine the impact on a site that is repeatedly treated every 10 years, the sum of the total GHG emissions for 100 years of treatments (10 sequential vegetation treatments) is calculated.

- On the natural impact side, GHG emissions are calculated from fires, using the calculated "natural" fire return interval, and again summed over 100 years. If there is a 50 year fire return interval for a project site, emissions are calculated as if the site burned twice in the 100 year period. The sum of the GHG emissions from the two fires is calculated.

- The two sets of emissions are compared, and the difference between them is the cumulative GHG impact. This method provides a fairly simple standard for quantitative calculations that fits in with what the Board is starting to do with reforestation for carbon sequestration. By including treatment repetition times and fire return intervals and scaling up across the entire VTP area, the Board can calculate the real impacts of the VTP.

10. Climate change and species migration

From the available science, it appears that California's plants adapted to climate change during the ice ages by migrating (Lancaster, L. T., and K. M. Kay. 2013. Origin and Diversification of the California Flora: Re-Examining Classic Hypotheses with Molecular Phylogenies. Evolution 67:1041-1054), and there is no reason to think that plants will not respond to future climate change by continuing to migrate, although their migration routes are massively limited by development, agriculture, and silviculture.

CalFire, through the VTP, quite possibly controls the outcome of migrations in the few areas that remain open. Both fires and especially clearances in areas critical to successful migration could exacerbate the loss of sensitive species by killing individuals that attempt to establish in treatment areas. To the degree that the data exist, critical migration corridors need to be identified, and impacts of the VTP upon these areas need to be analyzed and mitigated as necessary.

Our understanding is that plant migration was analyzed in the EIR for the Desert Renewable Energy Conservation Plan (DRECP), and we strongly suggest that impacts on migration corridors be studied as part of the next VTP EIR.

Other Points Needing Clarification

- Condition Class 3 (4-39) needs to clearly indicate it can meant either not enough fire or too much. Additionally, the fuel rank of 3 needs to be detailed out to include "too much fire."
- Climate change/carbon sequestration is only related project to emissions. It needs to reference carbon sequestration balances.
- There is no definition for old-growth chaparral. (4-16) Fifty-year-old stands and above qualify.
- The WUI definition needs to be based on science, not agency opinions.
- The structure of the public meetings needs to be clarified.
- "Critical infrastructure" needs to be defined.
- Different forest types need to be recognized.
- The Draft EIR fire modeling shows fuel breaks on every ridgeline without incorporating the science that clearly shows this is not an effective strategy and causes unnecessary damage to plant communities.

What we wrote in our 2005 comment letter on the draft VTP then being considered still applies to the current draft.

> If a thorough analysis of the true costs of various fuel modification treatments is performed (one has never been done), we believe concentrating efforts directly where loss of life and property can occur will produce the greatest and most effective benefit.

We are hopeful such an analysis will also be imbedded in the current effort.

Sincerely,

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