



September 25, 2015

David Lackie, Supervising Planner  
Santa Barbara County  
Planning and Development  
123 East Anapamu Street  
Santa Barbara, CA 93101

**Re: Response to the comment letter from the Santa Barbara County Fish and Wildlife Commission regarding the Draft EIR for the Gaviota Coast Plan Update.**

Dear Mr. Lackie,

We would like to submit the following as an addendum to our September 4, 2015 comment letter on the Draft EIR for the Gaviota Coast Plan Update.

In our original letter, we expressed our dismay over the misrepresentation of science in a comment letter on the Gaviota Coast Plan Update DEIR authored by the Santa Barbara Fish and Wildlife Commission. Considering the importance of using the most current, best available science in shaping public policy, we feel a more thorough review of the Commission's comments is necessary.

The discouraging aspect of the Commission's letter is that the Commission was provided the latest science via testimony and written documents during a public hearing held on November 20, 2014. The Commission's subsequent refusal to recognize this research is documented in a recent publication (DellaSala and Hanson 2015) as described in our previous letter.

**1. Outdated References**

The fundamental problem with the statements and conclusions made in the Commission's letter is that they are based on either outdated literature or anecdotal evidence. Most of the cited science/land management references are more than 50-years-old. Our understanding of the natural environment has advanced considerably over the last half century.

## 2. Misapplication of Forest Science

The Commission continually misapplies forestry science to shrubland plant communities because it claims “*the same principles apply to a chaparral forest, which also has trees of mixed species.*”

The physical structure, ecology, and fire regimes of shrublands and forests are significantly different. They are not comparable.

The Commission uses this misapplication to promote prescribed burning in chaparral to “*achieve the goal of good biodiversity and maintain a healthy eco-system while reducing fuel loads that fuel catastrophic wildfires,*” and to eliminate “*unnatural conditions of dense fuel [chaparral]*” that has presumably been caused by past fire suppression.

Keeley (2002) addressed such misapplications in his comprehensive review of chaparral fire management. He wrote,

Fire management of California shrublands has been heavily influenced by policies designed for coniferous forests, however, fire suppression has not effectively excluded fire from chaparral and coastal sage scrub landscapes and catastrophic wildfires are not the result of unnatural fuel accumulation. There is no evidence that prescribed burning in these shrublands provides any resource benefit and in some areas may negatively impact shrublands by increasing fire frequency.

Research over the past two decades by multiple scientists has rejected the notion that fire suppression has caused unnatural fuel accumulation in chaparral, leading to large, high-intensity wildfires. Such fires reflect the natural fire regime for the chaparral (Conard, S.G. and Weise, D.R. 1998, Mensing et al. 1999, Keeley et al. 1999, Keeley and Zedler 2009, Lombardo et al. 2009).

To suggest, as the Commission does, that chaparral is supposed to burn frequently (every 10-15 years) and that the natural fire regime for chaparral includes “frequent, cooler burning fires,” as is the case for some mixed conifer forests, is contrary to established science (Steel et al. 2015). Considering the physical structure and ecology of native California shrublands, such low intensity fires are impossible (Keeley et al. 2012).

The natural fire return interval in California chaparral is between 30 to 130 years plus. Any shorter interval can seriously compromise or eliminate chaparral plant communities (Zedler et al. 1983, Jacobsen et al. 2004, Haidinger and Keeley 1993, Keeley 2005).

## 3. Frequent Fire Impacts - Contradictory Perceptions

The Commission is confused over the impact of increasing fire frequencies on the chaparral plant community.

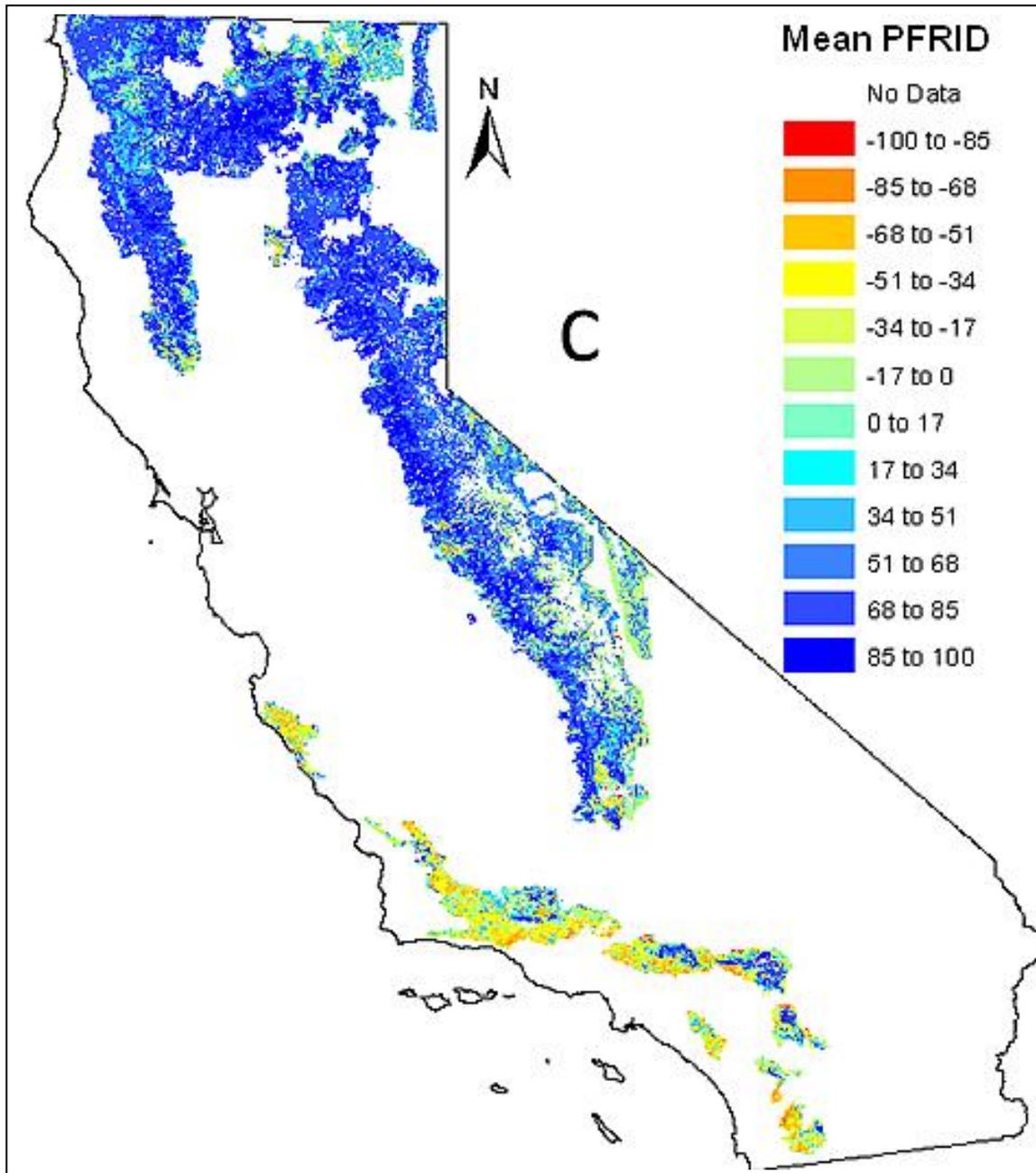
To support its claim that chaparral should burn more frequently, the Commission cited theorized Native American burning practices. In doing so, they acknowledged that Native Americans were able “*to effect type conversion of chaparral/coastal sage scrub to grassland*” through “*repeated burning.*” The Commission did not seem to make the connection, however, that eliminating a plant community through repeated burning is not an effective way to improve the community’s ecological health.

Despite recognizing the negative impact of repeated burning on chaparral in the past, the Commission refuses to acknowledge the threat remains today. In an attempt to reject the November, 2014 scientific testimony on the subject, they wrote, “*In all the Commission’s experiences, we have not found Chaparral areas in our county to convert to weeds after a wildfire or prescribed burn.*”

Contrary to the Commission’s perspective, native shrublands in areas surrounding the San Diego, Los Angeles, and Santa Barbara metropolitan areas have some of the most negative fire return interval departures in California, meaning they are experiencing more fire than they have historically, threatening the chaparral’s resilience and potentially leading to type conversion (Safford and Van de Water 2014)

Chaparral loss due to increasing fire frequencies appears to be spreading into the northern Santa Lucia Range and may likely continue to spread as climate change and population growth increase the potential for ignitions (Figure 1).

Addressing such change poses difficult challenges to agencies responsible for planning.



**Figure 1.** Most chaparral in California is threatened by too much fire, as shown by the map's color variations representing the fire return interval departure (PFRID) percentages for national forest lands in California. Note the color differences between the southern California national forests, which are dominated by chaparral (yellows), and the conifer-dominated forests in the Sierra Nevada (blues). The warm colors identify areas where the current fire return interval is shorter than that before European settlement (negative PFRID percentages). Cool colors represent current fire return intervals that are longer than those before European settlement (positive PFRID percentages). From Safford and Van de Water (2014).

#### 4. Personal Opinion vs. Science

One of most unfortunate claims by the Commission is that it has conducted its own studies concerning the impact of frequent fires on native ecosystems. The Commission wrote, “*We have found that Smaller, more frequent fires in the event range of ten to fifteen years, creates a more natural condition while preventing fuel loading that causes large, expensive, catastrophic wildfires...*”

We are unaware of any research conducted or published by the Commission on this topic. This is especially concerning since the Commission is implying that its purported research contradicts established science. As Moritz et al. 2004 concluded,

Fire frequency analysis of several hundred wildfires over a broad expanse of California shrublands reveals that there is generally not, as is commonly assumed, a strong relationship between fuel age and fire probabilities.

#### 5. Science-based Vegetation Management vs. Mosaic Patterns

Vegetation management is an important component of the fire risk reduction equation. However, it needs to be conducted in a manner that is consistent with the most recent research.

The Commission’s statements and its references to testimony offered during the 1960’s and ‘70’s promotes prescribed burning for the purpose of creating “*mosaic patterns*” on the chaparral dominated landscape. This position does not reflect the conclusions made by the US Forest Service, the National Park Service, and the fire science community over the past decade that such an approach is an ineffective fire management tool.

The National Park Service:

In the last forty years fire managers have promoted the idea that prescribed fire is necessary to protect ecosystems and communities by restoring fire’s natural role in the environment to thin forest stands and to reduce hazardous fuels. This is true for western forests where the natural fire regime was frequent, low intensity surface fires started by lightning... However, this is not true for the shrubland dominated ecosystems of southern California and the Santa Monica Mountains (SMMNRA 2015).

US Forest Service:

For these purposes, landscape mosaics are impractical, unnecessary, and probably not particularly effective. We basically recommend shifting the management focus away from pure mosaic burning toward development (and rejuvenation) of strategically placed fuel management zones (Conard and Weise 1998).

We commend Santa Barbara County in its efforts to create sound land management plans, such as the Gaviota Coast Plan and the Goleta Valley Community Plan, that will protect and enhance both the natural environment and surrounding communities. Ensuring that the chaparral is managed with the best available, most current science will play an important role in the long term success of such plans.

Sincerely,



Director  
California Chaparral Institute  
[www.californiachaparral.org](http://www.californiachaparral.org)

### **Citations**

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