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Hon. Janet Wolf, Chair
Santa Barbara County Board of Supervisors
105 East Anapamu Street, Fourth Floor
Santa Barbara, CA 93101

Subject: Eastern Goleta Valley Community Plan

Dear Chair Wolf and Honorable Members of the Board:

This letter is being submitted at the request of clients who own ranches that would be affected by elements of the Eastern Goleta Valley Community Plan, specifically language added by Mitigation Measure BIO-1 identified in the EIR. I understand that there has been some disagreement regarding the potential impacts of Mitigation Measure BIO-1, which addresses "Impacts on Sensitive Vegetation Communities" (MM BIO-1). Specifically, I understand that there has been substantial discussion regarding the appropriateness and advisability of including chaparral in this measure and that there is disagreement regarding controlled burning of chaparral and other techniques to reduce fire risk. This letter provides some context to this discussion.

My background is as an environmental scientist, biologist, and consultant. I have a bachelor's degree from the University of California at Santa Barbara in Ecology and Evolution. I have been working as a biological consultant, including on many projects in the County of Santa Barbara (County), for over 20 years. Most of these projects are subject to the California Environmental Quality Act (CEQA) and include both development and habitat restoration projects. My experience includes conducting surveys, vegetation mapping, and preparing impact analyses for a variety of southern California habitats including chaparral, oak woodland, and riparian areas. I have a strong understanding of these habitats, their extent, challenges, and limitations in the County. In addition, I have extensive understanding of issues related to the impacts and benefits related to fires in southern California habitats including chaparral. I have provided expert opinion for litigation regarding the ecological impacts of fire in California in conifer-dominated systems, chaparral, coast live oak woodland, riparian habitats, coastal scrub, and other vegetation types.

For the purposes of this letter, I have provided a brief summary on three topics:

- Should chaparral be classified as Environmentally Sensitive Habitat (ESH) based on the vulnerability of the habitat and considering categories of ESH developed by the County?
- Are there unintended negative consequences of designating the vast expanse of chaparral in the County as ESH?
- Are there other CEQA considerations that should have been considered as part of Mitigation Measure BIO-1 but were not?

In the discussion that follows, I attempt to answer these questions. I have provided supporting information and references as attachments.

Is Chaparral ESH?

Including chaparral as ESH would be inconsistent with how ESH has been determined by the County in the past and represents a significant change in policy. The County definition of ESH includes seven categories of habitats and habitat elements as provided in Table 1, Attachment A. Chaparral does not generally match any of those categories, although specific stands of chaparral that support rare species do meet some of those categories (see Attachment A for a table of ESH criteria and why chaparral types in the EIR do not meet it). Specific stands of chaparral (such as chaparral dominated by special status plant species) meet the criteria and would be protected by the existing policies; therefore it is not necessary or appropriate to provide protection as part of a new or changed policy. The land area covered by chaparral amounts to approximately 40 percent of the Eastern Goleta Valley Plan area (Recon 2015). To suggest that this is unique or rare is inconsistent with the data on chaparral abundance and County ESH criteria. It is also inconsistent with how other coastal southern California counties treat chaparral, with the exception of some local coastal plans.

Furthermore, the primary source for determining whether a habitat is sensitive under CEQA is the Manual of California Vegetation II (Sawyer et al 2009). This manual is relied on by regulatory agencies, including the California Department of Fish and Wildlife, and I have been asked to use the determinations in this Manual for identifying habitat sensitivity on projects by the County in the past. Specifically, the types of chaparral habitat that would be considered ESH under MM BIO-1 are all considered either secure or relatively secure both globally and statewide. These habitats have no other management considerations. For these reasons, chaparral vegetation types should not be added to the list of ESH.

Designating Chaparral as ESH Would Actually have Negative Impacts to the Habitat

There are different opinions about whether chaparral removal by controlled fire is generally good for the habitat and/or human safety, and debate within the County has been heated on both sides of the issue. One only need to look at comments provided by the Chaparral Institute (CI) and the Fish and Game Commission on the Draft EIR for the Gaviota Coast Community Plan to see the varying thought on this. However, although the CI letter quotes Keely (2002) as stating that prescribed burning does not provide resource benefits, the quote (repeated for reference in Attachment B) is from the abstract for the paper, and misrepresents conclusions of the report. Reading further into the paper, it is clear that in this statement, Keeley is referring to prescribed fire on a landscape (widespread) scale to prevent massive fire storms, and is saying that it is not economically feasible or effective. Reading onward in this article, Keeley *recommends* the use of prescribed fire conducted with strategic placement in well-known fire corridors and buffer zones (relevant quotes in Attachment B).

The CI also commented on the DEIR for the Eastern Goleta Valley Community Plan, with a focus on the potential environmental impacts of chaparral removal for fire safety. However, the CI fails to recognize some of the benefits of *not* designating chaparral as ESH. These benefits include allowing individual property owners to decide how to maintain the habitat, thus creating a mosaic of habitat that is necessary to support a variety of species and allowing landowners to conduct activities that will protect higher-priority ESH(s).

By allowing individual property owners to decide how to maintain habitat on their property, a mosaic of treatment types and time since clearing will be achieved. The result of these activities will be a mosaic in the expansive chaparral habitat in the Eastern Goleta Valley Plan area. The importance of a diversity of habitats (habitat complexity) has been demonstrated in numerous habitats (Kovalenko et al 2011). In this instance (multiple seral phases of chaparral), the value of this benefit would be variable, depending on how the land is treated after chaparral removal and how the removal is achieved. The key element is that different species, different life stages of the same species, and different needs of the same individual sometimes require different habitat characteristics

for different times and/or needs of their lives. For that reason, increases in habitat complexity generally result in higher biological diversity. For example, some chaparral species grow exclusively from seed following fire events and prolonged periods with no fire may result in exclusion of those species from the landscape. Keeley (1992) explores this point and concludes:

> "...Opportunities for population expansion increase immediately after fire for fire-recruiter species, but for fire-persister species, opportunities for population expansion arise only in the long absence of fire. These conclusions suggest that equilibrium in species composition of California chaparral may be enhanced by variable burning regimes."

In addition, there are many special status plant species that are primarily found in openings in chaparral, such as Santa Ynez false-lupine (*Thermopsis macrophylla*) and the late-flowered mariposa lily (*Calochortus fimbriatus*). The Santa Ynez false-lupine is known from areas where chaparral has been removed (CNDDB 2015). Clearly, for species such as these, periodic natural fires, controlled fires, or land clearing can allow these species to persist on the landscape.

Quinn (1990) has four recommendations regarding optimizing habitat for wildlife in California chaparral as follows:

1. "...keep chaparral in a mixture of several age classes. In this way, whatever the stages of plant community development that are optimum for a particular species of mammal, those stages will be present..."
2. "...if chaparral is maintained in young age classes by design, such as prescribed fire, then the size of the treated areas should be on the order of 1 to 100 ha, rather than the thousands of hectares that are consumed by larger wildfires..."
3. "...any populations of native trees present in chaparral areas should be protected, and their growth encouraged..."
4. "...all sources of surface water should be protected and enhanced..."

MM-BIO 1 is in *direct conflict* with Quinn (1990) recommendations numbers 1 and 2 because it would increase restrictions for vegetation management to such an extent that it would discourage property owners from creating different age classes of chaparral, thereby impacting wildlife species diversity. MM-BIO 1 is in indirect conflict with Quinn (1990) recommendations numbers 3 and 4 because it would discourage protection of native trees and water sources from fire. Chaparral clearing (either by controlled burning or mastication) allows for the creation of buffer areas and/or the removal of critical fire corridors as recommended in Keeley (2002). Not removing scrub and chaparral around oak trees can increase fire damage to coast live oak trees (Dagit 2002). Dougherty (1982) also recognizes the potential benefits of prescribed burning to protect high-value riparian and woodland resources.

Finally, by enlarging the category of ESH to include common habitat types (e.g. chaparral) impacts to other ESH (e.g. coast live oak woodland) would be considered equivalent to chaparral and hence the incentive to avoid these habitats would be less.

Other CEQA Issues not Addressed in the EIR:

One final issue I want to mention is that there appears to be a serious omission in the EIR analysis. Inclusion of MM BIO-1 would cause impacts to other resource areas as follows:

- Hazards: Implementation of MM BIO-1could result in less vegetation management for fire risk reduction which could increase fire risk. This issue should be addressed in the Hazards section but is not. The Hazards section does not include a discussion of wildfire hazards and this is a serious omission.

- Agriculture: The County CEQA guidelines allow for a points system to analyze the potential future agricultural uses of the property. The points system is not applicable to a planning document, however, the

concept from the County's CEQA guidelines manual: "...preservation, encouragement, and enhancement of agriculture. This is accomplished through policies which discourage incompatible uses, promote an agriculturalist's freedom for determining methods of operation, encouraging land improvement programs...". The change resulting from MM BIO-1 should have been analyzed because it is clearly in conflict with County goals and policies meant to preserve, encourage and enhance Agriculture in our community..

Concerns regarding the impact of MM BIO-1 about both of these issues were brought up during the public comment period on the DEIR, and those comments were dismissed. I understand others will speak to these issues in more detail, but as a 20-year CEQA practitioner, I feel it important to point out that adding such a broad mitigation measure affecting approximately 40 percent of the plan area (by Recon's own estimate), without adequate review of the potential consequences is not advisable.

Conclusion

Based on my analysis and understanding of the issues, the Eastern Goleta Valley Community Plan Final EIR erroneously recommends implementation of Mitigation Measure BIO-1. The negative consequences of doing so may be deleterious to maximizing habitat values. In addition, the EIR fails to address some of the impacts to agriculture and hazards as a result of this mitigation measure. For these reasons, I respectfully recommend that the Board not adopt MM BIO-1 along with the proposed Eastern Goleta Valley Community Plan.

Sincerely,

Tamara Klug

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Attachment A
Table 1

Table 1: Applicability of ESH Criteria to Chaparral

ESH Criteria (County of SB 1995)	Applicability to Chaparral
1. Unique, rare, or fragile communities which should be preserved to ensure their survival in the future.	**Not applicable.** Looking at the extent of chaparral in the County of Santa Barbara (County) and Southern California using statewide data (GAP 2014). Based on this analysis, chaparral covers 482,215 acres (27 percent of the land area) in the County and 2,226,210 acres (6 percent of the land area) in Southern California. This is clear evidence that the chaparral plant community is not unique or rare generally speaking. Chaparral has been documented to recover following fire and mechanical disturbances and therefore does not need to be preserved to ensure survival into the future.
2. Habitats of rare and endangered species that are also protected by State and Federal laws.	**Generally not applicable; other standards apply when it would be applicable.** Some stands of chaparral support special status species. This may be true for isolated stands of chaparral that support for example, Santa Cruz Island oak (*Quercus parvula*) chaparral, but these stands are already protected by the policy by virtue of their characteristics. It is not appropriate to include a massive area (40 percent of the land area) when the appropriate area to be protected is actually much smaller and already protected.
3. Plant communities that are of significant interest because of extensions of ranges, or unusual hybrid, disjunct, or relict species.	**Generally not applicable; other standards apply when it would be applicable.** Some stands of chaparral support extensions of ranges, or unusual hybrid, disjunct, or relict species, but these stands are already protected by the policy by virtue of their characteristics. It is not appropriate to include a massive area (40 percent of the land area) when the appropriate area to be protected is actually much smaller and already protected.
4. Specialized wildlife habitats which are vital to species survival, e.g., White-tailed Kite habitat, butterfly trees.	**Not applicable.** This is not applicable to chaparral.
5. Outstanding representative natural communities that have values ranging from a particularly rich flora and fauna to an unusual diversity of species.	**Generally not applicable; other standards apply when it would be applicable.** Some stands are outstanding representatives of natural communities, but these stands are already protected by the policy by virtue of their characteristics. It is not appropriate to include a massive area (40 percent of the land area) when the appropriate area to be protected is actually much smaller and already protected.
6. Areas that are important because of their high biological productivity such as wetlands.	**Not applicable.** Chaparral does not have unusually high productivity.
7. Areas that are structurally important in protecting natural landforms and species, e.g., riparian corridors that protect stream banks from erosion and provide shade.	**Not applicable.** Chaparral is not more structurally important than other landforms.

Attachment B

Relevant quotes from Keeley 2002

From Keeley (2002) as quoted in the CI comment letter on the Gaviota Coast Plan Update DEIR:

> "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."

However, the CI fails to recognize the context of this paper which is comparing chaparral fire management to that of conifer forests. The two systems burn differently and fire management goals for the two systems are different. Later (same paragraph of the abstract), Keeley goes on to say:

> "...Fire management should focus on strategic placement of prescription burns to both insure the most efficient fire hazard reduction and to minimize the amount of landscape exposed to unnaturally high fire frequency..."

In essence, Keeley's criticism is that the use of controlled burns for fuels management should be used selectively and that widespread use in chaparral ecosystems is not economically feasible and may have deleterious impacts on the environment. After stating many shortcomings of prescription burns, Keeley goes on to say:

> "These considerations should not be interpreted to mean that prescription burning has no place in fire management of shrubland ecosystems, but only to emphasize the limitations to its effectiveness..."

Keeley goes so far as to suggest that:

> "...Therefore, widespread prescription burning to create landscape age mosaics should be replaced with strategic placement of prescription burns that focus on well known fire corridors and expose the least amount of landscape to the risk of unnaturally high fire frequency..."

Keeley also states that:

> "[rotational burning] ... is unlikely to ever be a viable management strategy, both because it is ineffective against the most dangerous fires, and because it is neither economically feasible nor possible within the temporal window of burning opportunity constrained by air quality restrictions (Conard and Weise 1998). Although of minimal value in stopping fires under severe conditions, prescription burning may aid fire suppression under other conditions..."

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Attachment C

References

References

California GAP Analysis Project (GAP). (2014). Home page and vegetation mapping. University of California at Santa Barbara Biogeography Lab. http://www.biogeog.ucsb.edu/projects/gap/gap_home.html. Visited January 2014.

California Natural Diversity Database (CNDDB). (2015). GIS files downloaded from: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp. October 2015.

County of Santa Barbara. (1995). Goleta Community Plan.

Dagit, R. (2002). "Post-fire monitoring of coast live oaks (Quercus agrifolia) burned in the 1993 Old Topanga Fire." Proceedings of the Fifth Natural Resources 90290: 243-249.

Dougherty, R., & Riggan, P. J. (1982). Operational use of prescribed fire in southern California chaparral. In Proceedings of the symposium on dynamics and management of Mediterranean-type ecosystems. USDA Forest Service General Technical Report PSW-58 (pp. 502-510).

Keeley, J. E. (2002). "Fire management of California shrubland landscapes." Environmental Management 29.3: 395-408.

Keeley, J. E. (1992). "Recruitment of seedlings and vegetative sprouts in unburned chaparral." Ecology: 1194-1208.

Kovalenko, K. E., Sidinei, M., Thomaz, & Warfe, D. M. (2012). "Habitat complexity: approaches and future directions." Hydrobiologia 685.1: 1-17.

Quinn, R. D. (1990). Habitat Preferences and Distribution of Mammals in California Chaparral. Res. Paper PSW-202. Berkeley. CA: Pacific Southwest Research Station, Forest Service. U.S. Department of Agriculture: 11 p.

Recon. (2015). Biological Resources Report for the Eastern Goleta Valley Community Plan, County of Santa Barbara. Revised May 2015.

Sawyer, J. O., Keeler-Wolfe, T., & Evens, J. (2009). A Manual of California Vegetation Second Edition. Sacramento, CA: University of California Press.