March 31, 2008

El Dorado County Planning Services
Attn: Monique Wilber
2850 Fairlane Court
Placerville CA 95667

Sent via email to: monique.wilber@edcgov.us

Re: Comments on the Oak Woodland Management Plan (OWMP) and Negative Declaration (ND)

To Whom It May Concern:

I have reviewed the El Dorado County Oak Woodland Management Plan (February 2008; hereinafter referred to as "OWMP"), the Initial Study/Negative Declaration for the OWMP, and various staff reports posted at the County's website.

I have a B.A. in Botany from the University of California, Berkeley and a Ph.D. in Biology from the University of California, Los Angeles. I am a professional biologist with over 14 years experience evaluating native plant resources in El Dorado County and throughout California. My expertise includes over 10 years experience reviewing and analyzing land management plans and the application of the National Environmental Policy Act and the California Environmental Policy Act to project planning. I have served as an expert on the Plant and Wildlife Technical Advisory and Oak Woodland Technical Advisory committees for El Dorado County providing expertise on native plant and habitat issues, and in particular, advice on oak woodland conservation. I have also provided expert advice and technical assistance to local government and non-profit agencies on the biology and habitat values of oak woodlands and strategies in support of oak woodland conservation.

The comments below address the attributes and biological values of oak woodlands in El Dorado County and throughout California. The diversity of oak woodland habitats is well documented (Barbour et al. 1993). This diversity is characterized by attributes such as canopy cover, the variety of oak species, and understory vegetation (Johnson 1988). The El Dorado County General Plan and supporting documents commit "to preserve[ing] (through acquisition or conservation easements) existing woodlands of equal or greater biological value as those lost." (El Dorado County 2004, FEIR, Chapter 4, p. 4.1-51) and to "to fully compensate for the impact to oak woodland habitat" (General Plan Policy 7.4.4.4). The OWMP, as proposed in the February, 2008 version, fails to preserve oak woodlands of equal or greater biological value in two fundamental aspects. First, the OWMP incorrectly defines the extent of oak woodland that requires replacement. The approach outlined in the OWMP will result in an underestimate of the area of oak woodland affected by a development. This in turn will cause less oak woodland to be preserved relative to the area developed. Second, the OWMP makes no provision to mitigate the fragmentation of oak woodlands that will result from increased development within approximately 3 miles of Highway 50. Development proposed in this area is not required to mitigate for the fragmentation of oak woodland caused in this region that is adjacent to Highway

50. Mitigation funds are directed solely to Priority Conservation Areas (PACs) that are outside the Highway 50 corridor. As a result, the biological benefit or value of oak woodlands that presently are connected and not highly fragmented across the Highway 50 will not be preserved or compensated for in the current OWMP. The comments below address these two points in greater detail.

1. Characterization of Replacement Area for Oak Woodland Lost

Oak woodland is universally recognized as a habitat that includes the oak trees, the open space between, and the plant and wildlife communities that live therein (Johnson 1988; Barbour et al. 1993; Standiford 1996). Specific biological values of oak woodlands were defined in Standiford (1996) for several oak woodland types. For instance, blue oak woodland with 10-24 percent canopy cover was found to be occupied by wildlife species that were associated with both grassland and wooded habitats. As many 264 wildlife species are predicted to occur in this habitat type, depending on the special habitat elements available (Ibid.). In contrast, Standiford (1996) identified that blue oak wood land with 60-100 percent canopy cover had few species associated with grassland habitat, and many associated with denser canopy. As many 208 wildlife species are predicted to occur in this habitat type, depending on the special habitat elements available (Ibid.). Some species, such as Cooper's hawk and orange-crowned warblers, preferred this denser habitat (Ibid.). Thus, as the quality and nature of the oak woodlands varies, different assemblages of wildlife species utilize the oak woodland.

Barbour et al. (1993) also identifies habitat variability in the oak woodlands occurring in the Sierra Nevada foothills between 300 and 3,000 feet elevation. El Dorado County occurs within this geographic area. Oak woodlands in this the lower elevations of this foothill belt can be composed of "tree canopy covers less than thirty percent of the ground" and "fewer than twenty trees per acre" (Ibid., p. 84-85). Upslope from these areas oak woodlands have "thirty to sixty percent canopy cover and more than sixty trees per acre" (Ibid., p. 85). Further, Barbour et al. (1993, p. 87) relate this diversity in the quality of oak woodland to habitat utilization by native species:

> Vegetation such as oak woodland, which is heavily utilized by a variety of animals, tends to be rich in species and structurally complex. The complexity creates a variety of habitats that can be occupied by different animals. For example, the gray fox prefers young woodlands with dense trees smaller than six inches in diameter, while the titmouse prefers older woodlands with scattered trees more than twenty-four inches in diameter. Both are part of the foothill woodland, but their niches are separate.

Thus, the biological values of oak woodlands differ depending on the structure and characteristics of the woodland.

The OWMP defines the amount of woodland lost as simply the area of oak canopy lost (Staff Report, February 12, 2008, p. 2) and does not include the intervening open areas. In an oak woodland with 40% canopy cover, the intervening areas amount to as much as 60% of the area. Thus, a project that proposed to remove 10 acres of oak woodland with 40% canopy cover would be required to mitigate for the loss of only 4 acres of oak canopy when in fact a total of 10

acres of oak woodland are removed. As demonstrated in the literature above, oak woodland values vary with the structure and nature of the oak woodland. The biological quality of an oak woodland with 40% canopy cover differs in significant ways from an oak woodland with 100% canopy cover. There is no biological basis to support the conclusion in the OWMP and Negative Declaration that this approach to calculating the area of mitigation required will comply with the direction in the General Plan "to preserve (through acquisition or conservation easements) existing woodlands of equal or greater biological value as those lost" (El Dorado County 2004, FEIR, Chapter 4, p. 4.1-51) and to "to fully compensate for the impact to oak woodland habitat" (General Plan Policy 7.4.4.4).

2. Fragmentation of Oak Woodlands is not Adequately Addressed.

Tom Scott, Natural Area Resource Specialist with the Department of Forestry and Resource Management, University of California, Berkeley, in a review of fragmentation in California's oak woodlands found that:

> Unlike land conversion, fragmentation of oak woodlands alters wildlife resources without completely consuming their habitats. Although the consequences of fragmentation are often equivalent to complete conversion, the process is typically gradual and often goes undetected because fragments may exist long after they have lost their utility to wildlife.

(Scott undated)

He also found that:

> As a woodland area becomes more and more fragmented, management of the spatial distribution of habitat becomes more critical. If the remaining fragments are to continue to support wildlife species, then they need to provide habitat for both the proper patterns of population dispersion and the movements of individuals.

(Ibid.) This review emphasizes the dependence of wildlife on connected oak woodland habitats.

Research by Knapp et al. (undated) documented direct effects of oak woodland fragmentation on pollination and acorn development. They studied the relationship between the density of oaks and acorn production and found that "taken together, our results indicate that habitat fragmentation and isolation of trees can alter pollen availability and reduce acorn production in blue oak." Thus, fragmentation of oak woodlands can negatively affect the reproduction of oak woodlands and ultimately the persistence of oak woodlands, as well as negatively affecting the wildlife species that depend on the habitat.

Stralberg and Williams (2002) evaluated the relationship between bird abundance, habitat availability, and development in Placer County. Their results highlighted:

> …the fact that the importance of local habitat and landscape characteristics may vary greatly by species. On one end of the response spectrum, several sparrow species appear to experience negative consequences of human development… For other woodland

> species, including orange-crowned warbler and Hutton's vireo, the quality, the amount and configuration of available habitat in the surrounding landscape seem more important than the number of built structures. This suggests that development that retains oak woodlands (including a significant interior live oak component within the blue oak matrix) may still provide adequate habitat for these species. Other species such as Berwick's Wren appear insensitive to development and landscape characteristics but are well-predicted by the presence of certain local habitat features.

These results emphasized the need to examine a variety of spatial scales when conserving oak woodland habitat for bird species. This study proposed a number of strategies to conserve habitat including:

> Preserving the remaining large, undeveloped parcels of oak woodland (>40 acres)[1] should help ensure the local persistence of landscape-sensitive species.
>
> Managing oak woodlands on small parcels to retain a variety of habitat components including large trees, snags and interior live oaks can provide habitat for a host of human-tolerant avian species.
>
> Oak woodland species have varying habitat needs, so maintaining a mosaic of habitat types is important for preserving a suite of oak woodland species.

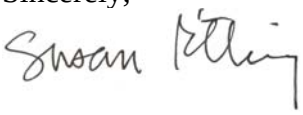
(Ibid., p. 358-359)

Each of the studies above addresses in some way the nature of oak woodland fragmentation and its effect on oak tree species or dependent wildlife. Fragmentation of oak woodlands universally is viewed as having a negative biological effect. These effects occur at different spatial scales (a few meters to thousands of meters), and each study identifies the need to address these multiple scales of impact in conservation planning. The OWMP does not adopt mitigation measures to address fragmentation of oak woodlands in the Highway 50 corridor or to ensure connectivity among PCAs. As demonstrated in the above studies, the connectivity or linkage among oak woodlands is integral to their conservation. In my opinion, the failure of the OWMP to include measures to ensure oak woodland connectivity is a significant impact. Furthermore, the failure to address oak woodland connectivity in the OWMP violates the direction in the General Plan "to preserve (through acquisition or conservation easements) existing woodlands of equal or greater biological value as those lost" (El Dorado County 2004, FEIR, Chapter 4, p. 4.1-51) and to "to fully compensate for the impact to oak woodland habitat" (General Plan Policy 7.4.4.4).

[1] In a oak woodland conservation plan developed by Mackenzie and Merenlender (undated) for Sonoma County, fragments of oak woodland of 50 acres and larger were found to be important to oak woodland conservation.

Please contact me (530-295-8210; britting@earthlink.net) if you have specific questions about these comments.

Sincerely,



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Attachments

Barbour, M, Pavlik, B., Drysdale, F., and Lindstrom, S. 1993. Chapter 4: Valley heat. In: California's changing landscape. California Native Plant Society, Sacramento, California. 246 pp.

Johnson, S. 1988. Wildlife among the oaks. Integrated Hardwood Range Management Program, University of California, Berkeley, California.

Knapp, E., Rice, K., and Goedde, M. undated. Habitat Fragmentation Limits Pollen Availability and Acorn Production in Blue Oak. IHRMP Oak Fact Sheets No. 96. Integrated Hardwood Range Management Program, University of California, Berkeley.

Mackenzie, A. and Merenlender, A. (undated). Sonoma County Acquisition Plan 2000: A Tool for Conserving Oak Woodlands. IHRMP Oak Fact Sheets No. 101. Integrated Hardwood Range Management Program, University of California, Berkeley.

Scott, T. undated. The Effects of Development on Oak Woodland Wildlife: Fragmentation of Woodland Habitats. IHRMP Oak Fact Sheets No. 45. Integrated Hardwood Range Management Program, University of California, Berkeley.

Standiford, R. (technical coordinator) 1996. Chapter 3: Resource assessment and general hardwood rangeland values. In: Guidelines for managing California's hardwood rangelands. Integrated Hardwood Range Management Program, University of California, Berkeley.

Stralberg, D. and Williams, B. 2002. Effects of Residential Development and Landscape Composition on the Breeding Birds of Placer County s Foothill Oak Woodlands. USDA Forest Service Gen. Tech. Rep. PSW-GTR-184.

References

Barbour, M, Pavlik, B., Drysdale, F., and Lindstrom, S. 1993. Chapter 4: Valley heat. In: California's changing landscape. California Native Plant Society, Sacramento, California. 246 pp.

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El Dorado County General Plan 2004. Final Environmental Impact Report, including Reponses to Comments, Findings of Fact, FEIR, and Environmental Assessment of General Plan Mitigation Measure Changes.

Johnson, S. 1988. Wildlife among the oaks. Integrated Hardwood Range Management Program, University of California, Berkeley, California.

Knapp, E., Rice, K., and Goedde, M. undated. Habitat Fragmentation Limits Pollen Availability and Acorn Production in Blue Oak. IHRMP Oak Fact Sheets No. 96. Integrated Hardwood Range Management Program, University of California, Berkeley.

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