Letter 37

CENTER for BIOLOGICAL DIVERSITY

April 27, 2011

SENT VIA EMAIL

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Re: Comments on the Fairfax DEIR

Dear CAL FIRE:

The Center for Biological Diversity ("Center") submits the following additional comments for the Fairfax Draft Environmental Impact Statement ("Fairfax DEIR")/THP 1-09-058-SON. The Center is a non-profit, public interest, conservation organization dedicated to the protection of native species and their habitats through applying sound science, policy and environmental law. The Center has over 40,000 members, many of whom reside in California.

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The California Environmental Quality Act ("CEQA") mandates that the environmental impacts of a project be considered and analyzed, and that agencies "mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so."[1] Mitigation of a project's significant impacts is one of the "most important" functions of CEQA.[2]

As the lead agency, it is CAL FIRE's duty to ensure that the Fairfax EIR conforms with applicable law. With regard to GHG emissions analysis under CEQA, the Attorney General's Office has explained:

> Lead agencies should make a good-faith effort, based on available information, to calculate, model, or estimate the amount of CO2 and other GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities.
>
> The question for the lead agency is whether the GHG emissions from the project . . . are considerable when viewed in connection with the GHG emissions from past projects, other current projects, and probable future projects.

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[1] Pub. Res. Code § 21002.1(b); *see also* Pub. Res. Code § 21002 ("[It is the] policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of such projects.")

[2] *Sierra Club v. Gilroy City Council* (1990) 222 Cal.App.3d 30, 41

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> Unlike more localized, ambient air pollutants which dissipate or break down over a relatively short period of time (hours, days or weeks), GHGs accumulate in the atmosphere, persisting for decades and in some cases millennia. The overwhelming scientific consensus is that in order to avoid disruptive and potentially catastrophic climate change, then it's not enough simply to stabilize our annual GHG emissions. *The science tells us that we must immediately and substantially reduce these emissions.*
>
> The decisions that we make today do matter. Putting off the problem will only increase the costs of any solution. Moreover, delay may put a solution out of reach at any price. *The experts tell us that the later we put off taking real action to reduce our GHG emissions, the less likely we will be able to stabilize atmospheric concentrations at a level that will avoid dangerous climate change.*
>
> [Agencies should] evaluate *at least one alternative* that would ensure that the [agency] contributes to a lower-carbon future.[3]

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On December 30, 2009, the California Resources Agency, pursuant to SB 97, adopted CEQA Guidelines for greenhouse gas impacts.[4] For example, Guideline 15064.4 declares that a "lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project."[5] Guideline 15064.4 sets forth factors a lead agency should consider in reaching a significance determination, and states that a "lead agency should consider . . . [t]he extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting . . . ."[6] The Final Statement of Reasons for the CEQA greenhouse gas Guidelines explains: "[15064.4(b)'s] reference to the 'existing environmental setting' reflects existing law requiring that impacts be compared to the environment as it currently exists."[7]

The above statements from the Attorney General and Resources Agency make clear that agencies must give careful attention to the greenhouse gas ("GHG") impacts associated with the projects they approve and must calculate, model, or estimate all of the GHG impacts associated with a particular project. After fully quantifying a project's effects, an EIR must determine the cumulative significance of the project's greenhouse gas impacts. An impact is considered

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[3] *See* Climate Change, the California Environmental Quality Act, and General Plan Updates: Straightforward Answers to Some Frequently Asked Questions California Attorney General's Office [Rev. 9/01/09] (emphasis added).

[4] *See* California Natural Resources Agency, Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB 97 (Dec. 2009), *available at* http://ceres.ca.gov/ceqa/guidelines/

[5] *Id.*

[6] *Id.*

[7] *See* California Natural Resources Agency, Final Statement of Reasons for Regulatory Action, Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB 97 (Dec. 2009) at 24, *available at* http://ceres.ca.gov/ceqa/guidelines/

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significant where its "effects are individually limited but cumulatively considerable."[8] Climate change is the classic example of a cumulative effects problem – emissions from numerous sources are combining to create the most pressing environmental and societal problem of our time.[9] While a particular project's greenhouse gas emissions may represent only a small fraction of total emissions, courts have rejected the notion that the incremental impact of a project is not cumulatively considerable just because it is small.[10]

37-3

This Project is particularly problematic from a GHG perspective because it "would convert forests and grasslands to vineyards, a reservoir, corporation yard, and roads."[11] As explained below, forests are one of this planet's greatest attributes in terms of sequestering carbon, and, consequently, any loss of forest is cause for serious concern. In this particular instance, 154 acres of forest would be clear-cut and permanently lost;[12] therefore, alternatives and/or mitigation must be presented in the DEIR to address this significant environmental impact. Indeed, the lead agency for this DEIR, CAL FIRE, has already stated that conversions such as this one are a significant GHG threat that require mitigation:

> One of the activities recognized as having adverse impacts to CO2 sequestration potential of California's forests is deforestation through conversion . . . [L]oss to conversions are recognized as potential threats to the Forest Sector in relation to achieving [AB 32 GHG] goals . . . . [C]onversions will require GHG accounting to analyze and mitigate the direct and indirect impacts associated with these types of projects . . . . Even before carbon sequestration was in the national spotlight it was acknowledged that the most significant threat to resource values associated with forest lands is when those forestlands are converted to non-timberland uses . . . . [C]onversion of forests to other non-forest uses [] has been shown in many studies to reduce the potential for carbon sequestration and elevate carbon release on a long-term basis . . . ."[13]

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[8] Guidelines § 15065(a)(3)

[9] *Ctr. for Biological Diversity v. Diversity v. NHTSA*, 508 F.3d 508, 550 (9th Cir. 2007), ("the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct"); *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 720 ("Perhaps the best example [of a cumulative impact] is air pollution, where thousands of relatively small sources of pollution cause a serious environmental health problem.")

[10] *Communities for a Better Env't v. California Resources Agency* (2002) 103 Cal.App.4th 98, 117 ("The relevant issue was not the relative amount of traffic noise resulting from the project when compared to existing traffic noise, but whether any additional amount of traffic noise should be considered significant given the nature of the existing traffic noise problem. From *Kings County* and *Los Angeles Unified*, the guiding criterion on the subject of cumulative impact is whether any additional effect caused by the proposed project should be considered significant given the existing cumulative effect.")

[11] DEIR at 4-1

[12] DEIR at 4-2

[13] *See* CAL FIRE's Official Response for THP 04-08-024-AMA

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I. BACKGROUND: FOREST ECOSYSTEMS ARE CARBON SINKS THAT CAN PROVIDE A SIGNIFICANT CONTRIBUTION TO CARBON STORAGE AND SEQUESTRATION

The following information provides background regarding forest carbon, explains why retaining existing forest is extremely important from a GHG perspective, and demonstrates that there are significant differences in carbon sequestration between a forest and a vineyard.

A. Carbon Forest Basics

Forests play an important role in reducing the amount of carbon dioxide in the atmosphere. During photosynthesis, trees "breathe in" carbon dioxide and "breathe out" pure oxygen. Through this process, forests remove massive amounts of carbon dioxide from the atmosphere each year.

Forest ecosystems also serve as banks that store carbon for finite periods of time; thus, in a natural state, and/or if managed well, they are carbon sinks and not sources (Tans et al. 1990). Carbon is added to the bank regularly through photosynthesis, which removes carbon dioxide from the atmosphere and stores the carbon contained therein in the organic matter of the forest.

Forest ecosystems are complex, and include not only living and dead trees but understory vegetation, and soil. Each of these elements contains carbon. For example, Turner et al. (1995) estimated that forests in the coterminous United States contain 36.7 Pg [14] of carbon with half of that in the soil, one-third in trees, 10% in woody debris, 6% in the forest floor, and 1% in the understory. The location of forest carbon is important because it helps determine how much carbon remains in storage or is lost after disturbances like logging.

37-4

B. Forest Conversion Releases Carbon Stores

Certain forest management actions, and conversion in particular, allow stored carbon to be released into the atmosphere. Thus, in addition to affecting habitat, conversion causes a withdrawal from the forest carbon bank: carbon is removed from long-term storage and released to the atmosphere, exacerbating global warming and climate change.

Evidence shows that the carbon dioxide releases from conversion can be substantial. In a letter to the California Air Resources Board regarding California Climate Action Registry Forest Protocols, Harmon (2007) wrote:

> Timber harvest, clear cutting in particular, removes more carbon from the forest than any other disturbance (including fire). The result is that harvesting forests generally reduces carbon stores and results in a net release of carbon to the atmosphere.

Turner et al. (1995) suggest that in light of climate change and further disturbance, we need to

[14] Pg [petagram]=one billion metric tonnes=1000 x one billion kg

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pay close attention to forest loss due to the fact that:

> In the U.S., projections call for a 5% loss in the private timberland area by the year 2040 (Alig et al. 1990). A general intensification of forest management, resulting in lower carbon storage per unit area (Cooper 1983, Dewer 1991), and a gradual increase in the harvest level (Haynes 1990), are also expected. These factors will tend to mitigate against a stable or increasing carbon sink (Turner et al. 1993). Increasing temperatures, atmospheric CO2, and nitrogen deposition could promote higher growth rates (McGuire et al. 1993), but projected climate change is also likely to produce a transient release of forest carbon because carbon sources associated with increasing disturbance rates would be greater than carbon sinks associated with land recovering from disturbance (King and Neilson 1992).

Clearly, land management, and specifically forest management, plays a major role in the global carbon balance. How California chooses to manage its forests has a significant effect on how much carbon dioxide is released and stored. If we are to maintain public and private forests as carbon sinks, which is now more important than ever, continued cumulative disturbance from conversion must be prevented or at least reduced.

C. Conversion Eliminates a Forest's Ability To Sequester Carbon

Studies show that logging can remove ninety-five percent of the non-soil carbon stored in a forest ecosystem and half of this is lost to the atmosphere in the first year (Janisch and Harmon 2002). Skog and Nicholson (2000) reconstructed the fate of forest carbon in the United States from 1910 to 2000. They found that 71 % of the carbon harvested during that period was released into the atmosphere while only 17% was stored in wood products and the remaining 12% was added to landfills. As pointed out in Turner et al. (1995b):

37-5

> After a human disturbance such as a clear cut harvest, ecosystems are a source of carbon to the atmosphere because of the decomposition of large woody debris and other forms of detritus. Later in stand development, as tree bole volume rapidly accumulates, forest ecosystems are strong carbon sinks.

Mackey et al (2008) note:

> The remaining intact natural forests constitute a significant standing stock of carbon that should be protected from carbon-emitting land-use activities. There is substantial potential for carbon sequestration in forest areas that have been logged commercially, if allowed to re-grow undisturbed by further intensive human land-use activities.

Noss (2001) also notes that clear-cutting causes significant habitat fragmentation, which has climate impacts of its own:

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> Fragmentation may threaten biodiversity during climate change through several mechanisms, most notably edge effects and isolation of habitat patches. Intact forests maintain a microclimate that is often appreciably different from that in large openings. When a forest is fragmented by logging or other disturbance, sunlight and wind penetrate from forest edges and create strong microclimatic gradients up to several hundred meters wide, although they may vary in severity and depth among regions and forest types (Ranney et al. 1981; Franklin & Forman 1987; Chen & Franklin 1990; Laurance 1991, 2000; Chen et al. 1992; Baker & Dillon 2000). With progressive fragmentation of a landscape, the ratio of edge to interior habitat increases, until the inertia characteristic of mature forests is broken. Fragmented forests will likely demonstrate less resistance and resilience to climate change than intact forests. Another potentially serious impact of fragmentation is its likely effect on species migration. By increasing the isolation of habitats, fragmentation is expected to interfere with the ability of species to track shifting climatic conditions over space and time. Weedy species, including many exotics, with high dispersal capacities may prosper under such conditions, whereas species with poor mobility or sensitive to dispersal barriers will fare poorly.

1. Forest Conversion Prevents The Development Of Carbon Stores

37-6

As discussed earlier, forests are carbon "banks," storing large amounts of carbon for long periods of time. Old growth forests have an especially vast amount of live vegetation including huge trees, large downed logs, a healthy understory and a rich ground layer. Each of these elements stores considerable amounts of carbon and so it follows that ancient forests are the "banks" holding the most carbon. A report from the IPCC has echoed this sentiment pointing out that the best way to preserve the carbon stored in a forest is to preserve the forest itself: "The theoretical maximum carbon storage (saturation) in a forested landscape is attained when all stands are in old-growth state (Nabuurs et al. 2007)."

As discussed in Luyssaert et al (2008): "old-growth forests can continue to accumulate carbon, contrary to the long-standing view that they are carbon neutral." Numerous other studies have likewise shown that old-growth forests continue to sequester carbon from the atmosphere (Desai et al. 2005; Law et al. 2003; Chen et al. 2004; Field and Kaduk 2004; Paw U et al. 2004; Harmon et al. 2004; Grier and Logan 1977; Knohl et al. 2003). Old-growth Douglas fir forests, for example, "show remarkable sequestration of carbon, comparable to many younger forests (Paw U et al. 2004)." And as discussed in Hudiburg et al (2009):[15]

> Decrease in NPP with age was not general across ecoregions, with no marked decline in old stands (200 years old) in some ecoregions. In the absence of stand-replacing disturbance, total landscape carbon stocks could theoretically increase from 3.2 +- 0.34 Pg C to 5.9 +- 1.34 Pg C (a 46% increase) if forests were managed for maximum carbon storage.

[15] Hudiburg, T. Beverly Law, David P. Turner, John Campbell, Dan Donato, and Maureen Duane. 2009. Carbon dynamics of Oregon and Northern California forests and potential land-based carbon storage. *Ecological Applications* 19(1):163–180.

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> Trends in NPP with age vary among ecoregions, which suggests caution in generalizing that NPP declines in late succession. Contrary to commonly accepted patterns of biomass stabilization or decline, biomass was still increasing in stands over 300 years old in the Coast Range, the Sierra Nevada and the West Cascades, and in stands over 600 years old in the Klamath Mountains. If forests were managed for maximum carbon sequestration total carbon stocks could theoretically double in the Coast Range, West Cascades, Sierra Nevada, and East Cascades and triple in the Klamath Mountains (Fig. 8).

This is why logging, especially logging that converts forest to a non-forest use, is problematic; it prevents vast amounts of trees from getting older, let alone from reaching the old growth stage, which means that vast amounts of carbon sequestration are foregone as soon as the forest is cut.

37-6 cont'd

But it is not only older trees that hold large amounts of carbon; forest floors in older forests contain significantly more carbon than forest floors of cutover forests (Lecomte et al. 2006; Fredeen et al. 2005; Harmon et al. 1990). Old forests also increase the amount of carbon that is placed into long-term storage in stable forest soils; this carbon is lost through the soil disturbance associated with logging. (Harmon et al. 1990). This can have serious implications for sequestration capabilities as we see from conclusions made by Jandl et al. (2007):

> What is beyond dispute is that the formation of a stable soil [carbon] pool requires time. Avoiding soil disturbances is important for the formation of … crucial elements in the process of [carbon] soil sequestration.

Luyssaert et al (2008) reported similar findings:

> In our model we find that old-growth forests accumulate 0.4 ±0.1 tC ha^{-1} yr^{-1} in their stem biomass and 0.7±0.2 tC ha^{-1} yr^{-1} in coarse woody debris, which implies that about 1.3 ±0.8 tC ha^{-1} yr^{-1} of the sequestered carbon is contained in roots and soil organic matter.

Jandl et al. (2007) states that "forest ecosytems store more than 80% of all terrestrial aboveground C and more than 70% of all soil organic C (Batjes, 1996; Jobbágy and Jackson, 2000; Six et al., 2002a)." The fact that the majority of sequestered carbon is found in roots and organic soil is significant given that logging, specifically clear-cutting, results in the loss of large amounts of soil and therefore, forest floor carbon. This loss is not only due to the direct impacts of logging, but also as a result of the continued erosion and soil degradation that often comes with logging.

2. The Rate Of Carbon Uptake By Vineyards Can Not Offset Forest Conversion

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As stated in *Winrock International. Measuring and Monitoring Plans for Baseline Development and Estimation of Carbon Benefits for Change in Forest Management in Two Regions, March 2004*,[16]

[16] Accessed at http://www.energy.ca.gov/reports/CEC-500-2004-070/CEC-500-2004-070F.PDF

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> Mature redwood stands are famous for their enormous stocks of standing biomass and represent perhaps the most massive forests, per unit area, on earth. Measurements of old-growth (>200 years) redwood stands have yielded standing carbon stocks ranging from 1,650 to 1,784 t C equivalent per ha (Hallin, 1934, Westman and Whittaker, 1975, and Fujimori, 1977). Equally impressive is the rate at which carbon is sequestered in growing redwood stands. A 100 year old redwood stand measured by Olson et al (1990) yielded 3,600 cubic meters per ha, equivalent to 648 t C per ha (at specific gravity 0.36 g oven dry biomass/cm3 for second-growth redwood (Markwardt and Wilson, 1935)), or a mean annual carbon increment of 6.48 t C per ha per year.

While this Project will be cutting young redwood forest, not old growth, the fact remains that the Project will prevent forest from growing older and attaining old growth status. Moreover, as noted above, and in the excerpts from *California's forest resources, 2001–2005: five-year Forest Inventory and Analysis report*,[17] redwoods are extremely efficient carbon sequesters, and therefore loss of young trees is problematic because it will prevent these trees from any further sequestration. Vineyards, of course, which even the calculations in the DEIR recognize, offer profoundly less carbon sequestration.[18]

II. THE DEIR MUST ENSURE INFORMED DECISION-MAKING

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CEQA demands, among other things, that enough information be provided regarding a project to allow informed decision-making. Moreover, CEQA requires that the information "be presented in a manner calculated to adequately inform the public and decision makers, who may not be previously familiar with the details of the project."[19] The information provided in the DEIR regarding greenhouse gas impacts falls well short of those standards and is therefore deficient. As stated by the Supreme Court in *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova*, 40 Cal. 4th at 449-50:

> The preparation and circulation of an EIR is more than a set of technical hurdles for agencies and developers to overcome. The EIR's function is to ensure that government officials who decide to build or approve a project do so with a full understanding of the environmental consequences, and, equally important, that the public is assured those consequences have been taken into account.[20]

[17] Christensen, Glenn A.; Campbell, Sally J.; Fried, Jeremy S., tech. eds. 2008. California's forest resources, 2001–2005: five-year Forest Inventory and Analysis report. Gen. Tech. Rep. PNW-GTR-763. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 183 p.

[18] DEIR at Table 4-7

[19] *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal. 4th 412, 442.

[20] *See also East Peninsula Ed. Council, Inc. v. Palose Verdes Peninsula Unified School Dist.* (1989) 210 Cal.App.3d 155, 174 ("Where failure to comply with the law results in a subversion of the purposes of CEQA by omitting information from the environmental review process, the err is prejudicial"); *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal. 3d 376, 402 ("CEQA's fundamental goal of … informed decision making")

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37-9 The DEIR does not even meet provide basic disclosures regarding its calculations. The spreadsheets from the CalFire GHG calculator, as presented in the DEIR Appendix R, fail to present or explain where the values plugged into the calculator originate – it is therefore impossible to critique the numbers. The numbers used are supposed to be site-specific values, usually based on site surveys and inventories of the particular project site, and generated through a forest growth simulation program based on site-specific growing conditions. If the Project proponents have these data they should disclose them in the DEIR; if they do not, then they must explain the origin of the values they provided as input for the CalFire GHG calculator.

37-10 Similarly, no information is provided as to why it can be assumed that the 151 acre "reserve" area will in fact remain an unmanaged forest reserve in perpetuity. Therefore, until the DEIR discloses the information for this assertion, and thereby makes it available for public and agency scrutiny, informed decisionmaking is impossible. The entire GHG analysis of the DEIR is premised on there in fact being a 151 acre reserve and thus, until the information on which that premise is based is disclosed, the DEIR fails as an informational document.

37-11 The DEIR also fails to present in proper light the importance of the fact that 154 acres of trees will no longer be sequestering carbon. This is a big deal, especially when considered in light of the many other conversions that have occurred or are occurring just in Sonoma County alone. As discussed in *Forests: Opportunities for Greenhouse Gas Emission Reduction in Sonoma County*, Michelle Passero, December 2007:

> Over the past several years, Sonoma County has witnessed an increasing threat of forestland conversion to non-forest uses, vineyards in particular. Between 1990 and 1997, at least 1,630 acres of dense oak woodlands were converted to vineyards and from 1989 to 2004, 851 acres of timberland were approved for conversion, primarily to vineyards. More recently, an application to convert approximately 1,700 acres of forestland to vineyards has been submitted to the County, which is still pending. According to Sonoma County's Permit and Resource Management Department, once the time and money has been invested to convert timberland to croplands, these lands are almost never restored to forests.
>
> The climate impacts of this forestland conversion are twofold. First, the conversion of these forestlands results in direct emissions of CO_2 to the atmosphere. Second, the future capacity of the forest to remove additional CO_2 from the atmosphere is significantly diminished because there is very little chance that these lands will be restored to forests based on the history of conversions in Sonoma County. The potential net difference between the overall carbon stored in a vineyard and forestland could be anywhere from 15 tons of carbon per acre to over a thousand tons per acre, depending on several factors, including forest type, age, site class and maturity and management of the vineyard. Such a reduction in overall carbon stocks means net emissions of CO_2 to the atmosphere upon conversion of the forestland to vineyards.

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37-12 This Project is not happening in isolation and therefore the DEIR must disclose and address the fact that much of Sonoma County, and surrounding counties, have already been converted to vineyard. In other words, thus far, due the absence of information about other conversions, an adequate cumulative impacts analysis is impossible.

37-13 Finally, while the DEIR shows in its calculations that carbon sequestration will be severely diminished as a result of the Project's conversion of forest to vineyard (*see* Table 4-3), the DEIR precludes informed decision-making by ignoring its own numbers to erroneously conclude that the diminished sequestration is insignificant. Given that the Project will result in loss of sequestration on 154 acres, and given that the forest would have otherwise continued to sequester carbon absent the Project, there will in fact be a significant loss of carbon sequestration as a result of the Project. And yet, as explained in more detail below, the DEIR pretends as though that reality does not exist by hiding behind a "business as usual" argument. To allow informed decisionmaking, the DEIR must present the Project's impacts candidly and correctly which means acknowledging and addressing the complete and permanent loss of sequestration from 154 acres of redwood forest.

Courts have made clear that even small impacts can be cumulatively significant and that this is especially so when dealing with GHG impacts. Moreover, time and again, the lead agency, Cal Fire, has explicitly stated that it believes conversion is a significant GHG problem.[21] Thus, because this Project would result in the complete loss of 154 acres of what the lead agency itself believes is our best weapon against climate change, the DEIR's conclusion that this Project does not have a significant GHG impact is fundamentally flawed.

37-14 It is also important to note that GHG emissions are now more than ever understood to be at a tipping point. In addressing the impacts of the greenhouse gas emissions from this project, it is important to take into account the impacts of ecological tipping points – irreversible changes in the climate expected to occur when atmospheric concentrations of greenhouse gases reach certain levels.[22] The issue of tipping points adds to the need for this project to fully disclose its greenhouse gas impacts. These impacts are adding to the overall problem at a time that the global climate is potentially approaching critical tipping points. In addition, the impacts in the short term would contradict the efforts throughout the state (including in the forest sector) to reduce greenhouse gas emissions to 1990 levels by 2020. This means that the temporal aspects of the carbon emissions associated with the project must be properly addressed.

[21] *See, e.g.,* CAL FIRE's Official Response for THP 04-08-024-AMA

[22] It is well-accepted that there will be tipping points. (Meehl et al. at 775, 2007). Reaching any single tipping point can bring severe economic and ecologic consequences. But perhaps more worrisome is the linkage between tipping points such that reaching one tipping point may in turn trigger a second. An example is the connection between Arctic sea ice and permafrost melt rates; recent evidence indicates that the loss of Arctic sea ice, one tipping point, accelerates permafrost thaw, a second tipping point. (Lawrence et al. 2008). Permafrost refers to permanently frozen land; this surface stores large amounts of carbon. As permafrost thaws due to global warming, it releases carbon, often as methane. (Christensen et al. 2004). Methane has a global warming potential that is approximately 25 times greater than that of carbon dioxide over 100 years. The multiplicative effect of reaching several tipping points on a similar time scale would drastically increase the costs associated with climate change.

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As noted by the US EPA, because "a substantial portion of CO_2 emitted into the atmosphere is not removed by natural processes for millennia, each unit of CO_2 not emitted into the atmosphere avoids essentially permanent climate change on centennial time scales."[23] Likewise, sequestration that is precluded by a project such as this one means that carbon that would have been sequestered in the near term will not be, and that "could result in substantially higher costs of stabilizing CO2 concentrations."[24] In short, it is undoubtedly preferable to remove a given unit of carbon in Year 1 rather than in Year 4, or Year 15, and so on, when it has wrought much more damage.[25]

O'Hare 2009 also explains the importance of accounting for the temporal aspects of GHG impacts:

> In life cycle assessment (LCA), emissions of pollutants are typically summed without regard for when or where these emissions occur. For well-mixed greenhouse gases, it is appropriate to ignore the location of the emissions, as these are global pollutants However, for long-lived pollutants, summing emissions over time masks potentially important differences among processes, especially if effects are measured at a fixed target date. In these situations, early emissions are in the environment longer relative to the target date, and thus cause greater environmental damage.

The best available scientific evidence now indicates that a warming of 2°C is not "safe" and would not prevent dangerous interference with the climate system. In order to avoid dangerous anthropogenic interference (DAI) with the climate system, sound climate analysis must minimize the risk of severe and irreversible outcomes. Stabilizing greenhouse gas emissions at 350 ppm CO2eq would reduce the mean probability of overshooting a 2°C temperature rise to 7 percent. A 350 ppm CO2eq stabilization level is also consistent with that proposed by leading climatologists, who have concluded that in order "to preserve a planet for future generations similar to that in which civilization developed and to which life on Earth is adapted . . . CO2 will need to be reduced from its current 385 ppm to at most 350 ppm."[26] While current CO2 levels exceed 350 ppm, a pathway toward 350 ppm is possible though the rapid phase-out of coal

[23] 74 Fed. Reg. 49589

[24] 74 Fed. Reg. 49613

[25] Numerous studies support the conclusion that delay in GHG emission reductions causes increasing damages. *See, e.g.*, Hans J. Schellnhuber et. al, , *Solving the Climate Dilemma: The Budget Approach,* German Advisory Council on Global Change 15 (2009), *available at* http://www.wbgu.de/wbgu_sn2009_en.html (delay will result in almost unachievable reduction requirements); Sir Nicholas Stern, *Stern Review on the Economics of Climate Change* xvii, Cambridge University Press (2006), available at http://www.sternreview.org.uk (last visited November 15, 2009) ("[t]he social cost of carbon is likely to increase steadily over time because marginal damages increase with the stock of GHGs in the atmosphere, an that stock rises over time"); Myles Allen et al., *The Exit Strategy*, Nature Reports Vol 3 (May 2009), *available at* www.nature.com/reports/climatechange (later GHG emission reductions are more risky, expensive and disruptive than earlier reductions).

[26] Hansen, J. et al., *Target Atmospheric CO2: Where Should Humanity Aim?* Open Atmospheric Sci. J. 217, 226 (2008)

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emissions, improved agricultural and forestry practices, and possible future capture of CO2 from biomass power plants.[27] Time is of the essence when addressing GHG emissions, and therefore, timing must be properly considered and accounted for when determining and addressing the GHG impcts associated with a project. Here, timing must be properly considered and accounted for when determining and addressing the impacts associated with the loss of 154 acres of forest. Carbon sequestration foregone, especially in the short term, and carbon emitted, especially in the short term, is significant, and the DEIR fails to adequately address that fact.

III. THE DEIR MUST ADEQUATELY IDENTIFY AND QUANTIFY ALL GREENHOUSE GAS IMPACTS ASSOCIATED WITH THE PROJECT

37-15

The removal of a forest in the name of conversion results in the direct loss of that forest's carbon as well as a loss of future carbon sequestration by that forest. In addition, there is also loss of carbon from a) soil disturbance, b) loss of understory, c) loss of litter, debris, and downed wood, d) burning or decay of leftover slash material, and e) emissions associated with the conversion/logging (e.g., gray emissions). All of these impacts must be quantified in order to do an accurate assessment of the carbon implications of the loss of 154 acres of forest.

37-16

The DEIR must provide calculations for the lost sequestration of the cut-down forest which here is a redwood/Douglas fir forest.[28] Just as importantly, when doing the calculations the DEIR must rely on the existing environmental conditions, not a hypothetical "business as usual" baseline. As explicitly admitted in the DEIR, this Project is attempting to avoid its GHG responsibilities by estimating "the difference between business as usual activities under current use for timber management and the effects of conversion . . . ."[29] The DEIR similarly states, "[t]he 'No Project – Timber Resource Management' analysis shows the amount of carbon sequestered in the 305 acres of forestland area (on the entire 324 acre property) if the conversion were not to occur and a periodic harvest be conducted as was the case in the past (i.e. business as usual)."[30]

[27] *Id.*

[28] This is especially true given that redwood trees "are famous for their enormous stocks of standing biomass and represent perhaps the most massive forests, per unit area, on earth. Measurements of old-growth (>200 years) redwood stands have yielded standing carbon stocks ranging from 1,650 to 1,784 t C equivalent per ha (Hallin, 1934, Westman and Whittaker, 1975, and Fujimori, 1977). Equally impressive is the rate at which carbon is sequestered in growing redwood stands. A 100 year old redwood stand measured by Olson et al (1990) yielded 3,600 cubic meters per ha, equivalent to 648 t C per ha (at specific gravity 0.36 g oven dry biomass/cm3 for second-growth redwood (Markwardt and Wilson, 1935)), or a mean annual carbon increment of 6.48 t C per ha per year." *Winrock International. Measuring and Monitoring Plans for Baseline Development and Estimation of Carbon Benefits for Change in Forest Management in Two Regions, March 2004. Accessed at http://www.energy.ca.gov/reports/CEC-500-2004-070/CEC-500-2004-070F.PDF on July 25, 2009.*
See also Figures 34, 40, 41and Tables 24, 25, 29 in Christensen, Glenn A.; Campbell, Sally J.; Fried, Jeremy S., tech. eds. 2008. California's forest resources, 2001–2005: five-year Forest Inventory and Analysis report. Gen. Tech. Rep. PNW-GTR-763. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 183 p.

[29] DEIR at 4-1

[30] DEIR at 4-3

Letter 37 Cont'd

37-16 cont'd

The "environmental setting" of a conversion—specifically, the physical environmental conditions in the area where the conversion will take place—is the "baseline physical conditions" against which Cal Fire must measure the significance of the conversion's effects.[31] As noted in Guideline 15064.4, in reaching a significance determination, "a lead agency should consider . . . [t]he extent to which the project may increase or reduce greenhouse gas emissions *as compared to the existing environmental setting* . . . ." ([emphasis added].) The Final Statement of Reasons for the CEQA GHG Guidelines explains further: "[15064.4(b)'s] reference to the 'existing environmental setting' reflects existing law requiring that impacts be compared to the environment as it currently exists."[32]

The problem with the DEIR's approach is that it masks the actual impacts of the Project. That is why, as many California courts have explained, a "business as usual" approach can not be used in place of "existing environmental conditions." The Supreme Court recently affirmed "a long line of Court of Appeal decisions" holding "that the impacts of a proposed project are ordinarily to be compared to the actual environmental conditions existing at the time of CEQA analysis, rather than to allowable conditions defined by a plan or regulatory framework."[33] As summarized in one of the appellate decisions cited with approval by the Supreme Court, the impacts of a project must be compared to "real conditions on the ground," not "hypothetical situations."[34]

Many of the Court of Appeal decisions affirmed by the Supreme Court are further instructive on this point. For example, in *Woodward Park Homeowners Ass'n v. City of Fresno* (2007) 150 Cal.App.4th 683, the Court held that an EIR for a development project was faulty because its "bottom-line conclusions" emphasized the minimal difference between the proposed project and a hypothetical project that could be built under the city's general plan, rather than the much greater difference between the project and the presently "vacant lot" where it would be built.[35] A CEQA document that compares a project's impacts to "hypothetical conditions contemplated by [an] existing plan and not with actual existing physical conditions . . . can only mislead the public as to the reality of the impacts and subvert full consideration of the actual environmental impacts which would result."[36]

Here, as in *Woodward Park* and the other cases affirmed by the Supreme Court in *Communities for a Better Environment*, the Project's' reliance on so-called business as usual

[31] CEQA Guidelines, § 15125, subd. (a)

[32] California Natural Resources Agency, Final Statement of Reasons for Regulatory Action, Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB 97 (Dec. 2009) at 24, *available at* http://ceres.ca.gov/ceqa/guidelines/)

[33] *Communities for a Better Env't v. S. Coast Air Quality Mgmt. Dist.* (2010) 48 Cal.4th 310, 321

[34] *Save Our Peninsula Committee v. Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 121

[35] *Id.* at 707-09; *accord City of Carmel-by-the-Sea v. Bd. of Supervisors* (1986) 183 Cal.App.3d 229, 246–247; *Envtl. Planning & Info. Council v. County of El Dorado* (1982) 131 Cal.App.3d 350, 354, 357–358

[36] *Woodward Park*, 150 Cal.App.4th at 709

Letter 37 Cont'd

serves only to mislead the public and decision-makers about the conversion's real impacts. Indeed, this is exactly the type of illusory and misleading comparison that the Supreme Court has found to be "at direct odds with CEQA's intent."[37] Thus, until the DEIR is corrected, and calculations and their associated conclusions are all based on the existing environmental conclusions, the DEIR will fail as a matter of law.

37-16 cont'd

Not only does the Project DEIR violate CEQA's intent by relying on a "business as usual" approach instead of existing environmental conditions, the DEIR does not even provide any basis to support what it puts forth as "business as usual." No documentation whatsoever is provided on which to base the "business as usual" logging and associated sequestration rates. In other words, the DEIR offers no documentation to show that there is currently an approved timber harvest program on the project site that would lead to a sequestration rate of .468 for the current site. Nor does the DEIR provide any documentation to demonstrate that such an approved harvest program is in fact being implemented. Consequently, the proposed .468 sequestration rate has no basis in reality.

37-17

The proper approach would be to acknowledge, as the DEIR in fact does (but crosses out) on page 4-1, that "[o]nsite vegetation is largely composed of second-growth forest; therefore, the reforestation sequestration rates currently apply." That means of course that the .468 rate should be dropped from the DEIR and the sequestration rate of 1.73 that is provided for a regenerating/growing forest should apply to the forested area—all 305 acres—because that is the rate that represents the existing environmental conditions (if in fact the 1.73 is accurate). Once these existing environmental conditions are properly acknowledged, it becomes plain that the "reserve" area will not actually do what the DEIR wants it to do – it will not make up for the loss of the converted site (154 acres) as the DEIR asserts in order to reach its conclusion of insignificant GHG impacts.[38] Again, if the 154 acres area is not converted, it would continue to sequester carbon and that is what must be properly addressed. There is a vast difference between the sequestration capacity of a young to middle aged redwood forest and the sequestration capacity of a vineyard and that difference has thus far been ignored under an improper "business as usual" approach. In short, the so-called "reserve" is not a viable means for addressing the GHG impacts of the 154 acre conversion, and therefore, the DEIR plainly violates CEQA because it does appropriately identify and quantify the GHG impacts associated with the Project.

37-18

The DEIR also fails to properly explain some of the information it presents regarding carbon sources. For instance, the DEIR asserts that "since the project area is considerably less stocked and younger on average than the average stand estimated by the FIA data, we have assumed that the standing dead and lying dead pools are 30 to 40 percent of those predicted by FIA, or 2 Mg C per acre (i.e., 0.3 * 6.42) and 4 Mg C per acre (0.4 * 10.27) respectively. The percentages of total carbon for the other pools were then adjusted slightly to account for these changes."[39] This

37-19

[37] *Communities for a Better Env't*, 48 Cal.4th at 322

[38] DEIR at 4-22 ("the proposed project would have a less than- significant impact on climate change")

[39] DEIR at 4-4

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37-19 cont'd assertion has no basis in fact. The standing dead and lying dead carbon pools are based on past history of the site, not the current standing tree stocks.

Similarly, in regard to soil, the DEIR states that "[b]ecause deep ripping is not proposed as part of this project, impacts to mineral carbon would be minimal."[40] "For this analysis, it is estimated that 25% of the soil carbon will be lost following conversion, which amounts to a slightly higher estimate of carbon loss than would be indicated by Murty et. al."[41] These are unjustified assertions. Murty et al 2002 investigated soil carbon levels in forests compared to established agricultural pasture lands. It did not look at vineyards or orchards, and did not attempt to characterize immediate carbon losses associated with forest clearing. Rather, it looked at soil carbon levels after multiple seasons of growth, tilling, and sequestration in agricultural pasture lands. This is not applicable to the Project, and fails entirely to account for immediate emissions associated with forest clearing. A recent review of the scientific literature written for the Climate Action Reserve titled "Accounting for Carbon in Soils" states,

37-20

> The most important factor for soil carbon content appears to be sampling time after harvest . . . . Yet a review of multiple studies that examined temporal dynamics after harvest reports that initially, soil carbon declines almost universally regardless of harvest type, by as much as 40%. However, within 40-60 years, depending on the dominant tree species, there is a return to previous soil carbon levels, with higher productivity forests returning quicker than low-productivity northern forests and forests that are found on nutrient-poor soils (Yanai et al., 2003). These results suggest that systems with rotation lengths of less than 50 years are likely to become net sources of carbon.
>
> From the range of studies examined, we see that potential declines in soil carbon following harvest can be as high as 60%.[42]

In this case, there is no rotation length, as the trees will not regenerate under the Project, and the emissions are not going to be offset by the annual input of forest litter and decomposing trees that would occur in an existing forest.

37-21 Finally, in regard to understory, the DEIR asserts that "The CAL FIRE GHG Calculator estimates losses from the live tree carbon pool >8" DBH, as well as approximately 2 Mg C of carbon losses from understory vegetation (understory and live tree <8" DBH pools from Table 4-5 above) removed as a part of site preparation. The CAL FIRE GHG Calculator thus already accounts for approximately 48% of the potential losses from the understory and live tree <8" carbon pools"[43]; "Because the CAL FIRE GHG Calculator already accounts for 48% of the

[40] DEIR at 4-5

[41] DEIR 4-6

[42] CAR at 23, 36

[43] DEIR at 4-5

Letter 37 Cont'd

potential losses from the understory and live tree < 8" DBH pools, these pools are only reduced by 52% in Table 4-6."[44] The DEIR is confusing and comparing two estimates from different sources, using differing and overlapping definitions of these carbon pools, and is largely dismissing the emissions as a result. The DEIR thus improperly uses and merges portions of disparate non-comparable regional FIA averages. Rather than arbitrarily prorating the estimates of these carbon pools from region-wide averages, the DEIR should provide estimates based on the characteristics of the actual site.

37-21 cont'd

IV. THE DEIR MUST ANALYZE AND ADOPT ALL FEASIBLE MITIGATION MEASURES AND ALTERNATIVES TO REDUCE ITS CARBON IMPACT

In order to comply with CEQA, CAL FIRE "must determine whether any of the possible significant environmental impacts of the project will, in fact, be significant."[45] A major deficiency of the DEIR is its failure to properly acknowledge and discuss a) what will be foregone as a result of the loss of 154 acres of forest, and b) what will be emitted as a result of the loss of 154 acres of forest. While the DEIR does provide calculations which show that carbon sequestration will be severely diminished, and that there will be serious impacts as a result of the Project, the DEIR then fails to take the next logical step of avoiding and/or mitigating for this significant impact. Instead, with almost no explanation, the DEIR asserts that its GHG impacts are insignificant. As explained above, that conclusion is without merit, and therefore, the DEIR is unlawful.

37-22

Even by its own calculations, the DEIR shows that the Project would result in significant GHG impacts. The DEIR's calculations demonstrate that foregone sequestration will be substantial – if left alone, the forest area being proposed for conversion would sequester at a rate of 1.73.[46] The vineyard on the other hand is much much lower—see table 4-7. Moreover, the DEIR notes that significant carbon will be emitted from vehicles as a result of the Project.[47] Together, this means that by the DEIR's own findings, this Project would result in substantial loss of the area's sequestration capabilities as well as substantial GHG emissions as a result of vehicles, etc. Finally, the GHG impacts would be even more serious if the DEIR adequately addressed soil, understory, and other carbon pools as explained above.

37-23

The DEIR concludes that "in the context of statewide, nationwide, or global emissions, and considering the carbon sequestration that would continue to occur once the vineyards are planted, the proposed project's incremental contribution … would not be cumulatively considerable. Therefore, the proposed project would have a ***less-than-significant*** impact on climate change."[48] This makes no sense given that the project will indeed lead to substantially diminished

37-24

[44] DEIR at 4-6

[45] *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal. App. 4th 1099, 1109

[46] *See* DEIR Table 4-3

[47] *See* DEIR 4-13, 4-16

[48] DEIR at 4-17 (emphasis in original)

Letter 37 Cont'd

37-24 cont'd

sequestration as well as greater GHG emissions than would occur absent the Project. Again, with GHG impacts, even small impacts are significant from a cumulative perspective in light of the very serious nature of the issue – millions of sources are combining to create the GHG problem and while some are small and some are large, all are significant because they each further intensify the problem. Thus, any source that adds to the problem is significant because at this point in time, reductions are urgently necessary. Regardless, conversion, by definition, means the complete loss of a forest – there is no greater impact than that and therefore any conversion must be avoided or mitigated.

37-25

The DEIR exacerbates its GHG problems by failing to explain how it determined its GHG significance threshold. Simply stating that "in the context of statewide, nationwide, or global emissions, and considering the carbon sequestration that would continue to occur once the vineyards are planted, the proposed project's incremental contribution … would not be cumulatively considerable" falls far short of CEQA's mandate. As already discussed, projects cannot, as this DEIR attempts to do, hide behind the fact that their GHG impacts are individually small when examined "in the context of statewide, nationwide, or global emissions." On the contrary, a cumulative impacts analysis under CEQA demands that even very small impacts be considered significant, and hence, mitigated, if they are further contributing to an already serious problem as is the situation with GHGs. Again, climate change is likely *the* most pressing cumulative impacts problem of our time – emissions from numerous sources are combining to create a dire situation, and if each small source was allowed to hide behind claims of "de minimis" impacts, the problem would go unsolved. This is why courts have consistently rejected the notion that the incremental impact of a project is not cumulatively considerable when it is so small that it would make only a *de minimis* contribution to the problem as a whole.[49] Moreover, CEQA, requires agencies to determine the significance of the DEIR's impacts with or without established significance thresholds. As noted in the CAPCOA white paper on CEQA and Climate Change, "[t]he absence of a threshold does not in any way relieve agencies of their obligations to address GHG emissions from projects under CEQA."[50]

37-26

The failure to immediately and drastically reduce emissions from existing levels will result in profound and devastating consequences for the economy, public health, natural resources, and the environment. Consequently, only thresholds that are highly effective at reducing emissions from new projects will ensure that new projects do not have significant cumulative effects on global warming. The California Global Warming Solutions Act of 2006 (AB 32) recognized that "global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California" and required that existing levels of greenhouse gases be reduced to 1990 levels by 2020.[51] AB 32 establishes that existing greenhouse gas

[49] *See, e.g., Communities for a Better Env't v. California Resources Agency* (2002) 103 Cal.App.4th 98, 117

[50] CAPCOA 2008 at 23. *See also* OPR Technical Advisory document, p. 4 ("Even in the absence of clearly defined thresholds [of significance] for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact.")

[51] Health & Safety Code §§ 38501(a), 38550

Letter 37 Cont'd

37-26 cont'd

levels are unacceptable and must be substantially reduced within a fixed timeframe. Put another way, any additional emissions that contribute to existing levels will frustrate California's ability to meet its ambitious and critical emissions reduction mandate. Thus, in order to account for the fact that any additional emissions are problematic, CAL FIRE should adopt a zero significance threshold for any Project's greenhouse gas emissions. As stated in *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review*, from the Governor's Office of Planning and Research:

> When assessing whether a Project's effects on climate change are cumulatively considerable, even though its GHG contribution may be individually limited, the lead agency must consider the impact of the project when viewed in connection with the effects of past, current, and probable future projects . . . . Lead agencies should not dismiss a proposed project's direct and/or indirect climate change impacts without careful consideration, supported by substantial evidence. Documentation of available information and analysis should be provided for any project that may significantly contribute new GHG emissions, either individually or cumulatively, directly or indirectly (e.g., transportation impacts).[52]

Regardless of whether a zero threshold is adopted, the fact remains that even by its own calculations, this Project's impacts are severe in light of the lost sequestration; hence, while the impacts may be small "in the context of statewide, nationwide, or global emissions," they are still cumulatively significant.

37-27

The failure to recognize the cumulatively significant GHG impacts from this Project directly leads to the failure to consider feasible alternatives and mitigation measures to reduce this cumulatively significant impact. CEQA requires that agencies "mitigate or avoid the significant effects on the environment of projects that it carries out or approves whenever it is feasible to do so."[53] A rigorous analysis of reasonable alternatives to the project must be analyzed to comply with this strict mandate. "Without meaningful analysis of alternatives in the EIR, neither courts nor the public can fulfill their proper roles in the CEQA process."[54] Moreover, "[a] potential alternative should not be excluded from consideration merely because it would impede to some degree the attainment of the project objectives, or would be more costly."[55] An analysis of alternatives should also quantify the estimated greenhouse gas emissions resulting from each proposed alternative.

Here, the DEIR neglects to discuss "at least one alternative that would ensure that the [agency] contributes to a lower-carbon future." Potential alternatives include one that would not result in

[52] *See also Communities for Better Env't v. California Resources Agency* (2002) 103 Cal. App. 4th 98, 120 ("the greater the existing environmental problems are, the lower the threshold for treating a project's contribution to cumulative impacts as significant")

[53] Pub. Res. Code § 21002.1(b)

[54] *Laurel Heights Improvement Ass'n v. Regents of University of California* (1988) 47 Cal.3d 376, 404

[55] *Save Round Valley Alliance v. County of Inyo* (2007) 157 Cal.App.4th 1437, 1456-57 (quotations omitted)

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37-27 cont'd

conversion of existing forest or would result in much less conversion.[56] A recent court decision also makes clear that just because a project proponent wishes to proceed under a certain scenario does not mean the CEQA analysis must accommodate that desire. Rather, feasible alternatives must be considered regardless of the project proponent's position on the alternatives. For instance, in *Preservation Action Council v City of San Jose* (2006) 141 Cal .App. 4th 1355, the defendant relied heavily on the real parties' project objectives in order to reject an alternative. The court found that "the project objectives in the DEIR appear unnecessarily restrictive and inflexible."[57] "[T]he willingness of the applicant to accept a feasible alternative . . . is no more relevant than the financial ability of the applicant to complete the alternative. To define feasible [in such fashion] would render CEQA meaningless."[58] This same principle was reiterated in *Save Round Valley Alliance v. County of Inyo* (2007) 157 Cal. App. 4th 1437, 1460, where the court found that "the willingness or unwillingness of a project proponent to accept an otherwise feasible alternative is not a relevant consideration." This was so despite the project proponent's explicit unwillingness to accept a proposed alternative.[59] The Court found that the alternative should have been analyzed regardless, and noted that an "applicant's feeling about an alternative cannot substitute for the required facts and independent reasoning."[60] Thus, CAL FIRE has an obligation to assess a lower carbon alternative. This is also necessary in order to allow for informed decision-making. In the words of the *Save Round Valley* Court, "the agency preparing the EIR may not simply accept the proponent's assertions about an alternative."[61] Consequently, thus far, the DEIR's analysis of alternatives is deficient.

37-28

In addition to thoroughly evaluating project alternatives, "the EIR must propose and describe mitigation measures that will minimize the significant environmental effects that the EIR has identified."[62] Mitigation of a project's significant impacts is one of the "most important" functions of CEQA.[63] Importantly, mitigation measures must be "fully enforceable through permit conditions, agreements, or other measures" so "that feasible mitigation measures will actually be implemented as a condition of development."[64]

[56] The DEIR does include an alternative that would result in less conversion than the proposed Project. However, there is no discussion whatsoever of how this alternative would avoid or mitigate GHG impacts. Until such a discussion is included, the DEIR's alternatives are inadequate from a GHG perspective.

[57] *Id.* at 1360

[58] *Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 601

[59] *Id.*

[60] *Id.* at 1458, quoting *Preservation Action Council,* 141Cal.App.4th at 1356

[61] *Id.* at 1460

[62] *Napa Citizens for Honest Gov't v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 360

[63] *Sierra Club v. Gilroy City Council* (1990) 222 Cal.App.3d 30, 41

[64] *Federation of Hillside & Canyon Ass'ns v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1261

**Letter 37
Cont'd**

37-29

In sum, there is simply no escaping the need for immediate GHG reductions and the DEIR offers no alternatives or mitigation for its substantial GHG impacts. A vineyard, as even the DEIR admits in its calculations, is far different than a redwood forest in regard to sequestration capacity and therefore it is obvious that this Project will not only lead to significant emissions in terms of carbon lost from the cut, but will also lead to a significant loss of sequestration capacity. Therefore, until the DEIR acknowledges the significance of its GHG impacts and appropriately avoids or mitigates them, this Project will be in violation of CEQA.

CONCLUSION

The Fairfax DEIR must be revised in light of its deficiencies. Until all issues discussed above are adequately addressed and the DEIR re-circulated for comments, the proposed harvest is unlawful.

Thank you for your consideration of these comments. Please contact us if you have any questions.

Sincerely,

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