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January 9, 2015

By Mail and Email

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Attachments and reference documents not included due to volume, but are available for review, or purchase, at the Santa Rosa Forest Practice Office.

Re: Timber Harvest Plan 1-14-080 MEN (Railroad Gulch)

Dear CalFire:

This office represents Forest Preservation Society (FPS), a non-profit corporation formed to protect forest ecosystems. FPS objects to approval of this THP for the reasons set forth below.

This letter attaches and incorporates by reference three letter reports prepared by consultants I retained: Richard Tanner regarding impacts on Northern Spotted Owl (Exhibit 1), Robert Curry regarding impacts of increased peak flows (Exhibit 7), and Tom Amesbury regarding GHG impacts (Exhibit 16).

1. Northern Spotted Owl.

a. Cumulative impacts.

The THP's discussion of impacts on NSO is set forth in two places. At pages 46-49, the THP discusses the measures employed to avoid "take," to protect owl activity centers, and required disturbance measures in the breeding and non-breeding seasons for purposes of complying with Rules 919.9 and 919.10. At pages 136-137, the THP discusses potential cumulative impacts on this species, but does so entirely in terms of whether the THP will cause "take" of NSO and whether the THP complies with MRC's Spotted Owl Resource Plan ("SORP") and its Planning Agreement ("PA") with CDFW. The SORP and PA specify surveys protocols, measures employed to protect owl activity centers, and required disturbance measures in the breeding and non-breeding seasons.

Since NSO is listed as "threatened" under the federal Endangered Species Act. Use of the word "take" in the THP and in Rules 919.9 and 919.10 has the same meaning it has under the federal ESA. (Rule 895.1 [""Take' for federally listed species means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct as stated in 16

United States Code 1532(19)"].) In addition, Rule 919.10 provides additional criteria for CalFire to use when determining whether a THP will cause "take."

However, the THP's focus on avoiding "take" and complying with the quantitative activity center buffers and disturbance measures does not constitute a legally adequate assessment of the cumulative impacts of the THP on this species. CEQA defines "Significant effect on the environment" to mean "a substantial, or potentially substantial, adverse change in the environment." (Public Resources Code section 21068 (emphasis added).) As stated by owl biologist Richard Tanner, in his letter report (Exhibit 1):

> MRC's position appears to be that if these same habitat retention guidelines are maintained across all THPs (and NTMPs), there will be no cumulative effects issues because there will be no take of an individual NSO. With regard to CEQA and cumulative impacts, I believe the more appropriate question is not whether a take will occur but whether timber harvesting in the BAA has or will cause cumulatively considerable impacts to the NSO.

Exhibit 1, p. 4.) Mr. Tanner's report demonstrates how the THP fails to present significant, crucial information regarding the existing environmental setting that is necessary to evaluate whether this THP will have a significant cumulative effect on NSO.

For example, the THP describes the amount and type of owl habitat (e.g., nesting, foraging, and suitable) that will be lost as a result of this THP (THP p. 330), and a list of past timber harvest plans in the biological assessment area (BAA) in the previous ten10 years. (THP pp. 126, 161, 330). But the THP does not provide any information regarding the cumulative loss of owl habitat in the area to which this THP will add. Nor does the THP otherwise utilize any of this information in its assessment of the THP's cumulative effects on NSO.

Mr. Tanner's investigation reveals that of the 1,283 total acres in the BAA, this harvest will bring NSO habitat losses in the last 10 years to 345 acres of NSO nesting habitat and 246 acres of NSO suitable. In other words, in this 10-year period, 26% of the total acreage in the BAA will have been converted from NSO nesting habitat to non-nesting habitat and 19% of the total acreage in the BAA will have been converted from suitable NSO habitat to unsuitable habitat. Further, 57% of this loss of nesting habitat, and 66% of this loss of suitable habitat is attributable to this *one* THP.

In another example, Mr. Tanner observes that there are a number of other important NSO "stressors" in the environmental setting, including drought, increasing populations of barred owls (a competitor and predator to NSO), and the use of rodenticides by marijuana growers in the region, that may be contributing to adverse effects on NSO.

The case law interpreting CEQA holds that: "In the end, the greater the existing environmental problems are, the lower the threshold should be for treating a project's contribution

to cumulative impacts as significant." *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 120, as modified (Nov. 21, 2002) (emphasis added).

Here, the NSO is listed as threatened, which means the "existing environmental problem" is severe. This THP will reduce NSO nesting habitat at a time when it is already experiencing a decline in nesting success. As a result, Mr. Tanner concludes: "This habitat loss, in combination with the cumulative impacts of all of the environmental stressors present, creates a potentially substantial threat to the NSO." (Exhibit 1, p. 5.)

In short, the THP fails to present a legally required assessment of this THP's cumulative effects on NSO.

Further, MRC's own research indicates that:

> A recent meta-analysis of demographic data from 11 study areas indicates the northern spotted owl is declining at an annual rate of 2.9% over its entire range. The strength of this population decline, however, is strongest in the north and weakens southward through the range (Forsman et al. 2011). In northwestern California, results from two of three demographic study areas show consistent pattern of declining fecundity, apparent survival, and finite rate of population change (Forsman et al. 2011). Although the potential causes differ by study area, the only study from the redwood region indicated that declining trends in both apparent survival and fecundity were influenced by the increasing presence of barred owls (Strix varia). While the maintenance and growth of habitat is still a key aspect to spotted owl conservation (Dugger et al. 2011), competition from the barred owl has been identified as the single-most pressing threat to the continued existence of the northern spotted owl throughout its entire range (USFWS 2011).

(Exhibit 2, Northern Spotted Owl Conservation and Management on Mendocino Redwood Company Forestlands, February 14, 2014, p. 2) This report also notes that:

> The increasing density of barred owls is a particular concern in northwestern California where several timberland owners have spent millions of dollars and devoted substantial amounts of time negotiating conservation agreements covering the spotted owl (Mendocino Redwood Company 2011; Humboldt Redwood Company 2012). These agreements have explicit spotted owl population objectives (based on occupancy and reproduction) that must be met annually in order for specific management activities to occur. This not only guarantees some level of certainty as to how landowners will be regulated, but also increases spotted owl conservation by focusing on populations across large areas. An increasing population of barred owls on these landscapes could result in a failure to meet population objectives, and thus, unexpectedly trigger additional regulations and costs for

> landowners, despite an overall higher level of spotted owl protection, habitat retention, and habitat growth. The prospect of such a failure provides impetus for landowners to study this issue before it has the opportunity to undermine the significant effort and long-range planning put into these conservation plans.

(Exhibit 2, p. 23.) Perhaps most striking is the vast increase in the number of northern spotted owl territories with barred detections within one-mile by year since 2005 on MRC lands as shown in Figure 14 of Exhibit 2.

It is known that logging of old-growth forests in the Pacific Northwest has given the barred owl access to previously un-colonized forests, enabling this species to vastly extend its range, in the last several decades, into the NSO's historic range. It now appears that MRC's entire NSO preservation management strategy, designed to retain habitat structural elements near NSO "activity centers," is unintentionally providing opportunities for barred owls to move into NSO territories and displace resident NSOs.

Since this strategy is not working, it is time to pause and reevaluate, and to stop converting NSO nesting habitat.

2. Threatened and Impaired Watershed Rules.

Forest Practice Rule 916.9 applies to "Watersheds with listed anadromous salmonids." "'Watersheds with listed anadromous salmonids' means any planning watershed where populations of anadromous salmonids that are listed as threatened, endangered, or candidate under the State or Federal Endangered Species Acts, are currently present or can be restored."

The THP does not directly state whether the Albion River meets this definition, but it notes that "fish species potentially impacted are steelhead, Chinook and Coho salmon." (THP p. 41.) It also contains a Streambed Alteration Agreement with CDFW for a previous THP in the area which finds the Albion River has coho salmon and steelhead. (THP p. 73.) Finally, CDFW's PHI report says:

> The Albion and its tributaries support steel head trout (0. mykiss irideus) and coho salmon (0. kisutch). The National Marine Fisheries Service listed coho as "endangered" and steelhead trout as "threatened" pursuant to the Federal Endangered Species Act (ESA). Further, the California Fish and Game Commission listed coho salmon as "endangered" pursuant to the California Endangered Species Act (CESA). Because the THP is located in a state planning watershed with populations of anadromous salmonids listed as threatened or endangered under ESA or CESA, the THP is subject to the "Anadromous Salmonid Protection Rules" (Title 14, California Code of Regulations, Section [14 CCR] 916.9).

(CDFW Report, pp. 3-4.) Therefore, the THP is required to meet the requirements of Rule 916.9.

Remarkably, this THP does not include any effort to comply with Rule 916.9.

a. Rule 916.9(b).

Subdivision (b) of Rule 916.9 provides:

Pre-plan adverse cumulative watershed effects - Pre-plan adverse cumulative watershed effects on the populations and habitat of anadromous salmonids shall be considered. The plan shall specifically acknowledge or refute that such effects exist.

The THP fails to include this required discussion.

b. Rule 916.9(f)(1)(E).

Subdivision (f)(1)(E) of Rule 916.9 provides:

"Documentation of how proposed harvesting in the WLPZ contributes to the objectives of each zone stated in 14 CCR § 916.9 [936.9, 956.9], subsection (c) and other goals in 14 CCR § 916.9 [936.9, 956.9], subsection (a)(1)-(8). Documentation shall include the examinations, analysis, and other requirements listed in 14 CCR § 916.4 [936.4, 956.4], subsection (a)."

Rule 916.4 provides:

(a) The RPF or supervised designee shall conduct a field examination of all lakes and watercourses and shall map all lakes and watercourses which contain or conduct Class I, II, III or IV waters.
(1) As part of this field examination, the RPF or supervised designee shall evaluate areas near, and areas with the potential to directly impact, watercourses and lakes for sensitive conditions including, but not limited to, existing and proposed roads, skidtrails and landings, unstable and erodible watercourse banks, unstable upslope areas, debris, jam potential, inadequate flow capacity, changeable channels, overflow channels, flood prone areas, and riparian zones wherein the values set forth in 14 CCR §§ 916.4(b) [936.4(b), 956.4(b)] are impaired. The RPF shall consider these conditions, and those measures needed to maintain, and restore to the extent feasible, the functions set forth in 14 CCR §§ 916.4(b) [936.4(b), 956.4(b)], when proposing WLPZ widths and protection measures. The plan shall identify such conditions, including where they may interact with proposed timber operations, that individually or cumulatively significantly and adversely affect the beneficial uses of water, and shall describe measures to protect and restore to the extent feasible, the beneficial

uses of water. In proposing, reviewing, and approving such measures, preference shall be given to measures that are on-site, or to offsite measures where sites are located to maximize the benefits to the impacted portion of a watercourse or lake.
(2) As part of this field examination, the RPF or supervised designee shall map the location of spawning and rearing habitat for anadromous salmonids, and the condition of the habitat shall be evaluated using habitat typing that at a minimum identifies the pool, flatwater, and riffle percentages. The opportunity for habitat restoration shall be described within the plan for each Class I watercourse, and for each Class II watercourse that can be feasibly restored to a Class I.
(3) The mapping of conditions identified in subsection (a)(1) and (a)(2) above, and their protective measures, shall be sufficiently clear and detailed to permit the Director and the other review team representatives to evaluate the potential environmental impacts of timber operations, the proposed mitigation measures and the proposed restoration measures.
(4) The mapping of conditions identified in subsection (a)(1) and (a)(2) above, and their protective measures, shall be sufficiently clear and detailed to provide direction and clear guidance to the timber operator.
(5) The mapping of conditions identified in 14 CCR § 916.4 [936.4, 956.4] subsections (a)(1) and (a)(2), and their protective and restoration measures, should be done at a scale of 1:2,400. In site-specific cases, the mapping of critical locations of corrective work and logging operation impacts shall be done at a scale of at least 1:240 when the Director determines it is necessary to evaluate the plan.
(6) One set of photocopies of recent stereo aerial photographs of the plan area may be required by the Director.

The THP fails to include the discussions required by Rule 916.9(f)(1)(E) or "the examinations, analysis, and other requirements listed in 14 CCR § 916.4."

c. Class II-L WLPZ Rules.

The THP incorrectly measures the widths of the Class II-L Core and Inner WLPZ zones. Under Rule 916.9(g)(2)(A) and Table 4, the Core Zone must be at least 30-feet wide measured from the "watercourse or lake transition line." Under Rule 916.9(g)(2)(B), the Inner Zone must be at least 70-feet wide measured from the landward edge of the Core Zone.

This THP defines the Inner Zone as the area within 75-feet of the "Watercourse and Lake Transition Line. (THP p. 27.) Therefore, the THP's designation of the Inner Zone is 25-feet too narrow.

Rule 916.9(g)(2)(B)2(iii) requires 80% overstory canopy retention in the Inner Zone (i.e., within 100-feet) of Class II-L streams. The THP violates this rule because it allows 50% canopy retention between 75 and 100-feet measured from the "watercourse or lake transition line."

Under Rule 916.9(v)(2), the procedure for deviating below 80% overstory canopy retention in the Inner Zone is either (1) provide a detailed evaluation of the beneficial functions of the actual riparian zone at issue (i.e., not a generic discussion of riparian zone function) and show how the deviation contributes to those functions; or (2) "obtain written concurrence from DFG prior to plan submittal." The THP contains neither the required evaluation nor DFG's prior "written concurrence."

d. The Albion River Sediment TMDL.

Rule 916.9(a)(1) requires that "every timber operation shall be planned and conducted to: (1) Comply with the terms of a Total Maximum Daily Load (TMDL)."

In 2006, the State Water Resources Control Board and U.S. EPA identified the Albion River as "impaired" by sediment pollution under section 303(d) of the Clean Water Act, finding:

> "Based on the readily available information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination in the Water Quality Limited Segments Being Addressed portion of the Section 303(d) List."

(Exhibit 3, p. 10.) In 2001, the U.S. EPA adopted a sediment TMDL for the Albion River. (See Exhibit 4.)

The THP does not describe how or whether the THP complies with this adopted TMDL, in violation of Rule 916.9(a)(1).

e. References to the MRC Planning Agreement with DFW do not cure these violations.

The THP states "(see MRC Planning Agreement with DFW, 1.1.2)." (THP p. 27.) Regardless of what MRC's Planning Agreement with DFW says, this vague reference cannot substitute for full disclosure, in the THP, of the timber operations' compliance with the Forest Practice Rules discussed above.

CalFire's regulation of timber harvesting operations is certified by the Secretary of Resources as meeting the requirements of Section 21080.5 of CEQA. (See CEQA Guideline 15251(a).) Therefore, a THP functions as the "equivalent of an EIR." (*Sierra Club v. State Bd. of Forestry* (1994) 7 Cal.4th 1215, 1230.) The fact that the Board of Forestry can and has adopted the Forest Practice Rules is one of the required bases for the Secretary for Resources' certification of CalFire

's regulation of timber harvesting under section 21080.5.[1] One of the primary purposes of an EIR, and thus of a THP, is:

> " 'to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action.' " [citation] "Because the EIR must be certified or rejected by public officials, it is a document of accountability. If CEQA is scrupulously followed, the public will know the basis on which its responsible officials either approve or reject environmentally significant action, and the public, being duly informed, can respond accordingly to action with which it disagrees.... The EIR process protects not only the environment but also informed self-government." [citation]

Sierra Club v. State Bd. of Forestry (1994) 7 Cal.4th 1215, 1229.

Also, EIRs, and thus THPs, must be written in a way that actually informs the public regarding environmental impacts and measures to reduce such impacts.

> The data in an EIR must not only be sufficient in quantity, it must 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. "[I]nformation 'scattered here and there in EIR appendices' or a report 'buried in an appendix,' is not a substitute for 'a good faith reasoned analysis.' "

Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova (2007) 40 Cal.4th 412, 442, as modified (Apr. 18, 2007). "The question is therefore not whether the project's significant environmental effects can be clearly explained, but whether they were." *Vineyard Area Citizens for Responsible Growth, supra,* 40 Cal.4th at p. 443.

Compliance with the Forest Practice Rules is a primary means by which THPs identify, disclose, and reduce environmental impacts. Indeed, the above described rules implement CEQA's requirement that the THP describe the environmental setting that may be affected by the project. Therefore, the THP must document how the proposed harvest will comply with these rules. This THP fails to do so in any way that would reasonably inform the public.

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[1]Public Resources Code section 21080.5 provides: "(d) To qualify for certification pursuant to this section, a regulatory program shall require the utilization of an interdisciplinary approach that will ensure the integrated use of the natural and social sciences in decisionmaking and that shall meet all of the following criteria: (1) The enabling legislation of the regulatory program does both of the following: (A) Includes protection of the environment among its principal purposes. (B) Contains authority for the administering agency to adopt rules and regulations for the protection of the environment, guided by standards set forth in the enabling legislation."

Further, even if the THP's vague reference to the MRC Planning Agreement with DFW is sufficient to put the public on notice that they have to read that document, it is unclear what document it refers to. On October 28, 2014, I sent an email to CalFire asking for this document; and on October 29, 2014, CalFire responded by email. (See Exhibit 5) CalFire 's responsive email attached a document entitled "Planning Agreement between The Mendocino Redwood Company and The California Department of Fish and Game regarding the Mendocino Redwood Company Natural Community Conservation Plan, June 23, 2003." (See Exhibit 6.)

This document does not have any sections numbered "1.1.1" or "1.1.2." Therefore, I am not sure the document CalFire sent to me is the same document the THP refers to on THP pages 26 and 27. Even if it is the same document, I have no information as to which portions of the document the THP refers to. Perhaps most important, this document does not supply any of the missing information or analyses detailed in sections 3.a, 3.b, or 3.c of this letter.

3. The THP Fails to Provide Required Information Regarding Impacts on Listed Fish Species and Their Habitat.

The November 26, 2014, Pre-Harvest Inspection Report for this THP prepared by the California Department of Fish and Wildlife (DFW) report points out a number of legal deficiencies in this THP regarding the THP's failure to lawfully assess impacts on listed fish species and their habitat.

CDFW's concerns on these issues are presented in the sections of their report entitled "Seagrass Meadows and Eelgrass Estuarine Habitat" (DFW Report, pp. 12-15); "Peak Flow and Suspended Sediment Yields" (DFW Report, pp. 15-16); and "Winter Operations." (DFW Report, p. 16.)

These sections explain that timber operations will increase the movement of sediments to listed fish species' habitat by increasing peak flows in the stream channels that drain the THP site. The DFW Report does not explain this mechanism of impact in detail, but it references a report that does entitled California Forestry Report No. 5, "Applications of Long-term Watershed Research to Forest Management in California: 50 Years of Learning from the Caspar Creek Experimental Watersheds," by Peter H. Cafferata and Leslie M. Reid, May 2013 (hereinafter referred to as "CalFire Report No. 5"). (Exhibit 8).

In brief, "Elevated peak flows can increase the frequency and magnitude of downstream overbank flooding, increase sediment transport, cause adverse impacts to fish habitat, contribute to streambank erosion, increase streamside landsliding, and trigger changes in channel morphology (Ziemer 1998b, MacDonald et al. 1991)." (Exhibit 8, CalFire Report No. 5, p. 14.)

The DFW report describes the importance and vulnerability of the Albion River estuary eelgrass beds and their function as important habitat for listed fish species. (DFW Report, pp. 12-

15.) The DFW report also points out the THP fails to present "accurate baseline information" regarding this environmental resource. (DFW Report, p. 15.) Thus, the THP fails to meet CEQA's requirement that it describe the environmental setting that may be affected by the project.

The DFW report also observes that "The THP does not include a discussion of potential and cumulative impacts to eelgrass beds and estuarine habitat within the biological assessment area or further downstream." (DFW Report, p. 15.) The DFW report also notes that the THP's contention that timber operations do not increase peak flows is "inconsistent with more recent peak flow, sedimentation, and turbidity studies for the coastal redwood/Douglas-fir forests in Mendocino County." (DFW Report, p. 15.)

To address these shortcomings in the THP, the DFW recommend that "the THP disclose eelgrass beds within its biological assessment area (Recommendation 11)." (DFW Report, p. 15.) But this recommendation, even if adopted, does not cure this legal violation because disclosing the existence of eelgrass beds within the boundaries of the "biological assessment area" is not the same as discussing potential and cumulative impacts to eelgrass beds and estuarine habitat" either within the biological assessment area or further downstream, both of which are legally required.

To address its concern that this THP will adversely impact the eelgrass bed portion of listed fish species habitat, DFW recommends the THP eliminate winter operations. This recommendation, even if adopted, does not cure the THPs failure to lawfully assess the cumulative impacts of this THP on this resource, for several reasons.

First, the effects of selection logging in North Coast redwood and douglas fir forests of increasing peak flows, thereby causing channel erosion and increased downstream sedimentation, last for many years after the actual harvest operation. Therefore, eliminating winter operations from the THP does nothing to mitigate the increased peak flow effect in post-harvest years.

> Caspar Creek studies showed that WLPZs and road repair work alone cannot prevent in-channel sediment increases because significant sediment inputs from in-channel sources can be generated by logging-related flow increases (Lisle et al. 2008, Reid et al. 2010)

(Exhibit 8, CalFire Report No. 5, pp. 28-29; see also, Exhibit 7 [R. Curry report].)

> Research at Caspar Creek has quantified the effect of timber harvesting on peak flows (Figure 13) in an area where hydrologic inputs are dominated by rainfall and where coast redwood and Douglas-fir represent major components of the native forest. Caspar Creek papers that address changes in peak flows include Ziemer (1981), Wright (1985), Wright et al. (1990), Ziemer (1998b), Lewis et al. (2001), Lewis and Keppeler (2007), Keppeler et al. (2009), and Reid (2012). The conclusions reached in this sequence of papers show an evolution of thought due to

> the increasing length and diversity of data sets available for analysis, the refinement of the temporal categories analyzed, and the increase in computing capabilities provided by new technologies. Interception studies conducted in the North Fork have helped explain why changes in peak flows occur following timber harvesting in the Coast Ranges of California (Reid and Lewis 2007). Several conclusions regarding the influence of logging on peak flows at Caspar Creek are now evident:
>
> • The largest percentage increases for peak flows after timber harvest are seen for small storms in the fall, when logged and unlogged watersheds are expected to show the greatest difference in soil moisture levels because of the extent of summer transpiration at unlogged sites (Ziemer 1981, Ziemer 1998b, Lewis et al. 2001).
> * * *
> • The estimated peak flow having a 2-year recurrence interval increased 14% for the 8-year period following completion of selection logging in the South Fork (Keppeler et al. 2009).

(Exhibit 8, CalFire Report No. 5, p. 14.)

Second, The DFW Report acknowledges that logging will increase peak flows and channel erosion related sedimentation. Nowhere does it find that eliminating winter operations will reduce that effect to zero. "In the end, the greater the existing environmental problems are, the lower the threshold should be for treating a project's contribution to cumulative impacts as significant." *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 120, as modified (Nov. 21, 2002). Here, the existing environmental problems are severe, as evidenced by the State Water Resources Control Board and U.S. EPA 2006, listing the Albion River as "impaired" by sediment pollution under section 303(d) of the Clean Water Act, and the listing of several species of salmonid that are indigenous to the Albion River as threatened or endangered under the federal Endangered Species Act. Therefore, CalFire must lawfully assess and disclose the potentially significant cumulative effect of this THP on these resources.

4. GHG/Climate Change.

The discussion of GHG impacts on THP pages 133-134 relies entirely on the GHG "calculator" at THP pages 218-237. Assuming, arguendo, that the GHG "calculator" is accurate, the THP still fails to lawfully assess the Project's impacts on GHG emissions.

The GHG the "calculator" results shows the THP achieving negative net carbon emissions, also known as carbon "sequestration" over a long time horizon. The THP's discussion of GHG impacts is legally erroneous for several reasons.

a. The THP Fails to Assess the "Significance" of its Near Term GHG Impact.

The THPs assessment of the "significance" of its GHG impacts ignores the fact that in the next ten to fifteen years, the timber operations will cause the emission "of more" carbon than forest growth will sequester in that time period. State policy is to maintain the current amount of carbon sequestration by California forests to achieve the state's carbon emissions reduction goals by 2020 - only six years in the future. The California Air Resources Board's (CARB) "2020 Scoping Plan target for California's forest sector is to maintain the current 5 MMTCO2E of sequestration through sustainable management practices, potentially including reducing the risk of catastrophic wildfire, and the avoidance or mitigation of land-use changes that reduce carbon storage." (Exhibit 9, 2009, CARB Plan, p. 64.)

The 5 MMTCO2E of "sequestration" is not the amount of carbon currently sequestered in California's forests. It is the amount by which *annual* carbon capture and sequestration by California forests exceeds carbon emissions from California forests. As explained in Appendix C of the CARB Plan:

> Current net forest sector emissions are approximately -5 MMTCO2E (2002-2004 average). This net number is negative because the gross emission rate from disturbances such as fires, harvesting, land conversion, and decomposition of wood and other forest products is less than the gross atmospheric uptake and sequestration of carbon from forest growth.

(Exhibit 10, CARB Plan, Appendix C, p. C-165.)[2] This THP says current carbon sequestration in California forests is 6.1 MMTCO2E. (THP p. 133.)

The time frames for the THPs carbon "balance sheet" to move from red to black vary between silviculture units, but all are at least 5-years and most are much longer (i.e., 14-years on page 221, 17-years on page 225, 5-years on page 229, 18-years on page 233, and 6-years on page 237.) In other words, this THP will undermine California's policy to maintain current carbon sequestration in California forests between now and 2020, regardless of whether the THP will achieve positive net carbon sequestration over a longer time horizon.

Indeed, climate change as a result of increasing GHG concentrations in the atmosphere is

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[2]AB 32 regulates "annual" emissions. See Health and Safety Code § 38505(h) ["Greenhouse gas emissions limit" means an authorization, during a specified year, to emit up to a level of greenhouse gases specified by the state board, expressed in tons of carbon dioxide equivalents."] Thus, all CARB Plan targets are annual target set for the year 2020. The forestry target was being met in 2008 when the CARB plan was published.

characterized by tipping points. These tipping points are GHG concentrations, which once achieved, result in types and degrees of environmental harm that are irreversible for centuries or millennia. (See e.g., Exhibit 15, Perspective of a Climatologist, James Hansen.) Therefore, near term positive net carbon emissions represent significant environmental harm, regardless of whether long sequestration exceeds short term emissions.

> Even when a project is intended and expected to improve conditions in the long term—20 or 30 years after an EIR is prepared—decision makers and members of the public are entitled under CEQA to know the short- and medium-term environmental costs of achieving that desirable improvement. These costs include not only the impacts involved in constructing the project but also those the project will create during its initial years of operation. Though we might rationally choose to endure short- or medium-term hardship for a long-term, permanent benefit, deciding to make that trade-off requires some knowledge about the severity and duration of the near-term hardship. An EIR stating that in 20 or 30 years the project will improve the environment, but neglecting, without justification, to provide any evaluation of the project's impacts in the meantime, does not "giv[e] due consideration to both the short-term and long-term effects" of the project (Cal.Code Regs., tit. 14, § 15126.2, subd. (a)) and does not serve CEQA's informational purpose well.

Neighbors for Smart Rail v. Exposition Metro Line Const. Authority (2013) 57 Cal.4th 439, 455.

b. The THP Unlawfully Relies on Unenforceable Projections Regarding Future Forest Growth to Conclude GHG Impacts Will Be Less Than Significant.

The THP's reliance on future tree growth to avoid a finding of significance, however, suffers from the fact that such growth is not part of the timber operations – the "project" – being approved. (Guidelines, § 15378, subd. (c) ["The term 'project' refers to the activity which is being approved"].) "Timber operations" are defined as "the cutting or removal, or both, of timber or other solid wood forest products ... from timberlands for commercial purposes, together with all the incidental work, including, but not limited to, construction and maintenance of roads, fuelbreaks, firebreaks, stream crossings, landings, skid trails, and beds for the falling of trees, fire hazard abatement, and site preparation that involves disturbance of soil or burning of vegetation following timber harvesting activities ..." (Pub. Resources Code, § 4527, subd. (a).)

Projected future tree growth, on the other hand, is not part of the timber operations, and more importantly, as explained below, is not actually required to occur. While future tree growth could perhaps be relied upon as "mitigation" for significant GHG impacts, the THP does not treat it as such, and it falls far short of CEQA's requirement that mitigation be assured. CEQA requires that mitigation measures for a project's impacts be considered only after the significance analysis is complete. This bifurcation of the significance analysis and mitigation matters greatly in the CEQA context because an agency approving a project application must guarantee that measures designed

to mitigate impacts are "fully enforceable through permit conditions, agreements, or other measures." (Pub. Resources Code, § 21081.6, subd. (b).) "The purpose of these requirements is to ensure that feasible mitigation measures will actually be implemented as a condition of development, and not merely adopted and then neglected or disregarded." (*Fed'n of Hillside & Canyon Ass'ns v. City of Los Angeles* ("*Fed'n of Hillside*") (2000) 83 Cal.App.4th 1252, 1261.) However, when, as here, the significance analysis and mitigation are conflated, the "mitigation" is not treated as an enforceable aspect of the project approval.

Although the THP relies on future tree growth to mitigate its GHG impacts, the THP fails to provide any assurances (e.g., conservation easements) that such growth will actually occur. The Forest Practice Act only requires that MRC replant the area logged (Cal. Code Regs., tit. 14, § 953.1(b)) – but there is nothing in the Act ensuring there will be a forest at this location in 10-years, 15-years, 50-years, or 80-years, hence. Nothing in the Act guarantees the sequestration MRC relies on to offset its GHG emissions will come to fruition, and just as importantly, nothing can be done to hold MRC accountable should there not continue to be a growing forest at this particular site in 10, 15, 50, or 80 years in the future. It is equally possible that after replanting the area post-harvest, MRC will sell the land or develop it; similarly, it is possible the forest, for whatever reason (e.g., fire), will not actually continue to grow and sequester carbon.

CEQA's substantive mandate is clear: "each public agency shall mitigate or avoid the significant effects on the environment of projects that it caries out or approves whenever it is feasible to do so." (Pub. Resources Code, § 21002.1(b), emphasis added.) The future tree growth relied upon in the THPs to address what would otherwise have to be considered significant GHG impacts, however, is unenforceable, and includes no monitoring to ensure it will occur. This violates the basic CEQA principle that mitigation measures must be "fully enforceable" and that there must exist "a monitoring program to ensure that the mitigation measures are implemented." (*Fed'n of Hillside*, Cal.App.4th at 1261.) MRC's assumptions regarding future tree growth are merely a forecast of what might grow at the site. Enforceable mitigation, on the other hand, is more than a forecast, it actually guarantees there will be a future forest and allows for accountability should the forest not come to fruition. In this instance, an enforceable requirement (like a conservation easement) could be incorporated into the THPs; therefore, absent such a requirement, future tree growth must be seen for what it is – speculation without accountability. Accordingly, the THPs should be deemed invalid for wrongly conflating "mitigation" that is not part of the project into the significance analysis, and thereby failing to require that any measures designed to mitigate project impacts are actually enforceable and monitorable.

c. The 2014 update to the California Air Resources Board's (CARB) Climate Action Scoping Plan demonstrates that forest growth (and thus carbon sequestration) will not measure up to the THP's growth projections.

Climate change is projected to suppress growth rates in California's forests, as a result of increased fire risk and insect infestations. The CARB's "First Update to the Climate Change

Scoping Plan," issued in May, 2014, shows that forest growth (and thus carbon sequestration) will not measure up to the THP's growth projections. (Exhibit 11.)

> Previous research by USFS suggests that there could be substantial declines in carbon storage beginning in 2050 assuming the status quo for land management [2]. The decrease in carbon storage is a function of declining forest health; expect pest outbreaks, and losses from wildfire. To change the status quo state climate change strategies need to consider federal lands and broader forest health issues that extend beyond ownership boundaries.

(Exhibit 12 [2014 CARB CAP Update, Appendix C, Focus Group Working Papers - Natural and Working Lands Working Paper], p. 4.)

> Climate can greatly influence the dynamics of forest and range ecosystems. Climate influences the type, mix and productivity of species. Future climate change scenarios predict increases in temperature, increases in atmospheric CO2 concentrations, and changes in the amount and distribution of precipitation [4]. Altering these fundamental drivers of climate can result in changes in tree growth, changes in the range and distribution of species, and alteration to disturbance regimes (e.g., wildfires, outbreaks of pests, invasive species).

(Exhibit 12, p. 5.)

> Research has provided estimates of expected changes in wildfire activity resulting from climate change [9]. Results from this research predict an extended fire season with a substantial increase in wildfire acres burned. Early studies [10] showed only a modest increase in wildfire acres burned (9 – 15%) under a range of future climate scenarios. However, more recent modeling showed that the expected wildfire-burned forested area for Northern California, under a high emissions scenario, increased in excess of 100% [11]. The increased activity in number and extent of wildfires would likely result in significant increases in emissions from wildfire. In addition, research predicted outcomes that varied with fire regimes; where expected increases in temperature promoted greater large fire frequency in wetter forested areas [12].

(Exhibit 12, p. 7.)

As discussed by RPF Tom Amesbury in his report, the GHG Calculator does not account for fire risk (Exhibit 16, pp. 9-10), nor does it account for the expected increase in fire risk associated with future climate change. Indeed, the THP fails to support its growth projections in the "Variable Retention" silviculture units, even ignoring the growth suppressing effects of future climate change (Exh. 16, p. 7).

Therefore, even if forest growth were an enforceable mitigation measure for this THP's GHG impacts, there is insufficient support for a conclusion that future growth will result in more carbon sequestration than project-induced carbon emissions.

d. The THP must Determine the Cumulative Significance of its Carbon Impact.

In order to comply with CEQA, CalFire "must determine whether any of the possible significant environmental impacts of the project will, in fact, be significant." *Protect the Historic Amador Waterways v. Amador Water Agency*, 116 Cal. App. 4th 1099, 1109 (Cal. App. 3d Dist. 2004). Moreover, CEQA requires CalFire to determine the significance of the THP's emissions with or without established significance thresholds – lack of established significance thresholds does not excuse CalFire from its obligation under CEQA to determine the significance of a THP's impacts. 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." (Exhibit 13 [CAPCOA 2008], p. 23; see also, Exhibit 15 [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.")

Any determination of whether the THP may have a significant impact must also include the consideration of the California Global Warming Solutions Act of 2006 (AB 32), wherein the State of California 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. Health & Safety Code §§ 38501(a), 38550. As recently pointed out in the OPR Technical Advisory document, p. 3, "AB 32 ... acknowledge[s] that [GHG] emissions cause significant adverse impacts to human health and the environment." Moreover, SB 97 "amends the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis." (Exhibit 14, OPR Technical Advisory document, p. 3.)

Because AB 32 establishes that existing greenhouse gas levels are unacceptable and must be substantially reduced within a fixed timeframe, any additional emissions that contribute to existing levels frustrate California's ability to meet its ambitious and critical emissions reduction mandate. Even ignoring emissions from smaller sources would be neglecting a major portion of the greenhouse gas inventory. In accordance with the scientific and factual data, and in order to account for the fact that any additional emissions are problematic, CalFire should adopt a zero significance threshold for any Project's greenhouse gas emissions. The THP's contribution to emissions is especially serious when considered from a cumulative perspective. An impact is considered cumulatively significant where its "effects are individually limited but cumulatively considerable." See *Friends of the Old Trees v. Dep't of Forestry & Fire Prot.*, 52 Cal. App. 4th 1383, 1394 (Cal. App. 1st Dist. 1997) ("[T]he Forest Practice Act and the Forestry Rules establish a statutory and

regulatory framework that, construed together with CEQA, confers on the Department the obligation to see that cumulative impacts and alternatives to the project, as well as other specified environmental information, be taken into consideration in evaluating THP's."). As explained in *Joy Road Area Forest & Watershed Assn. v. California Dept. of Forestry & Fire Protection*, 142 Cal. App. 4th at 667:

> [T]he substantive CEQA requirement of assessing cumulative environmental impact must be included in the evaluation of each THP by CDF. '[C]umulative damage [is] as a whole greater than the sum of its parts .... Furthermore, the cumulative impact analysis must be substantively meaningful. A cumulative impact analysis which understates information concerning the severity and significance of cumulative impacts impedes meaningful public discussion and skews the decisionmaker's perspective concerning the environmental consequences of the project, the necessity for mitigation measures, and the appropriateness of project approval. While technical perfection in a cumulative impact analysis is not required, courts have looked for adequacy, completeness, and a good faith effort at full disclosure.

Climate change is the classic example of a cumulative effects problem; emissions from numerous sources combine to create the most pressing environmental and societal problem of our time. *Center for Biological Diversity v. NHTSA*, 538 F.3d at 1218 ("the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct."). While a particular project's greenhouse gas emissions represent a fraction of California's total emissions, courts have flatly rejected the notion that the incremental impact of a project is not cumulatively considerable because it is so small that it would make only a de minimis contribution to the problem as a whole. *Communities for a Better Environment v. California Resources Agency*, 103 Cal. App. 4th 98, 117 (Cal. App. 3d Dist. 2002); see also *Kings County Farm Bureau v. City of Hanford*, 221 Cal. App. 3d 692, 720 (Cal. App. 5th Dist. 1990) ("[p]erhaps the best example of [a cumulative impact] is air pollution, where thousands of relatively small sources of pollution cause a serious environmental health problem"). As noted by former D.C. Circuit Judge Wald in a 1990 dissenting opinion, recently quoted with unanimous approval by the Ninth Circuit in *Center for Biological Diversity v. NHTSA.*:

> [W]e cannot afford to ignore even modest contributions to global warming. If global warming is the result of the cumulative contributions of myriad sources, any one modest in itself, is there not a danger of losing the forest by closing our eyes to the felling of the individual trees?

538 F.3d at 1217. Moreover, 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 cumulativ

> 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).

Accordingly, because the THP will contribute to greenhouse gas emissions, CalFire must find the THP's emissions a cumulatively significant impact.

Thank you for your attention to this.

Very Truly Yours,

Tom Lippe

Thomas N. Lippe

List of Exhibits

1. **Letter from Richard Tanner to Thomas Lippe, December 11, 2014.**
2. **Northern Spotted Owl Conservation and Management on Mendocino Redwood Company Forestlands, February 14, 2014.**
3. **Final California 2010 Integrated Report(303(d) List/305(b) Report), http://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/category5_report.shtml**
4. **Albion River Total Maximum Daily Load for Sediment, December, 2001. http://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/albion_river/**
5. **Emails exchange between Thomas Lippe and CalFire dated October 28, 2014, and October 29, 2014.**
6. **Planning Agreement between The Mendocino Redwood Company and The California Department of Fish and Game regarding the Mendocino Redwood Company Natural Community Conservation Plan, June 23, 2003.**
7. **Letter from Dr. Robert Curry to Thomas Lippe dated January 9, 2014.**

8. **California Forestry Report No. 5, "Applications of Long-term Watershed Research to Forest Management in California: 50 Years of Learning from the Caspar Creek Experimental Watersheds," by Peter H. Cafferata and Leslie M. Reid, May 2013**

9. **2009 Climate Change Scoping Plan, A Framework for Change, California Air Resources Board, Pursuant to AB 32, the California Global Warming Solutions Act of 2006; December 2008.**

10. **CARB 2009 Climate Change Scoping Plan, Appendices, Volume 1.**

11. **CARB 2014 First Update to Climate Change Scoping Plan**

12. **CARB 2014 First Update to Climate Change Scoping Plan, Appendix C - Focus Group Working Papers, Natural and Working Lands Working Paper, March 14, 2014.**

13. **CAPCOA, CEQA & Climate Change Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, January 2008.**

14. **Office of Planning and Research, Technical Advisory, Ceqa and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review, June 19, 2008.**

15. **Perspective of a Climatologist, James Hansen, 2008–2009 State of the Wild.**

16. **December 31, 2014 Report from Tom Amesbury of Forester's Co-op.**