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May 8, 2007

California Department of Forestry and Fire Protection
Attn: Leslie Markham, Forest Practice
135 Ridgway Avenue
Santa Rosa, CA 95401

Re: Bohemian Grove NTMP (1-06NTMP-011SON)

Dear Ms. Markham:

My letter is in response to the Bohemian Grove NTMP (1-06NTMP-011SON), which I have had an opportunity to review. As a plant ecologist with 40 years of experience working with conifer forests in California, I feel qualified to discuss the described objectives of this proposed project and the associated calculations of conifer volume, sustained yield, and harvesting levels.

My initial comment, which may be less relevant to the NTMP, is that this is clearly a logging project, not a project to reduce fire hazard. Old growth redwood forests have very low flammability. It is only when these forests are thinned and light openings are present in the canopy that flammable shrubs and tanbark oak can invade these stands. As a result fire intensity, the spread rate of fire, and flame lengths will be much higher after timber harvest than if these stands were left in their natural state. Once a cycle of thinning is established, reduction of fire hazard invariably involves heavy regular applications of herbicides to reduce shrub establishment and prevent the growth of ladder fuels with all of the negative aspects of such herbicide treatments.

My primary comments here relate to an analysis of the manner in which information was presented and calculated in the information available to the public in the above-referenced NTMP. My concerns grow out of the fact that the proposed harvest rates in this draft NTMP are more than twice those contained in the 2001 Bohemian Grove Forest Management Plan by Edward Tunheim, despite the fact that both plans generally agree on the volume of trees present and their rates of growth. I believe that the answer to this can be understood by looking at the manner by which yield and harvest levels were calculated in Table 12 of the NTMP.

The figures in Table 12 appear to be strongly driven by inclusion of the 107 acre "Main Grove" old-growth stand. However, as I understand there is no intention on the part of the Bohemian Club to carry out any timber harvesting in the Main Grove except for the possible removal of occasional hazard trees (April 2007 draft NTMP at page 40). This being the case, Table 12 and other related information should be recalculated based on accurate timber volumes on those portions of the forest where timber harvesting is actually expected to take place. Thus, the standing volume in the Main Grove and the other areas not slated for logging should be excluded from consideration in calculating forest growth.

For the entire property, Table 12 calculates a conifer growth rate of 670 bf/acre/yr, or 8,305,773 bf over 5 years for the entire 2443-acre property

(or 1,661,155 bf/yr). The total proposed harvest for the first five years of 5,688,869 bf (1,137,774 bf/yr) is just over 2/3 of this growth rate, and thus seemingly sustainable. This can be adjusted on a per acre basis for the proposed 623 acres of harvest to a total harvest of 9131 bf/5-yr/acre or 1826 bf/yr/acre for those areas harvested.

What happens if we remove the Main Grove area from the calculations in the table? The Main Grove has 251,998 bf of conifers/acre, compared to an average of only 20,840 bf/acre for the other portions of the property excluding the Main Grove. If we use the same figure of 2.2% annual growth rate (a rate significantly higher than those for coast redwood in the published literature), that gives an average growth rate of only 458.5 bf/yr/acre. Multiply that figure by the 2336 acres of land excluding the Main Grove and you get an annual growth rate of 1,071,056 bf/yr, about 64% of what you get with the Main Grove included.

In summary then, the plan proposes cutting 1,137,774 bf/yr for the first five years, and justifies this by calculating a growth rate of 1,661,155 bf/yr. If the Main Grove is excluded from calculations, the annual growth rate is more realistically only 1,071,056 bf/yr, or well less than a sustainable level. A dditionally, it would seem appropriate to also exclude other smaller old growth areas of the forest where logging will not take place from calculations. These include local areas of no-harvest reserves and protected streamside, marbled murrelet habitat, and other "distinctive and unique" patches of mature coniferous forest on the property where large trees are present. As with the Main Grove, the inclusion of these old growth stands unrealistically increases stand growth and levels of sustainable harvest in the areas for proposed logging. If these areas were excluded, the functional volume and growth of merchantable timber would be significantly less than even the figure of 1,071,056 bf/yr calculated above. This level of harvesting well beyond levels of replacement growth would steadily lead to a decline in stand structure and productivity in future years, contrary to the report's suggestion of increasing forest volume in the future.

Finally, the plan proposes cutting a total of 9131 bf/acre over the first five years for 623 acres. Since the mean stand volume is only 20,840 bf/acre with the Main Grove excluded, that means that 44% of the volume would be cut out of each treated acre over this harvest period. This proposed level of logging would clearly be unsustainable for the areas logged.

In conclusion, it appears that the information presented in the draft NTMP on conifer volume, sustained yield, and harvest levels are not calculated appropriately because of the inclusion of areas of old growth forest that will not be logged. For the areas specifically proposed for harvest, the scheduled intensities of logging are well beyond sustainable levels.

Sincerely yours,

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