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Durango, CO 81302  
January 23, 2015

Laurence Crabtree  
Supervisor  
Eldorado National Forest  
101 Forni Road  
Placerville, CA 95667

Dear Mr. Crabtree,

I am writing to comment on scoping for the proposed King Fire Restoration Project on the Eldorado National Forest, Placer and El Dorado Counties, California.

My concern is that the project is portraying the King fire as having fire severity that was outside the natural range of variation without having incorporated available scientific evidence which shows that this is incorrect.

Attached to the email I am sending containing these comments is a pdf of the following peer-reviewed scientific publication that I authored:

Baker, William L. (2014) Historical forest structure and fire in Sierran mixed-conifer forests reconstructed from General Land Office survey data. *Ecosphere* 5(7): article 79.

This article is also available online at the Ecological Society of America's website at:  
<http://www.esajournals.org/loi/ecsp>

There are several key points from this study that do not support the King Fire Restoration Project as it is proposed:

1. This study shows that large contiguous patches of high-severity fire historically reached up to at least 20,000-23,000 acres in area (See Figure 6 and page 18 right column) in Sierran mixed-conifer forests. Note that large high-severity patches exceeding 20,000 acres were also mapped directly by Leiberg in 1900. These are shown in the paper in Figure 8 and discussed on p. 22 left column. The high-severity patches mapped by Leiberg that are shown in the paper underestimate the full extent of contiguous high-severity patches, which likely were much larger.

This study shows that large mixed- and high-severity fires like the King fire are within the range of natural variability for fire in the forests of the King Fire Restoration Project.

The Leiberg report itself is likely in your Forest's archive, but if it cannot be found there, the report can be downloaded as a pdf from Google Books. Here is the citation:

Leiberg, John B. 1902. Forest conditions in the northern Sierra Nevada, California. US Geological Survey Professional Paper No. 8, U.S. Government Printing Office, Washington, D.C.

2. The average proportion of high-severity fire in historical forest landscapes in and near the proposed project area was 39.2%, as shown in Table 7, but of course may have varied from time to time and place to place, undoubtedly reaching high levels at times. The King Fire is thus not historically unprecedented in terms of the proportion of the fire that burned at high severity.

3. I would caution that preliminary estimates of fire severity from the RAVG system almost invariably overestimate the actual amount of high-severity fire, and it is essential to await the MTBS fire-severity mapping before assuming that the amount of high-severity fire is large.

Thank you for considering these scoping comments.

Sincerely,

William L. Baker, PhD