## MK Comments - CARB Sept. 12 2024 Meeting

Thank you for the chance to comment on the Sept. 12<sup>th</sup> 2024 discussion with CARB. I appreciate the talks focusing on forests and wildfire, and the environmental justice questions and comments. Overall, the approach appeared to favor massive extractions with little or no carbon accounting conducted by the state or associated entities. The first speaker and ensuing discussions seem to have missed relevant discussion points.

Please see example photos later in the attached document, below the comments.

Due to the current format for comments submittal, my comments have also been copied to others present, so that the comments may be taken into account and to allow for specific responses.

Regarding the first speaker: Two years ago, North et al wrote a paper supporting the removal/logging of ~80% of the forests to make them more "resistant" to climate change (fire, etc.) – i.e. massive forest extraction to supposedly save forests. The authors based the idea on "historic forest data." But the data they used in the paper left out most of the available forest data in the archives. As part of the work, they took a small subset of the archival data, showing low forest density, leaving out archival evidence of variable and higher forest density.

Several scientific papers disprove a central idea of low-density forests presented in North et al, 2022 (https://www.yahoo.com/news/uc-researchers-omit-key-evidence-203544768.html). In addition to the archives, there is an abundance of historic photographs showing variable and higher forest density.

The first presenter failed to mention the following:

(a) years of empirical data shows that carbon emissions from logging consistently exceed wildfire emissions (logging emissions are 5-10 times greater than wildfire emissions per published studies by Law and others);

(b) archival data in about the variable density of historic forests – which refutes the "low density" idea of "resistant" forests;

(c) 12 years of data analyzed by Hart and others, showing that forests with an abundance of bark beetles do not result in a greater spread of wildfire;

(d) published work by Meigs, Bond, Hanson, and many others showing that fire severity is unaffected by beetle-killed trees;

(e) large and old growth trees up to ~4 feet DBH are removed during forest extraction projects ("reducing stand density"/ "fuels reduction" / "thinning" etc.);

(f) many dense forests tend to retain adequate moisture to experience low intensity fire – which defeats the idea that forest extraction is the way to reduce fire intensity;

(g) cumulative impacts of tree removals, including tree mortality caused by "thinning" itself; (h) well-documented soil drying after removals, which was mentioned in comments, and even soil destruction: (i) multiple cases of high intensity fire that occurs in forests where tree removals were done prior to fire (2021 Dixie Fire is an example).

One of the presenters even suggested that the removed trees could be "put in a biomass facility," failing to mention that such facilities are responsible for some of the worst pollution and human health impacts that we are witnessing in CA – which are related to diseases including cancer, and lung and heart diseases. The person referring to "biomass facility" also failed to mention that burning biomass releases more emissions than burning coal, for an equal amount of energy produced

(https://www.biologicaldiversity.org/campaigns/debunking\_the\_biomass\_myth/pdfs/Forest-Bioenergy-Briefing-Book-March-2021.pdf).

The pertinence of carbon emissions from industrial processing and burning – which are far greater than wildfire emissions – should not have been ignored in such a meeting. The extent to which logging related carbon emissions are being routinely ignored by CA, is addressed in a new 2024 report (cited in <a href="https://shasta-cnps.org/conservation-news-september-2024/">https://shasta-cnps.org/conservation-news-september-2024/</a> ).

Another speaker mentioned that "reducing stand density" in the forest would be made up for "gain all that carbon back" in 10 years when large trees reabsorb the lost carbon No empirical data was provided.

One speaker mentioned the intensity of big fires like the 2021 Dixie Fire but failed to mention that many of the large forest patches that burned with high severity were previously logged – I personally surveyed multiple parts of the Dixie and documented the pre-fire removals of the largest trees in forests areas that burned with high severity. The 2020 Creek Fire is a similar example.

Much gratitude is owed to Matt Holmes who commented on proposed wood pellet operations and on the fact that "fuels reduction" efforts dry out the soils. He mentioned that for forest extraction results in disturbance to forest floor – this too has been shown in field studies that were not mentioned at the meeting. Wood pellet operations (and other "fuels reduction" efforts) routinely remove the largest trees.

Much gratitude is owed to one speaker who mentioned that removal of massive numbers of trees can destabilize the remaining old growth trees, an astute comment backed up by field data. This comment was not adequately addressed.

Astonishingly, there was no mention of snags as nesting, roosting, denning, resting and other wildlife activities supporting much of our biodiversity – the main emphasis was on removals without accounting for the carbon value and wildlife value. The main point emphasized removals with inadequate data.

Coincidentally, reducing stand density to the extent being proposed would most benefit industrialscale logging in public lands (also not mentioned). Failing to account for the carbon emissions from forest extraction would be favored by industries seeking to utilize the trees and snags for lumber, biomass energy, biofuels, and other products the state claims are "renewable" and "clean." The public should have a chance to objectively evaluate presentations, rather than being exposed to industrial-level forest extraction perspectives. Future meetings should provide the space for a balance of scientific findings rather than findings that suit industrial-scale logging and related removals.

Best regards, Maya Khosla, MS. Biologist and Writer

## PHOTOGRAPHS OF LOGGING PROJECTS ("FUELS REDUCTION"; "PRESCRIBED BURNING")

Below photo, August, 2024: commercial logging described as a "Restoration Project," (Ackerson Meadow, Yosemite NP, Stanislaus NF) – see photos below, showing where the largest trees in the project area were logged.



Below photo, September 2022: commercial logging project (called "restoration" and "prescribed burn") in Yosemite National Park's Merced Grove. Mature trees were removed. Snags and live trees up to 41" DBH were removed.



Below photos, June 2024: commercial logging project described as the "Hartley Springs Prescribed Burn," see photos below, showing where the largest trees in the project area were logged; complete soil drying and damage. Note: no evidence of burning.





Below photo, July 2024. Logging the largest trees before the 2021 Antelope Fire, Shasta National Forest. After the largest trees were removed, the area burned intensely.

