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Sent via electronic mail to publiccomments@BOF.ca.gov

Re: EMERGENCY NOTICE OF TIMBER OPERATIONS MONITORING AND REPORT ON EXEMPTION USAGE

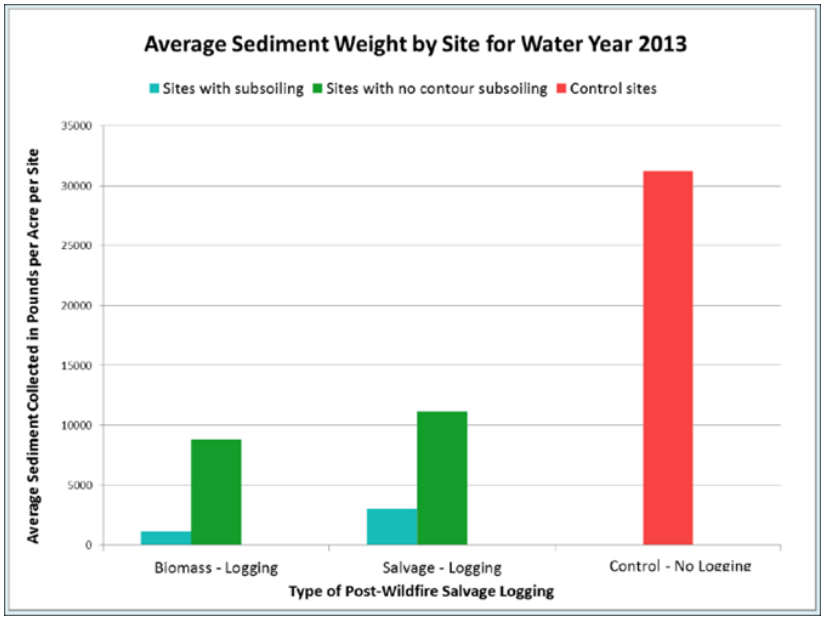
Chair Gilless and Board Members,

Sierra Pacific Industries is submitting this letter to provide some general comments on the Emergency Notice of Timber Operations Monitoring and Report on Exemption Usage. The report would benefit greatly from an initial statement that frames the context of the burned landscape such that the reader understands that an elevated level of erosion will likely occur in the watershed regardless of harvesting. It is critical to acknowledge the wide range of effects wildfires have on forest watersheds and not to underestimate these impacts have on forested watersheds when regulators evaluate post-fire operations. Moody and Martin (2009) stated that "wildfires are an important geomorphic agent of landscape change when linked to sufficient rainfalls and severe wildfires can cause profound changes in turbidity and water quality. Reale et al. (2015) found that turbidity increased by a factor of 13.7 (up to 1200 NTU) after a wildfire burned 36 percent of the East Fork Jemez River. Murphy (2012) reported post-fire turbidity values of 50,000 NTU in the front range of Colorado. Rhoades et al. (2011) found a significant relationship between the proportion of a watershed burned and increases in turbidity. Wise and O'Connor (2016) determined for watersheds in western Oregon and parts of northwest California that suspended-sediment loads were best predicted by lithology, mean annual precipitation and the area burned by wildfire. Wise and O'Conner (2016) stressed that the percent area burned was a very strong predictor of the turbidity and suspended-sediment levels in the watersheds they studied and concluded that understanding the critical role fire plays in sediment and erosion production on hillslopes was essential. The report under-emphasizes the effects of wildfires and over-emphasizes the effects of post-fire salvage logging. It is very difficult post-fire to discriminate between the extent of the actual impact of fire impacts from that of any post-fire forest management activities. There should be less insistence that post-fire forest management activities alone are the cause of some of the problems identified during inspections and more verbiage indicating the finding are a combination of intense wildfire and reduction in vegetation following such a natural disaster.

The report also does little to report on potential restoration work that results during post-fire salvation operations due to road rehabilitation, implementation of best management practices, salvage logging or

ground treatments that have been proven to provide significantly better environmental protections reducing hillslope sediment production in comparisons to not treating forestlands at all post-fire (James and Krumland (2018)).

James and Krumland (2018) demonstrate that the best action to minimize erosion is to conduct as much harvesting as possible, which adhere to the restrictions found in the California Forest Practice Rules, prior to the first and second winter. Harvesting reduces potential erosion by disturbing the soil which increases soil roughness and permeability. Harvesting also incorporates additional organic debris onto the ground prior to the first winter rains. The erosion reduction benefits from harvesting diminish year to year since most of the erosion occurs in the first two years following the fire (James and Krumland (2018).



Increasing Disturbance % by Salvaging Logging Yielded Significantly Less Sediment than Controls

Treatment Type	Sediment Yield (lbs/acre)	% of Controls	Disturbance (%)
Salvage + Biomass + Sub-soiling	1143	4	77
Salvage + Sub-soiling	3064	10	68
Salvage + Biomass	8813	28	53
Salvage	11113	36	40

Doing Nothing Generated 64-96% more Hill Slope Erosion than any Salvage Logging

The report does not seem to identify restorative actions that have occurred as the result of the Emergency Notice. Not reporting those beneficial activities biases the results. Activities that are restorative include: road out-sloping, culvert replacements, culvert maintenance, rock armoring culverts, changing a crossing to an armored ford, the distribution of slash on the soil surface, etc.

In the results the following two statements from the report should be discussed. On Pg. 14, paragraph 2. "Of the 65 watercourses, 16 (25%) had at least one sediment discharge related to timber operations, while 49 (75%) had no harvest-related discharges (Table 4)." And Pg. 14, paragraph 3. "Finally, in addressing the fire effects on a watershed, 47% of the watercourses on post- fire Emergencies exhibited erosional signs and scour related to fire effects irrespective of timber operations." These statements seem to corroborate the findings from James and Krumland 2018 which showed marked decreases in sediment delivery from hillslopes experiencing conventional ground-based logging system. This needs to be highlighted since the purpose of emergency harvesting is to recover the timber value and begin the restoration of the burn area, both of which are in the public's interest.

Pg. 15, paragraph 2, In the results the following two statements from the report should be discussed. Overall, 58% of the sediment discharges observed were under 1 yard3, while the remaining discharges were 1 yard3 or more, including 8% observed as 10 yards3 or more (Table 6). Pg. 15, paragraph 3, "Where roads were present that were used for hauling and harvest activity on Notices, 80% of the Emergencies had an "Acceptable" performance with regard to water quality, 10% had "Substandard" performance, and 10% were "Unacceptable" (Table 6)." These statements seem to suggest that where activities occurred the road infrastructure performed better that areas that did not receive logging operations. This needs to be highlighted since the purpose of emergency harvesting is to recover the timber value and begin the restoration of the burn area, both of which are in the public's interest.

Pg. 25, last paragraph. "The results of this study suggest that post-fire salvage activities covered by Emergency Notices have led to a higher frequency of unfavorable water quality impacts, especially when compared to previous monitoring studies focused on "green tree" timber harvesting (Cafferata and Munn, 2002; Brandow et al., 2006; BCTF, 2011; Brandow and Cafferata, 2014; Olsen et al., 2019). The comparison to "green tree" timber harvesting is inappropriate because it suggests that harvesting in a burn area has the potential to meet the same outcomes as in a green timber sale, which is highly unlikely for a multitude of reasons, the largest being the fact that all the vegetative cover is burned off. This report overemphasizes the potential impacts of salvage logging operations without any context of the wide-ranging impacts of the forest fires themselves. The conclusions reported in this report need to be qualified so that a uniformed reader is not misled to think that a burn area is somehow a stable landscape and if simply left alone it will lead to "acceptable" outcomes.

The monitoring team relies on visual estimations of impacts, which without a Quality Assurance Project Plan may provide inconsistent estimates during the course of that year's sampling and also for sampling between years. This monitoring program would benefit from a Quality Assurance Project Plan, which would help address Recommendation 3. Recommendation 3 requests that all the review agencies make engaging in the monitoring a priority. To facilitate this engagement a Quality Assurance Project Plan would ensure agency personnel are trained consistently for this data collection effort.

Sincerely,

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Sierra Pacific Industries

References:

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