



MEMORANDUM

TO: Mr. Bill Solinsky
California Department of Forestry and Fire Protection
1416 9th Street
P.O. Box 944246
Sacramento, CA 94244-2460

7/6/2020

Governor's Office of Planning & Research

Jun 03 2020

FROM: Thomas Key
Department of Conservation
California Geological Survey
801 K Street, MS 12-30
Sacramento, CA 95814

STATE CLEARINGHOUSE

DATE: June 3, 2020

SUBJECT: Review of Tahoe Program Timberland Environmental Impact Report

References.

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Introduction.

At the request of the California Department of Forestry and Fire Protection (CAL FIRE), the California Geological Survey (CGS) is pleased to provide you with this review of the Tahoe Program Timberland Environmental Impact Report (PTEIR). The proposed program area covers approximately 17,490 acres comprising private, local jurisdiction, federal and California Tahoe Conservancy lands throughout the California side of the Lake Tahoe Basin. The proposed program is intended to increase the pace and scale of forest management activities that reduce wildfire risk to communities and improve forest health in and adjacent to the Wildland Urban Interface (WUI).

Overarching Comment.

Integral to the PTEIR is the idea that project proponents would see an incentive in providing initial investments associated with long-term planning requirements because the planning will result in more streamlined project implementation in the future. CGS agrees with this philosophy and believes to achieve the full benefit of streamlined project implementation, the PTEIR preparation should involve a geologic assessment of the program area that includes the evaluation of slope stability conditions with regards to the proposed operations. Such an analysis serves to minimize the potential for adverse impacts to geology, hydrology, and slope stability that pose risks to public health and safety, listed species and their habitats, water quality, and adjacent downslope lands by increasing the potential for landslides and surface soil erosion. As it is currently written, the PTEIR provides a high-level analysis that discusses potential geologic impacts throughout the program area in general terms. This approach defers site-specific assessment of geologic hazards and receptors to the individual project level.

Primary Specific Comments.

1. The PTEIR characterizes the geology of the program area based primarily on a geologic map of the Lake Tahoe Basin (Saucedo et al., 2005) and state-wide landslide susceptibility map of California (Wills et al., 2011). Wills et al. (2011) does not include any landslide mapping from within the program area and expressly states that it is not appropriate for evaluation of landslide potential at any specific site. Saucedo et al. (2005) includes landslide deposits that can be displayed at a 1:100,000 scale, but does not include geomorphological data related to landsliding. The PTEIR references two other studies related to landslides within the Tahoe Basin (Glancy, 1969; Schweickert et al., 2019), but only the latter involved a study area near the proposed program area. This lack of site-specific geomorphic mapping highlights the onus that will be on the proponents of future treatments to conduct project-specific geologic assessments. Another helpful tool in geomorphic interpretation is the use of hillshades developed from LiDAR data. The PTEIR should disclose any available LiDAR data sets.
2. Standard Project Requirement (SPR) GEO-8 indicates that "the project proponent will require a Registered Professional Forester (RPF) or licensed geologist to evaluate treatment areas for unstable areas and unstable soils including active or dormant

landslides." An RPF may make a determination as to whether certain geomorphic features are present that are indicative of unstable ground conditions. RPFs would need to reference a source such as Note 50 (CGS, 1999) when characterizing geomorphic features to avoid practicing geology. We also recommend RPFs refer to CLFA (1999) as a guide to determining the need for a licensed geologist in project development.

3. Three Thresholds of Significance are listed on page 3.9-17. The first two correlate to the two potential impacts considered in Section 3.9 (i.e., increased soil erosion and slope instability). However, the third mentions "directly or indirectly cause substantial adverse effects, including risk of loss, injury, or death involving landslides, mudslides, and avalanches." An assessment of human, public, and critical infrastructure receptors that may be affected by geological factors within the program area is important to fully characterizing the potential impacts of the proposed program. This discussion should be included in Section 3.9 and in the Checklist in Appendix A as a third impact.

Secondary Specific Comments and Questions.

1. Figure 3.9-5 and references to it in the text interchangeably mention soil erodibility (correct) and soil erosivity (incorrect).
2. The terms mudslide, mudflow, and debris flow are used interchangeably in Section 3.9 and in Appendix A. These terms have discrete meanings (Cruden and Varnes, 1996; Hutchinson, 1988) and thus should not be used interchangeably. The primary landslide hazard that poses a threat to public health and safety in post-fire forested settings is debris flow. Therefore we suggest use of that term in the PTEIR.
3. SPR GEO-3 addresses stabilization of disturbed soil areas. It mentions mechanical and prescribed herbivory treatments, but states that the soil stabilization only applies to mechanical treatment activities. Is soil disturbance from herbivory treatments considered an insignificant impact?
4. The geologic discussion in the first paragraph of Section 3.9.2 references terms and features in Figure 3.9-1 that are not included in that figure (e.g., intrusives, till, and metamorphics). A separate simplified geologic map would add clarity to the discussion of site geology.
5. Section 3.9 includes pertinent excerpts of the Tahoe Regional Plan. Policy SEZ-1.1 is to "Restore all disturbed stream environment zone lands in undeveloped, unsubdivided lands and restore 25 percent of SEZ lands that have been disturbed, developed, or subdivided." It is not clear by what criteria SEZs will be determined to have been disturbed. As far as implementation of projects under this PTEIR goes, must the disturbance be related to implementation of the projects to necessitate restoration?

Original signed by: _____

Thomas Key, PG 9504
Engineering Geologist

Concur: Original signed by:

David Longstreth, CEG 2068
Senior Engineering Geologist

