DEPARTMENT OF FORESTRY AND FIRE PROTECTION
NORTHERN REGION HEADQUARTERS REDDING
6105 Airport Road
Redding, CA 96002
(530) 224-2445
Website: www.fire.ca.gov

OFFICIAL RESPONSE OF THE DIRECTOR OF THE CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION
TO SIGNIFICANT ENVIRONMENTAL POINTS RAISED DURING THE
TIMBER HARVESTING PLAN EVALUATION PROCESS

THP NUMBER: 2-21-00026-SIS

SUBMITTER: FWS Forestry

COUNTY: Siskiyou

END OF PUBLIC COMMENT PERIOD: July 19, 2021

DATE OF OFFICIAL RESPONSE/DATE OF APPROVAL: July 26, 2021

The California Department of Forestry and Fire Protection has prepared the following response to significant environmental points raised during the evaluation of the above-referenced plan. Comments made on like topics were grouped together and addressed in a single response. Where a comment raised a unique topic, a separate response is made. Remarks concerning the validity of the review process for timber operations, questions of law, or topics or concerns so remote or speculative that they could not be reasonably assessed or related to the outcome of a timber operation, have not been addressed.

Sincerely,

John Ramaley

John Ramaley, RPF #2504
Forester III
Cascade, Sierra & Southern Regions

cc: Unit Chief
RPF
Plan Submitter
Dept. of Fish & Wildlife, Reg. 1
Water Quality, Reg. 5
Public Comment Writers

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Summary of Review Process

Common Forest Practice Abbreviations

AB 32	Assembly Bill 32
ARB	Air Resources Board
BOF	Board of Forestry
CAA	Confidential Archaeological Addendum
CAL FIRE	Department of Forestry & Fire Protection
CAPCOA	Calif. Air Pollution Control Officers Assoc.
CCR	Calif. Code of Regulations
CDFW/DFW	California Dept. of Fish & Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CGS	California Geological Survey
CIA	Cumulative Impacts Assessment
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide equivalent
CSO	California Spotted Owl
DBH/dbh	Diameter Breast Height
DPR	Department of Pesticide Regulation
EPA	Environmental Protection Agency
FPA	Forest Practice Act
FPR	Forest Practice Rules
GHG	Greenhouse Gas
ha^{-1}	per hectare
LBM	Live Tree Biomass
LTO	Licensed Timber Operator
LTSY	Long Term Sustained Yield
m^{-2}	per square meter
MAI	Mean Annual Increment
MMBF	Million Board Feet
$MMTCO_2E$	Million Metric Tons CO_2 equivalent
NEP	Net Ecosystem Production
NEPA	National Environ. Policy Act
NMFS	National Marine Fisheries Service
NPP	Net Primary Production
NSO	Northern Spotted Owl
NTMP	NonIndust. Timb. Manag. Plan
OPR	Govrn's Office of Plan. & Res.
PCA	Pest Control Advisor
Pg	Petagram = 10^{15} grams
PHI	Pre-Harvest Inspection
PNW	Pacific NorthWest
PRC	Public Resources Code
RPA	Resource Plan. and Assess.
RPF	Registered Professional Forester
[SIC]	Word used verbatim as originally printed in another document
SPI	Sierra Pacific Industries
SYP	Sustained Yield Plan
tC	tonnes of carbon
Tg	Teragram = 10^{12} grams
THP	Timber Harvest Plan
TPZ	Timber Production Zone
USFS	United States Forest Service
USFWS	U.S. Fish & Wildlife Service
WAA	Watershed Assessment Area
WLPZ	Watercourse. & Lake Prot. Zone
WQ	California Regional Water Quality Control Board
yr^{-1}	per year

Notification Process

In order to notify the public of the proposed timber harvesting, and to ascertain whether there are any concerns with the plan, the following actions are automatically taken on each THP submitted to CAL FIRE:

- Notice of the timber operation is sent to all adjacent landowners if the boundary is within 300 feet of the proposed harvesting, (As per 14 CCR § 1032.7(e))
- Notice of the Plan is submitted to the county clerk for posting with the other environmental notices. (14 CCR § 1032.8(a))
- Notice of the plan is posted at the Department's local office and in Cascade Area office in Redding. (14 CCR § 1032))
- Notice is posted with the Secretary for Resources in Sacramento. (14 CCR § 1032.8(c))
- Notice of the THP is sent to those organizations and individuals on the Department's current list for notification of the plans in the county. (14 CCR § 1032.9(b))
- A notice of the proposed timber operation is posted at a conspicuous location on the public road nearest the plan site. (14 CCR § 1032.7(g))

Plan Review Process

The laws and regulations that govern the timber harvesting plan (THP) review process are found in Statute law in the form of the Forest Practice Act which is contained in the Public Resources Code (PRC), and Administrative law in the rules of the Board of Forestry (rules) which are contained in the California Code of Regulations (CCR).

The rules are lengthy in scope and detail and provide explicit instructions for permissible and prohibited actions that govern the conduct of timber operations in the field. The major categories covered by the rules include:

*THP contents and the THP review process
*Silvicultural methods
*Harvesting practices and erosion control
*Site preparation
*Watercourse and Lake Protection
*Hazard Reduction
*Fire Protection
*Forest insect and disease protection practices
*Logging roads and landing

When a THP is submitted to the California Department of Forestry and Fire Protection (CAL FIRE) a multidisciplinary review team conducts the first review team meeting to assess the THP. The review team normally consists of, but is not necessarily limited to, representatives of CAL FIRE, the Department of Fish and Game (DFW), and the Regional Water Quality Control Board (WQ). The California Geological Survey (CGS) also reviews THP's for indications of potential slope instability. The purpose of the first review team meeting is to assess the logging plan and determine on a preliminary basis whether it conforms to the rules of the Board of

Forestry. Additionally, questions are formulated which are to be answered by a field inspection team.

Next, a preharvest inspection (PHI) is normally conducted to examine the THP area and the logging plan. All review team members may attend, as well as other experts and agency personnel whom CAL FIRE may request. As a result of the PHI, additional recommendations may be formulated to provide greater environmental protection.

After a PHI, a second review team meeting is conducted to examine the field inspection reports and to finalize any additional recommendations or changes in the THP. The review team transmits these recommendations to the RPF, who must respond to each one. The director's representative considers public comment, the adequacy of the registered professional forester's (RPF's) response, and the recommendations of the review team chair before reaching a decision to approve or deny a THP. If a THP is approved, logging may commence. The THP is valid for up to five years, and may be extended under special circumstances for a maximum of 2 years more for a total of 7 years.

Before commencing operations, the plan submitter must notify CAL FIRE. During operations, CAL FIRE periodically inspects the logging area for THP and rule compliance. The number of the inspections will depend upon the plan size, duration, complexity, regeneration method, and the potential for impacts. The contents of the THP and the rules provide the criteria CAL FIRE inspectors use to determine compliance. While CAL FIRE cannot guarantee that a violation will not occur, it is CAL FIRE's policy to pursue vigorously the prompt and positive enforcement of the Forest Practice Act, the forest practice rules, related laws and regulations, and environmental protection measures applying to timber operations on the timberlands of the State. This enforcement policy is directed primarily at preventing and deterring forest practice violations, and secondarily at prompt and appropriate correction of violations when they occur.

The general means of enforcement of the Forest Practice Act, forest practice rules, and the other related regulations range from the use of violation notices which may require corrective actions, to criminal proceedings through the court system. Civil, administrative civil penalty, Timber operator licensing, and RPF licensing actions can also be taken.

THP review and assessment is based on the assumption that there will be no violations that will adversely affect water quality or watershed values significantly. Most forest practice violations are correctable and CAL FIRE's enforcement program seeks to assure correction. Where non-correctable violations occur, civil or criminal action may be taken against the offender. Depending on the outcome of the case and the court in which the case is heard, some sort of supplemental environmental corrective work may be required. This is intended to offset non-correctable adverse impacts. Once a THP is completed, a completion report must be submitted certifying that the area meets the requirements of the rules. CAL FIRE inspects the completed area to verify that all the rules have been followed including erosion control work.

Depending on the silvicultural system used, the stocking standards of the rules must be met immediately or in certain cases within five years. A stocking report must be filed to certify that the requirements have been met. If the stocking standards have not been met, the area must

be planted annually until it is restored. If the landowner fails to restock the land, CAL FIRE may hire a contractor to complete the work and seek recovery of the cost from the landowner.

General Discussion and Background

The following summary is provided for some of the over-arching concerns expressed in public comment. Specific issues raised within comments will be addressed in the next section.

Visual Impacts Evaluation and Mitigation

All timber harvesting plans must address the potential impacts the project could have on visual resources. Specifically, Technical Rule Addendum #2, Item E specifies the following:

> ***E. VISUAL RESOURCES****: The visual assessment area is generally the logging area that is readily visible to significant numbers of people who are no further than three miles from the timber operation. To assess visual cumulative effects:*
> ***1.*** *Identify any Special Treatment Areas designated as such by the Board because of their visual values.*
> ***2.*** *Determine how far the proposed timber operation is from the nearest point that significant numbers of people can view the timber operation. At distances of greater than 3 miles from viewing points activities are not easily discernible and will be less significant.*
> ***3.*** *Identify the manner in which the public identified in 1 and 2 above will view the proposed timber operation (from a vehicle on a public road, from a stationary public viewing point or from a pedestrian pathway).*

The RPF preparing the THP recognized that there would be visual concerns for this THP both from the residents of Dunsmuir but also from tourists who visit and drive on Interstate 5. In the original submission of the plan, the RPF included a robust analysis of the potential visual impacts from the proposed plan. This discussion is included on pages 113-122.10 of the plan and detail the potential visual impacts both from stationary locations within the city and also at points along I-5. Initial measures were offered in the original plan to offset potential impacts.

Once the plan was submitted, CAL FIRE recognized that visual concerns were going to be an important part of the plan review. CAL FIRE Inspector Pete Feller and Unit Forester Steve Wilson reviewed the initial submission and informed the RPF that an examination of visual impacts would be a significant portion of the field review during the preharvest inspection. Members from the CAL FIRE Redding Review Team were also requested to attend the field inspection to provide input on the potential visual impacts and any additional mitigation measures.

The entire first day of the preharvest inspection was dedicated to review of potential visual impacts. Views from the city of Dunsmuir, and along Interstate 5 were reviewed. Past projects visible from Dunsmuir were also discussed. It was noted that past plans visible to the city had been expected to “green up” (i.e. become less visually noticeable) much sooner than what was currently being observed. All of these discussions were considered by the CAL FIRE inspector when writing his report.

Figure 1. View from the corner of Dunsmuir Avenue and Spruce Street looking East.

Figure 2. View from the corner of Willow Street and Castle Avenue looking East.

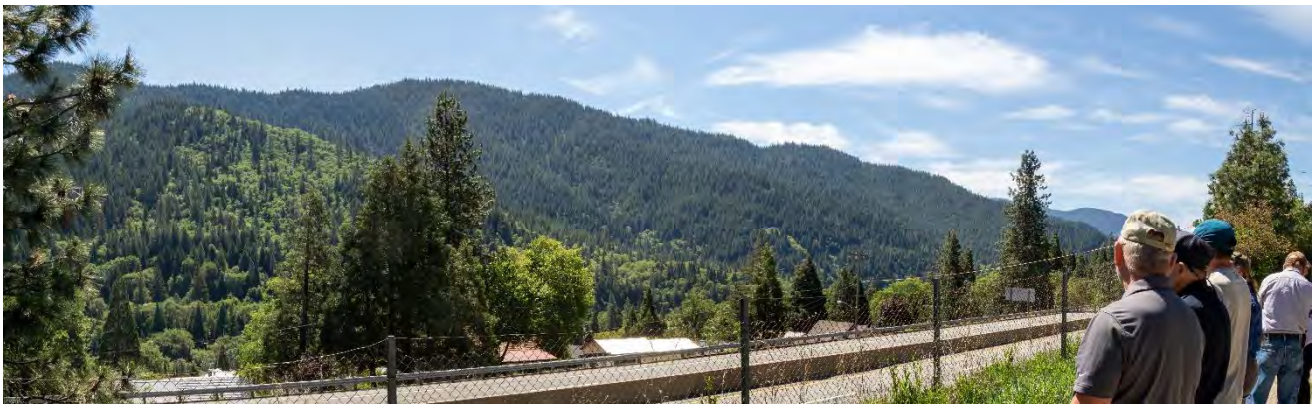


Figure 3. View from below Dunsmuir High School looking East.

Figure 4. View from below Dunsmuir High School looking East.

The Inspector made the following notes and recommendation in his report:

> *The plan as proposed during the 3 days of PHI does little to mitigate the stark visual change that will be observed by significant number of people traveling the I-5 corridor and for people living and traveling within the City of Dunsmuir.*
>
> *Prior to the PHI the I-5 corridor was traveled at the posted speed limit to evaluate the cumulative visual impacts of the proposed operation. It is very clear that large numbers of people traveling both north and south along the I-5 corridor and traveling through the city of Dunsmuir will experience a significant cumulative visual change in the landscape. This cumulative significant visual change in the landscape is not acceptable as proposed and will need to be mitigated to a level of insignificance.*
>
> *The first day of the PHI was dedicated to visual assessment of the proposed harvest plan as it relates to both silviculture and new road construction and reconstruction of existing roads as proposed. Day two of the PHI was dedicated to walking proposed roads, proposed stream crossings, unstable features and harvest units. From all harvest units, roof tops and portions of I-5 were visible. Day three of the PHI was dedicated to evaluating the northern portion of the plan area. At the end of day three it was agreed to that we would hold open the PHI until meaningful mitigations to lessen the cumulative visual impacts could be agreed upon. On May*

25, 2021 RPF Jim Ostrowski sent an email proposing mitigations to reduce the visual impacts of the plan.

These mitigations are as follows.

- *Change the following Seed Tree Seed Step units to individual tree selection silviculture; 1802, 2404, and 3007. These units are all site II and III and would require a minimum of 75 sq ft of BA retention.*
- *Change the following Alternative Prescriptions from closest to a clearcut to individual tree selection silviculture; 1907, 3011, 3609, 3608 and 3606. These units are all site II and III and would require a minimum of 75 sq ft of BA retention.*
- *Reducing the mileage of new road construction by removing the segments of NC2, NC12, NC14, and NC15 not needed for harvesting on this THP.*

These mitigations are agreed to and the RPF will revise sections 1-5 of the plan as necessary.

As a result of the PHI, the plan was extensively revised to change most of the Seed Tree and Alternative Prescription units to Selection silviculture. The remaining Seed Tree and Alternative Prescription units proposed for harvesting are much lower on the slopes and will be sufficiently screened so that a significant adverse visual impact is not anticipated. Additionally, several road segments previously proposed for construction were removed, further reducing the potential visual impact from their construction.

It is important to note that these revisions will not make the proposed operations invisible. Observers will be able to notice some visual difference after the operations have occurred. Visual impacts are difficult to quantify because there are as many opinions on what a significant impact looks like as there are people. CAL FIRE must exercise professional judgement when reviewing proposed plans and their impact on Visual Resources.

When doing so, CAL FIRE must balance many competing objectives (see also “CEQA Analysis” below). For example, lands zoned Timber Production Zone by Siskiyou County have been designated as lands to be used primary for the production of timber or other compatible uses:

(g) “Timberland production zone” or “TPZ” means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h).
With respect to the general plans of cities and counties, “timberland preserve zone” means “timberland production zone.”
(h) “Compatible use” is any use which does not significantly detract from the use of the property for, or inhibit, growing and harvesting timber, and shall include, but not be limited to, any of the following, unless in a specific instance such a use would be contrary to the preceding definition of compatible use:
(1) Management for watershed.
(2) Management for fish and wildlife habitat or hunting and fishing.
(3) A use integrally related to the growing, harvesting and processing of forest products, including but not limited to roads, log landings, and log storage areas.

(4) The erection, construction, alteration, or maintenance of gas, electric, water, or communication transmission facilities.
(5) Grazing.
(6) A residence or other structure necessary for the management of land zoned as timberland production.

Siskiyou County has a “right to farm” ordinance that specifies a priority use for productive agricultural lands such as those within the boundary of this THP:

- ***CHAPTER 11. - RIGHT TO FARM***
  Sec. 10-11.01. Definitions*.*
  (a) "Agricultural land" shall mean all that real property within the boundaries of the County currently used for agricultural operations or upon which agricultural operations may in the future be established.

  (b) "Agricultural operation" shall mean and include, but not be limited to, the cultivation and tillage of the soil, dairying, the production irrigation, frost protection, cultivation, growing, harvesting and processing of any agricultural commodity including viticulture, horticulture, timber or apiculture, the raising of livestock, furbearing animals, fish or poultry, and any commercial agricultural practices performed as incident to or in conjunction with such operations, including preparation for market, delivery to storage or to market, or to carriers for transportation to market.

  (§ I, Ord. 90-28, eff. October 25, 1990)

  Sec. 10-11.02. Findings and policy.
  (a) It is the declared policy of the County to enhance and encourage agricultural operations within the County. It is the further intent of the County to provide to the residents of the County proper notification of the County's recognition and support through this chapter of those persons' and/or entities right to farm.

  (b) Where nonagricultural land uses extend into agricultural areas or exist side-by-side, agricultural operations are frequently the subjects of nuisance complaints and are forced to cease or curtail operations. Such actions discourage investments in farm improvements to the detriment of adjacent agricultural uses and the economic viability of the County's agricultural industry as a whole. It is the purpose and intent of this section to reduce the loss to the County of its agricultural resources by limiting the circumstances under which agricultural operations may be considered a nuisance. This chapter is not to be construed as in any way modifying or abridging State law as set out in the Civil Code, Health and Safety Code, Fish and Game Code, Food and Agricultural Code, Division 7 of the Water Code of the State, or any other applicable provision of State law relative to nuisances; rather it is only to be utilized in the interpretation and enforcement of the provisions of this Code and County regulations.

  (c) An additional purpose of this chapter is to promote a good neighbor policy between agricultural and nonagricultural property owners by advising purchasers and users of property adjacent to or near agricultural operations of the inherent potential problems associated with such purchase or residence, including, but not limited to, the noises, odors, dust, chemicals, smoke and hours of operation that may accompany

agricultural operations. It is intended that through mandatory disclosures, purchasers and users will better understand the impact of living near agricultural operations and be prepared to accept attendant conditions as the natural result of living in or near rural areas.

(§ I, Ord. 90-28, eff. October 25, 1990)

When it comes to timber harvesting, the plan must balance many objectives in deciding how to best meet the landowners objectives while complying with statute and regulations.

897(a) [In Part]
The Timberland Productivity Act restricts use of lands zoned Timberland Production Zone to growing and harvesting timber and compatible uses and establishes a presumption that timber harvesting is expected to and will occur on such lands.

4513. Timberlands; creation and maintenance of system of regulation and use; legislative intent.
It is the intent of the Legislature to create and maintain an effective and comprehensive system of regulation and use of all Timberlands so as to ensure both of the following:
***(a)** Where feasible, the productivity of Timberlands is restored, enhanced, and maintained.*
***(b)** The goal of maximum sustained production of high-quality timber products is achieved while giving consideration to values relating to sequestration of carbon dioxide, recreation, watershed, wildlife, range and forage, fisheries, regional economic vitality, employment, and aesthetic enjoyment.*

14 CCR §895.1
***While Giving Consideration** means the selection of those feasible silvicultural systems, operating methods and procedures which substantially lessen significant adverse Impact on the environment and which best achieve long-term, maximum sustained production of forest products, while protecting soil, air, fish and wildlife, and water resources from unreasonable degradation, and which evaluate and make allowance for values relating to range and forage resources, recreation and aesthetics, and regional economic vitality and employment.*

Ultimately, the RPF who writes the plan must consider these and other regulations when deciding on the harvesting methods that will achieve the landowner's goals while meting the objectives of the Forest Practice Rules and the Forest Practice Act. Likewise, CAL FIRE must consider the range of values that must be evaluated while allowing for legally permitted activities on Timberland. These activities are often a tradeoff between competing and sometimes contradictory objectives. CAL FIRE believes that the plan as approved has mitigated potential significant adverse visual effects to below the level of significance.

Fire Hazard Risk and Assessment

From the appointment of the first State Board of Forestry in 1885, to the creation of the first State Forester position in 1905, and the organization of the original California Division of Forestry in 1927, the Department of Forestry and Fire Protection (CAL FIRE) has protected the people, property, and natural resources of California. The Department's diverse programs work

> *together to plan protection strategies for over 31 million acres of privately-owned wildlands, and to provide emergency services of all kinds throughout California.*
> ***-CAL FIRE 2019 Strategic Plan***

As an agency, CAL FIRE fulfills many roles to protect both the public and natural resources of our state. When it comes to operations that can impact both the natural environment and the public, CAL FIRE must review these proposals with an eye towards these two responsibilities. When it comes to a decision of whether to approve a plan, CAL FIRE must exercise professional discretion:

> ***14 CCR § 897 Implementation of Act Intent***
> ***(d)*** *Due to the variety of individual circumstances of timber harvesting in California and the subsequent inability to adopt site-specific standards and regulations, these Rules use judgmental terms in describing the standards that will apply in certain situations. By necessity, the RPF shall exercise professional judgment in applying these judgmental terms and in determining which of a range of feasible (see definition 14 CCR 895.1) silvicultural systems, operating methods and procedures contained in the Rules shall be proposed in the plan to substantially lessen significant adverse Impacts in the environment from timber harvesting. The Director also shall exercise professional judgment in applying these judgmental terms in determining whether a particular plan complies with the Rules adopted by the Board and, accordingly, whether he or she should approve or disapprove a plan. The Director shall use these Rules to identify the nature of and the limits to the professional judgment to be exercised by him or her in administering these Rules.*

Requirements of Evaluation included in the Rules

The Forest Practice Rules recognize that Timber Operations have the potential to cause and contribute to the severity of fires. The need to protect property and natural resources from fire goes back to the founding of the original Board of Forestry in 1885. Fire prevention laws were the first regulations governing forestry in our state.

Current Forest Practice Laws contain significant detail on how operations are to be conducted to reduce or eliminate the chance that logging will cause a fire. Article 7 of the Rules cover the various methods of reducing fire risk and hazard, collectively called “Hazard Reduction”:

- 917, 937, 957 Hazard Reduction
  - 917.2, 937.2, 957.2 Treatment of *[Logging]* Slash to Reduce Fire Hazard
  - 917.3 Prescribed Broadcast Burning of Slash [Coast]
  - 937.3 Prescribed Broadcast Burning of Slash [Northern]
  - 957.3 Prescribed Broadcast Burning of Slash [Southern]
  - 917.4 Treatment of Logging Slash in the Southern Subdistrict
  - 957.4 Treatment of Logging Slash in the High Use Subdistrict
  - 917.5, 937.5, 957.5 Burning of Piles and Concentrations of Slash
  - 917.6, 937.6, 957.6 Notification of Burning
  - 917.7, 937.7, 957.7 Protection of Residual Trees
  - 917.9, 937.9, 957.9 Prevention Practices

A primary concern addressed in the Hazard Reduction Rules deals with logging debris left over after trees are harvested. Branches, leaves, and other materials not taken to a sawmill (called "slash") must be treated in such a way that an increase in fire hazard does not occur, and to prevent the spread of forest-based insects and diseases. For example, the following standard practices shall be followed within the THP area to treat slash:

> ***917.2, 937.2, 957.2 Treatment of Slash to Reduce Fire Hazard [All Districts]***
> *Except in the [High-Use Subdistrict of the Southern Forest District,] Southern Subdistrict of the Coast Forest District and Coastal Commission Special Treatment Areas of the Coast Forest District, the following standards shall apply to the treatment of Slash created by Timber Operations within the plan area and on roads adjacent to the plan area. Lopping for fire hazard reduction is defined in 14 CCR 895.1.*
>
> - *Slash to be treated by piling and burning shall be treated as follows:*
> - *Piles created prior to September 1 shall be treated not later than April 1 of the year following its creation, or within 30 days following climatic access after April 1 of the year following its creation.*
> - *Piles created on or after September 1 shall be treated not later than April 1 of the second year following its creation, or within 30 days following climatic access after April 1 of the second year following its creation.*
> - *All woody debris created by Timber Operations greater than one inch but less than eight inches in diameter within 100 feet of permanently located structures maintained for human habitation shall be removed or piled and burned; all Slash created between 100-200 feet of permanently located structures maintained for human habitation shall be lopped for fire hazard reduction, removed, chipped or piled and burned*

For this plan, the structures within 200 feet of Unit 3606 along South 1st Avenue will be protected by a designated Harvest Retention Area that will not be harvested so no hazard reduction will be required in this area.

The plan was also revised during review to indicate that broadcast burning would not be used within the harvest area. Any Burning would be limited to piles treated for hazard reduction as discussed above. The burning of vegetation for Hazard Reduction must comply with other restrictions and permits issued by both CAL FIRE and the Air Resources Board before they can begin.

In addition to these regulations for slash treatment, all timber operators are required to have equipment onsite to deal with any fires that start unintentionally. The requirements for the "fire toolbox" are contained in PRC §4428 and are subject to inspection by any CAL FIRE employee.

Furthermore, every Licensed Timber Operator is required to submit to CAL FIRE a Fire Suppression Resource Inventory that contains emergency contact information for each Licensed Timber Operator along with the number of personnel and types of equipment that can be used to suppress any fire. These operators can be called upon to assist CAL FIRE with emergency fire suppression in the area where they are operating, further adding to the resources that can be used during a fire.

In addition to the hazard reduction rules, operations proposed in this plan have additional benefits expected to reduce fire danger.

- Road brushing and maintenance: As part of the Timber Operations, existing roads will receive maintenance to allow for access for logging equipment. These operations ensure that roads used for operations are free of obstruction and can be used during the operations and in the future in the event they are required for fire suppression:

> ***923.1, 943.1, 963.1 Planning for Logging Roads and Landings. [All Districts]***
> *Logging Roads and Landings shall be planned and located within the context of a systematic layout pattern that considers 14 CCR § 923(b), uses existing Logging Roads and Landings where feasible and appropriate, and provides access for fire and resource protection activities.*

Additionally, any time that burning permits are required (e.g. during the declared fire season), all roads and landings within the harvest plan area must be passable for use during an emergency:

> *943.6 (d) When burning permits are required pursuant to PRC § 4423, Logging Roads and Landings that are in use shall be kept in passable condition for fire trucks.*

- New road construction: In addition to the existing roads within the plan area, new seasonal roads are proposed to assist with harvesting. These roads will allow for additional access if necessary for fire suppression.

- Limits on access: New roads within the forest open the potential for unauthorized use by the public, increasing the potential that a fire may occur. The landowner maintains control over access to the plan area using locked gates to discourage trespass.

Maintaining access within the harvest plan area is consistent with the Siskiyou Unit Strategic Fire Plan to allow for rapid extinguishment of fires within CAL FIRE responsibility areas.

When it comes to evaluating the potential for the proposed plan to negatively impact wildfire risk and hazard, the Rules contain the following guidelines:

> **Excerpt from Technical Rule Addendum #2:**
> ***WILDFIRE RISK AND HAZARD***
> *Cumulative increase in wildfire risk and hazard can occur when the Effects of two or more activities from one or more Projects combine to produce a significant increase in forest fuel loading in the vicinity of residential dwellings and communities.*
> *The following elements may be considered in the assessment of potential Cumulative Impacts:*
> 1. *Fire hazard severity zoning.*
> 2. *Existing and probable future fuel conditions including vertical and horizontal continuity of live and dead fuels.*
> 3. *Location of known existing public and private Fuelbreaks and fuel hazard reduction activities.*
> 4. *Road access for fire suppression resources.*

The Rules specify that an RPF must evaluate potential impacts that could be caused by the project. Timber harvesting is not required to lower wildfire risk and hazard, although this is common from properly designed and implemented operations.

The plan correctly states on page 65 that the city of Dunsmuir is identified as a “community at risk” and has completed a Community Wildfire Protection Plan in 2016. This plan and other documents are also referenced as part of the Siskiyou Unit Strategic Fire Plan. These planning documents all work together to ensure that planned actions properly consider impacts to wildfire risk.

The RPF has identified the Wildfire Risk and Hazard assessment area on page 80 as:

> *the project area within a one quarter mile radius of permanently located structures maintained for human habitation, and residential communities. This assessment area was chosen based on the guidance in Technical Rule Addendum 2 which states that "Cumulative increase in wildfire risk and hazard can occur when the Effects of two or more activities from one or more Projects combine to produce a significant increase in forest fuel loading in the vicinity of residential dwelling and communities." One quarter mile was determined to be within "the vicinity" of dwellings and communities and within the area likely to be treated or used for community fuel breaks or suppression efforts.*

The complete assessment is located on pages 129 and 130 and includes Dunsmuir and structures in the vicinity of the plan. It correctly discloses that the area is designated as being within a Very High Fire Hazard Severity Zone. This designation was made by CAL FIRE as part of a statewide assessment. Additional detail and information can be found on the CAL FIRE website[1]

> *The Fire Hazard Severity Zone maps are developed using a science-based and field-tested model that assigns a hazard score based on the factors that influence fire likelihood and fire behavior. Many factors are considered such as fire history, existing and potential fuel (natural vegetation), predicted flame length, blowing embers, terrain, and typical fire weather for the area. There are three levels of hazard in the State Responsibility Areas: moderate, high and very high. Urban and wildland areas are treated differently in the model, but the model does recognize the influence of burning embers traveling into urban areas, which is a major cause of fire spread.*

For Siskiyou County, most lands are classified as being within the “Very High” category.

Responsibility Area	Percent of Total Acres
Federal	62%
Local	4%
State	34%

[1] https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildfire-prevention-engineering/fire-hazard-severity-zones

	Responsibility Areas		
Hazard Class	**Federal**	**Local**	**State**
Non-Wildland/Non-Urban	5%	65%	0%
Moderate	6%	25%	14%
High	7%	4%	13%
Very High	82%	6%	73%

The Plan discussion of wildfire risks continues:

Wildfire risks within the assessment area come from both within and outside of the project area. The potential for a fire to start within the residential area and travel into the wildlands is very high. The risks vary from accidental house or vehicle fires, electrical transmission line malfunction to intentional arson. This portion of the assessment area is below the project area and fire could spread rapidly into the wildlands due to topography. Within the project area a small increase in the risk of ignition during the logging operation will occur depending on the season of operations.

IMPACTS EVALUATION

The project is not expected to significantly change the fire risk. The proposed project will create a short-term increase in the risk of ignition during logging operations, but this risk will be mitigated by the required fire protection regulation followed by loggers and forest workers.

The residential buildings within 300 feet of harvest areas are buffered by no harvest HRAs. The project area is upslope from Dunsmuir where a fire would be expected to burn away from the residential areas due to topography. This also creates an increased risk of a fire entering the project area from residential and urban areas.

Improved access to the project area will provide for more effective fire suppression if a fire were to start in the area. The proposed road system and landings allow for efficient and rapid transport of fire fighters and equipment before a fire becomes too large for initial attach efforts to be successful. Landings also create safety zones for fire fighters. New roads will also provide access for any future fuel management projects. The proposed project will modify the short term fuel hazard by reducing crown density, creating gaps in surface fuels and reducing ladder fuels, while creating a short-term increase in surface fuels. The proposed project will modify the vertical and horizontal arrangement of fuels and reduce or eliminate the crown bulk density (CBD) within each harvest unit depending on the silviculture prescription that is used. CBD along with surface fuel loading has been shown to be a significant indicator of the potential for a crown fire to develop (Cram et al, 2006, Peterson et al, 2005). CBD will be reduced or eliminated in all of the silviculture prescriptions. The predicted flame lengths from the City of Dunsmuir CWPP should not significantly increase over the long te1m from the proposed project even though logging slash will add to the surface fuels. This is primarily due to the crushing of brush and slash during harvests which changes the structure of the fuel which reduces air circulation. The first few years after harvesting when slash still contains needles and fines there will be a short te1m increase in expected flame length.

CAL FIRE has determined that the assessment of potential hazards is reasonable based upon the characteristics of the assessment area and the proposed operations. While the plan notes the small potential for an increase in ignition due to logging operations, this is a known risk. As described above, the Rules have been developed to mitigate risks associated with logging-caused fires.

Evenage Management and Plantations Impact on Fire Hazard

Although the total acres proposed for evenage management has been reduced from 193 total acres to 38. As a result, only 38 acres of the THP area will be replanted. Item #14 of the plan describes that this area will be planted with enough tree to meet the minimum stocking standard of 125 point count (which would be at least 125 trees per acre).

Comment letters expressed concern with the potential fire risk associated with plantation management. Several research papers and experts have been cited to support this concern. As one would expect, CAL FIRE has concerns about responsible forest management as well as protecting lives and property. If there is a significant increase in risks associated with plantations, CAL FIRE needs to ensure that those risks are mitigated to protect life and property. Not only must we be concerned with protecting the public, but our employees as well which must go into these forested landscapes to fulfill their mission.

All CAL FIRE employees, no matter where they serve, are available to assist with emergency assignments at any time. For example, the CAL FIRE Inspector for the Dunsmuir area as well as the Siskiyou Unit Forester are also emergency responders who are often some of the first people to arrive on scene to a fire. They fill a variety of roles as part of an emergency response and are well aware that their duties as foresters can impact the safety of other emergency responders. Proposed harvesting plans are reviewed with both natural resources and public safety in mind.

The public is justified in being concerned about how logging operations can impact fire danger, and it is appropriate that CAL FIRE respond adequately to these concerns. The first concern related to fire hazard is the one posed by tree plantations, and their potential to cause fires to burn hotter and faster.

While there is literature studying the effects that plantations have on fire behavior, a clear cause and effect relationship between plantations and fire danger has not been established. This is primarily because there is a great deal of variability in how plantations are managed. This is especially true with private California timberlands as described below.

CAL FIRE has reviewed many studies on how fires burn within managed and unmanaged landscapes. Often, concerns related to fire behavior and plantations are added as public comment, referring to one of more of these studies. A brief discussion of those studies is provided below for context.

- Wildfire Effects Evaluation Project – Umpqua National Forest (Morrison, Marshall, Minor, & Davis, 2003)

- *Fire burned most plantation areas with high intensity and spread rapidly through the canopy of these young stands. However, surface-fire intensity was moderated because fuel accumulations on the ground were relatively light. Thus, many plantations experienced moderate-fire severity (high intensity, low heat).*

- *Fifty-five percent of the plantation areas within the 2002 fire perimeter burned as stand-replacement fires (Appendix A). Plantation mortality is disproportionately high compared to the total area that plantations occupied within the fire perimeter. In fact, mortality in plantations accounted for 41 percent of all mortality on the fires, while the plantation area represented only 22 percent of the total area within the fire perimeter. Younger-age plantations were damaged more than the older plantations and the unmanaged forest (Figure 17: Stand Replacement Mortality in Managed (Regen) and Unmanaged Stands). In fact, 74 percent of plantations 20 years old or less experienced stand replacement mortality. By comparison, mortality was only 40 to 50 percent in stand 21 to 50 years old. (Page 19-20)*

- *Research in the moderate-severity fire regime of the mixed-evergreen forest of northern California showed a strong relationship of 1987 fire damage in plantations to fire damage levels in adjacent stands (Skinner and Weatherspoon, 1996). Data suggest that fuel treatments within dispersed locations alone may not reduce fire hazard. (Page 20)*

- *Fuel Model 5 best represents the early-seral vegetation including shrub communities and even-aged young plantations. As noted previously, these early-seral stands cover a greater portion of the landscape today than occurred historically. Crown fire spreads readily through these young stands: rates of fire spread can be high, and significant areas of mortality can occur in and adjacent to these stands. (page 25)*

When CAL FIRE reviewed this study, it was noticed that the plantations were classified under fuel (Anderson, 1982). Anderson described these fuels as follows:

> *"Fire is generally carried in the surface fuels that are made up of litter cast by the shrubs and the grasses or forbs in the understory. The fires are generally not very intense because surface fuel loads are light, the shrubs are young with little dead material, and the foliage contains little volatile material. Usually shrubs are short and almost totally cover the area. Young, green stands with no dead wood would qualify: laurel, vine maple, alder, or even chaparral, manzanita, or chamise."*

An examination of representative photos included in the Morrison study showed conifer plantations with a continuous shrub understory. Fuel loading appeared to be high and there was no apparent break in either the vertical or horizontal continuity of fuels. Under these conditions, it is not surprising that young plantations suffered a high degree of mortality. It must be pointed out, in contrast, that plantations on private timberland in California receive a degree of

post- harvest cultural treatments (either via mechanical, fire or herbicide treatment) that prevents the level of shrub and fine fuel buildup noted in the Morrison study. As a result of this important difference, CAL FIRE cannot draw a reasonable cause and effect conclusion between the conditions found in the Morrison report and the THP area.

- Southwest Oregon Biscuit Fire: An Analysis of Forest Resources and Fire Severity (Azuma, Donnegan, & Gedney, 2004)

  In this study of burn severity following the Biscuit Fire, the Forest Service found that the areas with the highest fire severity were most closely correlated with low site (i.e. Poor growing conditions - Site Class IV, V, and VI), and non- stocked areas (areas that are brush dominated). Table 11., from the report appendix shows that 74% of the non stocked (brush) areas burned with high and moderate severity while 100% of the stands classified as seedling/sapling (<5" DBH) burned with low severity. Results of another study in the same area (Thompson, Spies, & Ganio, 2007) on stands logged and planted after a 1987 fire indicated an increase in fire behavior and mortality in logged stands but noted that these stands had lower conifer densities and more brush than typical plantations. Other studies in the area (Raymond & Peterson, 2005) did not have a statistically valid sample of stands necessary upon which to validate the accuracy of fire behavior in stands they had previously harvested. From an examination of these studies, a direct causal link between plantations and increased fire danger could not be established.

  What was apparent from an examination of the literature was the difference between the plantations evaluated in those studies and those that are managed in California. For the most part, plantation density is managed below densities required to sustain independent crown fire (Peterson, et al., 2009). These stands are also managed during the early successional period to remove or restrict the growth of competing vegetation that can carry fire from the fine fuels into the crowns of the trees.

- Effects of Timber Harvest Following Wildfire in Western North America (Peterson, et al., 2009)

  > *The forest developing after wildfire or postfire logging may, over time, also constitute a fire hazard because trees can act as part of the understory fuelbed. As crowns emerge from the shrub layer, the low canopy base height creates torching potential (cf. Scott and Reinhardt 2003). If the stand is dense (e.g., 10-cm d.b.h. trees at a density of >1200 per ha), canopy bulk density may be high enough (>0.12 kg/m3) to carry independent crown fire under severe fire weather. Canopy base height will eventually increase, reducing torching potential. Fuel dynamics can also be affected by site productivity. For example, in the Olympic Mountains (Washington), fine fuel mass following fire at a productive site (Agee and Huff 1987) was higher than short-term fine fuel mass following fire on drier*

> *sites (table 2). In southwestern Oregon, sites burned with high-severity fire had lower fine fuel loads than unburned sites, but on the Olympic site, fuel mass in the first year postfire was twice that of unburned forest primarily owing to branch fall caused by a windstorm during the first postfire winter.*

The fire hazard mentioned in the Scott and Reinhardt study appears to be for plantations where competing vegetation has not been treated, thereby providing a ladder of fuels to carry fire into the crowns. When the hazard is reduced (If the competing vegetation was treated and not present) it stands to reason that the early hazard would be mitigated. The study also says that it would require approximately 485 trees per acre of higher density to carry independent crown fire, under severe fire weather conditions. Most plantations are planted at an initial density lower than this, with the new stocking standards allowing for as little as 125 trees per acre. As will be shown below, this results in a significant reduction in both vertical and horizontal continuity. Also, the number of days where severe fire weather would occur is low, relative to the number of days in a year, further lowering the risk.

- Fire-Silviculture Relationships in Sierra Forests (Weatherspoon, 1996)

Weatherspoon, studying the effects of fire damage on managed and unmanaged stands, noted that plantations were damaged at a higher rate than the unmanaged stands, but also noted the shift in management technique that the forest service had used in the recent past, which took the evaluated stands on a trajectory that differs significantly from those on private timberlands:

> ***"In recent years, however, concerns over air pollution from burning and adequate retention of soil cover and large woody debris have led managers to forego site preparation and plant through untreated slash on some units****. Depending on the site, clearcut units generally have been planted either with ponderosa pine (Pinus ponderosa Doug. ex Laws.) or Douglas-fir (Pseudotsuga menziesii [Mirb.] Franco) seedlings, or combinations of the two species.* ***Until the early 1980s, plantations routinely were sprayed with herbicides to release conifer seedlings from a wide variety of competing plant species. Since then, restrictions on use of herbicides have led to fewer plantations being released, and those mostly with hand tools. No recorded precommercial thinning was done in plantations affected by the 1987 fires****." [Emphasis added]*

In the study area, hazard reduction, site preparation, competing vegetation treatment and precommercial thinning (all common on private forestlands) were not applied. Further in his study, Weatherspoon noted that the increased damage to plantations was more due to the size of the trees and their position in relationship to fine fuels, the primary driver of fire behavior. What Weatherspoon identified as the single biggest indicator of fire danger, as noted above, was the method chosen for site preparation:

> *"**Site preparation method (as represented by dummy variables) was the only factor related to uniformity of damage, and it was highly significant. Untreated plantations burned quite uniformly (and severely), and differed markedly from treated units in terms of uniformity of damage.** Broadcast burned units showed the greatest tendency for fire damage to decrease from the edge of the unit inward-i.e., for the plantation apparently to retard the spread and intensity of the fire. They differed significantly from machine piled units, which tended more towards a spotty burn pattern. **No instances were observed in which fire damage increased from the edge of the plantation inward.** Further Quantification of results related to uniformity of damage probably is not warranted, given the subjective nature of this variable." [Emphasis Added]*

Also noted above was the observed decrease in damage to plantations the further the observation was made from the adjacent stand, suggesting that damage to the plantation was influenced by the fire behavior of the non-evenage stand. This could be because radiant heat damage from the adjacent stand created an increase in crown scorch near the edge of the plantation, but that as the fire moved into the fine fuels of the plantation, intensity and crown scorch decreased. As has been stated above, CAL FIRE could find no direct nexus between evenage management, in and of itself, and an increase in fire danger.

- Reburn severity in managed and unmanaged vegetation in a large wildfire (Thompson, Spies, & Ganio, 2007)

> *The Biscuit Fire tended to burn at relatively high severity in young naturally regenerated stands and even more severely in young conifer plantations of comparable age and fire history. This suggests that young forests, whether naturally or artificially regenerated, may be vulnerable to positive feedback cycles of high severity fire, creating more early-successional vegetation and delaying or precluding the return of historical mature-forest composition and structure.*
>
> *It should be noted, however, that many of the plantations examined in this analysis had lower conifer densities and a larger component of shrubs and hardwoods than would be found in typical intensively managed plantations of the same age (11–14 years).*

This is consistent with the findings of the Azuma, Donnegan, & Gedney, 2004 report where it disclosed a disproportionate number of low site acres in the fire area (IV and lower). It was these low site acres that burned the hottest, presumedly due to the presence of brush that created a continuous and receptive ladder to carry fire into the tree canopy.

> *Reducing connectivity of surface fuels at landscape scales is likely the only way to decrease the size and severity of reburns until vertical diversification and fire resistance is achieved*

The process of breaking up the horizontal and vertical continuity of fuel within plantations is achieved through the control of competing vegetation (e.g. brush) and controlling the density of trees in the plantation (through precommercial of commercial thinning).

- Severe fire weather and intensive forest management increase fire severity in a multi-ownership landscape (Zald & Dunn, 2018)

  As with other studies reviewed above, there are myriad differences between California and Oregon forestry practices that must be considered. The primary author of the study (Zald) was contacted on April 8, 2019 to inquire about applicability of this study to areas in California. The author was cautious about applying the study results outside of the geographic region and context of the study. The study itself provides numerous caveats that must also be considered when determining how applicable the results are to a particular area. For example, the plantations on the O&C lands mentioned in the study are typically managed on a 30-50 year harvest rotation. The harvest rotation ages in the study area are well below those found in California, by as much as half the minimum age for Site 1 timberland. Also, precommercial and commercial thinning is not a common practice in plantations in the Pacific Northwest. California plantations receive both pre-commercial and commercial thinning treatments in addition to other vegetation management treatments (e.g. site preparation, herbicide treatments) that appear to be lacking in the study area. These practices align with the authors descriptions of measures that would reduce fire severity and further differentiate the study area from California forests. For example, the author provides suggestions on measures that would reduce fire severity, one being, “increasing the age (and therefore size) of trees and promoting spatial heterogeneity of stands and fuels is a likely means to reducing fire severity, as are fuel reduction treatments in plantations.” When compared to the study area, California plantations are grown to an older age and receive fuel reduction treatments in the form of precommercial thinning and commercial thinning.

Visual Comparison of Plantation Density

The differences in management between Oregon and California (and between federal and private lands) cannot be understated. Most of the studies discussed above were from plantations on Federal lands, or on lands in Oregon that were managed much differently in California.

For example, the Shasta Cascade Timberlands LLC, demonstration of Maximum Sustained Production on file with CAL FIRE describes their plantation strategy:

> *The planting density varies by site but, in general, approximately 350 trees per acre (TPA) are planted on an 11-foot by 11 -foot spacing. This may vary slightly and the regimes used in our modeling exercise are given in Table 9. Our goal is to have 300 well established seedlings within two growing seasons 11 after planting. Where survival is expected to be difficult, even with carefully targeted seedlings, we may plant more trees initially. If there is insufficient survival, we will replant or interplant the area to achieve our goal. In the event that we have*

excessive in-growth, we will use pre-commercial thinning to reduce the stocking to a level which will allow us to carry the stand to either rotation or a commercial thin.

• Table 9. Planted numbers of trees per acre and species distribution used in modeling future planted forests.

Regime	Tract	Elevation	Site Class	TPA	Species Mix
1	All Tracts	<3,000 ft	I and II	350	80%PP, 20%DF
2	All Tracts	<3,000 ft	III and IV	350	100%PP
3	All Tracts	>=3,000 ft	I and II	350	40%PP, 35%WF, 25%DF
4	All Tracts	>=3,000 ft	III and IV	350	50%PP, 25%WF, 25%DF
5	Miller Mountain	All	all	400	50%PP, 25%WF, 25%DF
6	Yreka	All	all	400	40%PP, 25%WF, 35%DF

This demonstration of MSP was approved before changes were made to the stocking standards for timberlands. At the time of the preparation of this document, planting to at least 300 trees per acre was common, with follow up precommercial thinning to reduce density over time. The new standard is to plant at least 125 trees per acre, and the THP states that this standard is to be used on the proposed evenage stands.

Below is a visual demonstration of the difference in plantation stocking between lands similar to what was described in (Zald & Dunn, 2018) and those that will be planted for this THP. The stands on the left are planted at 400 trees per acre and those on the right are planted at 125 trees per acre. The top picture is the stand at 30 years of age and the bottom is 10 years. Visually you can see the crowns on the left side of the screen are much closer, allowing fire to carry easier from tree to tree.

Figure 5. Top-down view of planting density (400 on the left and 125 on the right). Images on top are the stand at 30 years and the bottom is 10 years of age. Image generated using Visual Stand Designer (https://visualforester.com/)

If trees are planted at a lower density, and competing vegetation is controlled to the point where there is little to no horizontal or vertical continuity, the fire danger within the plantation is minimized until the point where the crowns are well above the surface fuels.

Figure 6. Side view of a 10 year old plantation with 400 trees per acre. Image generated using Visual Stand Designer (https://visualforester.com/)

Figure 7. Side view of a 30 year old plantation with 400 trees per acre. Image generated using Visual Stand Designer (https://visualforester.com/)

Figure 8. Side view of a 10 year old plantation with 125 trees per acre. Image generated using Visual Stand Designer (https://visualforester.com/)

Figure 9. Side view of 30 year old plantation with 125 trees per acre, Image generated using Visual Stand Designer (https://visualforester.com/)

Beyond the stand level one must look to the larger landscape in order to understand the context of individual stands. Concerns relative to fire danger typically do not fully appreciate the diversity of stand conditions that exist across the landscape. Variability in fuel loading, composition and moisture greatly impact fire behavior. It is important to remember that areas proposed for evenage management are small in size, from a landscape perspective (20-30 acres depending on yarding method). As a result, even if a particular stand has a higher fire danger than a surrounding one, the area upon which that stand could impact overall fire hazard is very low. Except for instances where a fire has reached a plume-dominated or wind-driven state, rapid changes in vegetation types have the ability to significantly alter fire behavior. For instance, a fire that is moving through the crowns of a mature timber stand can move into a ground fire, when it reaches a plantation where spacing and competing vegetation is managed (as occurs on private timberlands). The variability of vegetation types can alter and moderate fire behavior. What we see in recent catastrophic fires is the combination of extremely dry fuels, aligned with terrain and driven by winds.

Concerns of Dunsmuir as Another "Paradise":

Several of the concerns mentioned the devastating fires that have occurred recently in California and express the same fears for the town of Dunsmuir. The fear of losing homes or lives to wildfire is understandable and, as has been described above, is a prime concern of CAL FIRE.

When it comes to direct cause and effect investigations related to wildfire, there are few available. A scientific analysis of the Camp Fire progression was released earlier this year by the National Institute of Standards and Technology, a department of the US Department of Commerce (Maranghides, 2021). This study examined the fire progression in extreme detail and reached several conclusions on the causation of the fire intensity:

> *The Camp Fire ignited on November 8, 2018 in the foothills of the Sierra Nevada in Butte County, California. The first 24 hours were characterized by a fast-moving fire with initial spread driven by high winds up to 22 m/s (50 mi/h) and long-range spotting up to 6.3 km (3.9 mi) into the community. The fire quickly impacted the communities of Concow, Paradise, and Magalia. The Camp Fire became the most destructive and deadly fire in California history, with over 18,000 destroyed structures, 700 damaged structures, and 85 fatalities. After a preliminary reconnaissance, it was determined that abundant data was available to support an in-depth case study of this devastating wildland-urban interface (WUI) fire to increase our understanding of WUI fire spread, fire behavior, evacuation, and structure response. The methodology guiding the case study and a detailed timeline reconstruction of the fire progression and fire behavior are presented. Over 2200 observations about fire spread and behavior were collected during the case study. Subsequent reports will detail additional aspects of the incident including emergency response and evacuation, and defensive actions and structure response. This study has identified that Butte County and the Town of Paradise were well prepared to respond to a WUI fire, that the Camp Fire grew and spread rapidly and that multiple factors contributed to the rapid growth and spread of the Camp Fire. Additionally, this study identified the importance of the wildland fire ignition location relative to the community, that multiple parcel-level fire spread pathways caused structure ignitions, and that WUI fire spread impacted the affected communities in multiple ways beyond the destruction of residential and commercial properties.*

What were the primary causes of the extensive devastation?
There are many factors that may impact individual structure survivability and the effectiveness of defensive actions at a parcel level. When viewing the Camp Fire in its entirety, four factors were identified that most significantly influenced overall fire losses:
i. Fuel ignition potential,
ii. Density of vegetative and structural fuels,
iii. Wind and terrain, and
iv. Extent/size of fire front reaching the communities.

Fuel Ignition Potential
Fuel receptivity to embers and ignition potential was a result of over 200 days with almost no precipitation. Fuel moisture contents were at or near record low for the time of year. The presence of fine fuels, including but not limited to pine needles and ornamental vegetation stressed by limited precipitation, enabled a number of spot ignitions by embers traveling well ahead of the fire front. Fuel receptivity and ignition from embers was clearly conveyed in multiple first responder statements reporting "100 % ember ignitions." It was this fuel receptiveness that caused the large number of ignitions within the communities. In Paradise, these ignitions started approximately 30 min to 40 min before the arrival of the fire front and rapidly grew in number when the front reached the community.

Density of Vegetative and Structural Fuels
All three communities, Concow, Paradise, and Magalia, are intermix communities that have developed over decades among the local wildland vegetation. Concow can be considered low population density intermix with 10 people/km2 (26 p/mi2), while Paradise and Magalia can be classified as high-density intermix communities with 552 p/km2 and 312 p/km2 (1433 p/mi2 and 808 p/mi2) respectively.

The absence of fire within most of Paradise and Magalia for many decades had resulted in significant vegetative fuel accumulation. The vegetative fuel loading was further increased by diseased vegetation (specifically pines). Seasonal needle dropping, combined with diseased trees and further enhanced by high winds, resulted in extensive needle accumulation before and during the fire. The historic growth of Paradise and surrounding communities, going back over a century, resulted in many structures placed on smaller lots. The short structure separation distances, together with the vegetative fuel loading, enabled rapid structure-to-structure fire spread.

Fuel treatments have been used extensively to compartmentalize the landscape in the area around Paradise, Magalia, and Concow. The intent was to provide access for firefighting operations and reduce the total impact of wildfires by reducing the total acreage burned. Fuel treatments were used not only to influence wildland fire behavior but also to protect critical infrastructure such as the primary pumping station and treatment plant of the Paradise Irrigation District. Together with defensive actions, these specific fuel treatments met their objectives during the Camp Fire, and the critical infrastructure was undamaged. This specific fuel treatment example is included here to highlight the value of pre-fire preparation and vegetative fuel reduction in protecting critical infrastructure. The systematic analysis of the effectiveness of fuel treatments and their impact on fire behavior are beyond the scope of this report.

Wind and Terrain
The terrain of eastern Butte County is defined by the Sierra Nevada foothills and numerous deep river canyons and ravines.

The Feather River Canyon and Jarbo Gap, near the fire's origin, are known for their particularly high winds. Ridgetop gusts over 22 m/s (50 mi/h) are not uncommon, and the downslope north winds bring dry air through the foothills and the Town of Paradise.

The north wind event that occurred in the early morning on November 8 combined with receptive fuels, and the restricted access associated with topography contributed to the rapid growth of the fire, exceeding the ability for initial containment.

It is the confluence of these four factors (fuel ignition potential, high fuel density, wind and terrain, and extent of the fire front reaching the communities) that caused the aggressive fire behavior resulting in dangerous conditions for residents and first responders and in extensive damage and destruction.

Multiple Factors Contributed to the Rapid Growth and Spread of the Camp Fire

F5. Dry winds, with recorded gusts at Jarbo Gap exceeding 22 m/s (50 mi/h) from the northeast, increased fire spread in vegetative and structural fuels.
F6. Steep topographical features including river canyons and creek drainages channeled north winds and accelerated fire spread through vegetative fuels.
F7. Extremely dry vegetative fuels, associated with over 200 days without any significant precipitation, increased the fuel ignition potential around and within Concow, Paradise, and Magalia.
F8. Fire spread toward Paradise from Concow was fueled by heavy conifer forests with brush understory. At lower elevations oak woodlands and savannah grass were primary fuels.

5.2. Fuels Description
Fuels around the point of origin and downwind towards and within Paradise and Magalia consisted of heavy conifer timber with brush understory. At lower elevations, oak woodland and grass savannah were the primary fuels. The area near the fire origin had burned previously in 2008; however, fuels west of the West Branch of the Feather River, in Paradise and Magalia, had not burned in recorded history (see Section 5.4). Timber was characterized by close crown spacing with heavy manzanita and oak cover underneath.

Fuel moisture levels were uncharacteristically low for the time of year due to the protracted dry period and late arrival of rain beginning the wet season. Fuel moisture levels [34] for 1000-hour time lag fuels measured at the Pike County Lookout south east of the fire area were at 5 % on November 1, well below the 17 % average for the Northern Sierras in November. Live fuel moisture in manzanita was 74 %; the critical level, in terms of fire hazard, for manzanita is 80 %. The average for November is 93 % [TD-131].3

The Energy Release Component (ERC) output by the National Fire Danger Rating System (NFDRS), a measure related to the total fuel energy availability per unit area (J/m2, Btu/ft2), which increases as fuels cure/dry, trended slightly above average for the northern Sierras during the summer, but in early October it began trending well above average. On the day of the fire the ERC calculated amongst a grouping of nearby fire weather stations was 80, above the historic record for the date (60) and above the 90th percentile for all dates in the previous 10 years (80). ERC values are presented in ***Figure 4****, developed by Aviva Braun from the National Weather Service. A slideshow by Ms. Braun on the weather conditions during the Camp Fire is presented in Appendix D [35].*

5.3. Weather
Weather before and during the Camp Fire, as for many rapidly spreading fires, was characterized by dry and windy conditions. In California, the windy conditions are often brought by downslope north wind events, bringing warm, dry air through fire prone regions. Jarbo Gap is known for locally high winds, particularly during north wind events which align with the Feather River Canyon. The Big Bend of the Feather River channels and forces winds up and over the ridge at Jarbo Gap. While dry or windy conditions are not unusual in Butte County, the overlap of late season dryness with a north wind event was relatively uncommon. Wetting rains typically begin in September before the frequency of north wind events increases in November and December [TD-003, TD-131].

It was very unusual to have fuel dryness levels so low in November in Butte County. In most years significant rain would have fallen by November, dampening fine fuels and lowering the ignition hazard. However, with the exception of a small amount of rain in early October leading up to the Camp Fire, it had been over 200 days since 13 mm (0.5 in) or more of rain had fallen at the lower elevations of Butte County. The U.S. Drought Monitor [38] reported much of Butte County in the "D0 Abnormally Dry" condition for the 19 weeks leading up to the fire, between June 26 and November 6, moving into "D1 Moderate Drought" on November 13Figure 6 [39].

Gusty winds were measured at the Jarbo Gap Remote Automated Weather Station (RAWS) [37] starting around 19:00 on November 7, becoming very strong by 21:00. Sustained winds of 12 m/s (27 mi/h) continued overnight with gusts over 22 m/s (50 mi/h). At the time of ignition on November 8, the RAWS station reported 8 m/s (18 mi/h) winds gusting to 18 m/s (40 mi/h) with relative humidity of 23 %. Wind direction across the foothills and ridgetops was almost exclusively from the northeast, driving the fire toward Concow and Paradise. Wind gusts during the day on November 8 were around 13 m/s (30 mi/h) with sustained winds of 5 m/s to 9 m/s (12 mi/h to 20 mi/h) from the northeast. Relative humidity dropped to 10 % during the day.

While selective fuel treatments were conducted in and around both communities (see Section 13.2), the lack of fire history throughout Paradise and Magalia was directly connected to the vegetative fuel loading in both communities.

9.4. Impact of Winds, Wildland Fuels, and Terrain on Fire Behavior
Section 5.3 in this report presents an overview of the weather during the Camp Fire. Local observations and video documentation provided additional resolution and information on how the wind affected local fire behavior. Firsthand observations on Rim

Road at 07:20 on November 8 talked of "softball size rocks hitting the engine" [TD-005]. These reports were consistent with the short video from the TD and likely indicated local winds in the range of 22 m/s to 27 m/s (50 mi/h to 60 mi/h). These values agree with the forecasted ridgetop winds.

Figure 25. Strong wind gusts blew dirt and rocks whipping across the ridgetop at Rim Road.

Terrain also directly impacted fire behavior, resulting in dramatic fire behavior as observed around 18:00 on November 8, with flame lengths of 30 m to 60 m (100 ft to 200 ft) breaking out of the Butte Creek Canyon into Wilder Drive [TD-117]. Similar effects of topography, compounded with high fuel loading and possible alignment with local winds, resulted in significant fire activity in other areas within the fire perimeter, including the drainages to the north of Nelson Bar Road where flame lengths of 15 m to 30 m (50 ft to 100 ft) were reported.

The terrain also impacted fire spread indirectly by restricting or slowing down access by first responders. An example is provided here to illustrate the impact of topography on access. A straight line from Rim Road (39° 47' 34.89" N, 121° 28' 24.00" W) to the intersection of Pentz Road and Skyway is 9.3 km (5.75 mi); however, it takes 40 km (25 mi) and 43 minutes of drive time to get there. The fire is thus able to travel much faster than ground suppression forces. Further information on incident response and defensive actions will be presented in NIST Camp Fire Report #5.

The extensive spotting, caused by ember transport and the low ignition threshold of abundant dry vegetative fuels, such as pine needles, discussed below, resulted in multiple ignitions of vegetation and structures that quickly spread and overwhelmed the available firefighting resources. The spot fires then grew and "backfilled," causing severe local fire exposures in many cases. These high intensity exposures might have then generated strong local winds and blackout conditions downwind.

Needle drop associated with drought-stressed vegetation, time of year, and disease resulted in piles of needles throughout town, even though the Town of Paradise had just swept the streets. The same buildup also occurred on properties and roofs that had been recently cleaned. This further accentuated the hazard on properties that might not have been recently maintained.

The extreme fire weather observed during the first day of the Camp Fire played a significant part in the devastation that followed. As described above, sustained winds of 27 MPH with gusts to 60 MPH in the area of the fire created the most extreme of results. By comparison, the Mt. Shasta Remote Automated Weather Station for the same day showed average winds of 2 MPH with gusts to 7 MPH.

It is abundantly clear from reading the report that the factors influencing the devastation caused by the Camp Fire are numerous and complex. Attempting to tie the impacts of the Camp Fire to forest management are not supported by the record and are entirely speculative.

As to the comparison between Paradise and Dunsmuir, it is too speculative to say what would happen if a fire occurred in the plan area. The Forest Practice Rules prescribe hazard reduction measures, as described above, and they are intended to reduce the potential for fire starts, and to reduce excess fuel loads generated by Timber Operations. Additionally, the silvicultural prescriptions used in this plan will result in lower tree densities on the landscape, and less vertical continuity between the surface fuels and the tree canopies. No hazard can be reduced to zero, but the combination of the proposed actions within the plan (both silviculture and road maintenance/construction) along with required hazard reduction activities and planning have allowed CAL FIRE to conclude that the plan will not result in a significant adverse effect on Wildfire Risk and Hazard.

Road Construction and Impacts

There were several concerns noted about the use of roads within the City of Dunsmuir and the construction of new roads within the THP area.

Access

The use of roads and streets within the City of Dunsmuir for log truck traffic was noted by several comment writers. A primary reason for the new road construction in the Plan area is to route all logging traffic to the north so that this and future harvesting plans can access Mott Road. Additionally, in the event of a fire or other emergency, fire personnel can use these same roads to access this area leaving residential and city streets open to civilians. The construction of segment NC4 is especially important to the routing of all log truck traffic to the north of Dunsmuir.

NC4 and Geologic Concerns

One segment of new road construction that has generated the most concern is located upslope of Butterfly and Wooden Avenue. This road segment was designed to avoid log truck traffic in the City of Dunsmuir. It crosses steep slopes in some segments of construction but does not cross any unstable areas. The area in the vicinity of SS #6 along road segment NC4 was specifically visited by representative of the California Geologic Survey and the CAL FIRE inspector on June 18, 2021 to assess impacts to homes and resources downhill from the

construction. The entire report is attached as Appendix B, but the following summary was provided:

Background:

CGS conducted a pre-harvest inspection (PHI) on May 12, 13 and 18, 2021 to assess slope stability and general geology within the THP area (CGS, 2021). On June 16, 2021 Dunsmuir resident Mike Bush contacted CGS to discuss his concerns regarding the potential for timber operations (i.e. new road construction) that could impact slope stability above Wooden Avenue.

A focused PHI was conducted on June 18, 2021, to observe existing site conditions immediately upslope of Wooden Avenue, in the area where Mr. Bush expressed the most concern. This report summarizes CGS's observations of the focused PHI; please refer to the 2021 CGS PHI memo for the engineering geologic review of the entire THP area.

Observations:

The slopes immediately upslope of Wooden Avenue were evaluated and consist of two (2) coalescing swales located below a break in slope that separates steep slopes (60 to 70 percent) above from very steep (75 to 85 percent) slopes below (Figure 1). The swales measure approximately 500 to 600 feet in length, 20 to 40 feet wide, 5 to 15 feet deep, with V- to U-shaped cross sections. Signs of recent slope instability (i.e. shallow translational slides) were not observed. However, ground disturbance associated with past skidding operations down the thalweg of the swales appears to have altered the natural slope morphology and placed additional fill in the swales that could be entrained by concentrated flows.

Vegetation along the slopes consists of a moderately dense 12 -to 24-inch diameter at breast height (DBH) mixed conifer and Oak canopy. Most of the conifers display near vertical boles, indicative of stable slope conditions during their lifetimes. Soils generally consist of 2 to 4 feet of silty sands (SM), with gravels and cobbles, mantled over gabbroic bedrock (Ogb) that outcrops in many locations. Signs of dormant instability, including bench-step to hummocky topography were not observed.

Timber harvest operations are not proposed immediately upslope of Wooden Avenue. However, a segment of new road construction along steep slopes (SS-6) is located approximately 400 feet above the break in slope, about 1,250 feet upslope of Wooden Avenue (Figure 1). To mitigate the potential for adverse impacts to slope stability and concentrated runoff down the swales, this segment of road will be constructed with a full bench prism, utilizing an excavator, and will be adequately drained by outsloping and installing appropriately-spaced drainage facilities in accordance with the Forest Practice Rules. Based on 1) the distance above the break in slope and 2) the proposed construction methods, it appears unlikely that timber operations will significantly adversely impact slope stability and runoff above Wooden Avenue. Thus, no additional recommendations outside the requirements of the Forest Practice Rules were made.

While no additional mitigation measures for this segment of road construction were necessary as a result of this site visit, the CGS preharvest inspection report for the entire THP made the following recommendations for road construction that was to occur on steep slopes and to address operations on or in the vicinity of unstable areas:

CGS-1

- Include a detailed description of the proposed road re-construction in the THP, not limited to: 1.) receding into the cutbank, 2.) utilizing full bench construction, 3.) end-hauling spoils, 4.) removal of over-steepend material that can be reached from the road, and 5.) placing jutt netting or slash along the slope to reduce erosion.
- Describe the feature in the THP and include a Geology "G" number for reference.

CGS-2

- Include a detailed description of the proposed road re-construction in the THP, including full-bench construction and end-hauling of spoils.
- Remove Crossing 1903 from the THP.

CGS-3

- Install a minimum of three (3) waterbars at two (2) locations discussed during the PHI, spaced no more than 50 feet apart.
- Include a detailed description of the proposed road re-construction in the THP, including full-bench construction and end-hauling of spoils.

CGS-4

- Ramp over the deposits blocking the road (northern approach) and place additional fill to buttress/raise the remaining road to finish grade.
- Disclose the unstable area on the relevant THP maps with a "G" number.

After examining the available information, including public comment and input from other agencies, CAL FIRE has determined that the proposed road construction is unlikely to lead to additional slope instability.

Greenhouse Gas Sequestration

Forest Practice Regulatory Background

The Z'berg-Nejedley Forest Practice Act (Division 4, Chapter 8, PRC) establishes the necessity for Timber Harvesting Plans to conduct commercial timber operations and establishes the Board of Forestry and Fire Protection as the regulatory authority for promulgation of regulations to, among other things:

…encourage prudent and responsible forest resource management calculated to serve the public's need for timber and other forest products, while giving consideration to the public's need for watershed protection, fisheries and wildlife, sequestration of carbon dioxide, and recreational opportunities alike in this and future generations.

The FPA was initially adopted in 1973. Since that time, the BOF has enacted numerous regulations to support the Act's intent related to sustained yield and has adopted conservation standards for post-harvest stocking that meet or exceed the minimum resource conservation standards specified in PRC §4561 of the Act. The Board has established rules related to demonstration of Timberland Productivity, Sustained Forestry Planning (14 CCR §933.10), demonstration of Maximum Sustained Productivity (14 CCR §933.11), and has defined sustained yield and Long Term Sustained Yield (14 CCR §895.1). Under these various rule provisions, landowners with more than 50,000 acres of timberland are required to demonstrate long-term sustained yield under the management regime they have selected for the ownership. Under this provision, the Department has received and approved long term sustained yield documents covering approximately 3.2 million acres of timberland. For smaller industrial and nonindustrial landowners, they must comply with minimum retention standards specified in the Rules as established by the BOF, although they may choose a higher standard.

More recently, amendments were made to the FPA to clarify and refine other mandates related to the assessment of Greenhouse Gas (GHG) impacts:

4512.5. Sequestration of carbon dioxide; legislative findings and declarations.
The Legislature finds and declares all of the following:

(a) State forests play a critical and unique role in the state's carbon balance by sequestering carbon dioxide from the atmosphere and storing it long term as carbon.

(b) According to the scoping plan adopted by the State Air Resources Board pursuant to the California Global Warming Solutions Act of 2006 (Division 25.5 (commencing with Section 38500) of the Health and Safety Code), the state's forests currently are an annual net sequesterer of five million metric tons of carbon dioxide (5MMTCO2). In fact, the forest sector is the only sector included in the scoping plan that provides a net sequestration of Greenhouse Gas emissions.

(c) The scoping plan proposes to maintain the current 5MMTCO2 annual sequestration rate through 2020 by implementing "sustainable management practices," which include potential changes to existing forest practices and land use regulations.

(d) There is increasing evidence that climate change has and will continue to stress forest ecosystems, which underscores the importance of proactively managing forests so that they can adapt to these stressors and remain a net sequesterer of carbon dioxide.

(e) *The Board, the Department, and the State Air Resources Board should strive to go beyond the status quo sequestration rate and ensure that their policies and regulations reflect the unique role forests play in combating climate change.*

4551. Adoption of district forest practice Rules and regulations; factors considered in Rules and regulations governing harvesting of commercial tree species; funding.

(a) …

(b) (1) The Board shall ensure that its Rules and regulations that govern the harvesting of commercial tree species, where applicable, consider the capacity of forest resources,

including above ground and below ground biomass and soil, to sequester carbon dioxide emissions sufficient to meet or exceed the state's Greenhouse Gas reduction requirements .for the forestry sector, consistent with the scoping plan adopted by the State Air Resources Board pursuant to the California Global Warming Solutions Act of 2006 (Division 25.5 (commencing with Section 38500) of the Health and Safety Code).

(2) …

Technical Rule Addendum #2, Item G:

G. GREENHOUSE GAS (GHG) IMPACTS

Forest management activities may affect GHG sequestration and emission rates of forests through changes to forest inventory, growth, yield, and mortality. Timber Operations and subsequent production of wood products, and in some instances energy, can result in the emission, storage, and offset of GHGs. One or more of the following options can be used to assess the potential for significant adverse cumulative GHG Effects:

1. *Incorporation by reference, or tiering from, a programmatic assessment that was certified by the Board, CAL FIRE, or other State Agency, which analyzes the net Effects of GHG associated with forest management activities.*
2. *Application of a model or methodology quantifying an estimate of GHG emissions resulting from the Project. The model or methodology should at a minimum consider the following:*
    a. *Inventory, growth, and harvest over a specified planning horizon*
    b. *Projected forest carbon sequestration over the planning horizon*
    c. *Timber Operation related emissions originating from logging equipment and transportation of logs to manufacturing facility*
    d. *GHG emissions and storage associated with the production and life cycle of manufactured wood products.*
3. *A qualitative assessment describing the extent to which the Project in combination with Past Projects and Reasonably Foreseeable Probable Future Projects may increase or reduce GHG emissions compared to the existing environmental setting. Such assessment should disclose if a known 'threshold of significance' (14 CCR § 15064.7) for the Project type has been identified by the Board, CAL FIRE or other State Agency and if so whether or not the Project's emissions in combination with other forestry Projects are anticipated to exceed this threshold.*

California Legislative and Administrative Background

Over the years, various efforts by the California Legislature and the Governor to quantify greenhouse gas emissions and develop strategies for avoiding potential negative impacts have occurred. A summary relevant to this THP is provided below:

1. Assembly Bill 32 (AB32), the Global Warming Solutions Act of 2006, was signed into law by Governor Schwarzenegger and represents a comprehensive approach to address climate change. AB32 establishes a statewide goal to reduce greenhouse gas emissions to 1990 levels by 2020. The California Resources Air Board (ARB) is the lead agency for implementing AB32.

The scoping plan adopted by the ARB in December of 2008 (CARB, 2008) establishes a general roadmap that California will take to achieve the 2020 goals. Targets for the Forestry Sector were established under the "Sustainable Forests" section of the Scoping Plan. The "Sustainable Forest" element was recognized as a carbon sink based on the current carbon inventory for the Forest Sector and sequestration benefits attributable to forest. Specific recommendations for the sector included:

- Maintaining the current 5 $MMTCO_2E$ reduction target through 2020 by ensuring that current carbon stock is not diminished over time.
- Monitoring of carbon sequestered
- Improving greenhouse gas inventories.
- Determining actions needed to meet the 2020 targets.
- Adaptation
- Focusing on sustainable land-use activities.

Wildfire threat and loss to conversions were recognized as potential threats to the Forest Sector in relation to achieving sector goals.

2. AB 1504 (Chapter 534, Statutes of 2010, Skinner): Requires the Board of Forestry and Fire Protection to ensure that its rules and regulations that govern timber harvesting consider the capacity of forest resources to sequester carbon dioxide emissions sufficient to meet or exceed the state's GHG reduction target for the forestry sector, consistent with the AB 32 Climate Change Scoping Plan goal of 5 million metric tons CO2 equivalent sequestered per year. Currently, these reports are principally prepared by Glenn A. Christensen.

3. SB 1122 (Chapter 612, Statutes of 2012, Rubio): This bill requires production of 50 megawatts of biomass energy using byproducts of sustainable forest management from fire threat treatment areas as determined by CAL FIRE.

4. AB 417 (Chapter 182, Statutes of 2015, Dahle): This bill provides the Board of Forestry and Fire Protection with additional flexibility in setting post timber harvest tree stocking standards in order to, in part, contribute to specific forest health and ecological goals as defined by the Board. The 2020 Forest Practice Rules include the Board's revisions to the "Resource Conservation Standards" under 14 CCR §932.7.

5. In 2015, the Governor issued Executive Order B-30-15 establishing a GHG reduction target for California of 40 percent below 1990 levels by 2030 and 80 percent by 2050 to help limit global warming to 2 degrees Celsius or less as identified by the IPCC to avoid potentially catastrophic climate change impacts. In 2016, the California Legislature passed Senate Bill 32 (Chapter 249, Statutes of 2016), which codifies the Governor's Executive Order. CARB updated the AB 32 Scoping Plan in 2017 to reflect the 2030 target.

6. SB 859 (Chapter 368, Statutes of 2016, Committee on Budget and Fiscal Review): Among other things, calls for CARB, in consultation with CNRA and CAL FIRE, to complete a standardized GHG emissions inventory for natural and working lands, including forests by December 31, 2018 (CARB, 2018).

7. SB 1386 (Chapter 545 Statutes of 2016, Wolk): Declares the policy of the state that the protection and management of natural and working lands, including forests, is an important strategy in meeting the state's greenhouse gas reduction goals, and requires all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands.

8. (2018) Accompanying release of the Forest Carbon Plan, Governor Brown's Executive Order B-52-18 on forest management emphasizes the importance of implementing the Forest Carbon Plan. Executive Order B-55-18 also calls for California to achieve carbon neutrality no later than 2045, with carbon sequestration targets to be set in the Natural and Working Lands to help achieve this goal.

These Laws, Regulations and Executive Orders form the background under which CAL FIRE reviews plans for impacts to GHG emissions and sequestration.

National and State-Level GHG Assessments

A variety of assessments have been conducted to calculate the GHG emissions and rates of sequestration related to management of natural and working lands. Due to the rapidly evolving science, accounting methods and policy directions from the executive and legislative branches, specific accounting that conforms from study to study has yet to be achieved. The overall trends, however, do provide meaningful insight within which to make assumptions about how an individual THP fits into the overall objectives of assessing and mitigating potential negative impacts from GHG emissions.

USEPA Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2018 (EPA, 2020)**:**

Summary: Forest management falls under the "Land Use, Land Use Change, and Forestry" (abbreviated LULUCF) for consistent reporting with other international efforts. Sequestrations at the national level offset approximately 12% of total US GHG Emissions annually and this carbon pool remains relatively stable over time.

- *In 2018, total gross U.S. greenhouse gas emissions were 6,676.6 million metric tons of carbon dioxide equivalent (MMT CO2 Eq). Total U.S. emissions have increased by 3.7 percent from 1990 to 2018, down from a high of 15.2 percent above 1990 levels in 2007. Emissions increased from 2017 to 2018 by 2.9 percent (188.4 MMT CO2 Eq.). Net emissions (including sinks) were 5,903 MMT CO2 Eq. Overall, net emissions increased 3.1 percent from 2017 to 2018 and decreased 10.2 percent from 2005 levels as shown in Table ES-2. The decline reflects many long-term trends, including population, economic growth, energy market trends, technological changes including energy efficiency, and energy fuel choices. Between 2017 and 2018, the increase in total greenhouse gas emissions was largely driven by an increase in CO2 emissions from fossil fuel combustion. The increase in CO2 emissions from fossil fuel combustion was a result of multiple factors, including increased energy use from greater heating and cooling needs due to a colder winter and hotter summer in 2018 compared to 2017.*

- *Conversely, U.S. greenhouse gas emissions were partly offset by carbon (C) sequestration in forests, trees in urban areas, agricultural soils, landfilled yard trimmings and food scraps, and coastal wetlands, which, in aggregate, offset 12.0 percent of total emissions in 2018.*

- *Within the United States, fossil fuel combustion accounted for 92.8 percent of CO2 emissions in 2018. There are 25 additional sources of CO2 emissions included in the Inventory (see Figure ES-5). Although not illustrated in the Figure ES-5, changes in land use and forestry practices can also lead to net CO2 emissions (e.g., through conversion of forest land to agricultural or urban use) or to a net sink for CO2 (e.g., through net additions to forest biomass).*

- *Land Use, Land-Use Change, and Forestry (LULUCF)*

    - *Overall, the Inventory results show that managed land is a net sink for CO2 (C sequestration) in the United States. The primary drivers of fluxes on managed lands include forest management practices, tree planting in urban areas, the management of agricultural soils, landfilling of yard trimmings and food scraps, and activities that cause changes in C stocks in coastal wetlands. The main drivers for forest C sequestration include forest growth and increasing forest area, as well as a net accumulation of C stocks in harvested wood pools.*
    - *The LULUCF sector in 2018 resulted in a net increase in C stocks (i.e., net CO2 removals) of 799.6 MMT CO2 Eq. (Table ES-5). This represents an offset of 12.0 percent of total (i.e., gross) greenhouse gas emissions in 2018… Between 1990 and 2018, total C sequestration in the LULUCF sector decreased by 7.1 percent, primarily due to a decrease in the rate of net C accumulation in forests and Cropland Remaining Cropland, as well as an increase in CO2 emissions from Land Converted to Settlements.*
    - *Forest fires were the largest source of CH4 emissions from LULUCF in 2018, totaling 11.3 MMT CO2 Eq. (452 kt of CH4).*
    - *Forest fires were also the largest source of N2O emissions from LULUCF in 2018, totaling 7.5 MMT CO2 Eq. (25 kt of N2O). Nitrous oxide emissions from fertilizer application to settlement soils in 2018 totaled to 2.4 MMT CO2 Eq. (8 kt of N2O).*

CARB AB32 Scoping Plan (CARB, 2017) **:**

Summary: At the state level, all sectors are cumulatively on track to meet the 2020 targets for GHG reductions and sequestration. The Natural and Working Lands in the state represent a key sector for the long-term storage of carbon in vegetation and soils. During the period of 2001-2010, disturbances (primarily in the form of wildfire) caused significant losses to the total stored carbon. Meeting state goals will require multi-owner and jurisdictional cooperation as well as trade-offs between competing interests.

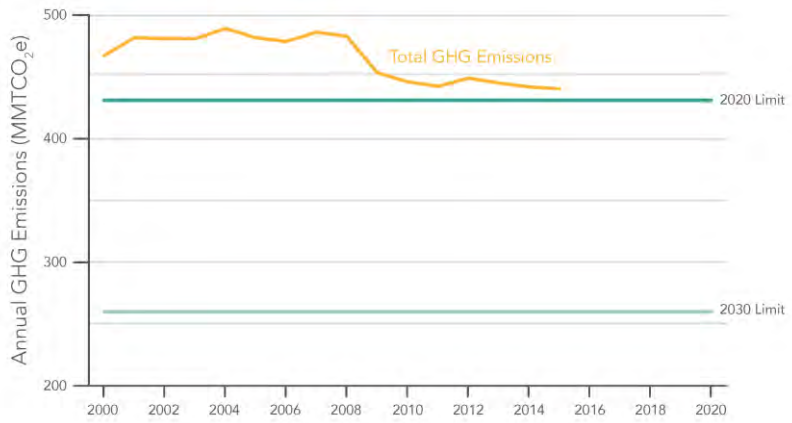
- *California's natural and working landscapes, like forests and farms, are home to the most diverse sources of food, fiber, and renewable energy in the country. They underpin the state's water supply and support clean air, wildlife habitat, and local and regional economies. They are also the frontiers of climate change. They are often the first to experience the impacts of climate change, and they hold the ultimate solution to addressing climate change and its impacts. In order to stabilize the climate, natural and working lands must play a key role.*

- *Work to better quantify the carbon stored in natural and working lands is continuing, but given the long timelines to change landscapes, action must begin now to restore and conserve these lands. We should aim to manage our natural and working lands in California to reduce GHG emissions from business-as-usual by at least 15-20 million metric tons in 2030, to compliment the measures described in this Plan.*

- *California's forests should be healthy carbon sinks that minimize black carbon emissions where appropriate, supply new markets for woody waste and non-merchantable timber, and provide multiple ecosystem benefits.*

- *AB 32 directs CARB to develop and track GHG emissions and progress toward the 2020 statewide GHG target. California is on track to achieve the target while also reducing criteria pollutants and toxic air contaminants and supporting economic growth. As shown in Figure 1, in 2015, total GHG emissions decreased by 1.5 MMTCO$_2$e compared to 2014, representing an overall decrease of 10 percent since peak levels in 2004. The 2015 GHG Emission Inventory and a description of the methodology updates can be accessed at: www.arb.ca.gov/cc/inventory/inventory .*

FIGURE 1: CALIFORNIA GHG INVENTORY TREND



- *Carbon dioxide is the primary GHG emitted in California, accounting for 84 percent of total GHG emissions in 2015, as shown in Figure 2 below. Figure 3 illustrates that transportation, primarily on-road travel, is the single largest source of CO2 emissions in the State.. When these emissions sources are attributed to the transportation sector, the emissions from that sector amount to approximately half of statewide GHG emissions. In addition to transportation, electricity production, and industrial and residential sources also are important contributors to CO2*

- *Increasing Carbon Sequestration in Natural and Working Lands*
    - *California's natural and working lands make the State a global leader in agriculture, a U.S. leader in forest products, and a global biodiversity hotspot. These lands support clean air, wildlife and pollinator habitat, rural economies, and are critical components of California's water infrastructure. Keeping these lands and waters intact and at high*

levels of ecological function (including resilient carbon sequestration) is necessary for the well-being and security of Californians in 2030, 2050, and beyond. Forests, rangelands, farms, wetlands, riparian areas, deserts, coastal areas, and the ocean store substantial carbon in biomass and soils.

- *Natural and working lands are a key sector in the State's climate change strategy. Storing carbon in trees, other vegetation, soils, and aquatic sediment is an effective way to remove carbon dioxide from the atmosphere. …We must consider important trade-offs in developing the State's climate strategy by understanding the near and long-term impacts of various policy scenarios and actions on our State and local communities.*

- *Recent trends indicate that significant pools of carbon from these landscapes risk reversal: over the period 2001–2010 disturbance caused an estimated 150 MMT C loss, with the majority– approximately 120 MMT C– lost through wildland fire.*

- *California's climate objective for natural and working lands is to maintain them as a carbon sink (i.e., net zero or negative GHG emissions) and, where appropriate, minimize the net GHG and black carbon emissions associated with management, biomass utilization, and wildfire events.*

- *Decades of fire exclusion, coupled with an extended drought and the impacts of climate change, have increased the size and intensity of wildfires and bark beetle infestations; exposed millions of urban and rural residents to unhealthy smoke-laden air from wildfires; and threatened progress toward meeting the state's long-term climate goals. Managing forests in California to be healthy, resilient net sinks of carbon is a vital part of California's climate change policy.*

- *Federally managed lands play an important role in the achievement of the California climate goals established in AB 32 and subsequent related legislation and plans. Over half of the forestland in California is managed by the federal government, primarily by the USDA Forest Service Pacific Southwest Region, and these lands comprise the largest potential forest carbon sink under one ownership in the state... The State of California must continue to work closely and in parallel to the federal government's efforts to resolve these obstacles and achieve forest health and resilience on the lands that federal agencies manage.*

California Forest Carbon Plan (Forest Climate Action Team, 2018)

Summary: Current estimated sequestration for the entire forest sector is 32.8 MMT CO2e/year, which is 6.56 times more than the current target of 5 MMT per year. Regional, landscape or watershed level assessments are appropriate scales for examining rates of GHG emissions and sequestration. Wildfire remains the single largest source of carbon loss and remains the largest source of black carbon emissions. Although there are trade-offs with in-forest carbon stores, sustainably managed working forests can further provide climate mitigation benefits.

- *When all forest pools are considered, California's forests are sequestering 34.4 MMT CO2e/year, and when land-use changes and non-CO2 emissions from wildfires are accounted for, the total net sequestration is 32.8 MMT CO2e/year.*

Table 16. Statewide Average Annual Growth, Removals, Mortality, and Net Change for the Above Ground Live Tree Pool by Disturbance, Owner, and Land Status on Plots Initially Measured between 2001-2005 and Re-Measured between 2011-2015 (thousand metric tons carbon dioxide equivalent per year).

	UNRESERVED FORESTLAND			RESERVED FORESTLAND	ALL FORESTLAND[2]
	Private, Corporate	Private, Non-Corporate	USDA Forest Service	USDA Forest Service	Total
	thousand metric tons CO2 equivalent per year				
Gross tree growth	18,554	13,772	25,983	7,188	**73,253**
Removal - harvest	-10,664	-1,476	-1,467	-22	**-13,645**
Mortality – fire killed	-278	-449	-6,077	-4,689	**-12,566**
Mortality – cut and fire[1]	-466	-49	-326	0	**-842**
Mortality – insects and disease	-488	-435	-3,162	-1,039	**-5,728**
Mortality – natural/other	-2,525	-2,988	-6,743	-2,203	**-16,543**
Net live tree	4,133	8,375	8,208	-765	**23,929**
				95% confidence interval	**4,575**

[1]Mortality – Cut and fire: plots where tree mortality has occurred due to both harvest and fire.

[2]Includes other public forestland.

Source: USDA Forest Service FIA.[267]

- *The key findings of the [Forest Carbon Plan] include:*
  - *California's forested landscapes provide a broad range of public and private benefits, including carbon sequestration.*
  - *The long-term impacts of excluding fire in fire-adapted forest ecosystems are being manifested in rapidly deteriorating forest health, including loss of forest cover in some cases.*
  - *Extreme fires and fire suppression costs are increasing significantly, and these fires are a growing threat to public health and safety, to homes, to water supply and water quality, and to a wide range of other forest benefits, including ecosystem services.*
  - *Reducing carbon losses from forests, particularly the extensive carbon losses that occur during and after extreme wildfires in forests and through uncharacteristic tree mortality, is essential to meeting the state's long-term climate goals.*
  - *Fuel reduction in forests, whether through mechanical thinning, use of ecologically beneficial fire, or sustainable commercial timber harvest to achieve forest health goals, involves some immediate loss of forest carbon, but these treatments can increase the stability of the remaining and future stored carbon.*
  - *Current rates of fuel reduction, thinning of overly dense forests, and use of prescribed and managed fire are far below levels needed to restore forest health, prevent extreme fires, and meet the state's long-term climate goals.*
  - *Where forest stands are excessively dense, forest managers may have to conduct a heavy thinning to restore resilient, healthy conditions, which, among other benefits, will subsequently facilitate the reintroduction of prescribed fire as an ecological management tool.*

- *Sustainable timber harvesting on working forests can substantially improve the economic feasibility of these treatments to achieve forest health goals at the scale necessary to make an ecologically meaningful difference.*
- *Where forestlands have been diminished due to fires, drought, insects, or disease, they should be reforested with ecologically appropriate tree species from appropriate seed sources.*
- *The scale and combination of needed treatments and their arrangement across the landscape is likely to be highly variable and dependent on the local setting.*
- *The state must work closely with Federal and private landowners to manage forests for forest health, multiple benefits, and resiliency efficiently at a meaningful scale.*

- *The watershed level has proven to be an appropriate organizing unit for analysis and for the coordination and integrated management of the numerous physical, chemical, and biological processes that make up a watershed ecosystem. Similarly, a watershed can serve as an appropriate reference unit for the policies, actions, and processes that affect the biophysical system, and providing a basis for greater integration and collaboration. Forests and related climate mitigation and adaptation issues operate across these same biophysical, institutional, and social gradients.*

  Because of these factors, the Forest Carbon Plan proposes working regionally at the landscape or watershed scale. The appropriate scale of a landscape or watershed to work at will vary greatly depending upon the specific biophysical conditions, land ownership or management patterns, and other social or institutional conditions.

- *Forests are shaped by disturbance and background levels of tree mortality. However, elevated tree mortality from overly dense stand conditions, fire exclusion, lack of or poor forest management practices, and impacts related to drought and climate change can have a substantial effect on the forest carbon balance. Wildfire is the single largest source of carbon storage loss and GHG emissions from forested lands: of the estimated 150 million metric tons of carbon lost from forests from 2001-2010, approximately 120 million metric tons of carbon was lost through wildland fire. Wildfire also is the single biggest source of black carbon emissions. Reducing the intensity and extent of wildland fires through tools such as fuels reduction, prescribed or managed fire, thinning, and sustainable timber management practices is therefore a top priority.*

- *In addition to fuels reduction and prescribed and managed fire treatments, sustainable commercial timber harvesting on private and public lands, where consistent with the goals of owners or with management designations and done to maximize forest health goals, can play a beneficial role, both in thinning dense forests and financing additional treatments. Although there are trade-offs with in-forest carbon stores, sustainably managed working forests can further provide climate mitigation benefits. Commercial timber harvest within a sustainable management regime to maximizing forest health goals also creates revenue opportunities to fund additional forest treatments and should be seen as a tool in the maintenance of our forests as healthy, resilient net sinks of carbon.*

- *In order to support the goals of this Forest Carbon Plan, wood and biomass material generated by timber harvesting, forest health, restoration and hazardous fuels treatments must be either utilized productively or disposed of in a manner that minimizes net GHG and black carbon*

emissions. Timber and other biomass harvest volumes are expected to increase as a result of the forest management activities outlined above. These volumes will include green and dead trees suitable for timber production, smaller-diameter green and dead trees with little traditional timber value, and tops and limbs.

- *Specific Rates of Sequestration/Emission by landowner category:*

    - *Private Corporate Forestland: Private corporate forestland includes both timberland and other forestland. On private corporate forestland growth is high and exceeds removal and mortality, reflecting the practice of sustained yield as required by California's Forest Practice Act and Rules. These forests are managed to create relatively little annual mortality and the harvested volume is less than forest growth. Rates of removals from harvest and thinning are highest on these lands, but the rate of fire-related mortality is lowest. These forests experience a net gain in carbon at a rate of 0.75 metric tons of CO2e per acre per year, or 4.1 MMT of CO2e per year. In 2012, these lands contributed 70 percent of the total harvest (Figure 16) and are therefore an important contributor to the carbon stored long-term in harvested wood products and reduced emissions from burning wood instead of fossil fuels for energy.*

    - *Private Non-Corporate Forestland: This category represents private ownerships for which timber production may or may not be a primary management objective. The rate of gross growth is high on these lands, while the rate of natural, non-fire related mortality is low. The rate of fire-related mortality is also quite low, although it is higher than on private corporate forestland. As these lands exhibit high growth rates, lower harvest per acre than corporate forestland, and have relatively low levels of mortality, these forest lands see the highest net sequestration rates on the order of 1.33 metric tons of CO2e per acre per year, or 8.4 million metric tons of CO2e per year.*

      Private non-corporate forestland has the highest rate of sequestration per acre (Figure 17), and despite making up 10 percent less of the forestland base than USDA Forest Service unreserved forestland, these forests sequester the greatest total amount (Table 16). A net 33 percent increase in carbon stock from private non-corporate forestland came from only 24 percent of the California forestland base (Figure 18, Figure 9). A net 13 percent increase in carbon stock from private corporate forestland came from 15 percent of the forestland base. … Private non-corporate forestlands provided slightly less of a net increase in carbon stocks than all USDA FS forestlands, despite being just half the size.

- *Forest carbon is stored in both forest ecosystems and, to a lesser extent, in harvested wood products. The degree to which California forests operate as a sink or source is influenced by land management, weather, and a range of forest health issues (e.g., growth, tree mortality from drought, pest and disease outbreaks, wildfire severity). In recent years, prolonged drought conditions have resulted in elevated tree mortality that is widespread across the southern Sierra. The combination of drought impacts and extensive wildfires has made forests lose significant capacity for storing carbon. For all forestlands, improving forest health and managing to reduce losses from mortality can greatly increase the carbon balance on forestlands. On commercial and other actively managed forestlands in California, efficient uses of long lasting wood products and residues for energy can yield GHG benefits. Key inventory findings include:*

- *Based on FIA Program data from 2006-2015, all California forests combined on all ownerships were performing as a net sink and are sequestering carbon at an average rate of 0.79 metric tons of CO2e per acre per year, or 0.22 metric tons of carbon per acre per year.*

- *Based on FIA Program data from 2006 – 2015, California forests have substantial carbon storage; 1,303 MMT above ground and 734 MMT below ground, for a total of 2,037 MMT.*

- *Based on remeasurements taken between 2011 and 2015, carbon sequestration in the live tree pool (in-forest) was estimated at 7.4 MMT of CO2e per year on National Forest System unreserved and reserved forestlands, 4.1 MMT on private corporate forestland, 8.4 MMT on private noncorporate timberlands, and 4.0 MMT on other public lands. The net change in the live tree pool across all forestlands is estimated at 23.9 MMT of CO2e per year.*

- *When other forest pools, soils, non-GHG emissions from wildfire, and changes from land-use are accounted for, the net change is 32.8 MMT CO2e per year, meeting the AB 1504 goal of sequestering 5 MMT CO2e per year, assuming the contribution of flux associated with wood products does not drastically lower rates.*

- *On a per-acre basis, conifer forest types have enormous carbon capture and storage potential.*

- *FIA Program data suggest that on private forestland growth is outpacing losses from harvest and mortality (excluding wood product storage), and exceeds that of National Forest System lands.*

- *FIA Program data show that non-corporate forestland has the greatest net growth (i.e., growth minus mortality and harvest excluding wood product storage).*

- *Based on FIA Program data, tree mortality from forest health-related causes results in substantial declines in forest carbon. These data indicate that tree mortality rates are highest on federal forest lands in reserve (e.g., wilderness), where mortality is slightly outpacing growth.*

CARB California Greenhouse Gas Emissions for 2000 to 2018 (CARB, 2020)

Summary: This inventory is specific to anthropogenic sources so most of the agriculture category relates to commercial agriculture. Emissions related to logging from trucks and equipment would fall under the transportation sector. The Natural and Working Lands Emission Inventory contains more specific emission and sequestration numbers for Forestry.

- *California statewide GHG emissions dropped below the 2020 GHG Limit in 2016 and have remained below the 2020 GHG Limit since then.*
- *Transportation emissions decreased in 2018 compared to the previous year, which is the first year over year decrease since 2013.*

- *Since 2008, California's electricity sector has followed an overall downward trend in emissions. In 2018, solar power generation has continued its rapid growth since 2013.*
- *Emissions from high-GWP gases increased 2.3 percent in 2018 (2000-2018 average year-overyear increase is 6.8 percent), continuing the increasing trend as they replace Ozone Depleting Substances (ODS) being phased out under the 1987 Montreal Protocol.*

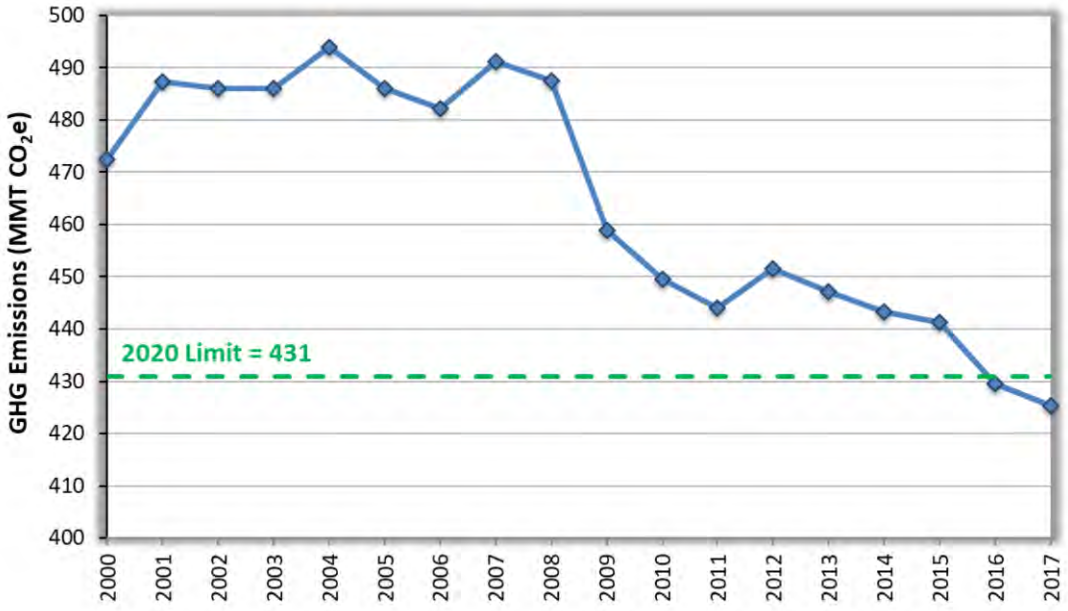


Figure 1. California GHG Emissions Trends. This figure shows the emission trends between 2000 and 2017 as compared to the 2020 statewide GHG limit of 431 $MMTCO_2e$.

- *In 2017, emissions from statewide emitting activities were 424 million metric tons of CO2 equivalent (MMTCO2e), which is 5 MMTCO2e lower than 2016 levels. 2017 emissions have decreased by 14 percent since peak levels in 2004 and are 7 MMTCO2e below the 1990 emissions level and the State's 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 tonnes per person to 10.7 tonnes per person in 2017, a 24 percent decrease.4,19 Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining. From 2000 to 2017, the carbon intensity of California's economy has decreased by 41 percent from 2001 peak emissions while simultaneously increasing GDP by 52 percent. In 2017, GDP grew 3.6 percent while the emissions per GDP declined by 4.5 percent compared to 2016.22 Figures 2(a)-(c) on the next page show California's growth alongside GHG reductions.*

- *California's agricultural sector contributed approximately 8 percent of statewide GHG emissions in 2017, mainly from methane (CH4) and nitrous oxide (N2O) sources.*

An Inventory of Ecosystem Carbon in California's Natural & Working Lands (NWL) (CARB, 2020)

This inventory tracks carbon within California ecosystems and how it moves between various "pools". This is a snapshot view that provides for valuable long-term comparisons. These

inventories are constantly being improved and some tracking categories have higher levels of certainty than others. Soil is the largest estimated pool of carbon and also has the highest error associated with those estimates. The assessment estimates that a majority of soil carbon loss is associated with the Sacramento-San Joaquin Delta region. Forest and shrublands show a 6% decrease, due to loss from wildfire. During the early iterations of these inventories, it appears prudent to only focus on gross trends.

- *The Earth's carbon cycle involves the exchange of carbon between the atmosphere, biosphere (plants, animals, and other life forms), hydrosphere (water bodies), pedosphere (soils), and lithosphere (Earth's crust and mantles, including rocks and fossil fuels). Carbon moves between land types (e.g., forests and grasslands) and carbon pools1 (e.g., wood, roots, and soils) due to natural processes (growth, decay, and succession) and disturbances (e.g., wildfire) or anthropogenic forces such as land use change. The NWL Inventory tracks how much carbon exists in California's ecosystems, where that carbon is located, and estimates how much carbon is moving in and out of the various land types and carbon pools. It provides stored carbon "snapshots" and gives insight into the location and magnitude of NWL carbon stocks at discrete moments in time.*

- *The NWL inventory includes:*
    - *Forest and other natural lands (woodland, shrubland, grassland, and other lands with sparse vegetation): live and dead plant materials and their roots*
    - *Urban land: trees in urban area*
    - *Cropland: woody biomass in orchards and vineyards*
    - *Soil Carbon: organic carbon in soils for all land types*
    - *Wetlands: CO2 and CH4 emissions from wetland ecosystem*

- *Current NWL Inventory*

    - *There are approximately 5,340 million metric tons (MMT)2 of ecosystem carbon in the carbon pools that CARB has quantified.3 (To put it into context, 5,340 MMT of carbon in land is equivalent to 19,600 MMT of atmospheric CO2 currently existing as carbon in the biosphere and pedosphere as carbon cycles through the Earth's carbon cycle.) Forest and shrubland contain the vast majority of California's carbon stock because they cover the majority of California's landscape and have the highest carbon density of any land cover type. All other land categories combined comprise over 35% of California's total acreage, but only 15% of carbon stocks. Roughly half of the 5,340 MMT of carbon resides in soils and half resides in plant biomass.*

    - *Soil is the largest carbon reservoir. Using the IPCC default assumptions, most of the estimated net change in soil carbon was due to microbial oxidation of organic soil on the Sacramento-San Joaquin Delta. Disturbance caused by tillage and other agricultural management practices, land conversion, and land degradation also contributed to the soil carbon loss. Forest and shrubland carbon stocks in 2010 was 6% lower than in 2001 due to a number of large wildfires that occurred during the 2001-2010 period. (Future inventory editions will capture the impacts of large fire events seen in recent years.) Woody crops and urban forest both gained carbon, as these trees are generally well maintained due to their economic and aesthetic values. Part of the carbon gain seen in urban forests came from expansion of the urban footprint over this period of time.*

Movement of carbon among land types and carbon pools is a dynamic process. Carbon gain in one land type may be a result of carbon loss in another land type, and vice versa.

- *Although carbon that leaves the land base is counted as a carbon stock loss in the NWL Inventory, not all carbon stock loss becomes emissions released into the atmosphere. Some of the carbon leaving the land base continue to retain carbon as durable wood products (e.g., furniture and building materials).*

- *Disturbances in Forest and Other Natural Lands*
  Geospatially explicit carbon stock change information can be related to the different types of disturbance on land. During the 2001–2014 period, wildfire accounted for 74% and prescribed fire accounted for 3% of the areas that experienced disturbance. The impact of wildfire can be seen throughout the State, in both rural areas and urbanized areas near shrublands and forest. Harvest and clearcut accounted for 11%, and fuel reduction activities (thinning, mechanical, and mastication) accounted for 14% of the disturbed area.

- *Uncertainty of the Inventory Estimates The science, method, and technique for accounting of ecosystem carbon are relatively new and still rapidly advancing. Although significant progress has been made in the inventory development, more work still needs to be done. The parts of the NWL Inventory that have been in development for more years generally have a reasonably constrained uncertainty (between 15% and 40%), but other parts of the inventory that CARB started to develop more recently contain significant uncertainties.*

AB 1504 California Forest Ecosystem and Harvested Wood Product Carbon Inventory
(Christensen, Gray, Kuegler, Tase, & M, 2021)

Summary: California forests vastly exceed the 5MMT CO2e target, by a factor of over 5 times, even when taking into account losses from fire, drought and timberland conversion. Forests remain a net sink of carbon, even accounting for losses from wildfire and drought.

- *Overall California forests are exceeding the 5 MMT CO2e target rate of annual sequestration established by AB 1504, sequestering 26.8 ± 4.2 MMT CO2e per year (excludes confidence interval for HWP C net change; Table 7.1). This value includes changes in forest ecosystem pools (26.0 MMT CO2e per year), harvested wood product pools (0.8 MMT CO2e per year), non-CO2 emissions from wildfires (-0.6 MMT CO2e per year), and forest land conversions (-1.0 MMT CO2e per year).*
- *Based on plots initially measured between 2001-2009 and re-measured between 2011-2019, the average statewide rate of forest carbon sequestration is 26.0 ± 4.1 MMT CO2e per year, excluding net CO2e contributions from other sources such as, harvested wood products, forest land conversions and non-CO2 GHG emissions from wildfire (Table 4.1,4.3).*
- *Based on the 2019 measurement period, after accounting for these other CO2 and greenhouse gas sources the statewide rate of carbon sequestration on all forest land is 24.5 ± 4.0 MMT CO2e per year (Table 4.2a), down from the 2018 re-calculated reporting period estimate of 26.4 ± 4.3 MMT CO2e. This value cannot be directly compared to previous report values from the 2015 reporting period (32.8 ± 5.5 MMT CO2e per year), the 2016 reporting period (30.7 ± 5.3 MMT CO2e per year), or the 2017 reporting period (27.0 ± 5.5 MMT CO2e per year) due to improved methods over time and the re- stratification that occurred in 2019. However, data*

suggest that the net annual sequestration rate is decreasing over time. This value excludes contributions from HWP pools.

THP-Specific Assessment

CEQA requires that individual projects estimate the associated GHG emissions from a proposed project and make a determination of significance. The plan submitter provided a site-specific analysis on pages 123-128. These calculations are provided by silvicultural category including road construction and predict both emissions from logging and milling operations as well as future sequestration of carbon from the remaining and planted forests.

These calculations estimate that the THP is capable of releasing a total of 3,204 tonnes of CO_2e. As described in the analysis, many of these releases will occur slowly over time, and are provided in the THP as a conservative, worst case emission estimate. These emissions are estimated to be recouped by trees planted in the THP area within 6-39 years. Over the next 120 years, these stands are expected to sequester a total of 47,475 tonnes of CO_2e

The THP concluded that these emissions would not be significant, when combined with other past, present and reasonably foreseeable future projects.

The Department has reviewed the estimates of emissions associated with the pools evaluated by the Plan as part of the project specific analysis and has determined that the calculations have reasonably accounted for emissions from biologic and production elements of the project and that the sequestration estimates incorporate approaches for estimating carbon sequestration that are consistent with current science.

When this THP is considered within its own context, taking into account the state and national assessments discussed previously, CAL FIRE believes that it meets the requirements of CEQA and is consistent with the broader goals established by AB32 in providing for long-term carbon sequestration while providing for the market needs for forest products.

CEQA Analysis

A CEQA analysis is not required to be perfect, but it must be accurate and adequately describe the proposed project in a manner that allows for informed decision-making. It must include an assessment of impacts based upon information that was "reasonably available before submission of the plan." (Technical Rule Addendum #2)

CEQA clearly establishes that the Lead Agency has a duty to minimize harm to the environment while balancing Competing Public Objectives (14 CCR §15021)[2]. These duties

[2] Duty to Minimize Environmental Damage and Balance Competing Public Objectives
CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible.
(1) In regulating public or private activities, agencies are required to give major consideration to preventing environmental damage.
(2) A public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment.

are further refined in the Z'berg-Nejedly Forest Practice Act (PRC §4512(c)[3]) and PRC §4513(b)[4] for how the mandate to provide "maximum sustained production of high quality timber products" is to be balanced with other environmental considerations. The term "while giving consideration to" is further defined in 14 CCR §895.1 as follows:

> ***While Giving Consideration*** *means the selection of those feasible silvicultural systems, operating methods and procedures which substantially lessen significant adverse Impact on the environment and which best achieve long-term, maximum sustained production of forest products, while protecting soil, air, fish and wildlife, and water resources from unreasonable degradation, and which evaluate and make allowance for values relating to range and forage resources, recreation and aesthetics, and regional economic vitality and employment.*

What is missing from the Act, Rules or CEQA Guidelines is the weight that is to be applied to the evaluation of the other resources specified. Clearly, there are certain legal restrictions on the degradation of specific values (i.e. water quality standards) but many of the elements that must be considered have a qualitative, not quantitative mandate for evaluation. This allows the Plan Submitter and the Lead Agency to exercise "professional judgement[5]" when preparing and evaluating plans.

What is also evident from an examination of the entire record (i.e. information provided by the Plan Submitter, submitted as public comment and information supplemented to the record by CAL FIRE) is that there is disagreement amongst experts about what the appropriate course of action is or what the feasible alternatives to the project may be. Again, CEQA provides

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(b) In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors.
(c) The duty to prevent or minimize environmental damage is implemented through the findings required by Section 15091.
(d) CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency shall prepare a statement of overriding considerations as described in Section 15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment.

Note: Authority cited: Section 21083, Public Resources Code; Reference: Public Resources Code Sections 21000, 21001, 21002, 21002.1, and 21081; San Francisco Ecology Center v. City and County of San Francisco, (1975) 48 Cal. App. 3d 584; Laurel Hills Homeowners Association v. City Council, (1978) 83 Cal. App. 3d 515.

Discussion: Section 15021 brings together the many separate elements that apply to the duty to minimize environmental damage. These duties appear in the policy sections of CEQA, in the findings requirement in Section 21081, and in a number of court decisions that have built up a body of case law that is not immediately reflected in the statutory language. This section is also necessary to provide one place to explain how the ultimate balancing of the merits of the project relates to the search for feasible alternatives or mitigation measures to avoid or reduce the environmental damage.

The placement of this section early in the article on general responsibilities helps highlight this duty to prevent environmental damage. This section is an effort to provide a careful statement of the duty with its limitations and its relationship to other essential public goals.

[3] (c) The Legislature thus declares that it is the policy of this state to encourage prudent and responsible forest resource management calculated to serve the public's need for timber and other forest products, while giving consideration to the public's need for watershed protection, fisheries and wildlife, sequestration of carbon dioxide, and recreational opportunities alike in this and future generations.

[4] (b) The goal of maximum sustained production of high-quality timber products is achieved while giving consideration to values relating to sequestration of carbon dioxide, recreation, watershed, wildlife, range and forage, fisheries, regional economic vitality, employment, and aesthetic enjoyment.

[5] *14CCR §897(d) Due to the variety of individual circumstances of timber harvesting in California and the subsequent inability to adopt site-specific standards and regulations, these Rules use judgmental terms in describing the standards that will apply in certain situations. By necessity, the RPF shall exercise professional judgment in applying these judgmental terms and in determining which of a range of feasible (see definition 14 CCR 895.1) silvicultural systems, operating methods and procedures contained in the Rules shall be proposed in the plan to substantially lessen significant adverse Impacts in the environment from timber harvesting. The Director also shall exercise professional judgment in applying these judgmental terms in determining whether a particular plan complies with the Rules adopted by the Board and, accordingly, whether he or she should approve or disapprove a plan. The Director shall use these Rules to identify the nature he limits to the professional judgment to be exercised by him or her in administering these Rules.*

guidance on this topic, with respect to both the adequacy of the record, and on differences of opinion, even between recognized experts:

> ***15151. Standards for Adequacy of an EIR***
> *An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.*
>
> ***Note:*** *Authority cited: Section 21083, Public Resources Code; Reference: Sections 21061 and 21100, Public Resources Code; San Francisco Ecology Center v. City and County of San Francisco, (1975) 48 Cal. App. 3d 584.*
>
> ***Discussion:*** *This section is a codification of case law dealing with the standards for adequacy of an EIR. In Concerned Citizens of Costa Mesa, Inc. v. 32nd District Agricultural Assoc. (1986) 42 Cal. 3d 929, the court held that "the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions." In Browning-Ferris Industries of California, Inc. v. San Jose (1986) 181 Cal. App. 3d 852, the court reasserted that an EIR is a disclosure document and as such an agency may choose among differing expert opinions when those arguments are correctly identified in a responsive manner. Further, the state Supreme Court in its 1988 Laurel Heights decision held that the purpose of CEQA is to compel government at all levels to make decisions with environmental consequences in mind. CEQA does not, indeed cannot, guarantee that these decisions will always be those which favor environmental considerations, nor does it require absolute perfection in an EIR.*

CAL FIRE has an obligation to explain the rationale for approving a plan. This is often done in the presence of contradicting information or resulting in different parties being displeased with the results. A competent CEQA analysis is not required to make the “best” choice, but the choice made must be supported by information contained within the record. This is where Lead Agency discretion comes into play. CAL FIRE ultimately bears the responsibility for making a decision and, when presented with public comments, is expected to provide an answer to significant questions raised.

Another expressed concern is over the extent to which the plan, and by extension CAL FIRE, discusses effects that are not deemed to be significant. CEQA provides guidance on how to address impacts within 14 CCR §15130:

> *15130. DISCUSSION OF CUMULATIVE IMPACTS*
> *(a) An EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable, as defined in section 15065 (a)(3). Where a lead agency is examining a project with an incremental effect that is not “cumulatively considerable,” a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.*
> *(1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in*

the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.

(2) When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant.

(3) An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable.

(b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact. The following elements are necessary to an adequate discussion of significant cumulative impacts:

(1) Either:

(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or

(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.

(2) When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.

(3) Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.

(4) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and

(5) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

(c) With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by- project basis.

(d) Previously approved land use documents, including, but not limited to, general plans, specific plans, regional transportation plans, plans for the reduction of greenhouse gas emissions, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. No further cumulative impacts analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the lead agency determines that the regional or areawide cumulative impacts of the proposed project have already been adequately addressed, as defined in section 15152(f), in a certified EIR for that plan.

(e) If a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact, as provided in Section 15183(j).

Note: Authority cited: Sections 21083, 21083.05, Public Resources Code. Reference: Sections 21003(d), 21083(b), 21093, 21094 and 21100, Public Resources Code; Whitman v. Board of Supervisors, (1979) 88 Cal. App. 3d 397; San Franciscans for Reasonable Growth v. City and County of San Francisco (1984) 151 Cal.App.3d 61; Kings County Farm Bureau v. City of Hanford (1990) 221 Cal.App.3d 692; Laurel Heights Homeowners Association v. Regents of the University of California (1988) 47 Cal.3d 376; Sierra Club v. Gilroy (1990) 220 Cal.App.3d 30; Citizens to Preserve the Ojai v. County of Ventura (1985) 176 Cal.App.3d 421; Concerned Citizens of South Cent. Los Angeles v. Los Angeles Unified Sch. Dist. (1994) 24 Cal.App.4th 826; Las Virgenes Homeowners Fed'n v. County of Los Angeles (1986) 177 Cal.App.3d 300; San Joaquin Raptor/Wildlife Rescue Ctr v. County of Stanislaus (1994) 27 Cal.App.4th 713; Fort Mojave Indian Tribe v. Cal. Dept. Of Health Services (1995) 38 Cal.App.4th 1574; Santa Monica Chamber of Commerce v. City of Santa Monica (2002) 101 Cal.App.4th 786; Communities for a Better Environment v. California Resources Agency (2002) 103 Cal.App.4th 98; and Ass'n of Irritated Residents v. County of Madera (2003) 107 Cal.App.4th 1383.

When an analysis has determined that the impacts are less than significant, a detailed discussion is not required and an abbreviated explanation is acceptable.

Requirement to augment the record

In addition to information provided by the Plan Submitter and Public Commenters, CAL FIRE is also responsible for considering additional information and adding it to the plan record. This requirement is specified in 14 CCR §898 "*The Director shall supplement the information provided by the RPF and the plan submitter when necessary to ensure that all relevant information is considered.*" Sometimes this information is discovered while reviewing submitted literature and other information is added when the reviewer believes it is relevant to the discussion.

About Agency "Activism" (Agency Prohibited from creating "underground regulations")

Another theme is that CAL FIRE should take an activist role in steering plan submitters towards, or in this case away from, certain actions that the comment writer deems deleterious to the natural environment. To do so would be contrary to our purpose and entirely outside of our jurisdictional authority. The plan submitter is responsible for proposing plans consistent with their objectives and CAL FIRE is responsible for determining whether or not the operations as proposed would cause a significant adverse effect on the environment. How an individual THP may or may not align with state goals or other non-regulatory targets is not a factor we can consider when making such a determination.

In fact, if CAL FIRE was to impose a standard not required by regulation, we would likely be found to have created an "underground regulation[6]" and would be open to legal challenge.

All Concerns Are Treated Equal

In some of the public comment letters, there was a sense that the author believed that their concerns would not be taken seriously because they were not an "expert" or because there were not enough people voicing the same concern. From CAL FIRE's perspective, one concern expressed is as good as a thousand. Every concern, no matter who it comes from, is given careful consideration. It is our responsibility to the public and to those we regulate to provide a fair and unbiased review. This Official Response is written with that in mind.

[6] https://oal.ca.gov/underground_regulations/

Public Comment

Public comment for this plan came in the form of several letters and emails. These have been included in Appendix A along with a reference to where they are specifically responded to in the document. The discussion preceding this section provides responses to broader questions received through public comment, and information below provides specific responses to individual questions responded to separately. The brackets around the snapshot below show that this is considered specific Concern #1, of which a corresponding Response #1 is provided.

#1

hill on what was formerly Roseburg property. Obviously, this was a high rain year.

- Domestic water was used from that area historically, as in, maybe 1933 or earlier when Champion Park Company was developing the residential area.
- There were 2 to 3 large wooden storage tanks up the east ridge and all the houses below used the water. We all have cut, disconnected pipes running through our properties.

After the households were connected to City water, some jerk went up and smashed the tanks.

- It is reasonable to assume that there is evidence as to the placement to those tanks from the ends of the pipes which began at the tanks. There must be some mighty springs up there and a system of gullies which are dry much of the year.

Response #1:
Domestic water supplies receive the highest level of protection under the Forest Practice Rules. As required, the RPF sent out notices to all property owners within 1,000 feet downstream of the harvest area. Page 40 of the plan discloses that there were responses to the downstream water notices and pages 144-145 include all of the landowners that required notification. Pages 165-166 summarize the responses from landowners. None of the response to the domestic inquiries had a source that would be impacted by the THP.

As for the other watercourses within the Plan area, pages 34-35 describe the protection measures for streams which can be impacted by operations.

Response #2:
As discussed above in the “Road Construction and Impacts” portion of the overview, the purpose of many of the new road segments it to allow all logging operations to avoid the city of Dunsmuir, and instead use Mott Road for access and hauling. Page 65 of the plan states:

> *Past logging utilized very long tractor skidding distances on very steep slopes. The residual road system in the plan area does not provide access for modern harvesting systems and the regeneration unit sizes required by the Forest Practices Regulations. The old road system was designed to haul through the City of Dunsmuir including many residential areas with roads not suited for heavy truck traffic today. A new road system is being proposed to haul out the landowner's Mott Road access thus avoiding impacts to the Dunsmuir residential and downtown areas.*

Response #3:
Response #1 discusses the general watercourse and lake protection measures for this Plan. As it relates to logging debris that could get into a watercourse, there are several rules related to this:

> *14 CCR §934.2*
> ***(e)*** *Slash and debris from Timber Operations shall not be bunched adjacent to residual trees required for silvicultural or wildlife purposes, or placed in locations where they could be discharged into a Class I or II Watercourse, or Lake.*

> ***14 CCR §936.3, 956.3 General Limitations Near Watercourses, Lakes, Marshes, Meadows and Other Wet Areas [All Districts]***
> *The quality and beneficial uses of water shall not be unreasonably degraded by Timber Operations. During Timber Operations, the Timber Operator shall not place, discharge, or dispose of or deposit in such a manner as to permit to pass into the water of this state, any substances or materials, including, but not limited to, soil, silt, bark, Slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, or the quality and beneficial uses of water. All provisions of this article shall be applied in a manner which complies with this standard.*
> ***(a)*** *When there is reasonable expectation that Slash, debris, soil, or other material resulting from Timber Operations, falling or associated activities, will be deposited in Class I and Class II waters below the Watercourse or Lake Transition Line or in Watercourses which contain or conduct Class IV water, those harvest activities shall be deferred until equipment is available for its removal, or another procedure and schedule for completion of corrective work is approved by the Director.*
> ***(b)*** *Accidental depositions of soil or other debris in lakes or below the Watercourse or lake Lake Transition Line in waters classed I, II, and IV shall be removed immediately after the deposition or as approved by the Director.*

These rules must be followed, in addition to the other measures described in the plan to ensure that additional logging debris is not added to watercourses.

Response #4:
Some of the confusion about the boundaries of the proposed THP come from the Domestic Water Inquiry map sent out by the RPF before the plan was submitted. This map shows the ownership boundary for the Shasta Cascade Timberlands, LLC which is much larger than the area where the logging operations were proposed. This gave the appearance that the proposed THP was much larger than it was.

Response #5:
The time allowed for public input and comment on a THP is prescribed by law and cannot be extended unless the owner of the THP allows it to occur:

> ***4582.7. Review of plan; public comments; time; hearing; determination by board and director.***

> ***(a)*** *The director shall have 30 days from the date that the initial inspection is completed (10 of these days shall follow the date of the final interagency review) or, if the director determines that the inspection need not be made, 15 days from the date of filing, as specified in Section 4604, or a longer period mutually agreed upon by the director and the person submitting the timber harvesting plan, to review the plan and take public comments. After the final review and public comment period has ended, the director shall have up to 15 working days, or a longer period mutually agreed upon by the director and the person submitting the plan, to review the public input, to consider recommendations and mitigation measures of other agencies, to respond in writing to the issues raised, and to determine if the plan is in conformance with the Rules and regulations of the board and with this chapter.*

In all, public comment for this plan was open for a total of 88 days to allow for input.

Response #6:
The Forest Practice Rules require special mitigations when there are operations on or adjacent to unstable areas. The Rules have the following definition for Unstable Areas:

> ***Unstable Areas*** *are characterized by slide areas or unstable soils or by some or all of the following: hummocky topography consisting of rolling bumpy ground, frequent benches, and depressions; short irregular surface drainages begin and end on the slope; tension cracks and head wall scarps indicating slumping are visible; slopes are irregular and may be slightly concave in upper half and convex in lower half as a result of previous slope failure; there may be evidence of impaired ground water movement resulting in local zones of saturation within the soil mass which is indicated at the surface by sag ponds with standing water, springs, or patches of wet ground. Some or all of the following may be present: hydrophytic (wet site) vegetation prevalent; leaning, jackstrawed or split trees are common; pistol-butted trees with excessive sweep may occur in areas of hummocky topography (note: leaning and pistol butted trees should be used as indicators of slope failure only in the presence of other indicators).*

As required by the Rules, the Plan identifies the presence of unstable areas within and adjacent to the proposed operations. The plan does not allow the operation of logging equipment for harvesting within any unstable area. The following unstable areas are related to historic roads or new road construction as follows:

- Site G1 is an existing road that crosses an active unstable area near Unit 1802. A new road will be constructed at this point around the unstable area.
- Site G2 is an existing road where water from a spring has begun running down the road and is causing gullying adjacent to Unit 3608. A new road will be constructed around this area and the historic road will be modified to remove water diversion.
- Site G3 is located in Unit 3608 and will have no operations conducted. It will be protected with a no harvest retention area.
- Site G4 is located outside of any harvest area.
- Site G5 is located in Unit 2403 and will not have any harvest equipment operating within 25 feet.
- Site G6 is an old road near Unit 3608 where the material on the downhill side of the road has failed and eroded into a watercourse over many years. This road will have the remaining materials on the downhill side removed and the road will be constructed as a

full bench road with an excavator so that there is no leftover loos soil to potentially move downhill.

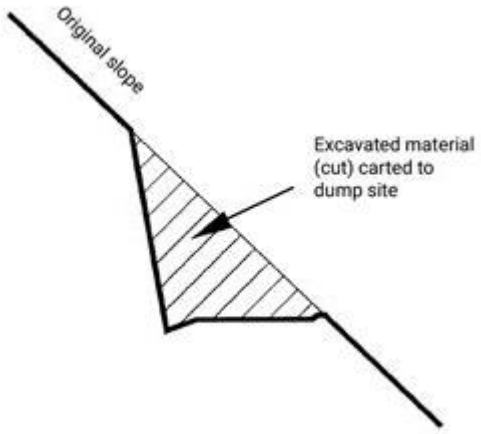

Figure 10. Example of a "full bench" road

- Site G7 is an existing road where some of the material on the uphill side of the road has fallen onto the road surface. These materials will be incorporated into the road bed during maintenance which will raise the surface of the road over this area.

For road construction segments on steep slopes over 65% where there is a risk of soil being delivered into a watercourse, or where side casting could create a safety hazard (such as the segments associated with NC4) will be treated as follows:

Road segments on slopes over 65% with a moderate or high risk of access to a watercourse (Road segments SS #1, 2, 3, 8, 9, 10 & 13) or where sidecast would create a potential safety hazard (SS#6) .

1. *In order to reduce excavated material roads will be single lane with no turnouts. Cut slopes will be as steep as possible and still remain stable in order to reduce excavation volume and minimize sidecast (See# 8 above)*
2. *Full bench road prism construction will be used with excess excavated material being endhauled lo waste areas or incorporated onto roads as surfacing material. Excess excavated material in waste areas shall be deposited and stabilized in a manner and in areas that avoid potential adverse impacts to locations that could deliver significant sediment discharge. Minor amounts of sidecast are expected to be generated during construction and will not be concentrated or placed over or against slash.*

The California Geological Survey (CGS) participated in the review of this plan, including two field visits to examine the impacts that timber operations could have on both slope stability and public safety. The mitigation measures developed by CGS were discussed in part in the General Discussion above and the RPF revised the plan to incorporate all recommendations.

CGS specifically evaluated the concerns related to the new road construction at NC4 and about the potential for such construction to create additional road instability. This visit is detailed in a report included with this response as Appendix B. There were no signs of instability on the slopes below this segment of road construction.

Response #7:
Several commenters were concerned that the Forest Practice Rules shielded the timber owner, RPF or timber operators from liability should their operations cause harm to others property or persons as a result of the proposed Plan. This is simply not the case. There is nothing in the Rules or Regulations that shield timber operations from liability if harm is caused to others.

The California Forest Practice Rules provide the basis for CAL FIRE's regulation of timber harvest operations, and their application is meant to avoid or substantially lessen significant adverse effects on the environment from timber harvesting. By approving the plan, CAL FIRE concludes that it conforms to the requirements contained in the Forest Practice Rules.

What the public notices are intended to communicate is that CAL FIRE is limited in their enforcement activity to violations of the Forest Practice Rules and the Forest Practice Act. The forest landowners, RPF and loggers must all comply with many other laws as part of their operations. Nothing in the THP allows the proposed operations to occur outside of the defined boundaries, on the lands of other people or to cause harm to those people.

With that being said, concerns related to other harm that could result from the proposed timber operations, outside of violations of the Forest Practice Rules or Act, are purely civil in nature and would be resolved through the civil courts system.

Response #8:
The concerns related to fire hazard are extensively discussed in the General Discussion above. CAL FIRE has concluded that the plan as approved will not result in a significant adverse effect on Wildfire Risk and Hazard. As to the scientific literature on fire hazard presented in the letters, CAL FIRE has reviewed those and other relevant studies to discuss the differences and similarities between that research and the area of proposed operations. CAL FIRE believes that the plan as proposed, along with the required hazard reduction regulations, will not result in an increased fire risk.

Response #9:
CAL FIRE agrees with many of the comment writers that visual impacts from the proposed plan were a serious concern during review. As discussed in the General Discussion above, CAL FIRE immediately noticed that visual concerns would be an issue and devoted significant field and office time to thoroughly investigating the issue. As a result, CAL FIRE was able to work with the Plan Submitter to substantially modify the plan in order to soften the visual impacts from the proposed logging. It is unlikely that this solution will satisfy everyone who is concerned. There are limits, however, to how much control can be exercised over the use of legally permitted logging operations on lands that are zoned by the County as primarily for timber production.

One of the concerns noted was the presence of clearcuts in the vicinity of Dunsmuir that are still visible from a harvesting plan approved in 2001. In that plan, the landowner believed that the plantations would "green up" in 10 years and would no longer be as noticeable as when they were harvested. During the PHI, the first stop was Manfredi's Depot where the older

clearcuts were examined. It was clear to the agency participants that the “green up” had not occurred like originally expected. This reality contributed to the recommendations to change the harvesting methods in the THP.

Figure 11. View of THP approved in 2001 from Manfredi's Depot


Figure 12. View of THP approved in 2001 from Manfredi's Depot

Response #10:
The ability for a proposed plan to have an impact on local and regional economies is a consideration when evaluating impacts, however there are limitations on CAL FIRE in using economics to decide whether or not to approve a plan:

> ***14 CCR §895.1***
> ***Significant Adverse Impact on the Environment*** *means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including*

> *land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.*

In reviewing this plan, CAL FIRE has used the potential visual impacts of the proposed operations as a surrogate for economic impacts, since the visual character of Dunsmuir is so clearly tied to the economics of the City and surrounding area. As discussed in the General Discussion and Response #9, the visual impacts of the THP were a significant factor in CAL FIRE's evaluation of the Plan, and significant changes were made to the plan in order to reduce visual impacts.

Response #11:
Impacts to visitors and residents from increased noise were discussed on the PHI, and recommendations were made to mitigate potential impacts from operations. The largest identified contributor to noise, above and apart from the interstate and railroad traffic, was the noises used by cable yarding equipment to safely move logs from where they are harvested to the landings where they are loaded. This device, known as a "talkie tooter" allows loggers downhill to communicate to the landing using a series of electronic whistles or "toots". This will likely be the most noticeable sound from the operations for the most number of people. CAL FIRE recommended, and the RPF agreed, to place limits on when this device will be used during operations:

> *To reduce noise during cable yarding operations, use of talky tooter signaling devices will be Restriction limited to use only from 8am to 8pm Monday through Saturday and not used at all on Sundays, Christmas Day, New Year Day, Thanksgiving Day and the Fourth of July.*

Other sound concerns related to the movement of logging trucks or other heavy equipment through Dunsmuir have been addressed by moving the log haul route to the north through Mott Road

Response #12:
A significant portion of the Forest Practice Rules are designed to prevent sediment generated from timber operations from traveling offsite or ending up in streams. These Rules are in a constant state of revision and the Board of Forestry has a special committee called the "Effectiveness Monitoring Committee" that is responsible for making sure that the Rules are working as designed. When research determines that improvements are required, the Rules are updated as necessary to avoid erosion and sediment movement. More information can be found on our website[7].

One of the concerns was that an independent geologist could review the proposed operations. This occurred when a representative of the California Geologic Survey participated in field review as described elsewhere.

[7] See, for example, the work of the Board of Forestry Effectiveness Monitoring Committee https://bof.fire.ca.gov/board-committees/effectiveness-monitoring-committee/

The plan was reviewed for its potential to generate excess sediment. Several mitigation measures were recommended in addition to the standard rules to reduce the potential for erosion to travel outside of the harvest area. These recommendations mainly applied to unstable areas and road construction as discussed elsewhere in this response.

Response #13:
The main purpose of the Commercial Thin prescription is to thin the trees from a stand and leave a forest that has, on average, larger trees left than the original stand:

> *14 CCR §933.3 Intermediate Treatments*
> *(a) Commercial thinning. Commercial thinning is the removal of trees in a young-growth stand to maintain or increase average stand diameter of the residual crop trees, promote timber growth, and/or improve forest health. The residual stand shall consist primarily of healthy and vigorous dominant and codominant trees from the preharvest stand.*

Page 11 of the plan details the trees that are to be retained within these stands, based upon site productivity:

> *For areas of the stand where the preharvest dominant & codominant trees are greater than 14 in. dbh the following stocking by site class shall be left;*
> *1. Site I lands - Minimum of 125 sq. ft. of basal area shall be left. In areas with more than 50% pine, 100 sq. ft of basal area shall be left.*
> *2. Site II lands - Minimum of 100 sq. ft. of basal area shall be left. In areas with more than 50% pine, 75 sq. ft of basal area shall be left.*
> *3. Site III lands - Minimum of 75 sq. ft. of basal area shall be left. In areas with more than 50% pine, 75 sq. ft of basal area shall be left.*

A sample of a commercial thinning stand can be seen in the example below:

Figure 13. Example of a Commercial Thinning prescription. Source www.visualforester.com

Response #14:
Each plan must include a discussion of alternatives to the proposed project, but the landowner is not required to pick one of the alternatives that is discussed. The plan includes a series of alternatives discussed on pages 70-76. These alternatives include the option of no project at all and also of selling the property to a public or private entity. The plan discloses on page 76 that there are no current offers to purchase the property and the landowner is not a willing seller. This makes the possibility of purchasing the property entirely speculative. The selection of different silvicultural prescriptions is also discussed in this analysis and the rationale for not choosing these alternatives is also justified in the plan.

Response #15:
While CAL FIRE understands the desire to have a public hearing on this plan, the Rules do not require this to occur. The public comment period is an alternative to the public hearing that would be required for other CEQA projects. Since timber harvesting is regulated under a Certified Regulatory Program, the process of approval follows its own schedule. The public meeting that the Plan Submitter did host was entirely voluntary and not subject to CAL FIRE regulation.

Response #16:
The General Discussion above includes an extensive discussion on the evaluation of Greenhouse Gas release and sequestration. CAL FIRE has reviewed extensive literature related to this topic and notes that the knowledge of the processes involved in climate mitigation are constantly evolving. There are many different opinions even within the scientific community as to how emissions and sequestrations are to be accounted for. CAL FIRE has

determined that the Plan Submitter has done an adequate job in assessing how the proposed plan will impact Greenhouse Gas production.

One of the comments correctly observed that the GHG calculations had not been updated to reflect the changes in silviculture that resulted from the visual mitigation measures. This was pointed out to the RPF who revised the calculations to account for the new proposal.

Response #17:
Concerns related to road building have been primarily responded to in the General Discussion above. The roads that will be built in the project area are all behind locked gates designed to discourage trespass and reduce the chance of fire. Additionally, the number of roads to be constructed under the plan was also reduced as a result of the preharvest inspection. The road including SS #6 has been reviewed multiple times by licensed professionals, and this road section is necessary to re-route traffic away from having to go through downtown Dunsmuir and instead route through Mott Road.

Response #18:
CAL FIRE understands and appreciates that people would worry about the impacts to property that could occur as a result of the proposed operations. The impact that a proposed project would have on property values is too speculative to require changes to the plan. Although, as explained in the prior responses, significant changes were made to the plan to account for visual impacts that are expected to address at least some of this concern.

SUMMARY AND CONCLUSIONS

The Department recognizes its responsibility under the Forest Practice Act (FPA) and CEQA to determine whether environmental impacts will be significant and adverse. In the case of the management regime which is part of the THP, significant adverse impacts associated with the proposed application are not anticipated.

CAL FIRE has reviewed the potential impacts from the harvest and reviewed concerns from the public and finds that there will be no expected significant adverse environmental impacts from timber harvesting as described in the Official Response above. Mitigation measures contained in the plan and in the Forest Practice Rules adequately address potential significant adverse environmental effects.

CAL FIRE has considered all pertinent evidence and has determined that no significant adverse cumulative impacts are likely to result from implementing this THP. Pertinent evidence includes, but is not limited to the assessment done by the plan submitter in the watershed and biological assessment area and the knowledge that CAL FIRE has regarding activities that have occurred in the assessment area and surrounding areas where activities could potentially combine to create a significant cumulative impact. This determination is based on the framework provided by the FPA, CCR's, and additional mitigation measures specific to this THP.

CAL FIRE has supplemented the information contained in this THP in conformance with Title 14 CCR § 898, by considering and making known the data and reports which have been submitted from other agencies that reviewed the plan; by considering pertinent information from other timber harvesting documents including THP's, emergency notices, exemption notices, management plans, etc. and including project review documents from other non-CAL FIRE state, local and federal agencies where appropriate; by considering information from aerial photos and GIS databases and by considering information from the CAL FIRE maintained timber harvesting database; by technical knowledge of unit foresters who have reviewed numerous other timber harvesting operations; by reviewing technical publications and participating in research gathering efforts, and participating in training related to the effects of timber harvesting on forest values; by considering and making available to the RPF who prepares THP's, information submitted by the public.

CAL FIRE further finds that all pertinent issues and substantial questions raised by the public and submitted in writing are addressed in this Official Response. Copies of this response are mailed to those who submitted comments in writing with a return address.

ALL CONCERNS RAISED WERE REVIEWED AND ADDRESSED. ALONG WITH THE FRAMEWORK PROVIDED BY THE FOREST PRACTICE ACT AND THE RULES OF THE BOARD OF FORESTRY, AND THE ADDITION OF THE MITIGATION MEASURES SPECIFIC TO THIS THP, THE DEPARTMENT HAS DETERMINED THAT THERE WILL BE NO SIGNIFICANT ADVERSE IMPACTS RESULTING FROM THE IMPLEMENTATION OF THIS THP.

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Appendices

21PC- 000000312

PC#1

To: Review Team, Public Comment

Blackberry THP

To: Jim Ostrowski Forestry
1517 Davis Place Road
Mt Shasta, CA 96067

March 29, 2021

Dear Forester Ostrowski,

I am writing on behalf of my neighborhood, as Public Comment, in response to your letter to Mrs. Nina Alameda, 308 S Second S, Dunsmuir, CA 96025, concerning the Blackberry Timber Harvest plan for the land manager, LandVest, Inc. Your mailing to notify adjacent homeowners only got to very few owners, considering that the boundaries of your THP extend from North Dunsmuir to Soda Creek Road East Ridge, East Dunsmuir.

First- **to LAND-VEST-** many minority residents of the so-called Blackberry Hill area strongly object to that name, BECAUSE OF THE IMPLIED **RACISM** INVOLVED, and want it called **Hilltop Drive (or Upper Hilltop Drive), as in HILLTOP DR T-H-P.**

I enclose parcel maps of our area, 1933 may be the most recent year that any mapping study has been done. Therefore any logging would have to be carefully conducted because of the following:

- In January of 1974, a flood of water came sluicing off that tall "Hilltop Drive" Hill into the neighborhood of 308 S 2nd St, of the south Siskiyou County Dunsmuir. The cause of the flooding was believed to be the release of pent-up water from clogged waterways from high up on the hill on what was formerly Roseburg property. Obviously, this was a high rain year.
- Domestic water was used from that area historically, as in, maybe 1933 or earlier when Champion Park Company was developing the residential area.
- There were 2 to 3 large wooden storage tanks up the east ridge and all the houses below used the water. We all have cut, disconnected pipes running through our properties.

#1

After the households were connected to City water, some jerk went up and smashed the tanks.

- It is reasonable to assume that there is evidence as to the placement to those tanks from the ends of the pipes which began at the tanks. There must be some mighty springs up there and a system of gullies which are dry much of the year.
- Neighbors are also aware, in years previous to 1973, that loaded logging trucks had been streaming down the hill on Mican St which the one road leading down from the Upper Hilltop Drive neighborhood. The kids used to race the trucks on their bikes. That hill and ridged were logged, obviously leaving slash, in the period of time before the up hill water ways were filling with logging debris and natural downfall.

#2

Please take care to clean all gullies and potential watercourses of whatever slash results from your logging operations.

#3

Our neighborhood does not need another flood.

Thank you

Ana Mulvaney

Ana Mulvaney, 118 S 2nd ST, Dunsmuir, CA 96025, parcel APN# 030-523-060 530-235-4491,530-859-3449

21PC-600000314

PC #2

April 3, 2021

Gary and Janet Crittenden
P.O. Box 197
Dunsmuir, CA 96025

RECEIVED
APR 07 2021
REDDING FOREST PRACTICE

Reviewed by: GAO
Dist. by:
Dist. Date: 4-8-2021
SKU RU ___ FS
FG ___ TO
WQ ___ TLO
ARCH LTO
RPF DMG
Feller INSP BOE
OTHER: ____
FPS ____
Status: LOC

Department of Forestry and Fire Protection
6105 Airport Rd.
Redding, CA 96002

Attention: John Ramaley, RPF #2504

Subject: Timber Harvesting Plan, No 2-21-00026 SIS

Dear Mr. Ramaley,

Please find enclosed a copy of a letter to Jim Ostrowski regarding the timber harvest plan directly east of
#1 the City of Dunsmuir. I have responded to his letters twice now. My neighbors have also had concerns regarding the proximity of logging work near their properties and the source of the spring that feeds a creek alluded to in Mr. Ostrowski's letter. We all hope the work is done responsibly and with respect for those living closer to the river.

I have enclosed a copy of my latest response to Jim Ostrowski as you appear to have some oversight for this project. I also enclosed a copy of his recent letter to me.

Sincerely,

Gary Crittenden

April 3, 2021

Gary and Janet Crittenden
P.O. Box 197
Dunsmuir, CA 96025

Jim Ostrowski Forestry
1517 Davis Place Road
Mt. Shasta, CA 96067

Attention: Jim Ostrowski

Subject: Blackberry Timber Harvest Plan

Dear Mr. Ostrowski,

I am in receipt of your letter dated March 12, 2021. This appears to be the same letter to which I responded several months ago. At that time, I indicated that some water from the creek that flows between my property and the adjacent Von Hein property is occasionally used for domestic uses by those that live near this creek which flows into the Sacramento River.

#4 I am also in receipt of a letter, dated March 4, 2021, from the Department of Forestry and Fire Protection regarding the aforementioned Timber Harvest Plan. This letter contains a map with a legend and shaded areas depicting Harvest Unit areas. I presume this map was generated as part of your "process of preparing the Blackberry Timber Harvest Plan". Harvest Unit areas as shown in the center of the map, provided by the Department of Forestry and Fire Protection, lie directly over the creek drainage that is mentioned in the first paragraph of this letter and which is the subject of your letters to me and my wife. There doesn't appear to be any consideration for buffer zones near this small watershed shown on this Harvest Unit map.

#1 Are there other details regarding some level of protection for tributaries of the Sacramento River that are not shown on these maps? You have, after all, twice now written us with concerns regarding tributaries in the timber harvest area.

I have enclosed copies of the maps provided with your letter and the government's letter.

Yours truly,

Gary Crittenden

CC: John Ramaley RPF #2504

Jim Ostrowski Forestry
Forest Management Services

1517 Davis Place Road, Mount Shasta, CA 96067 (530) 598-2325 jimostrow@gmail.com

March 12, 2021

GARY E & JANET A CRITTENDEN
PO BOX 197
DUNSMUIR, CA 96025-197

Dear GARY E & JANET A CRITTENDEN,

We are in the process of preparing the **Blackberry** Timber Harvest Plan (THP) for the land manager, FWS Forestry. The THP is in the **Upper Soda Springs, Lower Soda Creek, and Middle Soda Creek** planning watersheds approximately 1/2 mile east of the city of Dunsmuir post office. The proposed plan area is in portions of **Township 39N, Range 3 W, Sections 18, 19, & 30 and Township 39N, Range 4 W, Sections 24 and 36 Mt. Diablo Base and Meridian** (see attached map). Unnamed tributaries to the Sacramento River flow through the project. The Sacramento River is approximately 500 feet west from the project boundary.

We are requesting that you provide any information to us as to the presence of surface domestic water use from the THP area, or within an area 1000' downstream of the proposed THP. Domestic Water Use is defined by the Forest Practice Rules as:

> **Domestic Water Use** means the use of water in homes, resorts, motels, organization camps, developed campgrounds, including the incidental watering of domestic stock for family sustenance or enjoyment and the irrigation of not more than one half acre in lawn, ornamental shrubbery, or gardens at any single establishment. The use of water at a developed campground or resort for human consumption, cooking or sanitary purposes is a domestic use.

Current state law and the Forest Practices Regulations require that we seek information from landowners within 1000' downstream of any proposed THP for the purpose of identifying surface domestic water uses that may be affected by the proposed THP. Current law also requires that we request your response within 10 days of the post- marked date of this letter.

If surface domestic water use is noted by you or other landowners, mitigation measures will be incorporated into the THP, if needed, to protect the domestic water use.

This THP is in the final stages of preparation. There will be other opportunities for public comment on the THP after it has been submitted to Cal Fire for their review and approval. Please contact Cal Fire or their web site at www.fire.ca.gov for more information on the THP review process.

If you have any information or questions, please feel free to contact me at the above phone number, email, or address.

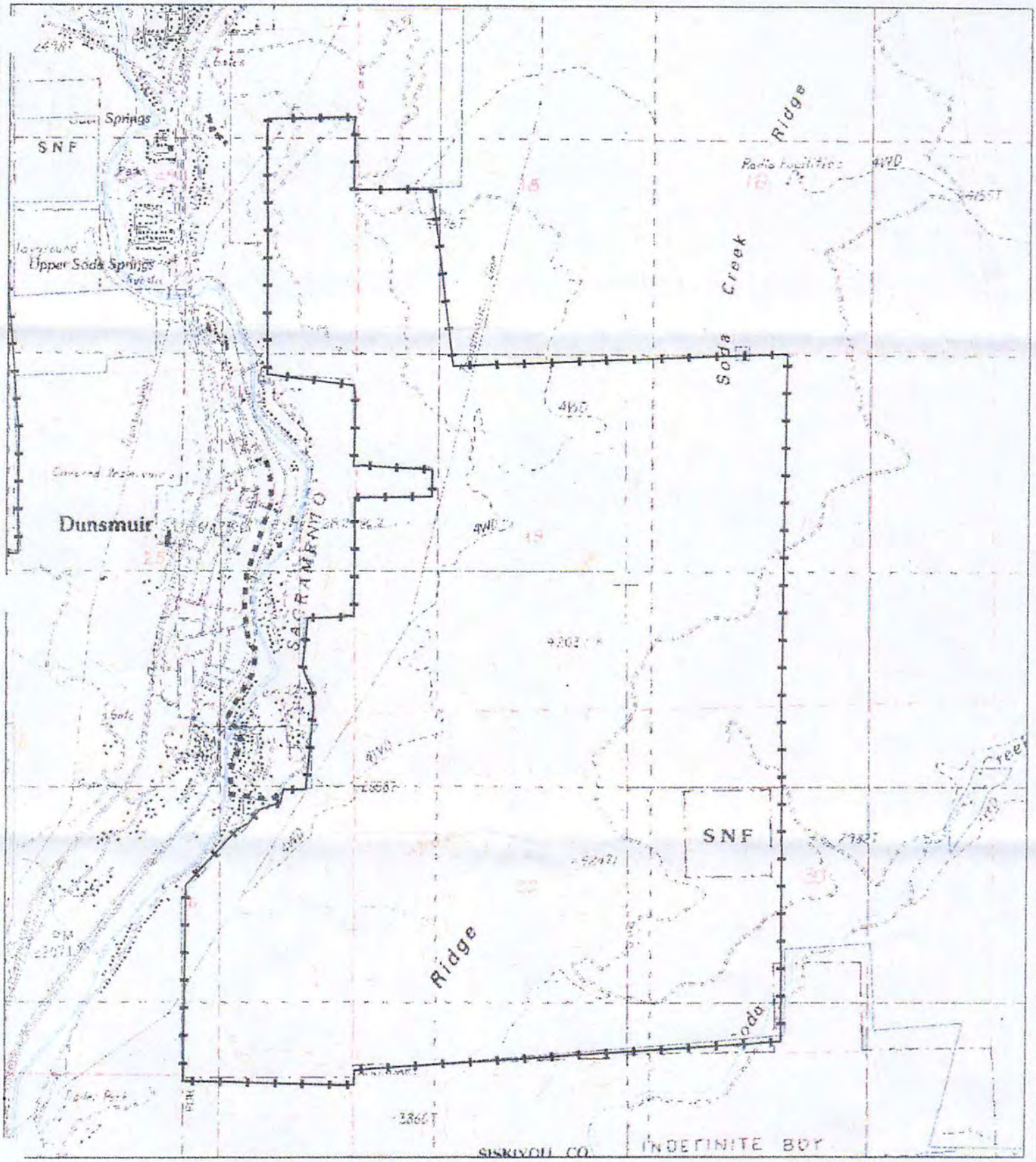
Sincerely,

James J. Ostrowski

James J. Ostrowski
Registered Professional Forester #2187

Blackberry THP
Project Area Map

T.39 N. R.3 & 4W MDBM



Ownership
THP Project Area
Travel Route

The project area is in the Dunsmuir & Girard Ridge USGS 7.5 minute quads.

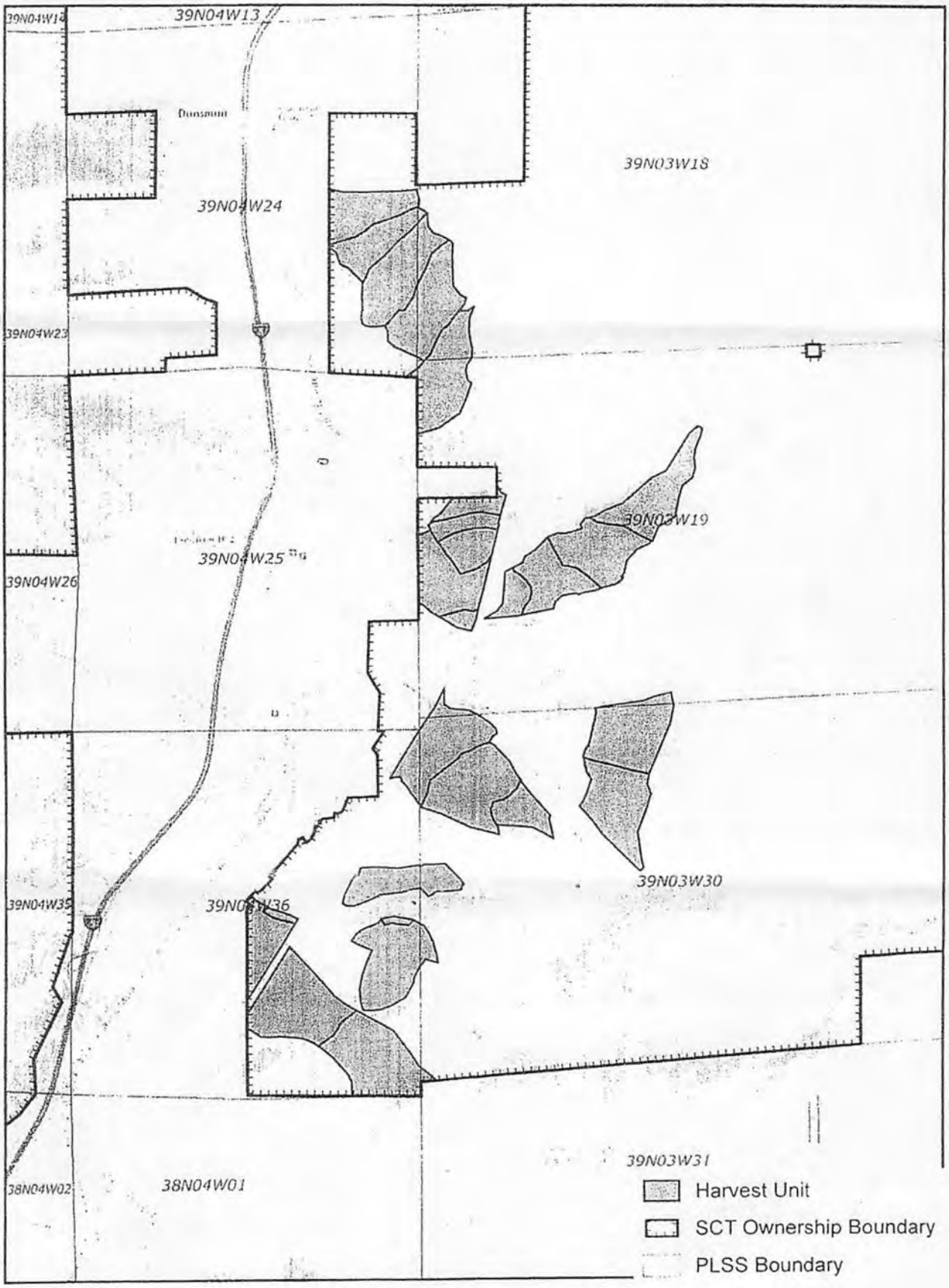
Feet
0 1,000 2,000 3,000 4,000

Jim Ostrowski Forestry
Forest Management Services

JLN
5/13/20

BLACKBERRY THP
NOTICE OF INTENT

Shasta Cascade Timberlands, LLC
Map Data Source: FWS Forestry Services
Mount Diablo Base Meridian
Map Date: 2/1/2021 Scale: 1:24,000



21PC-000000383

PC#3

Johnson, Corrine@CALFIRE

From: Wilson, Steve@CALFIRE
Sent: Friday, May 14, 2021 10:33 AM
To: Review Team Redding Inbox@CALFIRE
Cc: Feller, Peter@CALFIRE
Subject: Public Comment Letter 2-221-00026
Attachments: Knowles_Public Comment Letter 20210512.pdf

Reviewed by: JK
Dist. Date: 5-14-2021
RU ___ PS
FG ___ TO
WQ ___ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER: ___
FPS ___
Status: LOC

SKU

Feller

Attached is a Public Comment Letter for 2-21-00026. I will mail the hard copy down to Redding as well.

Thank You,

Steve Wilson
Forester II
CAL FIRE
Siskiyou Unit
P.O. Box 128
Yreka, CA 96097
(530) 842-3516

RECEIVED
MAY 14 2021
REDDING
FOREST PRACTICE

1 of 2 may 12 2021

STEVE Wilson - Dept of Forestry
1809 Fairlane Rd.
Yreka, Calif 96097

Attention STEVE Wilson

I am a homeowner in Dunsmuir California. I am writing about the Timber Harvesting Plan NO 2-21-00026 SIS.

I am located at the corner of Mountain Ave and Wooden, lot 8 in Block 103 and also lot 8 in Block 3 of the Campbell and Schuler Addition to Dunsmuir.

I have some concerns over this harvesting plan:

#5 The town of Dunsmuir needs more time to comment on this plan, May 31st 2021 is not enough time. The plan needs to be shown in the local newspaper, Most of the people I talk to doesn't know about it. Please make them aware of this plan by putting it in the newspaper and extending the deadline.

282 May 12 2021

#6

On the map, it looks like there are areas of unstable conditions. There are boulders in this area. A road will be made, logging trucks will be using it, this is a lot of weight. The constant driving on this road could unlodge boulders.

I have not seen any signs posted stating that harvesting timber in this area is being proposed.

#7

The letter: state the Forest Practice Rules do not contain provisions to protect personal property from damage by timber operations. The timber purchaser, timber operator or other responsible persons are obviously required to give legal attention to these matters, and protections are provided through other laws. Could you tell me what laws and what agencies?

Sincerely
Linda Knowles
6034½ Butterfly Ave
Dunsmuir, Calif 96025

Public Comment ID: 21PC-000000383
Comment Received Date: 5/14/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response:

Comment:
See uploaded document

182 May 10 2021

PC #4

21FC-0000000384

John Ramaley
Forester III RPF # 2504
Cascade, Sierra & So Regions
Forest Practice Manager
Cal Fire 6105 Airport Rd
Redding, Calif 96002

ATTENTION John Ramaley

I am a homeowner in Dunsmuir California. I am writing about the Timber Harvesting Plan No 2-21-00026 SIS.

I am located at the corner of Mountain Ave and Wooden, lot 8 in Block 103 and also lot 8 in Block 3 of the Campbell and Scholer Addition to Dunsmuir

I have some concerns over this harvesting Plan:

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I have not seen any signs posted stating that Harvesting Timber in this area is being proposed.

The letter: states the Forest Practice Rules do not contain provisions to protect personal property from damage by timber operations. The timber purchaser, timber operator or other responsible persons are obviously required to give legal attention to these matters, and protections are provided through other laws. Could you tell me what laws and what agencies?

These are my concerns

Sincerely

Linda Knowles
6034½ Butterfly Ave
Dunsmuir, Calif 96025

1 of 2 May 12 2021 PC-000000408 PC #5

STEVE Wilson - Dept of Forestry
1809 Fairlane Rd.
Yreka, Calif 96097

SKU

Attention STEVE Wilson

FELLER

Reviewed by: GAD
Dist by: [illegible]
Dist. Date: 05-21-21
RU PS
FG TO
WQ TLO
ARCH LTO
RPF DMG
NSP BOE
OTHER:
FPS
Status: LOC

I am a homeowner in Dunsmuir California. I am writing about the Timber Harvesting Plan NO 2-21-00026 SIS.

I am located at the corner of Mountain Ave and Wooden, lot 8 in Block 103 and also lot 8 in Block 3 of the Campbell and Schuler Addition to Dunsmuir.

I have some concerns over this harvesting plan:

RECEIVED
MAY 19 2021
REDDING
FOREST PRACTICE

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2&2 May 12 2021

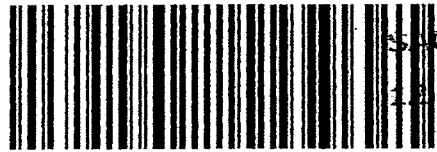
On the map, it looks like there are areas of unstable conditions. There are boulders in this area. A road will be made, logging trucks will be using it, this is a lot of weight. The constant driving on this road could ... unlodge boulders.

I have not seen any signs posted stating that harvesting Timber in this area is being proposed.

The letter: states the Forest Practice Rules do not contain provisions to protect personal property from damage by timber operations. The timber purchaser, timber operator or other responsible persons are obviously required to give legal attention to these matters, and protections are provided through other laws. Could you tell me what laws and what agencies?

Sincerely
Linda Knowles
60341/2 Butterfly Ave
Dunsmuir, Calif 96025

Linda Nowles
6034½ Butterfly Ln
Dunsmuir Calif
960
96025



SACRAMENTO CA
12 MAY 2021PM

1000

7019 2280 0002 1651 9971

Dept of Forestry
Attention Steve Wilson
1809 Fairlane Rd.
Yreka, Calif
96097

96097-953309

96097

U.S. POSTAGE P
FCM LETTER
DUNSMUIR, CA
96025
MAY 12, 21
AMOUNT

$4.15

R2305K133113-1

NOTICE
d NOTICE
TURNED

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT
OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

7019 2280 0002 1651 9972

21 PC - 0000000413

PC #6

Japp, Jeannie@CALFIRE

Reviewed by: JJ
Dist. by: SKW
Dist. Date: 5-24-2021
RU ___ PS
FG ___ TO
WQ ___ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER: Fellers
FPS ___
Status: C2

From: Nathan Johnston <allegro@gmail.com>
Sent: Monday, May 24, 2021 1:26 PM
To: Review Team Redding Inbox@CALFIRE
Subject: Public review for 2-21-00026-SIS

Warning: this message is from an external user and should be treated with caution.

Hello,

#5 My wife and I are writing to request an extension to the public comment period for THP #2-21-00026-SIS, Blackberry. We are landowners along one of the creeks within the footprint of the THP, below harvest units #1914 and #1906.

Also, if by chance there are maps available to be shared that show the location of our local streets and/or property boundaries in relation to the harvest units, that would be a big help.

Thanks so much for your consideration,
Nathan Johnston
Nora Silber

RECEIVED
MAY 2 4 2021
REDDING
FOREST PRACTICE

PC #7

Japp, Jeannie@CALFIRE

From: Perry Metzger <pmetzger2005@yahoo.com>
Sent: Tuesday, June 1, 2021 9:13 PM
To: Review Team Redding Inbox@CALFIRE
Cc: lucchesij8@gmail.com; matthewbryan.ch@gmail.com; arthpeterjr45@gmail.com; brucend75@yahoo.com; bigdave.keisler@yahoo.com
Subject: Blackberry THP, 2-21-0026-SIS

Reviewed by: SKM
Dist. by: KT
Dist. Date: 6-2-21
RD ___ PS ___
FG ___ TO ___
WQ ___ TLO ___
ARCh ___ LTO ___
RPF ___ DMG ___
INSP FELLER BOE
OTHER: ___
FPS ___
Status: LOC

Warning: this message is from an external user and should be treated with caution.

CAL FIRE Review Team

Forest Practice Program Manager

6105 Airport Road

Redding, California 96002

RECEIVED
JUN 01 2021
REDDING
FOREST PRACTICE

The following comments concern the **Cumulative Effects (Section 4) from Wildfire Risk and Hazard** regarding the 2-21-0026- SIS, Blackberry THP.

#8 Blackberry THP consists of 461-acre timber harvest of which includes even-aged Seed Tree Seed Step, Alternative Prescription, Commercial Thinning, uneven-aged Selection harvest with the remainder a non-regeneration road right-of-way. The THP has identified the harvest's fuel types as primarily dense, mature conifer forest with light understory vegetation with dead and downed logs and litter, and is located just outside the town of Dunsmuir.

The Blackberry Alternative Prescription (closest to clearcut) area totals 108-acres. The Seed Tree Seed Step area is 85-acres; here, enough seed trees are to be left standing so that points (replacement trees) are within 150 feet of the seed tree. Post-harvest stocking for both Alternative Prescription and Seed Tree Seed Step consists of 125 points per acre within five year of harvest completion. Essentially, this amounts to 193 acres of clearcuts followed by an even-aged managed tree plantation.

A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to increase in the intensity and spread of wildfire. Timothy Ingalsbee of the Western Fire Ecology Center states that small-diameter surface fuels (such as even-aged plantations younger than ten years) are the primary carriers of fire. Current fire spread models do not even consider fuels greater than three inches in diameter because it is mainly the fine-sized surface fuels that allows fire spread. Commercial logging operations remove large-diameter fuels which are naturally fire resistant, and replaces them with even-aged plantations with fire-prone small-diameter fuels. Timber plantations are usually comprised of densely-stocked, even-aged stands of young conifers that are extremely flammable and vulnerable to catastrophic fire effects.

A 2018 study by Zald and Dunn found that intensive plantation forestry characterized by young forests and spatially homogenized fuels (even-aged management), rather than pre-fire biomass (understory vegetation and litter) were significant drivers of wildfire severity.

Further research by Thompson, Spies and Ganio, 2007 provides more proof. Fire severity studies in plantations and naturally regenerated vegetation of similar ages show that site history influences fire severity and have found an association of high-severity fire with conifer plantations.

Compounding these fire concerns, scientific studies have shown that the "over-story" tree canopy moderates the "microclimate" of the forest floor. Reduction of the tree canopy which occurs in a clearcut, exposes the forest floor to increased sun and wind, causing increased surface temperatures and decreased relative humidity. The temperature increase in turn causes surface fuels to be hotter and drier, resulting in faster rates of fire spread, greater flame lengths and fire line intensities, and more erratic shifts in the speed and direction of fires.

#8

Causing further concern, page 129 (Affected Environment) describes the Blackberry THP as being in a very high fire severity hazard zone. However, aside from discussing the current fuel condition, the only conclusion identified in this THP is there will be a reduction in overall forest fuel loading over the assessment area and the project will create diversity in the fuel types, maintain crown spacing and reduced ladder fuels". Therefore, the project falsely claims that it is not expected to significantly change the fire risk.

The Blackberry THP area is located less than a half mile from the center of Dunsmuir, California and is only 300 feet from the closest residence. Should a wildfire occur as a result of this timber harvesting, the town of Dunsmuir would be immediately threatened, and has the potential of creating a tragedy equal to the Camp Fire in Paradise, California. We remind you that before reaching the town of Paradise, the Camp Fire had to first burn through more than 30,000 acres that ten years earlier was salvaged logged. These acres subsequently were restocked using even-aged plantation trees. Nevertheless, the Camp Fire raced through these even-aged trees in a matter of minutes giving very little warning to residents of Paradise.

Currently, the State of California is facing a severe fire season. Should another Camp Fire occur here and destroy the town of Dunsmuir, the responsibility of such a fire will fall directly on the shoulders of CALFIRE. It will be your failure to adequately address these fire risks and hazards using the most current, peer reviewed studies. Accordingly, I recommend that you reject the Blackberry THP until these fire issues can be addressed.

June 4, 2021

CAL FIRE Review Team
Forest Practice Program Manager
CAL FIRE
6105 Airport Road
Redding, California 96002

RECEIVED
JUN 07 2021
REDDING
FOREST PRACTICE

Reviewed by: GAO
Dist by: GJ
Dist. Date: 6-7-2021
RI ___ PS 6
FG ___ TO
WQ ___ TLO
ARCH LTO
RPF DMG
NSR BOE
OTHER:
FPS ___
Status: LOC

SKM
FELLER

Dear Program Manager,

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Sincerely,

Perry Metzger
3001 Tanya Court
Sacramento, California 95826

Copies furnished:

Senator Brian Dahle,
1320 Yuba Street #102
Redding, California 96001

Assemblywoman Megan Dahle
280 Hemsted Drive, Suit 110
Redding, California 96002

21PC-000000430

RECEIVED
JUN 0 8 2021
REDDING
FOREST PRACTICE

PC #9

Reviewed by: Dist by: Dist. Date: 6-8-2021

RPF, FG, WO, ARCH, WQ, INSP, OTHER, FPS, RS, TO, TLO, LTO, DMG, BOE

SKL Ellen

Ramaley, John@CALFIRE

From:	Jana Lopez <janallopez1@gmail.com>
Sent:	Monday, June 7, 2021 7:36 PM
To:	Redding Public Comment@CALFIRE
Cc:	Redding Public Comment@CALFIRE
Subject:	Review Team Redding - Blackberry THP Public Comment

Warning: this message is from an external user and should be treated with caution.

#8 We also are homeowners in Dunsmuir, CA. Our property is several hundred feet from dense forest. We are very concerned that logging so close to Dunsmuir will result in an event like Paradise experienced.

It is our understanding that several of the fires last fire season burned through even-aged forest. Several research projects, as noted by our neighbors in recent Public Comment on the Blackberry Timber Harvest Plan (THP), state that these types of replantings are responsible for the devasting effects on Paradise and other towns. As you know these types of even-aged plantings are proposed by the Blackberry Plan. We feel that CalFire will be directly responsible in these extreme drought and fire risk seasons for any loss of life or property if it allows even-aged plantings to surround Dunsmuir. This is an historical town. It's loss will be a loss to California's history. Please seriously consider changing the Blackberry THP to eliminate even-aged planting as well as clear cutting which also, we understand, increases fire danger.

The following statement was generated at a community meeting in April.

Community Statement

#9 During a recent neighborhood meeting the community came together to discuss the proposed logging in the ridges that border Dunsmuir. As would be expected, the subject of fire danger was at the top of the list of concerns. But, as importantly, the reasons why we live here are also at risk. The ridges and their habitat are a large part of why we have chosen to invest here. Every day we see the patches of past logging operations just below Castle Crags fir example (a draw for tourists) which have not rebounded as suggested. Our water and river are important elements in why we live here also. Their preservation as a habitat and as our 'backyard' is vital to the community and its economic well-being. Erosion, increased fire danger, damage to our infrastructure, loss of wildlife habitat, use of chemical and other logging methods as well as cleaning up thoroughly after logging is completed are some of the concerns the meeting produced.

The community does not want to see clear cutting which leaves large areas devoid of habitat. It seems much of the forests in the northwest are really plantations of trees replanted as crops. It is our understanding that when they're clear cut and replanted there exists a greater fire danger in 10 years when the trees are all the same age and vulnerable to wildfire. (even-aged vs uneven-aged). It has been noted that the Carr, Delta, Bear, Creek and Paradise fires burned through even-aged plantations.

Dave and Jana Lopez

21PC-000000433 PC#10

Johnson, Corrine@CALFIRE

From:	Janet Cowan <jscowan@snowcrest.net>
Sent:	Wednesday, June 9, 2021 11:02 AM
To:	Review Team Redding Inbox@CALFIRE
Subject:	Blackberry Timber Harvest near Dunsmuir CA

Warning: this message is from an external user and should be treated with caution.

I am writing to protest this timber harvest plan. The environmental impact on the town of Dunsmuir and the Sacramento River drainage would in my opinion be detrimental and unnecessary. As someone who lives near and works in Dunsmuir I am concerned about the effects this project might have.

Thank you,

Janet Cowan
2615 South Old Stage Road
Mount Shasta, CA
530-926-5839
530-859-2845

Reviewed by: GAO
Dist by: CJ
Dist. Date: 6-9-2021
SKU RU ___ PS
FG ___ TO
WQ ___ TLO
ARCH LTO
RPF DMG
FEUER INSP BOE
OTHER: ___
FPS ___
Status: LOC

RECEIVED
JUN 0 9 2021
REDDING
FOREST PRACTICE

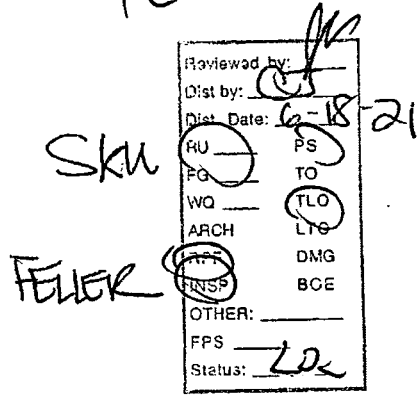
21PC-0000000450

PC#11

RECEIVED

JUN 16 2021

REDDING
FOREST PRACTICE



To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov
Timber Harvesting Plan No. 2-21-00026-SIS

My name is Brenda Montaño. I am a mother of a 5-year-old child and proud resident of Dunsmuir, California, land of the Winnemem Wintu people. Every day I give thanks for being so blessed to live on such beautiful lands like Dunsmuir, where my child and I find heaven on the river banks, observe the various birds that fly in our canyons and get to see the morning sun rise on Castle Crags. Our home is located at the base of the proposed Blackberry Timber Harvesting Plan No. 2-21-00026-SIS, which will not only impact the 461 acres currently proposed to be harvested, but will without a doubt create a drastic shift in the picture of peace I am trying to paint for you here.

#8

2020 broke records on California wildfires. We can not doubt that climate change, California's severe drought and decades of mismanagement of our precious waters and lands have all contributed to the devastation we have been experiencing for the last several years. When our community first heard of the Blackberry THP, many folks were under the impression that a plan like this would support fire mitigation. With further research, we have discovered that this is NOT the case, as is clearly stated on page 130 of the report. In fact, page 129 describes the Blackberry THP as being in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

In 2018 California experienced the deadliest and most devastating wildfire in California history. The Camp Fire in Paradise resulted after 30,000 acres burned with incredible speed, much of which was because of even-aged plantations. Dunsmuir, like Paradise, is in a canyon, which makes an incredibly frightening and potentially devastating environment for escaping a wild fire in our hills. Shouldn't we attempt to learn from our past and stop practices that clearly lead to harm?

#11

Furthermore, the road that is being proposed will create both sound pollution and potentially dangerous impact for homes that reside below the proposed line, where rocks and other debris can easily fall. Increase in traffic, especially of large diesel trucks, will create a more dangerous environment in our small streets, and will contribute to

#7

both noise and air pollution. If "the Forest Practice Rules do not contain provisions to protect personal property from damage by timber operations", how can CAL FIRE, who has the power of final determination on the THP, ensure my community that our homes and well being will be protected?

It is time that we end the practice of clearcutting in California altogether, beginning with stopping harmful timber harvest plans such as these. It is time that we begin to make plans that ensure a living environment not just for ourselves, but for all life for generations to come. Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,

Brenda Montaño

To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov
Timber Harvesting Plan No. 2-21-00026-SIS

My name is... and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

#8

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,

Ramaley, John@CALFIRE

From:	Brenda Montano <bmontano711@gmail.com>
Sent:	Wednesday, June 16, 2021 3:11 PM
To:	Redding Public Comment@CALFIRE
Subject:	Public Comment for Timber Harvesting Plan No. 2-21-00026-SIS (Blackberry THP in Dunsmuir)
Attachments:	Brenda Montano. Public Comment. No. 2-21-00026-SIS .pdf

To CAL FIRE Review Team
Forest Practice Manager

My name is Brenda Montaño. I am a mother of a 5-year-old child and proud resident of Dunsmuir, California, land of the Winnemem Wintu people. Every day I give thanks for being so blessed to live on such beautiful lands like Dunsmuir, where my child and I find heaven on the river banks, observe the various birds that fly in our canyons and get to see the morning sun rise on Castle Crags. Our home is located at the base of the proposed Blackberry Timber Harvesting Plan No. 2-21-00026-SIS, which will not only impact the 461 acres currently proposed to be harvested, but will without a doubt create a drastic shift in the picture of peace I am trying to paint for you here.

2020 broke records for California wildfires. We can not doubt that climate change, California's severe drought and decades of mismanagement of our precious waters and lands have all contributed to the devastation we have been experiencing for the last several years. When our community first heard of the Blackberry THP, many folks were under the impression that a plan like this would support fire mitigation. With further research, we have discovered that this is NOT the case, as is clearly stated on page 130 of the report. In fact, page 129 describes the Blackberry THP as being in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.
In 2018 California experienced the deadliest and most devastating wildfire in California history. The Camp Fire in Paradise resulted after 30,000 acres burned with incredible speed, much of which was because of even-aged plantations. Dunsmuir, like Paradise, is in a canyon, which makes an incredibly frightening and potentially devastating environment for escaping a wild fire in our hills. Shouldn't we attempt to learn from our past and stop practices that clearly lead to harm?

Furthermore, the road that is being proposed will create both sound pollution and potentially dangerous impact for homes that reside below the proposed line, where rocks and other debris can easily fall. Increase in traffic, especially of large diesel trucks, will create a more dangerous environment in our small streets, and will contribute to both noise and air pollution. If "the Forest Practice Rules do not contain provisions to protect personal property from damage by timber operations", how can CAL FIRE, who has the power of final determination on the THP, ensure my community that our homes and well being will be protected?

It is time that we end the practice of clearcutting in California altogether, beginning with stopping harmful timber harvest plans such as these. It is time that we begin to make plans that ensure a living environment not just for ourselves, but for all life for generations to come. Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,

Brenda Montaño

I am attaching this letter as well, to be able to print it and add to public comment sections of the plan.

21 PC-0000004451
PC #12

Japp, Jeannie@CALFIRE

From: Kayla Martel <kaylama623@gmail.com>
Sent: Monday, June 21, 2021 8:18 AM
To: Redding Public Comment@CALFIRE
Subject: Blackberry Timber Project NO 2-21-00026-SIS

#6

Please move the clear cutting further East! *BlackBerry Timber Clearcutting* NO 2-21-00026-SIS BUTTERFLY Avenue is in danger of landslides, and I live directly below the chunk of earth they want to stage the Clear cutting! I live at 6126 Butterfly Avenue. I have already had trees fall off the hillside into our yard and barely miss the house. This is a safety concern, I have a small child and my mother lives on the property as well. This is a landslide area and I am not feeling like this is a good idea. Can the staging for the clear cutting please scoot off the top of the ridge? I am worried our home will be in the line of damage and danger of trees and the hillside fall!!!
Thank You
Kayla Martel
--
Kayla M

Reviewed by:
Dist. by:
Dist. Date: 6-22-21
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ARCH ETO
RPF DMG
INSP BOE
OTHER:
FPS
Status: IDR

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21 PC-000000452

PC #13

Japp, Jeannie@CALFIRE

From:	Misa <misa@misajoo.com>
Sent:	Monday, June 21, 2021 5:13 AM
To:	Redding Public Comment@CALFIRE
Subject:	Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

Reviewed by:
Dist. by:
Dist. Date: 6-21-21
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Status:

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JUN 2 1 2021
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CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov
Timber Harvesting Plan No. 2-21-00026-SIS

My name is Misa Joo and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan will have destructive impact on 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

#8 The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection. Please be part of the solution not the problem.

Thank you for your time, Misa Joo, Redding CA, 96003

Sent from my iPhone

21PC-0000004453 PC #14

Japp, Jeannie@CALFIRE

Reviewed by: JA
Dist. by:
Dist. Date:
RU ___ FPS
FG ___ TIO
WQ ___ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER:
FPS
Status: OK

From: Kayla Martel <kaylama623@gmail.com>
Sent: Monday, June 21, 2021 8:15 AM
To: Redding Public Comment@CALFIRE
Subject: Dunsmuir Clearcutting.

Warning: this message is from an external user and should be treated with caution.

Please move the clear cutting further East! Butterfly Avenue is in danger of landslides, and I live directly below the chunk of earth they want to stage the Clear cutting! I live at 6126 Butterfly Avenue. I have already had trees fall off the hillside into our yard and barely miss the house. This is a safety concern, I have a small child and my mother lives on the property as well. This is a landslide area and I am not feeling like this is a good idea. Can the staging for the clear cutting please scoot off the top of the ridge? I am worried our home will be in the line of damage and danger of trees and the hillside fall!!!
Thank You
Kayla Martel

--
Kayla M

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JUN 21 2021
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FOREST PRACTICE

21PC-0000004521
PC#15

Japp, Jeannie@CALFIRE

From: Jana Lopez <janallopez1@gmail.com>
Sent: Friday, June 18, 2021 4:08 PM
To: Redding Public Comment@CALFIRE; Redding Public Comment@CALFIRE; Review Team Redding Inbox@CALFIRE; Citymanager@ci.dunsmuir.ca.us
Subject: Blackberry THP Public Comment
Attachments: Blackberry THP Public Comment.docx

Reviewed by:
Dist. by:
Dist. Date: 6/21/21
RU PS
FG TO
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ARCH LTO
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OTHER: FELLER
FPS
Status: LOC

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JUN 21 2021
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For Public Comment

Blackberry Timber Harvesting Plan
Dunsmuir, CA

June 18, 2021

As a resident in the proposed Blackberry THP my concern for the Plan comes from several directions. I concur with the previous comment submitted that outlines the various research that even-growth replantings are dangerous fire hazards adding to an already dangerous fire situation in Dunsmuir. But I also have erosion concerns and aesthetic concerns.

#9 #10 As you know the town of Dunsmuir is historic to California's railroad history and it houses many relics like the 1727 engine minted in 1901 which was newly renovated for the kick-off of Railroad Days this year. Many of our local businesses, if not all, depend on interested tourists who come for the history, the fishing and to hike in our beautiful forests. The slopes can be seen from all points in town and from the homes that dot the ravine effected by the Blackberry THP. It has come to our attention that many of the proposed areas to be harvested will be observable to anyone driving through or living in Dunsmuir. Clear cuts will be visible from City Hall in fact. It cannot be a leap to imagine that such harvesting will affect tourism. I have only to look at the clear cut below Castle Crags to know what our slopes will look like. My concern is that Dunsmuir will lose some of its attractiveness as a vacation destination and that in a time when our businesses are struggling to survive, they will not be able to.

#12 As to the question of erosion, myself and other neighbors have concerns regarding the erosion that the timber road will generate. Although those relating the Plan suggest that no erosion beyond what may be "normal" will occur it seems unlikely. One section of the proposed road follows the ridge above Wooden Avenue. Those folks have expressed the possibility that given our severe weather we can expect erosion to come down that slope which is around a 70 degree slope. An event like that would directly threaten property and homes perhaps even lives. It has been noted that an outside geologist, not hired by Blackberry THP, could shed some light on this issue before CalFire allows it to go forward. Also, I've heard from residents in the 600 block of South First Street saying the same. I was forwarded pictures of erosion that resulted from logging in the past in this area and severe erosion was the result. There is good evidence that despite what the logging company states, erosion is a distinct possibility.

I, personally, don't think it's realistic or fair to expect the logging to not go forward. However, I would strongly suggest Commercial cuts on our slopes and no clear cutting at all. I think the responsible thing to do is plant in stages, leaving old growth trees to slow forest fires giving CalFire a chance to fight them. I also suggest the road be rerouted to erase all chance of erosion.

#7 I've read through the THP and I see there is a clause which appears to protect the lumber companies from any damage to life or property they may cause. However, I believe there is other legal pressure that can and should be applied if fire or erosion or a dip in tourism should occur for which they or any agency can and should be held responsible.

I urge CalFire to require that the Plan be amended to address these issues.

Jana Lopez
Dunsmuir

For Public Comment

Blackberry Timber Harvesting Plan
Dunsmuir, CA

June 18, 2021

As a resident in the proposed Blackberry THP my concern for the Plan comes from several directions. I concur with the previous comment submitted that outlines the various research that even-growth replantings are dangerous fire hazards adding to an already dangerous fire situation in Dunsmuir. But I also have erosion concerns and aesthetic concerns.

As you know the town of Dunsmuir is historic to California's railroad history and it houses many relics like the 1727 engine minted in 1901 which was newly renovated for the kick-off of Railroad Days this year. Many of our local businesses, if not all, depend on interested tourists who come for the history, the fishing and to hike in our beautiful forests. The slopes can be seen from all points in town and from the homes that dot the ravine effected by the Blackberry THP. It has come to our attention that many of the proposed areas to be harvested will be observable to anyone driving through or living in Dunsmuir. Clear cuts will be visible from City Hall in fact. It cannot be a leap to imagine that such harvesting will affect tourism. I have only to look at the clear cut below Castle Crags to know what our slopes will look like. My concern is that Dunsmuir will lose some of its attractiveness as a vacation destination and that in a time when our businesses are struggling to survive, they will not be able to.

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I, personally, don't think it's realistic or fair to expect the logging to not go forward. However, I would strongly suggest Commercial cuts on our slopes and no clear cutting at all. I think the responsible thing to do is plant in stages, leaving old growth trees to slow forest fires giving CalFire a chance to fight them. I also suggest the road be rerouted to erase all chance of erosion.

I've read through the THP and I see there is a clause which appears to protect the lumber companies from any damage to life or property they may cause. However, I believe there is other legal pressure that can and should be applied if fire or erosion or a dip in tourism should occur for which they or any agency can and should be held responsible.

I urge CalFire to require that the Plan be amended to address these issues.

Jana Lopez
Dunsmuir

21PC-0000004456
PC#16

06-21-2021

To those involved in Blackberry THP,

I am writing this letter to express the concerns I, and many other members of the community, have regarding this project. In particular, we worry that the increased slash from the fallen trees will create an increased risk of fire within the area. Along with the increased fire danger, we also worry about mudslides and other potential hazards that could arise from having trees removed from the hills. Additionally, the lack of canopies following the removal of these trees will continue to dry up the ground, grasses, and other vegetation on these hills - further increasing the fire danger.

#8

From a personal perspective, we have a creek in our backyard which provides aesthetic value to our property. This is something we absolutely do not want disrupted due to any meddling in the hills above our home. We also fear that the clear cuts above Dunsmuir would lead to a reduction in tourism; something that would affect the entire population of Dunsmuir. Our town depends on tourism throughout the seasons, and our natural beauty is what brings people into town. Without it businesses would struggle, people would lose their jobs, and our property values would decrease substantially.

#9

#10

We also question the morality behind the lumber company being protected from any potential harm they may cause our families. These properties are what we've invested our livelihoods into. We've raised families here, created valuable memories, and have spent decades paying into our mortgages. For that to be potentially taken away from us at no cost to the lumber company seems extremely irrational, and shows a lack of concern for the community. At the very least, we request that this be amended, so as to ensure the safety of ourselves and our property. However, we want to make it clear that we are not supporting this project to any capacity due to our expressed concerns.

#7

Sincerely,
Carolyn Morzenti

RECEIVED
JUN 21 2021
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FOREST PRACTICE

Reviewed by: JAO
Dist. by: CJ
Dist. Date: 06/22/21
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OTHER: ___
FPS ___
Status: LOC

SCH
FELLER

Japp, Jeannie@CALFIRE

From: Carolyn Morzenti <3clmclan@gmail.com>
Sent: Monday, June 21, 2021 10:54 AM
To: Redding Public Comment@CALFIRE
Subject: Blackberry THP
Attachments: Blackberry THP.pdf

21PC-00000457
PC#17

06-21-2021

To those involved in Blackberry THP,

I am writing this letter to express the concerns I, and many other members of the community, have regarding this project. In particular, we worry that the increased slash from the fallen trees will create an increased risk of fire within the area. Along with the increased fire danger, we also worry about mudslides and other potential hazards that could arise from having trees removed from the hills. Additionally, the lack of canopies following the removal of these trees will continue to dry up the ground, grasses, and other vegetation on these hills - further increasing the fire danger.

From a personal perspective, we have a creek in our backyard which provides aesthetic value to our property. This is something we absolutely do not want disrupted due to any meddling in the hills above our home. We also fear that the clear cuts above Dunsmuir would lead to a reduction in tourism; something that would affect the entire population of Dunsmuir. Our town depends on tourism throughout the seasons, and our natural beauty is what brings people into town. Without it businesses would struggle, people would lose their jobs, and our property values would decrease substantially.

We also question the morality behind the lumber company being protected from any potential harm they may cause our families. These properties are what we've invested our livelihoods into. We've raised families here, created valuable memories, and have spent decades paying into our mortgages. For that to be potentially taken away from us at no cost to the lumber company seems extremely irrational, and shows a lack of concern for the community. At the very least, we request that this be amended, so as to ensure the safety of ourselves and our property. However, we want to make it clear that we are not supporting this project to any capacity due to our expressed concerns.

Sincerely,
Carolyn Morzenti

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JUN 21 2021
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FPS ___
Status: LA

Japp, Jeannie@CALFIRE

From: Carolyn Morzenti <3clmclan@gmail.com>
Sent: Monday, June 21, 2021 10:56 AM
To: Redding Public Comment@CALFIRE
Subject: Blackberry THP
Attachments: Blackberry THP.pdf

06-21-2021 PC#18

To those involved in Blackberry THP,

I am writing this letter to express the concerns I, and many other members of the community, have regarding this project. In particular, we worry that the increased slash from the fallen trees will create an increased risk of fire within the area. Along with the increased fire danger, we also worry about mudslides and other potential hazards that could arise from having trees removed from the hills. Additionally, the lack of canopies following the removal of these trees will continue to dry up the ground, grasses, and other vegetation on these hills - further increasing the fire danger.

From a personal perspective, we have a creek in our backyard which provides aesthetic value to our property. This is something we absolutely do not want disrupted due to any meddling in the hills above our home. We also fear that the clear cuts above Dunsmuir would lead to a reduction in tourism; something that would affect the entire population of Dunsmuir. Our town depends on tourism throughout the seasons, and our natural beauty is what brings people into town. Without it businesses would struggle, people would lose their jobs, and our property values would decrease substantially.

We also question the morality behind the lumber company being protected from any potential harm they may cause our families. These properties are what we've invested our livelihoods into. We've raised families here, created valuable memories, and have spent decades paying into our mortgages. For that to be potentially taken away from us at no cost to the lumber company seems extremely irrational, and shows a lack of concern for the community. At the very least, we request that this be amended, so as to ensure the safety of ourselves and our property. However, we want to make it clear that we are not supporting this project to any capacity due to our expressed concerns.

Sincerely,
Carolyn Morzenti

SKU

FELLER

Japp, Jeannie@CALFIRE

From: Carolyn Morzenti <3clmclan@gmail.com>
Sent: Monday, June 21, 2021 10:58 AM
To: Review Team Redding Inbox@CALFIRE
Subject: Blackberry THP
Attachments: Blackberry THP.pdf

Japp, Jeannie@CALFIRE 21PC-0000000459 PC #19

From: Kendra Cooley <kendracooley17@gmail.com>
Sent: Wednesday, June 23, 2021 8:49 PM
To: Redding Public Comment@CALFIRE
Subject: Opposition of Timber Harvest Plan No. 2-21-00026-SIS

Reviewed by GAO
Dist. by: SKV
Dist. Date: 6-24-21
RU PS
FG TO
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OTHER:
FPS
Status: LoC
Feller

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RECEIVED
JUN 24 2021
REDDING
FOREST PRACTICE

To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov
Timber Harvesting Plan No. 2-21-00026-SIS

My name is Kendra and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,

Kendra

Public Comment ID: 21PC-000000459
Comment Received Date: 6/24/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: kendracooley17@gmail.com

Comment:
See uploaded document

2-21-00026 SIS 21PC-0000004460 PC #20

RECEIVED
JUN 24 2021
REDDING
FOREST PRACTICE

06-21-2021

To those involved in Blackberry THP,

I am writing this letter to express the concerns I, and many other members of the community, have regarding this project. In particular, we worry that the increased slash from the fallen trees will create an increased risk of fire within the area. Along with the increased fire danger, we also worry about mudslides and other potential hazards that could arise from having trees removed from the hills. Additionally, the lack of canopies following the removal of these trees will continue to dry up the ground, grasses, and other vegetation on these hills - further increasing the fire danger.

From a personal perspective, we have a creek in our backyard which provides aesthetic value to our property. This is something we absolutely do not want disrupted due to any meddling in the hills above our home. We also fear that the clear cuts above Dunsmuir would lead to a reduction in tourism; something that would affect the entire population of Dunsmuir. Our town depends on tourism throughout the seasons, and our natural beauty is what brings people into town. Without it businesses would struggle, people would lose their jobs, and our property values would decrease substantially.

We also question the morality behind the lumber company being protected from any potential harm they may cause our families. These properties are what we've invested our livelihoods into. We've raised families here, created valuable memories, and have spent decades paying into our mortgages. For that to be potentially taken away from us at no cost to the lumber company seems extremely irrational, and shows a lack of concern for the community. At the very least, we request that this be amended, so as to ensure the safety of ourselves and our property. However, we want to make it clear that we are not supporting this project to any capacity due to our expressed concerns.

Sincerely,
Carolyn Morzenti

Reviewed by: SKU
Dist. by: Felker
Dist. Date: 6-24-21
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Public Comment ID: 21PC-000000460
Comment Received Date: 6/24/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response:

Comment:
See uploaded document

Carolyn Morzenti
114 Welsh Ln.
Dunsmuir, CA 96025

SACRAMENTO CA 957

22 JUN 2021 PM 7 L

Steve Wilson
Dept. of forestry
1809 Fairlane Rd.
Yreka, Ca
96097

96097-953303

Public Comment ID: 21PC-000000461
Comment Received Date: 6/24/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response:

Comment:
See uploaded document

21PC-000000462 PC #22

Japp, Jeannie@CALFIRE

From: Carol Schrum <crwschrum@gmail.com>
Sent: Friday, June 25, 2021 6:25 PM
To: Redding Public Comment@CALFIRE
Subject: Opposition to Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

Reviewed by: SK
Dist. by: SK
Dist. Date: 6-28-21
RU ____ PS
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OTHER: ____
FPS ____
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RECEIVED
JUN 25 2021
REDDING
FOREST PRACTICE

To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov
Timber Harvesting Plan No. 2-21-00026-SIS

My name is Carol Schrum, I am a resident of Dunsmuir CA. I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,

Carol R Schrum

Sent from my iPhone

Public Comment ID: 21PC-000000462
Comment Received Date: 6/28/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: crwschrum@gmail.com

Comment:
See uploaded document

21PC-000000463 PC #23

Japp, Jeannie@CALFIRE

From: devon warner <crabulux@yahoo.com>
Sent: Friday, June 25, 2021 9:46 PM
To: Redding Public Comment@CALFIRE
Subject: 2-21-00026-SIS

RECEIVED
JUN 2 5 2021
REDDING FOREST PRACTICE

Warning: this message is from an external user and should be treated with caution.

Devon Warner

5911 Shasta Ave.

Dunsmuir, CA 96025

415-596-6064

crabulux@yahoo.com

Reviewed by:
Dist. by:
Dist. Date: 6-28-21
RU ___ PS
FG ___ TO
WQ ___ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER:
FPS
Status: LOL

SKU

Felker

June 25, 2021

CalFire Review Team

Forest Practice Program Manager

6105 Airport Rd.

Redding, CA 96002

Re: 2-21-00026-SIS, Blackberry Timber Harvest (Proposed)

Dear Sir or Madam:

#8 Regarding the above referenced matter, I write in opposition. I understand the THP for this project states plainly that it does nothing to mitigate fire danger. In fact, clear cutting may exacerbate fire danger by fostering the growth of underbrush. Clearcutting and thinning contribute to erosion and possibly even flooding. This project will impact over 400 acres of forest, which border an active town with many residents, homes, and businesses. I

#8 oppose this project on safety grounds and on aesthetic grounds. Nothing is more horrifying to this community than the prospect of a wildfire taking out the town. We equally cherish the beauty of the Girard Ridge on the east side of the canyon and we value the habitat it provides for wildlife. We assume money is the reason for the proposed project. I ask you to recognize the views of those of us who live in the City of Dunsmuir, value the natural environment, and reject the proposal. Thank you for your time and attention.

Very truly yours,

/s/

Devon Warner

devon warner

Public Comment ID: 21PC-000000463
Comment Received Date: 6/28/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: crabulux@yahoo.com

Comment:
See uploaded document

21PC-600000464

RECEIVED PC #24

JUN 28 2021

REDDING FOREST PRACTICE

Japp, Jeannie@CALFIRE

From:	bill pfanner <billpfanner@yahoo.com>
Sent:	Saturday, June 26, 2021 12:42 PM
To:	citymanager@ci.dunsmuir.ca.us
Cc:	Redding Public Comment@CALFIRE; Redding Public Comment@CALFIRE; Review Team Redding Inbox@CALFIRE; Jana Lopez
Subject:	Blackberry Timber Harvesting Plan

Reviewed by: Dist. by: Dist. Date: 6-28 PS TO TLO LTO DMG BOE RU FG WQ ARCH OTHER: FPS Status:

Warning: this message is from an external user and should be treated with caution.

Public Comment
Blackberry Timber Harvesting Plan

"Don't it away seem to go that you don't know what you've got 'til it's gone. They paved paradise and put up a parking lot." Joni Mitchell"

June 26, 2021

To whom it may concern:

I am a resident of 116 Welsh Lane in unincorporated Dunsmuir California in the area adjacent to and directly impacted by the Blackberry Timber Harvesting Plan (THP). I would like to acknowledge support for private property rights and the ability of the Blackberry THP landowners to the legal use of their land. However, when the use of said land threatens to significantly impacts the environment, aesthetic and the lives property of adjacent homeowners, I feel the need to voice my concerns which fall into three categories: Fire Safety, Water Quality and Community Character.

FIRE SAFETY

#8 We know how dangerous the fire situation is in this region. Dunsmuir has been identified as one of the California communities with the highest potential to experience a fire scenario similar to what happened in Paradise. If the THP is to be approved, it must insure that it accounts for the short and long term impacts to fire safety. Specifically, the immediate impact must consider how the removal of trees in the THP area can mitigate, not exacerbate fire danger. In the long term, the THP must implement a replanting and restoration plan that will reduce, not increase fire risk. A THP that protects and promotes fire safety would be a win for all. A THP that permits the short term profit of cutting trees to the detriment of fire safety would be short-sited and a significant threat to life and property.

WATER QUALITY

#4 There are many natural springs and year-round drainages traversing the 461-acre THP area, all draining directly into the Upper Sacramento River. Past activities on this hillside have resulted in drainages becoming blocked, causing flood damage to downstream residences.The THP must map and account for all drainages and address vegetation clearance and wetland protection. Further, the potential exists for major soil erosion and landslide hazard. The THP must account for soil stability, slope hazard protection, and mitigate to prevent soil erosion entering the Upper Sacramento River.

COMMUNITY CHARACTER

#9 The Blackberry THP area is the scenic backdrop of the City of Dunsmuir. A clear-cut and denuded hillside would have a significant visual impact on the community. While it is hard to quantify a monetary impact, it is clear that such an

#10

#9
#10

unsightly outcome would irrevocably alter the community's character and negatively impact the economy of Dunsmuir which is already struggling to survive. It is therefore imperative the THP account for the visual impact to the surrounding region and provide appropriate conditions to protect the scenic quality of this region.

It is my hope that the Blackberry THP can learn from past mistakes and allow for timber harvesting only if will not degrade or negatively impact the Dunsmuir region. As the Joni Mitchell song goes..."Don't is always seem to go that you don't know what you've got til it's gone."

Maybe is we start listening, history will stop repeating itself!

Thank you for your consideration.

Bill Pfanner
116 Welsh Lane
Dunsmuir CA 96025

Email: billpfanner@yahoo.com

Public Comment ID: 21PC-000000464
Comment Received Date: 6/28/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: billpfanner@yahoo.com

Comment:
See uploaded document

21PC-0000000465

PC #25

RECEIVED
JUN 28 2021
REDDING
FOREST PRACTICE

Reviewed by: JW
Dist. by: JW
Dist. Date: 6-28-21
RU ____ PS
FG ____ TO
WQ ____ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER: SKU
FPS ____
Status: LOC
Felley

To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov
Timber Harvesting Plan No. 2-21-00026-SIS

My name is Blake Michaelsen and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,

Blake Michaelsen

Japp, Jeannie@CALFIRE

From: blake michaelsen <michaelsen.blake@gmail.com>
Sent: Monday, June 28, 2021 9:40 AM
To: Redding Public Comment@CALFIRE
Subject: Timber Harvesting Plan No. 2-21-00026-SIS - public comment
Attachments: comment letter.pdf

see attached letter. my wife and i are concerned with wildfire mitigation, landslide mitigation, and aesthetics surrounding the city of dunsmuir.

Japp, Jeannie@CALFIRE 21PC-000000467 PC#26

From: rita crayton <rita.crayton@yahoo.com>
Sent: Monday, June 28, 2021 12:36 PM
To: Redding Public Comment@CALFIRE
Subject: OPPOSE Blackberry Timber Plan

Reviewed by: JS 6-28-21
Dist. by: ___
Dist. Date: 6-28-21
RU ___ PS
FG ___ TO
WQ ___ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER: ___
FPS ___
Status: L02

SKU
Feller

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RECEIVED
JUN 28 2021
REDDING
FOREST PRACTICE

To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov
Timber Harvesting Plan No. 2-21-00026-SIS

My name is Rita and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

I have lived in Dunsmuir for 20+ years & I'm currently raising my child here. This proposed plan would greatly affect our beautiful town.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,
Rita Crayton - Long time Dunsmuir resident

Sent from Yahoo Mail on Android

Public Comment ID: 21PC-000000467
Comment Received Date: 6/28/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: rita.crayton@yahoo.com

Comment:
See uploaded document

Japp, Jeannie@CALFIRE 21PC - 600000468 PC #27

From: Cindy Martel <cindysittser@gmail.com>
Sent: Monday, June 28, 2021 12:58 PM
To: Redding Public Comment@CALFIRE

Reviewed by:
Dist. by:
Dist. Date: 6-28-2021
RU PS
FG TO
WQ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER:
FPS
Status: 402

Warning: this message is from an external user and should be treated with caution.

ReddingPublicComment@fire.ca.gov

RECEIVED
JUN 28 2021
REDDING
FOREST PRACTICE

To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov

Timber Harvesting Plan No. 2-21-00026-SIS

My name is (Your name here) and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,
Cindy Martel
Kayla Martel
Maddi Martel

Public Comment ID: 21PC-000000468
Comment Received Date: 6/28/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: cindysittser@gmail.com

Comment:
See uploaded document

Japp, Jeannie@CALFIRE 21PC-000000469 PC #28

From: Annie Marsh <annie_marsh@hotmail.com>
Sent: Monday, June 28, 2021 1:03 PM
To: Redding Public Comment@CALFIRE
Subject: OPPOSE Timber Harvesting Plan No. 2-22-00026-SIS

Reviewed by: Dist. by: Dist. Date: 6-28-21 RU PS FG TO WQ TLO ARCH LTO RPF DMG INSP BOE OTHER: FPS Status: LO2 SKU Felker

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RECEIVED
JUN 28 2021
REDDING FOREST PRACTICE

To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov

Timber Harvesting Plan No. 2-21-00026-SIS

My name is Anne Marsh and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS. I am a 24 year resident of Siskiyou County.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,
Anne Marsh

Get [Outlook for Android]

Public Comment ID: 21PC-000000469
Comment Received Date: 6/28/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: annie.marsh@hotmail.com

Comment:
See uploaded document

21 PC - 0000000470

PC #29

Reviewed by: GMO
Dist. by: CB
Dist. Date: 6-29
RU PS
FG TO
WQ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER:
FPS
Status: Loc

SKU

Feller

Japp, Jeannie@CALFIRE

From: Jaime Meredith <meredithjaime@gmail.com>
Sent: Monday, June 28, 2021 7:46 PM
To: Redding Public Comment@CALFIRE
Subject: Timber harvest plan number 2-21-00026-sis

I am a long term Dunsmuir resident, property owner and am not happy and oppose this timber plan. Dunsmuir had many mudslides in the past due to tree removal.

#8 I'm not opposed to goats eating the low vegetation, or even a few trees 10 feet apart. The 4-8 trees left per acre that they propose is awful. The slash piles left behind are 3 feet high of fuel!

I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,
Jaime Meredith

RECEIVED
JUN 29 2021
REDDING
FOREST PRACTICE

Public Comment ID: 21PC-000000470
Comment Received Date: 6/29/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: meredithjaime@gmail.com

Comment:
See Uploaded Document

PC #30

Japp, Jeannie@CALFIRE 21PC 000000471

Reviewed by: GAO
Dist. by: SJ 6-29-21
RD FS
FG TO
WQ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER:
FPS
Status: LOC

SKU
Felker

From:	Jade Price <hmprice@ucdavis.edu>
Sent:	Monday, June 28, 2021 8:02 PM
To:	Redding Public Comment@CALFIRE
Subject:	Timber Harvesting Plan No. 2-21-00026-SIS

Warning: this message is from an external user and should be treated with caution.

Hello,

My name is Hannah Price and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcut.
The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection!!

Thank you for your time,
Hannah Price

RECEIVED
JUN 29 2021
REDDING
FOREST PRACTICE

Hannah Marie Price
Undergraduate Student | Art Studio & Communication
University of California, Davis

***Art Team Member |** The Culture C.O.-O.P.*

hmprice@ucdavis.edu

www.linkedin/com/in/hannahmarieprice

Public Comment ID: 21PC-000000471
Comment Received Date: 6/29/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: hmprice@ucdavis.edu

Comment:
See uploaded document

Japp, Jeannie@CALFIRE 21PC-000000472 PC#31

From: patrycestout <patrycestout@comcast.net>
Sent: Monday, June 28, 2021 9:44 PM
To: Redding Public Comment@CALFIRE
Subject: Timber Harvesting Plan No. 2-21-00026-SIS

Reviewed by: [illegible]
Dist. by: SKV
Dist. Date: 6-29-21
RU ✓ PS ✓
FG ___ TO
WQ ___ TLO
ARCH ___ LTO
RPF ✓ DMG
NSF ✓ BOE
OTHER: Fellers
FPS ___
Status: LOC

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To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov
Timber Harvesting Plan No. 2-21-00026-SIS

My name is Patryce Stout and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time. Patryce Stout, 5906 Shasta Ave., Dunsmuir, Ca

Sent from my T-Mobile 4G LTE Device

RECEIVED
JUN 29 2021
REDDING
FOREST PRACTICE

Public Comment ID: 21PC-000000472
Comment Received Date: 6/29/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: patrycestout@comcast.net

Comment:
See uploaded document

Japp, Jeannie@CALFIRE 21PC-000000473 PC # 32

From: Shivara Saint Germain <sshivara@yahoo.com>
Sent: Monday, June 28, 2021 10:17 PM
To: Redding Public Comment@CALFIRE
Subject: Timber Harvesting Plan No. 2-21-00026-SIS

Reviewed By: GAO
Dist. by: 82
Dist. Date: 6-29-21
RU ___ PS
FG ___ TO
WQ ___ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER: ___
FPS ___
Status: LOC

SKU

Filed

Warning: this message is from an external user and should be treated with caution.

To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov

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JUN 29 2021
REDDING
FOREST PRACTICE

Timber Harvesting Plan No. 2-21-00026-SIS

Hello, my name is Shivara St. Germain, and I live in Dunsmuir. I am writing to OPPOSE the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,

Shivara Saint Germain

Public Comment ID: 21PC-000000473
Comment Received Date: 6/29/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: sshivara@yahoo.com

Comment:
See uploaded document

Japp, Jeannie@CALFIRE 21 PC -000000 474 PC #33

From: Corrine Masters <cmlee2931@gmail.com>
Sent: Monday, June 28, 2021 10:53 PM
To: Redding Public Comment@CALFIRE
Subject: CAL FIRE Review Team Forest Practice Manager

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JUN 29 2021
REDDING
FOREST PRACTICE

Reviewed by: Dist. by: Dist. Date: 6-29-21 RU FG WQ ARCH RPF INSP FPS TO TLO LTO DMG BOE OTHER: FPS Status: LOC
SKU Felk

TO:
CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov

RE:
Timber Harvesting Plan No. 2-21-00026-SIS

My name is Corrine Masters Lee. I was born and raised in Dunsmuir. My Father, Bill Masters, was also born in Dunsmuir at the old Cornish Hospital. My family has a very deep and old legacy in Dunsmuir whereby both grandparents where from pioneer families of the area. My maternal grandmother moved to Cantara at 5 years of age from Minnesota in 1901 with her widowed mother and five siblings. My paternal grandfather's family owned the section of land where Sweetbriar now exists. My family on both sides relished and loved the charm of the town of Dunsmuir. When I heard of this proposed plan to clearcut a large portion of the historical and valuable hillside, I was appalled.

I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire. Aside from the the above timely mention of extrene fire hazard (Lava fire), such a clearcut would produce horrible destruction of the charm and beauty in this area. The clearcut also puts this very steep hillside in vulnerable jeopardy of possible landslides.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better preservation of this town's beauty as well as its environmental protection.

Thank you for your time,
Corrine Masters Lee,

Granddaughter of pioneers Madge Masters and James Loftus

Public Comment ID: 21PC-000000474
Comment Received Date: 6/29/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: cmlee2931@gmail.com

Comment:
See uploaded document

Japp, Jeannie@CALFIRE 21PC- 600000475 PC#34

From: Jessie B. <shastajess@gmail.com>
Sent: Tuesday, June 29, 2021 9:35 AM
To: Redding Public Comment@CALFIRE
Subject: No clearcutting in Dunsmuir!!

Reviewed by: GAC
Dist. by: [illegible]
Dist. Date: 6-29-21
RD ___ PS
FG ___ TO
WQ ___ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER: ___
FPS ___
Status: LOC

SKW

Feller

To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov

Timber Harvesting Plan No. 2-21-00026-SIS

My name is Jessica Bishop and I live in Dunsmuir with my 2 children and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection. Fire protection is more important then clearcutting our hillsides.

Thank you,
Jessica Bishop
530-925-1846

Public Comment ID: 21PC-000000475
Comment Received Date: 6/29/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: shastajess@gmail.com

Comment:
See uploaded document

21PC-00000476

Johnson, Corrine@CALFIRE

From: Suzanne Scull <sescull@gmail.com>
Sent: Tuesday, June 29, 2021 12:58 PM
To: Redding Public Comment@CALFIRE
Subject: Timber Harvesting Plan No. 2-21-00026-SIS

Warning: this message is from an external user and should be treated with caution.

Timber Harvesting Plan No. 2-21-00026-SIS

My name is Suzanne Scull and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,
Suzanne Scull
Sent from my iPhone

Japp, Jeannie@CALFIRE 21PC 000000477 PC # 36

From: Katie K <kathryn.kraft@gmail.com>
Sent: Tuesday, June 29, 2021 3:50 PM
To: Redding Public Comment@CALFIRE
Subject: Opposition to the Blackberry Timber Harvesting Plan

Reviewed by: SKU
Dist. by: SKU
Dist. Date: 6-30-21
RU PS
FG TO
WQ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER:
FPS
Status: LOC
Feller

Warning: this message is from an external user and should be treated with caution.

To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov
Timber Harvesting Plan No. 2-21-00026-SIS

My name is Katie, and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan proposes to impact 461 acres of Dunsmuir's hillside, along with Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, with 32 acres of road right of way, 108 acres of which will be clear-cut.

The THP clearly states that this project will "not mitigate fire risk" and, if approved, will be conducted in a very high fire severity hazard zone. Many recent forest fire studies show that clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,

Katie

RECEIVED
JUN 29 2021
REDDING
FOREST PRACTICE

Public Comment ID: 21PC-000000477
Comment Received Date: 6/30/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: kathryn.kraft@gmail.com

Comment:
Se uploaded document

Japp, Jeannie@CALFIRE 21PC-000000478 PC#37

From: P C <thisispaulc@gmail.com>
Sent: Tuesday, June 29, 2021 4:26 PM
To: Redding Public Comment@CALFIRE
Subject: Timber Harvesting Plan No. 2-21-00026-SIS

My name is Paul Cowan and I live in Dunsmuir. I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,
Paul

Public Comment ID: 21PC-000000478
Comment Received Date: 6/30/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: thisispaulc@gmail.com

Comment:
See uploaded document

21PC-0000000479

PC #38

Japp, Jeannie@CALFIRE

Reviewed by: GAD
Dist. by: SKU
Dist. Date: 6-30-21
RU PS
FG TO
WQ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER:
FPS
Status: LOC

SKU

Fellers

From: Nora Silber <norasilber@gmail.com>
Sent: Tuesday, June 29, 2021 9:40 PM
To: Redding Public Comment@CALFIRE
Subject: Timber Harvesting Plan No. 2-21-00026-SIS

Dear Cal Fire Review Team,

I am writing with concern about Timber Harvest Plan No. 2-21-00026-SIS, the Blackberry THP in Dunsmuir. My primary residence, which my husband and I own, sits about 1000 feet from the western project boundary. My concerns include the visual impact from Dunsmuir, the noise pollution from the project, habitat alteration/destruction, unsustainable forest management, erosion and the sedimentation impacts on waterways, and most troubling, the increased fire risk that the proposed prescriptions may cause.

Having reviewed the Timber Harvest Plan, researching the various prescriptions, I feel strongly that the *way in which* the 458 acres proposed for harvest will be logged will do nothing to move our forest towards a more sustainable and fire resilient forest. I appreciate the concerns CalFire has brought forward in the second review and am heartened by the alternative prescription acreage being reduced by nearly 100 acres.

#13 Unfortunately I don't think this is enough given the other prescriptions that LandVest will carry out. I believe there should be more restrictions on the number of large trees taken from the selection and commercial thinning. Within the commercial thin prescription, for example, there is no restriction on minimum DBH, with the exception of the 15sqft basal area of "wildlife trees". This leads me to believe that 228 acres of land will be devoid of large trees, the trees that are the most important for forest health, habitat, and fire resilience. How is this ok?

#14 In the "project objectives" area of the plan, the first objective is to "maintain a productive, sustainable forest". Does the review team agree with this statement? Is this harvest plan indeed going to maintain a productive, sustainable forest? And I also beg the question is there an alternative. LandVest explores project alternatives in the plan including, the no project alternative and the public purchase of the land alternative. I ask the review team to consider both of these alternatives and give the community more time to explore the possibility of public purchase. My husband has been researching community owned forests and we believe this could be a viable option for the lands surrounding Dunsmuir.

I thank you for your time and for considering the possibility for a more sustainable and fire resilient management option for Dunsmuir's forests.

Thank you so much,
Nora Silber

RECEIVED
JUN 29 2021
REDDING
FOREST PRACTICE

Public Comment ID: 21PC-000000479
Comment Received Date: 6/30/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: norasilber@gmail.com

Comment:
See uploaded document

Japp, Jeannie@CALFIRE 21 PC - 0000000480 PC #39

From: Paulina Sanchez <plevie@gmail.com>
Sent: Wednesday, June 30, 2021 8:26 AM
To: Redding Public Comment@CALFIRE
Subject: Blackberry Timber Harvesting Plan No. 2-21-00026-SIS

Reviewed by: GAO
Dist. by: [illegible]
Dist. Date: 6-30-21
SKU
RU ___ PS
FG ___ TO
WQ ___ TLO
ARCH LTO
Feller RPF DMG
INSP BOE
OTHER: ___
FPS ___
Status: 1 OC

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To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov
Timber Harvesting Plan No. 2-21-00026-SIS

RECEIVED
JUN 30 2021
REDDING
FOREST PRACTICE

Hello CAL FIRE Review Team,

My name is Paulina Sanchez and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS. I am a Dunsmuir resident and landowner.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcut.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,
Paulina Sanchez

Public Comment ID: 21PC-000000480
Comment Received Date: 6/30/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: plevie@gmail.com

Comment:
See uploaded document

21PC-0000004181 #40

Japp, Jeannie@CALFIRE

From:	Dunsmuir2good <dunsmuir2good@yahoo.com>
Sent:	Wednesday, June 30, 2021 9:34 AM
To:	Redding Public Comment@CALFIRE
Cc:	Phyllis Skalko
Subject:	I Oppose Blackberry Timber Harvesting
Attachments:	ReddingPublicComment re Dunsmuir Clearcut.docx

Reviewed by: LAO
Dist. by: CJ
Dist. Date: 6/30
RU ___ PS
FG ___ TO
WQ ___ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER: ___
FPS ___
Status: LOC

Skalko

Fgler

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See attached document

Life may not be the party we hoped for, but while we're here we should dance!

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JUN 30 2021
REDDING
FOREST PRACTICE

ReddingPublicComment@fire.ca.gov
To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445

ReddingPublicComment@fire.ca.gov
Timber Harvesting Plan No. 2-21-00026-SIS

My name is (Your name here) and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.
This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.
The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.
Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.
Thank you for your time,
Phyllis Skalko

Japp, Jeannie@CALFIRE 21PC - 00000483 PC#41

From:	marc sanchez <mcs2285@gmail.com>
Sent:	Wednesday, June 30, 2021 4:17 PM
To:	Redding Public Comment@CALFIRE
Subject:	Blackberry Timber Harvest plan no 2-21-00026-sis

Reviewed by: [illegible]
Dist. by:
Dist. Date: 07-01-21
SKU RU PS
FG TO
WQ TLO
ARCH LTO
Feller RPF DMG
INSP BOE
OTHER:
FPS
Status: LO2

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To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov
Timber Harvesting Plan No. 2-21-00026-SIS

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JUL 01 2021
REDDING
FOREST PRACTICE

Hello CAL FIRE Review Team,

My name is Paulina Sanchez and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS. I am a Dunsmuir resident and landowner.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcut.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,
Marcos sanchez

Sent from my iPhone

Public Comment ID: 21PC-000000483
Comment Received Date: 7/1/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: mcs2285@gmail.com

Comment:
See uploaded document

Japp, Jeannie@CALFIRE 21 PC 000000484 PC#42

From:	Chrissy Thomure <tinajean42@gmail.com>
Sent:	Thursday, July 1, 2021 9:14 AM
To:	Redding Public Comment@CALFIRE
Subject:	Re: Timber Harvesting Plan No. 2-21-00026-SIS

Reviewed by: JJ
Due Date 7-1-21
SKU RU PS
FG TO
WQ TLO
ARCH LTO
Feller RPF DMG
INSP BOE
OTHER:
FPS
Status: LOI

Warning: this message is from an external user and should be treated with caution.

Also, I wanted to add that we never received any written notice of this plan via mail. I think as an adjacent property owner we are supposed to receive notice. Thank you.

On Thu, Jul 1, 2021 at 9:04 AM Chrissy Thomure <tinajean42@gmail.com> wrote:

To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov

RECEIVED
JUL 01 2021
REDDING
FOREST PRACTICE

Timber Harvesting Plan No. 2-21-00026-SIS

Note: I understand the deadline to submit comments was yesterday but we were preparing to evacuate due to the Lava Fire and only just learned about this project within the past week. I hope you will make an exception and accept letters through the end of this week to give time for the many local Dunsmuir community members who just found out about this plan from a facebook post a few days ago to give their input.

My name is Christina Thomure and my husband, Michael Brunjes, and I live at 418 S Second Street which is adjacent to the subject property. I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS in its current form.

This plan is proposing to impact 461 acres of Dunsmuir's scenic hillside, along Blackberry Hill east of the Sacramento River. Given the project is just ½ mile from Dunsmuir's Post Office, this project will have significant and long-lasting negative consequences for the local community. Its 32 acres of roads and 108 acres of clear cut will severely and negatively impact the view shed for the community of Dunsmuir, whose local economy is highly dependent on tourism and many are just barely making a living already.

#8 Many people in the community are under the impression that the project would mitigate fire risk, and that has been the primary reason they are tolerant of it. But the report clearly states that this project will "not mitigate fire risk". I have no reason to believe otherwise given this is straight from the horse's mouth. If approved, the project will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an ***increase*** in the intensity and spread of wildfire.

#12 Furthermore, as direct neighbors to the subject property, we are very concerned about erosion and runoff. Our hillside is very steep and the watershed from the subject property drains into our backyard. We are concerned about flooding, sediment runoff into our backyard that can cause flooding issues and potential for

environmental hazards associated with the material that could settle. It is common knowledge that clear cutting exacerbates runoff and erosion. We do not believe the replanting plan as its currently proposed will mitigate the impacts of erosion and runoff.

#10 The economic benefits of this project to the local community are little-to-none while the economic benefit to the private corporation is significant. We understand their strong desire to proceed with this project as quickly as possible to maximize profits. But the community of Dunsmuir demands and deserves better protection and support.

#15 Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS in its current form. We implore you to at least host a community meeting where Dunsmuir citizens can have time to coordinate, attend, become well-informed, have their voices heard by the appropriate representatives (which - although nice to have present- are not the Town Council members and project's consultant), and give adequate input on the plan. The 'community meeting' was thrown together with very short notice and not well publicized, no representation from the corporation or Calfire was present, and the slide deck did not clearly delineate the boundaries and the harvest plan for each section of the project boundary. The map shown for the project was laughable given today's GIS capabilities. (The least they could have done was use a color aerial map for the base layer.)

Thank you for your consideration and all that you do to protect our state.

--

Sincerely,

Christina Thomure
Michael Brunjes

--

Chrissy Thomure
tinajean42@gmail.com

Public Comment ID: 21PC-000000484
Comment Received Date: 7/1/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: tinajean42@gmail.com

Comment:
See uploaded document

Japp, Jeannie@CALFIRE 21PC-00000485 PC #43

From: Michael Starsheen <mastarsheen@att.net>
Sent: Friday, July 2, 2021 8:28 AM
To: Redding Public Comment@CALFIRE
Subject: Timber Harvesting Plan No. 2-21-00026-SIS

Reviewed by: MRJ
Dist. by: SKV 7-2-21
Dist. Date:
RU ___ PS
FG ___ TO
WQ ___ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER: Fellers
FPS ___
Status: ___

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JUL 02 2021
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To CAL FIRE Review Team
Forest Practice Manager
6105 Airport Road
Redding, CA 96002
(530) 224-2445
ReddingPublicComment@fire.ca.gov

Timber Harvesting Plan No. 2-21-00026-SIS

My name is Michael Starsheen and I am writing to oppose the Blackberry Timber Harvesting Plan No. 2-21-00026-SIS.

This plan is proposing to impact 461 acres of Dunsmuir's hillside, along Blackberry Hill east of the Sacramento River. The proposed project is just ½ mile from Dunsmuir's Post Office, 32 acres of which will be road right of way, 108 acres of which will be clearcutted.

The THP clearly states that this project will "not mitigate fire risk" and if approved, will be conducted in a very high fire severity hazard zone. A number of recent forest fire studies show clearcut harvesting and subsequent even-aged tree plantations lead directly to an increase in the intensity and spread of wildfire.

Please put a stop to the Black Berry Timber Harvesting Plan No. 2-21-00026-SIS. We demand and deserve better environmental protection.

Thank you for your time,

Michael A. Starsheen
203 Marion Street
Dunsmuir, CA 96025

Public Comment ID: 21PC-000000485
Comment Received Date: 7/2/2021
Comment for Plan Number: Enter plan number manually
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: mastarsheen@att.net

Comment:
See Uploaded Document

Jeff Stone
909 Bennett Drive
Yreka, CA 96097
stonepitts2@gmail.com

July 6, 2021

Forest Practice Program Manager
CALFIRE
6105 Airport Road
Redding, CA 96002
Submitted electronically via CalTrees

Re: Blackberry THP, 2-21-00026-SIS

The following are my comments on the Blackberry THP.

The Blackberry THP proposes to harvest timber from Shasta Cascade Timberlands properties adjacent to the City of Dunsmuir. This THP is one of many that have been proposed or implemented near Dunsmuir and are causing the wholesale conversion of these properties to timber plantations through prescriptions primarily of even-aged management.

Economic Viability and Alternative Analysis

#14 I appreciate that this THP was recently revised to eliminate 81% of the even-aged management that was originally proposed. The fact that this revision was acceptable to the landowner indicates that even-aged management is not generally required to make timber harvest economically viable, and that uneven-aged management is a legitimate alternative. While even-aged management may be economically superior (at least in the short term), uneven-aged management is more sustainable and desirable for other resources, including fire hazard and risk, visual resources, watershed, reduction of herbicide use, public acceptance, biological diversity, recreation, and tourism.

Cumulative Effects for Wildfire Risk and Hazard

#8 The Blackberry THP (p. 80) defines the cumulative effects assessment area for wildfire risk and hazard as "the project area within a one quarter mile radius of permanently located structures maintained for human habitation, and residential communities. This assessment area was chosen based on the guidance in Technical Rule Addendum 2 which states that 'Cumulative increase in wildfire risk and hazard can occur when the effects of two or more activities from one or more Projects combine to produce a significant increase in forest fuel loading in the vicinity of residential dwelling and communities.' One quarter mile was determined to be within

'the vicinity' of dwellings and communities and within the area likely to be treated or used for community fuel breaks or suppression efforts."

#8 The following statement from a publication cited in the Blackberry THP (p. 85) indicates that this assessment area is woefully insufficient:

> Effective fuel treatment programs must consider the spatial pattern of fuel across large landscapes (e.g., Hessburg et al. 2000) because multiple stands and fuel conditions are involved in large fires (Finney 2001). Fire behavior under extreme fire weather may involve large areas of fuel, multiple fires, and spotting, so a "firesafe" landscape needs to encompass hundreds to thousands of acres with desired fuel conditions strategically located in any particular management unit (Finney 2003). Treating small or isolated stands without assessing the broader landscape may be ineffective in reducing large-scale crown fire. (Peterson, David L. et al 2005. Forest structure and fire hazard in dry forests of the Western United States. Gen. Tech. Rep. PNW-GTR-628.)

Greenhouse Gases and Carbon Sequestration

#16 Regarding greenhouse gases (GHG), the statement is made on p. 124 of the THP that "Managed commercial forests make a significant contribution to the sequestration of carbon and mitigation of GHG." This is debatable. Recent research indicates that "[S]tate and federal reporting have erroneously excluded some [forest] product-related emissions, resulting in 25%–55% underestimation of state total CO2 emissions." (Meeting GHG reduction targets requires accounting for all forest sector emissions, Tara W Hudiburg et al, 2019 Environ. Res. Lett. 14 095005). It appears that significantly less of the biomass in harvested trees is sequestered in lumber and other wood products than has been assumed. If this is correct, it throws all the calculations off; this must be addressed.

This THP has been revised several times during the review process, as was appropriate. However, these revisions have turned the THP (as displayed on CalTrees) into a mishmash of disconnected pages spread over several documents. There are the original documents, the revised documents, and the responses to the first and second reviews, with replacement pages scattered around in no particular order. Not only does this make it very difficult for the public to review, but it appears that things have slipped through the cracks. For example, the Greenhouse Gas Table on page 116 of the original THP is nearly identical to that on page 125 of the revised THP, despite the major changes that occurred to the acreages of the various prescriptions in the project. The worksheets in the revised Section 5 were not changed when the prescription acreages were altered in other locations in the THP. This cannot be correct.

Conclusions

It is apparent from this amended plan that uneven-aged management is an economically viable alternative to clearcutting. Thank you for considering this alternative, and please continue to give uneven-aged management meaningful consideration during future THP analyses.

The Blackberry THP is one of five THPs currently in various stages of submission, review or approval that have been filed recently adjacent to the City of Dunsmuir; two additional, unnamed THPs are referred to in this THP that will be filed soon. In addition, at least fifteen other THPs, all including large clearcuts, have been implemented in this area during the last twenty years, which have cumulatively resulted in the conversion of about 30% of the land area within a four-mile radius of the City of Dunsmuir to tree plantations. The past several years have shown that large fires that threaten rural communities are here to stay, and that cumulative effects analyses in THPs for fire hazard and risk must consider a much larger area than has been the case to keep these communities safe.

While there is much controversy regarding GHG emissions and climate change, it is clear that timber harvest may not be as innocuous as is being claimed by the industry. A more realistic and rigorous analysis is necessary to meet the State of California's GHG reduction policy goals.

I hope that you will consider implementing an improved process to track and display revisions to THPs so that the public can better understand what exactly is being changed, and why. A more orderly process will also allow CalFire and the RFP to more effectively manage these revisions.

Thank you for this opportunity to comment.

Jeff Stone

Jeff Stone

21PC-0000000488

PC #45 p.1

Page 1 of 15

July 7, 2021

TO: Forest Practice Program Manager, CALFIRE
6105 Airport Road, Redding, CA 96002

Reviewed by:
Dist. by:
Dist. Date: 7-8-21
RU PS
FG TO
WQ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER:
FPS
Status: CO2

SKU

Feller

FROM: Michael Bush 6040 Butterfly Ave., Dunsmuir, CA 96025

Re: Blackberry Timber Harvesting Plan, 2-21-00026-SIS, My opposition to a proposed section of Road NC4

DEAR SIR:

#6

There is a proposed section of Road NC4 that is directly above my house on Butterfly Ave. I AM against building that section there; rather, it should be relocated to the east of Blackberry Hill summit/ridge area, or another new road constructed, or a reconstructed road to the east. SCT has vast amounts of land eastward to do that. That section I AM against can be generally described as from the southwestern boundary of THU 1906 running southwardly through SS#6 then continuing up to Blackberry Hill ridge. The rest of this letter gives relevant reasons for not putting section there. Please look over the maps I drew on pages 2, 3 and the comments I made about the very large dirt mass.

Additional Info. on Dirt Mass, and regular text of Letter continues on page 4.

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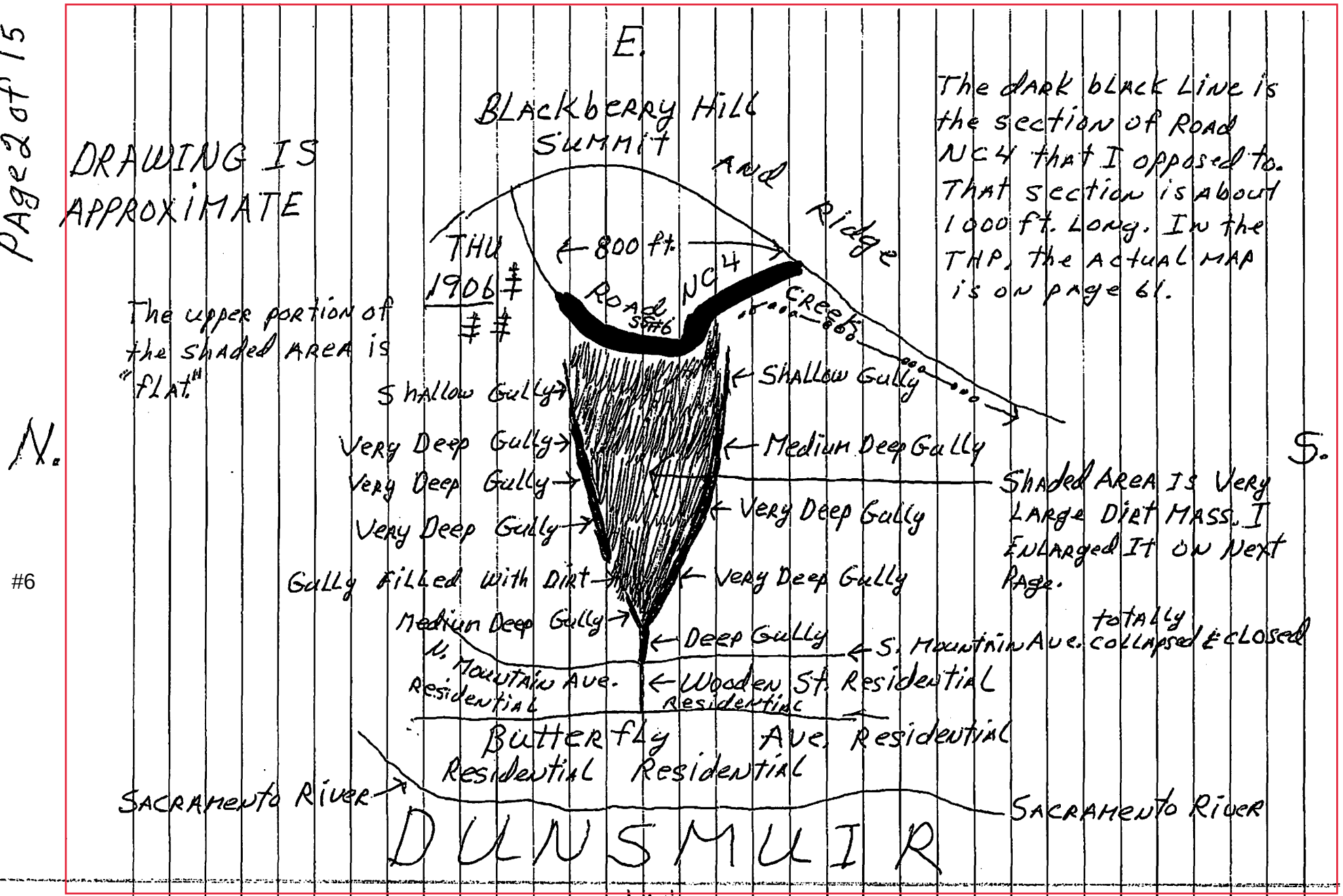
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BLACKBERRY HILL
SUMMIT
AND
RIDGE
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APPROXIMATE
THU
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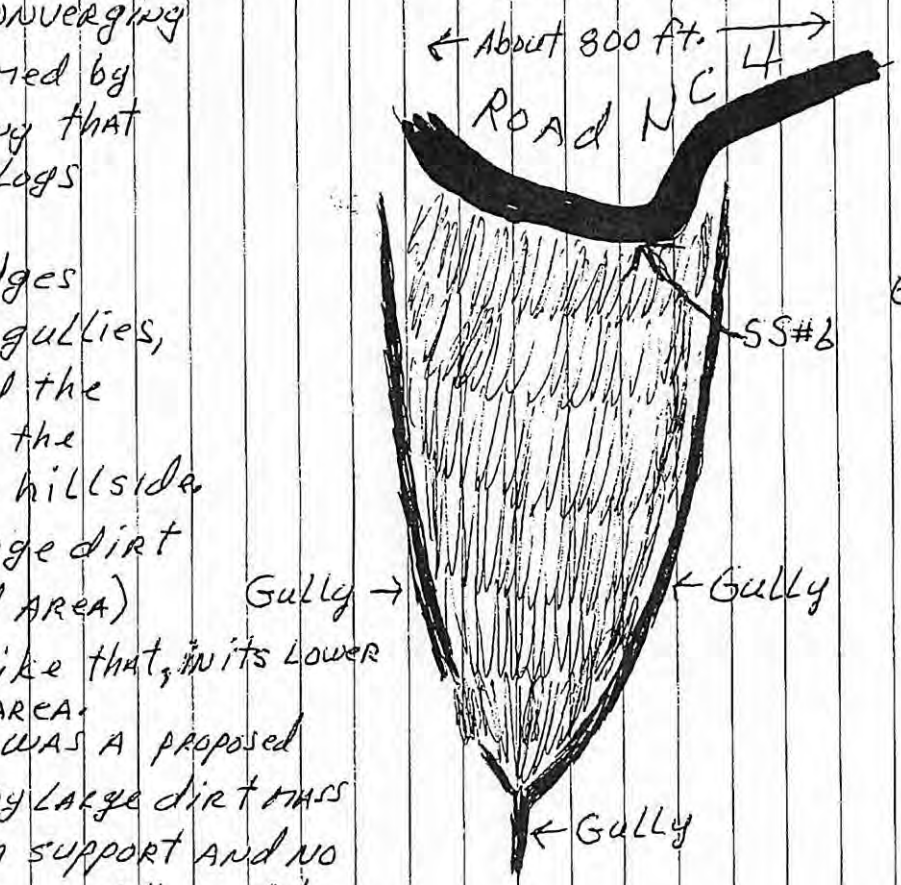
‡ #
← 800 ft. →
ROAD 5mi6
NC 4
CREEK
The upper portion of the shaded AREA is "flat."
N.
S.
Shallow Gully →
Very Deep Gully →
Very Deep Gully →
Very Deep Gully →
#6
Gully Filled with Dirt →
Medium Deep Gully →
← Shallow Gully
← Medium Deep Gully
← Very Deep Gully
← Very Deep Gully
← Deep Gully
Shaded AREA IS Very LARGE DIRT MASS. I ENLARGED IT ON NEXT PAGE.
totally collapsed & closed
← S. Mountain Ave.
N. Mountain Ave. Residential
← Wooden St. Residential
Residential
Butterfly Ave. Residential
Residential Residential
SACRAMENTO RIVER →
SACRAMENTO RIVER
DUNSMUIR
W.
The dark black line is the section of Road NC4 that I opposed to. That section is about 1000 ft. long. In the THP, the actual MAP is on page 61.

DRAWING IS APPROXIMATE

1. The 2 gullies converging to 1 were formed by old-time Logging that justed pulled Logs downhill.
2. This Left ridges between the gullies, And isolated the ridges from the rest of the hillside.
3. That very Large dirt MASS (shaded AREA) is A Ridge Like that, in its Lower AND middle AREA.
4. Before there WAS A proposed NC4, the very Large dirt MASS had No bottom support AND NO side support on either side
4½. The upper portion of the shaded AREA is more FLAT, AND is not A Ridge.



5. The dirt MASS just SAT on the steep, steep slope with its only connection to other dirt being the bedrock/pre bedrock below it.
6. That was bad enough, but now NC 4 will cut the top support off of it, too, with the horizontal cut!
7. When it RAINS for MANY days in A ROW, of course, WATER comes down the LARGE gullies, but, ALSO, from looking AT it from High School Road, WATER begins flowing in SMALL gullies NEAR the top of the SHADED AREA.
8. GO TO NEXT page

1. Additional Info. on Dirt Mass. With the old-style logging, who knows what fissures and weak points are in that dirt mass. The small gullies mentioned earlier may really be old fissures that have sunk over time and now appear to be gullies. My point is that no one knows these things – there are many unknowns – not even experts know for sure. Since there are humans below the dirt mass, you should bend over backwards not to do anything that could harm them. Please look at the creek about 300 ft. from SS#6, and remember small gullies of water I see in the dirt mass after a heavy rain; add to that there are actually 4 cottonwood trees growing where the bottom of the gullys converge on Wooden St, and the seepage all up and down N. Mountain Ave. – even the RPF said this is a wet area. Steep slopes + lots of water = Landslide area. Average rainfall in Dunsmuir is 60 inches annually. 60 inches, that's a lot! The cut in the hillside especially around SS#6 will be deep. No one, not even experts know the safe distance above the dirt mass to put the road. The reason is there are too many variables – I will mention a lot more. There are humans below. We should err on the side of caution – not power, ego, or money. That section of road should not be there; it belongs to the east, not over a residential area.

#6

I am able to help you get a clear satellite image of the gullies/dirt mass over the phone on your computer by you rotating and tilting. They can also be seen from high school road, but because of the sun and trees, the time and location to view is critical – I know how.

Landslides.

2. According to Siskiyou County General Plan, many Landslides have occurred in populated areas (see page #7 of this letter). Also, senior county planner Rachel Jeeeb (maybe Jaeeb) looked up Landslides around Butterfly; she said there were 3 known Landslides within ¼ to ½ mile of Butterfly. Her # is 841-2100.

Butterfly used to be called North Hilltop, and there was a road on the steep hillside that connected to South Hilltop. That connecting road partially collapsed, and the city permanently closed it.

#6 It was too steep a hillside to rebuild or even repair. A Landslide collapsed it. Now there is just a trail there. That steep slope is on Blackberry Hill.

The following is not related to what I just described. Please look at my map on page 2 in the lower right quadrant is a road called (South) Mountain Ave. It ~~is~~ was directly below the SS #6 area (about 1000 ft. below it). There was so much debris that the city permanently closed it, too. Page 8 is the old Assessor's parcel map. Not a trace of the road remains. Blackberry Hill hillside completely covered it.

My point in the examples is the incredible steepness of the lower and middle slope of Blackberry Hill. So I asked a RPF to put a clinometer on it - 80% slope were his exact words! The measurement was taken in Bastiani's driveway on Woodrow St.

Page 6 of 15

2. Landslides (continued)
The cumulative effects of a very steep slope (55%), 60 inches annual rainfall, a wet hillside to begin with, a very large dirt mass with no support at the bottom or sides, 3 known Land-slides occurring ½ mile, what it said in the
#6 General Plan, past old-style logging tearing up the hillside, the unknowns, and most of all, a residential area below would make a reasonable person using common sense concerned!
Remember Oso, Washington, 2014, 43 people were killed in a massive Landslide
Here's 1 more thing. If there were a massive Landslide, that hillside is so steep the inertia would carry the whole mess (liquid) into the Sacramento River. Butterfly is right next to it.

3. Visual. The western slope and Ridge of Blackberry Hill is the main viewshed of downtown Dunsmuir. Our viewshed is one of the most beautiful in the world in mountainous, beautiful spirituality. I can not see many firs, pines, or cedars in that section. Also, the general inaccessibility of the mountains has been the main deterrent to fires - no people, no fires. If that road is
#17 built, it will be a draw to dirtbikers, campers etc. - there's the real fire danger. Gates won't keep them out, and who is going to patrol that vast area? If that section were put east of the summit someplace, there would seem to still be fire surpression roads in that area like the switch-back and spur and landing in the 1906.

Siskiyou County General Plan Page 7 of 15

3. To compare two or more characteristics to determine certain relationships where compound effects may need to be considered. This type of service will be useful in both general planning and project planning on a case by case basis.

4. To provide a comparison of each or several characteristics with the present land use pattern and arrangement of public and community services.

The following provides a summary of the information provided on each map. Maps 1 through 8 represent basic physical characteristics, whereas Maps 9 through 12 show resources and cultural features. It is important to remember that Table 4 indicates the actual numerical value associated with the mapped tone of each characteristic. The mapped tones are qualitative judgments as to the development constraints of areas in the county; whereas the numerical values depicted in Table 4 are the quantitative judgments associated with the mapped tones.

4. Base Map (Map 13) - Each overlay map is to be superimposed over the Siskiyou County Base Map. The base map identifies the specific area of County jurisdiction in white. Areas under the control of Federal and State agencies and the nine incorporated cities are shown in pattern symbols. Major roads are also shown and are useful for reference purposes.

Map 1. Geologic Hazard - Landslide areas and fault lines are shown in this map. Existing, identified slides are indicated in a high constraint tone (60% screen), unless geologic field investigation indicates otherwise. Potential slide areas or suspected slides are shown in a moderate constraint tone (30% screen). Four principal areas are identified slide areas. The Dunsmuir area has a number of slides in close proximity to existing population concentrations. Other slide areas have been identified in the Scott Valley area, a large area extending from the vicinity of Hilt to the Klamath River and, finally, along Indian Creek near Happy Camp.

Fault lines are shown as thin black lines for identification only. Current and historic seismic activity has not been a problem and development proposals near fault lines may not require special treatment. Most faults are indicated in eastern Siskiyou County away from population concentration.[2]

Map 2. Soils: Erosion Hazard: Areas with soils tending to erode heavily when disturbed by development are shown in a moderate constraint tone (30% screen). This includes soil subject to both water and wind induced erosion. Water induced erosion potential is associated with high rainfall

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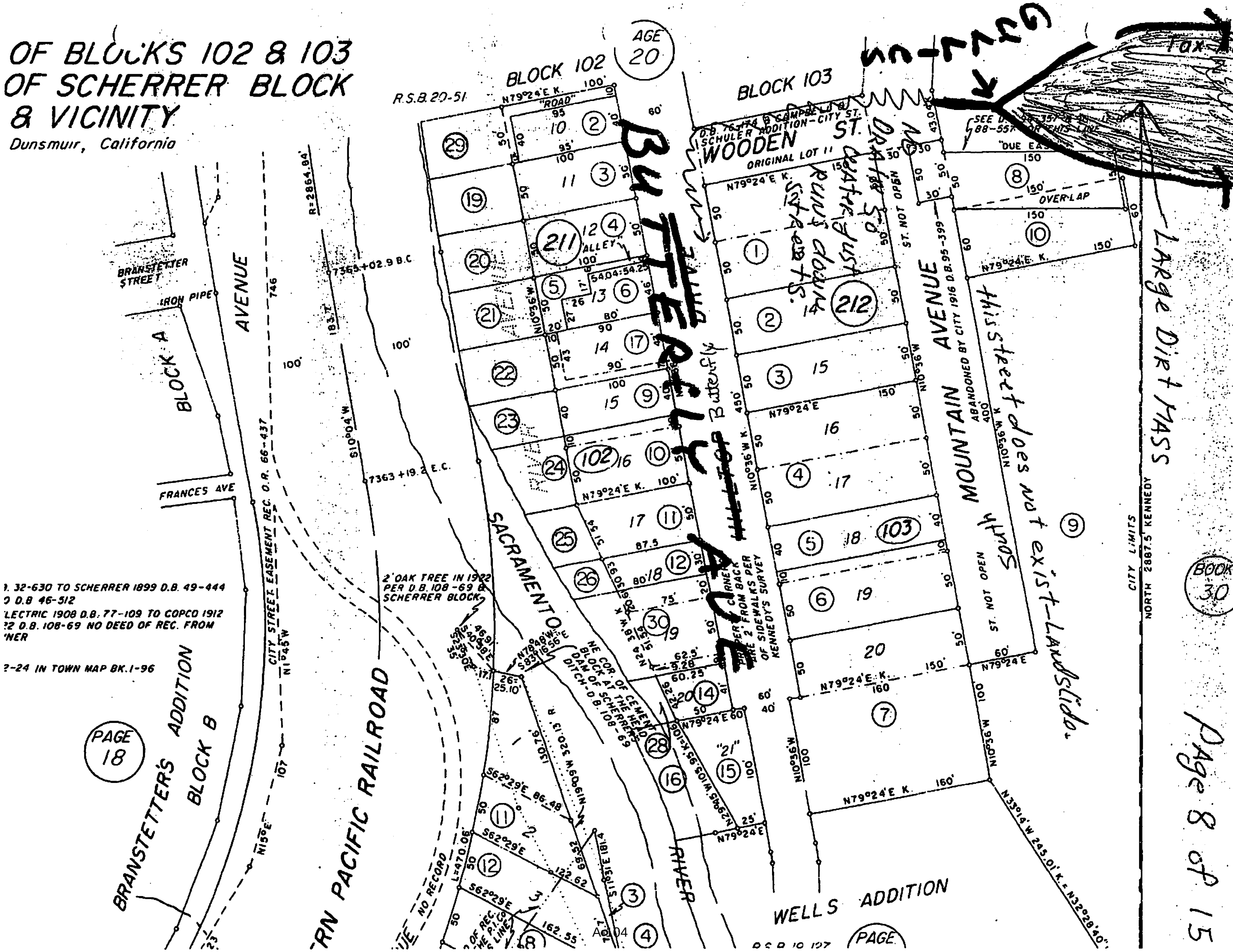
2 A possible relationshop exists between the identified slide areas and older fault lines in the central and western parts of the county. This is discussed further in the Technical Report.


OF BLOCKS 102 & 103
OF SCHERRER BLOCK
& VICINITY
Dunsmuir, California
BLOCK 102
BLOCK 103
PAGE 20
WOODEN ST.
BUTTERFLY AVE
Butterfly
AVENUE
MOUNTAIN AVENUE
ABANDONED BY CITY 1916 D.B. 95-399
ST. NOT OPEN
SACRAMENTO
RIVER
BLOCK A
BLOCK B
BRANSTETTER STREET
FRANCES AVE
BRANSTETTER'S ADDITION
PACIFIC RAILROAD
WELLS ADDITION
CITY LIMITS
PAGE 18
BOOK 30
ORIGINAL LOT 11
OVER-LAP
DUE EAST
CITY STREET EASEMENT REC. O.R. 66-437
2' OAK TREE IN 1922 PER D.B. 108-69 & SCHERRER BLOCK
Gully
Large Dirt MASS
this street does not exist-Landslide.
South
Drain so water just runs down street.
Page 8 of 15

4. Notice. I'm a veteran of Vietnam and put my life on the line many times in our Assault Helicopter Company for Freedom and Democratic Principles. I'm sure all the rules of Notice were fulfilled in the Blackberry THP because the RPF is a good and honest man. But the reality of THP's in general seems to be that most people don't even become aware of them, Let alone, understand them or how to comment until Late in the process. THP's are complicated and controversial. People are now

#5 up against the clock, become confused, get discusted, and many just give up. For example, 3 days ago, a man came down the trail (mentioned earlier - the one that partially collapsed) and told me how frustrated he was and asked how to comment. He is from Blackberry Hill!

Instead of complaining, here's a really good idea. With Covid, government agencies are extending timelines. Forest Management knows the scenario described above, 100 times better than I do. Surely, it must have occurred to someone up high in Forest Practice in the whole state to do something about extending Public comment beyond the normal review process extensions to help the Public. The Blackberry THP was right in the middle of Covid so maybe you have authority to extend it in that way. People are now learning about the Plan. For once, the people's voice could be completely heard because of Covid. I plead with you to do that. Again, imagine, at least once, the Public Comment working as it's supposed to. As a vet., I'm elated.

5. Low Income and Minority Neighborhoods. I Love America because we can speak the Truth even if it's sad or ugly. I grew up on Butterfly and spent most of my life here. I know and all the old-timers know facilities and practices that nobody wanted in their neighborhoods were put on or close to Butterfly because it's hard for us to fight back.

For example, when I was a kid, the city put the city barn and shop right across the street from us, even though it is a residential neighborhood. All the heavy equipment, noise, and chemicals were our neighbors. The old mortuary was across from Butterfly. The flood retaining wall at the north end has never been heightened so it floods very badly - the whole street - about every 15 years. The drainage above Butterfly on Mountain Ave. has never been fixed in 100 years! The gully in the drawing empty's right down Wooden St. The city never put a drain for it. I have to sandbag. There are 100 more examples.

The people of Butterfly and Blackberry Hill are the best. I wish the things nobody else wants were not forced on us. Even a forester involved in THP's said flatly that NO ONE WANTS A Logging road in their back yard. While we were growing up my friends were other black Amer and Mexican Americans. (We later were in Vietnam.) We suffered discrimination a lot; just the names we were called, I won't repeat, even. You may not want to know about all this, but we lived it. At least, now there is help.

6. Slope Stability and Geology Report.
Apparently, the geologist made a report. I have not read it. After talking with him, I think he is saying basically that the building OR use of that section of logging road will have no significant effect on the stability of that dirt mass. Further, I think he is saying that the portion of the dirt mass he looked at appears stable. If this is not ~~or~~ correct, I apologize. But, since I can not read it, I'll proceed based on the assumption that the above is what he said. The above may be what you at CALFIRE are thinking anyway since you recommended approval.

#6 I totally disagree. Respectfully, to the geologist, I also disagree with the methodology many "scientists" use for their conclusions. The following is hard to verbalize and requires you at Calfire to "think outside the box." I am not saying the geologist's methodology is wrong because I do not know what it is. Many scientist get so lost in their credentials, education, and jobs that they can prove anything even if it is totally wrong. They can write a report that the sun has stopped shining, "proving" this by all kinds of statistics and rationalizations, signing the report, and then being totally surprised by just looking up, using common sense, and see the sun is still shining.
Again, I am not saying your geologist does this. But pure science is getting harder and harder to find generally because of pressure, money, job security, bias, virtual reality and lack of common sense.

6. Slope Stability And Geology Report (continued)
You At Calfire MAY be thinking, "We have a Geology Report! Michael Bush is not a Geologist, and the Report carries a lot more weight than his opinions!" If that thought crossed your mind, I'll answer it below.

#6 All science, true science, is based on common sense And morality. Einstein learned that Lesson the hard way. His mind went into theorectical physics so deeply that he became the forefather of the Atomic bomb. When common sense would have told him that men will use his Knowledge for war; Leave it Alone. Einstein would have been a lot happier praying to God And working the Land than going to college; he would have been happier using common sense And morality than getting college degrees.
I AM An American And My opinion counts just As much As A Geology Report. I use prayer, common sense And morality As my methodology. Scientifically speaking there are so many unknowns And variables in that dirt mass. Unknowns And variables are A significant factors to take very seriously when human Life is concerned. For example, no one knows the make up of the prebedrock And bedrock that are the only thing holding up that dirt mass. Are there prominences, out-of-sight protrusions or depressions in the bedrock, Underground water movement, etc.? There are many more.

6. Slope Stability and Geology Report (continued)

I guess the Public can not come to your final determination meeting. So I answer here 1 more question that may come up. Someone from Calfire may think or say, "the geologist has to base his decision on what he knowns, not on the ~~presence~~ presence of unknowns." #6

Here's the short answer: unknowns and variables are real; the mere fact that they exist makes them a factor to include in a conclusion especially where human life is concerned. Heres what I would do if I were a geologist. First, prayer and fasting to ask GOD'S guidance; His mind is infinite, mine is finite; second, I would gather ALL the facts, including all the facts in this Letter; third, I would read ALL the Public Comment Letters and Ask about phone calls; fourth, I would physically ~~to~~ go to the Location; fifth I would use my common sense, morality, and education in geology to make a preliminary conclusion; sixth, I would be aware of my biases, peer pressures, ego and throw them away; seventh, I would factor in the unknowns and variables, giving them due weight; eighth, I would modify my preliminary conclusion; ninth, I would consider if human life were involved, even if the dangers were very remote. If there were a danger, I would find an alternative, and bend over backward for people's safety; tenth, I would pray again and write the report with my conclusion or Resign. I would be a rich geologist in morality, but, maybe, poor in money - that's OK.

7. Rolling Rock Hazard. In Table 5 on page 52 of the PLAN it says that. Here's what it doesn't say:
If a large rock/boulder gets into one of those steep long gullies, it can not get out - the sides are about 15 feet + high. Inertia, as it rolls further and further down the gully, will make it incredibly fast-moving when it reaches the bottom. THAT MAIN GULLY IN MY DRAWING IS POINTED DIRECTLY, I ~~MEAN~~, MEAN DIRECTLY AT MY BACK DOOR! The gully is 75 feet above my back door. Now and as the section on SS#6 gets older and deteriorates, I will always have to live with that fear.

#6

8. Property Value. Do you know what living below a main logging road will do to my property values? Apparently not, you recommended ~~APPROV~~ APPROVAL.

#18

9. Fire Suppression. Even if that section were not built there, you would still have NC4 in THU 1906 with its Landing, and the switchback and its Landings close by. There are few timber trees where that section with SS#6 would have run. You would also have the relocated section or the new construction or rebuilt road whatever you think for fire suppression.

#8

10. I am 75 years old. I spent 2 months (when I found out about the THP) reading, researching, informing, calling and most of all praying. Please read it over very carefully.

II. CONCLUSION: It is the SAME AS the PARAGRAPH - the first PART - ON PAGE 1.

I'LL close by ASKING you to open your HEART AND READ the following:

If there were A hospital OR school below the PROPOSED SECTION of ROAD, the public outcry would be so great that the section would not be built there. Why ARE we, the Residents, ANY LESS important?

Signed,
July 7, 2021 Michael Bush

FAX COVER PAGE

DATE: July 7, 2021

TO: Forest Practice Program Manager, Redding

FAX: 530 224 4841

FROM: Michael Bash

SUBJECT: Blackberry Timber Harvesting Plan #2-21-00026SIS, Public Comment

PAGES: 16 pages including cover sheet

Public Comment ID: 21PC-000000488
Comment Received Date: 7/7/2021
Comment for Plan Number: 2-21-00026SIS
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response:

Comment:
See uploaded document

21PC-000000489 2-21-00026-SIS

2nd Public Comment Letter PAge 1 of 3

July 8, 2021

#46

To Forest Management, Redding Airport Road, Redding, CA 96002

From: Michael Bush
6040 Butterfly Ave Dunsmuir, CA 96025

Re: Blackberry Hill THP, Public comment

Reviewed by: Dist by: Dist. Date: RU PS FG TO WQ TLO RCH LTO NPF DMG BOE OTHER: FPS Status: SKU FELLER LOC

Dear Sir:

#6 I have lived on Butterfly Ave. all my life. Seismic tremors do occur here often. Since Butterfly is right next to the river, the street itself ~~is~~ is on top of water so it feels more swaying that jolting. But up where SS #6 is, many people who actually live on the mountain say they can definitely feel them (over the years)
Earthquakes can move or shift bedrock and that section SS#6 road will be built into bedrock. Really, with that and the large dirt mass below, we could have a really bid landslide right into Butterfly and the Sacramento River. Mt. Shasta is so close. The bedrock cleavage of that road could be the ~~bea~~ breakage line if an earthquake occurs.

RECEIVED
JUL 08 2021
REDDING
FOREST PRACTICE

PAGE 2 of 3

BLACKBERRY THP Public Comment (continued

#6

CONCLUSION. The following is written in a respectful way to Forest Management, Redding. It sounds dramatic because it is so hard to believe. It has recommended for approval a section of Road 40N64; I described that section in my first public comment Letter of July 7, 2021 - the SS#6 section on Blackberry Hillside That SS#6 section:

a) is directly above a residential neighborhood;
b) is in the main viewshed of downtown Dunsmuir;
c) has steep slopes below it
d) is in an area with 60 inches of annual rainfall;
e) is within ½ mile of 3 previous Landslides;
f) is ~~in~~ next to Dunsmuir, a known Landslide area - residential Landslide area - as stated in the Siskiyou County General Plan (Geohazard);
g) is unknown (the building of it) by the vast majority of Dunsmuir;
h) is about 6 miles from the lower slopes of Mt. Shasta, a volcano, seismic problems;
i) is going to be cut deeply into the hillside;
j) is about 1000 ft. long;
k) is a main logging road;
l) was heavily logged by old-styled logging (the whole hillside);
m) has very long, deep gullies below pointed directly at residences - Rolling Rock hazards
n) is above the main neighborhood in Dunsmuir that has always been known as low income and minority so things no one else wants are put here - the people can not fight the Power;
o) will be an inducement to access that whole area up there by dirt bikers and campers etc. - that's the real fire hazard for the future

Blackberry THP Public Comment (continued)

p) has a very large dirt mass below it with no bottom or sides (because of the massive gullies) and just sits on that steep slope only being held by the bedrock below it; #6

q) will cut off the top of that dirt mass;

r) is ~~bet~~ above 2 city streets that have been closed for years, 1 because of a landslide there on it, and the other has been completely (no sign of the road at all [South Mountain Ave]) covered by falling rocks and dirt from the hillside;

s) will be there "forever."

t) with the logging truck traffic will make so much NOISE for all Dunsmuir #11

u) could be put to the east of Blackberry Hill summit, or another road used to transport the logs;

v) has very few timber trees on it;

w) Public Comment closes in 2 hours and I'm running out of alphabet so

x) IS A BAD IDEA!!

I have about 1½ hours before public Comment closes so

y) [redacted] is on a hillside (Blackberry, of course) that is a wet area, as explained in my previous letter. For example, there is an actual creek at the southern ~~right~~ ridge beginning about 200 ft. from SS #6. #6

z) People are just beginning to learn about the Blackberry THP and its many parts. People say this is always the way it goes - when people finally are ready to comment - it CLOSES - even with covid. You are missing a Lot of Public Comment

Sincerely, Michael Bush

FAX COVER PAGE

DATE: July 8, 2021 3:45 pM

TO: Redding
Forest Management Program Manager

FAX: 530-224-4841

FROM: Michael Bush

SUBJECT: 2nd Letter
Blackberry THP Public Comment

PAGES: 4 pages including cover sheet

Japp, Jeannie@CALFIRE

Reviewed by: 640
Dist. by: 07-19-21
Dist. Date:
RG ___ PS
FG ___ TO
WQ ___ TLO
ARCH LTO
RPF DMG
INSP BOE
OTHER: ___
FPS ___
Status: LOC

SKU

Feller

From: Bobby Steger <bigsursun6@gmail.com>
Sent: Monday, July 19, 2021 7:29 AM
To: Redding Public Comment@CALFIRE
Subject: Dunsmuir

2-21-000026 SIS

Warning: this message is from an external user and should be treated with caution.

#9

Hi Cal Fire,

Thanks for your work this year and every year. I am this year a south bound PCT hiker of the California section. For along time Dunsmuir has been a favorite town of mine in California. While using it as a resupply recently I was dismayed to hear that there is a proposed logging road that will penetrate the hill view from town. I don't think that's a appropriate idea.

Thanks for receiving this, Bobby Steger.

RECEIVED
JUL 19 2021
REDDING
FOREST PRACTICE

Public Comment ID: 21PC-000000494
Comment Received Date: 7/19/2021
Comment for Plan Number: 2-21-00026SIS
County: Siskiyou
Closest City: Dunsmuir
Email to Notify for Official Response: bigsursun6@gmail.com

Comment:
See uploaded document

California
Department of
Conservation
California Geological Survey

Gavin Newsom, Governor
David Shabazian, Director

CGS c/o CA Department of Forestry
6105 Airport Road, Redding, CA 96002
conservation.ca.gov

MEMORANDUM

DATE: June 24, 2021

TO: Matthew Reischman
Acting Deputy Director for Resources Management
California Department of Forestry and Fire Protection

FROM: Christopher Gryszan, Engineering Geologist
Department of Conservation

SUBJECT: Focused Engineering Geologic Review-Timber Harvest Plan (THP) for THP 2-21-00026-SIS [Blackberry THP]

Timber/Timberland Owner:
Shasta Cascade Timberlands, LLC (SCT)

County: Siskiyou

Quadrangle: Dunsmuir and Girard Ridge 7.5' USGS Quadrangles

CALWATER 2.2 Planning Watershed:
Upper Soda Springs (5525.210102)
Lower Soda Creek (5525.210202)
Middle Soda Creek (5525.210201)

Silviculture:
Seed Tree Seed Step (85 ac)
Selection (8 ac)
Commercial Thinning (228 ac)
Alternative (108 ac)
Road Right of Way (32 ac)

Logging Method:
Tractor, including end/long lining; rubber-tired skidder, forwarder, Fellerbuncher and Shovel yarding, Cable, Including ground lead, high lead and skyline

Date of Inspection: June 18, 2021

Participants-Affiliation:
Jim Ostrowski, RPF
Peter Feller, CAL FIRE
Christopher Gryszan, CGS

Legal Description:
Sections 24 and 36 T39N, R04W; 18, 19 and 30, T39N, R03W; MD B&M.

Slope:
Ranges from horizontal to as much as 100 percent. With most slopes between 40 and 50 percent

Area: 461 acres

Erosion Hazard Rating (EHR): Low, Moderate

Geologic Concerns: Proposed road construction SS-6 could adversely impact slope stability and downslope residences.

References:

CGS (California Geological Survey), 2021, *Engineering Geologic Review of Timber Harvest Plan (THP) 2-21-00026-SIS [Blackberry THP]*: California Geological Survey, dated December 28, 2021, 8 pgs., 4 figures.

Wagner, D.L. and Saucedo, G.J. (compilers), 1987, Geologic map of the Weed Quadrangle: California Geologic Survey, Regional Geologic Map Series, Map No. 4A, scale 1:250,000.

Aerial Photographs Reviewed:

41°12'24.62"N and 122°16'05.31"W. **Google Earth.** June 10, 1993, December 31, 2004, July 8, 2017. Accessed June 17, 2021.

Background:

CGS conducted a pre-harvest inspection (PHI) on May 12, 13 and 18, 2021 to assess slope stability and general geology within the THP area (CGS, 2021). On June 16, 2021 Dunsmuir resident Mike Bush contacted CGS to discuss his concerns regarding the potential for timber operations (i.e. new road construction) that could impact slope stability above Wooden Avenue.

A focused PHI was conducted on June 18, 2021, to observe existing site conditions immediately upslope of Wooden Avenue, in the area where Mr. Bush expressed the most concern. This report summarizes CGS's observations of the focused PHI; please refer to the 2021 CGS PHI memo for the engineering geologic review of the entire THP area.

Review Team Questions:

None.

Observations:

The slopes immediately upslope of Wooden Avenue were evaluated and consist of two (2) coalescing swales located below a break in slope that separates steep slopes (60 to 70 percent) above from very steep (75 to 85 percent) slopes below (Figure 1). The swales measure approximately 500 to 600 feet in length, 20 to 40 feet wide, 5 to 15 feet deep, with V- to U-shaped cross sections. Signs of recent slope instability (i.e. shallow translational slides) were not observed. However, ground disturbance associated with past skidding operations down the thalweg of the swales appears to have altered the natural slope morphology and placed additional fill in the swales that could be entrained by concentrated flows.

Vegetation along the slopes consists of a moderately dense 12 -to 24-inch diameter at breast height (DBH) mixed conifer and Oak canopy. Most of the conifers display near vertical boles, indicative of stable slope conditions during their lifetimes. Soils generally consist of 2 to 4 feet of silty sands (SM), with gravels and cobbles, mantled over gabbroic bedrock (Ogb) that outcrops in many locations. Signs of dormant instability, including bench-step to hummocky topography were not observed.

Timber harvest operations are not proposed immediately upslope of Wooden Avenue. However, a segment of new road construction along steep slopes (SS-6) is located approximately 400 feet above the break in slope, about 1,250 feet upslope of Wooden Avenue (Figure 1). To mitigate the potential for adverse impacts to slope stability and concentrated runoff down the swales, this segment of road will be constructed with a full bench prism, utilizing an excavator, and will be adequately drained by outsloping and installing appropriately-spaced drainage facilities in accordance with the Forest Practice Rules. Based on 1) the distance above the break in slope and 2) the proposed construction methods, it appears unlikely that timber operations will significantly adversely impact slope stability and runoff above Wooden Avenue. Thus, no additional recommendations outside the requirements of the Forest Practice Rules were made.

Original signed by

Christopher J. Gryszan, CEG 2640
Engineering Geologist
Redding, California

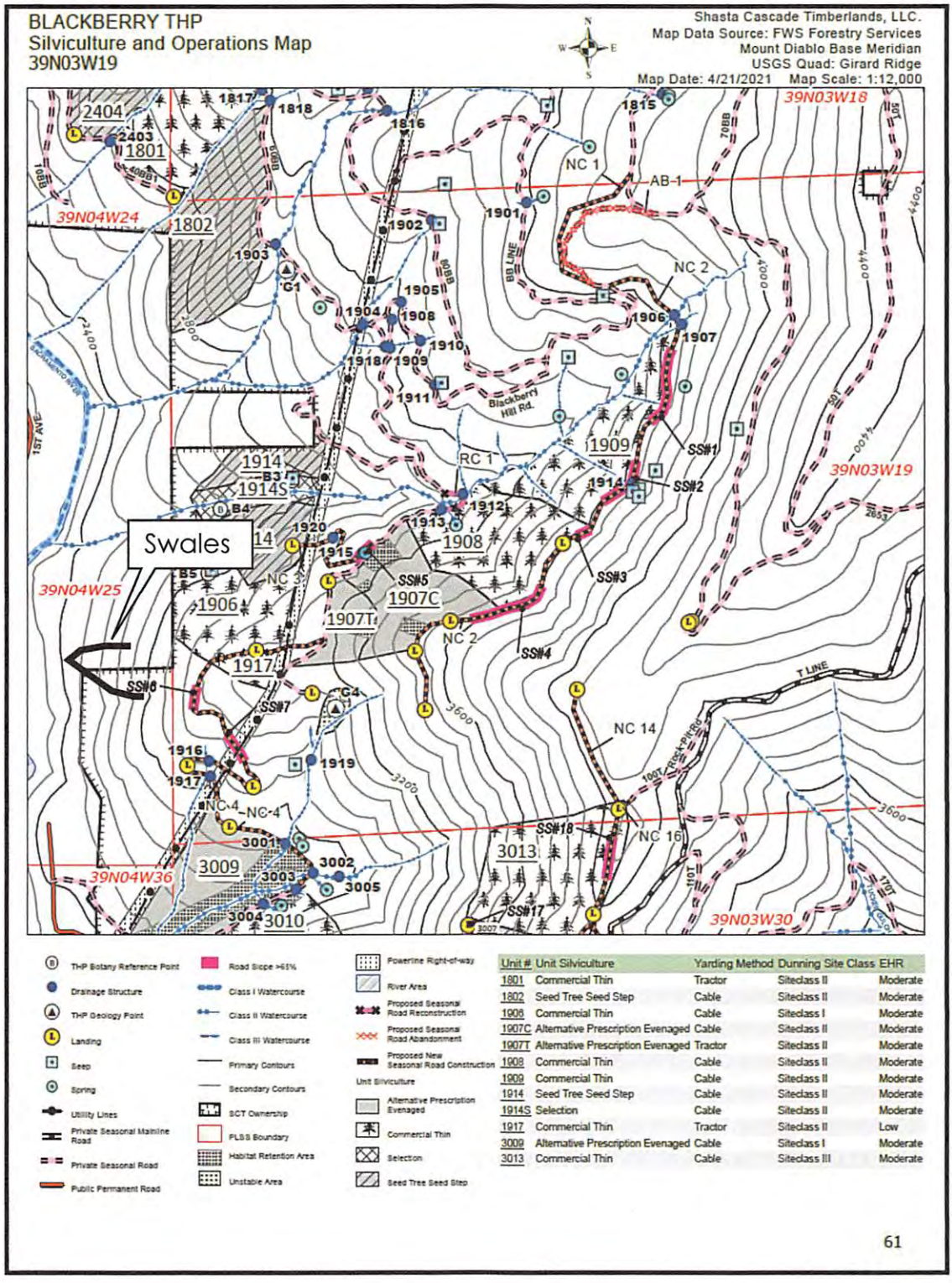
Concur:

June 24, 2021 *Original signed by*

Date

Donald N. Lindsay, CEG 2323
Senior Engineering Geologist
Redding, California

Attachments: Figure 1: CGS Reference Point Map



Unit #	Unit Silviculture	Yarding Method	Dunning Site Class	EHR
1801	Commercial Thin	Tractor	Siteclass II	Moderate
1802	Seed Tree Seed Step	Cable	Siteclass II	Moderate
1906	Commercial Thin	Cable	Siteclass I	Moderate
1907C	Alternative Prescription Evenaged	Cable	Siteclass II	Moderate
1907T	Alternative Prescription Evenaged	Tractor	Siteclass II	Moderate
1908	Commercial Thin	Cable	Siteclass II	Moderate
1909	Commercial Thin	Cable	Siteclass II	Moderate
1914	Seed Tree Seed Step	Cable	Siteclass II	Moderate
1914S	Selection	Cable	Siteclass II	Moderate
1917	Commercial Thin	Tractor	Siteclass II	Low
3009	Alternative Prescription Evenaged	Cable	Siteclass I	Moderate
3013	Commercial Thin	Cable	Siteclass III	Moderate

Explanation

Swales

CGS Reference Point

Date: 6/24/2021	CGS Reference Point Map	Figure:
Scale: 1" = 1,320'	To Accompany	1
Approved By: C. Gryszan, CGS	Focused Engineering Geologic Review of THP 2-21-00026-SIS	