Laura Bynum
Siskiyou
County Clerk/Registrar of Voters
311 4th St., Rm. 201
Yreka, CA 96097
(530) 842-8084

Public

Receipt No.: RPT20240000000299

Finalization No.: 2024003250

Cashier: 29

Register: CLK-044

Date/Time: 05/06/2024 02:57 PM

Description	Fee
NOTICE OF EXEMPTION	
Filing Time:	02:57 PM
Filing Total:	$50.00
Filing Fee:	$50.00
Total Amount Due:	$50.00
Total Paid	
Cash Tendered:	$50.00
Amount Due:	$0.00

THANK YOU

PLEASE KEEP FOR REFERENCE

NOTICES OF COMPLETION, NOTICES OF DETERMINATION, NOTICES OF AVAILABILITY AND NOTICES OF EXEMPTION

AFFIDAVIT OF POSTING

Pursuant to Public Resources Code e §21152C, the following Notice of Completion, Notice of Determination, Notice of Availability an/or Notice of Exemption, was posted on May 6, 2024 at the:

SISKIYOU COUNTY CLERK'S OFFICE
311 4TH ST., RM. 201 , YREKA, CA 96097

NOTICE OF EXEMPTION

for

MILLER MOUNTAIN FUEL REDUCTION PROJECT

I certify under penalty of perjury that the foregoing is true and correct.

DATED: May 6, 2024

RETURNED TO: SVRCD

DATED: _____

LAURA BYNUM , COUNTY CLERK

By:_____

Deputy

CALIFORNIA ENVIRONMENTAL FEE FORM

FILED
Siskiyou County
MAY 06 2024
LAURA BYNUM, CLERK
BY: _____ Deputy Clerk

On 05/06/2024 (Date), Shasta Valley RCD (Name) filed an application for development with the Yreka (Name of City). Before the application is accepted as complete for processing, fees in the following amount(s) must be deposited with the County Clerk.

☒	Clerk Processing Fee	$50.00
☐	Negative Declaration	$2354.75*
☐	EIR	$3271.00
☐	Categorically Exempt	$0.00
☐	Statutorily Exempt	$0.00
☐	Fee Exemption issued by the DFG	$0.00
☐	Other _____	$_____

No project shall be operative, vested or final until the required fee is paid. *Public Resources Code* §21089 (b)

On 05/06/2024 (Date), Shasta Valley RCD (Name) deposited $ 50.00,

with the Siskiyou County Clerk _____ (Attest).

Application No. N/A (To be completed when application is received for processing)

Receipt # 2024003250 47-05/06/2024-019

* If it is determined by Siskiyou County that the fee required for a Negative Declaration does not apply to your project a refund will be granted.

2019fee.form

State of California - Department of Fish and Wildlife

2024 ENVIRONMENTAL DOCUMENT FILING FEE CASH RECEIPT

DFW 753.5a (REV. 01/01/24) Previously DFG 753.5a

Print [redacted] Save

RECEIPT NUMBER:
47-05/06/2024-019

STATE CLEARINGHOUSE NUMBER *(If applicable)*

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY	LEADAGENCY EMAIL	DATE
SVRCD		05/06/2024

COUNTY/STATE AGENCY OF FILING	DOCUMENT NUMBER
SISKIYOU COUNTY	2024-47-019

PROJECT TITLE

MILLER MOUNTAIN FUEL REDUCTION PROJECT

PROJECT APPLICANT NAME	PROJECT APPLICANT EMAIL		PHONE NUMBER
SHASTA VALLEY RCD			
PROJECT APPLICANT ADDRESS	**CITY**	**STATE**	**ZIP CODE**
215 EXECUTIVE ST., SUITE A	YREKA	CA	96097

PROJECT APPLICANT *(Check appropriate box)*

☒ Local Public Agency ☐ School District ☐ Other Special District ☐ State Agency ☐ Private Entity

CHECK APPLICABLE FEES:

☐ Environmental Impact Report (EIR)	$ 4,051.25	$
☐ Mitigated/Negative Declaration (MND)(ND)	$ 2,916.75	$
☐ Certified Regulatory Program (CRP) document - payment due directly to CDFW	$ 1,377.25	$

☒ Exempt from fee

- ☒ Notice of Exemption (attach)
- ☐ CDFW No Effect Determination (attach)

☐ Fee previously paid (attach previously issued cash receipt copy)

☐ Water Right Application or Petition Fee (State Water Resources Control Board only)	$ 850.00	$
☒ County documentary handling fee	$ 50.00	$ 50.00
☐ Other		$

PAYMENT METHOD:

☒ Cash ☐ Credit ☐ Check ☐ Other **TOTAL RECEIVED** $ 50.00

SIGNATURE	AGENCY OF FILING PRINTED NAME AND TITLE
X	Dana Brooks Deputy Clerk

ORIGINAL - PROJECT APPLICANT COPY - CDFW/ASB COPY - LEAD AGENCY COPY - COUNTY CLERK DFW 753.5a (Rev. 01012024)

SHASTA VALLEY
RESOURCE CONSERVATION DISTRICT

Notice of Exemption

PROJECT TITLE	Miller Mountain Fuel Reduction Project		
PROJECT LOCATION	The project area is located on the eastern slopes of Miller Mountain and Goosenest Peak, west of Grass Lake, and along the Ball Mountain-Little Shasta Road. It is approximately 17 miles northeast of Weed, CA, in Siskiyou County. The property is currently owned by Acer Klamath Forests, LLC and managed by FWS Forestry Services California, LLC. T44N R3W Sections 4, 5, 7, 8, 17, 19, 20, 21, 28, 29, and 33; T45N R3W Sections 7, 8, 9, 14, 15, 16, 18, and 33; Mt. Diablo Base and Meridian,	**COUNTY**	Siskiyou
LEAD AGENCY	Shasta Valley Resource Conservation District (SVRCD)		
CONTACT	Dan Blessing, Shasta Valley RCD		
ADDRESS	215 Executive Ct., Suite A Yreka, CA 96097	**PHONE**	(805) 458-2684

PROJECT DESCRIPTION

The project area is characterized by mixed conifer stands, plantations composed of ponderosa pine and Douglas-fir ranging from 3 to 41 years old and isolated brush patches and rock outcroppings. The native mixed conifer stands are composed of ponderosa pine, sugar pine, white fir, Douglas-fir, and incense cedar. Elevations range from 4,290 to 6,420 feet with side slopes of 0-50%. The portion of the project covered by this document is entirely on Acer Klamath Forests property.

Water sources are few as the project area is generally on the east and north sides of Goosenest Peak, although there are a few seeps in the lower portion of the project area near the south end of Grass Lake. The north part of the project area contains a portion of Bull Meadows and a tributary to the Little Shasta River; however, these areas will be excluded from treatment. Wildlife is abundant and includes fisher, deer, elk, black bear, squirrels, and numerous birds. There are no known occurrences of Rare, Threatened, or Endangered plant or animal species within the treatment areas. Gray wolves are known to travel within the project vicinity and much of the project area is within the home range of the Whaleback Pack. There is one bald eagle occurrence (occupied nest) between 0.5 and 0.6 miles from the project treatment areas and the southern portion of the project is within the USGS quadrangle where there is an occurrence of prairie falcon. Bald eagles are listed as Endangered under CESA. Prairie falcons are on the CDFW watch list but are otherwise not a listed species.

The project intends to 1) improve forest health and resilience to severe wildfire, drought, disease, and pests, 2) reduce wildfire risk for nearby communities and infrastructure, 3) facilitate fire suppression operations, 4) increase long-term carbon capture and storage to ensure treated and adjacent forested areas remain net sinks of carbon and continue to provide an abundance of ecosystem and societal benefits.

Miller Mountain Fuel Reduction Project treatments include prescribed fire, mastication, thinning, pruning, and biomass removal. The treatment prescriptions will reduce hazardous fuel loads and horizontal and vertical fuel connectivity within the project footprint and facilitate future maintenance of these treatments. Fuel treatment width and prescriptions are designed to promote surface fire, limiting crown fires and spotting. Treatments will reduce fire behavior along main USFS roads to support future wildfire defense and prescribed fire opportunities.

Understory surface fuels will be treated with the objective to limit surface fire with flame lengths to four feet or less in order to facilitate direct suppression operations and reduce the risk of crown fire initiation. This will be done by reducing surface fuels to less than five tons per acre in the treatment areas.

The objective of ladder fuel treatments is to increase canopy base heights, creating a separation between surface fuels and canopy fuels of no less than six-feet and up ten-feet, dependent on-site specific conditions. Treatments will focus on the removal of young and/or suppressed advanced regeneration tree species less than 12-inch diameter at breast height, removing slash and jackpot accumulations, removing medium and large shrubs where they contribute to vertical and horizontal fuel continuity and removing lower branches from residual trees.

SHASTA VALLEY
RESOURCE CONSERVATION DISTRICT

Notice of Exemption

The objective of our canopy and mid-canopy fuel treatments is to increase horizontal spacing between the outer extents of live crowns (i.e., drip line) of residual trees to a distance of 28-32 feet. This treatment is expected to favorably alter fire behavior in a way that will reduce the likelihood of a running or active crown fire and limit aerial fuel ignitions to isolated torching.

EXEMPTION STATUS

- [x] Categorical Exemption — Type/Section: Class 4 §15304 (e) Minor Alterations to Land
- [ ] Statutory Exemption (state code section):
- [ ] Ministerial (§21080(b)(1); 15268)
- [ ] Declared Emergency (§21080(b)(3); 15269(a))
- [ ] Emergency Project (§21080(b)(4); 15269(b)(c))

REASONS PROJECT IS EXEMPT

Public Resources Code, Division 13, Chapter 6, Article 19, Section 15304 allows minor alteration of vegetation including fuel management activities to reduce the volume of flammable vegetation, provided the activities do not result in the taking of endangered, rare, or threatened plant/animal species, or cause significant erosion and sedimentation of surface waters. Minimal ground disturbance is expected from most of this project, although mastication of brush, slash, and small trees may affect the ground. A current CNDDB and USFWS search was conducted. The project as proposed will not have a negative impact upon any listed species of plant or animal with potential to be found within the project area. A current Archaeological records check was obtained. No sites were located within the project area. The archaeological survey reports were reviewed and approved by archaeologists at Sonoma State University under contract to CAL FIRE. Information Request letters were sent to parties on the current Native American Contact List for eastern Siskiyou County. This project as proposed is not expected to result in a significant impact on the environment. Documentation of the environmental review is kept on file at Shasta Valley RCD, 215 Executive Ct., Suite A, Yreka, CA 96097 – Attention Dan Blessing.

DATE RECEIVED FOR FILING

5/6/24

Rod Dowse, District Manager — Date
Shasta Valley Resource Conservation Distict

Shasta Valley Resource Conservation District
Environmental Review Report for an Exempt Project

Note: This report form is intended for use by Shasta Valley Resource Conservation District (SVRCD) staff to document a limited environmental impact analysis supporting the filing of a notice of exemption document for a proposed Ore-Cal RC&DC project. Although the project appears to fit within the descriptions for allowable categorical exemptions, this report presents SVRCD review for possible exceptions that would preclude finding the project to be categorically exempt as discussed in CEQA Guidelines Section 15300.2. This report will be filed with the CEQA administrative record for this project to document the environmental impact analysis conducted by FWS and approved by SVRCD.

Author:	John Kessler
Title:	Forest Program Manager, RPF #2494
Address:	1216 Fruit Growers Rd., Hilt CA 96044
Phone:	(530) 643-9232
Email:	jkessler@fwsforestry.com

Project Name:	Miller Mountain Fuel Reduction Project
Program Type:	Forest Health
Acres:	965 acres
Legal Location:	T44N R3W Sections 4, 5, 7, 8, 17, 19, 20, 21, 28, 29, and 33; T45N R3W Sections 7, 8, 9, 14, 15, 16, 18, and 33; Mt. Diablo Base and Meridian,

Name of USGS 7.5'Quad Map(s): Grass Lake, CA, Panther Rock, CA, and The Whaleback, CA

☒ Project Vicinity Map Attached ☒ Project Location Map Attached ☐ Photos Attached

Other Public Agency Review or Permit Required: Would the project result in:	**YES**	**NO**
Alterations to a watercourse (DFW - Lake and Stream Alteration Agreement)		X
Conversion of timberland (CAL FIRE - Conversion Permit or Exemption)		X
Demolition (Local Air District - Demolition Permit)		X
Soil disturbance over 1 acre (RWQCB - SWPPP)		X
Fill of possible wetlands (404 Permit - USACE)		X
Other:		X

Discuss any above-listed topic item checked Yes and consultation with agencies:

This project will result in a minor amount of soil disturbance due to mechanical mastication. However, given the one-time nature of these mechanical operations, soil disturbance will be minimized. All heavy equipment use will comply with the standards prescribed in the California Forest Practice Rules.

Project Description and Environmental Setting (describe the project activities, project site and its surroundings, its location, and the environmental setting): The project area is located on the eastern slopes of Miller Mountain and Goosenest Peak, west of Grass Lake, and along the Ball Mountain-Little Shasta Road. It is approximately 17 miles northeast of Weed, CA, in Siskiyou County. The property is currently owned by Acer Klamath Forests, LLC and managed by FWS Forestry Services California, LLC. It is part of a larger project that also includes treatment of lands owned by the Klamath National Forest.

The project area is characterized by mixed conifer stands, plantations composed of ponderosa pine and Douglas-fir ranging from 3 to 41 years old and isolated brush patches and rock outcroppings. The native mixed conifer stands are composed of ponderosa pine, sugar pine, white fir, Douglas-fir, and incense cedar. Elevations range from 4,290 to 6,420 feet with side slopes of 0-50%. The portion of the project covered by this document is entirely on Acer Klamath Forests property

Water sources are few as the project area is generally on the east and north sides of Goosenest Peak, although there are a few seeps in the lower portion of the project area near the south end of Grass Lake. The north part of the project area contains a portion of Bull Meadows and a tributary to the Little Shasta River; however, these areas will be excluded from treatment. Wildlife is abundant and includes fisher, deer, elk, black bear, squirrels, and numerous birds. There are no known occurrences of Rare, Threatened, or Endangered plant or animal species within the treatment areas. Gray wolves are known to travel within the project vicinity and much of the project area is within the home range of the Whaleback Pack. There is one

bald eagle occurrence (occupied nest) between 0.5 and 0.6 miles from the project treatment areas and the southern portion of the project is within the USGS quadrangle where there is an occurrence of prairie falcon. Bald eagles are listed as Endangered under CESA. Prairie falcons are on the CDFW watch list but are otherwise not a listed species.

The project intends to 1) improve forest health and resilience to severe wildfire, drought, disease, and pests, 2) reduce wildfire risk for nearby communities and infrastructure, 3) facilitate fire suppression operations, 4) increase long-term carbon capture and storage to ensure treated and adjacent forested areas remain net sinks of carbon and continue to provide an abundance of ecosystem and societal benefits.

Miller Mountain Fuel Reduction Project treatments include prescribed fire, mastication, thinning, pruning, and biomass removal. The treatment prescriptions will reduce hazardous fuel loads and horizontal and vertical fuel connectivity within the project footprint and facilitate future maintenance of these treatments. Fuel treatment width and prescriptions are designed to promote surface fire, limiting crown fires and spotting. Treatments will reduce fire behavior along main USFS roads to support future wildfire defense and prescribed fire opportunities.

Understory surface fuels will be treated with the objective to limit surface fire with flame lengths to four feet or less in order to facilitate direct suppression operations and reduce the risk of crown fire initiation. This will be done by reducing surface fuels to less than five tons per acre in the treatment areas.

The objective of ladder fuel treatments is to increase canopy base heights, creating a separation between surface fuels and canopy fuels of no less than six-feet and up ten-feet, dependent on-site specific conditions. Treatments will focus on the removal of young and/or suppressed advanced regeneration tree species less than 12-inch diameter at breast height, removing slash and jackpot accumulations, removing medium and large shrubs where they contribute to vertical and horizontal fuel continuity and removing lower branches from residual trees.

The objective of our canopy and mid-canopy fuel treatments is to increase horizontal spacing between the outer extents of live crowns (i.e., drip line) of residual trees to a distance of 28-32 feet. This treatment is expected to favorably alter fire behavior in a way that will reduce the likelihood of a running or active crown fire and limit aerial fuel ignitions to isolated torching.

Environmental Impact Analysis

Aesthetics

☐This topic does not apply to this project and was not evaluated further.

☒This topic could apply to this project, and results of the assessment are provided below:

The project is located in a remote area not visible from densely populated areas. A segment of the project area is visible from US 97, a portion of the Volcanic Scenic Highway system, which carries a fair amount of traffic. Forest Service Road 22 and a portion of the Ball Mountain – Little Shasta Road are in the center of the project and receive periodic recreational use. However, the mixed private and public ownership has resulted in managed natural and planted forest stands as part of the viewshed and those who use the roads see these conditions as normal. Therefore, no negative impacts to Aesthetics are expected from this project.

Agriculture and Forest Resources

☐ This topic does not apply to this project and was not evaluated further.

☒Yes ☐No Would any trees be felled? If yes, discuss protection of nesting birds, if necessary.

☐Yes ☒No Would the project convert any prime or unique farmland?

☐Yes ☒No Would the project result in the conversion of forest land or timberland to non-forest use?

☒This topic could apply to this project, and results of the assessment are provided below:

The entire project area on private land is located on "Timberland Production Zone" (TPZ) zoned land, in accordance with the Z'berg- Nejedly Forest Practice Act of 1973 and the Z'berg-Warren-Keene-Collier Forest Taxation Reform Act of 1976. The lands are managed for the "maximum sustained production of high-quality timber products… 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" and to encourage "the protection of immature trees and restricting the use of timberland to the production of timber products and compatible uses." The private timberlands in the project area have been primarily utilized for timber production for over the last 70 years. It is the timberland owner's intention to maintain the project area for timber production.

The goal of this project is to reduce hazardous fuel loads and horizontal/vertical fuel connectivity to prevent severe impacts to forest resources caused by wildfire. No healthy, mature, scenic trees will be removed.

Please see the Biological Resources discussion to see protections for nesting birds.

No negative impacts to Agriculture or Forest Resources are expected from this project.

Air Quality

☐This topic does not apply to this project and was not evaluated further.

☒Yes ☐No The local Air Quality Management District guidelines for dust abatement and other air quality concerns were reviewed for this project.

☒This topic could apply to this project, and results of the assessment are provided below:

According to the California Air Resources Board (CARB), the Siskiyou County Air Pollution Control District is currently designated within "attainment" of California's standards related to Particulate Pollution (PM 10 and PM 2.5) and Ozone (ppm). In 2021 Siskiyou County exceeded the state's 24-hour maximum allowable emission levels of PM 2.5, on 32 occurrences, due to wildfire. The proposed project is designed to prevent or reduce the spread of wildfires which could contribute to Siskiyou Counties' "attainment" status.

Treatment activities associated with the project are expected to be minimal. Hand treatments are expected to make essentially no impacts to air quality. Mastication will create a mat of biological material in front of machinery to minimize contact with the soil and minimize dust creation. Road traffic from operations is expected to be at a level to not require road surface maintenance measures. However, if the road surface does appear to be becoming compromised then road watering will begin immediately.

No negative impacts to Air Quality are expected from this project.

Biological Resources

This topic does not apply to this project and was not evaluated further.

☐Yes ☒No Will the project potentially effect biological resources?

☒Yes ☐No Was a current California Natural Diversity Database review completed? Results discussed below:

☐Yes ☒No Was a biological survey of the project area completed? Results discussed below:

☒This topic could apply to this project, and results of the assessment are provided below:

A query of the California Natural Diversity Data Base was conducted on April 21, 2023. Scoping was conducted within the Grass Lake, Panther Rock, and The Whaleback Quads, and the surrounding 12 quads to determine the potential occurrence of State or Federally listed plant and animal species and animal species of special concern within or directly adjacent to the project area. According to CNDDB, the following listed species are known to occur near the project area:

<u>BUMBLE BEE ASSESSMENT</u>

The range of the Frankin's bumble bee is limited to the Klamath Mountains of northern California and southern Oregon. The western bumble bee is known to occur though much of the western United States, southern Canada, and the Rocky Mountains. While outside of the current known range for western bumble bee, this project is within its historic range. Suckley's cuckoo bumble bee occurs within a portion of the range of the western bumble bee as it is a social parasite on that species. Suckley's bumble bee has rarely been found in California and its exact range is unknown due to its rarity. However, this project is in the presumed range of this species. The range of Crotch's bumble bee is generally the southern 2/3 of the state, and CNDDB's online mapping tool indicates that this project is outside of the range of this species.

Colony sites are often associated with rodent holes and intact grass clumps. The species generally pollinate in open meadows and other wet areas where a higher diversity/density of flowering plants exist. The project area does include Bull Meadows, but the meadow will be excluded from treatment.

Areas of suitable habitat for Franklin's, western, and Suckley's cuckoo bumble bee will not be affected as these areas are at very low priority for reducing hazardous forest fuels.

BALD EAGLE ASSESSMENT

Bald eagles are found throughout much of California where they are associated with large bodies of fish-bearing water, such as lakes, reservoirs, rivers, and bays. They nest in large conifers near foraging areas.

There is a known and active bald eagle nest more than ½ mile from the project treatment areas. This nest likely receives audio impacts from a nearby rock quarry, which has not had a demonstrable effect on this occurrence. The project is well outside of the buffer zone for this occurrence.

The project will not have a significant effect on this species.

GOLDEN EAGLE ASSESSMENT

Golden eagles are found throughout much of California where they are associated with large expanses of open habitat, such as grassland, oak savanna, chaparral, open woodland, agricultural areas, and open canyons, Nest sites include cliff ledges, rock outcrops and large conifers near foraging habitat. Although this species could occur in the project area, they have large home ranges and are generally associated with more open areas than what is found in or adjacent to the project area.

The project area contains potential habitat for the golden eagle. As stated in the project description no large, scenic, and/or mature trees will be removed which are potentially most likely to contain a nest site. If a nest is found during operations, then operations in the vicinity will cease until site specific protection measures can be developed.

GREAT GRAY OWL ASSESSMENT

The range of the species within California includes the Southern Cascades, Klamath and Sierra Nevada mountains. According to CDFW's RAREFIND site, there are no occurrences of this species within 30 miles of the project area. There is one treatment unit that is within ½ mile of a large meadow complex (Grass Lake). However, the project does not propose to modify any suitable nesting or roosting habitat for great gray owls.

The project will not adversely impact potential habitat for the great grey owl.

GREAT BLUE HERON ASSESSMENT

The great blue heron is fairly common year-round throughout most of California. They are associated with shallow estuaries, lakes, reservoirs, ponds, marshes, rivers, creeks and other fresh or saline wetlands, where they feed on a variety of fish and other aquatic and semi-aquatic organisms, and occasionally small mammals. They generally nest in colony's (rookeries) located in secluded groves of tall trees near foraging areas.

The project area does not contain suitable habitat for the great blue heron.

GREATER SANDHILL CRANE ASSESSMENT

The greater sandhill crane, which is listed as Threatened under CEQA, is a summer resident of northeastern California, including Siskiyou, Lassen, and Modoc Counties. They use wet meadows, shallow lakes, and fresh emergent habitats, and are known to use Grass Lake which is adjacent to this project area. There are no known nest trees for this species in the vicinity of this project and project operations will occur outside of the 300' buffer for this species.

This project will not adversely affect greater sandhill cranes.

NORTHERN GOSHAWK ASSESSMENT

The range of the species is throughout the forested and wooded regions of California. This species is generally associated with montane forested habitats and mixed conifer-hardwood stands. Nests are generally constructed in large conifers and occasionally hardwoods. Nests are generally constructed on large limbs against the bole of the tree, but may also be built on crooks, forks, and large platforms in conifers, and to a lesser extent, in hardwoods. The closest known occurrence (last updated 1989) is 2/3 mile away from the project.

The project area contains potential habitat for the northern goshawk. As stated in the project description no large, scenic, and/or mature trees will be removed which are potentially most likely to contain a nest site. If a nest is found during operations, then operations in the vicinity will cease until site specific protection measures can be developed.

NORTHERN SPOTTED OWL ASSESSMENT

The range of the northern spotted owl (NSO) in California is throughout the forested regions of western and central northern California. This species is associated with mature forested habitat and mixed conifer-hardwood stands generally at elevations below 6,000 feet. Nest stands are usually found at the lower third of slope, and contain large trees, with complex structure and high overhead canopy cover. Platforms, such as mistletoe brooms, and cavities in conifers and hardwoods are used for nesting.

NSO activity centers (ACs) SIS0284 and SIS0581 are located within 1.3 miles of the project area. Neither of these ACs are within ½ mile of the project and there are no known ACs within ¼ mile of any treatment area. This project will not change or downgrade any suitable habitat types and no nest stands will be treated.

The project area contains potential habitat for the Northern Spotted Owl. As stated in the project description no large, scenic, and/or mature trees will be removed which are potentially most likely to contain a nest site. Mistletoe clumps, witches' brooms, hardwoods, and other habitat structures will be retained to the extent possible. Since this project does not propose to remove overstory trees, no habitat changes are anticipated from the project.

The main disturbance concern from this project is noise disturbance from mechanical treatments during the February 15 to August 31 NSO breeding period. Therefore, based on the above, three spot check surveys to 0.25 miles are recommended in the year of and prior to mechanical operations if such operations are to occur during the February 15 to August 31 NSO breeding season and within 0.25 miles of suitable nesting/roosting habitat that lies within 1.3 miles of a known NSO activity center. Spot check surveys consist of three visits per year, with each visit separated by a minimum of seven days.

OSPREY ASSESSMENT

The range of the species is throughout California. Nest sites include snags or large trees in a variety of habitats usually within ½ mile, but up to 1 mile of a large reservoir, lake or river that provides foraging habitat.

The project area does not contain suitable habitat for the osprey.

WILLOW FLYCATCHER ASSESSMENT

The range of the species within California includes the Coast redwood, Southern Cascades and Klamath Mountains. Habitat includes willows, brush thickets, deciduous tree thickets near streams and wet areas. These habitat types are avoided in fire hazard reduction projects and will not be disturbed by this project.

The project will not have a significant negative effect on the Willow flycatcher.

GRAY WOLF ASSESSMENT

The range of this species within California is limited to the northern portion of the state. Wolves are habitat generalists that primarily prey on large ungulates such as elk and deer, but will also take a variety of smaller animals, along with domesticated animals and livestock. The treatments will not degrade the habitat or change the potential for use by wolves.

This project is within the area known to be occupied and used by the Whaleback pack. CDFW will be contacted before implementation of treatment activities to obtain general information about documented gray wolf activity and current home ranges within or in the vicinity of a treatment area that has not been made publicly available. If gray wolf activity (e.g., occurrences or overlapping home range) has been documented in a treatment area, pursuant to information provided by CDFW, then treatment activities will not be initiated in the treatment area until CDFW have provided further guidance.

The project will not adversely impact potential habitat for the gray wolf.

FISHER ASSESSMENT

The range of the species within California includes the Coast redwood, Southern Cascades, Klamath and Sierra Nevada Mountains. Fishers use a variety of forested and wooded habitat, but require cavities for breeding.

The project area contains potential habitat for the fisher; therefore, green cull trees or "wolf trees" will be retained within the parimeters of the treatment. Lower limbs on wolf trees will be removed as prescribed from the pruning treatment. As stated in the project description no large, scenic, and/or mature trees will be removed which are most likely to contain a den site. Retention of these structures is likely to provide denning and resting sites and may provide habitat for small mammal species

which may be prey for fisher. If a den is found during operations then operations in the vicinity will cease until site specific protection measures can be developed

Treatment activities will not adversely impact potential fisher habitat.

SIERRA NEVADA RED FOX ASSESSMENT

The range of the species within California is restricted to portions of the Southern Cascades and Sierra Nevada mountains (CDFG 2000). Typically, the species is found to use red fir, lodgepole pine, and subalpine habitats, foraging in meadows and barren rock and talus slopes. Some surveys have been conducted to determine the presence of mesocarnivores within the project area, and no Sierra Nevada red fox have been detected on Acer Klamath Forests timberlands.

There are no known occurrences within the project area; therefore, project activities will not adversely impact the Sierra Nevada red fox.

WOLVERINE ASSESSEMENT

The range of the species within California is restricted to portions of the Southern Cascades and Sierra Nevada mountains (CDFG 2000d). Habitat associated with wolverines includes high alpine and subalpine meadows, scree fields, and forests.

The project area does not contain suitable habitat for the wolverine.

MARTEN ASSESSMENT

The range of the species within California includes the Coast redwood, Southern Cascades, Klamath and Sierra Nevada Mountains. Martens are associated with higher elevation mixed and pure coniferous forests.

The project area contains potential habitat for the Marten; therefore, green cull trees or "wolf trees" will be retained within the parameters of the treatment. Lower limbs on wolf trees will be removed as prescribed from the pruning treatment. As stated in the project description no large, scenic, and/or mature trees will be removed which are potentially most likely to contain a den site. Retention of these structures is likely to provide denning and resting sites and may provide habitat for small mammal species which may be prey for marten. If a den is found during operations, operations in the vicinity will cease until site specific protection measures can be developed.

Treatment activities will not adversely impact potential marten habitat.

BOTANICAL CONSIDERATIONS

The botanical scoping for this project produced a list of 55 plant species within the USGS quads covering this project area plus the surrounding 12 quad maps. Of those species, 39 are CRPR rank 1 and 2, there were no rank 3 species. The species considered for additional review from this list include one species listed under CESA as Endangered (Ashland thistle, *Cirsium ciliolatum*) which is addressed below. The remaining species are either CRPR list 1 or 2.

Tree climacium (*Climacium* dendroides), Blandow's elodium moss (*Elodium blandowii*), broad-nerved hump-moss (*Meesia uliginosa*), grass leaf water plantain (*Alisma gramineum*), slender stemmed androsace (*Androsace filiformis*), vanilla grass (*Anthoxanthum nitens ssp. nitens*), resin birch (*Betula glandulosa*), scalloped moonwort (*Botrychium crenulatum*), Wilkins' harebell (*Campanula wilkinsiana*), slough sedge (*Carex atherodes*), water whorlgrass (*Catabrosa aquatica*), bracted owl's clover (*Orthocarpus bracteosus*), Newberry's cinquefoil (*Potentilla newberryi*), and Columbia yellow cress (*Rorippa columbiae*) are species that are associated with wet areas, fens, bogs, wet meadows, and ponds. There are no known occurrences of these species within the project area and this project area does not include those habitat types, so there is no potential effect on these species from this project and these species will not receive further consideration.

Northwest moonwort (*Botrychium pinnatum*), Hall's sedge (*Carex halliana*), Ashland thistle (*Circium ciliolatum*), northern daisy (*Erigeron nivalis*), pumice buckwheat (*Eriogoum pyrolifolium var. pyrolifolium*), little hulsea (*Hulsea nana*), Lemmon's goldflower (*Hymenoxys lemmonii*), scalloped moonwort (*Botrychium crenulatum*), Cooke's phacelia (*Phacelia cookei*), Rocky Mountain spike moss (*Selaginella scopulorum*), Cascade alpine campion (*Silene suksdorfii*), and large flower triteleia (*Triteleia grandiflora*) are species associated with meadows, dry meadows, forest openings, grasslands, and alpine fell fields. There are no known occurrences of these species within the project area and this project area does not include those habitat types, so there is no potential effect on these species from this project and these species will not receive further consideration.

Crater Lake grape fern (*Botrychium pumicola*), Mt. Eddy draba (*Draba carnosula*), and Mt. Shasta sky pilot (*Polemonium pulcherrimum var. shastense*) are species that are associated with elevations above this project. Pallid bird's beak (*Cordylanthus tenuis ssp. pallescens*), Jepson's dodder (*Cuscuta jepsonii*), Peck's lomatium (*Lomatium peckianum*), and Shasta orthocarpus (*Orthocarpus pachystachyus*) are associated with elevations below this project area. There are no known

occurrences of these species within the project area and there is no potential effect on these species from this project, therefore these species will not receive further consideration.

Shasta chaenactis (*Chaenactis suffrutescens*) is associated with serpentine soils, which are not present in this project area. There are no known occurrences of this species within the project area and there is no potential effect on this species from this project, therefore this species will not receive further consideration.

WOOLLY BALSAMROOT ASSESSMENT

Woolly balsamroot (*Balsamorhiza lanata*) is a CRPR rank 1B.2 species and has no federal status. The range of species within California is mainly the Scott Mountains and Shasta Valley. Habitat associated with the species includes open foothill woodlands between 2,885' and 7,380', roadsides, and rocky volcanic soils in cismontane woodlands. Blooming period for this species is April – June.

There are no known occurrences of woolly balsamroot within the project area. The project will not impact adversely woolly balsamroot.

MINGAN MOONWORT ASSESSMENT

Mingan moonwort (*Botrychium minganense*) is a CRPR rank 2B.1 species and has no federal status. Habitats associated with this species include bogs and fens, meadows and seeps (edges), and open forests along streams or around seeps, in lower and upper montane coniferous forests at 5,215' – 10,795'. Flowering period for this species is July – September, sometimes October.

There are no known occurrences of Mingan moonwort within the project area. The project will not impact adversely Mingan moonwort.

WESTERN GOBLIN ASSESSMENT

Western goblin (*Botrychium pinnatum*) is a CRPR rank 2B.3 species and has no federal status. Habitats associated with this species include meadows and seeps in lower and upper montane coniferous forests. Also, shady conifer woodlands, especially under Calocedrus along streams at 4,920' – 6,890'. The flowering period for this species is July – September.

There are no known occurrences of western goblin within the project area. The project will not impact adversely western goblin.

GREENE'S MARIPOSA LILY ASSESSMENT

Green's mariposa lily (Calochortus greenei) is a CRPR rank 1B.2 species and has no federal status. Habitats associated with the species include meadows and seeps on shrubby hillsides and in open woodlands, mainly on volcanic soils in Pinyon-Juniper woodlands, cismontane woodlands, and upper mixed conifer forests between 2,360-5,875'. The flowering period for this species is June – August.

The project area has nearby populations of Green's mariposa lily north of the Ball Mountain – Little Shasta Road. Prior to implementation of the project, surveys will be conducted for this species within treatment areas. All identified populations will have a 25-foot buffer where vegetation disturbance shall be limited to hand chainsaw work; slash will not interfere with populations. No heavy equipment will be used within the buffer.

SUBALPINE ASTER ASSESSMENT

Subalpine aster (*Eurybia merita*) is a CRPR list 2B.3 plant species and has no federal status. Habitats associated with the species are generally open, mesic or dry rocky areas and woods clearings, burnt areas and creek banks (rocky, sandy or gravelly). The species is found in non-wetland upper montane coniferous forests from 4,265' – 6,560'. The flowering period for this species is July – August.

There are no known occurrences of subalpine aster within the project area. The project will not impact adversely subalpine aster.

MODOC FRASERA ASSESSMENT

Modoc frasera (*Frasera albicaulis var. modocensis*) is a CRPR list 1B.2 plant species and has no federal status. Habitats associated with the species include dry, brushy places along with openings in great basin grasslands and sometimes in upper montane coniferous forests between 0' and 7,055'. The flowering period for this species is May – July.

There are no known occurrences of Modoc frasera within the project area. The project will not impact adversely Modoc frasera.

Cultural Resources/Tribal Cultural Resources

This topic does not apply to this project and was not evaluated further.

☒Yes ☐No Was a current archaeological records check completed? Results discussed below:
☐Yes ☒No Was a CAL FIRE staff or contract archaeologist consulted? Results discussed below:
☒Yes ☐No Was an archaeological survey of the project area completed? Results discussed below:
☐Yes ☒No Will the project effect any historic, archaeological or tribal cultural resources?
☒This topic could apply to this project, and results of the assessment are provided below:

Acer Klamath Forests had an ownership-wide records check conducted April 2023. That records check showed the presence of two recorded historic site within the project area.

An Archaeological Survey Report was prepared for the Acer Klamath Forest timberlands (T44N, R3W, portions of sections 4, 5, 7, 8, 17, 20, 21, 28, 29 and 30; and T45N, R3W, portions of sections 15, 27 and 33; MDBM. The results of archaeological surveys are included in this CONFIDENTIAL REPORT.

The following groups or individuals were sent letters regarding their knowledge of significant sites within or adjacent to the project area:

- Native American Heritage Commission
- Cher-Ae Heights Indian Community
- Karuk Tribe, Orleans and Happy Camp offices
- Klamath Tribe
- Nor-Rel-Muk Wintu Nation, Anderson and Trinity River offices
- Quartz Valley Indian Reservation
- Shasta Indian Nation, Newport and Redding offices
- Shasta Nation
- Winnemem Wintu Tribe, Redding and Mount Shasta offices
- Wintu Tribe of Northern California, Anderson, Redding, and Shasta Lake offices
- Klamath National Forest

Energy

☒This topic does not apply to this project and was not evaluated further.
☐This topic could apply to this project, and results of the assessment are provided below:

The project does not conflict with a state or local plan for renewable energy or energy efficiency. The very limited use of energy resources to access the remote site, conduct the fuels reduction tasks, and protect the neighboring forest and residences during the prescribed burns will create a negligible environmental impact and will have no effect on energy consumption at a regional or larger scale.

The proposed treatment will have a net positive impact to Energy.

Geology and Soils

☐This topic does not apply to this project and was not evaluated further.
☒This topic could apply to this project, and results of the assessment are provided below:

Soils within the project area are comprised primarily of Avis-Oosen Complex and Avis-Lava flows, Oosen loamy sand, and Sheld-Iller stony, sandy loams with minor amounts (less than 20 acres each) of Bogus stony loams, Esro silt loams, Louie stoney loam, and Mary stony loam. All are stony loams to loamy sands and are well to excessively well drained. The project area does not contain any unstable slopes. Potential soil movement could result from mastication equipment on steep slopes. Equipment will generally be masticating in front of itself producing organic matter between itself and the soil reducing erosion and compaction hazards. There are no steep slopes associated with this project that will have heavy equipment operations and there will be no excavation or significant soil disturbance associated with this project.

The proposed treatment will have no significant impacts to Geology or Soils.

Greenhouse Gas Emissions

☐This topic does not apply to this project and was not evaluated further.

☐Yes ☒ No Would the project generate significant greenhouse gas (GHG) emissions?

☐Yes ☒ No Would these GHG emissions result in a significant impact on the environment? Discuss below:

☐Yes ☒ No Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? Discuss below:

Sustainable forestry practices can increase the ability of forests to sequester additional atmospheric carbon while enhancing other ecosystem services, such as improved soil and water quality. Planting trees, restoring forested ecosystems and improving forest health are some of the ways to increase forest carbon (USFS Carbon Sequestration 2008). The dynamics of forest growth under different silvicultural practices show that sustainably managed forest projects can sequester more carbon over time than unmanaged forests. Sustainable management keeps the forest growing at a higher rate over time, providing net sequestration benefits that are additional to that of an unmanaged forest. All forests, both managed and unmanaged will eventually stop sequestering carbon as they reach maturity, where sequestered carbon equals emitted carbon (Ruddell et al. 2007).

EMISSION ASSESSMENT

Research on western coniferous forests of North America has well described the potential storage of carbon in our forests (Malmsheimer et al. 2008). From 1990 to 2014, 787 million metric tons were sequestered by land use, land-use change and forestry activities (EPA 2019). Research has found that storage of carbon or sequestration of carbon in our conifer forests occurs in the tree biomass, mineral and organic soils, forest floor vegetation and coarse woody debris and roots. Total accumulation of carbon in a fully stocked stand will continue to rise until the stand reaches growth maturity (Hover et al. 2007). Some scientific studies suggest younger forests sequester carbon at greater rates than older forests (Hover et al. 2007, Law et al. 2003), while other scientific studies suggest old-growth forests store more carbon that younger forests (Fredeen et al. 2005, Stephenson et al. 2014, Christensen et al. 2018). These apparently conflicting results may both be correct. Yet, there is significant scientific debate over carbon sequestration rates and carbon storage rates in western conifer forests. Some research has claimed that even-aged clearcut management may result in a net release of carbon into the atmosphere (Harmon 2002) or may not store as much carbon as uneven-aged management (CDF Jackson State Forest EIR). Yet, some scientific studies suggest that intensively managed forests show substantial increases in carbon sequestration over other passive forms of management (James et al. 2007). While much scientific debate and study is still ongoing and proposed, it appears when forests are managed under sustained yield management over time, the amount of carbon removed by harvesting is balanced by the amount of carbon grown or sequestered (Eckert 2007).

The State of California Air Resources Board (2009) has stated that coniferous forests sequester carbon at the fastest rates between ages 10 years old and 80 years old, at somewhat slower rates 80 years and older and between 80 years old and 150 years old the forest reaches a balance between slow sequestration rates and decay, which releases carbon (CARB 2009). Accordingly, these research results have been recognized by the State of California that our forests are potentially the only sector of our environment that removes greenhouse gases from the environment and potentially stores it for long periods of time (CARB 2017). However, this sink is at risk of becoming a large emitter with catastrophic wildlife and high intensity bark beetle infestations if active management and restoration is not occurring on the landscape (CARB 2017). From 2001 to 2014 roughly 170 million metric tons of carbon was released from natural lands and the vast majority was released due to wildfire (CARB 2019). This output is estimated to continue to increase in the future. To combat this, the state has set goals to double the amount of forest management and restoration efforts (FCAT 2018). This project is in line with those goals by removing hazardous and unhealthy stand conditions while retaining ecological functions such as snags, habitat retention areas, protected species, and exclusion areas for water quality within the stand.

Project Level Greenhouse Gas Assessment: To complete the proposed project, some greenhouse gases may be released as part of road maintenance, equipment use, equipment transportation, commuting, and site preparation. While some models can estimate

greenhouse gas or carbon emissions from these various activities (Cayan et al. 2007, Harmon and Marks 2002, OPR 2008), we believe these models should be viewed cautiously for California, as they have not been calibrated or verified for many forest management activities in California. However, the following greenhouse gas emission assessment for this project does rely on and cites scientific protocols or standards previously used to estimate greenhouse gas emissions (See Table 1). The project level greenhouse gas emission assessment is summarized into several general categories: Equipment, Site Preparation, Wood Products, Non-Merchantable Vegetation and LTSY.

Mastication and hauling equipment Based on the specific variables of equipment systems, production rates, acres of operation, density of forest vegetation and protocols and standards cited in Table 1, the amount of carbon equivalent emission (CO2e) for operations was calculated. During operations slash including branches, leaves, and shrubs may release carbon during and following mastication operations (Fredeen 2005). Based on the acres of operation, density of forest vegetation, and protocols and standards cited in Table 1, the amount of carbon equivalent emission (CO2e) for site preparation was calculated.

Wood products, non-merchantable vegetation and Long Term Sustained Yield (LTSY) Based on the specific variables of the acres of operation, amount of wood masticated, and protocols and standards cited in Table 1, the amount of carbon equivalent emission (CO2e) for Wood Products and Non-Merchantable wood was calculated. No wood products will be produced by this project, but long-term sustained-yield should be improved through the removal of smaller understory vegetation that compete with the desirable forest trees for resources.

For this project, the stated objective is to: improve forest health and resilience to severe wildfire, drought, disease, and pests, reduce wildfire risk for nearby communities and infrastructure, facilitate fire suppression operations, increase long-term carbon capture and storage to ensure treated and adjacent forested areas remain net sinks of carbon and continue to provide an abundance of ecosystem and societal benefits. CALFIRE has recognized that, in general, California forests remain below their potential growth productivity, and therefore management could increase forest growth thereby increasing sequestration of carbon (CDF 2005).

Using tree biomass vegetation-based fuels to produce electricity or steam may substitute the use of more non-renewal and energy intensive fuels. However, for this project assessment, biomass vegetation (tops, limbs, leaves) were considered to be carbon emission in Table 1.

Atmospheric CO2 fertilization on tree growth from increased CO2 in the atmosphere may occur in the future. Due to this possible effect, some greenhouse gas models have included atmospheric CO2 (Lenihan et al. 2006) and a recent meta-analysis describes tree productivity may respond to increases in atmospheric CO2 (Ainsworth and Long 2005). However, due to the current understanding and relatively mild increases, in summary, at this time atmospheric CO2 fertilization on tree growth would be considered a very small increase in sequestration of carbon.

Potential climate change may reduce forest growth and reduce sequestered carbon from managed forests. The estimated loss in forest growth from potential climate change was once estimated in a worst-case scenario at -25% (Battles 2006) but has been recently revised to a worse-case scenario at -5% by the end of the 21st century (Battles 2008). The authors have cautioned that "modeling specific impacts of future climate on California forests is a precarious undertaking" (Battles 2008). Due to this apparent large discrepancy in estimates, and authors' caution, while a reduction in growth and subsequent carbon sequestration maybe possible, the amount that is likely to occur by the end of the 21st century appears to be currently speculative in nature. However other effects that are occurring in conjunction with climate change are beginning to have a significant impact on forest sequestration rates. From 2011-2017 it is estimated that roughly 28 thousand acres are converted to non-forest uses per year. This is offset slightly by afforestation rates but overall, the net loss 16 thousand acres per year (Christensen et al. 2018). In summary, at this time, reductions in forest growth from potential climate change may result in a gradual reduction in sequestration of carbon.

Drought and related insect and disease impacts may increase forest decay resulting in emission of forest carbon. During this century fire has been the number one. Drought is a common occurrence in a Mediterranean climate. Improving forest management practices including improved growing stock, improved spacing of trees and reduction of competing vegetation will improve overall forest health, increase tree vigor and growth over unmanaged conditions. Improving forest health will also include rapid response to episodic insect and disease conditions through harvesting under Exemptions and Emergency Notices. Together these forest management measures should reduce episodic drought and related insect and disease impacts, currently and during long-term management of the forest.

Drought and related catastrophic wildfire can potentially release very large amounts of carbon into the atmosphere. In 2017 forest fires were the largest emitter of nitrous oxide and methane within the Land Use, Land-Use Change, and Forestry sectors. This sector is relied upon as the largest carbon sink (EPA, 2019). Reducing fire frequency or their severity can reduce the amount of carbon released by episodic catastrophic wildfires (Eckert 2007). Additionally, in California Sierra Pacific Industries managed forestlands experienced a 2.3% fire frequency per decade between 1987 and 2004, while all lands reviewed in the USFS Sierra Nevada

Framework were 6% for Ponderosa pine types and 4% for mixed conifer types (Eckert 2007, Mader 2007). This project will improve general forest health, thus reducing fire frequency and the potential risk to release carbon through episodic catastrophic wildfire.

The California Energy Commission and California Environmental Protection Agency (Cayan et al. 2007) claim increases in greenhouse gases from releases in sequestered carbon may lead to significant climate changes in California. Some have speculated that potential climate change may result in increased air temperatures and decrease in winter snow accumulation resulting in adverse environmental changes for some plants, trees, terrestrial wildlife and aquatic species (Cayan 2007). While others have claimed, after assessing eight different climate change scenarios, biological diversity may increase or decrease depending geographic location (Loarie et al. 2008). Within the Klamath Province, others have speculated that potential climate change may result in increased precipitation in our currently xeric climate which may result in beneficial environmental changes for some species including rare species that have behavioral and physiological adaptations from previous local climate changes (Broddrick 2006) or previous stochastic events (USFWS 2006).

General Information

Project Name: Miller Mtn. Fuel Break	
Project Acres	965
Total Project Days	270

Exhaust CO2 Emissions

Total Round Trip Miles	50
# of Chainsaws	0
# of Chippers	0
# of Masticators	1
Diesel Kilograms/Gal	10.15
Gas Kilograms/Gal	8.91
Pounds of CO_2/Kilogram	2.20462
One Masticator Diesel Gal/day	70
One Chipper Gas Gal/day	10
Crew Bus MPG	8
Chainsaw Gas Gal/Day/Saw	1.5
Conversion Factor Pounds to Tons	2000
Conversion Factor Tons of Biomass to Tons CO_2	1.65

Crew Bus Total Miles	13,500	Chainsaws Total Gal Gas Needed	0
Masticator Total Diesel Needed	18,900		
Total Gal of Diesel Needed	20,587.50	Chipper Total Gal Gas Needed	0
Total Kilograms of Diesel Produced	208,963	Total Kilograms of Gas Produced	-
Diesel Total Pounds of CO_2 Produced	460,684	Gas Total Pounds of CO_2 Produced	-
Diesel Total Tons CO_2	230	Gas Total Tons of CO_2 Produced	0

Smoke or Decay CO2 Emissions

Est. Biomass Tons Per Acre Removed (Fuel Model)	4

Biomass Total Tons Removed	3860
Total Tons of CO_2	6369

Final Outputs

Total Tons of CO_2 for Project	6599
Sequestration Rate 2 - 6 Tons/Ac/Yr (stocked Sierra mixed conifer)	1
Total Sequestration Rate/Yr	3541.55
Years Required for Complete Sequestration	1.9

Greenhouse Gas Emission Information Referenced

Ainsworth, E.A., Long, S.P. 2005. What have we learned from fifteen years of free-air CO2 enrichment. A meta-analytic review of the responses of photosynthesis, canopy properties and plant production to rising CO2. New Phytologist. 165:351-372.

Battles, J.J. and T. Robards, A. Das, K. Waring, J. Gilless, G. Biging, F. Schurr. 2008. Climate change impacts on forest growth and tree mortality: a data driven modeling study in the mixed conifer forest of the Sierra Nevada, California. California Climate Change Center, Supplement 87, 1, pg. 193-213.

Battles, J.J. and T. Robards, A. Das, K. Waring, J. Gilless, J. LeBlanc, G. Biging, F. Schurr, C. Simon. 2006. Climate Change Impact on Forest Resources, California Climate Change Center, CA

Bridsey, R.A., and L.S. Heath. 1995 Carbon Changes in U.S. Forests. GTR-RMRS-271. USDA Forest Service, Rocky Mountain Research Station.

Broddrick, R. 2006. A Petition to the State of California Fish and Game Commission: Delisting of Siskiyou mountains salamander. California Department of Fish and Game. pg. 47. September 2006.

California Air Resources Board. 2009. State of California, Environmental Protection Agency, Air Resources Board. AB32 Scoping Plan for the Forest Sector. 19 pages.

California Air Resources Board. 2017. State of California, Environmental Protection Agency, Air Resources Board. California's 2017 Climate Change Scoping Plan. Pgs. 86-87

California Air Resources Board. 2017. State of California, Environmental Protection Agency, Air Resources Board, Natural Resources Agency, Department of Food & Agriculture, Strategic Growth Council. California 2030 Natural and Working Lands Climate Change Implementation Plan. Pgs. 10-

California Department of Forestry and Fire Protection. 2005 Jackson State Forest. Draft Environmental Impact Report for the Draft Jackson State Forest Management Plan.
Cayan, D.R. and E.P. Maurer, M.D. Dettinger, M. Tyree, K. Hayhoe. 2007 Climate change scenarios for the California region. Climate Change. Vol 87 pg 521-542.

Christensen et al. 2018. AB 1504 California Forest Ecosystem and Harvested Wood Product Carbon Inventory: 2017 Reporting Period Final Report. U.S. Forest Service agreement no. 18-
CO-11052021-214, 17-CO-11261979-086, California Department of Forestry and Fire Protection
agreement no. 8CA04056 and 8CA03714 and the University of Montana. Sacramento, CA:
California Department of Forestry and Fire Protection and California Board of Forestry and Fire
Protection. 539 p.

Concillio, A. and Siyan, A., Soung-Ryoul, R. North, M. Chen, J. Soil respiration response to experimental disturbances over 3 years. Forest Ecology and Management. 228(2006) 82-90.

Eckert, J. P. 2007. Carbon sequestration in Sierra Pacific Industries Forests: A Watershed Example. Tetra Tech. Inc., Bothell, WA.

Environmental Protection Agency. 2019. Inventory of US Greenhouse Gas Emissions and Sinks 1990-2017. 430-R-19-001. 6-3.

Freeden, A. L. and C.H. Bois, D.T. Janzen, P.T. Sanborn. 2005. Comparison of coniferous forest carbon stocks between old-growth and young second-growth forests on two soil types in central British Columbia, Canada. Canadian Journal of Forest Research 35:1411-1421.

Forest Climate Action Team. 2018. California Forest Carbon Plan: Managing Our Forest Landscapes in a Changing Climate. 178p.

Harmon, M.E. and B. Marks. 2002. Effects of silvicultural treatments on carbon stores in forest stands. Canadian Journal of Forest Research. 32: 863-877.

Haswell, W.T. III. 2000. Techniques for estimating forest carbon. Journal of Forestry. 98(9): Focus 1-3.

Heath, L.S. and J.E. Smith. 2000. Soil carbon accounting and assumptions for forestry and forest-related land use change. GTR-RMRS-59 USDA Forest Service. Rocky Mountain Research Station. 134 p.

Hoyer, C. and S. Rebain, L.S. Heath, J.E. Smith. 2007. The Kane Experimental Forest Carbon Inventory: A Case Study Introducing FVS Carbon. USDA Forest Service. Northern Research Station.

James, C. and B. Krumland, P.J. Eckert. Carbon Sequestration in California Forests: Two Case Studies in Managed Watersheds. Technical Report. December 2007. pg. 52.

Johnson, M.C. and D.L. Peterson, C.L. Raymond. 2007. Guide to fuel treatments in dry forests of the Western United States: assessing forest structure and fire hazard. PNW-GTR-686. Portland, OR. USDA Forest Service. PNW p322.

Law, B.E. and O.J. Sun, J. Campbell, S. Van Tuyl, P.E. Thornton. 2003. Changes in carbon storage and fluxes in a chronosequence of ponderosa pine. Global Change Biology. Vol 9:510-524.

Lenihan, J.M. and D. Bachelet, R. Drapek, R.P.Nelson. 2006. The response of vegetation distribution, ecosystem productivity, and fire in California to future climate scenarios simulated by the MC1 Dynamic Vegetation model. CEC-500-2005-199-F. California Climate Change Center. February 2006. pg 19.

Loarie, S.R. and B.E. Carter, K. Hayhoe, S. McMahon, R. Moe. Climate change and the future of California endemic flora. Plus One 3(6): 2502.

Mader. S. 2007. Climate Project: Carbon Sequestration and Storage by California Forests and Forest Products. CH2MHill Technical Report. August 2007. pg. 33

Malmsheimer, R.W. and P. Heffenan, S. Brink, D. Crandall, F. Deneke, C. Galik, E. Gee, J.A. Helms, N. McClure, M. Mortimer, S. Ruddell, M.Smith and J. Stewart. Forest management solutions for mitigating climate change in the United States. Journal of Forestry. Volume 106, Number 3. April/May 2008. 174 pages.

McIver, M.P. and J.Meek, M. Scudder,C. Sorenson. T. Morgan, and G. Christensen 2015. California's Forest Products Industry and Timber Harvest, 2012. USDA, Forest Service. Pacific Northwest
Research Station. PNW-GTR-908

Office of Planning and Research 2009. Governor's Office of Planning and Research. State of California.

Powers, R.F. and D.A Scott, F.G. Sanchez, R.A. Voldseth, D. Page-Dumroese, J.D. Elioff, D.M. Stone. The North American long-term soil productivity experiment: Findings from the first decade of research. Forest Ecology and Management. Volume 220. Issue 1-3. December 2005. Pg 31-50.
Sonne, C. 2005. Greenhouse gas emissions from Pacific Northwest forestry operations: Implications for forest management. University of Washington. Phd Dissertation. 171 pages.

Skog, K.E. and G.A. Nicholson. 2000. Carbon sequestration in wood and paper products. USDA Forest Service. GTR-RMRS-59. Chapter 5, p79-88.

Stephenson, N.L. and A.J. Das, S. Condit, P. Baker, N. Beckman, D. Coomes, E. Lines, W. Morris, N. Ruger, E. Alvarez, C. Blundo, S. Bunyavejchewin, G. Chuyong, S. Davoes, A. Duque, C. Ewango, O. Flores, J. Franklin, H. Grau, Z. Hao, M. Harmon, S. Hubbell,

D. Kenfack, Y. Lin, J. Makana, A. Malizia, L. Malizia, R. Pabst, N. Pongpattananurak, S. Su, I. Sun, S. Tan, D. Thomas, P. van Mantgem, X.Wang, S. Wiser & M. Zavala. 2014. Rate of tree carbon accumulation increases continuously with tree size. DOI: 10.1038, Nature 12914.

Ximenes, F, Gardner, WD & Kathuria, A 2008, 'Proportion of above-ground biomass in commercial logs and residues following the harvest of five commercial forest species in Australia', Forest Ecology and Management, vol. 256, pp. 335-346

The proposed treatments will have no significant impact to Greenhouse Gas Emissions.

Hazards and Hazardous Materials

☐This topic does not apply to this project and was not evaluated further.

☒This topic could apply to this project, and results of the assessment are provided below:

The hazardous materials being utilized for this project include diesel, gasoline, oil and other fluids associated with motorized equipment. Equipment used on this project will not be serviced in locations which could allow oil or fuel to contaminate soil or pass into a watercourse. All containers shall be properly labeled and designed to prevent accidental spillage.

Operators will have spill kits present at the site. If a spill occurs and the situation is safe, the operators will contain the spill and prevent the spill from spreading or prevent the spill from expanding. Operators will shovel a dike or berm to contain or divert the spilled material. Bark, duff, other forest litter or absorbent pads (if available) should be used to absorb spilled material.

The proposed project will not have a significant effect from Hazards or Hazardous Materials.

Hydrology and Water Quality

☐This topic does not apply to this project and was not evaluated further.

☐Yes ☒No Will the project potentially affect any watercourse or body of water?

☒ This topic could apply to this project, and results of the assessment are provided below:

The project area contains several headwaters of streams.

Intermittent streams that have side slopes less than 30% will have a 25-foot buffer, side slopes over 30% will have a 50-foot buffer. Perennial streams will have no vegetation disturbance within the first 15 feet from the stream bank. Side slopes less than 30% will have 35-foot buffer beyond that 15 foot no activity zone. Slopes 30-50% will have a 60-foot buffer and side slopes over 50% will have buffer of 85 feet beyond the 15 foot no activity zone. Within these buffers, vegetation disturbance shall be limited to hand chainsaw work. No pile burning or equipment will be used within the buffer.

The proposed project will not alter the drainage patterns or adversely impact hydrology and water quality.

Land Use and Planning

☒This topic does not apply to this project and was not evaluated further.

☐This topic could apply to this project, and results of the assessment are provided below:

The predominant land use in this area is commercial timberland. This project will not alter the existing land use for the project area. This proposed project will not result in significant adverse impacts to Land Use and Planning.

Mineral Resources

☒This topic does not apply to this project and was not evaluated further.

☐This topic could apply to this project, and results of the assessment are provided below:

The proposed project area does not contain any mines or mineral processing areas. The proposed project will not result in significant adverse impacts to Mineral Resources.

Noise

☐ This topic does not apply to this project and was not evaluated further.

☒ This topic could apply to this project, and results of the assessment are provided below:

The project area is remotely located and is not within close proximity to a business or residential areas. The proposed project will not result in significant adverse impacts to Noise.

Population and Housing

☒ This topic does not apply to this project and was not evaluated further.

☐ This topic could apply to this project, and results of the assessment are provided below:

The predominant land use in this area is growing and harvesting trees for commercial products

This proposed project will not result in significant adverse impacts to Population and Housing.

Public Services

☒ This topic does not apply to this project and was not evaluated further.

☐ This topic could apply to this project, and results of the assessment are provided below:

The proposed project will have no significant effect on Public Services.

Recreation

☐ This topic does not apply to this project and was not evaluated further.

☒ This topic could apply to this project, and results of the assessment are provided below:

The primary recreational activities within the project area are hunting and hiking. All operations occur on private lands.

The project will not result in a significant negative impact to recreation.

Transportation and Traffic

☐ This topic does not apply to this project and was not evaluated further.

☒ This topic could apply to this project, and results of the assessment are provided below:

These roads are part of a rural network frequently utilized for the transport of equipment, recreational vehicles, and forest products. The project will slightly increase the amount of traffic on the roads but not by a significant amount.

The project will not result in a significant negative impact to Traffic.

Utilities and Service Systems

☒ This topic does not apply to this project and was not evaluated further.

☐ This topic could apply to this project, and results of the assessment are provided below:

There are no overhead or underground utility line or other utilities.

The proposed treatment will have no significant impacts to Utilities or Service Systems.

Wildfire

☐ This topic does not apply to this project and was not evaluated further.

☒ This topic could apply to this project, and results of the assessment are provided below:

This project was designed to reduce wildfire hazards and interrupt horizontal and vertical fuels in the case of a wildfire. There has been a significant amount of mortality related to drought, insects, and disease, and the project area receives regular public recreational use during the warmer, drier times of the year, hence the need for this project to be completed before the next wildfire.

The site's setting amid mature trees, shrubs and forest understory provides a setting conducive to the ignition and spread of a wildland fire if appropriate measures are not taken during work. Chapter 26 of the California Fire Code (California Code of Regulations, Title 24, Part 9) establishes provisions for safety and care during construction activities defined as hot work. In brief, the code requires that specific measures be taken during construction to minimize the potential ignition of a wildland fire in areas susceptible to such events, which include the project site and surrounding lands. Personnel carrying out the project activities during fire season will take all safety precautions necessary to avoid an escaped fire.

The proposed treatment will likely have a positive effect on Wildfire.

Changes Made to Avoid Environmental Impacts:

If nest and den sites for Northern Spotted Owls, goshawk, raptors, fisher, gray wolf, or marten are found within or adjacent to treatment areas during the project, all operations in the vicinity will cease until site specific protection measures can be developed in consultation with CDFW.

CDFW will be contacted before implementation of treatment activities to determine whether gray wolves have been documented within or in the vicinity of a treatment area or if the treatment area is within the known home range of a documented gray wolf or gray wolf pack.

No mechanical treatments will be used within Bull Meadows to prevent disturbance of potential Bumble Bee habitat.

Plants of interest within the project area will be identified prior to implementation of the project. Populations will have a 25 foot buffer where vegetation disturbance shall be limited to hand chainsaw work, slash will not interfere with populations. No heavy equipment will be used within the buffer.

Intermittent and perennial streams will have an appropriately sized buffer (see Hydrology and Water Quality for specifics) set around the watercourse prior to implantation of the project.

Equipment used on this project will not be serviced in locations which could allow oil or fuel to contaminate soil or pass into a watercourse. Operators will have spill kits and shovels present at the site. If a spill occurs and the situation is safe, the operators will contain the spill and prevent the spill from spreading or prevent the spill from expanding. Operators will shovel a dike or berm to contain or divert the spilled material. Bark, duff, other forest litter or absorbent pads (if available) should be used to absorb spilled material.

Personnel carrying out the project activities during fire season will take all safety precautions necessary to avoid an escaped fire.

Mandatory Findings of Significance:	**YES**	**NO**
(a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒
(b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects.	☐	☒
(c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒

Justification for Use of a Categorical Exemption (discuss why the project is exempt, cite exemption number(s), and describe how the project fits the class):
The proposed project qualifies for a Categorical Exemption under CEQA Guidelines Section 15304. Pursuant to Section 15304, Class 4 consists of minor alterations of vegetation which do not involve removal of healthy, mature, scenic trees.

Treatments will focus only on the removal of young and/or suppressed advanced regeneration tree species less than 12-inch diameter at breast height, removing slash and jackpot accumulations, removing medium and large shrubs where they contribute to vertical and horizontal fuel continuity and removing lower branches from residual trees.

Conclusion:

☒ After assessing potential environmental impacts and evaluating the description for the various classes of categorical exemptions to CEQA, SVRCD has determined that the project fits within one or more of the exemption classes and no exceptions exist at the project site which would preclude the use of this exemption. SVRCD considered the possibility of (a) sensitive location, (b) cumulative impact, (c) significant impact due to unusual circumstances, (d) impacts to scenic highways, (e) activities within a hazardous waste site, and (f) significant adverse change to the significance of a historical resource. A notice of exemption will be filed at the State Clearinghouse.

☐ After assessing potential environmental impacts and evaluating the description for the various classes of categorical exemptions to CEQA, SVRCD has determined that the project does not fit within the description for the various exemption classes or has found that exceptions exist at the project site that precludes the use of a categorical exemption for this project. Additional environmental review will be conducted and the appropriate CEQA document used may be a negative declaration or a mitigated negative declaration.