NDRC Fuel Breaks Project

Environmental Assessment Determinations and Compliance Findings for HUD-assisted Projects 24 CFR Part 58

March 2020 | HCD-01

Prepared for:

State of California Department of Housing and Community Development
2020 West El Camino Avenue, Suite 200
Sacramento, CA 95833

Prepared by:

HELIX Environmental Planning, Inc.
11 Natoma Street, Suite 155
Folsom, CA 95630

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LIST OF ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
APE	Area of Potential Effect
BLM	U.S. Department of Interior Bureau of Land Management
BTR	Biological Resources Technical Report
CAL FIRE	California Department of Forestry and Fire Protection
CAL TRANS	California Department of Transportation
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife/California Department of Fish and Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CWRP	Community Watershed Resilience Program
dbh	diameter at breast height
DHPS	Delegated Heritage Program Staff
FYLF	foothill yellow-legged frog
GHG	greenhouse gases
HCD	California Department of Housing and Community Development
HELIX	HELIX Environmental Planning, Inc.
HPM	Heritage Program Manager
HUD	U.S. Department of Housing and Urban Development
LOP	Limited Operating Period
MCAB	Mountain Counties Air Basin
MECH	Mechanical Harvesting or Shredding (low ground pressure track-laying machines such as feller bunchers and masticators)
NAHC	Native American Heritage Commission
NDRC	National Disaster Resilience Competition

LIST OF ACRONYMS AND ABBREVIATIONS (cont.)

NDRC Partners	Agencies and organizations who have formed a partnership to coordinate and facilitate activities associated with implementation of the National Disaster Resilience Competition (NDRC) Grant. The partners include: the California Department of Housing and Community Development (HCD), County of Tuolumne, Sierra Nevada Conservancy (SNC), the United State Forest Service (USFS), the California Department of Forestry and Fire Protection (CAL FIRE), California Conservation Corps, Rural Community Assistance Corporation, the Governor's Office of Planning and Research, and the California Environmental Protection Agency.
NEPA	National Environmental Policy Act
OHV	off-highway vehicle
PAC	Protected Activity Center
PER	perennial
Regional PA	Amendment #1: Programmatic Agreement Among the U.S.D.A. Forest Service, Pacific Southwest Region (Region 5), California State Historic Preservation Officer, Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Processes for Compliance With Section 106 of the National Historic Preservation Act For Management of Historic Properties By the National Forests of the Pacific Southwest Region (Region 5)
RWQCB	Regional Water Quality Control Board
SKID	Skidding (rubber-tired skidders and track laying tractors)
SNC	Sierra Nevada Conservancy
STF	Stanislaus National Forest
STF LRMP	Stanislaus National Forest Land and Resource Management Plan
TCAPCD	Tuolumne County Air Pollution Control District
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Department of Agriculture Forest Service
USGS	U.S. Geological Survey
WUI	Wildland Urban Interface
YSS	Yosemite Stanislaus Solutions

U.S. Department of Housing and Urban Development
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Washington, DC 20410
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Environmental Assessment
Determinations and Compliance Findings for HUD-assisted Projects
24 CFR Part 58

1.0 Project Information

Responsible Entity: State of California Department of Housing and Community Development (HCD)

Certifying Officer Name and Title: Janice Waddell, Federal Programs Branch Chief

Project Name: NDRC Fuel Breaks Project

Project Location: Tuolumne County, California

Grant Recipient (if different than Responsible Entity): Same

Recipient Address: 2020 West El Camino Avenue, Suite 200, Sacramento, CA 95833

Project Representative: Patrick Talbott

Telephone Number: 916-263-2297

Consultant (if applicable): HELIX Environmental Planning, Inc.

Direct Comments to: Patrick Talbott at email: CA-NDRC@hcd.ca.gov

1.1. Project Background

The proposed project consists of expanding a series of shaded fuel breaks in Tuolumne County on federal lands (U.S. Department of Interior Bureau of Land Management [BLM]- and U.S. Department of Agriculture Forest Service [USFS]-administered land), private lands, and lands controlled by State and local agencies. The project is a collaborative effort under the oversight of the State of California Department of Housing and Community Development (HCD) and Sierra Nevada Conservancy (SNC). The USFS Stanislaus National Forest (STF) would be implementing the fuel break activity and California Department of Forestry and Fire Protection (CAL FIRE) staff would be providing support and facilitating STF implementation activities.

The proposed project is part of the Community Watershed Resilience Program (CWRP), which consists of three interconnected sets of activities in Tuolumne County for resilient recovery from the 2013 Rim Fire. The CWRP is funded by the U.S. Department of Housing and Urban Development, and its activities will assist in community recovery

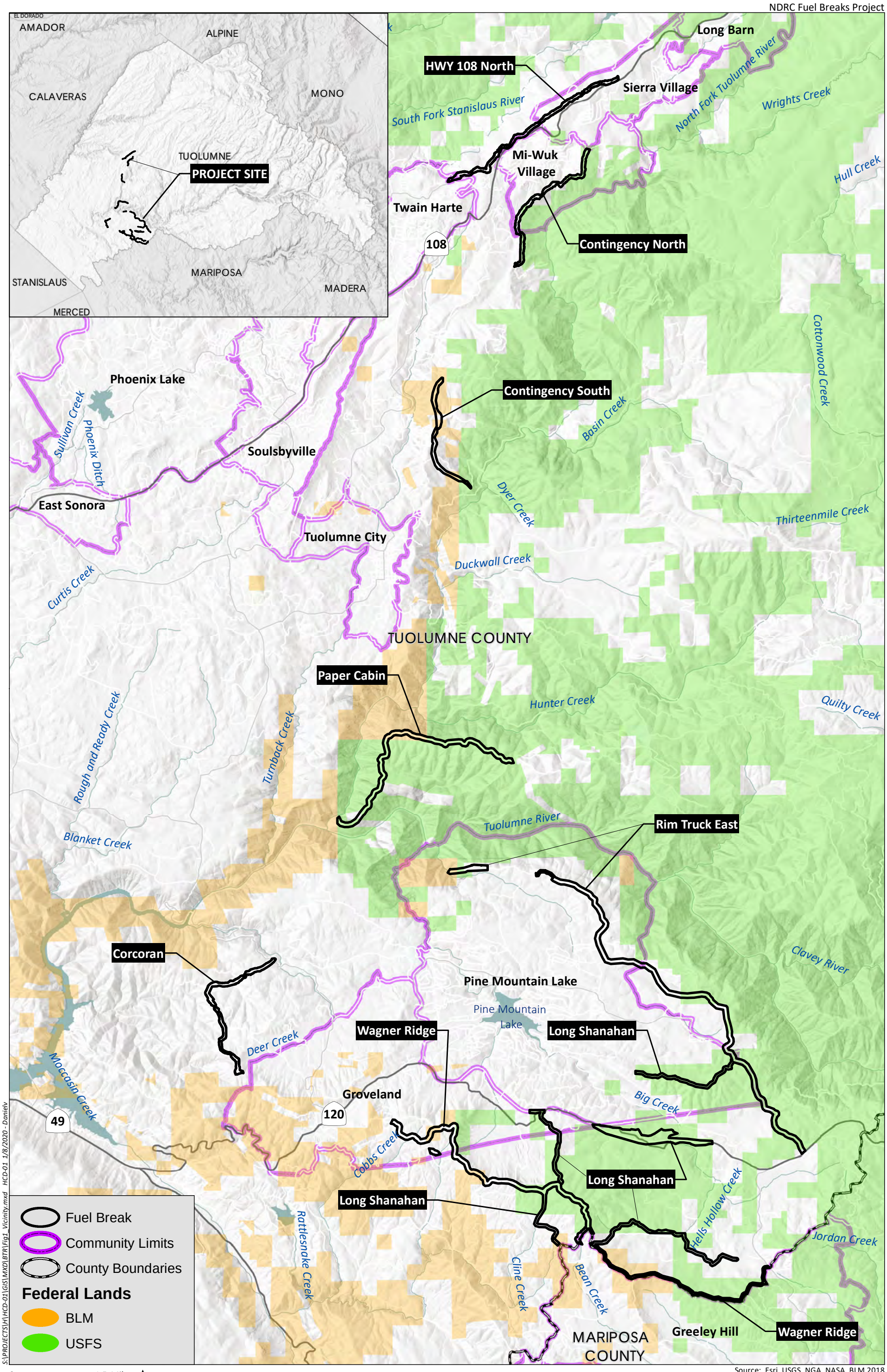
efforts and building resiliency to future disaster. The three sets of activities comprised by the CWRP are: (1) Forest and Watershed Health Projects, including a system of strategic fuel breaks to protect communities from future wildfire; (2) Community Resilience Centers that provide shelter and necessary services in the event of a disaster; and (3) Biomass Utilization Facility Projects that utilize forest byproducts. The proposed project is a Forest and Watershed Health Project activity under the CWRP, which is a collaborative effort between the SNC, USFS, and CAL FIRE to restore and protect the Tuolumne River watershed.

The proposed project requires analysis pursuant to the National Environmental Policy Act (NEPA) because it is partially on federal land, and because implementation is financed with federal funds from the Community Development Block Grant Program NDRC. Review pursuant to the California Department of Environmental Quality Act (CEQA) is required because the project would partially occur on private lands, and lands controlled by State and local agencies, and because HCD is taking a discretionary action to fund the project activities.

Separate NEPA documents will be prepared for the activities on BLM lands, and for HCD as the NEPA Responsible Entity on behalf of the U.S. Department of Housing and Urban Development (HUD). The CEQA decision will be filed separately by the HCD.

1.2. Project Location

The project is in the western Sierra Nevada and is only being conducted in Tuolumne County, California. The project area consists of eight distinct fuel breaks located between Wagner Ridge in the south and State Highway 108 in the north (Figure 1). The size and location by Township (T), Range (R), Mount Diablo Meridian for each fuel break is listed in Table 1.



HELIX Environmental Planning

Vicinity Map

Figure 1

Table 1
LOCATION AND SIZE BY FUEL BREAK

Fuel Break	Approximate Size (acres)	USGS Quadrangle	Township, Range and Section
Highway 108	125.7	Twain Harte	T03N, R16E, Sections 25, 34-36 and T02N, R16E, Sections 3-4
Contingency North	102.5	Twain Harte	T02N, R16E, Sections 1, 2, 10, 11, 14, 15
Contingency South	85.6	Twain Harte/Tuolumne	T02N, R16E, Sections 21, 28, 33, 34
Paper Cabin	214.9	Tuolumne	T01N, R16E, Section 20, 21, 27-29
Rim Truck East	405.2	Tuolumne/Groveland/Jawbone Ridge	T01S, R16E, Section 1-4, 12, 25 and T01S, R17E, Sections 7, 17, 18, 20, 28, 33
Corcoran	108	Moccasin	T01S, R15E, Sections 11, 12, 14, 23
Long Shanahan	404.5	Groveland	T01S, R16 E, Section 25, 26, 35, 36 and T01S, R17E, Section 19, 20, 29, 20, 31 and T02 S, R16E, Section 2 and T02S, R17E, Section 5, 6
Wagner Ridge	362	Groveland	T01S, R16E, Section 27, 28, 29, 33, 34, 35, 36 and T02S, R16E, Section 1, 2 and T02 S, R17 E, Section 5-8

1.3. Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]

The project would reduce ladder fuels and establish eight 300-foot-wide shaded fuel breaks totaling 22 linear miles (approximately 1,808.4 acres). Most of the areas proposed for treatment would expand existing fuel breaks. Treatments would begin in 2020 and be completed in 2021.

Treatment prescriptions will be determined for a given area based on vegetation characteristics, proximity to residences and infrastructure, slope, and the presence of sensitive resources. The treatments may include a combination of hand or machine felling of trees, mechanical or hand piling and pile burning, and masticating brush and smaller trees. All standing and fallen dead trees would be treated.

Where economically feasible, on USFS lands, timber would be harvested and removed under a USFS timber contract. On BLM lands, all live and dead trees to be treated would be assessed for highest and best use, and if BLM chooses to not extract the material due to a balance of economic, ecological, and public safety reasons, it would be piled and burned. No timber would be sold from private properties in the project area.

Selected live trees less than 12-inches diameter at breast height (dbh) would be treated and trees up to 16 inches dbh may be extracted from USFS and BLM lands where a timber sale is feasible and required to meet desired spacing and reduction of ladder

fuels. The residual trees would be spaced to break up the vertical and horizontal continuity of the fuels, reduce crown contact to less than 10 percent, and to achieve an average crown spacing of between 5 feet and one full crown width. Removal of oaks would generally be avoided.

1.3.1. Mechanical Treatments

Mechanical Mastication

Masticators would be used to grind and chip small diameter trees and brush to increase horizontal spacing of residual trees and remove ladder fuels.

Machine Piling

Bulldozers or grapple pilers may be used to pile small trees and brush for future burning. Piles will be a minimum of 25 feet from residual trees and free of soil to the greatest extent possible. Piles would be constructed at least 25 feet from any sensitive areas such as archaeological sites and all drainages. Piling would include all down logs and standing dead trees. Bulldozers may also be used to rehabilitate staging areas, skid trails, and landings by ripping to reverse the effects of soil compaction.

Ground-Based Extraction

If timber is harvested, it would be conducted on portions of USFS and/or BLM lands only using conventional logging equipment, which may include feller bunchers and rubber tire skidders. Existing landings along fuel breaks and roads would be used to minimize impacts where possible. Live trees up to 16 inches dbh would be removed if they are ladder fuels and/or if the desired shaded fuel break structure cannot be attained through the removal of smaller trees and brush alone.

On BLM lands, all potential timber and biomass would be assessed by BLM Forester and sold for highest and best use or disposal, at the discretion of the BLM, by use of BLM permit or contract. Trees deemed too small or defective for timber must be assessed for firewood or biomass use (biomass fuel, particle board, or other non-timber forest product). Whether or not the material is transported, the proponent would still estimate the total green tons cut, to be reported to the BLM.

1.3.2. Hand Treatments

Hand treatments include using chainsaws to cut brush and trees. Hand treatments would primarily be used on steep slopes (generally, slopes greater than 35 percent with pitches up to 40 percent) and other areas where equipment use is not appropriate or possible. Hand piles would be created for burning at a later time and the same buffers listed above would apply. If needed, hand lines would be created around burn piles to increase control over pile burning.

1.3.3. Pile Burning

Pile burning is proposed as a follow-up treatment and would be conducted in accordance with all state and federal laws including air quality regulations and a site-specific burn plan would be developed for the project.

1.3.4. Herbicide Treatments (USFS Lands Only)

On USFS lands only, future maintenance of recolonizing vegetation would be done with the herbicide glyphosate. Directed herbicide applications would target only brush species that could create ladder fuel into the overstory trees and/or high fuel loading within these areas. This would include most ceanothus species and other taller/sprouting species such as manzanita. Herbicides could be used up to three times over a 10-year period after implementation of the initial treatments and would be applied by hand.

1.3.5. Management Requirements and Design Criteria

The proposed treatments were developed by CAL FIRE and the STF, in accordance with the management direction contained in the Stanislaus National Forest Land and Resource Management Plan (STF LRMP; 1991), as amended. Incorporation of the applicable management requirements as design criteria are standard practice by STF to meet the goals and objectives for management of the Forest. While the proposed project also includes non-USFS lands, the project is being implemented as a cooperative effort. Therefore, the management requirements and design criteria identified by the STF would apply for the entire project and are incorporated into the project design. Additional management requirements and design criteria specific to actions on BLM lands are also included to address possible timber harvest on BLM lands. Standards and guidelines pertinent to resources with the potential to be affected by the project are presented below:

<u>Sensitive Wildlife Species</u>

General Special-Status Species

Notify the District wildlife biologist if any special-status species is discovered during project implementation so that protective measures can be applied, if needed.

Foothill Yellow-Legged Frog and Western Pond Turtle

1. Within 165 feet of Big Creek and 150 feet of Hell's Hollow Creek:

    a. Pre-implementation surveys by a qualified biologist shall be conducted within 14 days prior to all implementation activities or during the breeding season prior to implementation within the 165-foot buffer of Big Creek in the Long Shanahan Fuel Break.

    b. No equipment shall be allowed to cross Big Creek.

c. Hand felling, hand-piling, and end-lining may be conducted at any time once a qualified biologist confirms foothill yellow-legged frog (*Rana boylii*; FYLF) are not present. If FYLF are present, the aquatic biologist will consult with California Department of Fish and Wildlife (CDFW) on appropriate monitoring and protection requirements prior to operations beginning. No mechanical felling within the buffers.

d. Avoid working within the 165-foot buffer of Big Creek after the first major rains in the fall when FYLF, if present, may be moving upslope toward tributaries and overwintering sites. Work may resume within five days after.

e. Preference is to hand-pile and burn or end-line material. Burning will only take place when water is in the creek because FYLF and western pond turtles are very likely to be in aquatic habitats and away from burn piles when water is present. If hand-piling or end-lining are not practicable, mechanical piling equipment may be used, but only when water is in the creek. Limit the number of paths used by mechanical piling equipment to the minimum amount necessary to achieve the objective.

2. If FYLF or western pond turtle are observed within the project area, inform the project aquatic biologist of the sighting immediately and cease operations that may impact the animal. The frog will be allowed to leave the work area on its own. The aquatic biologist will notify CDFW within 24 hours if FYLF is found. No FYLF will be handled without first contacting CDFW.

California Mountain Kingsnake

1. Any California mountain kingsnake encountered in the project site during project activities will not be harassed and will be allowed to leave the area of its own accord. A qualified biologist may handle a snake in order to relocate it out of the project site.

Nesting Birds

1. Pre-implementation surveys for northern goshawk, great gray owl, and California spotted owl will be conducted by a qualified biologist prior to implementation when vegetation treatments are planned in suitable nesting habitat during the breeding season (see species specific dates below).

   a. For the northern goshawk, maintain a Limited Operating Period (LOP) prohibiting vegetation treatments within 0.25 miles of active nests during the breeding season (February 15 to September 15).

   b. For the great gray owl and the California spotted owl, maintain a LOP prohibiting vegetation treatments within 0.25 miles of active nests during the breeding season (March 1 to August 15).

c. The LOPs described above may be waived on a case by case basis if a biologist determines that breeding disturbance is unlikely to occur given the intensity, duration, timing, and specific location of the project activity.

2. Native birds and active nests that are discovered during the above-mentioned nesting bird surveys or during implementation will not be taken, possessed, or destroyed.

3. BLM Managed Lands: As feasible, project implementation on BLM lands will occur between September 16 to February 14 to avoid disrupting nesting birds or their nests during the breeding season. Should project activities occur on BLM lands during the breeding season (February 15 to September 15), a qualified biologist will first survey the project area for migratory birds. The surveys will be conducted within 14 days prior to implementation of the work. If the area surveyed has not been treated within 14 days, the area must be surveyed again. If birds protected under the Migratory Bird Treaty Act are found nesting in the project site, a 100-foot buffer will be established to avoid disturbance of the nests. The qualified biologist will mark sites to be avoided during vegetation removal or will be on-site during the work. Management requirements and design criteria applicable to the project for protecting raptors and other native birds will apply.

Special-Status Plants

1. Botanical surveys will be conducted during the appropriate blooming season prior to project implementation in suitable habitat that occurs in areas that were not included in the 2019 botanical surveys (e.g., private properties that did not grant permission to enter in 2019).

2. All known sensitive plant occurrences will be flagged for avoidance prior to project implementation. Notify the STF District botanist of any new sensitive plant occurrences discovered during project implementation.

3. Place all burn piles a minimum of 25 feet from known sensitive plant occurrences.

Riparian Conservation Areas and Jurisdictional Waters

1. Table 2 identifies mechanized equipment requirements.

2. No staging, fueling, maintenance, or cleaning of vehicles, equipment, or tools will take place inside a Riparian Conservation Area as defined in Table 2 below.

Noxious Weeds

1. Standard USFS contract provisions for equipment cleaning are applied to mechanized activities, including washing of heavy equipment prior to its arrival at the work site and following completion of work in known infested areas. This

serves to reduce the risk of import/export of weed propagules to/from the project site resulting in spread of existing weed populations. All heavy equipment brought to this project that leaves roads must be free of soil, mud (wet or dried), seeds, vegetative matter, or other debris that could contain seeds or propagules. Dust or light dirt is not a concern.

2. Flagged weed populations will be avoided by project activities where feasible, and, if unavoidable, the weeds will be treated prior to contract initiation. If practicable, burn piles will be placed in existing weed populations to reduce the risk of weed propagules being introduced to adjacent weed-free locations and to suppress the regrowth of weeds.

Table 2
OPERATING REQUIREMENTS FOR MECHANIZED EQUIPMENT OPERATIONS IN RIPARIAN CONSERVATION AREAS

Stream Type[1]	Zone	Width (feet)	MECH[2]	SKID[3]	Operating Requirements
PER/INT/SAF	Exclusion[4]	0-15	Prohibited	Prohibited	N/A
PER/INT/SAF	Exclusion	15-50	Allowed	Prohibited	N/A
PER/INT/SAF	Transition	15-50	Allowed	Prohibited	Remove operation-created debris from stream channels unless prescribed for resource benefit. Retain remaining obligate riparian shrubs and trees (e.g., willows, alder, aspen). Do not damage streambanks with equipment and retain sufficient vegetation to maintain streambank stability.
PER/INT/SAF	Transition	50-100	Allowed	Allowed	Use existing skid trails except where unacceptable impact will result. The number of crossings should not exceed an average of two per mile.
PER/SAF	Outer	100-300	Allowed	Allowed	Density and intensity of skid trails will gradually increase as distance increases from the Transition Zone.
INT	Outer	100-150	Allowed	Allowed	Density and intensity of skid trails will gradually increase as distance increases from the Transition Zone.
EPH	Exclusion[5]	0-15	Prohibited	Prohibited	N/A
EPH	Exclusion	15-25	Allowed	Prohibited	N/A
EPH	Transition	25-50	Allowed	Allowed	The number of crossings should not exceed an average of three per mile.

[1] **PER**=Perennial; INT=Intermittent; EPH=Ephemeral; SAF=Special Aquatics Features (lakes, meadows, bogs, fens, wetlands, vernal pools, and springs).
[2] **MECH**=Mechanical Harvesting or Shredding (low ground pressure track-laying machines such as feller bunchers and masticators).
[3] **SKID**=Skidding (rubber-tired skidders and track laying tractors).
[4] The exclusion zone for perennial/intermittent streams starts at: A. The edge of the active channel where slopes rise uniformly from the stream, or at the outer edge of the following features, whichever is the furthest from the stream. B. The first slope-break adjacent to the stream (e.g., stream bank, inner gorge). C. Flat or nearly flat ground adjacent to the channel (e.g., floodplain or terrace). D. Obligate riparian shrub and/or tree communities associated with any of the above. The exclusion zone for SAFs begins at: A. The outer edge of obligate trees, shrubs or herbaceous plants in wet meadows, bogs, fens and springs, or the high-water line of lakes and vernal pools. B. The top of the first slope-break immediately adjacent to the special aquatic feature if further than the obligate vegetation or high-water line.
[5] The exclusion zone for ephemeral streams begins at the edge of the channel where slopes rise uniformly or at the edge of the stream bank, whichever is furthest from the stream.

Cultural Resources

1. The following Standard Protection Measures from Appendices E and H of the 2013 Forest Service Region 5 Programmatic Agreement will be implemented for all cultural sites documented in the project site (resources of interest):

   Flag and Avoid:

   a. Property location conveyed to contractors and employees responsible for implementation; flag for avoidance/protection (Regional PA Standard Protection Measure E.1).

   b. All cultural properties within the Area of Potential Effects (APEs) shall be clearly delineated prior to implementing any associated activities that have the potential to affect historic properties. (1) Cultural property boundaries shall be delineated with coded flagging and/or other effective marking (Regional PA Standard Protection Measure E.1.3).

   c. Monitoring by Heritage Program Specialist required when work is required within cultural sites (Regional PA Standard Protection Measure E.1.5).

   d. Vegetation to be burned shall not be piled within the site boundary unless locations have been specifically approved by qualified Heritage Program staff (Regional PA Standard Protection Measure E.2.2(b)(1)(H)).

   e. Trees may be directionally felled away from flagged cultural properties.

2. In accordance with Appendix H.3.1(b) of the Regional PA, inventory efforts in areas of the project site of impenetrable brush or obscured visibility were deferred until after project implementation. As required by and in accordance with the Regional PA, after implementation and within one year of completion of the project activities, the STF will survey areas, determined to be warranted based on the area's historic property sensitivity, that have been cleared of the brush or that have improved visibility. The timing of the surveys will be based on the progress of the implementation in contingent locations so that new surveys can be grouped together as much as possible. The Field Operator will inform the STF Heritage Program Manager (HPM)/Delegated Heritage Program Staff (DHPS) of various stages of the project so that subsequent field work can proceed in a timely fashion.

3. Prior to project implementation in areas that were not included in the 2019 cultural resource surveys for the project (e.g., private properties that did not grant permission to enter in 2019), protocol-level cultural resource surveys will be conducted by a qualified archaeologist. Standard Protection Measures will apply for any resources that are located.

4. Should any previously unrecorded cultural resources be encountered during project implementation, all work will immediately cease in that area and the STF

HPM will be notified immediately. Work may resume after approval by the STF HPM providing any Standard Protection Measures are implemented. Should any cultural resources become damaged in unanticipated ways by project activities, the steps described in the Regional PA for inadvertent discoveries will be followed.

Noise

1. Except where the Field Operator has determined that no disturbance will result to the occupants of dwellings, the use of power equipment and machinery within 300 feet of an occupied structure will be restricted to between the hours of 7:00 a.m. and 7:00 p.m., and will be prohibited on Saturdays, Sundays, and nationally designated legal holidays. This requirement may be waived by the effected property owner(s).

Timber Harvest on BLM Lands

If a BLM Forester determines that a timber harvest is warranted on BLM-managed lands, the following design criteria will apply:

1. Skid Trails

    a. A designated trail network will be used for ground-based harvesting equipment. The network will incorporate existing skid trails over creating new trails and will consider proper spacing, skid trail direction and location relative to terrain and stream channel features. Old skid trails will not be opened or driven on without the approval of the Field Operator.

    b. Skid trails will be designated in locations that channel water from the trail surface away from waterbodies, floodplains, and wetlands, or unstable areas adjacent to them.

    c. Erosion control measures will be applied at skid trails and other disturbed areas with potential for erosion and subsequent sediment and silt delivery to waterbodies, floodplains, or wetlands. These practices may include mulching, water barring, tillage, and woody debris placement.

    d. Main skid trails will be blocked where they intersect roads and landings with an approved barricade and/or scattered slash to preclude off-highway vehicle use (OHV) use.

    e. Designated skid roads will be used to limit soil compaction to less than 12 percent of the project area.

    f. Skid trails will be located to minimize disturbance to coarse woody debris. Where skid trails encounter large coarse woody debris, either the log will be moved out of the way, or a section will be bucked out for equipment access. All sections will remain on site and as undisturbed as possible.

    g. Low psi, wide-track vehicles or one-pass operations (one round trip, in and out) will be required for all mechanical harvester (includes felling and

bunching) operations. For multiple passes, equipment must walk on at least 12 inches of slash for equipment greater than 6 pounds per square inch or at least 8 inches of slash for equipment less than 6 pounds per square inch. Mechanized equipment must be capable of reaching 20 feet.

h. Specific locations of logging operations must be approved by the STF HPM and BLM Archaeologist prior to skidding of material.

2. Landings and Hauling

   a. Existing landings and turnouts along fuel breaks and roads will be used to minimize impacts wherever possible, or at locations pre-approved by the STF HPM and BLM Archaeologist.

   b. During hauling operations, water will be applied when necessary to reduce dust and buildup of fine sediment that can enter into waterways. No surface water will be drafted for dust control

3. Restore Existing Roads

   a. Following completion of treatments, existing public and private gravel roads used for project activities would be restored to pre-project conditions. Contractors will be required to document existing conditions of gravel roads planned for project use prior to project initiation and will document restoration of these conditions following project completion.

4. Waterbars

   a. Spacing and construction of waterbars on skid trails and any other location deemed necessary by BLM will be based on gradient and erosion class in compliance with standard BLM guidelines.

   b. The following techniques will be used to construct waterbars:

      i. Open the downslope end of the waterbar to allow free passage of water.

      ii. Construct the waterbar so that it will not deposit water where it will cause erosion.

      iii. Compact the waterbar to prevent water from breaching the berm.

      iv. Skew waterbars no more than 30 degrees from perpendicular to the centerline of the trail or road.

1.4. Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]

The purpose of the project is to protect communities in Tuolumne County from wildfire and to minimize the spread of fires originating in developed areas while supporting fire resilient landscapes.

The shaded fuel breaks proposed in this project are needed to:

1. Reduce the threat of large, high severity wildfires to communities. These strategically placed fuel breaks would interrupt potential fire spread into the Wildland Urban Interface (WUI).

2. Provide treated areas with low fuel for fire crews to work from and more quickly stop fire spread.

3. Provide safer ingress and egress routes for the public and fire fighters during a fire.

4. Protect critical wildlife habitat and forests from wildfires.

1.5. Existing Conditions and Trends [24 CFR 58.40(a)]

Existing land uses in the project area include existing fuel breaks, roads, rural residences, timberlands, utility corridors, transportation corridors, and recreation. Land management in the project area includes federal (STF and BLM), State and local public lands (County of Tuolumne, Tuolumne Utilities District, California Department of Transportation [CAL TRANS], and San Francisco Public Utilities Commission), and private (Sierra Pacific Industries, Pacific Gas and Electric, and individual private landowners). The 2013 Rim Fire burned over 257,000 acres east of the project area. The proposed fuel breaks on Paper Cabin Ridge and Clements Road lie on the westernmost edge of the Rim Fire (Paper Cabin and Rim Truck East Fuel Breaks); the remainder of the proposed fuel breaks are 2 to 5 miles west of the Rim Fire burn area.

Land uses inside the project area are similar to those that surround it. Nearby towns include Mi-Wuk Village, Sierra Village, Confidence, Twain Harte, Tuolumne, Big Oak Flat, and Groveland. Major roads near the project site include Highway 108, Highway 120, Tuolumne Road, and Ferretti Road. Figure 1, Vicinity Map, depicts the locations of the nearby towns and major roadways.

The project covers approximately 1,808.4 acres, approximately 882.6 acres of USFS (STF) lands, 161.3 acres of BLM lands, 46.2 acres of State and local agency lands and/or easements, and 718.3 acres of private lands.

Vegetation in the project area is dominated by coniferous forests in the higher elevations, oak woodlands and grasslands in lower elevations, and montane chaparral in previously disturbed areas (existing fuel breaks) at all elevations.

The project area has experienced severe wildfires in the past. The 2013 Rim Fire burned more than 257,000 acres which devastated the landscape and local communities. It resulted in significant impacts to the local ranching community, threatened access to clean and drinkable water, disrupted the lives of thousands of people, and damaged air quality. The project is strategically located within the WUI to provide a defensible space for firefighting efforts and to interrupt the spread of a fire (USFS 2020; CAL FIRE 2018). Without implementation of the project, the ongoing risk

to the surrounding communities would worsen as the forests become increasingly stocked with fuels and the area lacks an effective mechanism to best control the spread.

2.0 Funding Information

Funding information for the project is presented in Table 3.

Table 3
FUNDING INFORMATION

Grant Number	HUD Program	Funding Amount
B-13-DS-06-0001	Community Development Block Grant Program National Disaster Resilience Competition (NDRC)	$70,359,459

2.1. Estimated Total HUD Funded Amount

The estimated total HUD funded amount is approximately $3,200,000.

2.2. Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]

No other funds available, total project costs: $3,200,000.

3.0 Environmental Effects

3.1. Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Table 4 presents an analysis of the project's compliance or conformance for each statute, executive order, and regulation listed at 24 CFR 50.4, 58.5, and 58.6.

Table 4
COMPLIANCE WITH 24 CFR 50.4, 58.5, AND 58.6 LAWS AND AUTHORITIES

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance Determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6		
Airport Hazards 24 CFR Part 51 Subpart D	Yes ☐ No ☒	The proposed project area is located in rural and forested areas of Tuolumne County. The nearest airport is the Pine Mountain Lake airport, a public airfield (Tuolumne County 2020), located approximately 2,000 feet west of the Rim Truck East fuel break. The proposed project is located along ridgetops that are a minimum of 2,000 feet away from any runway. 24 CFR Part 51 Subpart D does not apply to projects which do not result in new construction or emergency assistance which is provided to save lives, protect property, public health and safety or remove debris. The proposed project would not involve construction and is being implemented to create a defensible space to help protect property and lives from wildfire and to promote safety in the region. There would be no impact related to airport hazards.
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes ☐ No ☒	The Coastal Barrier Resources Act applies to designated areas along the Atlantic and Gulf coasts. There are no areas protected under the Act in California, where the project is located. Furthermore, the project is in the Sierra Nevada range and does not involve coastal areas. The project would have no impact on coastal barrier resources.
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes ☐ No ☒	The project does not involve mortgage insurance, refinance, acquisition, repairs, rehabilitation, or construction of a structure, mobile home, or insurable personal property. The proposed project consists of expanding existing fuel breaks by removing understory vegetation and small trees from within the fuel break alignment which is primarily situated along ridgelines. The project does not involve development or activities requiring flood insurance under the National Flood Insurance Program. The project would have no impact related to flood insurance.

Table 4 (cont.)
COMPLIANCE WITH 24 CFR 50.4, 58.5, AND 58.6 LAWS AND AUTHORITIES

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance Determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes ☐ No ☒	The project area is in the Tuolumne County portion of the Mountain Counties Air Basin (MCAB). The MCAB lies along the northern part of the Sierra Nevada range and encompasses El Dorado (western portion), Plumas, Sierra, Nevada, Placer (middle portion), Amador, Calaveras, Tuolumne, and Mariposa counties. Air Quality in Tuolumne County is under the regulatory jurisdiction of the Tuolumne County Air Pollution Control District (TCAPCD). Tuolumne County is a non-attainment area for the State and Federal ozone Air Quality Standards (California Air Resources Board [CARB] 2019; U.S. Environmental Protection Agency [USEPA] 2019). Currently, there are no required local attainment plans in Tuolumne County. The proposed project would not include the construction or conversion of land use. The proposed action would produce limited emissions from: (1) off-road motorized equipment used for the project treatments; (2) from vehicles used to transport personnel to and from the project area; and (3) smoke from pile burning and particulate matter from mechanical treatments. Sensitive receptors include people in proximity to areas being treated, such as residents of the private properties being treated and recreationists and workers using public lands. Emissions from off-road equipment and worker transport would be limited in duration and the associated emissions would cease once the work is complete. The BLM recently adopted a Programmatic Environmental Assessment for Hazard Removal and Vegetation Management Projects in 38 counties throughout California, including Tuolumne, which analyzed the environmental effects of treatments including off-road equipment operation, timber harvest and biomass removal (BLM 2019a). As noted in the discussion of air quality/greenhouse gases (GHG), the mechanical equipment used in these treatments would need to be in operation for

Table 4 (cont.)
COMPLIANCE WITH 24 CFR 50.4, 58.5, AND 58.6 LAWS AND AUTHORITIES

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance Determinations
		thousands of hours before de minimis thresholds for criteria pollutants would be exceeded. Potential effects to air quality from pile burning could range from a minimal reduction in visibility to potential pneumonic irritation, as well as the smell of smoke affecting people in proximity to the project area when such treatments are underway. However, the duration of these effects is expected to be short with the greatest impact occurring during the actual ignition or active burning phase and lasting from one to a few days depending on the size or number of piles to be ignited. Effects to air quality from mechanical treatments and wood cutting would be dominated by airborne particulate matter generated during the operation of mechanical equipment and transport vehicles and could temporarily reduce visibility in the immediate project area; however, these impacts would quickly dissipate upon the completion of operations. Potential air quality impacts would be monitored and controlled through existing regulatory processes. A site-specific burn plan would be developed in accordance with all federal and State regulations, and a burn/smoke permit from the TCAPCD will be obtained. The TCAPCD Rule 302 (Burning Permits), Rule 303 (Burn or No-Burn Day), and Rule 307 (Wildland Vegetation Management Burning) would apply, as would California Code of Regulations Title 17 Subchapter 2 (Smoke Management Guidelines for Agricultural and Prescribed Burning). Mandatory compliance with rules and regulations would ensure project related emissions fall below TCAPCD thresholds (B. Sandman, TCAPCD Deputy Air Pollution Control Officer, personal communication via phone on January 21, 2020). Mechanical treatments causing temporary short-term impacts from dust and exhaust emissions would be very short-lived. Cooperation with the TCAPCD, and the temporary nature of the work would avoid long term air quality impacts. Emissions from the proposed project would be

Table 4 (cont.)
COMPLIANCE WITH 24 CFR 50.4, 58.5, AND 58.6 LAWS AND AUTHORITIES

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance Determinations
		below de minimis levels and therefore in compliance with the Clean Air Act. The smoke from large wildfires can contribute to reduced air quality in the region. CARB's Wildfire Program notes that wildfire smoke impacts communities across the State and provides guidance for protecting yourself from exposure to smoke from wildfires (CARB 2018). By providing fuel reduction in the project area and improved opportunities for fire fighters to control the spread of wildfires, the project may contribute to an overall benefit associated with air quality by helping to reduce the intensity and spread of wildfires in the area.
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes ☐ No ☒	The proposed project is located in the Sierra Nevada in Tuolumne County. No portion of the County or the mountain range in which the project is located are within 100 yards of a coast (Coastal Zone as described in the California Coastal Act Public Resources Code Section 30103; California Coastal Commission 2020).
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes ☐ No ☒	No contamination sites exist within or near the project area. The Cortese list by the California Environmental Protection Agency includes only one site in Tuolumne County, which is not located in the project area (DTSC 2019). The project will not affect a hazardous materials site.
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes ☐ No ☒	A Biological Technical Report (BTR) was prepared for the project to evaluate potential effects on biological resources, including species protected under the Endangered Species Act, in the project site (HELIX 2020; Appendix A). The evaluation included a review of databases for regionally occurring species with the potential to be affected by the project, and surveys. HELIX biologists found no potential for threatened or endangered species to occur in the project site or be affected by the project. The project would have no effect on threatened or endangered species or critical habitat.
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes ☐ No ☒	The project is located in a rural area, and above ground propane tanks are common. Propane is defined as a hazardous gas pursuant to 24 CFR 51.201 (Appendix I to Subpart C of Part 51). The proposed project to expand existing fuel breaks would not involve any

Table 4 (cont.)
COMPLIANCE WITH 24 CFR 50.4, 58.5, AND 58.6 LAWS AND AUTHORITIES

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance Determinations
		development, construction, or rehabilitation that would increase residential densities or conversion, nor does it include a facility that stores, handles or processes flammable or combustible chemicals. Therefore, the project would not result in inhabited structures being placed near explosive and flammable hazards. The project would not create a hazard to the public through the routine transport, use, or disposal of hazardous materials. All hazardous materials used for equipment or pile burning would be disposed of in accordance with applicable federal, State and local requirements. Piles would be located an appropriate distance from propane storage tanks and other structures, as specified in the Burn Permit for the project. The project would be in compliance with regulations pertaining to explosives and flammable hazards.
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes ☐ No ☒	The proposed project consists of expanding existing fuel breaks by removing understory vegetation and small trees and would not result in any activities that could convert agricultural land to nonagricultural uses. The project would not affect farmlands protection.
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes ☐ No ☒	Executive Order 11988 applies to Floodplain Management. Floodplains are found along stream channels throughout the project area; however, project activities would not have an adverse impact on floodplains. The proposed project would include certain methods of vegetation removal through thinning and pile burning could result in limited soil erosion. Those effects would be minimal due to the minimal ground disturbance associated with the proposed activities. The project would comply with all measures set forth in the Stanislaus National Forest Land and Resource Management Plan (STF LRMP; USFS 1991, as amended) to avoid the potential for significant soil erosion. Additional measures would be implemented on BLM lands in compliance with the BLM's Sierra Resource Management Plan (BLM 2007, 2008) to avoid the potential for soil erosion associated with timber harvest activities, if implemented. The intent of Executive Order 11988 would be met since this project would not affect floodplains.

Table 4 (cont.)
COMPLIANCE WITH 24 CFR 50.4, 58.5, AND 58.6 LAWS AND AUTHORITIES

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance Determinations
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes ☐ No ☒	As a federally funded undertaking that would take place on lands administered by the STF and the BLM, the project requires compliance with Section 106 of the National Historic Preservation Act (Section 106). Because the majority of Federal lands within the fuel breaks are administered by the STF, the BLM and HCD have designated the STF as the lead Federal agency for the entire undertaking. Through consultation with the State Historic Preservation Officer, the STF determined that *Amendment #1: Programmatic Agreement Among the U.S.D.A. Forest Service, Pacific Southwest Region (Region 5), California State Historic Preservation Officer, Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Processes for Compliance With Section 106 of the National Historic Preservation Act For Management of Historic Properties By the National Forests of the Pacific Southwest Region (Region 5)* was the appropriate agreement for the STF to use in order to satisfy the requirements of Section 106 for all lands involved in the undertaking. As lead agency, the STF provided site location data and determined the appropriate survey and reporting requirements for the project's cultural resources assessment. In addition, all formal Native American consultation for the project was conducted directly between the STF and local tribes, including the Chicken Ranch Rancheria of Me-Wuk Indians and the Tuolumne Band of Me-Wuk Indians. An evaluation of cultural resources was prepared by Clarus Backes, Registered Professional Archaeologist, of HELIX Environmental Planning, Inc. (Backes 2020). The scope of work included a records search at the Central California Information Center at California State University, Stanislaus to identify previous survey coverage and documented resources within the project site, Native American coordination, pedestrian surveys, and preparation of a report. The Native American Heritage Commission (NAHC) was contacted by written request for a

Table 4 (cont.)
COMPLIANCE WITH 24 CFR 50.4, 58.5, AND 58.6 LAWS AND AUTHORITIES

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance Determinations
		Sacred Lands File Search. A NAHC Contacts List dated June 27, 2019 was received. Inquiry letters prepared by Mr. Backes, dated July 9, 2019, were sent to the individuals included on the list. The inquiry letters included a description of the project, its location, and a map of the project area. No responses were received in regard to the request for information. The records search identified 42 previously recorded sites considered to be resources of interest. Intensive field inventories in areas of the project site not previously surveyed or where the previous surveys were inadequate were conducted HELIX archaeologists between July 2, 2019 and December 12, 2019. A total of 762.3 acres of the APE had been adequately surveyed, 558.9 acres were covered during the intensive survey conducted in 2019, and 631.7 acres were unable to be surveyed due to steep slopes, impenetrable vegetation, or poor visibility, or because landowners had not granted access to the survey crews. Thirteen new heritage resource sites were located and documented and are considered potentially eligible for the National Register of Historic Places; as such they are resources of interest that will be protected through the application of Standard Protection Measures. Specific site information and protection measures developed during the study are available on a need-to-know basis and are kept in a project-associated confidential file. Standard Protection Measures would be implemented for each site. The measures include flagging sites for avoidance and protection, monitoring by heritage program specialist, directional felling of trees away from cultural features during prescribed burns, and staging burn piles outside of archaeological site boundaries. HCD will verify that the flagging has been completed. Areas of the site where inventories were deferred due to impenetrable vegetation or obscured visibility would be surveyed within one year of completion of the project activities, based

Table 4 (cont.)
COMPLIANCE WITH 24 CFR 50.4, 58.5, AND 58.6 LAWS AND AUTHORITIES

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance Determinations
		on the historic property sensitivity of the area. If previously undiscovered historical resources are encountered during project activities, the resources would be avoided through coordination with the STF HPM, and Standard Protection Measures would apply. The STF HPM issued a letter dated February 12, 2020, with a recommendation of no effect on the resources, as well as noting that as lead agency for Section 106 compliance, the project is certified as having met all stipulations of the Regional PA and therefore has complied with Section 106 of the National Historic Preservation Act (refer to Appendix B for the letter). No adverse effects would occur to historical resources, and the project would be in compliance with the National Historic Preservation Act.
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes ☐ No ☒	The proposed project is in a rural/forested area and project activities are not a “noise sensitive use” under HUD regulations. The project area is not considered to be urban, however, several of the treatment areas occur on or near private properties with residences. Sensitive receptors include the residents on private properties and recreational users near active treatment areas. During the treatment activities, there would be temporary noise increases from the use of mechanical mastication and piling equipment, chainsaws, chippers, pole saws, and hand tools. In addition, temporary noise increases may occur from the use of mechanical timber harvesting equipment on BLM and USFS lands only (e.g., harvesters, skidders, processors, and log loaders). The noise increases would be for only the duration of the work and would vary depending on the treatment activity’s location and the equipment being used. The County does not have an adopted noise ordinance; however, project activities would conform with the temporary construction noise policy outlined in the County General Plan (General Plan Policy 5.A.5; Tuolumne County 2018). Activities within 300 feet of residences would be limited to the daytime hours (7:00 a.m. to 7:00 p.m. weekdays) when people are less sensitive to

Table 4 (cont.)
COMPLIANCE WITH 24 CFR 50.4, 58.5, AND 58.6 LAWS AND AUTHORITIES

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance Determinations
		noise. Any contractor will be required to comply with all applicable noise and occupational safety standards as defined in the contract specifications, and to protect workers and other persons from the health effects of increased noise levels from the use of equipment. With conformance to these noise standards the proposed project would have a less than significant noise impact.
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes ☐ No ☒	No sole source aquifers occur in the project area. The USEPA interactive map of sole source aquifer locations were reviewed on January 28, 2020 (USEPA 2020). The project is located in Tuolumne County and the nearest sole source aquifer is located in Madera County, approximately 20 miles southeast of the nearest fuel break. The project would not affect a sole source aquifer.
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes ☐ No ☒	The BTR prepared for the proposed project analyzed wetland impacts (HELIX 2020). Four perennial streams and numerous seasonal streams are present in the project area and off-channel stock ponds are also present. Perennial and seasonal streams are under U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) jurisdiction. Riparian vegetation in and along streams is regulated by California Department of Fish and Wildlife (CDFW). Off-channel stock ponds are not regulated by the USACE or CDFW but may be regulated by the RWQCB. The project incorporates design criteria that avoid and minimize impacts to waterways, including equipment restriction zones. The project would not result in placement of fill or alteration of the aquatic habitats in the project area and would not require permits from the USACE, RWQCB or CDFW. Work is not proposed within any wetlands or jurisdictional waters.
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes ☐ No ☒	The Tuolumne River is designated as a Wild and Scenic River from its source to the Don Pedro Reservoir, and the STF is the managing agency for the segment through the project area (National Wild and Scenic Rivers System 2020). The Paper Cabin and Rim Truck East Fuel Breaks are located on ridgelines over the river, with the Paper Cabin Fuel Break approximately

Table 4 (cont.)
COMPLIANCE WITH 24 CFR 50.4, 58.5, AND 58.6 LAWS AND AUTHORITIES

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance Determinations
		700 feet from the river at its closest point. Treatment activities may be visible from a small portion of the Wild and Scenic Tuolumne River, but proposed activities would create very minor disturbance to vegetation and soils and nothing that would be visible beyond the implementation phase. The project also includes best management practices and management requirements that will protect riparian areas that are tributaries to the river, eliminating potential impacts from treatment activities on water quality. The project would have no adverse impact on the Wild and Scenic Rivers value. Overall, the project would potentially benefit the Tuolumne River and its Wild and Scenic values by reducing the risk of a high-severity fire moving into the canyon from communities. High severity fire has the potential to cause severe erosion and adverse effects to water quality and this project is designed to protect the river and its special values. No mitigation is required for work performed within one mile of the river. Maria Benech, Rim Restoration Coordinator, STF, provided concurrence with the findings in an e-mail dated January 30, 2020 (refer to Appendix C for the e-mail).
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes ☐ No ☒	The proposed project would not lead to higher concentrations of low-income persons or place low-income families into areas that are unhealthy. The proposed project may help protect low income persons and communities from wildfire.

3.2. Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]

Table 5 presents the qualitative and quantitative impact determinations of the effects of the proposal on the character, features and resources of the project area. Each environmental assessment factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted.

Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

Impact Codes:

(1) Minor beneficial impact

(2) No impact anticipated

(3) Minor Adverse Impact – May require mitigation

(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Table 5
ENVIRONMENTAL ASSESSMENT FACTORS [24 CFR 58.40; REF. 40 CFR 1508.8 & 1508.27

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	The proposed project would consist of developing a series of shaded fuel breaks to protect communities in Tuolumne County from wildfire and to minimize the spread of fires originating in developed areas while supporting fire resilient landscapes. The project would have no impact on existing land use plans or zoning.
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	3	Operation of equipment, such as masticators and tractors, has the potential to result in some ground disturbance, but equipment would only be used on slopes less than 35 percent, with pitches up to 40 percent, and methods would be chosen and used solely or jointly based on changing topography and site-specific conditions. Operating requirements for the project outline mechanical equipment operation restrictions within 300 feet of a stream, including prohibiting staging, fueling, maintenance or cleaning of vehicles, equipment, or tools within the buffer. Existing crossings would be used, and equipment would not be operated in water. In addition, existing landings and skid trails would be used to minimize ground disturbance. If necessary, new landings and skid trails would be sited to minimize ground disturbance and the potential for erosion and siltation, and erosion control measures would be installed in accordance with USFS standard specifications (STF LRMP; USFS 1991, as amended), and as specified for BLM lands in the project description. Soil erosion and sedimentation and other effects on water quality as a result of the project would be negligible. No mitigation associated with soil suitability, slope, erosion, drainage, or storm water runoff would be required. The project may have a beneficial effect on erosion and water quality in the region. Implementation of the project would allow opportunities to control the spread of wildfires, and would reduce the risk of high severity wildfires which may cause erosion and adversely affect water quality.

Table 5 (cont.)
Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 & 1508.27

Environmental Assessment Factor	Impact Code	Impact Evaluation
Hazards and Nuisances including Site Safety and Noise	3	The purpose of the project is to develop a series of shaded fuel breaks to protect communities in Tuolumne County from wildfire and to minimize the spread of fires originating in developed areas while supporting fire resilient landscapes. In this regard the proposed project would be beneficial and reduce hazards and promote safety in the region. The project would not create a hazard to the public through the routine transport, use, or disposal of hazardous materials. All hazardous materials used for equipment or pile burning would be disposed of in accordance with applicable federal, State and local requirements. The project would not require soil excavation or structures associated with hazardous materials sites. The project would not include road closures or generate substantial traffic that would create a hazard. Temporary lane closures could occur along rural roads, however, the implementation would not interfere with any adopted emergency response or evacuation plan. Several of the treatment areas occur on or near private properties with residences. During the treatment activities, there would be temporary noise increases from the use of power tools, equipment, and other non-powered hand-tools. Sensitive receptors include the residents on private properties and recreational users near active treatment areas. During the treatment activities, there would be temporary noise increases from the use of mechanical mastication and piling equipment, chainsaws, chippers, pole saws, and hand tools. The noise increases would be for only the duration of the work and would vary depending on the treatment activity's location and the equipment being used. The County does not have an adopted noise ordinance; however, project activities would conform with the temporary construction noise policy outlined in the County General Plan (General Plan Policy 5.A.5; Tuolumne County 2018). Activities within 300 feet of residences would be limited to the daytime hours (7:00 a.m. to 7:00 p.m. weekdays) when people are less sensitive to noise. Any contractor will be required to comply with all applicable noise and occupational safety standards as defined in the contract specifications, and to protect workers and other persons from the health effects of increased noise levels from the use of equipment. The anticipated noise from this activity would be negligible, and the project incorporates specifications which would prevent nuisances associated with noise. No mitigation associated with hazards, site safety, or noise would be required.
Energy Consumption	3	While implementation activities would result in the temporary consumption of energy resources in the form of vehicle and equipment fuels (gasoline and diesel fuel), such consumption would be incidental and temporary and would thus not have the potential to have a significant impact on energy consumption. No mitigation associated with energy consumption would be required.

Table 5 (cont.)
Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 & 1508.27

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns	1	Section 3 of the HUD Act of 1968 requires that wherever HUD financial assistance is expended for housing or community development, to the greatest extent feasible, economic opportunities will be given to residents and businesses in areas receiving certain types of HUD financial assistance (low-income residents and businesses owned and/or employing low-income residents). The project would be subject to Section 3 of the Act which would benefit employment and income patterns in the region.
Demographic Character Changes, Displacement	1	Implementation of the proposed project would result in a beneficial impact from a reduced potential for displacement from wildfires in the region.
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	1	The proposed project would not involve the modification of any educational or cultural facility. The proposed project has the potential to benefit educational and cultural facilities through reducing wildfire threats to these facilities. No adverse impacts would occur.
Commercial Facilities	1	The proposed project would not involve the modification of any commercial facility. The proposed project has the potential to benefit commercial facilities through reducing wildfire risk to these facilities. No adverse impacts would occur.
Health Care and Social Services	2	The proposed project would have no impact on health care and social services.
Solid Waste Disposal / Recycling	2	The proposed project would have no impact on solid waste disposal/recycling.
Waste Water / Sanitary Sewers	2	The proposed project would have no impact on wastewater or sanitary sewers.
Water Supply	2	The proposed project would have no impact on water supply.
Public Safety - Police, Fire and Emergency Medical	1	The purpose of the project is to develop a series of shaded fuel breaks to protect communities in Tuolumne County from wildfire and to minimize the spread of fires originating in developed areas while supporting fire resilient landscapes. In this regard the proposed project would aid in promoting public safety and the safety of fire fighters through creating a safer defensible space to fight fire.
Parks, Open Space and Recreation	3	The proposed action could have negligible short-term impacts on recreational use. Recreationists and motorists on designated routes might be inconvenienced temporarily during project implementation due to the noise and dust caused by cutting and chipping fuels, and the use of the roads in the area by project-related vehicles. Recreationists would continue to use the project area after the proposed action is implemented with no additional inconvenience.
Transportation and Accessibility	3	The proposed project may include temporary lane closures on rural roads. The proposed project would not conflict with any transportation plan, ordinance or policy. Encroachment permits would be required prior to working within a County or CAL TRANS right-of-way. The project would not result in inadequate emergency access or create design hazards, the project would not have a significant impact on transportation.

Table 5 (cont.)
Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 & 1508.27

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	3	The proposed project would be located on ridgelines on rural private and public properties. The proposed project would involve vegetation clearance and any impact to unique natural features would be negligible. The BTR prepared for the proposed project analyzed impacts to water resources (HELIX 2020). Four perennial streams and numerous seasonal streams are present in the project site and off-channel stock ponds are within the project site. Perennial and seasonal streams present in the project site are under USACE and Regional Water Quality Control Board RWQCB jurisdiction. Off-channel stock ponds are not regulated by the USACE or CDFW but may be regulated by the RWQCB. The project incorporates design criteria that avoid and minimize impacts to waterways, including equipment restriction zones. The operating requirements for the project outline mechanical equipment operation restrictions within 300 feet of a stream. Impacts to unique natural features and water resources as a result of the project would be negligible.
Vegetation, Wildlife	3	Potential impacts to wildlife and vegetation were analyzed by biologists for the proposed project in the BTR prepared for the project (HELIX 2020). The project incorporates management requirements and design criteria to avoid impacts to sensitive species of wildlife, and nesting birds, and to prevent the spread of invasive species. Impacts to wildlife, nesting birds, and vegetation would be negligible, and no mitigation would be needed. The project would be in compliance with the Migratory Bird Treaty Act.
Other Factors: Greenhouse Gases and Climate Change	1	As described under Clean Air in Table 4, the proposed action would produce limited emissions from: (1) off-road motorized equipment used for the project treatments; (2) from vehicles used to transport personnel to and from the project area; and (3) smoke from pile burning and particulate matter from mechanical treatments. Emissions from off-road equipment and worker transport would be limited in duration and the associated emissions would cease once the work is complete. Pile burning would be conducted in accordance with State, federal and local regulations as described under Clean Air in Table 4. Emissions generated by the project would not result in substantial emissions and no impact to climate change would occur. Furthermore, wildfires can be a source of carbon dioxide emissions that contribute to GHGs. While emissions from wildfires vary depending on the severity and frequency of the fires, changes in the fire severity and frequency can also lead to net changes in atmospheric carbon dioxide (Wiedinmyer and Neff 2007). The proposed project would reduce fuels in the project area and provide improved opportunities for fire fighters to control the spread of wildfires through the area which may contribute to an overall beneficial effect on GHGs and climate change.

4.0 Additional Studies Performed

- Biological Technical Report, HELIX Environmental Planning, Inc., 2020
- Cultural Resources Management Report, HELIX Environmental Planning, Inc., 2020
- Environmental Assessment, Bureau of Land Management 2020
- Decision Memo, US Forest Service 2020

5.0 Field Inspections

Biological surveys were conducted by HELIX biologists on the following dates in 2019:

- May 9 and 10
- June 3 through 7
- July 10 and 11

Cultural surveys were conducted by HELIX archaeologists between July 2 and December 12, 2019.

6.0 List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]

- Bureau of Land Management
  - Brenneman, Beth; Botanist
  - Brown, Ann-Sheree; Archaeologist
  - Kawahara, Monty; Forester
  - Jones, Jeffery; Wildlife Biologist
- Central California Information Center
- California Department of Forestry and Fire Protection
  - Frese, Adam; Tuolumne-Calaveras Unit Forester
- HELIX Environmental Planning, Inc.
  - Backes, Clarus; R.P.A. Senior Archaeologist
  - Stringer, Stephen; Principal Biologist

- Sierra Nevada Conservancy
  - Vander Kolk, Elliott; NDRC Forest and Watershed Health Program Coordinator
  - Williams, Andrea; Reimbursements Program Coordinator
- State Historic Preservation Officer
- Tuolumne County Air Pollution Control District
  - Sandman, Bill; Deputy Air Pollution Control Officer
- U.S. Forest Service
  - Benech, Maria; Rim Restoration Coordinator, Stanislaus National Forest
  - Holdeman, Steve; Forest Aquatic Biologist, Stanislaus National Forest
  - Kalinowski, Ryan; Forest Wildlife Biologist, Stanislaus National Forest
  - Strain, Kathy; Forest Heritage Resource and Tribal Relations Program Manager, Stanislaus National Forest

7.0 List of Required Permits

- Burn Permit from the TCAPCD
- Encroachment permit from CAL TRANS for work in CAL TRANS right-of-way
- Encroachment permit from Tuolumne County Department of Public Works for work in County right-of-way

8.0 Public Outreach [24 CFR 50.23 & 58.43]

The NDRC Partners have undertaken an extensive public outreach program as part of the NDRC Forest Health and Watershed Program. Meetings have been held with various stakeholders since 2016 and the project has been presented to stakeholders and interested members of the public as part of the overall Forest Health and Watershed Program. Initial feedback was sought from the Yosemite Stanislaus Solutions (YSS) Collaborative Group and the Stanislaus National Forest Annual Grazing Permittees starting on March 17 and 22, 2017, respectively. The Program was presented to the Tuolumne County Board of Supervisors and members of the public for the first time on May 2, 2017. Public meetings were hosted in cooperation with the USFS on June 13 and 14, 2017 to present the Program and to seek feedback on locations in Sonora and Groveland, respectively. This project has continued to be discussed with these groups and others including the Tuolumne Band of Me-Wuk

Indians at least annually. YSS receives a briefing at their meetings every other month, the Tuolumne Board of Supervisor's Natural Resource Committee receives an update at their monthly meetings and the Tuolumne Band of Me-Wuk Indians have been contacted as the project has progressed toward implementation.

All property owners have been coordinated with regarding permissions to access their land and to ensure they understand the proposed treatments. Coordination is ongoing.

9.0 Cumulative Impact Analysis [24 CFR 58.32]

The proposed action is implemented in accordance with the management direction contained in the STF LRMP, which has the objective to protect environmental resources. The proposed project would have negligible negative impacts on the environment and would not contribute to a cumulatively considerable impact.

The project consists of a series of linear shaded fuel breaks, which would be implemented in conjunction with similar projects in the region. The proposed project is part of the Forest and Watershed Health Program which will include additional efforts to reduce fuels from forests in Tuolumne County on up to 4,600 acres. In addition, the USFS and BLM have ongoing efforts to implement fuel breaks and fuels reduction projects in the watershed, including the approximately 220-acre Wagner Ridge Fuel Break Watershed Protection Project in northern Mariposa County (which would be continuous with or nearly continuous with the proposed project; BLM 2019b). While ongoing and future activities in the area, including non-federal actions, would be implemented in the region, all projects would be implemented in accordance with State and federal regulations. There is not at present a better way to reduce dense understory vegetation that would have been reduced by wildfire in the past, before intense fire suppression was practiced. The proposed action is expected to have a beneficial cumulative impact on wildfire suppression in the area, especially with planned long-term maintenance of the treatment area.

10.0 Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]

Two alternatives to the proposed action were considered: (1) Maintain Existing Fuel Breaks Alternative; and the (2) No Action Alternative. The purpose of the project is to protect the communities in Tuolumne County and to minimize the spread of wildfire from developed areas by developing fuel breaks in the WUI. Furthermore, the proposed action would employ the treatments necessary to achieve the desired density for the shaded fuel breaks. Therefore, no alternatives at other locations or design modifications to reduce the environmental effects were considered.

10.1. Maintain Existing Fuel Breaks Alternative

The alternative to Maintain Existing Fuel Breaks was considered but rejected from further consideration. Current recommendations by fire professionals are for a minimum 300-foot-wide fuel break which is more effective than the conventional 200-foot-wide fuel break at providing protection from catastrophic wildfires. Maintaining the existing

fuel breaks would not achieve the minimum 300-foot-wide fuel break along its entirety and would not achieve the project objectives of providing fire fighters with effective treated areas to control future wildfires, adding protection for communities and reducing the impacts of future wildfires on forests and watersheds. The purpose of the project to develop strategically placed fuel breaks to interrupt the spread of wildfire would not be met.

10.2. No Action Alternative [24 CFR 58.40(e)]

Under the No Action alternative, the proposed treatments would not be implemented to create the shaded fuel breaks. Fuels would continue to build up in the WUI, increasing the likelihood of a high severity fire, and deterring the goals of this project to create a defensible space that could interrupt wildfire through the WUI and provide a safer space for fire-fighting efforts, and to promote fire resiliency. Ladder fuels could carry wildfire into the tree canopy creating crown fire conditions. These conditions could be devastating to the environment, not to mention lives and property. Without the treatment, even a low intensity surface fire has the potential to move into the canopy of larger conifers, potentially killing these trees and causing a relatively small fire to intensify and grow into a catastrophic crown fire. The potential would remain for a catastrophic fire to cut off access for emergency responders and evacuees endangering the health and safety of the local communities.

The No Action Alternative would not result in direct impacts to environmental resources, including air quality, GHG, biological, and cultural. However, if a fire were to occur within the project area during a high fire season it would likely move into the upper story, creating a crown fire and burning virtually all the trees and vegetation. The result could be a larger wildfire that would have a greater impact on forest health, and adjacent properties. A catastrophic wildfire would remove large areas of vegetation, leading to increased erosion and very limited habitat and forage for wildlife, as well as increased impacts to air quality and GHG emissions. Implementation of the proposed action would help create a larger defensible space that provides safer areas for firefighting and fuel reduction operations within the WUI zones near communities of Tuolumne County.

11.0 Summary of Findings and Conclusions

Based on the analyses presented in this document, the proposed project would have negligible negative impacts on the environment and would be in compliance with the authorities and factors evaluated in Section 3.0, Environmental Effects, with no mitigation required. The project would not result in a cumulatively considerable impact on the environment.

The proposed project would be implemented in accordance with the management direction contained in the STF LRMP, which has the objective to protect environmental resources. As previously mentioned, the project would benefit the communities near the WUI zones by creating a larger defensible space that provides safer areas for fire-fighting and fuel reduction operations. The treated areas could interrupt wildfire and promote wildfire resiliency while preventing or lessening the effects of a catastrophic

wildfire on wild and scenic rivers, watershed health, air quality, GHG and climate change. The project would also provide opportunities for temporary employment and income benefits, as well as reducing the potential for displacement associated with a catastrophic wildfire.

12.0 Mitigation Measures and Conditions [40 CFR 1505.2(c)]

There are no required mitigation measures.

13.0 Determination

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: Catherine E Silvester Date: 03/17/2020

Name/Title/Organization: Catherine Silvester, Senior Environmental Project Manager

HELIX Environmental Planning, Inc.

Certifying Officer Signature: Date: 3/23/2020

Name/Title: Janice Waddell, Federal Programs Branch Chief

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

14.0 References

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Benech, M. 2020. Rim Restoration Coordinator, U.S. Forest Service Stanislaus National Forest. Personal communication vial e-mail in which Ms. Benech provided concurrence to a no effect finding regarding Wild and Scenic Rivers. E-mail to

Patrick Talbott, Grants Management NDRC Representative, State of California Department of Housing and Community Development, dated January 30, 2020.

Sandman, B. 2020. Tuolumne County Air Pollution Control District Deputy Air Pollution Control Officer. Personal communication via telephone with V. Ortiz, Senior Air Quality Specialist, HELIX, in which Mr. Sandman provided direction regarding level of air quality analysis required for project – no quantitative analysis is needed. Phone conversation January 21.

15.0 Preparers

David W. Claycomb, AICP, Principal-In-Charge, HELIX Environmental Planning, Inc.

Catherine Silvester, Senior Environmental Project Manager, HELIX Environmental Planning, Inc.

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Appendix A

Biological Resources Technical Report Executive Summary

The full report is available for review.
Request by phone: 916-263-2297; or by e-mail: CA-NDRC@hcd.ca.gov

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NDRC Fuel Breaks Project

Biological Resources Technical Report

March 2020 | HCD-01

Prepared for:

Department of Housing and Community Development
Sierra Nevada Conservancy
U.S.D.A. Forest Service – Stanislaus National Forest
D.O.I. Bureau of Land Management

Prepared by:

HELIX Environmental Planning, Inc.
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NDRC Fuel Breaks Project

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March 2020 | HCD-01

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ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
BCC	Bird Species of Conservation Concern
BLM	Bureau of Land Management
BLMS	Bureau of Land Management Sensitive
BTR	Biological Resources Technical Report
CAL FIRE	California Department of Forestry and Fire Protection
Cal-IPC	California Invasive Plant Council
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife/California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRLF	California red-legged frog
CRPR	California Rare Plant Rank
CWA	Clean Water Act
CWRP	Community Watershed Resilience Program
dbh	diameter at breast height
EPA	U.S. Environmental Protection Agency
EPH	ephemeral
F	Fahrenheit
FESA	Federal Endangered Species Act
FP	State Fully Protected
FSS	U.S. Forest Service Sensitive
FT	FESA Threatened
FYLF	foothill yellow-legged frog
HCD	California Department of Housing and Community Development
HELIX	HELIX Environmental Planning, Inc.
HHERA	Human Health and Ecological Risk Assessment
HUC	Hydrological Unit Code
HUD	U.S. Department of Housing and Urban Development
INT	intermittent
LOP	Limited Operating Period

ACRONYMS AND ABBREVIATIONS (cont.)

MBTA	Migratory Bird Treaty Act
MECH	Mechanical Harvesting or Shredding (low ground pressure track-laying machines such as feller bunchers and masticators)
NDRC	National Disaster Resilience Competition
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
NRIS	Natural Resource Information System
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PAC	Protected Activity Center
PER	perennial
RCA	Riparian Conservation Area
RWQCB	Regional Water Quality Control Board
SAF	Special Aquatic Feature
SCE	CESA Candidate Endangered
SE	CESA Endangered
SKID	Skidding (rubber-tired skidders and track laying tractors)
SNC	Sierra Nevada Conservancy
SSC	Species of Special Concern
ST	CESA Threatened
STF	Stanislaus National Forest
STF LRMP	Stanislaus National Forest Land and Resource Management Plan
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WL	Watch List
WQC	Water Quality Certification

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EXECUTIVE SUMMARY

Under contract with the Department of Housing and Community Development (HCD), HELIX Environmental Planning, Inc. (HELIX) prepared this Biological Resources Technical Report (BTR) for the National Disaster Resilience Competition (NDRC) Fuel Breaks Project (proposed project). The project is being implemented under the Community Watershed Resilience Program (CWRP) which is funded by the U.S. Department of Housing and Urban Development (HUD). The CWRP consists of activities to assist in community recovery efforts from the 2013 Rim Fire and building resiliency to future disasters.

The project is being conducted under the oversight of HCD and the Sierra Nevada Conservancy (SNC). The U.S. Forest Service (USFS) Stanislaus National Forest (STF) will be implementing the fuel break activity and the California Department of Forestry and Fire Protection (CAL FIRE) will provide support and facilitate STF activities. The proposed project extends through public and private lands, including STF and lands managed by the Bureau of Land Management (BLM).

HCD, STF, and BLM are Responsible Agencies under the National Environmental Policy Act (NEPA). HCD is the NEPA Responsible Entity pursuant to the National Disaster Relief HUD Grant Agreement. HCD is also the Lead Agency under the California Environmental Quality Act (CEQA).

The purpose of this BTR is to describe the existing biological environment and to determine to what extent the proposed project may affect biological resources. This document also incorporates the following evaluations in compliance with USFS management direction: (1) migratory bird conservation on the STF (Section 6.1.9); (2) Noxious Weed Risk Assessment (Appendix G); and (3) a Management Indicator Species Report (Appendix H).

PROJECT LOCATION

The project is in the western Sierra Nevada, in Tuolumne County. The project consists of eight distinct fuel breaks located between Wagner Ridge at the Tuolumne-Mariposa County line in the south and State Highway (Hwy) 108 in the north (Figure 1 in Appendix A). The project site is located in the following Townships (T) and Ranges (R), Mount Diablo Meridian: T3N, R16E; T2N, R16E; T1N, R16E; T1S, R16E; T1S, R17E; T2S, R16E; T2S, R17E. Figure 2 in Appendix A depicts the locations of the fuel breaks on a U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle map.

PROPOSED ACTION

The description of the proposed action is summarized from the detailed action presented in Section 2.3.

The project would reduce ladder fuels and establish eight 300-foot-wide shaded fuel breaks totaling 22 linear miles (approximately 1,808.4 acres). Most of the areas proposed for treatment would expand existing fuel breaks. Treatments would begin in 2020 and be completed in 2021.

Treatment prescriptions will be determined for a given area based on vegetation characteristics, proximity to residences and infrastructure, slope, and the presence of sensitive resources. The treatments may include a combination of hand or machine felling of trees, mechanical or hand piling and pile burning, and masticating brush and smaller trees. All standing and fallen dead trees would be piled for burning. Where economically feasible, on USFS lands only, timber may be harvested and

removed under a USFS timber contract. On BLM lands, all live and dead trees to be treated would be assessed for highest and best use, and if BLM chooses to not extract the material due to a balance of economic, ecological, and public safety reasons, it would be piled and burned. No timber would be sold from private properties in the project area.

The mechanical treatments would include use of masticators to remove shrubs and small trees, and bulldozers or grapple pilers may be used to pile the small trees and brush for burning. If timber is harvested on USFS and BLM lands, conventional logging equipment would be used, which may include feller bunchers and rubber tire skidders. Existing landings along fuel breaks and roads would be used to minimize impacts wherever possible. Hand treatments using chainsaws to cut small trees and brush and hand piling would be used on steep slopes (slopes greater than 35 percent with pitches up to 40 percent) and other area where equipment use is not appropriate or possible.

Piles would be a minimum of 25 feet from residual trees and free of soil to the greatest extent possible. Piles would be constructed at least 25 feet from any sensitive areas such as archaeological sites and all drainages. Piling would include all down logs and standing dead trees.

Selected live trees less than 12-inches diameter at breast height (dbh) would be treated; trees up to 16 inches dbh would be treated in those areas where a timber sale is required to meet desired spacing and reduction of ladder fuels. The residual trees would be spaced to break up the vertical and horizontal continuity of the fuels, reduce crown contact to less than 10 percent, and to achieve an average crown spacing of between 5 feet and one full crown width. Removal of oak species will generally be avoided because they are important habitat species and vigorous sprouters that become bush like when the main stem is cut. On USFS lands only, recolonized brush would be maintained by application of the herbicide glyphosate. The herbicide could be used up to three times over a 10-year period after implementation of the initial mechanical/hand treatments and would be applied by hand.

MANAGEMENT REQUIREMENTS AND DESIGN CRITERIA

The proposed treatments were developed by CAL FIRE and the STF, in accordance with the management direction contained in the Stanislaus National Forest Land and Resource Management Plan (STF LRMP; 1991), as amended. Incorporation of the applicable management requirements as design criteria are standard practice by STF to meet the goals and objectives for management of the Forest. While the proposed project also includes non-USFS lands, the project is being implemented as a cooperative effort with a unified goal. Therefore, the management requirements and design criteria identified by the STF would apply for the entire project and are incorporated into the project design. Standards and guidelines pertinent to sensitive species and other biological resources with the potential to be affected by the project are presented in detail in Section 2.3.5, and address: General Special-Status Species; Foothill Yellow-Legged Frog and Western Pond Turtle; California Mountain Kingsnake; Nesting Birds; Special-Status Plans; Riparian Conservation Areas and Jurisdictional Waters; Noxious Weeds. Additional management requirements and design criteria specific to actions on BLM lands are also included to address possible timber harvest on BLM lands.

LAND USE AND HABITATS

The project covers approximately 1,808.4 acres, approximately 882.6 acres of USFS (STF) lands, 161.3 acres of BLM lands, 46.2 acres of State and local agency lands and/or easements, and 718.3 acres of private lands. The project site is located in a rural area in western Tuolumne County. Existing land

uses in the project site include existing fuel breaks, roads, rural residences, timberlands, utility corridors, transportation corridors, and recreation. Land management in the project site includes federal (STF and BLM), State and local public lands (County of Tuolumne, California Department of Transportation [CAL TRANS], and San Francisco Public Utilities Commission), and private (Sierra Pacific Industries, Pacific Gas and Electric, and individual private landowners). The 2013 Rim Fire burned over 257,000 acres east of the project site. The proposed fuel breaks on Paper Cabin Ridge and Clements Road lie on the westernmost edge of the Rim Fire (Paper Cabin and Rim Truck East Fuel Breaks respectively); the remainder of the proposed fuel breaks are 2 to 5 miles west of the Rim Fire burn area.

Land uses surrounding the project site are similar to those inside the project site. Nearby towns include Mi-Wuk Village, Sierra Village, Confidence, Twain Harte, Tuolumne, Big Oak Flat, and Groveland. Major roads near the project site include Hwy 108, Hwy 120, Tuolumne Road, and Ferretti Road. Figure 1 in Appendix A depicts the locations of the nearby towns and major roadways.

Vegetation in the project site is dominated by coniferous forests in the higher elevations, oak woodlands and grasslands in lower elevations, and montane chaparral in areas where land clearing has previously occurred such as around residences and in existing fuel breaks (Table ES-2). Plant community nomenclature follows *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988). Figures 4A – 4E in Appendix A depict habitats/land covers in the project site.

Table ES-1
HABITAT ACREAGE IN THE PROJECT SITE

Fuel Break	Habitat (acres)					Total
	Montane Hardwood-Conifer	Blue Oak-Foothill Pine	Montane Chaparral	Annual Grassland	Lava Cap	
Highway 108 North	125.7	--	--	--	--	125.7
Contingency North	102.5	--	--	--	--	102.5
Contingency South	66.9	--	18.7	--	--	85.6
Paper Cabin	62.4	--	152.5	--	--	214.9
Rim Truck East	166.3	102.2	29	82.6	25.1	405.2
Corcoran	--	37.9	15.7	54.4	--	108
Long Shanahan	309.1	--	84.5	10.9	--	404.5
Wagner Ridge	277.6	--	84.4	--	--	362
TOTAL	**1,110.5**	**140.1**	**384.80**	**147.9**	**25.1**	**1,808.4**

SPECIAL-STATUS SPECIES

The literature and database review conducted in support of this BTR identified 119 regionally-occurring special status species (six species of invertebrates, six species of fish, seven species of amphibians, 17 species of birds, 14 species of mammals, and 69 species of plants). Based on the ranges and habitat affinities evaluated in Appendix C of this BTR for each species, a total of 18 regionally-occurring special-status wildlife species have the potential to occur in the project site and are evaluated in detail in the body of this report. California red-legged frog (*Rana draytonii*) is also evaluated in detail due it's federal listing status and because of reported occurrences in the region; although the project site is outside of the known range and the species is presumed absent from the project site. Four special-status wildlife species were observed during biological surveys: Cooper's hawk (*Accipiter cooperii*), olive-sided flycatcher (*Contopus cooperi*), peregrine falcon (*Falco peregrinus*), and California spotted owl (*Strix*

occidentalis occidentalis). Five special-status plant species have potential to occur in the project site; however, none were observed in the project site during focused rare plant surveys.

Species with the potential to occur in the project site are discussed in detail in Section 6.1 and a determination of effect is provided for each species. Species occurrences and observations are summarized in Table 7 in Section 5.7. Table ES-2 provides a summary for each of the regionally-occurring special-status species with the potential to occur in the project site that were analyzed in detail in the body of the BTR. For each species, the species status, the fuel break in which the species may occur, a brief analysis, and the NEPA and CEQA/California Endangered Species Act (CESA) determination for each species is provided.

SENSITIVE NATURAL COMMUNITIES

There are no terrestrial sensitive natural communities in the project site, and none will be impacted by the project. Although lava caps are specialized habitats, they are not a recognized natural community, as natural communities are defined according to a vegetation classification system based on species associations.[1] Lava cap habitat characterized by an association of species considered sensitive would be considered a sensitive natural community; however, lava cap habitat in and of itself is not a sensitive natural community. The lava cap habitat in the Rim Truck East Fuel Break (Figure 4E) is dominated by common native and naturalized grassland species that do not constitute a sensitive natural community.

JURISDICTIONAL WATERS AND WETLANDS

Four perennial streams and numerous seasonal streams are present in the project site as discussed in Section 5.8. The U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory online database was reviewed to determine if there were any wetlands or other waters of the U.S. previously mapped by the USFWS in the project site (refer to Figures 3A – 3E in Appendix A). The National Wetlands Inventory identifies no aquatic features other than those discussed in Section 5.8, except for several stock ponds in the Rim Truck East Fuel Break along Clements Road (USFWS 2019b). Perennial and seasonal streams present in the project site are under U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) jurisdiction. Riparian vegetation in and along streams is regulated by California Department of Fish and Wildlife (CDFW). Off-channel stock ponds are not regulated by the USACE or CDFW but may be regulated by the RWQCB.

Because all streams in the project site are tributaries to South Fork Stanislaus River or Tuolumne River, they are potentially jurisdictional under the federal Clean Water Act (CWA) and state Porter-Cologne Act (see discussion of pertinent regulations in Section 3.4). Class I and Class III streams and ponds in the project site are subject to the Lake and Streambed Alteration Program administered by CDFW under Section 1600 et seq. of the Fish and Game Code. The project incorporates design criteria that avoid and minimize impacts to waterways, including equipment restriction zones. The project would not result in placement of fill or alteration of the aquatic habitats in the project site and would not require permits from the USACE, RWQCB, and/or CDFW. No work is proposed within any wetlands or other waters.

[1] https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive natural communities

Table ES-2
SUMMARY OF FINDINGS FOR SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR OR BE AFFECTED BY THE PROPOSED PROJECT

Scientific Name/ Common Name Status: FESA/CESA/ Other State Status/Other Federal Status[1]	Potential to Occur by Fuel Break								NEPA Determination/ CEQA/CESA Determination
	Highway 108 North	Contingency North	Contingency South	Paper Cabin	Corcoran	Rim Truck East	Long Shanahan	Wagner Ridge	
Fishes									
Lavinia symmetricus ssp. 1 San Joaquin roach --/--/SSC/--							X		Habitat is present on USFS lands in Big Creek and Hell's Hollow Creek. Not observed during 2019 survey, and no CNDDB records nearby. Operating requirements in RCAs avoid impacts to individuals and their habitat. **NEPA**: A NEPA determination is not necessary for this species as it is not designated as a special-status species by FESA, the USFS, or BLM. **CEQA/CESA**: Impacts to San Joaquin roach would be less than significant.
Amphibians									
Rana boylii foothill yellow-legged frog --/SE/SSC/FSS, BLMS							X		Suitable habitat is present in Big Creek at Hwy 120 on USFS lands. Operating requirements in RCAs and design criteria along Big Creek avoid impacts to individuals and their habitat. **NEPA**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for FYLF in the project region. **CEQA/CESA**: Impacts to FYLF would be less than significant. No take of individuals is anticipated as a result of the proposed project.
Rana draytonii California red-legged frog FT/--/SSC/--	NA	NA	NA	NA	NA	NA	NA	NA	There is no suitable breeding habitat in the project site. The project is outside of the current range for the species (USFWS 2002) and no longer known to occur on the STF (R. Kalinowski, STF Wildlife Biologist, personal communication via e-mail September 27, 2019). **NEPA**: The project will not affect CRLF or its designated Critical Habitat. **CEQA/CESA**: The project will have no effect on CRLF or designated Critical Habitat.

Table ES-2
SUMMARY OF FINDINGS FOR SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR OR BE AFFECTED BY THE PROPOSED PROJECT

Scientific Name/ Common Name Status: FESA/CESA/ Other State Status/Other Federal Status[1]	Potential to Occur by Fuel Break								NEPA Determination/ CEQA/CESA Determination
	Highway 108 North	Contingency North	Contingency South	Paper Cabin	Corcoran	Rim Truck East	Long Shanahan	Wagner Ridge	
Reptiles									
Actinemys marmorata western pond turtle --/--/SSC/FSS							X		Suitable habitat is present in Big Creek and Hell's Hollow Creek on USFS lands. Operating requirements in RCAs and design criteria for operations along Big Creek and Hell's Hollow Creek avoid impacts to individuals and their habitat. **NEPA**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the western pond turtle in the project region. **CEQA/CESA**: Impacts to western pond turtle would be less than significant. No take of individuals is anticipated as a result of the proposed project
Lampropeltis zonata California mountain kingsnake --/--/--/BLMS	X	X	X	X	X	X	X	X	Suitable habitat is present in all fuel breaks. Design criteria prevent workers from handling or harassing the snake, if present. **NEPA (BLM Only)**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the California mountain kingsnake in the project region. **CEQA/CESA**: A CEQA determination is not necessary for this species as it is not designated as a special-status species under CEQA.

Table ES-2
SUMMARY OF FINDINGS FOR SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR OR BE AFFECTED BY THE PROPOSED PROJECT

Scientific Name/ Common Name Status: FESA/CESA/ Other State Status/Other Federal Status[1]	Potential to Occur by Fuel Break								NEPA Determination/ CEQA/CESA Determination
	Highway 108 North	Contingency North	Contingency South	Paper Cabin	Corcoran	Rim Truck East	Long Shanahan	Wagner Ridge	
Birds									
Accipiter cooperii Cooper's hawk --/--/--/WL	X	X	X	X	X	X	X	X	No suitable nesting habitat in project site. Suitable foraging habitat only, in all fuel breaks. Detected during surveys near the Corcoran Fuel Break along Corcoran Gray Road. No direct impacts would occur. The low potential for indirect effects which would be reduced by the temporary nature of activities, operating requirements in RCAs, and limited scope of work. **NEPA**: A NEPA determination is not necessary for this species as it is not designated as a special-status species by FESA, the USFS, or BLM. **CEQA/CESA**: Impacts to Cooper's hawk would be less than significant.
Accipiter gentilis northern goshawk --/--/SSC/FSS, BLMS	X	X				X	X	X	The proposed project overlaps 11.27 acres of PAC on USFS lands in the Long Shanahan Fuel Break, and additional habitat may occur on non-USFS lands (see Figures 6A – E in Appendix A for distribution of potentially suitable habitat). The nesting habitat is only marginally suitable. Non-nesting birds could avoid contact with equipment and personnel, and management requirements and design criteria include pre-implementation surveys and establishment of nest buffers if this species is found nesting in the project site. In addition, the project would not result in negative long-term effects on the quality of the habitat in the project site for northern goshawk. **NEPA**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the northern goshawk in the project region. **CEQA/CESA**: Impacts to northern goshawk would be less than significant. No take of individuals is anticipated as a result of the proposed project.

Table ES-2
SUMMARY OF FINDINGS FOR SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR OR BE AFFECTED BY THE PROPOSED PROJECT

Scientific Name/ Common Name Status: FESA/CESA/ Other State Status/Other Federal Status[1]	Potential to Occur by Fuel Break								NEPA Determination/ CEQA/CESA Determination
	Highway 108 North	Contingency North	Contingency South	Paper Cabin	Corcoran	Rim Truck East	Long Shanahan	Wagner Ridge	
Aquila chrysaetos golden eagle --/--/FP/BLMS	X	X	X	X	X	X	X	X	Marginally suitable foraging habitat is present in all fuel breaks. No nests have been observed. Non-nesting birds could avoid contact with equipment and personnel, and management requirements and design criteria require that native birds and active nests be avoided. Habitat alterations would be inconsequential to the value of the habitat for the species. **NEPA (BLM only)**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the golden eagle in the project region. **CEQA/CESA**: Impacts to golden eagle would be less than significant. No take of individuals is anticipated as a result of the proposed project
Contopus cooperi olive-sided flycatcher --/--/SSC/--	X	X	X			X	X	X	Suitable foraging and nesting habitat is present in all fuel breaks (see Figures 6A – E for distribution of potentially suitable habitat). Detected during surveys along the Hwy 108 North Fuel Break. Non-nesting birds could avoid contact with equipment and personnel, and management requirements and design criteria require that native birds and active nests be avoided. The project would not affect the quality of forage habitat for the species, which forages high in the tree canopy. **NEPA**: A NEPA determination is not necessary for this species as it is not designated as a special-status species by FESA, the USFS, or BLM. **CEQA/CESA**: Impacts to olive-sided flycatcher would be less than significant.

Table ES-2
SUMMARY OF FINDINGS FOR SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR OR BE AFFECTED BY THE PROPOSED PROJECT

Scientific Name/ Common Name Status: FESA/CESA/ Other State Status/Other Federal Status[1]	Potential to Occur by Fuel Break								NEPA Determination/ CEQA/CESA Determination
	Highway 108 North	Contingency North	Contingency South	Paper Cabin	Corcoran	Rim Truck East	Long Shanahan	Wagner Ridge	
Falco peregrinus peregrine falcon FD/SD/FP/--	X	X	X	X	X	X	X	X	No nesting habitat is present; occurrence in the project site would be limited to foraging. Foraging habitat is highly limited. Individuals were observed flying overhead and did not linger during 2019 surveys along Wagner Ridge Fuel Break. If present during project activities, foraging birds would move away from project activities. The project would not affect the quality of forage habitat for the species and would not affect nests. **NEPA**: A NEPA determination is not necessary for this species as it is not designated as a special-status species by FESA, the USFS, or BLM. **CEQA/CESA**: The project will have no effect on peregrine falcon.
Haliaeetus leucocephalus bald eagle FD/SE/--/FSS, BLMS	NA	NA	NA	NA	NA	NA	NA	NA	No suitable nesting or foraging habitat in the project site (R. Kalinowski, STF Wildlife Biologist, personal communication via e-mail September 27, 2019). **NEPA**: The project will not affect the bald eagle. **CEQA/CESA**: The project will have no effect on bald eagle.

Table ES-2
SUMMARY OF FINDINGS FOR SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR OR BE AFFECTED BY THE PROPOSED PROJECT

Scientific Name/ Common Name Status: FESA/CESA/ Other State Status/Other Federal Status[1]	Potential to Occur by Fuel Break								NEPA Determination/ CEQA/CESA Determination
	Highway 108 North	Contingency North	Contingency South	Paper Cabin	Corcoran	Rim Truck East	Long Shanahan	Wagner Ridge	
Strix nebulosa great gray owl --/SE/--/FSS						X	X	X	The proposed project overlaps 5.15 acres of PAC on USFS lands in the Long Shanahan Fuel Break. Potentially suitable habitat is present near meadows at Long Shanahan, Wagner Ridge and Rim Truck East. The habitat is marginally suitable and there are no known nests. See Figures 6A – E for distribution of potentially suitable habitat. Non-nesting birds could avoid contact with equipment and personnel, and management requirements and design criteria include pre-implementation surveys and establishment of nest buffers if this species is found nesting in the project site. In addition, the project would not affect the quality of the habitat for forage. Nests are highly unlikely and would be avoided if present. **NEPA**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the great gray owl in the project region. **CEQA/CESA**: Impacts to great gray owl would be less than significant. No take of individuals is anticipated as a result of the proposed project.

Table ES-2
SUMMARY OF FINDINGS FOR SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR OR BE AFFECTED BY THE PROPOSED PROJECT

Scientific Name/ Common Name Status: FESA/CESA/ Other State Status/Other Federal Status[1]	Potential to Occur by Fuel Break								NEPA Determination/ CEQA/CESA Determination
	Highway 108 North	Contingency North	Contingency South	Paper Cabin	Corcoran	Rim Truck East	Long Shanahan	Wagner Ridge	
Strix occidentalis occidentalis California spotted owl --/--/SSC/FSS, BLMS	X	X		X		X	X	X	A total of 34.5 acres of spotted owl PAC on USFS lands fall within the fuel breaks: Long Shanahan Fuel Break (6.10 acres), Paper Cabin (3.10 acres), Wagner Ridge (15 acres), and Long Shanahan/Wagner Ridge (10.3 acres). Based on the locations, habitat, and nature of the spotted owl observed during surveys in 2019, spotted owls are not believed to be nesting within any of the fuel breaks. See Figures 6A – E for distribution of potentially suitable habitat. Non-nesting birds could avoid contact with equipment and personnel, and management requirements and design criteria include pre-implementation surveys and establishment of nest buffers if this species is found nesting in the project site. In addition, the project would not affect the quality of the habitat for forage. Nests are highly unlikely and would be avoided if present. **NEPA**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the spotted owl in the project region. **CEQA/CESA**: Impacts to spotted owl would be less than significant. No take of individuals is anticipated as a result of the proposed project.
Mammals									
Antrozous pallidus pallid bat --/--/SSC/FSS, BLMS	X	X	X	X	X	X	X	X	Limited, low suitability potential roost sites in all fuel breaks. Not observed during 2019 survey. No CNDDB records. Impacts are unlikely due to low likelihood to occur and because the species is highly mobile. Design criteria require notifying District wildlife biologist, if observed. **NEPA**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the pallid bat in the project region. **CEQA/CESA**: Impacts to special-status bats would be less than significant.

Table ES-2
SUMMARY OF FINDINGS FOR SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR OR BE AFFECTED BY THE PROPOSED PROJECT

Scientific Name/ Common Name Status: FESA/CESA/ Other State Status/Other Federal Status[1]	Potential to Occur by Fuel Break								NEPA Determination/ CEQA/CESA Determination
	Highway 108 North	Contingency North	Contingency South	Paper Cabin	Corcoran	Rim Truck East	Long Shanahan	Wagner Ridge	
Bassariscus astutus ringtail --/--/FP/--	X	X	X	X	X	X	X	X	Potentially suitable habitat in woodland and riparian habitat in all fuel breaks. Not observed during survey. This species is not tracked by the CNDDB. Impacts are unlikely due to low likelihood to occur and because the species is highly mobile. Design criteria require notifying District wildlife biologist, if observed. **NEPA**: A NEPA determination is not necessary for this species as it is not designated as a special-status species by FESA, the USFS, or BLM. **CEQA/CESA**: Impacts to ringtail would be less than significant.
Myotis ciliolabrum small-footed myotis --/--/--/BLMS	X	X	X	X	X	X	X	X	Limited, low suitability potential roost sites are present in all fuel breaks. This species was not observed during 2019 survey. Impacts are unlikely due to low likelihood to occur and because the species is highly mobile. Design criteria require notifying District wildlife biologist, if observed. **NEPA (BLM only)**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the small-footed myotis bat in the project region. **CEQA/CESA**: Impacts to special-status bats would be less than significant.
Myotis evotis long-eared myotis --/--/--/BLMS	X	X	X	X	X	X	X	X	Limited, low suitability potential roost sites are present in all fuel breaks. This species was not observed during 2019 survey. Impacts are unlikely due to low likelihood to occur and because the species is highly mobile. Design criteria require notifying District wildlife biologist, if observed. **NEPA (BLM only)**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the small-footed myotis bat in the project region. **CEQA/CESA**: Impacts to special-status bats would be less than significant.

Table ES-2
SUMMARY OF FINDINGS FOR SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR OR BE AFFECTED BY THE PROPOSED PROJECT

Scientific Name/ Common Name Status: FESA/CESA/ Other State Status/Other Federal Status[1]	Potential to Occur by Fuel Break								NEPA Determination/ CEQA/CESA Determination
	Highway 108 North	Contingency North	Contingency South	Paper Cabin	Corcoran	Rim Truck East	Long Shanahan	Wagner Ridge	
Myotis thysanodes fringed myotis --/--/--/FSS, BLMS	X	X	X	X	X	X	X	X	Limited, low suitability potential roost sites are present in all fuel breaks. This species was not observed during 2019 survey. Impacts are unlikely due to low likelihood to occur and because the species is highly mobile. Design criteria require notifying District wildlife biologist, if observed. **NEPA**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the small-footed myotis bat in the project region. **CEQA/CESA**: Impacts to special-status bats would be less than significant.
Myotis yumanensis Yuma myotis --/--/--/BLMS	X	X	X	X	X	X	X	X	Limited, low suitability potential roost sites are present in all fuel breaks. This species was not observed during 2019 survey. Impacts are unlikely due to low likelihood to occur and because the species is highly mobile. Design criteria require notifying District wildlife biologist, if observed. **NEPA (BLM only)**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the small-footed myotis bat in the project region. **CEQA/CESA**: Impacts to special-status bats would be less than significant.

Table ES-2
SUMMARY OF FINDINGS FOR SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR OR BE AFFECTED BY THE PROPOSED PROJECT

Scientific Name/ Common Name Status: FESA/CESA/ Other State Status/Other Federal Status[1]	Potential to Occur by Fuel Break								NEPA Determination/ CEQA/CESA Determination
	Highway 108 North	Contingency North	Contingency South	Paper Cabin	Corcoran	Rim Truck East	Long Shanahan	Wagner Ridge	
Plants									
Clarkia australis ssp. biloba Mariposa clarkia 1B.2/FSS, BLMS						X		X	Suitable chaparral and cismontane woodland habitat occurs on the Rim Truck East and Wagner Ridge Fuel Breaks. This species is not anticipated to occur – it was not observed during 2019 survey. Design criteria would avoid impacts to previously undiscovered populations. Overall effects to species anticipated to be neutral to beneficial due to the reduction in fuel loading and creation of openings. **NEPA**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the Mariposa clarkia in the project region. **CEQA/CESA**: Impacts to Mariposa clarkia would be less than significant.
Cypripedium montanum mountain lady's slipper --/--/4.2/FSS		X							Suitable mesic forest habitat occurs in the Contingency North Fuel Break on USFS land near Confidence Creek. This species is not anticipated to occur – it was not observed during 2019 survey. Design criteria would avoid impacts to previously undiscovered populations. Overall effects to species anticipated to be neutral to beneficial due to the reduction in fuel loading and creation of openings. **NEPA**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the mountain lady's slipper in the project region. **CEQA/CESA**: Does not apply for CRPR Rank 4 species; however, impacts to mountain lady's slipper would be less than significant.

Table ES-2
SUMMARY OF FINDINGS FOR SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR OR BE AFFECTED BY THE PROPOSED PROJECT

Scientific Name/ Common Name Status: FESA/CESA/ Other State Status/Other Federal Status[1]	Potential to Occur by Fuel Break								NEPA Determination/ CEQA/CESA Determination
	Highway 108 North	Contingency North	Contingency South	Paper Cabin	Corcoran	Rim Truck East	Long Shanahan	Wagner Ridge	
Diplacus pulchellus yellow-lipped pansy monkeyflower 1B.2/FSS, BLMS	X					X	X		Suitable wet meadow habitat occurs where the Rim Truck East Fuel Break crosses Indian Creek and in other small patches of mesic meadow along streams in Rim Truck East and Long Shanahan. The habitat occurs in the project site on USFS and private lands. This species is not anticipated to occur – it was not observed during 2019 survey. Design criteria would avoid impacts to previously undiscovered populations. Overall effects to species anticipated to be neutral to beneficial due to the reduction in fuel loading and creation of openings. **NEPA**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the yellow-lipped pansy monkeyflower in the project region. **CEQA/CESA**: Impacts to yellow-lipped pansy monkeyflower would be less than significant.
Erythranthe filicaulis slender-stemmed monkeyflower 1B.2/FSS, BLMS						X	X		Suitable mesic habitat occurs in the montane hardwood-conifer forest in the Rim Truck East and Long Shanahan Fuel Breaks. This species is not anticipated to occur – it was not observed during 2019 survey. Design criteria would avoid impacts to previously undiscovered populations. Overall effects to species anticipated to be neutral to beneficial due to the reduction in fuel loading and creation of openings. **NEPA**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the slender-stemmed monkeyflower in the project region. **CEQA/CESA**: Impacts to slender-stemmed monkeyflower would be less than significant.

Table ES-2
SUMMARY OF FINDINGS FOR SENSITIVE SPECIES WITH THE POTENTIAL TO OCCUR OR BE AFFECTED BY THE PROPOSED PROJECT

Scientific Name/ Common Name Status: FESA/CESA/ Other State Status/Other Federal Status[1]	Potential to Occur by Fuel Break								NEPA Determination/ CEQA/CESA Determination
	Highway 108 North	Contingency North	Contingency South	Paper Cabin	Corcoran	Rim Truck East	Long Shanahan	Wagner Ridge	
Lupinus spectabilis shaggyhair lupine 1B.2/BLMS								X	Suitable chaparral and cismontane woodland habitat with serpentinite soils occurs on the Wagner Ridge Fuel Break. This species is not anticipated to occur – it was not observed during 2019 survey. Design criteria would avoid impacts to previously undiscovered populations. Overall effects to species anticipated to be neutral to beneficial due to the reduction in fuel loading and creation of openings. **NEPA**: The project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability for the shaggyhair lupine in the project region. **CEQA/CESA**: Impacts to shaggyhair lupine would be less than significant.

[1]Regulatory Status is Federal Endangered Species Act listing/California Endangered Species Act listing/Other state status. FT=Federal Threatened; SE = State Endangered; FP=Fully Protected; SSC=Species of Special Concern; WL = Watch List. Other federal status: BLMS=Bureau of Land Management Sensitive; and FSS=Forest Service Sensitive.
BLM = Bureau of Land Management; CEQA = California Environmental Quality Act; CESA = California Endangered Species Act; CNDDB = California Natural Diversity Database; CRLF = California red-legged frog; FYLF = foothill yellow-legged frog; NEPA = National Environmental Protection Act; RCA = Riparian Conservation Area; STF = Stanislaus National Forest; USFS = U.S. Forest Service

POTENTIAL FOR SPREAD OF INVASIVE PLANT SPECIES

A total of 25 plant species rated by the California Invasive Plant Council as having "limited", "moderate", or "high" potential for invasiveness were identified in the project site (Appendix D, Table D-1). Fifteen of these, plus an additional two species (*Convolvulus arvensis*, *Lathyrus latifolius*) are considered noxious weeds or non-native invasive pest plants of concern by STF. The potential for the proposed project to result in introduction or spread of STF noxious weeds is analyzed in Appendix G. Design criteria for noxious weeds including provisions for equipment cleaning and placing burn piles in existing weed populations, which would minimize the potential for spread of invasive plant species.

MIGRATORY BIRD CONSERVATION ON THE STANISLAUS NATIONAL FOREST

The project site provides nesting and foraging habitat for a wide variety of common native birds. Over 50 species of birds were observed in the project site during the avian surveys in June and July of 2019. Potential effects to bird species of conservation concern resulting from the project were assessed in Table 9, including some species that were assessed in the Management Indicator Species analysis for the project (Appendix I).

The project actions provide long-term net benefits by increasing habitat diversity and sustainability. Although some actions may have short-term adverse effects on some individual birds, adverse effects are not expected at the population level. Potential adverse effects to migratory bird species have been minimized through the adherence of STF LRMP Standards and Guidelines and project specific management requirements including: riparian reserve buffers; limited ground disturbance; maintenance of canopy closure; and other measures.

- Vegetation management will create greater long-term resilience to habitats and providing net long-term benefit to species diversity and composition.
- Collaboration/education with fire and other staff was done to help minimize adverse effects of project implementation.
- Greater forest resilience to ecosystem stressors such as high severity fire, insect and disease infestation and prolonged drought.
- These fuel breaks are narrow, 300-foot areas on the top of ridges that were historically more open canopy and burned more frequently and with higher intensity.
- The area adjacent to these linear features will provide a variety of habitat for species favoring brush. The project is designed to protect these areas from high intensity fire and habitat loss.

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The full Biological Resources Technical Report for the NDRC Fuel Breaks Project is available for public review and may be requested by phone: 916-263-2297; or by e-mail: CA-NDRC@hcd.ca.gov.

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Appendix B

Cultural Resources:
U.S. Forest Service Letter of Findings

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United States Department of Agriculture | Forest Service | Stanislaus National Forest | 19777 Greenley Road Sonora, CA 95370

File Code: 2360 **Date:** February 12, 2020
Route To: Planning and Implementation Officers

Subject: National Disaster Resilience Competition Fuel Break Project, Cultural Resource Management Report 05-16-4532

To: Sarah LaPlante and Jim Junette, District Rangers

Based on the following actions, a NO EFFECT RECOMMENDATION is made for the above undertaking in accordance with the provisions set forth in the "Programmatic Agreement Among the U.S.D.A. Forest Service, Pacific Southwest Region (Region 5), California State Historic Preservation Officer, Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Processes for Compliance With Section 106 of the National Historic Preservation Act for Management of Historic Properties by the National Forests of the Pacific Southwest Region" (Regional PA), signed February 2013, as amended 2018.

[x] A review of the Forest's heritage resource files revealed that ALL [ ] or PART [x] of the Area of Potential Effect (APE) of the undertaking has been previously inventoried to current professional standards through the following reports. No further inventory of these areas is required:

Report or CCIC Number	Report Name	Author	Year
051600268	Burnout FSS	C. Buttery, S. Baker	1991
051600280	Garrotte ISS	J. Moriarty	1988
051600285	Kassabaum Property Fence	C. Buttery	1989
051600295	Stanislaus Heli FSS	K. Benedict	1989
051600300	Paper FSS	C. Whitesell	1988
051600311	Sugar 'A' ISS	J. Moriarty	1989
051600312	Ferretti ISS	J. Moriarty	1989
051600333	Hetchy ISS	C. Whitesell	1989
051600348	Mcgee ISS	C. Dreyer	1990
051600350	Wagner ISS	S. Howe	1989
051600432	Spike ISTS	S. Marsh	1992
051600463	Bower Cave Land Exchange	PAR	1990
051600466	Mi-Wok Site Prep/Round Cr	B. Balen	1990
051600486	South Fork ISS	J. Senser	1992
051600545	Groveland Road Oblit	J. Ruhan	1993
051600559	Hamm-Hasloe Timber Sale	S. Marsh	1994
051600568	Shaft Insect Salvage Timber Sale	H. Asquith	1993
051600586	NR Eval Of Bower Cave Land Exchange	PAR	1991
051600655	Mi-Wok Village Firebreak	S. Baker	1992
051601020	Skidmore Deeptill	T. Keefe	1993
051601023	Tuolumne Prec Trail Exten	A. Leigh	1993
051601062	American Camp Fuelbreak Project	J. Sandorf	1994
051601129	Refried F.S.T.S.	D. Phinney	1997
051601186	Excel Hazard Tree Removal	E. Potter	1999
051601198	Son of Scramble	E. Potter	2000

051601220	Mt. Provo Fuel Reduction	S. VanBuskirk	2001
051601222	Mi-Wok, Hacienda Fair Oaks	S. VanBuskirk	2001
051601252	South 108 Fuel Reduction, Forest Health, & Road Mgmt	E. Potter	2005
051601316	Ponderosa Way Pit Project	C. Ashe	2013
051601328	Westside Trail Reroute	K. Strain	2012
051601371	Tud Eureka Ditch Rac Project	K. Strain	2017
051601406	Pg&E Emergency Sup For Htr Forestwide	Blue Rock	2019
051603377	Highway 108 Caltrans Hazard Tree Removal Project	B. Norton	2016
051604015	Spike II Addon ISTS	S. Marsh	1993
051604038	PG&E HTR	G. Maniery, PAR	1994
051604062	Rust Resistant Sugar Pine	S. Marsh	1995
051604165	Rim Truck Fuelbreak	S. Marsh	2001
051604237	2004 Creek Fire Suppression	S. Marsh	2004
051604240	Indian Creek (Private) Fuelbreak	J. Ruhan	2004
051604255	Fy05 Groveland Hazard Tree Removal	J. Ruhan	2005
051604257	Three Fires Timber And Hazard Tree	J. Ruhan	2005
051604263	Hells Hollow Roadside Fuelbreak	J. Ruhan	2006
051604274	Long Shanahan Fuels Reduction And Forest Health Project	P. Riefkohl	2007
051604382	Knobcone Ecological Restoration Project	K. Strain	2013
051604386	Hetch Hetchy Reliable Power Project	William Self and Associates	2014
051604393	Rim Fire Suppression	P. Wisniewski	2014
051604420	Rim Fire Section 110 Project	A. Hoskins	2015
051604446	Big Creek Fire Salvage	P. Wisniewski	2016
051604455	Rim Recovery-Reforestation Add-On	Not provided	2016
051604457	Wagner Ridge East Hazard Tree Removal Sale	K. Strain	2016
051604459	Second Garrotte Hazard Tree Sale	P. Wisniewski	2016
051604462	Golden Gate Highway 120 Hazard Tree Removal Project	Far Western	2016
051604468	Hetch Hetchy Hazard Tree Removal West	S. Zaragoza	2016
05160772G	Clavey River Project - 230 Kv	L. Napton	1992
05164448B	Pg&E Curtis 1704a Line Htr Add-On	K. Strain	2016
05164463B	Red Tsunami Hazard Tree Project 2	K. Strain	2016
TO-00433	Cultural Resource Inventory Report, U.S.D.I. - Bureau of Land Management Bakersfield District, Folsom Resource Area: Report No. CA-018-S-TM-86/09, Wagner Ridge Timber Sale	D. Decker	1986
TO-01134	Cultural Resource Recordation (CA-TUO-002466/H), Brack Property, Tuolumne County, California	E. Greathouse, L. Napton	1990
TO-01297	Cultural Resource Assessment of the Tuolumne County Ditch Improvement Project, California	Peak & Associates, Inc.	1987
TO-01310	Archaeological Survey and Extended Archaeological Survey Report for the Proposed East Sonora Bypass On Highway 108 Near Sonora, California 10-TUO-108 P.M. 1.7/6.7 10200-340400	M. Rondeau	1988
TO-01921	A Cultural Resources Survey and Assessment of the Long Gulch Ranch Project, Tuolumne County, California	J. Foster, M. Thornton	1993
TO-02081	Archaeological and Historical Resources Survey and Impact Assessment; A Supplemental Report for a Timber Harvesting Plan; Wagner Ridge THP	R. Krohn	1993

TO-02308	Archaeological and Historical Resources Survey and Impact Assessment, a Supplemental Report of a Timber Harvesting Plan; Project Levin THP	M. Vroman	1993
TO-02356	Archaeological and Historical Resources Survey and Impact Assessment, A Supplemental Report for a Timber Harvesting Plan: Project Klein/Davis Sale	T. Tate	1993
TO-02483	Cultural Resource Survey of the Proposed Tuolumne Park and Recreation District Trail Extension Project, Cultural Resource Management Report 05-16-1023 in Tuolumne County, California	A. Leigh	1994
TO-02681	Sugar Pine Railroad: Archaeological and Global Positioning Survey, Ralph Station to Lyons Dam	S. Davis-King, R. Ozbirn	1995
TO-02719	Archaeological and Historical Resources Survey and Impact Assessment; A Supplemental Report for a Timber Harvesting Plan, Graham THP	M. Vroman	1995
TO-02720	Archaeological and Historical Resources Survey and Impact Assessment; A Supplemental Report for A Timber Harvesting Plan: Brockett THP. 4-95-174/TUO-21	W. Dorrell	1995
TO-02771	Archaeological and Historical Resources Survey and Impact Assessment A Supplemental Report for a Timber Harvesting Plan, Alderman THP, 4-94-211/TUO-34	S. Cannon	1994
TO-02977	Archaeological and Historical Resources Survey and Impact Assessment; A Supplemental Report for a Timber Harvesting Plan; Project Name: Willis THP	W. Dorrell	1996
TO-03031	Confidential Archaeological Addendum for Timber Operations on Non-Federal Lands in California. Project: Hills Hollow Timber Harvesting Plan	Cannon, S.	1997
TO-03284	Confidential Archaeological Addendum for Timber Operations on Non-Federal Lands in California: M&B Ranch/Seastrom THP. 4-98-21/TUO-4	R. Krohn	1997
TO-04070	Department of Transportation Negative Archaeological Survey Report, 10-Tuolumne-10-10-108, P.M. 10-16.90+/-	C. Francis	2000
TO-04627	Letter Report for Archaeological Survey, Bank Emergency Notice Timber Harvest Plan (4-02EM-016/TUO-4)	W. Dorrell	2002
TO-04627	Letter Report for Archaeological Survey, Bank Emergency Notice Timber Harvest Plan (4-02EM-016/TUO-4)	W. Dorrell	2002
TO-04693	Confidential Archaeological Addendum for Timber Operations on Non-Federal Lands in California: Bottini THP, 4-02-25/TUO-2	D. Baker	2001
TO-04720	Confidential Archaeological Addendum for Timber Operations on Non-Federal Lands in California: South Pearl THP #4-02-34/TUO-3	M. Vroman	2002
TO-04731	Cultural Resource Inventory Report: Creek Fire Salvage Timber Sale (Report #CA-018-S-TM-02/04)	D. Decker	2002
TO-04759	CDF Project Review Report for Archaeological and Historical Resources: Mi-Wuk Fuel Break, Rx4-038-TCU	T. Francis	2002
TO-05438	Confidential Archaeological Addendum for Timber Operations on Non-Federal Lands in California: Mi Wuk THP, 4-97-31/TUO-8	M. Vroman	1997

TO-05498	Cultural Resources Inventory of Caltrans District 10 Rural Conventional Highways; Volume l: Summary of Methods and Findings	L. Leach-Palm et al.	2004
TO-05565	Confidential Archaeological Letter for the Dennison/Williams Emergency Fuel Hazard Reduction; 4-04EM-029-TUO	W. Dorrell	2004
TO-05568	An Archaeological Survey Report for the Shiloh NTMP, Tuolumne County, California; N-4-04-4	B. Pollard	2004
TO-05711	Cultural Resource Survey and Evaluation for the Baker Youth Camp, Near Groveland, Tuolumne County, California (APN 66-220-13)	J. Costello, L. Leach-Palm, T. Brejla	2005
TO-05725	Confidential Archaeological Letter for Emergency Notice Dated 02/15/05 - Tuolumne Fire Salvage Operations - Section 16, T1S, R18E: MDM--(D'Eyraud Ranch Emergency)	M. Albrecht	2005
TO-06816	Cultural Resource Inventory Report U. S. Department of Land Management Folsom Field Office Project Name: Arrastraville Fuel Break, Case # CA-018-S-TM-08/11	J. Barnes	2008
TO-06957	An Archaeological Survey Report for the M & B Ranch NTMP Tuolumne/ Mariposa County, California	D. Baker	2008
TO-07198	Archaeological Investigations of the Wagner Ridge Fuel Treatment Project, Mariposa and Tuolumne Counties, California	L. Napton	2010
TO-07343	United States Department of the Interior Bureau of Land Management Mother Lode Field Office Section 106 Compliance for the Wagner Ridge Fuel Break Maintenance Tuolumne and Mariposa Counties (BLM case # CA-018-STM-10/06)	J. Barnes	2010
TO-07521	Tuolumne Utilities District Ditch Sustainability Project Historic Resource Evaluation Report	Foothill Resources, Ltd.	2012
TO-07737	Field Office Report of Cultural Resources Ground Survey Findings, EQIP Program, Project #749104112z0, Forest Stand Improvement	E. Truman	2011
TO-08041	Final Archaeological Survey Report Mountain Tunnel Geotechnical Project, Tuolumne County, California	A. Estes, T. Young, N. Fino	2013
TO-08271	Archaeological Survey Report for the Robert McDow, Tuolumne County, California Farm No. 118 Tract No. 399	A. DeGeorgey	2015
TO-08943	Final Archaeological Resources Survey Report for the Valley Area ROW and Culvert Locations of the Reliable Power Project, Tuolumne and Stanislaus Counties, California; Technical Report 18-566	A. Estes, N. Fino	2018
TO-08955	State Water Resources Control Board Supplemental Historic Properties Identification Report, Groveland Community Services District Downtown Groveland and Big Oak Flat Sewer Collection System Improvement Project, Tuolumne County, California	W. Pierce, K. Marti	2019

[x] A review of the Forest's heritage resource files revealed that ALL [ ] or PART [x] of the APE of the undertaking had not been previously inventoried to current professional standards.

The APE was subsequently inventoried, and documented in the following report: National Disaster Resilience Competition Fuel Break Project, Cultural Resource Management Report 05-16-4532

[x] Heritage resources of interest are located within the APE and are to be protected using the following protection methods:

Standard Protection Measures
Flag and Avoid: E.1: Property location conveyed to contractors and employees responsible for implementation; flag for avoidance/protection. E.1.3: All cultural properties within APEs shall be clearly delineated prior to implementing any associated activities that have the potential to affect cultural properties. (1) cultural property boundaries shall be delineated with coded flagging and/or other effective marking. E.1.5: Monitoring by heritage program specialist required when work is required within cultural sites. E.2.2(b)(1)(H): Vegetation to be burned shall not be piled within the site boundary unless locations have been specifically approved by qualified Heritage Program staff. Trees may be directionally felled away from flagged cultural properties.

ADDITIONAL PROTECTION MEASURES

1. In accordance with Appendix H.3.1(b) of the Region 5 PA, inventory efforts in areas of the project site of impenetrable brush or obscured visibility were deferred until after project implementation. As required by and in accordance with the Region 5 PA, after implementation and within one year of completion of the project activities, the STF will survey areas, determined to be warranted based on the area's historic property sensitivity, that have been cleared of the brush or that have improved visibility. The timing of the surveys will be based on the progress of the implementation in contingent locations so that new surveys can be grouped together as much as possible. The Field Operator will inform the STF HPM/DHPM of various stages of the project so that subsequent field work can proceed in a timely fashion.

2. Prior to project implementation in areas that were not included in the 2019 cultural resource surveys for the project (e.g., private properties that did not grant permission for cultural resource surveys in 2019), protocol-level cultural resource surveys will be conducted by a qualified archaeologist. Standard protection measures will apply for any resources that are located. The following private parcels are located within the APE but were not surveyed:

3. Should any previously unrecorded cultural resources be encountered during project implementation, all work will immediately cease in that area and the STF HPM/DHPM will be notified immediately. Work may resume after approval by the STF HPM/DHPM providing any standard protection measures are implemented. Should any cultural resources become damaged in unanticipated ways by project activities, the steps described in the Region 5 PA for inadvertent discoveries will be followed.

Remarks:

In agreement with the California State Historic Preservation Office, this project used the U.S.F.S. Region 5 Regional PA to comply with Section 106 of the National Historic Preservation Act on all project lands (private, Bureau of Land Management and the U.S. Forest Service). The project is certified as having met all the stipulations of the Regional PA and therefore has complied with Section 106. Other agencies, for purposes of NEPA or CEQA, may reference this letter for compliance with Section 106.

Prior to implementation, the project manager is required to contact a qualified archaeologist to ensure sites are flagged and if any assessments are needed due to a change in condition. This is required each time the project is implemented regardless of information received in prior years.

Kathy Strain

KATHY STRAIN
Forest Heritage Resource Program Manager

Appendix C

Wild and Scenic Rivers: U.S. Forest Service E-mail Demonstrating Concurrence with Findings

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From:	Catherine Silvester
To:	Talbott, Patrick@HCD
Cc:	Vander Kolk, Elliott@SNC; Raber, Lindsay@SNC
Subject:	FW: Wild and Scenic River
Date:	Thursday, January 30, 2020 3:04:00 PM
Attachments:	image001.png image002.png image003.png image004.png

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Hi Patrick,

This concurrence will be cited in the HCD EA and incorporated into the project record.

Thank you,

Catherine Silvester
Senior Environmental Project Manager

HELIX Environmental Planning, Inc.
11 Natoma Street
Suite 155
Folsom, CA 95630
916.365.8700 **tel**
916.365.8715 **direct**
CatherineS@helixepi.com
helixepi.com | LinkedIn | Facebook | Twitter

Please consider the environment before printing this email.

From: Benech, Maria -FS <maria.benech@usda.gov>
Sent: Thursday, January 30, 2020 2:53 PM
To: Talbott, Patrick@HCD <Patrick.Talbott@hcd.ca.gov>
Cc: Vander Kolk, Elliott@SNC <Elliott.VanderKolk@sierranevada.ca.gov>; Raber, Lindsay@SNC <Lindsay.Raber@sierranevada.ca.gov>
Subject: Wild and Scenic River

Patrick, please see language below regarding the fuel breaks and no impact to wild and scenic rivers.

Treatment activities may be visible from a small portion of the Wild and Scenic Tuolumne River, but proposed activities would create very minor disturbance to vegetation and soils and nothing that would be visible beyond the implementation phase. The project also includes best management practices and management requirements that will protect riparian areas that are tributaries to the river, eliminating potential impacts from treatment activities on water quality.

Overall, the project would potentially benefit the Tuolumne River and its Wild and Scenic values by

reducing the risk of a high-severity fire moving into the canyon from communities. High severity fire has the potential to cause severe erosion and adverse effects to water quality and this project is designed to protect the river and it's special values.

Maria Benech
Rim Fire Restoration Coordinator

Forest Service
Stanislaus National Forest

p: 209-288-6285
c: 209-283-4079
maria.benech@usda.gov

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