



# Decision Memo

## Forest Projects Plan - Phase 1

### USDA Forest Service

#### Amador Ranger District, Eldorado National Forest

#### Amador, Calaveras, and El Dorado Counties, California

### Background

The Forest Projects Plan - Phase 1, (herein referred to as “FPP” or “the project”) is an approximately 25,671-acre landscape level timber stand and wildlife habitat improvement and protection project located on U.S. Forest Service (USFS or Forest Service) lands, primarily within the upper Mokelumne River watershed. The project is designed to help prevent high-intensity, large-scale wildfires, improve forest conditions, and protect important wildlife habitat and other resources. The project encompasses Phase 1 of a two-phased approach to the Forest Projects Plan. Phase 1 consists of non-commercial actions to reduce forest ladder fuels and implement other forest management activities on the Amador Ranger District. Phase 2 will incorporate the Calaveras Ranger District of the Stanislaus National Forest into the project area and will include additional forest management actions such as commercial thinning. Phase 2 will require a more comprehensive planning document and is expected to take approximately two years to complete.

In Phase 1, non-commercial vegetation treatments and prescribed burning activities will enhance and protect a variety of habitats including three ecosystems that provide essential components of wildlife habitat: late seral/old forest ecosystems, aquatic ecosystems, and aspen stands. The treatments will enhance forest health by reducing competition for resources (water, sunlight, and nutrients) within forested stands that are overly dense and in habitats that have been diminished due to conifer encroachment from lack of fire (aquatic systems, aspen stands).

Another critical benefit from project implementation will come from lowering the risk of high severity fire effects within both treated and adjacent untreated areas. The project treatments were designed to reduce ladder fuels to slow wildfire spread, and improve firefighter safety and effectiveness, thus protecting forested habitat from loss due to large stand replacing, high severity wildfires.

The majority of the project area is a subset of the much larger 390,904-acre program known as the Cornerstone Collaborative Forest Landscape Restoration Program (CFLRP), also known as Cornerstone. The purpose of the CFLRP is to encourage the collaborative, science-based ecosystem restoration of priority forest landscapes. To that end, the Upper Mokelumne River Watershed Authority (UMRWA) designed the FPP in collaboration with the Amador Calaveras Consensus Group (ACCG), a community-based local collaborative that works to create healthy forests and watersheds, fire-safe communities, and sustainable local economies, and with the Amador Ranger District Wildlife Biologist and Fuels Management Officer. UMRWA is a Joint Powers Agency comprised of six water agencies and the counties of Amador, Calaveras and Alpine. UMRWA’s role in this project is facilitated under a Master Stewardship Agreement between the Forest Service and UMRWA, signed May 18, 2016. The Forest Service serves as the lead NEPA agency. The FPP builds on strategic planning and collaboration achieved by UMRWA,



the Forest Service and the ACCG through use of ACCG's recently developed Strategic Landscape Prioritization Tool, known as the GIS Mapping Tool, to assist in identifying treatment areas.

The project area is situated north and south of the Highway 88 corridor in an area considered extremely high-risk for catastrophic wildfire. The project area is surrounded by lands devastated by recent wildfires including the Caldor Fire to the north (2021), the Tamarack Fire to the east (2021), the Rim Fire to the south (2013) and the Butte Fire to the west (2015). Project lands fall within areas administered by three counties (Amador County - 84% of project area, El Dorado County - 15%, and Calaveras County - 1%). Eighty-four percent of the FPP is within the Wildland Urban Interface (WUI), including the WUI defense zone (32 percent of the FPP area) and the WUI threat zone (52 percent). The FPP is within 5 miles of four U.S. Census defined populated areas (i.e., Buckhorn, Pioneer, Red Corral, and West Point).

### **Purpose and Need for Action**

The past decade has brought major environmental changes in the Sierra Nevada, including unprecedented drought, bark beetle and other insect outbreaks, large high-intensity wildfires, and associated tree mortality. While ecosystems of the Sierra Nevada have evolved to be well-adapted to fire, the recent increases in the size, frequency, and intensity of fires have resulted in ecosystem transitions, changes in hydrology, and associated effects to sediment and nutrient fate and transport. These dramatic shifts have reduced habitat quality and quantity for sensitive species and pose a significant risk to natural biodiversity (North et al. 2021).

The purpose of the action is to improve the quality and resiliency of timber stand and wildlife habitat by:

#### **1. Protecting wildlife habitat, aspen stands, forest resources and developed communities within the Wildland Urban Interface (WUI) and beyond from potential severe wildfire effects.**

As a result of decades of fire suppression and lack of recent management, aspen stands and conifer forests in the project area have an abundance of dense small diameter trees, thick undergrowth and a high density of surface fuels. These conditions, together with periodic drought and a warming climate, weaken mature trees and create a higher potential for uncharacteristically severe, stand replacing wildland fire leading to higher mortality of vegetation, damage to wildlife habitats and special status species that rely on these habitats, and damage to soils and watershed values. Further, uncharacteristic wildland fire results in the destruction of homes and property; and increases risks to public safety. Action is needed to improve timber stand conditions in order to protect wildlife habitat, reduce fire severity and to make the stands more resilient to wildfire. The project area incorporates late seral and old forest ecosystems, aquatic ecosystems, aspen stands, and areas in close proximity to private property, summer tract homes, recreational facilities, and important infrastructure which are at risk in the event of a large fire occurring in the area. Removing dense understory trees, shrubs, and surface vegetative debris reduces fuel loading, fuel continuity, competition for limited resources (water, sunlight, and nutrients), and increases the ability for the public to evacuate unharmed and for fire-fighting assets to directly suppress fire in a safe and efficient manner.

There is also a need to implement treatments within Protected Activity Centers (PACs) for California spotted owls and northern goshawks, which have typically been excluded from these types of fuel treatments both inside and outside the WUI areas, resulting in large scale destruction

of habitat in recent wildfires (Jones et al. 2016, 2020). The treatments within PACs will contribute toward meeting fuels objectives for PAC protection, maintain habitat structure and function (SNFPA Record of Decision (ROD) p. 60), and are expected to enhance old forest stand habitat by supporting the health and growth of larger trees.

## **2. Strategically placing treatments which complement and extend continuity of existing forest and fuel treatments to create a fire resilient landscape.**

There is a need to strategically place fuel reduction treatments that are effective, connect past treatments, and complement planned and completed treatments on adjacent National Forest System (NFS) and private lands. The Forest Service has completed NEPA planning and is currently implementing thinning treatments on nearby NFS lands. These projects include the Scottiago Fuels Reduction Project, Scottiago Forest Health Project, Panther Fuels Reduction Project, and the Power Fire Pre-Commercial Thin Project. Forest Service partners are in the process of completing surface fuel reduction and prescribed fire readiness treatments within portions of the View 88 Project. The FPP actions will complement and extend the efficacy of this collective work, particularly within the WUI surrounding portions of the project area.

## **3. Strategically placing treatments to prepare the landscape for prescribed burning and improve the safety and efficacy of wildfire suppression efforts.**

There is a need to strategically place fuel reduction treatments to facilitate prescribed burning. The current surface fuel loading and ladder fuels in this area create hazards to communities and firefighters. These hazards can be reduced through widespread reduction of surface and ladder fuels, tree thinning, and prescribed burning. As demonstrated in the recent Caldor Fire, the treatments in the FPP will facilitate fire suppression tactical operations in the event of a wildfire. The Forest Service is implementing ongoing prescribed fire treatments on nearby NFS lands and the activities of this project will complement and extend the efficacy of this work.

## **Decision**

I have decided to approve the Forest Projects Plan (Phase 1) on the Amador Ranger District of the Eldorado National Forest. Phase 1 treatments will reduce understory ladder and surface fuels to ameliorate wildfire behavior and facilitate the future application of prescribed fire. Stands will be less overcrowded, have fewer small trees, reduced ladder fuels, and higher canopy base height (Figure 1). Hardwoods will be retained and managed consistent with SNFPA guidelines and direction (SNFPA Record of Decision, p. 53), and shrubs and ground cover will be retained in canopy openings to the extent that there is minimal connectivity to overstory trees. In the event of a wildfire, crown fire potential will be lessened; suppression effectiveness will be increased; and firefighter safety will be improved.



**Figure 1. Example of forest stand with ladder fuels removed**

**Project Actions:**

Remove ladder fuels such as brush and small trees, prune residual trees, and remove or compact the arrangement of surface fuels in order to prepare the landscape for wildfire resilience and prescribed burning. I have also decided to utilize prescribed burning as an initial treatment where site conditions allow. These are cost efficient and effective fire hazard reduction treatments designed to moderate fire behavior in treated stands, reduce the rate and extent of spread of high intensity fire, improve the resiliency of the forest, and result in faster, safer, and more efficient wildfire suppression efforts.

The most cost efficient and effective treatment or combination of treatments will be chosen for each area based on in-field verification of on-the-ground conditions, suitability, timing, equipment availability, and post-treatment results. Pruning and hazard tree felling and removal will be undertaken at select locations where conditions warrant such supplemental activities.

Table 1 below lists the extent (in terms of acres) of each type of treatment. A more detailed description of each treatment is in the text following the table. Design Criteria applicable to the project to minimize or eliminate potential effects, or to comply with laws, regulations, and policy are described in Appendix B and will be required during project implementation.

**Table 1. Treatment Acres**

<b>Treatment Activity</b>	<b>Anticipated Acreage<sup>1</sup></b>
Mechanical Fuels Reduction	14,537
Mechanical Fuels Reduction Plus Prescribed Burning	4,715
Prescribed Burning	1,888
Aspen Restoration	172
Aspen Restoration Plus Prescribed Burning	22
Hand Thinning Only	4,337
<b>Total Acreage</b>	<b>25,671</b>

<sup>1</sup>Acreage is estimate based on geographical information system mapping; acreage may vary upon field layout of treatment units.

***Mechanical Fuels Reduction (mastication, crushing, chipping, etc.)***

Mechanically reduce live shrubs and small trees generally up to ten inches diameter breast height (dbh). Larger live trees up to a maximum of 14” dbh may be treated where necessary to facilitate machinery movement within the stand. Mechanically treat dead trees up to sixteen inches dbh or larger where necessary to abate an imminent safety hazard. Refer to Figures 2a and 2b for examples of typical mastication equipment.



**Figure 2a: example of a boom type masticator**

**Figure 2b: example of a front-mounted masticator**

Mechanical fuels reduction will be applied:

- to slopes less than or equal to 40 percent where feasible;
- where hand treatments are not required or specified;
- within California spotted owl and northern goshawk PACs, or portions thereof, that are located within WUI Defense and Threat Zones. Note that all areas within 500 feet of the activity center (nest tree) will be treated by hand, consistent with SNFPA) (SNFPA ROD, p.60, #72 and #73);

No live trees shall be cut that are larger than ten inches dbh and meet minimum merchantable timber specifications (i.e., will produce at least a ten-foot straight sawlog with six-inch diameter inside bark at the small end. ~~Lodgepole pine is not considered merchantable for this project~~). Exceptions up to 14” dbh will be made if such removal is necessary to facilitate machinery movement within the stand.

On slopes of greater than 40 percent, a tethered mastication system may be implemented where feasible and in accordance with soils standards following site specific review and recommendation by a Forest Service soil specialist. Tethered systems consist of a cable winch mounted on a piece of equipment. The winch system either mounts to the working equipment or it is mounted to another piece of equipment, like a dozer, that also acts as the anchor. When mounted to the working equipment, the winch line is anchored to an anchor point, such as a stump or the base of a standing tree, somewhere on the slope. The mechanical influence of the winch is used for enhanced traction and mobility on steep slopes (often called “traction assist”) or for safety on steep slopes (preventing machine sliding and overturning and reducing soil disturbance).



Surface fuels will be treated through grinding, machine crushing, or chipping.

In areas adjacent to roads, a “reach-in” mastication system may be utilized. This system keeps the masticator on the road while the arm reaches off the road to remove or masticate adjacent vegetation and ladder fuels.

### ***Hand Thinning***

Hand thinning may occur where other treatments are not feasible or where this activity will not conflict with other resource concerns or restrictions.

In areas where mechanical fuels reduction treatments are unsuited or prohibited, hand thinning will remove brush and live trees up to ten inches dbh and dead trees up to sixteen inches dbh. Larger dead trees may also be removed, if necessary to abate an imminent safety hazard.

Hand thinning within California spotted owl and northern goshawk PACS outside of the WUI and within a 500-foot radius surrounding activity centers within WUI will target select conifer trees less than six inches dbh prior to implementing prescribed fire (SNFPA ROD, p. 60, #74). Outside the WUI, stand-altering activities will be limited to reducing surface and ladder fuels through prescribed fire treatments.

In forested stands with overstory trees eleven inches dbh and greater, prescribed fire treatments will be designed to promote average flame length of four feet or less. Hand treatments, including handline construction, tree pruning, and cutting of small trees (less than six inches dbh), may be conducted prior to burning as needed to protect important elements of owl habitat.

Hand thinning may be followed by chipping, lopping and scattering, and/or prescribed burning.

### ***Prescribed Burning***

Implement prescribed burning using ground based or aerial ignition methods to reduce understory fuels. Prescribed understory fire will be prioritized in strategic locations to reduce the risk of large fires within treatment areas and on the surrounding landscape. Prescribed understory burning may take place following mastication or hand thinning, or as a stand-alone treatment.

Construct hand or machine fire lines where needed to contain the fire. Natural barriers and roads will be utilized as fire containment lines where possible. Fire lines will only be constructed in areas where adequate archeological and botanical surveys have been completed.

### ***Aspen Restoration***

Aspen stands will be field delineated by UMWRA or its designee in consultation with the United States Forest Service.

Remove encroaching conifers generally less than twelve inches dbh and shrubs to begin to reestablish the historic aspen stand edge, enhance stand function, increase the diversity of age classes, and promote aspen growth.

Treatments for aspen may extend beyond the current perimeter of an aspen stand up to (1) 1.5 times the height of aspen trees in the stand (the maximum extent of lateral aspen roots), (2) the distance required to prevent remaining, adjacent conifers from shading the aspen stand and suppressing aspen regeneration, or (3) up to 100 feet, whichever is greater.

Utilize hand thinning, ground based mechanical equipment (e.g., masticator, feller buncher, skidder), chipping, lopping and scattering, and/or prescribed burning. Mechanical fuels reduction treatments will be applied to stands on slopes generally less than or equal to 40 percent and hand thinning will be applied on slopes generally greater than 40 percent.

### ***Supplemental Activities/Treatments***

#### **Pruning**

Residual trees may be pruned to raise the base height to live crown and to reduce the risk of wildfire or prescribed fire moving into the crowns. Pruning involves severing all limbs on live trees up to a height of eight feet to twelve feet on the bole, while retaining a minimum of 50 percent but not to exceed 50 percent of total tree height.

#### **Hazard Tree Felling and Removal**

Weak and high-risk trees of all sizes (both dead and unstable live trees) identified as an imminent hazard to the implementation of FPP activities will be felled and may be removed. Hazard trees will be identified and assessed using the 2012 Region 5 Hazard Tree Guidelines for Forest Service (USDA 2012).

## **Environmental Analysis**

This action is categorically excluded from documentation in an environmental impact statement (EIS) or an environmental assessment (EA). The applicable category of actions is identified in agency procedures as *Timber Stand and/or Wildlife Habitat Improvement Activities that Do Not Include the Use of Herbicides or Do Not Require More Than 1 Mile of Low Standard Road Construction* (36 CFR § 220.6(e)(6)). This category is applicable because the project treatments are designed to reduce fuel build-up and fire hazard through the removal of surface and ladder fuel. Removal of surface and ladder fuels will slow the spread and reduce the intensity of future fires, thus protect forested wildlife habitat and timber stands from loss due to large, high severity wildfire, both within the treatment areas and the adjacent lands. Habitat for late seral ecosystem species such as California spotted owl and northern goshawk has been severely reduced and degraded by recent large scale high intensity wildfires (Jones et al. 2016, USDA-FS 2019, Blakely et al. 2019, Jones et al. 2020). While California spotted owl and northern goshawk may thrive in the dense forest conditions resulting from past fire suppression policies, both species evolved in Sierran landscapes characterized by frequent fire regimes and low to moderate severity fire with small patches of severe fire (Kramer et al., 2020, Gutierrez et al. 2017) which created heterogenous forest structures. These historical forests contained higher densities of large trees and lower densities of small trees than today, with the same approximate basal area but fewer trees per acre (Lydersen et al. 2013, Safford and Stevens 2017)). The FPP is expected to improve landscape-level forest habitat heterogeneity and diversity that have been compromised by fire suppression and conifer encroachment.

I find that there are no extraordinary circumstances that will warrant further analysis and documentation in an EA or EIS. I took into account resource conditions identified in agency procedures that should be considered in determining whether extraordinary circumstances might exist:

1. *Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species.*

There are two Federally listed species that have potential to be within the project area; the Sierra Nevada yellow-legged frog (SNYLF) and the California red-legged Frog (CRLF). There is also some potential for one species proposed for listing; the foothill yellow-legged frog (FYLF). The probability for adverse effects to these species from the project was analyzed in a Biological Assessment (BA) (JNA Consulting 2022a) and through consultation with the US Fish and Wildlife Service. The BA concluded that the project may affect, but is not likely to adversely affect CRLF. This determination was based on no known breeding populations or other known occurrences in treatment areas; the FPP will not be implemented within breeding habitat, and will affect only a very small percent of the non-breeding aquatic habitat, upland habitat, and dispersal habitat within the action area; and the incorporation of design criteria (Appendix B).

For FYLF and SNYLF, potential impacts to suitable habitat including increased erosion and sedimentation, changes in hydrology, and changes in canopy cover will be minimal because the project is designed to retain large trees, thus preserving root systems that stabilize soils and retaining existing canopy cover. Design criteria, such as riparian exclusion zones and requirements for retention of ground cover, will further minimize the potential for impacts. However, while prescribed burns will be excluded from within 50 feet of aquatic habitats, including those known to be occupied by FYLF or SNYLF; fire will be allowed to back into the riparian areas. Therefore, there remains some potential for FYLF or SNYLF along occupied streams to be affected by this activity. The BA concluded that the project is likely to adversely affect individual FYLF and SNYLF. The BA also concluded that the project may result in a short-term reduction in habitat suitability within upland and dispersal habitat within critical habitat. Although under the Endangered Species Act (ESA) it was determined that the project is likely to adversely affect FYLF and SNYLF, the significance under NEPA has a different legal standard than the significance under ESA. NEPA regulations define significance in terms of context (i.e., scale, time period) and intensity (severity of the impact) (USFS 2018). That is, the degree of the impact on the population or whether or not the action as a whole is a net benefit is considered when making the determination under NEPA (USFS 2018).

The FPP is a large, approximately 25,671-acre landscape level forest stand and wildlife habitat improvement and protection project on USFS lands, primarily within the upper Mokelumne River watershed. The project is designed to help prevent high-intensity, large scale wildfires, improve forest conditions, and protect important wildlife habitat and other resources. Implementation of the project could potentially affect individual SNYLF or FYLF and could temporarily reduce habitat suitability within 12,187 acres of critical habitat for SNYLF. However, considering the intensity and context under NEPA, the project may potentially affect an individual SNYLF or FYLF, but will not result in effects to the species as a whole. In addition, although the project may have short-term and temporary indirect impacts to habitat, long-term, the project will result in benefits to habitat for SNYLF and FYLF by reducing the risk of catastrophic fire, improving safety and efficacy of wildfire suppression, and providing an overall fire resilient landscape.

The project has incorporated aquatics related design criteria (Appendix B) to protect individual SNYLF and FYLF and their habitats (including critical habitat for SNYLF).



Therefore, although the project could result in limited impacts to individuals and temporary, short-term impacts to critical habitat, considering the nature of the activities proposed (i.e., wildlife habitat improvement and restoration) and with incorporation of design criteria to protect special-status amphibians, the effects will not result in significant impacts to listed species as defined under NEPA.

The full rationale for the determination for these species is available in the BA which can be obtained through the Amador Ranger District of the Eldorado National Forest.

Potential effects on ten Forest Service Sensitive (FSS) wildlife species with suitable habitat in the project area were addressed in the project Biological Evaluation (BE) (JNA Consulting 2022b). These are: western pond turtle (*Actinemys marmorata*), western bumble bee (*Bombus occidentalis*), bald eagle (*Haliaeetus leucocephalus*), great grey owl (*Strix nebulosa*), northern goshawk (*Accipiter gentilis*), California spotted owl (*Strix occidentalis occidentalis*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), fringed myotis (*Myotis thysanodes*), and Pacific (Sierra) marten (*Martes caurina* (sierrae)). For these species, the BE concluded that the project is not likely to have adverse effects, and while the project may have some effect on individuals, the implementation of design criteria (Appendix B) will minimize these effects. In addition, the BE determined that the project is not likely to result in a trend toward Federal listing or loss of viability for any of the ten species.

The probability for adverse effects to Forest Service Sensitive (FSS) plant species from the project was analyzed in the Biological Evaluation for Botanical Species (BE) (JNA Consulting 2022c). Botanical field surveys will be conducted for Forest Service Sensitive species and all known occurrences will be flagged and avoided during project implementation. With implementation of this and other design criteria (Appendix B), the BE concluded that the project is not expected to result in negative direct or indirect effects to known FSS plant species. Because past surveys cannot positively state the absence of a sensitive plant species it is possible that the project could affect undetected individuals. Therefore, the BE determined that the project may affect undiscovered individuals but is not likely to result in a trend toward Federal listing or loss of viability.

2. *Flood plains, wetlands, or municipal watersheds.*

This project will have no adverse effects to floodplains, wetlands, and municipal watersheds. The project is designed to meet the requirements of the Sierra Nevada Forest Plan Amendment (2004) and the National Best Management Practices for Water Quality Management on National Forest System lands (2012). The project is also designed to comply with the Eldorado National Forest Land and Resource Management Plan (LRMP), uses methods that maintain soil cover and minimize erosion, and includes design features to protect stream courses and water quality (Appendix B). Beneficial uses of surface waters exist, including downstream domestic water supply and hydroelectric power. These beneficial uses will not be adversely affected.

3. *Congressionally designated areas such as wilderness, wilderness study areas, or national recreation areas.*

The project will not occur within any Congressionally designated areas such as wilderness, wilderness study areas, or national recreation areas.

4. *Inventoried roadless areas or potential wilderness areas.*

The project will not occur within an inventoried roadless area or potential wilderness area.

5. *Research natural areas.*

The project will not occur within a research natural area.

6. *American Indians and Alaska Native religious or cultural sites.*

There are no known American Indian or Alaska Native religious or cultural sites within the project area.

7. *Archaeological sites, or historic properties or areas.*

This project complies with Section 106 of the National Historic Preservation Act of 1966, as amended in accordance with provisions of the *Programmatic Agreement among the U.S.D.A. Forest Service, Pacific Southwest Region (Region 5), the California State Historic Preservation Officer, the Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Processes for Compliance with Section 106 of the National Historic Preservation Act for Management of Historic Properties by the National Forest of the Pacific Southwest Region (Regional PA 2018)*.

A comprehensive Cultural Resource Management Report (R2022-0503-51011) was completed. Cultural resource surveys and site monitoring for the project took place in summer of 2022. The cultural resource inventory strategy utilized the Region 5 Hazardous Fuels Protocol for Non-Intensive Inventory Strategies for Hazardous Fuels and Vegetation Reduction Projects (Appendix H of the Regional PA 2018). Approximately 57 cultural resource sites have been identified within the project area. Cultural resources will be protected by flagging and avoiding sites during project implementation. Based on the analysis documented in the Cultural Resource Management Report, the project will not result in adverse effects to historic properties.

## Public Involvement

This action was originally listed as a proposal on the Eldorado National Forest Schedule of Proposed Actions and updated periodically during the analysis. The project was discussed at the UMRWA board meetings on January 28, 2022, April 22, 2022, and July 22, 2022. UMRWA met with the ACCG Planning Work Group on February 23, 2022, on March 23, 2022 and again on April 5, 2022 to receive feedback on the proposed action. UMRWA also met with the larger ACCG on March 16, 2022. These collaborative efforts resulted in reducing the footprint of the initial project, emphasizing mechanical treatments over hand treatments where feasible due to concerns over effectiveness, and reducing prescribed fire acreage to high priority areas. Scoping was initiated April 15, 2022. Letters were sent to 31 individuals, groups, and government entities. Written responses to scoping were received from three individual members of ACCG (Central Sierra Environmental Resource Center (CSERC) Foothill Conservancy, and the Amador Water Agency District 3 Director). In general, comments were supportive of the project and requests for clarification. Some concern was still expressed over the effectiveness of hand treatments. The Amador Ranger District Fuels Officer emphasized that in addition to reducing ladder fuel, hand treatment can be very effective in providing safe anchors for fire suppression action as well as prescribed burning. In addition, in some areas, hand treatment is the only

feasible option due to steepness of slope and access. In a subsequent email dated August 24, 2022, CSERC expressed its unqualified support for the project.

Tribal Consultation was initiated during the scoping process for this project. Letters from the Georgetown District Ranger were emailed or otherwise provided to Tribal Officials and Cultural Representatives of the following tribes and organizations: The Jackson Rancheria Band of Miwok Indians, Buena Vista Rancheria of Me-Wuk Indians, Washoe Tribe of Nevada and California, United Auburn Indian Community, Wilton Rancheria, Ione Band of Miwok Indians, California Indian Water Commission, California Indian Basketweavers' Association, El Dorado Band of Miwok Indians, El Dorado County Indian Council, El Dorado County Wopumnes Nisenan-Mewuk Tribe, and Calaveras Band of Mi-Wuk Indians. No comments were received.

## Findings Required by Other Laws and Regulations

This action is found to be consistent with all applicable laws and the Eldorado National Forest Land and Resource Management Plan (1989), as amended by the Sierra Nevada Forest Plan Amendment (2004).

The National Forest Management Act (NFMA) directs the Forest Service “provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives.” (P.L. 94-588, Sec 6 (g) (3) (B)). Direction for integrating migratory bird conservation into forest management and planning includes the January 2000 USDA Forest Service Landbird Conservation Strategic Plan (USDA 2000); the Partners in Flight Landbird Conservation Plans (CalPIF 2002, 2004; Rich et al. 2004); the 2001 Executive Order (EO)13186; and the 2017 Department of Interior Solicitor’s Opinion M-37050. The Migratory Bird Report prepared for this project (JNA Consulting 2022d) concludes that the project will not adversely impact migratory landbird species or their associated habitats. Potential impacts to migratory species would be minimized through the adherence of design criteria to retain snags and downed woody debris, maintain exclusion buffers within riparian conservation areas (RCAs), limit ground disturbance, and maintenance of canopy closure and canopy structure within forests. The project is designed to improve habitat conditions through the preservation of late-successional habitat characteristics, while still maintaining current functional habitat, included protecting/retaining migratory bird habitat.

The Management Indicator Species Report for the project (JNA Consulting 2022e) evaluated and disclosed the impacts of the project on the habitat of ten of the Management Indicator Species (MIS) identified in the ENF LRMP as amended by the Sierra Nevada Forests Management Indicator Species Amendment Record of Decision (USDA 2007). The report concludes that the effects of the project on the habitat of these MIS is minimal and will not alter the existing trend in the habitat, nor will it lead to a change in the distribution of MIS.

Appendix B of the Biological Evaluation for Botanical Resources (JNA Consulting 2022c) addresses the risk of non-native invasive plants (NNIP) becoming established and spreading in the project area. With incorporation of design criteria, it is anticipated that the risk of spreading and/or introducing noxious weeds due to the removal of native vegetation and the movement of vehicles and equipment in and out of the treatment units would be low within forested habitats. If NNIP do become established, Design Criteria 30 provides for treatment to eradicate the occurrence.



The project will comply with the Clean Water Act and California Water Quality Law because design criteria and the methods of treatments ensure that the project will have no adverse effects on water quality or riparian and aquatic habitats. There are no stream channels or waterbodies listed in the project area according to the 2010 Clean Water Act, Section 303(d) list of water quality limited segments for the State of California. Water quality in the project area is regulated by the Central Valley Regional Water Quality Control Board. Designated beneficial uses, water quality objectives (standards), and a policy statement regarding maintaining high quality waters in California are in the Board's Water Quality Control Plan (CVRWQCB 2019).

This decision is in compliance with the Endangered Species Act. Threatened and endangered species have been addressed under "Environmental Analysis", sub-section 1. above.

No historic properties (prehistoric, historic, or traditional cultural properties) will be adversely affected (refer to "Environmental Analysis", sub-section 7. above).

This decision is consistent with the Clean Air Act. A Smoke Management Plan from the El Dorado County Air Quality Management District will be required for any prescribed burning activities, in accordance with Title 17, Smoke Management Guidelines for Agricultural and Prescribed Burning as required by the California Air Resources Board. The project will also comply with additional requirements set forth by the Mountain Counties Air Basin and the Great Basin Air Pollution Control Districts and the Eldorado National Forest Land and Resources Management Plan. Federal clean air laws require areas with unhealthy levels of pollutants to develop plans, known as State Implementation Plans (SIPs). SIPs are comprehensive plans that describe how an area will attain national ambient air quality standards. Pursuant to 40 CFR 93.153(i)(2), prescribed fire conducted in accordance with a smoke management program is presumed to conform to the SIPs, therefore the pollutant thresholds do not apply to prescribed burning.

In addition, the project has limited context and intensity (40 CFR 1508.27), and this action will produce little or no individual or cumulative environmental effects, to either biological or physical components of the human environment (40 CFR 1508.14).

## Administrative Review (Objection) Opportunities

This decision is not subject to legal notice and comment procedures of 36 CFR 218.22, and is not subject to the pre-decisional administrative review process pursuant to 36 CFR 218.

## Implementation Date

The project may be implemented immediately. Implementation is expected to begin in spring 2023.

## Contact

For additional information concerning this decision, contact: Brian Brown, NEPA Planner, Eldorado National Forest at (530) 647-5304 or by email at [brian.brown@usda.gov](mailto:brian.brown@usda.gov) or by mail at 4260 Eight Mile Road, Camino, CA 95709.



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KARL GOODWIN  
District Ranger (Acting)

Date

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## References

- Amador-Calaveras Consensus Group (ACCG) Strategic Landscape Assessment Work Group (SLAWG) GIS Tools. (2020). Website link: <https://acconsensus.org/work-groups/slawg/>.
- Blakely, R.V., Seigel, R.B., Webb, E.B., Dillingham, C.P., Johnson, M., Kesler, D.C. 2019. Multi-scale Habitat Selection by Northern Goshawks (*Accipiter gentilis*) in a fire-prone forest.
- California Regional Water Quality Control Board Central Valley Region. 2019. The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region. Fifth edition revised February 2019 (with approved amendments). The Sacramento River basin and the San Joaquin River basin.
- Gutiérrez, R.J.; P.N. Manley; P.A. Stine, tech. eds. 2017. The California Spotted Owl: Current State of Knowledge. Gen. Tech. Rep. PSW-GTR-254. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 294 p.
- JNA Consulting. 2022a. Biological Assessment for the Forest Projects Plan (Phase 1). Sara Reece, Janelle Nolan & Associates Environmental Consulting.
- JNA Consulting. 2022b. Biological Evaluation. Forest Projects Plan (Phase 1). Sara Reece, Janelle Nolan & Associates Environmental Consulting.
- JNA Consulting. 2022c. Biological Evaluation for Botanical Species, Forest Projects Plan (Phase 1). Sara Reece, Janelle Nolan & Associates Environmental Consulting.
- JNA Consulting. 2022d. Migratory Bird Report for the Forest Projects Plan (Phase 1). Sara Reece, Janelle Nolan & Associates Environmental Consulting.
- JNA Consulting. 2022e. Management Indicator Species Report for the Forest Projects Plan (Phase 1). Sara Reece, Janelle Nolan & Associates Environmental Consulting.
- Jones, G. M., R. J. Gutiérrez, D. J. Tempel, S. A. Whitmore, W. J. Berigan, and M. Z. Peery. 2016. Megafires: An Emerging Threat to Old-Forest Species. *Frontiers in Ecology and the Environment* 14:300–306.
- Jones, G.M., Kramer, H.A., Whitmore, S.A., Berigan, W.J., Tempel, D.J., Wood, C.M., Hobart, B.K., Erker, T., Atuo, F.A., Pietrunti, N.F., Kelsey, R., Gutierrez, R.J., Peery, M.Z. 2020. Habitat Selection By Spotted Owls After A Megafire Reflects Their Adaptation To Historical Frequent-Fire Regimes. *Landscape Ecol* 35, 1199–1213 (2020). <https://doi.org/10.1007/s10980-020-01010-y>
- Kramer, H. A., Jones, G. M., Whitmore, S. A., Keane, J. J., Atuo, F. A., Dotters, B. P., Sawyer, S. C., Stock, S. L., Gutierrez, R. J., and Peery, Z. P. 2020. California Spotted Owl Habitat Selection in a Fire-Managed Landscape Suggests Conservation Benefit of Restoring Historical Fire Regimes. *Journal of Forest Ecology and Management* 479: 12p.

- Lydersen, J., M. North, E. Knapp, and B. Collins. 2013. Quantifying Spatial Patterns of Tree Groups and Gaps in Mixed Conifer Forests: Reference Conditions and Long-term Changes Following Fire Suppression and Logging. *Forest Ecology and Management* 304: 370-382.
- North, M. 2012. *Managing Sierra Nevada Forests*. General Technical Report PSW-GTR-237. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 184 p
- North, M. P., York, R. A., Collins, B. M., Hurteau, M. D., Jones, G. M., Knapp, E. E., Kobziar, L., McCann, H., Meyer, M. D., Stephens, S. L., Tompkins R. E., and Tubbesing, C. L. 2021. Pyrosilviculture Needed for Landscape Resilience of Dry Western United States Forests. *Journal of Forestry* 119(5): 520–544 P.
- Safford, H. D. and J.T. Stevens. 2017. Natural Range of Variation for Yellow Pine and Mixed Conifer Forests in the Sierra Nevada, Southern Cascades, and Modoc and Inyo National Forests, California, USA. Gen. Tech. Rep. PSW-GTR-256. Albany, CA. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 229p.
- USDA Forest Service. 1989. Eldorado National Forest Land and Resource Management Plan. Pacific Southwest Region.
- USDA Forest Service. 2004. Sierra Nevada Forest Plan Amendment Final Supplemental (SNFPA) Environmental Impact Statement, Record of Decision (ROD). USDA Forest Service, Pacific Southwest Region. Vallejo, California. 72p.
- USDA Forest Service. 2012. Hazard Tree Guidelines for Forest Service Facilities and Roads in the Pacific Southwest Region (2012), as supplemented October 2020 with the Streamlined Approach to Hazard Tree Abatement After Catastrophic Events (USDA 2020) and Defining the Hazard Tree Failure Zone (USDA 2020).
- USDA Forest Service Region Five, 2013. Programmatic Agreement among the USDA. Forest Service, Pacific Southwest Region (Region 5), the California State Historic Preservation Officer, the Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding 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, 2013).
- USFS. 2018. Significance under the Endangered Species Act and National Environmental Policy Act. File Code 2670; 1950.
- USDA-FS. 2019. Conservation Strategy for the California Spotted Owl (*Strix occidentalis occidentalis*) in the Sierra Nevada. Version 1.0. Publication R5-TP-043.

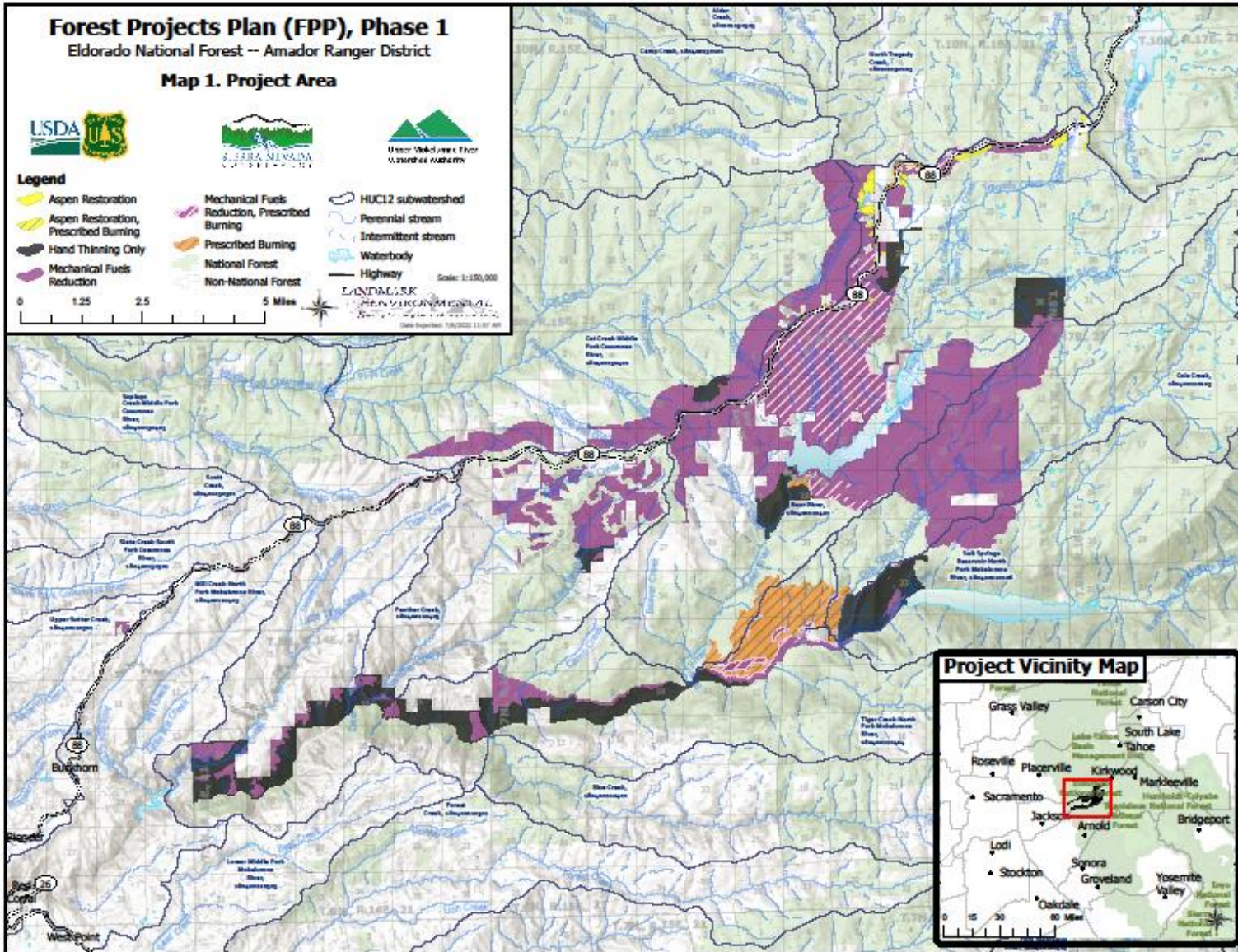
## Appendix A. Location and Project Map

### Legal Location:

- T7N, R13E, Sec. 2, 13, 24, MDB&M within the USGS 7.5-minute West Point Quadrangle
- T7N, R14E, Sec. 1, 3, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, MDB&M within the USGS 7.5-minute Devils Nose Quadrangle
- T7N, R15E, Sec. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 16, 17, 18, MDB&M within the USGS 7.5-minute Garnet Hill Quadrangle
- T7N, R16E, Sec. 5, 6, MDB&M within the USGS 7.5-minute Calaveras Dome Quadrangle
- T8N, R13E, Sec. 35, 36, MDB&M within the USGS 7.5-minute Omo Ranch Quadrangle
- T8N, R14E, Sec. 13, 14, 20, 21, 22, 23, 24, 25, 28, 29, 30, 36, MDB&M within the USGS 7.5-minute Caldor Quadrangle
- T8N, R15E, Sec. 1, 2, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, MDB&M within the USGS 7.5-minute Peddler Hill Quadrangle
- T8N, R16E, Sec. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, MDB&M within the USGS 7.5-minute Bear River Reservoir Quadrangle
- T9N, R15E, Sec. 36, MDB&M within the USGS 7.5-minute Peddler Hill Quadrangle
- T9N, R16E, Sec. 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29, 30, 31, 32, 33, 35, 36, MDB&M within the USGS 7.5-minute Bear River Reservoir Quadrangle
- T9N, R17E, Sec. 7, 18, 31, MDB&M within the USGS 7.5-minute Bear River Reservoir Quadrangle

Project lands fall within areas administered by three counties (Amador County - 84% of project area, El Dorado County - 15%, and Calaveras County - 1%).





## Appendix B. Project Design Criteria

The following protection measures shall be implemented to minimize or eliminate potential effects, or to comply with the LRMP, laws, regulations, and policy. Compliance with the Clean Water Act will be demonstrated through the implementation of best management practices (BMPs) certified by the state, and then monitoring to determine if the actions have met the appropriate Central Valley Regional Water Control Board standards.

**Final Conservation Measures from USFWS consultation for federally protected species are still pending and are expected by November 11, 2022.**

**Table B.1. Project Design Criteria**

ID	Resource Area	Project Design Criteria
1	Forest Service Standard Design Criteria	<p>All applicable standards and guidelines described in the Eldorado National Forest Land and Resource Management Plan (USDA 1989), as amended by the 2004 Sierra Nevada Forest Plan Amendment ((SNFPA) USDA 2004) shall be followed during project implementation.</p> <p>Mechanical and fuels prescriptions have been designed to be consistent with Forest-wide management standards and guidelines (SNFPA ROD 2004, pages A-49 to A-59), as well as land allocation standards and guidelines for California spotted owl and Northern Goshawk Protected Activity Centers (SNFPA ROD 2004, pages A-59 to A-61), and Riparian Conservation Areas and Critical Aquatic Refuges (SNFPA ROD 2004, pages A-62 to A-66).</p> <p>This project will also incorporate the National Best Management Practices (BMPs) for Water Quality Management on National Forest System Lands (USDA 2012). In addition, there are other applicable, standard policies, and guidelines included in various Forest Service Handbooks, laws, and regulations that shall be adhered to throughout implementation of this project.</p>
2	Aquatics	<p>All project activities shall be consistent with Riparian Conservation Objectives described in the Sierra Nevada Forest Plan Amendment Final Supplemental Environmental Impact Statement (USDA, Forest Service 2004a). and the U.S Fish and Wildlife Service Conservation Measures from the programmatic Biological Opinion on three federally listed amphibian species, the Sierra Nevada yellow-legged frog, the Northern Distinct Population Segment of the mountain yellow-legged frog, and the Yosemite toad (USDI, Fish and Wildlife Service 2014).</p>
3	Aquatics	<p>If federally listed Threatened, Endangered, or Forest Service Sensitive (TES) botanical, aquatic, or terrestrial species are detected during work, operations shall cease in that area and the appropriate biologist shall be informed immediately to determine appropriate actions to take. Before restarting activities, consultation may need to be initiated with USFWS for listed species.</p>

ID	Resource Area	Project Design Criteria
4	Aquatics	Temporary Erosion Control Products (blankets, mats, rolls, etc.) that contain exposed netting shall use wildlife friendly loose weave netting or similar materials when netting is left exposed. See Metz (2016) Wildlife-Friendly Plastic-Free Netting in Erosion and Sediment Control Products for details.
5	Aquatics	A Limited Operating Period (LOP) restricting all work activities at or below the 4500-foot elevation shall be implemented from 1st fall frontal system depositing a minimum of ¼ inch of rain between October 15th through April 15th. Activities may resume after a 72-hour drying period. <b>The LOP may be lifted in locations where sufficient survey data demonstrate the absence of CRLF or suitable breeding habitat.</b> Locations where this LOP <b>will not</b> apply are within the Mokelumne River watershed above Panther Creek. The Mokelumne River is a large river that does not provide the right habitat conditions for CRLF breeding. Tributaries are steep and there is no mapped potential or documented actual breeding locations above the Panther Creek confluence.
6	Aquatics	Storage of fuel or other toxic materials and maintenance of equipment shall not occur within Riparian Conservation Areas (RCAs <sup>1</sup> ).
7	Aquatics	Table 2 below defines boundaries where mechanical operations are prohibited for the protection of aquatic resources and applies to features identified on map and those found in the field during treatment. Unmapped features will be treated as Special Aquatic Features <sup>1</sup> .
8	Aquatics	Hand falling of trees is allowed within the mechanical exclusion zone. Any trees should be felled away from the stream and left in place, bucked and scattered, or removed by reach in and full suspension.
9	Aquatics	<b>If mechanical falling/skidding equipment is used:</b> No new landings shall be created in the RCA. Reuse of existing landings within the RCA will be allowed where creation of a new landing is likely to result in more resource damage than use of the existing landing within the RCA.
10	Aquatics	<b>If mechanical falling/skidding equipment is used:</b> Any skid trails or landings within RCAs shall be repaired to restore soil infiltration capacity and soil cover to reduce erosion and may include practices such as, reshaping to restore natural surface flow patterns, installation of drainage control features, decompaction, placement of organic material, and seeding on disturbed soil surfaces. Slash shall be added to any skid trails while operations are occurring to facilitate incorporation into the substrate and help stabilize soil.
11	Aquatics	Ground cover will be maintained at least at 70 percent in the zone of 50 to 100 feet from the edge of the stream channel. If the existing ground cover is less than 70 percent, then the existing ground cover will be maintained. Tops, limbs, and small trees within the mechanical exclusion zone can be lopped and scattered to meet ground cover criteria.
12	Aquatics	At a minimum, an annual review of burning treatment plans will occur with a Forest Aquatic Biologist, Terrestrial Biologist, and Botanist to

ID	Resource Area	Project Design Criteria
		ensure conditions for Threatened, Endangered or Sensitive species have not changed and to ensure consistency with FWS consultation determinations.
13	Aquatics	<p>Ignition of prescribed fires shall not occur within 50 feet of any perennial or intermittent stream or Special Aquatic Feature (SAF). The ignition exclusion zone shall be measured from the edge of the channel or high-water mark of the SAF or the adjacent riparian vegetation if present.</p> <ul style="list-style-type: none"> <li>a. Fire will be allowed to back into the exclusion zone</li> <li>b. Ignition may occur within the exclusion zones if it is deemed necessary to maintain control of a prescribed burn or to control burn severity.</li> </ul>
14	Aquatics	Prescribed fire containment lines shall be rehabilitated to prevent transport of water and sediment to nearby aquatic systems prior to the onset of winter weather or large summer storm
15	Aquatics	No burn piles shall be placed within meadows, fens, springs, or draws, or within 50 feet from the edge of perennial or intermittent stream channels or riparian vegetation, whichever is greater.
16	Aquatics	Large reservoirs will be used for water drafting. If it is necessary to use waterholes, ponds, rivers, and streams for water drafting, the ENF aquatic biologist will be consulted, and surveys for aquatic threatened, endangered and sensitive species prior to use. In the event that threatened, endangered and sensitive species are found or are known to occur at drafting sites, sites will not be used unless ENF-approved minimization measures are put into place.
17	Aspen Stands	Low to moderate intensity prescribed burning may have adverse effects on aspen stands, due to shallow rooting of this species. For this reason, existing aspen stands and adjacent areas will be evaluated before inclusion in prescribed burning units.
18	Botany	Botanical surveys will be conducted in suitable habitat for Sensitive, Proposed, or Federally listed plant species prior to project implementation unless recent surveys (within 5 years) have been conducted. Surveys shall be conducted by qualified individuals and adhere to Forest Service standards for botanical surveys as defined by FSH 2609.26. Sensitive plant occurrences will be flagged for avoidance. Site-specific mitigations to avoid impacts to un-surveyed Sensitive plant habitat will be approved by Forest Service Botanist prior to implementation of project activities. Mitigations may include flag and avoid, LOPs, hand fell and leave, or remove by reach-in only. Hand thinning and prescribed fire within plant protection areas may occur at the recommendation of the Forest Service Botanist.
19	Botany	Watch list species encountered during surveys for Sensitive, Proposed, or Federally listed plant species will be noted. Protection measures shall be developed and approved by the District Ranger for any watch list plant that may qualify as a Forest Service Sensitive species.

ID	Resource Area	Project Design Criteria
20	Botany	Burning operations within Sensitive, Proposed, or Federally listed plant populations shall be designed to produce a low intensity fire. No ignition within occupied habitat shall occur unless required to moderate fire intensity.
21	Botany	Lava cap plant communities shall be protected from motorized equipment and vehicles. All project related equipment and vehicles shall remain on existing road corridors within lava caps; including no parking off road, heavy equipment travel, etc.
22	Botany	Where sensitive plant populations occur within or adjacent to thinning units, actions will be taken to limit OHV activity including: scattering materials, placing barricade rock, and/or leaving strategic patches of vegetation to discourage vehicles from driving off designated routes into sensitive plant habitat.
23	Botany	Riparian vegetation associated with perennial, ephemeral streams, and other special aquatic features will be avoided during project implementation.
24	Botany	When working above 7,000 feet, areas with potential habitat for whitebark pine will be assessed for stand-health and delineated for avoidance. Hand-thinning, line construction, and active ignition shall not occur in healthy stands of whitebark pine.
25	Cultural Resources	At-risk historic properties and cultural resource sites within the area of potential effects (APE) shall be identified for avoidance with the use of flagging and on project implementation maps as documented in the Cultural Resource Management Report R2022-0503-51011, UMRWA Forest Projects' Plan (Hutcheson, 2022).
26	Cultural Resources	Should any previously unrecorded cultural resources be encountered during implementation of this project, all work in that area shall cease as soon as practicable and an archeologist shall be notified. Work may resume if approved by an archeologist subject to implementation of additional protection measures, as necessary to meet provisions in the Region 5 PA (2018).
27	Cultural Resources	Should any cultural resources become damaged in unanticipated ways by project activities, the steps described in the Region 5 PA (2018) for inadvertent effects shall be followed.
28	Cultural Resources	This project complies with Section 106 of the National Historic Preservation Act of 1966, as amended in accordance with provisions of the "Programmatic Agreement among the USDA Forest Service, Pacific Southwest Region (Region 5), the California State Historic Preservation Officer, the Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding 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 PA)" (USDA 2018).

ID	Resource Area	Project Design Criteria
29	Invasive Plants	Invasive plant surveys will be conducted prior to project implementation unless recent surveys (within 5 years) have been conducted. Known invasive plant sites will be flagged prior to implementation and will be avoided as much as possible by conducting all project work outside of flagged exclusion areas. If project activities cannot be completely avoided within flagged infestations, risk minimization strategies shall be employed, such as working in the infested area last, working in infested areas when propagules are not viable, limiting the number of people or equipment within the infestation, and cleaning mechanical and hand equipment, clothing, boots, etc., before moving to other un-infested National Forest System lands.
30	Invasive Plants	Post-implementation invasive plant surveys shall also be conducted in areas of ground disturbing activities. If found, newly detected or expanding Eldorado National Forest Priority 1 or 2 invasive plants shall be treated in accordance with the design features of the Forest-Wide Treatment of Invasive Plants Project (ENF 2013).
31	Invasive Plants	All off-road equipment shall be cleaned to ensure it is free of soil, seeds, vegetative matter or other debris before entering National Forest System lands to prevent the introduction or spread of invasive plants. Equipment will be inspected before initial entry and any subsequent re-entries onto the project area. If determined necessary during the inspection, cleaning shall occur at a vehicle washing station or agreed upon cleaning location before the equipment enters or re-enters the project area.
32	Invasive Plants	Known invasive plant sites in the project area will be flagged prior to implementation and the spread of occurrences will be avoided as much as possible by conducting all project work outside of flagged exclusion areas. If project activities cannot be completely avoided within flagged infestations, risk minimization strategies shall be employed such as working in the infested area last, working in infested areas when propagules are not viable, limiting the number of people or equipment within the infestation, and cleaning mechanical and hand equipment, clothing, boots, etc., before moving to other un-infested National Forest System lands. These areas will be identified on project maps.
33	Public Safety	Warning signs shall be posted in work areas, including all access points along trails and roads, to alert oncoming traffic and recreational users to safety hazards associated with the Project.
34	Protection of Improvements	Damage to roads, recreation sites, fences, land survey monuments, property boundary markings, and improvements shall be repaired in a timely fashion, such as but not limited to repair to road and pad surfacing, improvement repair or replacement, removing debris off site, and seeding.
35	Range Improvements	Protect range improvements and repair any damage in consultation with the range permittee.
36	Recreation	Treatment timing shall be coordinated to minimize conflicts with recreation use.

ID	Resource Area	Project Design Criteria
37	Recreation	Trails shall be cleared of felled material and slash.
38	Terrestrial Wildlife	The project is designed to meet SNFPA 2004 and Eldorado National Forest Plan standards related to California spotted owl, and northern goshawk PACs. These standards and guidelines have been incorporated into the project.
39	Terrestrial Wildlife	Standard LOPs shall be adhered to, for all activities, for both the California spotted owl (CSO) and northern goshawk (NG), unless surveys conclusively ascertain that nesting/reproduction will not be affected in that particular breeding season by the treatments. The LOP periods are March 1 through August 15th for the California spotted owl, and February 15th through September 15th for the northern goshawk. Where surveys and biological assessment determine that impacts will not affect reproduction for these species, the LOP may be lifted, or the area affected by the LOP reduced. Based on nesting status, additional mitigation measures, such as (but not limited to): exclusion of portions of the treatment areas until after the breeding season, additional fire lines, and different treatment techniques (lighting techniques, postponing slash work), may be implemented to reduce potential effects to nesting spotted owls and goshawks.
40	Terrestrial Wildlife	Snags ( $\geq 15''$ dbh) shall be retained, except where they pose a threat to human health and safety, or perimeter control risk for containment of prescribed fire, and will not be actively lit during burning operations.
41	Terrestrial Wildlife	Should any Threatened, Endangered or Eldorado National Forest Sensitive species be detected during any phase of the project, the Forest Service district wildlife staff will be notified, and potential adjustments to the project will be evaluated and may be adjusted accordingly.
42	Terrestrial Wildlife	Mechanical and hand fuel reduction treatments to remove ladder fuels less than 12" dbh are designed to ensure protection and retention of highly suitable habitat for CSO and NG. Within existing suitable habitat, maintain canopy closure at or above 90% of starting canopy closure following mechanical and hand treatments.
43	Terrestrial Wildlife	The district wildlife biologist shall be involved in prescribed burn planning and notified prior to implementation of prescribed burning in CSO or NG PACs. When possible, the biologist and/or staff shall be onsite to take part in, and/or monitor burning and associated effects.
44	Terrestrial Wildlife	Prescribed burning is designed to ensure retention of highly suitable habitat for CSO and NG, where it currently exists. Within suitable CSO and NG habitat planned for burning, maintain canopy closure at or above 85% to 90% of starting canopy closure following prescribed burning. Prescribed burning may result in small openings (generally $\leq 1/4$ - $1/2$ acre in size), however design burning to limit the total area of openings created less than 5% of treated area.

ID	Resource Area	Project Design Criteria
45	Terrestrial Wildlife	Additional hand treatments, including handline construction, tree pruning, and cutting of small trees (less than 6 inches dbh), may be conducted within a 1–2-acre area surrounding known nest trees, to the extent necessary, to protect nest trees and trees in their immediate vicinity during prescribed burning.
46	Terrestrial Wildlife	To reduce impacts to local populations, no more than four PACs within the FPP project area shall be burned in a 12-month period. Burning shall avoid direct impacts to known nest/roost stands by either not burning through them, or clearing material from around known nest and roost trees and other trees/snags > 30” dbh in the nest stands.
47	Terrestrial Wildlife	Retain downed logs greater than 30” diameter (large end) by not actively lighting during implementation of prescribed burning.
48	Terrestrial Wildlife	Where the design criteria standards applicable to prescribed burning are not expected to be met, no prescribed burning shall occur within CSO and NG PACs, or applicable portions of PACs without further survey and analysis.
49	Terrestrial Wildlife	Detection of a wolverine or Sierra Nevada red fox will be validated by a forest carnivore specialist. When verified sightings occur, conduct an analysis to determine if activities within 5 miles of the detection have a potential to affect the species. If necessary, apply a limited operating period from January 1 to June 30 to avoid adverse impacts to potential breeding. Evaluate activities for a 2-year period for detections not associated with a den site.
50	Terrestrial Wildlife	Downed logs greater than 16 inches in diameter will be retained during mechanical fuels treatments (i.e., mastication) to the extent practicable.

<sup>1</sup>The Riparian Conservation Area (RCA) is defined as 300 feet on each side of perennial streams and from the edge of special aquatic features (lakes, wet meadows, bogs, fens, wetlands, vernal pools, and springs), and 150 feet from each side intermittent and ephemeral streams. For streams, the RCA is measured from the bank full edge of the stream.

**Table B.2. Aquatic Mechanical Exclusion Zones**

Aquatic Feature	Criteria
Perennial and intermittent streams	No ground-based equipment within 50 ft. of the edge of the stream channel. Equipment is allowed to reach into the equipment exclusion zone to masticate vegetation.
Ephemeral streams and draws	No ground-based equipment within 15 feet of the edge of the stream channel or bottom of draw.
Special aquatic features	No ground-based equipment within 50 feet of the edge of the wet area or riparian vegetation, whichever is greater.