## FOREST PROJECTS PLAN

## Phase 1 Proposed Action

Proposed by: Upper Mokelumne River Watershed Authority (UMWRA)

Location: Amador Ranger District, Amador County, Eldorado National Forest

**Introduction**

The Forest Projects Plan (FPP or proposed project) is a large, landscape-level forest 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[[1]](#footnote-1). The project is designed to help prevent high-intensity, large-scale wildfires. This document covers Phase 1 of a two-phased approach to the Forest Projects Plan. Phase 1 proposes 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 into the project area and will include additional forest management actions such as commercial thinning. Phase 2 will require a much more comprehensive planning document and is expected to take approximately two years to complete.

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. The FPP builds on strategic planning and collaboration achieved by 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 proposed Phase 1 treatments include what the ACCG refers to as “mutually agreeable” in the group’s Forest Treatment Guidance Document, and non-to-moderately controversial forest restoration and understory fuels treatments such as fuel breaks, ridge-top understory thinning, mechanical fuels reduction forest thinning, forest ladder fuels treatments and hand treatments. Select hazard trees would be removed as necessary to facilitate the safe implementation of the habitat treatments. Additionally, prescribed fire treatments would be implemented by the Forest Service.

The FPP would enhance wildlife habitat through non-commercial mechanical fuels reduction, manual vegetation treatments and prescribed burning within three target ecosystems that provide essential components of wildlife habitat: late seral/old forest ecosystems, aquatic ecosystems, and aspen stands.

The treatments would enhance forest health by reducing competition for resources (water, sunlight, nutrients) within 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 would come from lowering the risk of high-severity fire effects within both treated and adjacent untreated areas. The project treatments were designed to reduce lower ladder fuels to slow the spread and reduce the intensity of future fires, thus protecting forested habitat from loss due to large, high severity wildfire.

**Purpose and Need**

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).

North et al. (2021) estimate that of the 13 million acres of federal forest lands across the Sierra Nevada, fires historically reduced fuels on approximately 631,000 acres annually. In contrast, the footprint of all fuel treatment areas on Forest Service lands from 2011–2020 was 63,357–92,725 acres/per year.[[2]](#footnote-2) As a result, fuel loads in forests today are much higher than historical conditions. Accordingly, North et al. (2021) propose the targeted use of traditional silvicultural methods (i.e., mechanical and hand-thinning treatments) to prepare landscapes for both prescribed fire and to better manage wildfire. Such treatments would increase the pace and scale of fuels reduction on dry Sierra Nevada Forests and restore ecosystem function and integrity. Drawing on North’s work, the FPP would utilize mechanical fuels reduction and manual vegetation treatments to prepare the landscape for wildfire resilience and prescribed burning strategies. The FPP would also utilize prescribed burning as an initial treatment where site conditions allow.

Due to the difference between current and desired conditions in the upper Mokelumne watershed, there is a need to implement actions which would:

1. Reduce and maintain lower ladder fuels to slow the spread and reduce the intensity of future wildfires.
2. Reduce fuel loads within late seral/old forest ecosystems, aquatic ecosystems, and aspen stands. Preserve these habitats from loss due to large, high severity wildfire.
3. Protect special-status species that rely on these habitats such as California spotted owl, northern goshawk, Sierra Nevada yellow-legged frog and Yosemite toad.
4. To the extent possible, prepare the landscape for prescribed burning and improve the safety and efficacy of wildfire suppression efforts.
5. Protect developed communities, wildlife habitat and water quality within the Wildland Urban Interface (WUI).
6. Protect aspen stands from conifer encroachment.
7. Work collaboratively with the ACCG to design effective, solutions-oriented treatment activities that are consistent with a triple-bottom line approach, and build relationships and rapport to set the foundation for Phase 2.

UMRWA is currently leading the National Environmental Policy Act (NEPA) planning process for the FPP Phase 1 to allow implementation of strategically-placed on-the-ground fuels treatments for the protection of large trees and wildlife habitat as quickly and as efficiently as possible. The NEPA planning and analysis will also serve as a component of the larger landscape fuels strategy plan for the Amador Ranger District and as required by the Sierra Nevada Forest Plan Amendment (SNFPA Record of Decision, p. 4).

The areas proposed for these fuels treatments are at high risk for wildfire and are characterized by dense understory and overstocked forest conditions that are susceptible to mortality from drought, pests, pathogens, and catastrophic wildfire. The current surface fuel loading and ladder fuels in this area create hazards to communities, firefighters, wildlife, and watershed health. These hazards can be reduced through widespread reduction of surface and ladder fuels and tree thinning. As demonstrated in the recent Caldor Fire, these treatments would also facilitate fire suppression tactical operations in the event of a wildfire.

*Project Benefits to Forests and People*

In addition to protecting and enhancing timber stands, the FPP Phase 1 Project is designed to help protect communities within the Wildland Urban Interface (WUI) to the extent possible. Sixty percent of the proposed project area is within the WUI, including the WUI defense zone (20% of the project area) and the WUI threat zone (40%). The proposed project area encompasses one census populated area (Kirkwood) and is within five miles of six other census populated areas (i.e., Grizzly Flats, Buckhorn, Pioneer, Red Corral, West Point, and Markleeville). The proposed treatments would be implemented across the landscape including in sensitive areas and unique habitats that have traditionally been excluded from these types of fuel treatments both inside and outside the WUI areas.

The risk of large, high intensity wildfire has become disturbingly apparent over the past few years. Wildland fire suppression crews are experiencing more extreme fire behavior in places where forest fuels have accumulated, and where overly dense plantation and natural stands persist. Improving forest health and reducing surface and ladder fuel accumulations across the project area are essential to effectively reducing the risk of large, severe wildfires to life, property, and natural and cultural resources. The vegetation management activities in the proposed project are 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.

Another critical benefit from project implementation would come from lowering the risk of high-intensity fire effects within both treated and adjacent untreated areas. The project treatments are designed to reduce lower ladder fuels to slow the spread and reduce the intensity of future fires, and thus protect forested habitat both inside and outside the WUI areas from loss due to large, high severity wildfire.

Restoration of healthier, more resilient forests will aid a reduction in uncontrolled emissions from wildfire over the long-term and improve growth, life-span, and carbon storage of residual trees. Surface water quality, supply and reliability will be protected by reducing fire-induced soil erosion, benefiting downstream users, hydroelectric infrastructure, and potentially special status species. Project activities are planned within drainages that flow into the Mokelumne River upstream of Pardee Reservoir, which is a critical water storage infrastructure providing water to 1.4 million downstream California residents.

The following paragraphs provide further details concerning project benefits to three ecosystems that provide essential components of wildlife habitat: late seral/old forest ecosystems, aquatic ecosystems, and aspen stands.

*Project Benefits to Wildlife*

*Late Seral/Old Forest Ecosystems:* Late seral/old forest ecosystems support a complex vegetation structure—with relatively dense overstory canopy, tall, large-diameter trees and snags, and a varied understory including downed wood and debris—that provides habitat for a wide variety of plant and animal species. Of particular importance in the Sierra Nevada are two birds that are emblematic of late seral/old-growth conifer and mixed conifer forests, the California spotted owl and the northern goshawk. California spotted owls and northern goshawks are old-growth forest specialists and, at the landscape scale, require heterogeneous forest stands that support patches of large live trees and snags with moderate-to-dense canopy cover in the higher tree strata (North et al. 2017, USDA-FS 2019).

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)).

*Aquatic Ecosystems:* Aquatic ecosystems provide habitat for species such as Sierra Nevada yellow-legged frog and Yosemite toad. Sierra Nevada yellow-legged frogs are a highly aquatic species whose preferred habitat consists of streams or lakes with a gentle slope such that at the shore there is shallow warm water. A large portion of the FPP is located within federally designated critical habitat for Sierra Nevada yellow-legged frog (Subunit 2F, East Amador), which was delineated to encompass extant populations in the Sierra Nevada. Yosemite toads breed in high-elevation wet meadow complexes, moving into adjacent upland forests outside of the breeding season. Federally designated critical habitat for Yosemite toad (Unit 1, Blue Lakes/Mokelumne) is located in higher elevation areas in the southeastern portion of the FPP. Past fire suppression practices and associated changes in vegetation structure within a watershed may have reduced the portion of precipitation that ends up as runoff to creeks and streams (in general, reducing vegetative cover increases water yield, and increasing vegetative cover decreases water yield [Hibbert 1967]).

*Aspen Stands:* Aspen stands within the proposed project area have been compromised by fire suppression and conifer encroachment, which, over time, has resulted in fewer and smaller stands comprised of a single age-class of trees. The FPP is expected to improve the landscape-level forest habitat heterogeneity and diversity that have been compromised by fire suppression and conifer encroachment by increasing the spatial extent of aspen stands. In addition, the proposed aspen enhancement treatments would enhance within-stand resiliency by creating stands characterized by multiple age classes.

Multiple locations within the upper Mokelumne watershed, such as in and around Anderson Canyon, have been identified where aspen stands are currently declining due to conifer encroachment and competition. Conifer encroachment, fire suppression, and livestock/ wildlife browsing and have resulted in an overall decline in the health and extent of aspen stands. Aspen is a shade intolerant species which needs full sunlight for successful establishment and growth. Throughout the northern Sierra Nevada aspen are being shaded out by conifer encroachment and this is evident within the project area as well. The aspen stands in the project area are currently being overtopped by conifers, resulting in a lack of successful regeneration, a decline in the number of aspen stands/aspen clones and declining stand health. Removing competing conifers to maximize sun exposure and reducing the insulating litter/surface fuel layer to stimulate potential for sprouting to create conditions conducive to restoring or expanding these remnant clones of aspen have proven successful on aspen restoration projects in Region 5.

Furthermore, aspen forests are biodiversity hotspots, second only to riparian habitats (Shepperd et al. 2001, Western Aspen Alliance 2019), and, while typically a minor habitat component, they may add disproportionately to overall landscape diversity (Martin and Maron 2012, Kouki et al., 2014, Rogers 2017).

**Location**

The proposed project footprint (25,750acres) is situated primarily within the upper Mokelumne River watershed entirely on National Forest System lands administered by the Amador Ranger District on the Eldorado National Forest. The project is *not* proposed on private lands, in designated wilderness areas, or research natural areas.

UMRWA utilized the GIS Mapping Tool described above to identify areas within the upper Mokelumne watershed at high risk for fire that are inside and outside the WUI. UMRWA identified one large potential project area within the Amador Ranger District.

**Proposed Activities**

The project proposes to implement four categories of treatments: 1. Mechanical Treatments of Surface and Ladder Fuels, 2. Hand Thinning, 3. Prescribed Burning; and 4. Aspen Stand Restoration. 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. Additionally, two supplemental activities/treatments (pruning and hazard tree felling and removal) may be undertaken at select locations where conditions warrant such supplemental activities.

Project activities include thinning brush and small trees, removing ladder fuels, pruning trees, and removing or compacting the arrangement of surface fuels in order to prepare the landscape for wildfire resilience and prescribed burning. These are simple, cost efficient and effective fire hazard reduction techniques that will increase the annual acreage of fuels reduction treatments and enable more intensive treatments in key areas. The FPP would also utilize prescribed burning as an initial treatment where site conditions allow.

Mechanical Fuels Reduction

Mechanically reduce shrubs and small trees generally up to 10 inches dbh (larger live trees may be masticated where necessary to facilitate machinery movement within the stand). Masticate dead trees up to 16” diameter (larger dead trees may be masticated to abate an imminent safety hazard). Mechanical fuels reduction treatments within the prescribed fire treatment areas will only occur where required field surveys have been conducted.

* Treat ground fuels through grinding, machine crushing, or chipping.
* Mechanical Fuel Reduction would be applied:
	+ to slopes ≤40% where feasible;
	+ within 0.25 miles of road centerline;
	+ where hand treatments are not required or specified;
	+ within California spotted owl and Northern goshawk Protected Activity Centers (PACs) within WUI Defense and Threat Zones (except within 500’ of the activity center and as consistent with SNFPA) (SNFPA ROD, p.60, #72 and #73);
	+ Except where necessary to facilitate machinery movement within the stand, no live trees shall be cut that exceed 10" DBH and meet minimum merchantable timber specifications (i.e., would produce at least a 10' straight log with a 6" diameter inside bark at the small end). Lodgepole pine is not considered merchantable in this project.
* On slopes >40% a tethered mastication system may be utilized where feasible and in accordance with soil standards. 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).
* 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 grab adjacent vegetation and ladder fuels.
* Some areas designated mechanical fuels reduction may require further evaluation to determine if archaeological field surveys are required. These areas are referred to as “phased arch field surveys” in Table 1below.

Hand Thinning Brush and Small Trees

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

* Hand thin brush and live trees generally up to 10” diameter in areas where mechanical fuels reduction treatments are unsuited or prohibited. Hand cut dead trees up to 16” diameter (larger dead trees may be cut to abate an imminent safety hazard).
* Hand thinning within California spotted owl and northern goshawk PACS outside of WUI and surrounding activity centers within WUI would target select conifer trees less than 6 inches diameter prior to implementing prescribed fire (SNFPA ROD, p. 60, #74). Outside the WUI, stand-altering activities would be limited to reducing surface and ladder fuels through prescribed fire treatments. In forested stands with overstory trees 11 inches dbh and greater, prescribed fire treatments will be designed to promote average flame length of 4 feet or less. Hand treatments, including handline construction, tree pruning, and cutting of small trees (less than 6 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 would 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 would be utilized as fire containment lines where possible.

Aspen Restoration

* Aspen stands will be defined in consultation with the United States Forest Service.
* Remove encroaching conifers and shrubs 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) 1½ 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 (to conduct treatments or process treatment by-products), 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 would be applied to stands on slopes generally ≤40% and hand cutting would be applied on slopes generally >40%; removing trees less than 12" diameter.

**Supplemental Activities/Treatments**

Pruning

* Residual trees may be pruned to raise the base height to live crown in order 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 8’ to 12’ on the bole, while retaining a minimum of 50% but not to exceed 50% 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 proposed project 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.

**Table 1**: Summary of Forest Projects Plan (FPP) Phase 1 proposed treatment activities and estimated acreages.

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| --- | --- | --- |
| **No.** | **Treatment activity** | **Estimated acres** |
| 1 | Mechanical fuels reduction\* (confirmed) | 7,639 |
| 2 | Mechanical fuels reduction\* (phased Arch field surveys) | 6,686 |
| 3 | Mechanical fuels reduction\* (confirmed), prescribed burning | 2,179 |
| 4 | Mechanical fuels reduction\* (phased Arch field surveys), prescribed burning | 2,197 |
| 5 | Hand thinning only | 4,898 |
| 6 | Prescribed burning\*\* | 1,957 |
| 7 | Aspen restoration | 172 |
| 8 | Aspen restoration, prescribed burning | 22 |
| **Total project acreage** | **25,750** |

**\*:** Hand thinning will be utilized wherever mechanical fuels reduction treatments are determined to not be suitable based on field reconnaissance.

**\*\*:** Prescribed burning treatment areas also have the option of pre-hand thinning treatments.

***Confirmed***: treatments are confirmed since there is adequate Arch survey coverage.

***Phased:*** Arch survey coverage adequacy unknown or there is no adequate Arch survey coverage; areas are proposed to be treated with mechanical fuels reduction pending funding and capacity to conduct Arch surveys.

**Anticipated Timing and Extent of Proposed Activities**

This project is intended to support an implementation window of five to six years while a larger scale and more comprehensive Phase 2 Forest Projects Plan is completed. The timing and duration of implementation for this project is expected to vary based on the type of action. We estimate 500 to 2,000 acres of hand treatments and 500 to 2,000 acres of mechanical fuels reduction treatments could be implemented on an annual basis over the next five to six years and repeated for 10 to 15 years or more, depending on fuel conditions and funding. We estimate that 6,000 acres or more may be treated with prescribed fire in the next five to six years.

**Forest Plans and Sierra Nevada Forest Plan Amendment**

The FPP is consistent with the Eldorado National Forest Plan, as amended by the 2004 SNFPA. In addition, the project would achieve concepts described in the more recent 2019 California Spotted Owl Conservation Strategy (Owl Strategy). Both documents recommend treatments that retain high quality habitat, and protect habitat and PACs, from stand destroying wildfire. Furthermore, the FPP is consistent with the national-level, Wildfire Crisis Strategy, which articulates a need for an increase in pace and scale of fuel treatments within high-risk firesheds (including the Upper Mokelumne River watershed) in the western United States. The treatments planned in this project would retain habitat where it exists, reduce potential for larger wildfires in and adjacent to habitat, and improve stand health which will benefit spotted owls and other species through time. This project and others like it may serve as a model for future projects.

The FPP aligns with the Mokelumne Avoided Cost Analysis which was a joint effort by the ACCG, the Forest Service, the Sierra Nevada Conservancy, and The Nature Conservancy. The analysis demonstrated the importance of forest management to protecting resources in disproportion to their costs. The project is consistent with Amador County High Country Community Wildfire Protection Plan objectives in that work will help to protect human life, protect property from wildfires, minimize ignitions, decrease wildfire intensity and damage, and protect infrastructure. The proposed project advances the State’s Shared Stewardship Memorandum of Understanding with Forest Service Region 5, which identifies a shared goal to increase the pace and scale of science-based forest stewardship activities, and better protect human life, infrastructure, and ecosystems. Finally, this project/work advances California’s Wildfire and Forest Resilience Action Plan; it promotes forest and watershed health, protects critical infrastructure including creation of fire-safe roadways, reduces the likelihood of large-scale fire, and decreases the potential for uncontrolled emissions.

**Public Outreach and Use of Mapping Tool**

The UMRWA team utilized the GIS products recently developed in collaboration with the ACCG Strategic Landscape Assessment Work Group – SLAWG (as part of the Sierra Nevada Conservancy (SNC)-funded GIS Mapping Tool Project) to identify priority treatment areas. The UMRWA team worked closely with the SLAWG to develop a landscape prioritization tool that utilizes a wildfire risk assessment framework outlined in GTR-315 (Scott et al., 2013). This prioritization tool was utilized to identify where the region’s high-valued assets and resources would be most vulnerable to predicted future wildfire. This process identified “priority areas” for future treatments – model outputs were areas identified as being most at risk. Along with the “priority areas” output generated from the tool, UMRWA also utilized the project inventory database that was developed by the ACCG to track previously identified project and treatment areas.

Based on GIS analyses compiled as part of the Mapping Tool Project (described also below, under Site Description), the project planning areas are considered high priority for habitat protection and fuels treatments due to dense, overstocked, homogeneous forest conditions that are susceptible to mortality from drought, pests, pathogens, and catastrophic wildfire. While high severity fire has likely been part of the natural range of variability for several forest types at low to mid-elevation in the Sierra Nevada, the number of large fires (>160 acres) per year has increased from 1950 to 2010, and the proportion of high severity fire area in large fires has steadily increased from 1984 to 2010 in the Sierra Nevada (Miller and Safford 2012). In the time since 2010, there have been other large fires with similar trends of increasing total fire size, making the proportion of area of high severity fire greater in modern times, and increasing the size of contiguous high severity patches. The associated impacts of high severity fire on forest structure, wildlife and their habitat, and soils and watershed condition are beginning to be understood. It is widely accepted that mechanical fuels reduction thinning and prescribed burning are effective strategies in changing forest stand structure and fuel beds to a condition that is more resistant to stand-replacing, high intensity fire, resulting in diminished high severity fire effects (Stephens et al. 2012).

UMRWA worked closely with FS staff and the ACCG to design project activities with well-established treatment methods to reduce fuels and the threat of wildfire, maximize co-benefits such as watershed protection, while simultaneously minimizing the time needed to complete the NEPA/CEQA processes. The proposed landscape-level planning initiative and the associated NEPA/CEQA compliance will address areas identified as most urgently needing understory treatments. Most of the treatments employed will be service work or stewardship such as hand treatments and mechanical fuels reduction.

**Environmental Review Process**

Planning involves the NEPA/California Environmental Quality Act (CEQA) processes which must be completed before any significant future fuels treatments can be implemented in the upper Mokelumne watershed. It is critical that UMRWA and others work as expeditiously as possible to vastly increase the areas where forest treatments can be conducted and implement those projects as-soon-as possible.

The exact deliverables and milestones for the NEPA/CEQA process will depend on which NEPA strategy is decided by the Forest Service. The final decision about which NEPA compliance strategy is required will be made following scoping, however; we anticipate this planning project will fall under a NEPA Categorical Exclusion (CE)/Decision Memo (DM) (36 CFR § 220.6(e)(6)) (wildlife habitat improvement activities) and CEQA compliance will be completed under a statutory exemption (PRC Section 4799.05(d) (AKA Senate Bill 901). These permitting strategies generally require fewer steps and less time; however, the exact number of acres included in the NEPA DM/CEQA compliance documents will depend on funding availability primarily for archaeological field surveys in areas needing mechanical fuels reduction (e.g., ground disturbing activities) or wherever archaeological field surveys are required prior to execution of the NEPA DM. Specific reports likely to be prepared as part of the NEPA process include: Wildlife Biological Evaluation, Botanical Biological Evaluation, hydrological analyses, Cultural Resources documentation, and all analyses required to complete the NEPA Project Record reports, Decision Memo(s) and CEQA Notice of Exemption.

Once the NEPA/CEQA process is completed on the larger landscape, UMRWA is committed to seeking funding over time for implementation of the entire planning area. Implementation costs for on-the-ground fuels treatments include flagging unit boundaries (if needed), procurement, contract administration, monitoring, and project management.

The NEPA DM will incorporate a thorough and detailed list of environmental protection measures to avoid adverse impacts to environmental resources including soil, plants and fish and wildlife. These environmental protection measures are carefully worded and discussed as part of the entire NEPA and CEQA processes. The FS has adopted a number of Best Management Practices and protection measures to avoid unnecessary environmental impacts. For example, to reduce the spread of noxious weeds and, per USDA guidelines, invasive plants will be monitored during baseline and post treatment periods (USDA 2013). Previous UMRWA implementation projects have incorporated these BMPs into contract documents and compliance is maintained through regular inspection by UMRWA staff.

**BACKGROUND AND CONTEXT**

The majority of the proposed 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. The project employs a diverse mix of management actions that build on the Cornerstone initiative.

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Draft Design Criteria to be included with Scoping/Interested Party Letter.

1. The FPP also includes an adjacent protective buffer on the northeastern boundary of the Mokelumne watershed, which was included based on recommendations from USFS personnel to further strengthen protection of the watershed based on prevailing winds, topography, hazardous fuel conditions and other risk factors. [↑](#footnote-ref-1)
2. Includes mechanical, prescribed burn and managed wildfire treatments. [↑](#footnote-ref-2)