

Mina Commercial Thinning

Finding of No Significant Impact Determination

DOI-BLM-CA-N030-2009-0010-EA

**U.S. Department of the Interior
Bureau of Land Management (BLM)
Arcata Field Office
Arcata, CA**

Based upon a review of the EA and the supporting documents, the BLM Arcata Field Office has determined that this project is not a major federal action and will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. The project includes no environmental effects that meet the definition of significance in context or intensity as defined in 40 CFR 1508.27. Design features to reduce impacts were incorporated into the project. None of the environmental effects discussed in detail in the EA and associated appendices are considered significant, nor do the effects exceed those described in the *Arcata Resource Management Plan* (USDI BLM 1995). The project involves use of common implementation and monitoring techniques and there is no scientific controversy or uncertainty over the type or level of impacts. The action will not adversely affect an endangered or threatened species or habitat, historic or cultural properties, wilderness, or other unique characteristics of the area. The action is in compliance with all laws and policies guiding management of the area. Therefore, an environmental impact statement is not needed.

Signed
Lynda Roush
Arcata Field Manager

6/7/2010
Date

**Mina Commercial Thinning
Decision Record**

DOI-BLM-CA-N030-2009-0010-EA

**U.S. Department of the Interior
Bureau of Land Management (BLM)
Arcata Field Office
Arcata, CA**

Decision and Rationale

It is the decision of the BLM Arcata Field Office to implement the proposed action which is commercial thin the Mina parcel in Trinity and Mendocino County. The selected alternative best meets the purpose and need for the project which is to accelerate the development of late-successional forest characteristics and reduce the fuel loading within the forest stand. This project is not expected to adversely impact elements of the human environment due to design features and operations criteria. This decision is consistent with the *1995 Arcata Resource Area Resource Management Plan (as amended)* and other relevant laws, regulations and policies guiding management of the project area.

Administrative Remedies

Administrative remedies may be available to those who believe they will be adversely affected by this decision. Appeals may be made to the Office of Hearings and Appeals, Office of the Secretary, U.S. Department of Interior, Board of Land Appeals (Board) in strict compliance with the regulations in 43 CFR Part 4. Notices of appeal must be filed in this office within 30 days after publication of this decision. If a notice of appeal does not include a statement of reasons, such statement must be filed with this office and the Board within 30 days after the notice of appeal is filed. The notice of appeal and any statement of reasons, written arguments, or briefs must also be served upon the Regional Solicitor, Pacific Southwest Region, U.S. Department of Interior, 2800 Cottage Way, E-1712, Sacramento, CA 95825.

The effective date of this decision (and the date initiating the appeal period) will be the date this notice of decision is posted on BLM's Arcata Field Office internet website.

Signed
Lynda Roush
Arcata Field Manager

6/7/2010
Date

MINA COMMERCIAL THINNING
EA # DOI-BLM-CA-N030-2009-0010

U.S. Department of the Interior
Bureau of Land Management (BLM)
Arcata Field Office
Arcata, CA

Prepared By: Signed 4/6/2010
Henry R. Harrison, Forester

Reviewed By: Signed 4/6/2010
Bob Wick, Planning/NEPA Coordinator

 Signed 6/2/2010
Jeff Knisley, Acting Assistant Field Manager

1. Introduction

Background and Setting

The Mina parcel is located in T.5 S., R. 7 E. Section 34 on the Trinity and Mendocino county line and contains 200 acres.

This tract of land was first harvested in 1980 at which time approximately 1.9 million board feet (MMBF) of timber was removed by a commercial thinning on 185 acres with the remaining 15 acres left unharvested. The stand was conservatively marked with the intention of entering the stand again within 15 years to remove additional volume to develop a mature stand structure. Since then, the stand has become stagnant and is in need of additional thinning for development to a more mature forest with large diameter trees and healthy crown ratios.

The existing road system and landings were built during the first entry in 1980.

Purpose and Need for Action and Decision to be Made

As previously stated above, the forest stand was first entered in 1980 as a first entry thinning with the intention of a follow-up second entry thinning approximately 15 to 20 years later. This second thinning was not done within the proposed timeframe and as a result the stand has again become stagnant and in need of a thinning. The surrounding private forest stands have all been heavily harvested in the last 50 years with only a few isolated small stands of mature forests remaining on the landscape.

The development of a mature forest would be beneficial for wildlife species dependent on forest stands with mature characteristics.

The decision to be made is whether to implement a commercial thinning on the Mina parcel or let the forest stands continue to remain in its present condition.

Conformance with Land Use Plan

This parcel is identified as “matrix land” in the Arcata Resource Management Plan and in the Northwest Forest Plan (USDA-USDI 1994). As such the parcel is not subject to the restrictions for “Late-Successional Reserves”. Nevertheless, the thinning will be consistent and meet the objectives as outlined in the Record of Decision (ROD) and Standard and Guidelines in the Northwest Forest Plan.

Relationship to Statutes, Regulations or Other Plans

This action is consistent with the Northwest Forest Plan and the federal Endangered Species Act. The BLM has determined that no effect will occur to listed species. The thinning and subsequent treatment of the slash will be consistent with the National Fire Plan.

Scoping and Issues

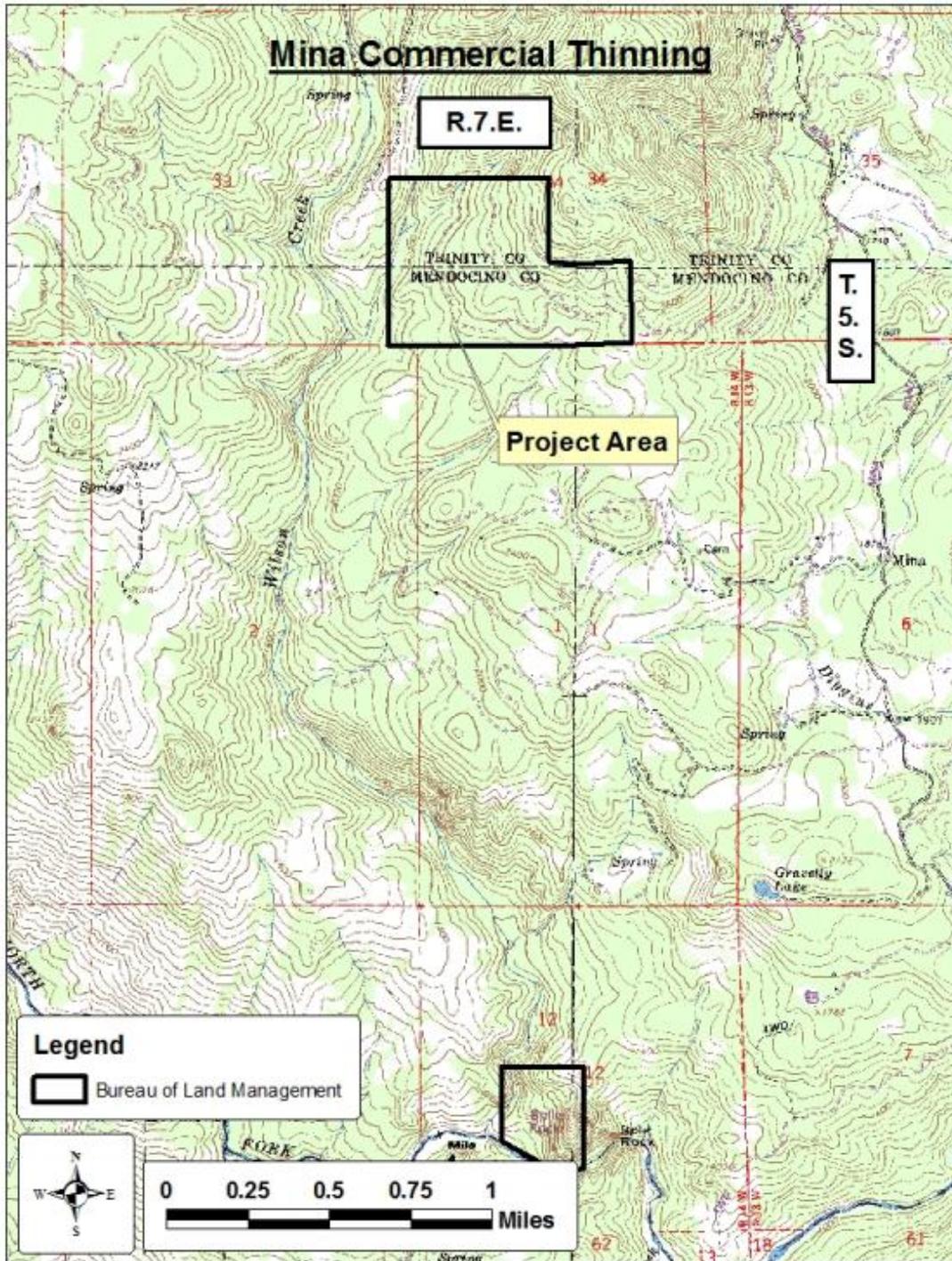
Scoping occurred within the BLM Arcata Field Office staff. The issues that arose were sediment yield to Wilson Creek, protecting Riparian Reserves, disturbance of forest soils, and the impact this project will have on the fuel loading in the area. Other issues discussed were controlling the introduction of non-native species and the presence of threatened and endangered plants and animals. These issues will be addressed further in this document.

2. Proposed Action and Alternatives

Proposed Action

The proposal is to conduct a commercial thinning on the Mina parcel located in T.5 S., R. 7 E. Section 34. The parcel is located on the Trinity and Mendocino county line and contains 200 acres. See Figure 1.

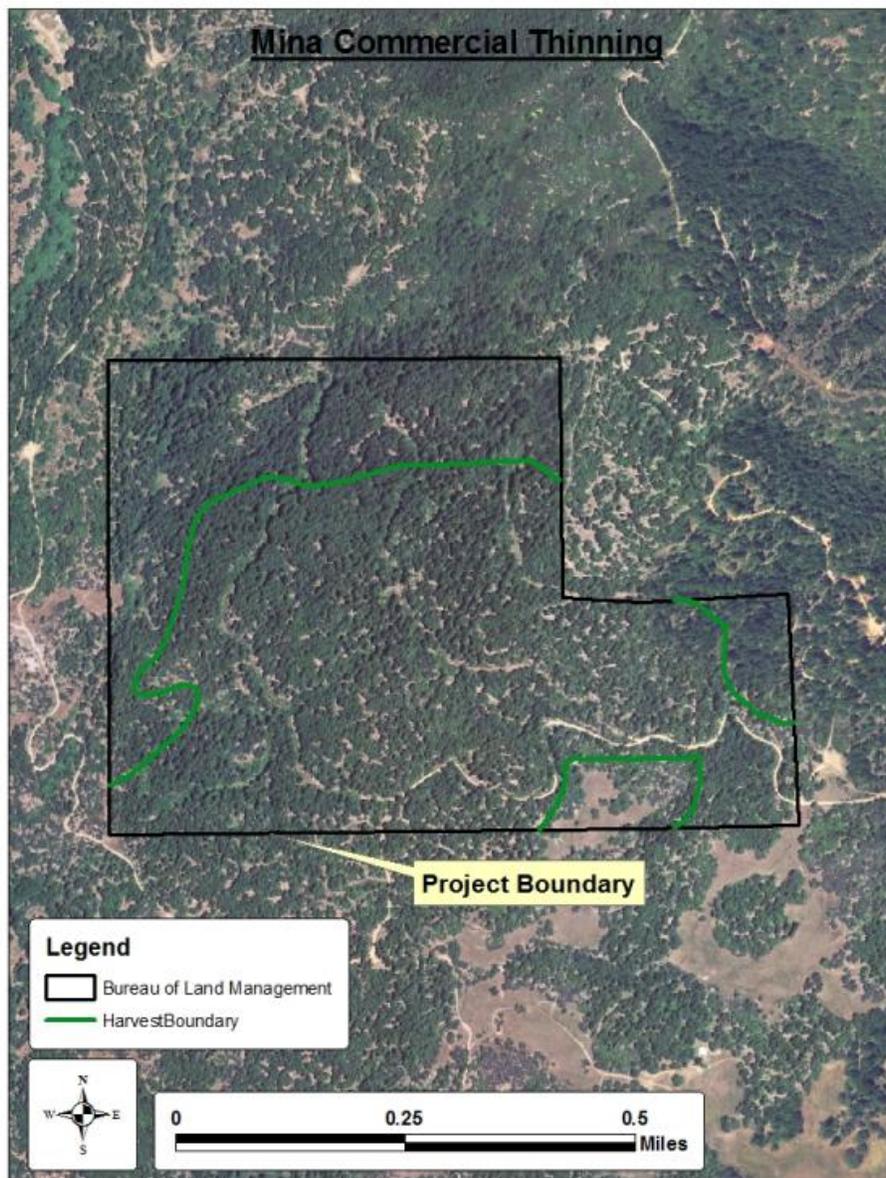
Figure 1 Location Map



The forest stand is approximately 100 to 130 years old and stand structure is mostly even aged Douglas-fir (*Pseudotsuga menziesii*) and an older component of ponderosa pine (*Pinus ponderosa*). See Figure 2.

The proposal is to remove Douglas-fir trees that are suppressed, intermediate and co-dominate in the stand structure. This type of thinning is often referred to as “thinning from below” where the smaller and less thrifty trees are removed leaving the larger and healthier trees to continue growing and develop the stand. It is anticipated that no ponderosa pine will be removed since one of the objectives is to maintain a healthy ponderosa pine component within the stand. The diameter of the trees to be removed will range from 12 to 24 inches and no trees larger than 24 inches will be removed. Approximately 500 thousand board feet (MBF) will be removed with this harvest on the same 185 acres harvested in 1980.

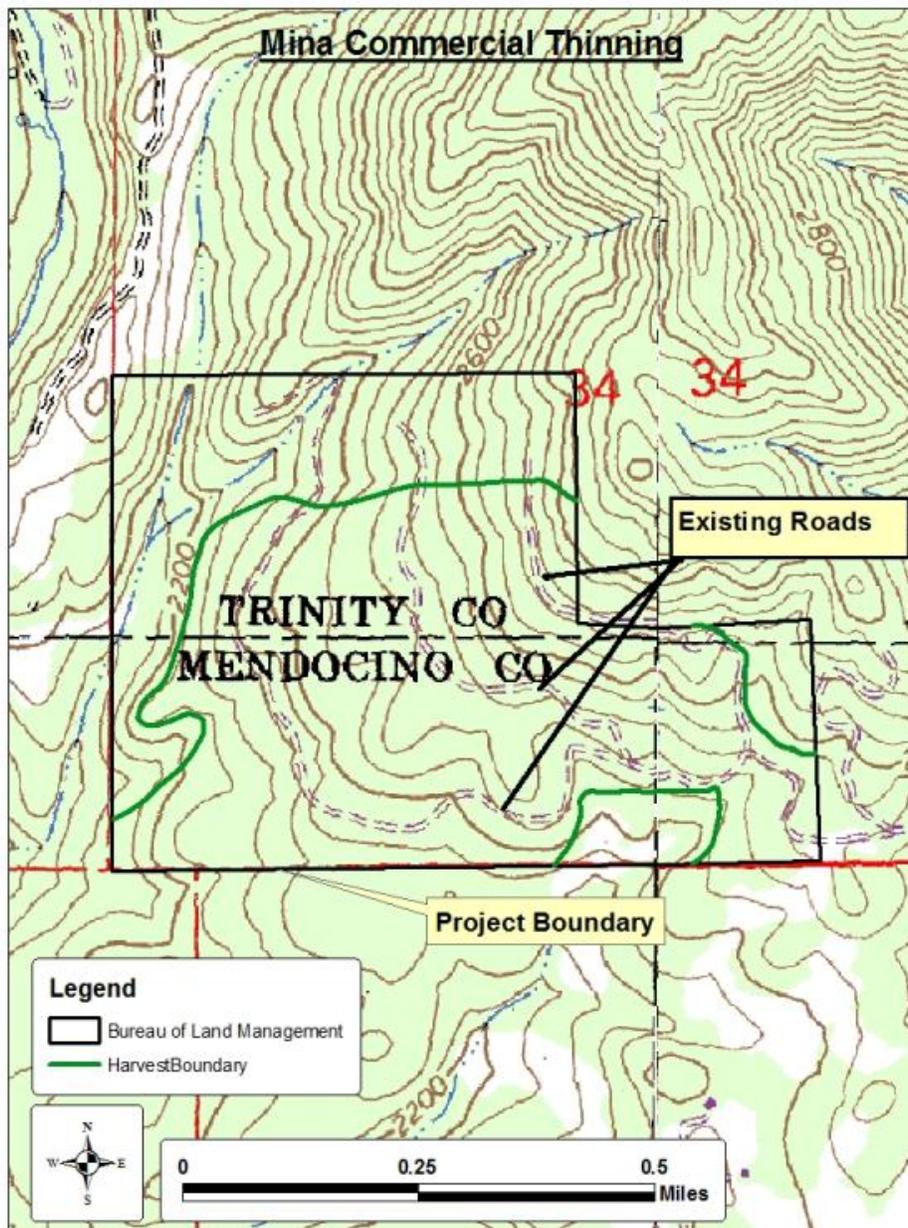
Figure 2 Plan View



Only the 185 acres previously harvested areas will be thinned again under this proposed action. The 15 acres not previously entered will remain in an unharvested condition.

No additional roads and landings will be constructed since all are still in place from the earlier harvest. Harvesting will be done by a combination of small tractors, rubber tired skidders and/or a small mobile yarder. See Figure 3.

Figure 3 Road System



No operations including log hauling will occur during wet weather, thus reducing the potential for rutting and deformation of the roadbed. The operating season will be from April 1st until November 15th of each year. The thinning operation will be completed within 24 months after the contract is awarded.

Riparian Reserves, as defined by the Northwest Forest Plan (USDA-USDI 1994), will be identified on the ground and no tree cutting or mechanical equipment will be allowed in any Riparian Reserve.

The objective of the thinning is to reduce the tree density and develop late-successional (mature) forest stand characteristics. In addition, the thinning will be used to reduce the fuel loading to protect the stand from a catastrophic stand replacing fire. The thinning and subsequent treatment of the slash will be consistent and meet the objectives of the National Fire Plan.

No ponderosa pine will be removed as one of the objectives is to maintain a healthy ponderosa pine component within the stand.

Slash will be piled on landings and will be burned with an approved burn plan following completion of the harvesting operation.

Pursuant to Executive Order 13112, preventative action would be taken to limit the opportunities for the introduction, establishment, or spread of invasive, non-native plant species.

- 1) Road side trees would be maintained so as to provide sufficient shade to prevent establishment or spread of sun loving invasive weeds.
- 2) All heavy equipment and vehicles contracted to conduct project activities would be inspected and cleaned of any reproductive plant parts prior to entry on BLM lands.

Alternative 1 (No Action)

The no action alternative would be to not commercially thin this forest at this time and let the stand remain in its present condition.

3. Affected Environment

3.1 Terrestrial Wildlife

Pacific fisher (*Martes pennanit pacifica*), a candidate species for protection under the Endangered Species Act, are possible but unlikely inhabitants of the project area. The area does not contain a sufficient number of conifers and hardwood trees large enough to contain potential denning cavities. Foraging areas with sufficient cover and large woody are infrequent in the project area.

The action area includes wildlife common to interior mountain ranges. Mammalian species typical of this landscape include black-tailed deer (*Odocoileus hemionus*), coyote (*Canis latrans*), grey fox (*Urocyon cineroargenteus*), black-tailed jack rabbit (*Lepus californicus*), deer mice (*Peromyscus maniculatus*), western harvest mouse (*Rethedontymus megalotis*), and grey squirrel (*Sciurus griseus*). Avian species commonly found in this area include red-tailed hawk (*Buteo jamaicensis*), western scrub jay (*Aphelocoma californica*), oak titmouse (*Baeolophus inornatus*), California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), and western bluebirds (*Sialia mexicana*). Common ravens (*Corvus corax*), pigeons (*Columba livia*), barn owls (*Tyto alba*) are often associated with human development and can be found in the area.

There is potential for the neo-tropical and non-migrating birds to nest on the project site. California quail and ruffed grouse are some of the more common birds with potential to breed on the site.

3.2 Threatened or Endangered Species

The project area is within the range of the federally threatened northern spotted owl (*Strix occidentalis caurina*) and marbled murrelet (*Brachyramphus marmoratus*) but is not within designated critical habitat for either species. The project area has suitable habitat for the spotted owl, although the habitat quality is low for both species. Protocol surveys for spotted owls were completed in 2008 and 2009 with negative results.

3.3 Geology/Soils

The area lies within the Central Belt Franciscan complex which is Cretaceous to Jurassic in age (65 to 215 million years old). Throughout the project area, various marine sedimentary rocks occur as colluvium and as larger clasts in stream channels including chert, meta-chert and sandstone. Much of the project area is mantled in thick soils of the Asabeen-Sanhedrin complex. These soils range in depths from 0.5 to 1.6 meter and are well drained, gravelly loams (California Soil Resource Lab 2008).

Evidence of recent instability is mostly lacking in the project area. No evidence of recent land sliding was observed in the area. The gentle topography in the project area suggests that the potential for hill slope land sliding is low. Evidence of recent erosion is present

on the road but is confined to short segments of tread erosion along the actively used right-of-way along the western margin. Instances of fill slope instability along the existing roads are rare and are indicated by small tension cracks along the outboard edge of the road. Overall, the road network appears relatively stable and well-drained due to the gentle slopes in the project area.

3.4 Hazardous Fuels Management

The existing stand conditions exhibit moderate to high density characteristics with closely spaced, small diameter trees inter-mixed with larger mid-mature trees. These conditions can increase fire intensity and lead to a transition from a surface fire to a crown fire. This occurs as small diameter trees carry fire into the canopy where tightly spaced crowns allow fire to spread from tree to tree creating what is called an active crown fire. Crown fires can cause public safety issues, destruction of private property, and high mortality in the stand. Removing the young trees will have the effect of decreasing stand density and increasing crown spacing. This will potentially moderate fire behavior creating fire effects that are more likely to enhance long-term stand health and development.

3.5 Threatened or Endangered Fish and Essential Fish Habitat

The project area is located approximately 2.5 miles from anadromous fish habitat. The project area contains sections of three unnamed tributaries to Wilson Creek. Wilson Creek is a small tributary to the North Fork Eel River. Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), and steelhead (*Oncorhynchus mykiss*) populations occur in the North Fork Eel River and all three of these Pacific salmon species are listed as “threatened” under the federal Endangered Species Act. Wilson Creek does not contain Pacific salmon populations. Essential Fish Habitat is defined by the Magnuson Act of 1996 as areas where commercially-fished species breed, rear, or use for migration. No Essential Fish Habitat occurs within the project area.

3.6 Vegetation and Threatened and Endangered Plants

The dominant plant community is Douglas-fir/black oak with mixed Ponderosa pine and associated forest understory species. The understory is fairly open with low-statured herbs more or less uniformly distributed across the duff layer. No rare, threatened, or endangered vascular or non-vascular plants were determined present in the area following an April 14, 2009 field survey.

3.7 Water Quality

Limited water quality data are available for Wilson Creek. The Humboldt County Resource Conservation District (Humboldt County Resource Conservation District 1998) collected summer water temperature data in 1996–1997 and reported a mean weekly average temperature of 71.2° F which is above the threshold considered stressful to Pacific salmon species. The North Fork Eel River is listed by the U.S. Environmental Protection Agency (EPA) 303(d) list to be impaired for temperature and for sediment (EPA1992).

4. Environmental Effects – Direct, Indirect and Cumulative

Proposed Action

Direct and Indirect Effects

4.1 Terrestrial Wildlife

Clearing smaller trees and opening the understory will likely provide improved forage conditions for grazing and browsing species such as deer and quail. Reducing the canopy cover allows more light to infiltrate to ground level creating more productive habitat for grasses and shrubs. The peak benefit will be in the years immediately after the treatment. The canopy will begin to close over time.

During the project implementation wildlife in the area will likely experience a high level of short-term disturbance resulting from equipment operations and felling trees. Most wildlife will likely leave the project area until the project is completed, though tolerance to disturbance varies among species and individuals.

Logging operations have the potential to impact breeding birds. Ground nesting and tree nesting birds are subject to direct injury and mortality during equipment and tree falling operations. To avoid this impact, the area will be thoroughly searched for nests prior to work if the work is scheduled between April 1 and June 15. Project specification do not allow for work to begin prior to April 1. If a nest is detected a 10 meter radius around the nest will be flagged off until the nestlings have fledged or the nest has failed.

4.2 Threatened or Endangered Species

The proposed action will not impact northern spotted owls or marbled murrelets. Those species have not been detected in the project area. Northern spotted owls may benefit from improved habitat conditions and accelerated maturing of the forested stand into a late-succession habitat type.

4.3 Geology/Soils

Under the proposed action, potential effects on erosional processes would occur from use of the existing roads and tractor skidding of logs. Effects from roads are expected to be minor and localized and negligible in extent or duration. Re-shaping of the road surface along the western margin of the project area would reduce the extent of runoff from the current road surface. Other roads are currently well drained and minimal equipment work is needed to provide vehicle accessibility while minimizing disruption to the already stable running surface. Stream crossings in the project area are either unchanneled swales or small streams (<0.5 meter wide) with adequately-sized culverts in place. Hand-cleaning of culvert inlets, where necessary, would ensure that any soil disruption near stream crossings is negligible. Where the road fill exhibits potential instability (i.e., tension cracks and slumping) excavation would pull back the unstable portion, placing it in a nearby stable storage location along the inboard portion of the road. The gentle topography of the project area, the original road locations and configurations, coupled

with the improvements during project implementation will result in negligible quantities of road-related sediment generation and transport.

Effects on hill slope erosional processes are expected to be localized in extent with disruption of uppermost soil layers occurring where the larger logs are yarded. Limiting equipment access to slopes less than 35 percent will ensure that any soil disruption has little potential for transport. Previous harvest in the area shows little, if any, evidence of ground displacement. Retention of the existing forest over-story canopy would continue to buffer the forest floor from raindrop impacts. Review of aerial photos and ground reconnaissance suggests that mass wasting is not a factor in the project area. Regardless, maintenance of the existing overstory stand structure would ensure that root cohesion on hill slopes is retained. Finally, equipment would be excluded from riparian buffers, except for road access, reducing the potential for any soil generation to reach nearby stream channels. Overall, effects on hill slope erosional processes would be so limited in extent and duration that any effects would be insignificant.

4.4 Hazardous Fuels Management

Under the proposed action slash generated from the harvesting operation are projected to range from 5–30 tons per acre. Follow up treatments of activity fuels such as tractor or hand burning will reduce the fuel load to 3–10 tons per acre (Maxwell and Ward 1980). Slash concentrations at landings will also need to be piled and burned. All burning will be conducted after the timber sale contract has been completed using a BLM approved burn plan. By thinning the stand the overall fuel loading will be reduced and the potential for a stand replacement fire will be greatly reduced. Thinning the stand and reducing the fuel loading will be beneficial in accelerating the forest stand to an older seral stage.

4.5 Threatened or Endangered Fish and Essential Fish Habitat

Given the nature of the proposed action no direct effects are expected to occur. No perennial streams flow through the project area and thus tree removal, yarding, hauling, or management of slash on all units will have no effect on summer water temperature because no water flows in these channels during summer months. Thus no casual mechanism exists to effect summer water temperatures. The proposed action will have no impact on aquatic species, essential fish habitat and wetlands. A completed Biological Assessment for this project has been completed.

4.6 Vegetation and Threatened and Endangered Plants

There will be short-term trampling of understory vegetation and removal of smaller Douglas-fir trees. Shady forest understory conditions will be maintained therefore no understory composition changes are anticipated. Full vegetation recovery is expected following disturbance.

4.7 Water Quality

Each indicator was analyzed for potential effects from each project element by examining the proximity to stream channels and fish habitat, the probability that an effect could occur, and the potential magnitude of an effect. The great majority of indicators are

not affected by the project elements. Tree cutting, yarding, hauling and slash management have a negligible effect on turbidity and substrate because of proximity and magnitude. Tree cutting, yarding, hauling and slash management may have undetectable effects on chemical contaminants and nutrients.

Cumulative Effects

The cumulative effects assessment area for this project is the Wilson Creek watershed which ultimately flows into the North Fork Eel River. The main activities on private lands are grazing and timber harvesting with some rural development scattered mostly on the western edge of the watershed. Almost all of the mature timber was harvested from this watershed more than 30 years ago. No commercial timber harvesting has occurred in the assessment area in the last 20 years. The last thinning on the Mina tract was in 1980. During the last 20 years there has been significant growth of the forest stands on the surrounding private lands. Possibilities exist that private landowners within the area will again harvest timber from their property if market conditions improve and the trees grow to merchantable size.

This project will accelerate the development of a mature stand of trees. Since the area is lacking in mature forest stands, implementing this thinning project will have a beneficial cumulative effect on the assessment area since it will increase the amount of acreage of large mature trees. This will be the case especially if the private landowners resume harvesting on their lands.

Alternative 1 (No Action)

5.1 Terrestrial Wildlife

Under the no action alternative wildlife in the area would not benefit from increased forage availability. Wildlife would not be subjected to short-term disturbance created during project implementation. There would be no impact to nesting birds.

5.2 Threatened or Endangered Species

Under the no action alternative, northern spotted owls would not receive the potential benefit of accelerated growth into a late succession stand. However, since both northern spotted owls and marbled murrelets have not been detected in the project area, there would be no impact from short-term disturbance resulting from the thinning operations.

5.3 Geology/Soils

Under the no action alternative no potential effects would occur from the harvesting operation.

5.4 Hazardous Fuels Management

The no action alternative would maintain existing high stocking levels of young trees in the understory and tight crown spacing in the overstory. These conditions could increase the risk of undesirable fire behavior in the stand.

5.5 Threatened or Endangered Fish and Essential Fish Habitat

Under the no action alternative the potential effects on fish habitat would be eliminated.

5.6 Vegetation and Threatened and Endangered Plants

Under the no action alternative, the forest stand will remain stagnant and opportunity to accelerate the stand into a mature forest stand will be forgone. The stand would remain susceptible to a stand replacement fire due to the density of the stand.

5.7 Water Quality

Under the no action alternative the potential effects on water quality from the harvesting operation would be eliminated.

6.0 Tribes, Individuals, Organizations and Agencies Consulted

The following persons, organizations, and agencies were consulted during preparation of this analysis. Inclusion of an organization or individual's name below should not be interpreted as their endorsement of the analysis or conclusions.

Persons, Agencies and Organizations consulted

Carlino Bettega, Round Valley Tribes of the Round Valley Reservation.

List of Preparers

Signed _____ 6/4/2010
Jared Hammatt, Fuels

Signed _____ 6/7/2010
Jennifer Wheeler, Botanist and Invasive Weed Coordinator

Signed _____ 6/4/2010
Jesse Irwin, Wildlife Biologist

Signed _____ 6/7/2010
Sam Flanagan, Geologist

7.0 References

California Soil Resource Lab. 2008. Online Soil Survey Mapping. University of California Davis. Available at <http://casoilresource.lawr.ucdavis.edu/drupal/>

Environmental Protection Agency 1992. *North Fork Eel River Total Maximum Daily Loads for sediment and temperature*. Total Maximum Daily Load, U.S. Environmental Protection Agency Region IX, San Francisco.

Humboldt County Resource Conservation District. 1998. Eel River Water Quality Monitoring Project, Final Report. 205(J) Contract # 5-029-250-2. May 15, 2008, Humboldt County Resource Conservation District, Fields Landing, California.

U.S. Department of Agriculture and U.S. Department of the Interior. 1994. *Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-growth Forest Related Species within the Range of the Northern Spotted Owl*. Volume 1 and 2 February 1994.

U.S. Department of the Interior Bureau of Land Management. 1992. *Record of Decision, Arcata Resource Area Resource Management Plan (as amended)*. Record of Decision, Environmental Impact Statement, Arcata, CA.

U.S. Fish and Wildlife Service, 2009. Listed/Proposed Threatened and Endangered Species for the Updegraff Ridge quad (Candidates Included), document 641186851-13106. Last revised: March 17, 2009 . <http://www.fws.gov/arcata/>. Accessed: April 20, 2009.

Maxwell and Ward. *Photo Series For Quantifying Natural Forest Residues in Common Vegetation Types of the Pacific Northwest*. Government Technical Report, Portland, Oregon: Pacific Northwest Forest and Range Experiment Station U.S. Department of Agriculture, 1980.