Record of Decision

Algoma Vegetation Management Project

Shasta-Trinity National Forest

Shasta-McCloud Management Unit

Siskiyou County, California

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Introduction
This Record of Decision (ROD) documents my decision on the Algoma Vegetation Management Project on the Shasta-McCloud Management Unit, Shasta-Trinity National Forest. The project was undertaken to implement provisions of the Shasta-Trinity National Forest Land and Resource Management Plan (Forest Plan) (USDA Forest Service, 1995) and Forest-wide Late-Successional Reserve Assessment (LSRA) (USDA Forest Service, 1999). The Algoma Vegetation Management Project Final Environmental Impact Statement (FEIS) discloses the environmental impacts associated with the original proposed action, a no-action alternative and three additional action alternatives developed to meet the purpose and need and respond to significant issues raised by the public.

Project Location
The project location is on the Shasta-Trinity National Forest, Shasta-McCloud Management Unit in Siskiyou County, California. The project is about 10 miles east of the town of McCloud, California, within Township 40 North, Range 1 West and Range 1 East, Mount Diablo Meridian and Township 39 North, Range 1 West and Range 1 East, Mount Diablo Meridian. The project area lies within two fifth-field watersheds: Ash Creek and the Upper McCloud River Basin. California State Highway 89 and the McCloud River pass through the center of the project area in an east-west orientation. The northern boundary of the assessment area is located approximately two miles south of Black Fox Mountain and the southern boundary is located below the slopes of the Mushroom Rock – Bartle Gap Ridgeline.

Background
The Record of Decision on Management for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl (Northwest Forest Plan) (USDA Forest Service & USDI Bureau of Land Management, 1994) established a network of late-successional reserves (LSR) and accompanying management standards and guidelines. The network of LSRs is intended to provide habitat for species associated with late-successional and old-growth forests and to help ensure that late-successional wildlife species diversity will be conserved. The Forest Plan incorporated direction from the Northwest Forest Plan, including standards and guidelines for the management of LSRs.

In accordance with Northwest Forest Plan standards and guidelines, the Forest prepared the LSRA in 1999. Overall, management objectives within the LSRs are to protect and enhance conditions of late-successional forest ecosystems. Protection includes reducing the likelihood of large-scale disturbance, including stand-replacing fire and insect and disease epidemics. Enhancement includes silviculture treatments designed to accelerate the development of late-successional stand characteristics.
Purpose and Need
When comparing the existing condition with the desired condition in the Forest Plan and LSRA, two needs were identified for the project:

- The need to reduce the risk of large-scale habitat loss from, and increase resiliency to, natural disturbances and stressors (such as insects, disease, wildfire, and drought); and
- The need to promote and/or accelerate the development of late-successional and old-growth habitat characteristics in project area stands.

The project was developed to meet these needs. The purpose and need, including existing and desired conditions, is described in the FEIS (p. 3-9). Overcrowded conditions, root disease, and/or fuels in project stands have affected stand resilience and sustainability.

As a result of overcrowding, competition for available resources (such as water, nutrients, and sunlight) has made the 25 to 85 year old trees in project treatment stands more susceptible to drought, disease, and insect infestation. In root disease infected areas, trees are particularly stressed and mortality is especially high. Small and large trees have succumbed to these stressors. Mortality areas scattered throughout the project range in size from approximately 1 to 12 acres. This can result in a loss of habitat. Hardwoods are being suppressed by encroaching and competing conifers and are declining across the landscape.

Fuel conditions in the project place stands at risk to high intensity fires. Though a sustained running crown fire may not occur, a passive crown fire is likely. Much of the project is susceptible to wildfire mortality from tree crown or cambium kill. This can also result in a loss of habitat.

Riparian Reserves proposed for treatment include substantial areas of terrestrial vegetation\(^1\)\(^2\) having the same characteristics and treatment needs as the adjacent stands outside of the Riparian Reserves. An exception is where relic cottonwoods grow near creeks.

Decision
Based on the analysis in the FEIS and associated project record, I have decided to implement Alternative 5 (the preferred alternative as described in Chapter 2 of the FEIS). I selected this alternative because it meets the purpose and need for the project, addresses aspects of public concerns and fulfills recovery actions described in the *Revised Recovery Plan for the Northern Spotted Owl* (2011 NSO Recovery Plan) (U.S. Fish & Wildlife Service, 2011). The selected alternative treats just about 14% of the Riparian Reserves identified in the project area. For example, riparian vegetation is almost completely absent from many intermittent stream channels in the assessment area located north of Highway 89, but the Riparian Reserve extends for a distance of 200 feet on either side of ephemeral channels. In many cases these channels display minimal evidence of annual scour and some channels haven’t carried surface runoff in the past 3 to 5 years.
alternative is fully described and analyzed, and its impacts disclosed, in the FEIS. Please refer to the FEIS for additional information, including discussion of the alternatives analyzed and the environmental consequences. In brief, the selected alternative includes the following activities within the 14,780-acre project area boundary:

**Thinning:** Approximately 4,670 acres of forested stands would be thinned. In general, the thinning prescriptions would retain densities recommended for ponderosa pine and mixed conifer stands (outside of sanitation areas) and a stand density index of 250 or lower, with an emphasis on leaving the healthiest dominant and co-dominant trees and removing trees from the smaller size and crown classes.

In non-plantation stands, thinning will retain basal area densities of 100 to 120 square feet per acre in ponderosa pine and 120 to 175 square feet per acre in mixed conifer 10 inches at diameter breast height (dbh) and larger. Trees 4 inches to 9.9 inches dbh will be thinned to a 20 to 25 foot spacing in ponderosa pine and 16 to 20 foot spacing in white fir/mixed conifer (except as noted below). In plantations, thinning will retain densities of 35 to 70 trees per acre (or about 25 to 35 foot spacing).

The following treatments respond to the needs highlighted in the FEIS:

- **Thinning in natural stands on approximately 2,490 acres of 50 to 85 year old mixed conifer and ponderosa pine stands to reduce ladder fuels and return stands to desired densities.**

- **Thinning with sanitation on approximately 930 acres of 75 year old ponderosa pine and mixed conifer stands in areas of heavy mortality from blackstain root disease. Healthy areas will be thinned; and dead, dying and infected trees will be removed from areas infected with root disease to break the cycle of re-infection.**

- **Single tree selection on approximately 180 acres of 50 to 75 year old ponderosa pine and mixed conifer stands to reduce stocking, treat ladder fuels and increase forest health while enhancing stand variability. Trees will be harvested across diameter classes to reduce stand density to a level that allows for improved growth.**

- **Thinning in approximately 1,070 acres of 25 to 40 year old ponderosa pine plantations to reduce fuels and tree densities.**

- **Thinning of conifers encroaching on hardwoods. Conifers will be removed within prescribed distances from black oak, aspen, and other hardwoods in the project area.**

Small diameter understory trees (4 to 9.9 inches dbh) will be thinned in all units except units 31, 33, 40, and 214. In these units, thinning of 4 to 9.9 inches dbh will not occur except within 300 feet of main roads (and along the back of the plantations that are adjacent to 40N13 and 40N13B in unit 40). The thinning prescriptions for 4 to 9.9 inch dbh trees were modified to retain more vertical structure and/or closer tree spacing for northern spotted owl (NSO) habitat needs in units 32, 42, and 247.
Approximately 420 acres of thinning described above is in Riparian Reserves. In units 44 and 56, encroaching conifers will be removed within 100 feet of cottonwood trees.

**Fuel Treatments:** Approximately 1,300 acres of fuels in thinned stands would be treated mechanically or by prescribed fire in order to reduce fuels and reintroduce fire into the ecosystem. Additionally, a 150-foot Defensible Fuels Management Zone (DFMZ) will be established along units that border roads 40N63Y, 40N13, 40N13B, 40N11, 41N06, 39N06, 39N28Y and portions of Highway 89. The thinning and fuel prescriptions would accomplish the majority of the DFMZ establishment; in addition, all snags within the DFMZ will be removed.

**Road Actions:** Road actions are planned to improve and maintain the transportation infrastructure or facilitate LSR restoration activities. Road actions include:

- road closures to reduce open road density in the LSR to benefit wildlife and protect sensitive features on 21.7 miles (5.3 miles in Riparian Reserves);
- road decommissioning activities to reduce road density, reduce habitat fragmentation and to restore habitat in Riparian Reserves on 10.2 miles (5.4 miles in Riparian Reserves); and
- other connected road actions include construction of 1.3 miles of temporary roads; reconstruction of 9.9 miles of roads; general maintenance on 41 miles of roads; and adding 4 miles of existing routes to the National Forest Transportation System (NFTS).

My decision includes the implementation of resource protection measures described in Chapter 2 of the FEIS that are designed to minimize, reduce or eliminate impacts to natural and cultural resources.

**How Public Comments Shaped the Decision**

In response to public scoping, the Forest Service identified three significant issues and other concerns from public comments. In response to the Notice of Availability for the Draft Environmental Impact Statement (DEIS), the Forest Service received nine comment letters from individuals, organizations, and agencies. These responses generated over 100 separate comments. Appendix M of the FEIS lists public comments on the DEIS and includes the Forest Service’s responses to those comments. The following main concerns were identified from the review of public comments:

- effects of temporary or permanent road construction and reconstruction, effects of road-related sediment, method of road closures;
- effects to NSO habitat, critical habitat and habitat components such as snags and logs; cumulative effects to the NSO and impacts of barred owl; consistency with the Final Recovery Plan for NSO; effects to late-successional habitat and Forest Service sensitive species;
- range of alternatives is too narrow, alternatives are too alike and all impact NSO habitat; and
• treatments and/or reasoning are contrary to the best available science, including logging and spread of black stain root disease, effects to NSO habitat from wildfire and rationale supporting the purpose and need.

After reviewing the public comments, I re-evaluated the proposed action, alternatives and project impacts. I solicited further information from the interdisciplinary team (IDT) regarding road actions, effects to NSO and the science and rationale behind the actions proposed.

In response to public concern, I asked the IDT to closely review the need for permanent and temporary road construction as well as the impacts of long skidding, forgoing treatments, modifying treatments or continuing with the actions as proposed. I called for further review of access and management needs, as well as short and long-term road-related impacts on sensitive species and water quality. The IDT determined that the proposed permanent road and one temporary road were already existing openings (a windrow and an unauthorized route respectively). In order to further reduce road related impacts, I asked the IDT to replace permanent road construction with temporary use of the existing (windrow) opening, which would be decommissioned post-activity.

Regarding public concern about the NSO, I asked the IDT to review literature suggested by the public, consistency with the 2011 NSO Recovery Plan and impacts of the project on the NSO using best available science. Additionally, subsequent to the DEIS comment period, field surveys revealed a single female NSO was detected in the southeastern portion of the project area on four occasions. Three detections occurred at night and a fourth during a daytime (follow up) survey. As a result of this new information we pursued additional consultation with the U.S. Fish and Wildlife Service (FWS). We visited the project area with FWS and discussed NSO habitat and potential project impacts. Through subsequent meetings and phone calls with the FWS, we thoroughly discussed NSO habitat typing, proposed thinning and fuels prescriptions, road and other connected actions, and potential effects to NSO habitat.

Several outcomes resulted. First, a new home range was designated in the vicinity of the 2011 detections as agreed with FWS pursuant the 2012 NSO survey protocol (U.S. Fish and Wildlife Service, 2012). Second, the examination of habitat suitability within the project area resulted in re-classification of ponderosa pine stands as dispersal habitat; FWS worked closely with Forest staff to perform this habitat examination and retyping. Third, we reduced impacts to the NSO from project actions by modifying prescriptions and by forgoing treatments in foraging habitat in eleven units in the new home range until further information can be gathered. The selected alternative includes these revisions, which addresses public concerns about impacts to the NSO, habitat and critical habitat. More vertical structure, canopy layering and tree densities preferred by NSO will be retained in treated units (Irwin, Rock, & Rock, 2011; Williams, 2012). With these revisions, consistency with the 2011 NSO Recovery Plan will be ensured (FEIS p. 101-102). Additional analysis and research supporting this conclusion is provided throughout the FEIS (p. 35-205, 209-210 and appendices E-H, K, M-O).
I also consulted with the IDT about other alternatives that would address public concerns regarding the range of alternatives. Two additional alternatives were reviewed and added, but not considered in detail because they did not meet the project purpose and need. The selected alternative, modified Alternative 1, and was added to the range of alternatives considered in detail as a new alternative. I reviewed the alternatives considered in detail and those not considered in detailed study, and believe a sufficient range of alternatives was analyzed. Chapter 2 of the FEIS thoroughly discusses alternatives considered.

**Rationale for the Decision**

In making my decision, I considered how to best meet the purpose and need of reducing risk of large-scale habitat loss while promoting and/or accelerating development of late-successional and old-growth habitat characteristics in the project area. I considered public issues and concerns raised during scoping and the DEIS comment period. I considered comments both in support of and in opposition to project actions. My decision to select Alternative 5 is based upon a thorough review of all alternatives, the affected environment and environmental consequences presented in the FEIS and project record. In making my decision I considered project impacts on the human environment and consistency with the Forest Plan as well as goals and objectives of the Northwest Forest Plan, LSRA, 2011 NSO Recovery Plan, McCloud River Coordinated Resource Management Plan (Group, 1991), and Conservation Agreement for the Upper McCloud River Redband Trout (CA Dept. of Fish & Game, 1998). I considered opposing views, uncertainty and risk, and carefully evaluated both the benefits and costs of implementing the selected alternative. I believe the analysis in the FEIS adequately discloses the likely environmental impacts of the project. Negative project-related impacts will be relatively minor and short-term. Beneficial effects to forest health, wildlife habitat (including designated critical habitat for the NSO), watershed condition and fisheries are expected in the long-term.

All practicable means to avoid or minimize environmental harm have been adopted in the design of the selected alternative. I have included all of the project resource protection measures that I believe are necessary to avoid, minimize or rectify impacts on the resources potentially affected. The analyses disclosed in Chapter 3 of the FEIS identify the methodologies and scientific references which informed this decision.

The analysis presented in the FEIS concludes that implementing the selected alternative is expected to meet the purpose and need for this project. The project would reduce the risk of large-scale habitat loss, increase stand resiliency, and promote the development of late-successional and old-growth habitat characteristics in treated stands.

**Achievement of Purpose and Need**

The selected alternative provides protection for natural and public resources in the project area within the framework of existing laws, regulations, policies, public needs and desires, capabilities of the land, and direction in the Forest Plan. The selected alternative achieves the purpose and need of the project because it will increase stand resilience and
promote/accelerate late-successional characteristics on approximately 3,600 acres of natural stands and 1,070 acres of plantations (FEIS p. 40-49). Thinning will reduce tree densities, allowing remaining trees to better use resources such as nutrients, water and sunlight. The remaining trees will have increased vigor and improved defense mechanisms, which will decrease their vulnerability to insects, disease, and other environmental factors (FEIS p. 44, 48-49). Thinning will also promote late-successional characteristics, such as large tree character, in less time, when compared to no action (FEIS p. 43-44, 48-49). Vegetation modeling for this project estimated a 21 to 76 percent increase in diameter compared to the untreated stands after 30 years (FEIS p. 43, 48-49). Project actions will reduce conditions that allow for insect and disease epidemics to levels that better support sustainable stands. Although, insects and diseases (and other natural disturbances) create openings and contribute to decadence attributes desired in LSRs, it is important that they do not reach levels that affect habitat sustainability (USDA Forest Service, 1999).

Thinning will affect individual tree development, increasing crown width and depth, as well as foliage density and needle length (FEIS p. 44, 48-49, 191-192). This will contribute to desirable tree characteristics for wildlife such as fuller crowns and larger branches (FEIS p. 192).

The long-term health and growth of black oaks (and other hardwoods) will be improved by removing conifers that are competing for light and growing space and removing conifer seed sources. These treatments will help restore black oak vigor and reproduction and increase habitat diversity on the landscape (FEIS p. 46, 48-49,189).

The selected alternative will reduce the potential for spread of blackstain root disease (FEIS p. 46, 48-49); improve age, size, and species diversity (FEIS p. 41, 46, 48-49); and reduce future fuel accumulations (FEIS p. 44, 48-49, 59-60). Sanitation will remove recently dead and dying blackstain root disease infected trees, decreasing disease spread via root-to-root contact (FEIS p. 46, 48-49) and improving stand resistance to insect attack (FEIS p. 46, 48-49). A healthy and diverse mix of trees will be established in these areas by planting. The removal of dead and dying trees and reduction in expected mortality will decrease the amount of trees that topple and contribute to fuels (FEIS p. 44, 48-49, 60).

The selected alternative will create an uneven-aged stand structure, adding age and size diversity to the landscape with single tree selection (FEIS p. 41, 48-49). Heterogeneity further contributes to forest resilience to disturbance (Graham, McCaffrey,, & Jain, 2004, p. 3) and older forest stand character (Johnson & Frankin, 2009; U.S. Fish & Wildlife Service, 2011).

The selected alternative will reduce the probability of stand replacement wildfires across the project area (FEIS p. 58- 60). Whole tree yarding will reduce the amount of activity-generated fuels left in stands (FEIS p. 17). Where natural fuels are high, breakage occurs, or limbs or tops are left in the stand, piling and burning of fuels or prescribed underburning of stands will reduce surface fuels. Thinning of overly dense small diameter understory trees (4 to 9.9 inches dbh) reduces the ladder fuels and the potential of crown-dominated fire. Reducing ladder fuels will
allow fire to remain in the surface fuels, lowering the risk of spotting and allowing better suppression capability (FEIS p. 60) and fire firefighter safety. Thinning over 84 percent of the project area in conjunction with 300-foot buffers adjacent to areas without biomass thinning will reduce the chance of high intensity wildfire (FEIS p. 60). Though fire starts could still occur, the resulting fire would be of lower intensity and fire effects would be more in line with historic fire regimes (FEIS p. 60). Ground fuels will be retained at levels consistent with Forest Plan management prescriptions and wildlife and soil standards as described in the FEIS.

The selected alternative will promote structural and age variability and improve terrestrial connectivity on approximately 420 acres of Riparian Reserves (FEIS p. 137-141, K-2). Thinning and fuel reduction activities occurring within and adjacent to Riparian Reserves will reduce overcrowding and fuel loading, and may have some beneficial effects on connectivity by reducing the risk of fire (FEIS 137-141, K-2). Removing competing vegetation from around the relict cottonwoods will allow these trees to optimize resources, especially sunlight, giving them a chance to survive and grow (FEIS p. 40-41). Suckering and/or seeding conditions will be created through restoration treatments. Cottonwood treatments will provide more species diversity within stands.

The selected alternative will reduce habitat fragmentation for wildlife and riparian dependent species and decrease disturbance by decommissioning and closing 37 miles of road (FEIS p. 68, 75, 79, 84, 99, 140-142). Open road densities will be reduced from 3.7 to 2.4 miles per square mile across the project area post implementation (FEIS p. 155). Other connected road actions will improve and maintain the transportation infrastructure or facilitate LSR restoration activities, including construction of 1.3 miles of temporary roads (decommissioned post activities); reconstruction of 9.9 miles of roads; general maintenance on 41 miles of roads; and adding 4 miles of road to the NFTS. The addition of 4 miles of road to the NFTS will not increase habitat fragmentation because they are already existing routes (needed for long-term management of the LSR) and therefore do not remove existing habitat.

**Retention of Important Habitat Elements**

Approximately 4,100 acres in the project area boundary have been designated for no treatment to maintain currently functioning high quality nesting, roosting, and foraging habitat for the NSO and other organisms associated with these habitat characteristics and to provide diversity in stand conditions. In addition, over 500 acres of unthinned patches are interspersed in stands to retain thermal and visual cover, natural suppression and mortality, small trees, natural size differentiation, undisturbed debris, large trees, decadent trees, large snags, large downed logs and dense and/or multilayered forest attributes. Retention of these areas will help retain diverse forest structure and functioning at the stand and landscape scales.
By choosing the selected alternative over Alternative 1 (the original proposed action), I have also deferred 935 acres of treatment in NSO foraging habitat in the southern part of the project area until further information is gathered. These areas will not be treated under this decision. The surrounding stands, however, will be thinned to a density that will reduce damage from insects and disease for several decades and reduce the probability of stand replacement wildfires. In addition, a discontinuous fuel bed will be created (FEIS p. 59, M-11, 17). Project actions along with resource protection measures will help reduce unwanted effects to designated untreated areas.

Thinning prescriptions will emphasize leaving the healthiest dominant and co-dominant trees, old-growth trees, and large trees significantly taller than the surrounding general crown canopy. Trees with cavities or broken tops, leaning boles, decadence, and/or damage will also be retained in various amounts over the project area. Project actions would take place on 32 percent of project area boundary. Thinning prescriptions emphasize retention of under-represented species in the project area such as Douglas fir, sugar pine, black oak, and incense cedar (Douglas fir and black oak are species known to provide habitat utility for NSO). Large snags and downed logs and multiple canopy layers (where conditions allow) will be retained consistent with LSRA guidelines. These components will provide important decadence and late-successional/old-growth habitat characteristics within treated stands.

Because project actions reduce the risk of large-scale habitat loss and enhance conditions of late-successional and old-growth habitat while maintaining important current habitat areas, attributes, and functions, the preferred alternative will help the LSR play the role for which it was established (FEIS p. 193) and continue to provide habitat for NSO and other species reliant on habitat in this area (FEIS p. 193).

Consideration of Public Comments

Roads
I considered all comments on the project including road construction impacts, road closure methods, and sediment production from road actions. The project soil scientist, hydrologist, fisheries biologist, and transportation specialist further reviewed project impacts. With the exception of one stream crossing associated with a planned temporary road in Unit 38, all temporary roads are located outside of Riparian Reserves and will not result in sediment delivery to streams or water quality impacts. The crossing in unit 38 is associated with a highly intermittent stream course where flow has not been observed. Any short-term increases in turbidity will not negatively impact aquatic or riparian habitats (FEIS p. 141-142).

3 Future NEPA would be done in this area if further information reveals actions are compatible with NSO habitat and recovery.
The recommendation for road abandonment was made under the Algoma Roads Analysis Process (2008) and was intended as a decommissioning treatment. Roads recommended for abandonment were identified as having no significant drainage facilities or improvements in place that could pose a potential future impact (e.g. culvert plugging, diversion, roadfill failure) to water quality. Vegetation has also naturally reestablished on the surfaces of these roads, stabilizing the road surface. These conditions present an opportunity to implement decommissioning without interrupting the ecological processes that are already occurring. To protect decommissioned roads during restoration, natural materials will be used to block the road entrances. Other roads would be closed through a variety of methods based on future management needs in the area.

**NSO**

I considered effects to NSO habitat, designated critical habitat and habitat components, including cumulative effects to the NSO. The project biologist, silviculturist, IDT leader, and others reviewed literature suggested by commenters and other science regarding NSO. The FEIS analysis for NSO in Chapter 3 demonstrates that NSO suitable habitat (nesting, roosting and foraging) and designated critical habitat will not be adversely affected by the selected alternative (FEIS p. 94-107, appendices G and O). The selected alternative will degrade approximately 1,815 acres of existing suitable NSO foraging habitat project-wide (approximately 1,740 acres of the 1,815 acres is in critical habitat). This habitat will continue to function as foraging habitat post-treatment (FEIS p. 94-107, appendices G and O). The selected alternative will also remove an estimated 20 to 21 acres of foraging habitat due to road actions and landing creation. Because the landing and road action areas are small in size and not in nesting/roosting habitat, the effects to foraging habitat are considered negligible in the scope of the project (FEIS p. 94-107, appendices G and O). Primary constituent elements (PCE) of both foraging and dispersal habitat will be affected in the project, but they will not be removed and the project will not significantly reduce their value.

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\(^4\) Note that the term degrade in this context is different than the typical definition of degrade, such as to impair or to lower in status (Merriam-Webster, 2012). The FWS in their Letter of Concurrence on the project described the term degrade to mean, “The term degraded signifies when treatments influence characteristics of habitat by the removal or reduction of habitat elements but not to the degree where existing habitat function is changed. It is important to recognize that this category includes activities that may be neutral or beneficial to habitat function even though specific habitat elements are being reduced.” See Appendix O.

\(^5\) Primary constituent elements are used to identify the known physical and biological features essential to the conservation of the NSO.

\(^6\) Approximately 2,785 acres of dispersal habitat are proposed for treatment within critical habitat unit 29, subunit C-73. These treatments occur in ponderosa pine stands or young pine plantations and are not
The selected alternative will not affect any nesting/roosting habitat or result in a downgrade of foraging habitat. This project will not affect nesting/roosting or foraging habitat within the 0.5 mile territory or the 1.3 mile home ranges of three of four NSO home ranges. Forty-eight acres of foraging habitat in the nest core of one home range is proposed for treatment. The FWS found that remaining habitat values are well within the range of stand conditions used by foraging NSOs and that foraging habitat functionality post-treatment will be retained (FEIS p. O-10).

Retyping of suitable habitat, modification of project actions to retain more vertical structure and/canopy layering, and deferring treatments in foraging areas in the vicinity of the 2011 single NSO detections have been incorporated into the selected alternative to further protect the NSO. Habitat typing modifications better reflect expected habitat suitability, and project action modifications reduce impacts to NSO habitat and critical habitat (FEIS Appendix G and O).

Cumulative effects were reevaluated in light of public comments regarding effects to the NSO. While the DEIS assessed this larger landscape area for cumulative effects, it should not be misconstrued that this was an analysis of critical habitat (since 1992 critical habitat was replaced by 2008 critical habitat in August 2008). This larger landscape area is still an appropriate spatial scale to assess impacts on NSO habitat because it allows for an analysis of effects to connectivity of foraging and dispersal habitat across the larger landscape to nearby LSRs and managed late-successional areas (MLSAs)\(^7\) and for consideration of the effects of several Forest projects in various planning stages. This has been clarified in the FEIS. The FEIS additionally includes a cumulative effects analysis of the effects of habitat modification within an owl’s home range size (approximately 1.3 miles radius) applied to the project area boundary.

I considered NSO recovery and consistency with 2011 NSO Recovery Plan. Because NSO recovery requires well distributed, older and more structurally complex multi-layered conifer forests on federal and non-federal lands across its range, the Forest worked with the FWS to maintain and restore such habitat while allowing for other threats, such as fire and insects, to be addressed by restoration management actions (FEIS O-44). Treatments were deferred in high quality NSO nesting/roosting and foraging habitat in the project area. The project proposes treatment in suitable NSO foraging habitat while retaining the function of the foraging habitat at levels that avoid adverse effects on NSO (FEIS G-59). Although the project may have short-term impacts to foraging habitat, in the long-term treatments will increase stand resiliency to disturbances (such as insect, disease and drought), such that the forest stands persist and are able to develop into and provide late-successional habitat over the long-term (FEIS G-59).

expected to significantly or appreciably reduce the function of dispersal habitat or habitat connectivity across the critical habitat unit.

\(^7\)Similar to Late-Successional Reserves but are identified for certain owl locations in the drier provinces where regular and frequent fire is a natural part of the ecosystem.
As part of consultation with FWS, I considered the impacts of barred owls on the NSO and in relation to project actions. Barred owls in the project area are recognized as a significant threat to the recovery of the NSO. Dugger and others (2011) suggest that in environments where the two species compete directly for resources, maintaining larger amounts of older forests (nesting/roosting) may help NSOs to persist in the short-term. There are no treatments in nesting/roosting habitat and therefore it is unlikely that the project will contribute to competitive interactions between the two species (FEIS G-29-31).

I recognize that wildfire has beneficial effects to forest landscapes, including fire-hardened snags, canopy gaps, and edges. Within the project area (and LSR network) a notable threat of loss or degradation of habitat for late-successional species is wildfire (USDA Forest Service, 1999) (U.S. Fish & Wildlife Service, 2011). While this project area in its current state does not exhibit conditions where active crown fire is imminent, it does exhibit conditions that place stands at risk to high intensity surface fires, which can result in cambium or crown damage or death, resulting in habitat loss (FEIS p. 6, 52-53, 57-58).

While spotted owls can make use of some post-fire landscapes, fire also reduces the function of some habitat and likely removes some from immediate usability, particularly in areas of high-severity fire (U.S. Fish & Wildlife Service, 2011, pp. B-2). The amount of habitat mortality expected if a wildfire were to occur under current vegetative conditions is of concern. Implementing the selected alternative will reduce the risk of high intensity wildfire and/or wide-scale insect or disease epidemics in forest stands and help to reduce effects to high quality NSO habitat. Reducing the surface and ladder fuels will reduce the likelihood of habitat loss from wildfire whether the threat originates from within or outside of the LSR boundary (FEIS p. FEIS p. 59, M-51), consistent with the LSRA and with recovery actions in the 2011 NSO Recovery Plan.

**Impacts to Late-Successional Habitat and Forest Service Sensitive species**

I considered the effects to late-successional habitat and Forest Service sensitive species. I carefully weighed information submitted by commenters regarding LSR maintenance without human intervention with the need for treatments identified in the Forest Plan and LSRA. I reviewed the condition of LSRs and MLSAs in the project vicinity (Elk LSR, McCloud MLSA, Sheephaven MLSA). Large areas within both the Elk LSR and McCloud MLSA are declining. Areas within the project are also declining because density-induced tree stress has allowed insects, Dugger, K. M., R. G. Anthony and L. S. Andrews. 2011. Transient dynamics of invasive competitions: barred owls, spotted owls, habitat and the demons of competition present. Ecological Applications. 21 (7): 2459-2468. Et al. 2011.
primarily bark beetles, to successfully attack and kill trees, especially in black stain root disease infected areas.\footnote{While more mixed conifer conditions exist in the project area (such that wide-spread pine mortality is less likely to result in complete stand loss), the decline of stands within the area LSRs and MLSAs are a concern from a landscape perspective.}

I believe the selected alternative balances the protection and restoration needs within the project area boundary. It reduces the risk of large-scale habitat loss, increasing resiliency, and promoting the development of late-successional and old-growth habitat characteristics in treated stands.\footnote{32 percent of the project area boundary} The project retains (does not treat) high quality nesting, roosting, and foraging habitat, including late-successional habitat and nest cores for northern goshawk in the project area.\footnote{28 percent of the project area boundary} The retention areas are intended to provide necessary habitat for late-successional and old-growth associated species such as NSO.

**Science Supporting the Purpose and Need**

Project silvicultural and fuel reduction actions designed to reduce fuels are based on several principles of forest fuel reduction in dry forests (FEIS p. 38-39, 44, 46, 56, M-16, M-65). Silvicultural concepts are in line with “ecological forestry”, where natural disturbance regimes are emulated with management actions (Johnson & Frankin, 2009). Research that shows how thinning helps reduce the incidence of pest damage to a stand and how less competition increases the health and vigor of the remaining trees (resulting in a reduction of risk to bark beetle attack) is well supported in the literature (Fiddler, Hart, Fiddler, & McDonald, 1989; Fettig, 2006; Oliver, 1995).

Scientific literature supports the use of thinning in ponderosa pine to lessen disease viability and spread (Kliejunas, 1992; Otrosina, et al., 2007; Woodruff, 2002). I understand that ground-based silvicultural methods can result in soil disturbance, which could possibly affect the incidence of blackstain root disease. But, with proper layout of the skid trail system and other resource protection measures to minimize disturbance (e.g., using existing trails as much as possible, rehabilitating areas with detrimental disturbance), disturbance can be minimized. Adhering to Soil Quality Standards, Best Management Practices, and project resource protections will minimize erosion, compaction and subsequent root damage.

Judicious use of silvicultural and fuels management can retain and encourage some conditions important to late-successional and/or old-growth systems in the dry forest of this area (Johnson & Frankin, 2009) (U.S. Fish & Wildlife Service, 2011). These tools can be used to restore processes and put these stands on a trajectory toward late-successional/old-growth forest. Silvicultural treatments can be used to create conditions that increase stand resiliency (promoting sustainability) and accelerate the rate at which larger tree sizes are attained. It can
also be used to introduce spatial and species heterogeneity within stands. Prescribed fire treatments can create a seedbed for a diversity of herbaceous plants, and create a patchy understory open enough for NSO movements (USDA Forest Service, 1999). Prescribed fire and other fuel treatments also create conditions where stand replacing fires are less likely. Retention of older trees and stands, as well as hardwoods, canopy density, diverse species composition, large snags, and downed logs will help sustain important habitats for late-successional associated species.

**Consideration of Project Effects**

As described in Chapter 3 of the FEIS, the selected alternative would result in some environmental effects. These include indirect effects to threatened and sensitive wildlife and fish species (not likely to adversely affect species or their designated critical habitat, or result in a trend toward Federal listing or loss of viability). Other project-related impacts include effects to soils, potential introduction and spread of invasive weeds, negligible amounts of sediment displaced from roads and culvert replacement, emission of smoke and dust and release of greenhouse gas emissions. These environmental effects would be short-term and localized, occurring primarily during the course of project implementation and would diminish over time. They would be minimized or eliminated by adherence to resource protection measures and best management practices that have been incorporated into the project and will be monitored to ensure effectiveness. Effects are consistent with Forest Plan standards and are below generally accepted thresholds of concern.

I believe this project will improve the biodiversity of the area by increasing the acreage of sustainable mixed conifer, hardwood and late-successional forests. The selected alternative will result in multiple public benefits. Public benefits include both environmental and economic benefits. Environmental benefits include increased fire resiliency and reduced wildfire risk. Habitat for mid and late-successional associated wildlife species will be protected and enhanced. Reduced open road density, combined with increased forest resiliency to natural disturbance in the project area Riparian Reserves, will result in improved watershed function and condition over the long-term. Economic benefits of the project include sawlog and biomass volume, revenue and jobs. Jobs and income would be generated directly from the industries performing the tasks, as well as indirectly from the inter-industry purchasing habits and household expenditure patterns of the directly affected industries and employees. Project actions also help support continued operation of local facilities, such as biomass plants.

The long-term public benefits anticipated from project implementation outweigh the short-term costs caused by implementing the selected alternative. The FEIS presents an objective and well-documented analysis of environmental effects expected to result from implementation of the selected alternative.
Public Involvement
This project has been listed on the Forest Schedule of Proposed Actions since July 2007. A notice of intent to prepare an environmental impact statement was published in the Federal Register on February 25, 2008. In addition, the agency published news releases in the Redding Record Searchlight on February 28, 2008 and the Mount Shasta Herald on March 5, 2008. Comments were received from four individuals and/or organizations, the Department of Energy and the U.S Environmental Protection Agency. A public meeting was held at the McCloud Ranger District Office on March 13, 2008 to discuss the project at the request of Kyle Haines from the Klamath Forest Alliance.

A formal letter of consultation pursuant to 36 CFR 800.4 was sent to the Pit River Tribe on February 27, 2009. A subsequent presentation about the project was made on February 10, 2011 as requested by the State Historic Preservation Officer (FEIS p. 162).

The Forest presented the project proposal to the McCloud River Coordinated Resource Management Group, Inc. (CRMG) at a CRMG meeting on July 28, 2009. Project information was subsequently emailed to the CRMG Chair on October 2, 2009.

The project has also been discussed with and/or presented to the Siskiyou County Board of Supervisors, California Licensed Foresters Association and Siskiyou Water Network.

On August 5, 2011, the Notice of Availability for the DEIS was published in the Federal Register. The legal notice for comment was published in Mount Shasta Herald on August 2, 2011. The DEIS was posted on the Forest Service website on August 4, 2011. Copies of the DEIS were mailed on July 28, 2011 to the Federal, State, and local agencies and publics listed in Chapter 4 of the DEIS. The comment period for the DEIS ended on September 19, 2011.

Timely comments were received from six individuals, U.S. Department of the Interior, the Western Area Power Administration, and the U.S Environmental Protection Agency. Over 100 comments were identified from these responses. A summary of comments received on the DEIS and the Forest Service response to these comments are located in Appendix M of the FEIS.

Alternatives Considered
In addition to the selected alternative, the FEIS analyzed and reviewed three action alternatives, a no action alternative, and nine alternatives that were eliminated from detailed study. A more detailed comparison can be found in Chapter 2 of the FEIS (pp. 15-34). Descriptions of the alternatives considered in detail are discussed here as well as the reasons why I did not select them for implementation.

Alternative 1: Proposed Action
This alternative is the same as the selected alternative except that units 45 - 49, 51, 53, 55, and 58 - 60 (totaling 935 acres) would receive treatment. This alternative would have increased Riparian Reserve treatments by 220 acres, road reconstruction by 0.2 miles, road maintenance
by five miles, temporary road construction by 0.3 miles, and the number of landings by 41. In this alternative, trees 4 inches to 9.9 inches dbh would receive a biomass prescription throughout the treatment acres.

This alternative meets the purpose and need on the largest acreage of the project boundary (approximately 5,600 acres). This alternative would reduce stand density and fuels similar to the selected alternative on more acreage. Given the new NSO detections in the southeastern area of the project, however, I believe forgoing treatments in foraging habitat in the new NSO detection area (and new home range) until further information is gathered is necessary. Additionally, biomass treatment as proposed in Alternative 1 on 408 acres would likely have downgraded foraging habitat to dispersal habitat. I did not select Alternative 1 as it would not provide as much post-project habitat and/or protection for the NSO.

**Alternative 2: Eliminate Road Construction**

This alternative was developed in response a significant issue and eliminated the construction of temporary roads thus avoiding road construction related impacts. This alternative is the same as the Alternative 1 except that approximately 1.6 miles of temporary roads would not be constructed. By not constructing temporary roads, there are portions units (25-4, 25-5, 33, 38, 40, 49 and 214) that would require skidding distances longer than ¼ mile to reach existing roads and associated landings. Skidding beyond this distance is undesirable in terms of site disturbance and equipment operation. Therefore these areas were removed, resulting in a decrease of 230 acres total treatment acreage (including a reduction of 40 acres in Riparian Reserves).

This alternative meets the purpose and need on 5,370 acres in the project boundary). This alternative would reduce stand density and fuels similar to the selected alternative on more acreage (and to a greater degree). It would treat 180 more acres of Riparian Reserve, including an additional unit with cottonwood. This alternative includes units deferred in the selected alternative, thus I have the same concerns about NSO with this alternative as with Alternative 1. Additionally, this alternative forgoes treatment in two units with substantial ladder fuel problems (both in proximity to NSO home ranges in the southern part of the project) and portions of other units to avoid long skidding or new road construction to units. Given the unwanted effects of long skidding and the fire hazard in stands deferred for treatment with this alternative compared with the minimal impacts from temporary road construction, and effect discussed for NSO in Alternative 1, I did not select Alternative 2.

**Alternative 3: Eliminate Sanitation Treatments**

This alternative was developed in response to significant issues regarding the sanitation component of the “Thinning with Sanitation” prescription. Thinning would still occur in these units except thinning with sanitation would be replaced by thinning only on approximately 930 acres.
This alternative meets much of the purpose and need on the same acreage as Alternative 1. This alternative would reduce stand density and fuels similar to Alternative 1, including Riparian Reserve treatments, except in 930 acres where thinning only would replace thinning with sanitation. Eliminating the sanitation treatments would result in diseased trees being retained in stands that have been experiencing excessive mortality as a result of blackstain root disease. The root disease cycle will continue in these stands and spread to adjacent stands via root-to-root contact with infected trees, creating ever widening pockets of mortality at an average rate of 3.2 feet a year. Dead-fall from tree mortality will increase fuel loads and the risk of wildfire. These areas will not meet the objectives for promoting the development of late-successional habitat stand characteristics such as large diameter trees, or of decreasing the risk of stand loss. This alternative includes units deferred in the selected alternative, thus may not provide sufficient protection of NSO until more information is gathered. Given the unwanted effects of forgoing sanitation, and the NSO reasons cited for not selecting Alternative 1, I did not select Alternative 3.

**Alternative 4: No Action**

This alternative would result in none of the proposed management activities being implemented within the project area at this time. Conditions would continue to trend in the direction described in the Purpose and Need and Affected Environment section of the FEIS (increasing tree density, root disease, fire hazard). The analysis of the no action alternative provides reviewers with a baseline to compare the magnitude of environmental effects of the action alternatives.

This alternative is responsive to significant issues regarding tree retention (diameter limit on tree removal), canopy cover retention, and site disturbance in heavily infected black stain areas.

This alternative would implement no activity, allowing for the current trends in declining forest resiliency from root disease and overstocked stand conditions, increases in ladder and surface fuel amounts and conifer encroachment on hardwoods continue over time. Alternative 4 was not chosen because it does not address the purpose and need for action. It does not reduce stand density or susceptibility to environmental stressors in natural stands, plantations, or Riparian Reserves. It does not decrease fuel loadings or potential wildfire behavior. Alternative 4 would perpetuate the current condition of disease and mortality, and does not support the goals of the Forest Plan, the LSRA, or the 2011 NSO Recovery Plan. For these reasons, I did not select Alternative 4.

**Findings by Other Laws or Policies**

**National Forest Management Act**

The National Forest Management Act requires projects to be consistent with minimum specific management requirements as provided in the implementing regulations at 36 CFR 219.12 and described in the Forest Service Manual 1921.12a. The project will not result in irreversible
damage to soils, slopes or other watershed conditions, detrimental changes in water temperature or blockages of water courses. The project has long-term beneficial effects to vegetation diversity, wildlife, forage production, water quality and quantity and visual quality. No measurable deposits of sediment or measurable effects on water conditions or fish habitat will occur.

Vegetation removed as by-products of restoration and fuels treatments will constitute a loss of production of individual trees or groups of trees but will not result in a loss of productivity of entire stands of vegetation. Trees are a renewable resource and landings and other areas will re-vegetate over time. Functioning of forest habitats will continue.

Under the selected alternative, an irretrievable loss of individual trees or groups of trees (due to proposed landings) will occur. The selected alternative would result in a temporary change in the quality but not function, of NSO foraging habitat in critical habitat (1,740 acres) and would last for approximately 20 to 30 years. It would also result in a temporary loss of NSO foraging habitat from landing and temporary road construction (20 to 21 acres), though due to their small size and placement outside of high-quality habitat, the effects of landing construction are considered negligible in the scope of the project (Williams, 2012).

Management prescriptions were specifically developed for their beneficial effects on residual trees and adjacent stands by improving resistance to insects and disease, improving tree growth, vigor, and overall resilience, reducing the risk for catastrophic, stand-replacing wildfire and restoring hardwoods on the landscape. The project contains specific design criteria and resource protection measures described in Chapter 2 of the FEIS to minimize the level of environmental impacts to soils, Riparian Reserves and water quality, terrestrial and aquatic wildlife species, visuals, botanical and heritage resources and air quality.

As described in the purpose and need section of the FEIS, management prescriptions were developed to reduce large-scale habitat loss and to promote/accelerate development of late-successional and old-growth habitat characteristics. Harvesting systems were selected based on a variety of factors, including reduced impacts to soils and reduced activity fuels, topography, cost and efficiency. I find the selected alternative to be consistent with the provisions of the National Forest Management Act.

**Endangered Species Act**

Thorough analyses of potentially affected federally listed species and consultation with the FWS have been completed fulfilling Section 7 of the Endangered Species Act consultation requirements ((19 U.S.C. 1536 (c)). Fish and Wildlife Service Red Bluff Field Office biologists visited the project area in June and July of 2007 and discussed the proposed actions with the interdisciplinary team. During additional consultation, Yreka FWS Field Office biologists visited the project area in December 2011. Chapter 3 of the FEIS thoroughly describes project effects to threatened and endangered wildlife, plant, and aquatic resources. The project was found to have no effect to federally listed plants or fish due to the lack of habitat and/or the project was
not within the species range. The project would have no effect to federally-listed wildlife species, except the NSO, for which a “may affect, not likely to adversely affect” determination was made. The project does not affect suitable NSO nesting/roosting habitat. The project temporarily degrades\(^\text{12}\) (but retains current function of) 1,815 acres of suitable NSO foraging habitat in the project area (including 1,740 acres of 1,815 acres in NSO critical habitat Unit 29 subunit CA-73), as described in the NSO section of this document and does not significantly reduce the value of PCEs. The FWS concurred with the determination for the NSO on April 5, 2012 stating that “based on the project design features, potential effects to spotted owls occupying home ranges within the action area are considered to be insignificant and discountable, and likely to have beneficial effects in the longer term.” The FWS also concurred with the determination for designated critical habitat, stating that “since treatments are not proposed within nesting/roosting habitat (PCE1); treatments within 1,740 acres of foraging habitat (PCE2) have been designed to retain and improve the current function of foraging habitat following treatment; and treatments across the project area will not significantly affect the ability of NSOs to disperse (dispersal habitat PCE3) across the landscape, the action is not likely to remove PCEs of critical habitat or result in a measurable change in the subunit’s [CA-73] ability to provide the functions for which it was designated” (Williams, 2012). An assessment of how the project demonstrates compatibility with the overall intent of the 2011 NSO Recovery Plan was also completed (FEIS p. 101-102, O-56 to O-59).

**Clean Water Act**

Representatives from the Central Valley Regional Water Quality Control Board (CVRWQCB) and California Department of Fish and Game visited the project area with Forest personnel on October 17, 2008. The review focused on treatment buffers on intermittent non-fish bearing and intermittent fish bearing reaches and supported the proposed treatments and buffers. All timber sales occurring as a result of the Algoma FEIS will be enrolled in the Timber Harvest Waiver Program administered by the CVRWQCB under Resolution No. R5-2010-0022 (FEIS E-5).

Based on the results of the Cumulative Watershed Effects Analysis the proposed actions and alternatives would not adversely affect water quality, riparian and aquatic habitats, and fisheries located downstream and outside of the project area (FEIS p. 150-151). Implementation of project resource protection measures and Best Management Practices will protect beneficial uses of water (FEIS Appendix E). I find the selected alternative to be consistent with the Clean Water Act.

\(^{12}\) Several terms used in this document correspond to terms used in the Biological Assessment. These terms have a specific definition for NSO analysis and do not necessarily crosswalk with typical dictionary definitions. The term degrade indicates a reduction in habitat quality, but not habitat function following the effect.
Federal Clean Air Act, As Amended, State Clean Air Act and other Air Quality Regulations

Conformity under the Federal Clean Air Act is not required as there are no criteria pollutants in federal nonattainment status. The project is compliant with the Regional Haze Rule, California Clean Air Act, Title 17 and Air Pollution Control District rules. Naturally occurring asbestos is not present in the project area. A burn permit and smoke management plan will be required prior to ignition (FEIS p. 186).

National Historic Preservation Act

The project is in compliance with the requirements of Section 106 of the National Historic Preservation Act (see section titled “Cultural Resources,” Chapter 3 in the FEIS). Archaeological field inventories were conducted in the project area. Known heritage sites in the project area and any sites discovered during project implementation will be protected by a provision in the timber sale or stewardship contract. Should unknown archaeological resources be discovered during the implementation phase, all ground-disturbing activities will immediately cease and appropriate measures will be taken (FEIS p. 187).

Environmental Justice, Executive order 12898 of February 11, 1994

The FEIS analysis found that there will be no disproportionate adverse effects on low income or minority populations as a result of implementation of any of the project action alternatives (FEIS p. 204).

Management Indicator Assemblages

The analysis presented in the FEIS and the Project Management Indicator Assemblage Report indicate that although project implementation will result in changes to assemblage habitats such as reduction in canopy closure, tree density, and snag density, treated areas will continue to provide the same quantity and distribution of the three management indicator assemblage habitats post-implementation. The project is not likely to result in any meaningful change to population trends and habitat availability for the brown creeper, Nashville warbler, or red-breasted nuthatch at the project-scale, or Forest-wide. I find the selected alternative complies with the Forest Plan for Management Indicator Assemblage (FEIS p. 193-199).

Survey and Manage

This decision is consistent with the January 2001 Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USDA Forest Service & USDI Bureau of Land Management, 2001). The project is in compliance with the list of Survey and Manage species in the 2001 ROD (Table 1-1, Standards and Guidelines, page 41-51). The project is also consistent with the

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13 Including the Federal General Conformity Rule, the Regional Haze Rule, Naturally Occurring Asbestos, Title 17 Compliance and Siskiyou County Air Pollution Control District Regulations

**Aquatic Conservation Strategy**

The selected alternative meets and will not prevent attainment of all nine objectives of the Aquatic Conservation Strategy as discussed in Appendix K of the FEIS. The FEIS analyzed both the project and watershed scale. Short and long-term impacts were assessed. The two fifth-field watersheds within the project area are sufficiently described in the hydrology analysis as is consistency with guiding watershed analyses. The proposed action and alternatives would improve the conditions of stands within Riparian Reserves and not have any negative impacts to the Aquatic Conservation Strategy at the project-scale. Because the selected alternative will have no negative effects at the project-scale it will also have no negative effects at the fifth-field watershed scale (FEIS 143, K-5, 6).

**McCloud River Coordinated Resource Management Plan**

The CRMP coordinates management activities among private landowners and public agencies to assure protection of the “outstandingly remarkable values (ORVs) associated with the McCloud River. The ORVs include cultural/historical, fisheries, geology, visual quality/scenery, and wildlife. The project is designed to comply with the CRMP. Anticipated effects on the McCloud River from project implementation are described in Chapter 3 for Hydrology, Scenery, and Cultural Resources. The FEIS analysis determined the selected alternative will protect the ORVs, water quality and free flowing condition of the Wild and Scenic River eligible McCloud River (FEIS p. 199-200).

**Redband Trout Conservation Agreement**

The project is consistent with Conservation Measure B of the Agreement to “enhance and/or maintain habitat” (CA Dept.of Fish & Game, 1998). Habitat improvement has and will continue to focus on the reduction of fine sediment, development of off-site water stations, bank stabilization, barrier development and/or removal where necessary, riparian restoration and the enhancement of pools and cover within McCloud River redband trout streams. The anticipated effects of the proposed road decommissioning (including portions along Shady Gulch Creek); road reconstruction and maintenance; culvert replacements; fish barrier removal on Raccoon Creek; and vegetation treatments in Riparian Reserves, and how these actions maintain or enhance habitat for McCloud River redband trout, are described in FEIS (p. 125-126, 204-205, Appendix H). The FEIS analysis determined that the selected alternative may affect Upper McCloud River redband trout individuals, but is not likely to lead toward a trend in federal listing or loss of viability for the species (FEIS p. 126-127, Appendix H).
Environmentally Preferable Alternative

Implementing regulations for NEPA require agencies to specify the alternative or alternatives which are considered to be environmentally preferable, 40 CFR 1505.2(b). In addition, Forest Service NEPA policy defines “environmentally preferable” as:

“The alternative that will best promote the national environmental policy as expressed in NEPA’s section 101 (42 United States Code 4321). Ordinarily, the environmentally preferable alternative is that which causes the least harm to the biological and physical environment; it also is the alternative which best protects and preserves historic, cultural, and natural resources. In some situations, there may be more than one environmentally preferable alternative. (36 CFR 220.3).”

Section 101 of the NEPA describes national environmental policy, calling on federal, state and local governments and the public to “create and maintain conditions under which man and nature can exist in productive harmony.” Section 101 further defines this policy in six broad goals:

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all Americans safe, healthful, productive and esthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural, and natural aspects of our national heritage, and maintain wherever possible, an environment which supports diversity and variety of individual choice;
5. achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life’s amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Based on my review of the material presented in the FEIS, the project record, and this Record of Decision, I believe that the selected alternative best promotes the national environmental policy as expressed in Section 101 of the NEPA and therefore is the environmentally preferred alternative. The selected alternative provides the most benefits with the least adverse impacts, attains the widest range of beneficial uses of the environment without degradation of the environment, and balances resource use and protection. The actions proposed under the selected alternative are designed to conform to management standards and guidelines and project design criteria outlined in the LSRA as established by the Northwest Forest Plan for the conservation of old-growth and late-successional forest habitat and the species associated with them. The project will reduce tree densities, remove dead and dying trees and reduce surface and ladder fuels to protect existing mid and late-successional forest habitat. It will also promote conditions favorable to the enhanced development of stands with late-successional characteristics. While Alternatives 1 and 3 would treat 935 more acres than the selected alternative, the selected alternative has been designed to provide the greatest possible protection to NSOs by avoiding treatments in existing home ranges until further information is
The selected alternative incorporates resource protection measures and Best Management Practices designed to minimize adverse environmental impacts associated with project activities. The selected alternative would reduce open road density through closure and decommissioning of approximately 37 miles of authorized and unauthorized NFTS roads. It would add needed road segments to the NFTS. Alternative 2 would reduce short-term environmental effects by forgoing temporary road construction, but would result in treatments occurring within the NSO’s home range. Alternative 4, the project’s no action alternative, fails to address existing conditions in the project area, including ongoing mortality, dense stand conditions and heightened fire risk, and would not move the project area toward desired conditions as described in the LSRA.

**Implementation Date**

If no appeals are filed within the 45-day time period, implementation of the decision may occur on, but not before, five business days from the close of the appeal filing period. When appeals are filed, implementation may occur on, but not before, the 15th business day following the date of the last appeal disposition.

**Administrative Review/Appeal Opportunities**

This decision is subject to administrative review (appeal) pursuant to 36 CFR Part 215. Appeals, including attachments, must be filed within 45 days following the publication date of the legal notice of this decision in the *Record Searchlight*, Redding, CA. Attachments received after the 45-day appeal period will not be considered. The publication date in the Record Searchlight, newspaper of record, is the exclusive means for calculating the time to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframe information provided by any other source.

Individuals or organizations that provided comments or otherwise expressed interest in the proposal by close of the comment period are eligible to appeal the decision pursuant to 36 CFR 215.13. It is the appellant’s responsibility to provide sufficient project-specific evidence and rationale, focusing on the decision, to show why my decision should be reversed. The notice of appeal must meet the appeal content requirements at 36 CFR 215.14.

The appeal must be filed (regular mail, fax, e-mail, hand delivery or express delivery) with the Appeal Deciding Officer, Regional Forester Randy Moore, at:

ATTN: APPEALS  
Randy Moore, Regional Forester  
USDA Forest Service, Pacific Southwest Region  
1323 Club Drive  
Vallejo, CA 94592
Appeals can also be sent via email to: appeals-pacificsouthwest-regional-office@fs.fed.us
(subject: Algoma Project). An automated response will confirm your electronic appeal has been
received. Electronic appeals must be submitted in plain text (.txt), rich text format (.rtf), Word
(.doc or .docx) or searchable PDF (.pdf) format. In cases where no identifiable name is attached
to an electronic message, a verification of identity will be required. A scanned signature is one
way to provide verification.

The office business hours for those submitting hand-delivered appeals are: 7:30 am to 4:00 pm
Monday through Friday, excluding holidays.

Contact Person
For additional information concerning the Algoma Vegetation Management Project and this
decision, contact Emelia Barnum, Shasta-Trinity National Forest, Shasta-McCloud Management
Unit, 204 West Alma Street, Mt. Shasta, CA, 96067, telephone (530) 926-4511.

Electronic copies of the Record of Decision, FEIS, and resource reports are available at:

J. SHARON HEYWOOD
Forest Supervisor
Shasta-Trinity National Forest

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Works Cited


CA Dept. of Fish & Game. (1998). *Conservation Agreement for the Upper McCloud River Redband Trout*. California Department of Fish and Game.


