United States Department of Agriculture

Forest Service

Pacific Southwest Region

Gordon Hill Vegetation and Fuels Management Project

Decision Notice and Finding of No Significant Impact

June 2015

Smith River National Recreation Area of the Six Rivers National Forest

Del Norte County, California

Lead Agency: USDA Forest Service

Responsible Official:
Merv George Jr., Forest Supervisor
Six Rivers National Forest
1330 Bayshore Way
Eureka CA 95501

For More Information Contact:
David Palmer at (707) 457-3860, District Ranger at the Smith River National Recreation Area
Brenda Devlin at (707) 457-3862 or Sheila Balent at (707) 457-3968, Project Team Leaders

Table of Contents

Introduction

This Decision Notice and Finding of No Significant Impact (DN &FONSI) documents my selection to implement Alternative 2, as disclosed in the Gordon Hill Vegetation and Fuels Management (hereafter Gordon Hill) Project Environmental Assessment (EA). The Gordon Hill Project EA discloses the environmental effects of Alternative 2 (the Proposed Action) and Alternative 1 (No Action), developed in detail to meet the purpose and need and respond to public issues.

The Gordon Hill Project was designed in compliance with the Standards and Guidelines per the 1995 Six Rivers Land and Resources Management Plan (Forest Plan) and fulfills the provisions of Title I of the 2003 Healthy Forest Restoration Act (HFRA), the 1995 Smith River NRA Late Successional Reserve Assessment (LSRA), the 2011 Recovery Plan for the Northern Spotted Owl (2011 RP), the 2012 Northern Spotted Owl Critical Habitat Rule (2012 NSO CH) and 1994 Aquatic Conservation Strategy (ACS).

The Project area lies within the Smith River National Recreation Area (NRA) of the Six Rivers National Forest in Del Norte County, California, in Township 17 North, Range 1 East, Section 25; Range 2 East, Section 25, 26, 29, 31 - 36; Range 3 East, Sections 30 - 32; Township 16 North, Range 2 East, Section 1, 2, 5 - 8, 11 - 15, 17, 20, 21, 23 - 30, 32 - 36; Range 3 East, Sections 5, 7, 8, 18, 19, 30, 31; and Township 15 North, Range 2 East; Sections 1, 2, 11, 12 & 14 of the Humboldt Meridian.

Purpose and Need

The Gordon Hill Project was developed through a collaborative process to complement private land defensible space (fuelbreak) projects around the communities Big Flat and Gasquet, as recommended by their 2005 Community Wildland Protection Plan (CWPP) (EA pgs. 4 and 6). Big Flat and Gasquet are federally recognized as communities at risk from high severity wildland fire (US Department of Interior in the Federal Register, August 17, 2001; Vol. 66 No. 160, 2001). The CWPP reported that in the four years between 1998 and 2001, state and federal agencies responded to more than 250 fires in Del Norte County, not including fires responded to by the County's local fire departments. The largest recent fire was the Biscuit Fire of 2002, which burned a total of 499,965 acres in California and Oregon.

Approximately half of the project occurs in a Late-Successional Reserve (LSR 303). The Smith River NRA LSR Assessment (USDA 1995) identified: 1) the LSR is deficient in late-successional habitat; 2) stands that had been converted to early seral vegetation due to past logging and wildfires can be treated to develop late-successional habitat; and 3) strategic fuelbreaks are needed to protect late-successional habitat and reduce catastrophic loss due to wildfire.

The northern spotted owl, a federally threatened species, continues to decline within its range. On June 28, 2011, the US Fish & Wildlife Service released the *Revised Recovery Plan for the Northern Spotted Owl* which recognizes the importance of maintaining, and restoring habitat for the recovery and long-term survival of the spotted owl. The 2011 RP recommends active

management to reduce the fire hazard and increase resilience, as well as to accelerate the development of structural complexity and biological diversity that will contribute to the spotted owl's persistence and recovery.

The Smith River is classified as a Tier 1 key Watershed under the Aquatic Conservation Strategy (ACS), described in the Six Rivers National Forest Land and Resources Management Plan (LRMP). Tier 1 watersheds are those with a high potential for being restored as part of the watershed restoration program to conserve at-risk salmonids and resident fish species; the highest priority for restoration. The ACS identifies that one of the most important components of watershed restoration is "restoration of the conditions of riparian vegetation". The Strategy states that restoration activities restore watershed processes "to recover degraded habitat" and that "silvicultural treatments may be used to restore large conifers in Riparian Reserves".

The Smith River NRA of the Six Rivers National Forest plays a role in contributing to sustainable local economies in two primary ways: (1) through the generation of income and employment opportunities for residents of the immediate area linked to accomplishing restoration work, and; (2) through direct and indirect contributions to local county revenues from the sale of forest by-products and raw supply of logs, post and pole, fuelwood/fire wood or wood chips. The Forest Service also contributes in secondary ways such as through production of goods and services in regional markets.

Specifically, the purpose and need for the Gordon Hill Project is to:

- Reduce hazardous fuel loading in strategically located high-risk areas.
- Accelerate the development of late-successional habitat characteristics in plantations and young natural stands, and restore ecological conditions in special habitats (LSRs, Riparian Reserves, sugar pine stands and Jeffrey pine grasslands).
- Provide biomass utilization and forest commodities in the form of timber, post and pole, fuelwood/fire wood or wood chips.

Decision

Based on the analysis disclosed in the August 2014 Gordon Hill Project EA, the Project record, best available science and consideration of public comments, I have decided to select Alternative 2 (the Proposed Action), as described in the EA, Chapter 1, pgs. 8-12. My decision authorizes hazardous fuels reduction and late successional, riparian, and meadow/grassland habitats and plantation restoration on approximately 2,749 acres of National Forest System lands; contributing approximately 4 million board feet (MBF) timber volume to support local economies; as follows:

- 1168 acres of fuel reduction treatments employing manual, mechanical and prescribed burning methods in conifer stands in various seral stages within strategic fuelbreak areas.
- 665 acres of commercial thinning to 40% or greater crown closure and activity fuel treatment in 40-45-year old plantations and young natural stands within and outside of fuelbreak areas. Of these acres, 521 acres will be ground skidded and 144 acres will be cable yarded.

- Approximately 2-3 landings/disposal sites per unit have been identified for use. Thirty-eight (38) existing landings/natural openings and wide spots in roads will be utilized and 9 new landings will be used.
- 1.08 miles of road reconstruction on Operational Maintenance Level (OML) 1 roads (temporary upgrade to OML 2) and subsequent re-closure after project implementation.
- 0.26 miles of new temporary road construction.
- 2.8 miles of existing (non-system) temporary roads will be utilized with minor reconstruction. All temporary roads used for this project will be closed after implementation is completed.
- 801 acres of timber stand improvement (TSI), including 6 acres of hardwood restoration, of 20 to 30 year old plantations and natural stands. All stands will be thinned to 40% or greater crown closure with approximately 15 to 24 foot spacing.
- Approximately 31 miles of roadside/ridge top fuelbreaks will be created. Once treatments and activity-generated fuels are fully completed in commercial and TSI units an additional 4 miles of roadside/ridge top treatment will be considered as part of the fuel break corridor system.
- 95 acres of fuels reduction/prescribed burning in a Jeffrey pine grassland restoration.
- 20 acres of sugar pine restoration
- The fuelbreak corridors will be maintained every 5-15 years using a combination of fuels treatments as needed to maintain desired conditions.

Permits, licenses and authorizations needed to implement the decision.

In accordance with 40 CFR 1502.25 (b), the Environmental Assessment is to list all Federal permits, licenses, or other entitlements that must be obtained in implementing the action alternatives (see EA; pg. 12). On June 10, 2010, the North Coast Regional Water Quality Control Board adopted Waiver No. R1-2010-0059, Waiver of Waste Discharge Requirements for Nonpoint Source Discharges Related to Certain Federal Land Management Activities on national Forest System Lands in the North Coast Region (the Federal Waiver). This waiver exempts certain activities (must meet all conditions of the Waiver) conducted on National Forest System Lands from the waste discharge requirements of Article 4 (commencing with Section 13260) of Chapter 4, Division 7 of the California Water Code, except as provided within the waiver. Order No.R1-2010-0029 expires on June 10, 2015, unless renewed by the Regional Water Board. No additional Federal, State or County permits, licenses, or other entitlements were identified as requirements for implementation of the proposed action or alternatives.

Mitigation and Monitoring

I recognize there may be short term disturbances to the human environment from the use of machinery, presence of field crews and associated increased traffic, noise and smoke from prescribed burning while operations are underway. My decision requires Project Design Features

aimed at reducing, minimizing, or eliminating impacts to various natural and cultural resources and to ensure the project is in compliance with the resource protection standards and guidelines of the Six Rivers National Forest LRMP, the Region 5 Soil Management Handbook (FSH 2509.18), Six Rivers National Forest Best Management Practices (BMP) for Invasive Plant Species and Aquatic Organisms (2014), National, Regional, and State Water Quality BMPs, and 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 (USFS et al. 2001) based on the district court's remedy order issued on February 18, 2014 (Conservation Northwest v. Bonnie, W.WA No. C08-1067-JCC).

My decision includes the monitoring described in the EA (Chapter 2. pg. 27). Monitoring is fundamental to inform decision-making that can influence future conditions. The objective of the Gordon Hill Project's Monitoring Plan is to: 1. gather new information to determine the effectiveness of management decisions; 2. establish a baseline for various measures prior to implementation and mitigations, and; 3 verify the accuracy of analysis assumptions and conclusions.

Implementation and effectiveness monitoring for cumulative watershed effects are currently accomplished through the Best Management Practice (BMP) Effectiveness Evaluation Process. The objective is for BMP implementation to be at 100 percent. Results for any BMP below 85 percent trigger a review of the activity area before implementation of further projects. Implementation monitoring is achieved by selecting a representative number of treatment units each year from a sample pool of completed stands or project areas.

Wildlife monitoring will occur by conducting NSO surveys using the most current, USFWS-approved protocol throughout the project area. Updated surveys will be maintained throughout the life of the project or additional limited operating periods will be implemented on activities within 0.25 miles of NSO nesting/roosting habitat without up-to-date surveys (EA Ch. 3, pg 163).

Botany effectiveness monitoring (pre- and post-burning) will occur to acquire information about prescribed burning effects on the Sensitive species, *Silene serpentinicola*, which occurs within the Idaho fescue dominated grasslands on ultramafic soils (Chapter 2. pg. 27)..

Reasons for the Decision

In reaching my decision, I have considered the purpose and need for action, Tribal and interagency consultation, public comments, resource reports, the alternatives and their potential effects and outcomes, as disclosed in the Gordon Hill Project EA. My decision to implement Alternative 2 represents a step toward promoting diverse, healthy fire resilient forests and returning fire to its natural place in the environment, as well as restoring habitat conditions for late-successional species such as the northern spotted owl and riparian habitats for at-risk salmonids.

I believe Alternative 2 will most effectively alter fuel loading and fire behavior to aid fire suppression benefiting the local communities of Big Flat and Gasquet. I find it will protect key

communications infrastructure and incrementally restore ecological resilience to preserve and restore late successional, riparian, and meadow/grassland ecosystems on National Forest System lands. The management of vegetation and fuels will contribute commercially-valuable timber by-products to support local economies; consistent with the 1995 Six Rivers Forest Plan and other Federal, State, and local laws and requirements (EA, pgs. 12, 24, 30 and 31, 33 - 207).

Fire and Fuels

The Gordon Hill Project responds to the purpose and need for reducing hazardous fuel loading in strategically located areas to enhance the defensibility between the communities of Big Flat and Gasquet and around late-successional habitat. I believe this action will best protect human life and property and rare habitats by promoting desired fire behavior of flame lengths of four feet or less in the fuelbreak corridors, minimizing torching and reducing crown fire potential.

My concern is for the likelihood of human-caused ignitions during the hot, dry summer months; particularly within the wildland urban interface (WUI). The project area is generally low elevation with very warm summers and temperatures that can reach 105 degrees or greater. Due to the prevailing winds in this area, fires have a tendency to spread up canyon and upslope towards the ridgetops, making it difficult and dangerous for direct attack methods performed by fire suppression crews without fuels treatment.

My decision acknowledges residents living in Big Flat and Gasquet rely on collaborative fuels reduction efforts as a preventative measure to keep them safe during a wildfire. The 2003 Gasquet Community Protection Project, the 2008 Big Flat Vegetation and Fuels Management Project, and the 2009 Elk Camp Ridge Fuelbreak established a somewhat contiguous network of strategically-placed fuelbreaks around these at-risk communities to aid fire suppression crews. I find my selection of Alternative 2 will be beneficial to these communities by connecting and enhancing this larger fuelbreak network. Treatment areas on National Forest System lands will be strategically placed along main access roads and ridgetops to establish continuous defensible space as recommended by the 2005 Del Norte Community Wildfire Protection Plan (CWPP).

Initial fuelbreak treatments will be applied in a variety of vegetation types and seral stages on 1,168 acres of NFS lands. These fuelbreak corridors will be created by treating surface, ladder and crown fuels; maintained every 5 to 15 years after initial treatments, as needed to maintain desired conditions.

My review of historic records indicates there has been a significant number of wildfires ignited along high use roads in the Gordon Hill Project area; the majority being human-caused. As disclosed in the EA, Chapter 1 pgs. 8-9 and Chapter 2 pgs. 15-16, my decision responds to this high risk of roadside ignition by establishing 31 miles of fuelbreaks along the following road systems: County Road 405 and 411 (Corridor A); Forest Road 17N07 and 16N19 (Corridor B); Forest Road 17N07 (Corridor C); and Forest Road 16N19E (Corridor D).

Equally as important to managing vegetation and fuels is the protection of infrastructure supporting fire suppression. Alternative 2 will provide improved protection of the Camp Six

Communication Site (F-47 A) and National Forest System Road #17N71 from wildfire by strategically establishing defensible space. This site is a high value communications link for the Del Norte County area, used for Emergency response services (California Highway Patrol, Del Norte Sheriff's Dept., Del Norte Ambulance, and Gasquet Fire Dept.) serving the Gasquet, Hiouchi, Rock Creek, and Big Flat areas, as well as along the Highway 199 corridor.

Based on the results of the modeling (FFE-FVS and BehavePlus) conducted for the Gordon Hill Project EA, Alternative 2 will decrease the fire rate of spread from 16.2 chains/hr (one chain equals 66 ft) down to 5.4 chains/hr (positive effect) and reduce flame lengths from 10.1 feet to 2.6 feet (positive effect) in the fuelbreak corridors. This in turn will create conditions whereby fire intensity and severity are lessened across the larger landscape.

As the Responsible Official, I am dedicated to protecting historic properties in a spirit of stewardship for the inspiration and benefit of present and future generations (*National Historic Preservation Act* [NHPA] (16 USC 470-1(3)). Based upon my review of the Gordon Hill Project record, I am satisfied Alternative 2 will provide immediate and foreseeable benefits associated with creating defensible space around known sites, while avoiding direct operational impacts by buffering from activities.

I have concluded Alternative 2 offers an important advantage of lessening the impacts of wildfires. Recent fire seasons illustrate the risks and costs of inaction to life, property, firefighter and public safety, and natural and sacred cultural resources. Over time, as fuel treatments/maintenance are implemented, fire suppression effectiveness should increase and the associated cost of fighting fire (within the Project area) should decrease, as ecological resilience is restored.

Late-successional & Special Habitats

The Gordon Hill Project responds to the purpose and need for accelerating the development of late-successional habitat characteristics in plantations and young natural stands, and restoring ecological conditions in special habitats (LSRs, Riparian Reserves, sugar pine stands and Jeffrey pine meadow/grasslands).

I find Alternative 2 contributes to fulfilling the goals and objectives of the US Fish and Wildlife's 2011 *Revised Recovery Plan for the Northern Spotted Owl* (NSO*; Strix occidentalis caurina*). It expedites conservation and restoration of spotted owl sites and high-value spotted owl habitat using silvicultural techniques to enhance structural complexity and biological diversity in plantations, overstocked stands and modified younger stands, as recommended by the 2011 Recovery Plan and 2012 NSO Critical Habitat Rule. Alternative 2 will apply variable basal area retention thinning to create clumps and gaps to stimulate tree undergrowth. Trees contributing to the upper forest canopy will be thinned to accelerate diameter and height growth, while retaining a minimum 40% canopy cover in foraging habitat for the NSO. No predominant trees (large diameter, older trees) will be cut and large snags and downed logs will be maintained at the 80-100% level.

I am encouraged these resource protection measures, coupled with the careful placement of fuelbreak networks, will collectively help accelerate the development of late successional habitat and alter wildfire behavior to restore ecological processes and resilience. For this reason, I believe my decision to implement Alternative 2 is the best way to aid in the recovery and long-term survival of the northern spotted owl (NSO).

I find the Gordon Hill Project will achieve Aquatic Conservation Strategy (ACS) restoration objectives as defined in the Forest Plan, while providing for the protection and restoration of riparian habitats. Riparian Reserve boundaries within treatment areas have been delineated at 160 ft as all channels within in the treatment areas are ephemeral or intermittent channels. No treatment will occur within 80 ft of a stream or waterway. Restoration actions through commercial thinning, timber stand improvement, and fuels reduction will occur in the remaining 80 ft of the riparian reserve. Ignition of prescribed fire will be restricted to outside riparian reserves; only restorative low intensity flame creep into reserves is authorized. I believe that Alternative 2 will accelerate the development of late-successional riparian vegetation in plantations and young stands and restore ecological processes in riparian reserves.

Encroachment by Douglas fir and brush species is occurring within Jeffrey pine-grassland areas due to a lack of natural fire that maintains the diversity inherent in the grassland plant community. Under Alternative 2, Jeffery pine-grassland areas (95 acres) will be restored using prescribed fire as a tool to rejuvenate and reinvigorate native grass and other herbaceous species, while reducing encroaching forest vegetation. Sugar pine tree vigor, particularly in the mid and larger size classes, is being compromised as inter-species competition for limited water resources increases. I believe Alternative 2 provides an advantage to sustaining sugar pine compared to the No action Alternative, as treatments will begin to reverse declining trends by removing small diameter trees under the drip line of (up to 30 feet from base of tree) of the large pines, as well as thinning the understory.

Economics

The Gordon Hill Project responds to the purpose and need for providing biomass utilization and forest commodities in the form of timber, post and pole, fuelwood/fire wood or wood chips. My decision to allow for commercial timber harvesting as a tool to achieve desired vegetative and fuels conditions will contribute to economic stability. While it was a challenge to balance economic feasibility while conserving natural resources and protecting cultural values, I feel my decision supports forestry-related economic activity and employment opportunities by generating approximately 4 MBF, with a projected total timber value of $473,038.

I appreciate the Gordon Hill Project incorporates important mechanical, manual and prescribed burning restoration costing over $2 million dollars. In making my selection, I feel it is important to consider what these jobs linked to these activities mean to our rural economic, cultural and social well-being. I believe the Forest Service has an obligation to provide local jobs,

while securing any available fiscal venues to optimize implementation of critical restoration treatments. The Forest Service also has a role to play in providing a wood supply for local manufacturers.

Best Available Science - My conclusions are based on a review of the Project record that demonstrates a thorough review of relevant best available science was considered. The resource sections in Chapter 3 of the EA disclose the effects analysis methodologies, and reference scientific sources which informed the analysis as well as the assumptions underpinning the basis for the findings.

Public Involvement

Collaboration was initiated by volunteers from the Del Norte Fire Safe Council, who facilitated coordination with various stakeholders to develop a fire safe plan. In 2003, the Council received a grant from the US Forest Service Economic Action Program to fund the creation of the fire safe plan. The first phase of collaboration culminated in the completion of the Del Norte Fire Safe Plan and Community Wildland Fire Protection Plan (CWPP) in September of 2005, which identified areas of concern and potential project opportunities across multiple land ownerships within Del Norte County; including recommendations for National Forest System lands.

Scoping

The Council on Environmental Quality (CEQ) defines scoping as "...an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action" (40 CFR 1501.7). Beginning in March, 2010, the Gordon Hill Vegetation and Fuels Management Project was listed in the Six Rivers National Forest Schedule of Proposed Actions (SOPA).

In May of 2012, field trips to the Project area were hosted by the Forest Service to solicit ideas from collaborators and interested parties (individuals, environmental groups and timber industry); used to help refine proposed treatment methods and design criteria. The Forest Service compiled and reviewed all information and comments and circulated a preliminary vegetation and fuels management proposal to prospective stakeholders to initiate the collaboration process under the HFRA (36 CFR 218; Subparts A and C).

The Six Rivers National Forest initiated formal governmental consultation with Tolowa Nation, the Smith River Rancheria, and the Elk Valley Rancheria Native American tribes on February 19, 2013 regarding the preliminary design of the Gordon Hill Vegetation and Fuels Management Project. No concerns about the project were raised.

On March 15, 2013, the 30-day Scoping period for the Gordon Hill Project was initiated with the circulation of a Scoping package mailed to 48 individuals and groups disclosing information and seeking public comment on the proposed action. This included federal and state agencies, Native American tribes, local government officials, businesses, interest groups, adjacent landowners, and interested individuals. The Scoping process concluded on April 16th, 2013.

As a result of the feedback received from the initial outreach effort, an informational public meeting/field trip was scheduled on June 26, 2013. This event was announced through invitation letters mailed to prospective stakeholders. None of the participants attended the event, but three groups asked for other field trip dates and each was accommodated by the Forest Service. Field trips were held on August 27, 2013, April 22, 2013 and July 23, 2014.

A total of eight responses to this mailing were received, with four parties that provided substantive comments, one state agency that provided procedural recommendations, two individuals that expressed support for the project, and one individual that requested a copy of the EA. Public concerns raised during Scoping included the economic viability of project design, environmental effects to various resource values, and road access by the public. Appendix C of the EA, Disposition of Scoping Comments, provides detailed information on the public comments submitted and the Forest Service responses to issues identified.

Objection

The Pre-decisional Administrative Review (Objection process) pursuant to 36 CFR 218 provides the sole means of administrative review of this HFRA project. On August 9, 2014, publication of the Opportunity to Object legal notice in the newspaper of record (the Daily Triplicate) initiated the 45- day objection filing period.pursuant to 36 CFR 218, Subparts A and B. Following publication of the legal notice, an electronic copy was posted on the Six Rivers National Forest (SRNF) web site.

On August 25, 2014, an objection letter was submitted by the Klamath-Siskiyou Wildland Center (KS Wild). KS Wild withdrew the objection on September 8, 2014 after receiving written clarification from the Forest Supervisor concerning a project design feature for the Project.

On September 5, 2014, an objection letter was submitted by Conservation Congress. As required by 36 CFR 218.32(b), the Reviewing Officer provided a written response to issues raised in the objection letter. The Reviewing Officer found that the Forest Supervisor's rationale for this project is clear and the reasons for the project are logical and responsive to direction contained in the Six Rivers National Forest Land and Resource Management Plan (LRMP). The Reviewing Officer determined that the Responsible Official could proceed with issuance of this Decision Notice, but issued instructions to amend the project record to address some of the concerns raised in the objection. The instructions to the Forest Supervisor are as follows:

1) Provide supplemental cumulative effects analysis and/or clarification of analysis conducted for: 1) instances of subsequent entries into the Gordon Hill Project fuel breaks for fuels maintenance activities over the next 5 to 15 years, and 2) past, present and reasonably foreseeable future actions as listed in Appendix D of the EA and how those actions may affect Northern spotted owl and its habitat.

2) Correct the inconsistency between the EA's proposed action and the Silviculture Report. The Silviculture Report incorrectly states that trees with 20" dbh or larger will not be removed, but the proposed action indicated incidental felling of 20" dbh and larger trees for access to temporary roads and landings.

3) Provide clarification on how the Gordon Hill Project analysis met protocol survey requirements for northern spotted owl.

4) Document consideration of new science raised by the objector during the objection period that was not previously considered (e.g. Odion et al., 2014, and Lee et al., 2012).

Appendix A of this Decision Notice and Finding of No Significant Impact discloses clarifications and correction of inadvertent errors in compliance with the Reviewing Officer's instructions.

Alternative Considered in Detail but Not Selected

In addition to the selected alternative, I considered the No-action Alternative 1 to provide a baseline for comparison with Alternative 2 (the Proposed Action). The environmental analysis and disclosure of the No-action Alternative provides an indication of what could happen if the Proposed Action (Alternative 2). Although under Alternative 1, no hazardous fuels reduction or vegetative management would occur at this time, the lack of action could result in discrete, indirect consequences, as described in Chapter 3 of the EA.

I did not choose this alternative because it does not meet the purpose and need to implement the Six Rivers LRMP or the recommendations in the Del Norte Community Wildland Protection Plan. The No-action Alternative would not meet the purpose of modifying fire behavior to aid suppression, as it would not expedite the need to establish strategically placed fuelbreaks or reduce potential flame lengths to 4 feet or less around the communities of Big Flat and Gasquet, at risk to wildfire.

Without active forest management, the vigor and grow rates of seedling, saplings and small trees growing in overstocked plantations and young natural stands would stagnate or decline as water availability becomes more limited from inter-tree competition. Alternative 1 would tend to maintain uniform structure and species composition at the landscape scale. For these reasons, the opportunity to accelerate the development of late-successional habitat characteristics and restore ecological conditions in special habitats (LSRs, Riparian Reserves, sugar pine stands and Jeffrey pine grasslands) would not occur.

Under the No-action Alternative, wood and forestry-related jobs would not be created to support local economies.

Finding of No Significant Impact

Based on the site-specific analysis summarized in the Gordon Hill Vegetation and Fuels Management EA and the associated project file, I have determined that the Selected Alternative is not a major Federal Action and will not significantly affect the quality of the human environment; therefore, an Environmental Impact Statement EIS is not required. Under the 1978 regulations written by the Council on Environmental Quality (40 CFR Parts 1500-1508), significance is evaluated for both context and intensity. Evaluation of context and intensity is summarized below.

(a) CONTEXT: This means that the significance of an action must be analyzed in several contexts, such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting. In the case of a site-specific action, significance usually depends upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

The proposed action's context is limited to 2,749 acres within an area of potential influence that includes portions of the Gasquet, Big Flat, and Rock Creek communities and Wildland-Urban Interface (WUI), five 6th field watersheds, and the Haines LSR (LSR 303), which in combination total 42,724 acres. The objectives are to reduce potential wildfire effects in order to protect life and property, restore fire to its natural role in the ecosystem, and accelerate the development of late-successional riparian and terrestrial habitats.

The context of this action is of limited scope and duration. The potential effects will be confined to approximately 665 acres of commercial thinning with subsequent activity fuel treatment, 801 acres of TSI with subsequent activity fuel treatment, 1168 acres of stand-alone fuel reduction treatment, and 115 acres of Jeffrey and sugar pine restoration. Proposed activities will likely be completed by 2031. Any adverse effects will be limited and short-term, while benefits will be long lasting.

Even in a local context, the proposed action will not pose significant short- or long-term effects. Resource protection measures included in the proposed action minimize and avoid adverse impacts to the extent that all impacts are within accepted levels. Proposed activities are consistent with all Standards and Guidelines in the Forest Plan.

(b) Intensity: This refers to the severity of impact, which is evaluated on the basis of ten factors. The following summarizes the findings of intensity relative to those factors:

(1) Impacts may be both beneficial and adverse. A significant effect may exist even if, on balance, effects are believed to be beneficial.

The proposed action has beneficial effects to the majority of resources and both beneficial and potential for minor adverse effects to soils, as discussed in Chapter 3 of the EA. Beneficial and adverse effects are summarized in the EA and fully addressed in specialist reports. Adverse effects to soils are not significant (Ch.3, pg. 83). Beneficial effects are also not significant and have not been used to offset or compensate for adverse effects in making this determination of "no significant effects".

(2) The degree of effects on public health or safety.

Public health and safety were considered in the design of the project. The proposed activities are governed by standard public health and safety guidelines, Forest Service direction, and other applicable laws and guidelines. Specifications designed to protect public health and safety will be included in the project implementation contract. Actions such as abating dust, temporary road closures during operations and signing for public safety, and maintaining roads used during the project are standard measures that will be used. Best Management Practices for the protection of water quality will be used (EA, Appendix E). Project activities will produce short-term localized dust (primarily operation of heavy equipment) and smoke (from pile or prescribed burning). Design standards will be implemented to reduce emissions and impacts to air quality (EA, Chapter 2, page 24). They include abating dust by applying water to roads and burning during conditions that will allow smoke to rise and dissipate. Local residents will likely notice impaired visibility from smoke. The project will meet state and federal guidelines.

Felling hazard trees will provide for public and worker safety on Forest Service roads maintained for this project, consistent with the requirement of the Forest Plan, Federal Highway Safety Act, and the Occupational Safety and Health Administration.

In the long term the project will improve public health and safety by reducing fuel loading, reducing fire intensity and severity, and reducing risk of ignition between the communities of Gasquet and Big Flat.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

No parklands, prime farmlands, wetlands, or ecologically critical areas are known to exist in the vicinity of the project area.

Historic or cultural resources: Within the project area, surveys indicated the presence of 35 sites, 22 of which occur within treatment units. All of the 22 sites are historic associated with mining. All of these sites would be protected through adherence to the project design features discussed in Chapter 2 of the EA (pages 24-26). The Cultural Resource Inventory Report is on file in the Six Rivers National Forest Supervisor's Office.

Wetlands, Wild and Scenic rivers: The project area occurs in the Hardscrabble-Myrtle Creeks, Lower Middle Fork Smith River, Hurdygurdy Creek, Lower South Fork Smith River watersheds and the entire Craigs Creek watershed.

Hurdygurdy, Craig, Coon, and Gordon as well as the lower portion of the South Fork of the Smith River, are congressionally designated Recreational Rivers under the Wild and Scenic River Act. The Act also designated the upper portion (above the confluence of Blackhawk Creek) of the South Fork of the Smith River as a Wild River. The proposed action does not occur within any Wild River corridor and will not impede the free-flowing conditions or cause direct or adverse impacts on the outstandingly remarkable values of those rivers.

The project meets all visual quality objectives of the Forest Plan (EA, Chapter 1, pg. 24)

(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

Legitimate controversy must be based on credible scientific evidence. Public involvement efforts (refer to EA, Chapter 1, Collaboration and Public Involvement) have not revealed any significant controversies regarding the environmental effects of the proposed action. Non-significant issues are thoroughly discussed in the EA, Appendix C. Thinning (commercial and noncommercial), understory burning, ground skidding and cable yarding, and hand piling/burning are standard practices on the Forest.

Through involvement and discussion with stakeholder groups controversy over environmental effects was minimized.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

The proposed action was designed to achieve objectives identified in the Forest Plan. Project design features and resource protection measures will minimize adverse resource effects. Years of local experience with these types of projects minimize the chance of highly uncertain effects or effects which involve unique or unknown risks. The proposed action is routine in nature, employing standard practices and protection measures, and their effects are well known. Sire and Taylor (2003) documented Federal agencies' evaluation of these effects:

"..The agencies also synthesized 153 peer-reviewed scientific publications analyzing the influence of forest structure on wildfire behavior and the severity of its effects. This synthesis found that forest thinning and prescribed burning are two land-management techniques long employed by foresters and others to maintain forest health and reduce wildfire risk and that the benefits of these practices are supported by hundreds of scientific investigations and years of professional field experience. The synthesis also found that thinning and prescribed burning, when conducted properly with safeguards, effectively reduce wildfire risk and have a net beneficial effect on the environment by protecting and sustaining air and water quality, soil stability and productivity, desirable vegetation composition and structure, wildlife habitat, and human communities." (See *http://www.fs.fed.us/projects/hfi/2003/november/documents/forest-structure-wildfire.pdf*)

As stated in the EA (Chapter 3, pages 34 & 39-44), the Forest Vegetation Simulator (FVS) and the Fire and Fuels Extension (FFE) were used to project changes in stand characteristics that affect fire behavior and habitat development. The model uses growth, development, and mortality measurements collected by forest researchers in this region of the United States. The fire behavior model BehavePlus was then used to predict fire behavior in stands before and after the proposed treatments. Using these models reduces the uncertainty of anticipated fire effects for both project understory burning and for potential wildfire in the project area.

The Six Rivers National Forest has had an active fuels treatment program for many years. Prescribed fires are implemented using measures that will ensure good air quality for local

residents. Effects on the human environment from smoke and prescribed burns are predictable; past experience shows impacts to humans are negligible when management measures are in place.

(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

Due to the routine nature of the proposed action, no precedent will be set for future decisions with significant effects. A decision to proceed does not represent a decision in principle about a future consideration.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

The proposed action will not result in significant cumulative adverse impacts when considered in combination with other past, current, or reasonably foreseeable actions.

Cumulative effects to sensitive resources were discussed in the EA (Chapter 3 in resource-specific cumulative effects and Appendix D). Based on the effects to soil productivity, water quality, riparian areas, wildlife, fish, botany, and fuels contained in this EA, and the biological assessments/evaluations addressing this project, there would be no significant cumulative adverse effects that could result from implementation of the proposed action.

Due to the scope, size, and intent of this project, there are no concerns of further exacerbation of negative cumulative effects on sensitive resources. This project is designed to attain LSR objectives and reduce fuel loadings, and contains implicit measures to reverse negative cumulative effects over the long term in the treated areas.

Reasonably foreseeable future actions such as the Smith River Restoration and Motorized Travel Management project were also considered in this analysis. Due to the scope, size, and intent of the projects there are no concerns of further exacerbation of negative cumulative effects on sensitive resources when combined with the Gordon Hill Vegetation Management and Fuels Reduction Project.

(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

Within the project area, surveys indicated the presence of 35 recorded archeological sites, 22 sites (all historic sites associated with mining) within treatment units. Treatments within archaeological sites primarily will include directional felling, bucking, and hand-carrying trees from archaeological sites. The purpose of these treatments is to reduce fuels around archaeological sites.

Heritage resources will be protected by following 36 CFR 800 regulations of the National Historic Preservation Act. Standard contract provision will protect any sites discovered during the project implementation. Consultation requirements under Section 106 of the Act have been fulfilled as outlined in the Programmatic Agreement among the U.S.D.A. Forest Service, Pacific

Southwest Region (Region 5), California State Historic Preservation Officer, Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Processes for Compliance with Section 106 of the National Historic Preservation Act for Management of Historic Properties by the National Forests of the Pacific Southwest Region.

Consultation has taken place with the Tolowa Nation, and Elk Valley and Smith River Rancherias; and no issues were identified.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

Biological Assessments were completed which analyzed the effects of this action on proposed, threatened, and endangered species of fish, wildlife, plants, and their Critical Habitat. The proposed project will not adversely affect any federally listed fish, wildlife, or plant species protected under the Endangered Species Act.

Wildlife: Informal consultation with the U.S. Fish and Wildlife Service (FWS) was initiated through the interagency Level 1 Process. The project was designed to ensure no adverse impacts to listed species would occur. The Level 1 team determined that the project was not likely to adversely affect the northern spotted owl or the marbled murrelet or their designated Critical Habitat. The FWS concurred with this determination. Direct, indirect, and cumulative effects on northern spotted owl and marbled murrelet and their Critical Habitats are addressed in the EA (Chapter 3, pages 136-166) and the *Gordon Hill Vegetation Management and Fuels Reduction Project Biological Assessment/ Evaluation* wildlife *(*Devlin, 2014*)*.

Fish: Based upon the project size, nature, and duration, as well as the proximity of the project area to downstream anadromous fish habitat, this project will not affect Southern Oregon/Northern California Coast (SONCC) coho salmon and its designated critical habitat and essential fish habitat. Since the project has no effect on SONCC coho salmon, consultation with the National Marine Fisheries Service (NMFS) is not required. However, section 7 Endangered Species Act consultations on previous USFS thinning and fuel hazard reduction projects with NMFS have occurred for many years, and have helped in the development of design criteria for these types of actions that minimize or eliminate impacts to SONCC coho salmon and Critical Habitat. These criteria were incorporated into the project design features as described in the fisheries section of the EA (EA Chapter 3, pages 101-135) and the Biological Evaluation/Biological Assessment for the Gordon Hill Vegetation Management and Fuels Reduction Project for Threatened, Endangered, and Sensitive Fish Species (McCain 2014).

Plants: No Federally listed Threatened, Endangered, or Proposed plant species are known to occur within the planning area and none were found during botanical surveys of the project area (EA, Chapter 3, pages 182-197) and the *Biological Evaluation/Biological Assessment for Threatened, Endangered, Sensitive Plant and Fungi Species* (Hoover 2014). No threatened or endangered plant species will be affected by this project.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

The action will not violate Federal, State, and local laws or requirements for the protection of the environment. The action is consistent with the Six Rivers Land and Resource Management Plan standards and guidelines and will not threaten a violation of any laws or other requirements imposed for the protection of the environment. It is consistent with the Smith River National Recreation Area Act of 1990, National Forest Management Act, Endangered Species Act, National Environmental Policy Act, National Historic Preservation Act, Archaeological Resources Protection Act of 1979, Clean Water Act, Clean Air Act, Wild and Scenic Rivers Act, the Federal Highway Safety Act, and the California Porter Cologne Water Quality Act, and Executive Order 12898. It is consistent with the Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl (April 1994) and the Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (January 2001). The project meets the Aquatic Conservation Strategy objectives of the Forest Plan (EA Chapter 1, page 5 and EA, Chapter 3, pages 88-123).

Findings Required by Other Laws and Regulations

My decision complies with the laws, policies, and executive orders listed below and described in Chapter 3 of the EA in compliance with the National Environmental Policy Act as follows:

Forest Service Sensitive Species: Biological evaluations were prepared for Forest Service Sensitive Species of fish, wildlife, plants, and fungi. Implementation of this action will not cause a trend towards Federal listing of any potentially affected Sensitive species. Beneficial and long-term results include accelerated development of late-successional characteristics in riparian areas and young stands within the project area.

Survey and Manage Species: Application of the Survey and Manage Standards and Guidelines for this project is consistent with the district court's remedy order issued on February 18, 2014 (Conservation Northwest v. Bonnie, W.WA No. C08-1067-JCC) which rejected the 2011 Consent Decree executed in resolution of the district court action (Conservation Northwest, et al v. Harris Sherman, et al and D.R. Johnson Company, 715 F.3d. 1181, C.A. 9 (Wash), April 25, 2013) yet provided categories for which reliance on the 2011 Consent Decree (settlement agreement exemptions and/or species list) may continue: a) projects in which Survey and Manage pre-disturbance surveys were initiated prior to April 25, 2013, b. projects in which any known site(s) has received site-management, and c. projects that are consistent with the exemptions stipulated by Judge Pechman (October 11, 2006, "Pechman exemptions") and ordered by the court in Northwest Ecosystem Alliance et al. v. Mark E. Rey et al., No. 04-844P, (W.D. Wash. October 10, 2006).

The Gordon Hill Vegetation and Fuels Management Project is in compliance with the court's remedy order of February 18, 2014 in that the project falls within one or more of the

aforementioned categories, specifically, pre-disturbance surveys were initiated prior to April 25, 2013, known site management has been provided, and a majority of the project falls within the "Pechman" exemptions (e.g. thinning in stands less than 80 years of age, hazardous fuels treatment using prescribed fire).

Forest Service Manual 7700, Chapter 7710 – Transportation Atlas, Records and Analysis, Effective December 14, 2001: In November 2005, The Six Rivers National Forest completed a Roads Analysis Process (RAP) for the Smith River NRA. Using information from this RAP, the Forest Supervisor has determined that there is adequate road information to inform the decision on the Gordon Hill Vegetation and Fuels Management project. The proposed action is consistent with the recommendations developed during the Smith River NRA RAP.

System roads within the planning boundary include 94.49 miles of National Forest Transportation System roads. Approximately 62.58 miles of FS system roads will be utilized for this project. Of these, approximately 21.84 miles of are needed to access commercial thin units and will require some form of maintenance over the life of the project. Road management maintenance levels are defined in Forest Service Handbook 7709.59, Section 62.32. The system roads needed for the project include Operational Maintenance Level (OML) 3 roads (11.01 miles), OML2 roads (9.7 miles) and OML1 (1.08 miles). OML 1 roads used for this project will be temporarily upgraded to OML 2 and returned to OML 1 status (closed to vehicle traffic) once the treatments has been completed.

Del Norte County roads needed to directly access the units identified in the project includes County Road 411 (French Hill Road) and County Road 405 (Big Flat Road). County Road 427 (South Fork Road) will be used when exiting the south project area (County Road 405) to get to State Highway 199. Landings along Del Norte County Road 411 are anticipated to encroach within the travel way in some areas and will require county permitting prior to commencement of work along this corridor.

Forest Plan, Noxious Weeds: The overall level of risk for the project is moderate when implemented with project design features in place. Requiring equipment to be washed prior to entering the project area will reduce the risk of importing new weeds into the project area by equipment, treating weed sites in keeping with ground disturbing activities, and using certified weed-free seed and straw or native mulch where needed will also reduce the risk of introducing new weed populations. (EA, Chapter 3, pages 195-197).

The treatment areas will retain fully stocked timber stands after completion of the project. The high level of shading and the retention of duff and litter levels sufficient to meet Best Management Practices will reduce the risk of weed introduction into areas with ground disturbance.

Monitoring of the project area will ensure that any noxious weeds that may be introduced into the area can be quickly controlled by hand pulling methods.

Forest Plan, Port-Orford-Cedar Root Disease: The project area was evaluated for risks associated with the introduction or spread of Port-Orford-Cedar root disease (EA, Appendix F) in the project area. The overall level of risk for the project is low with project design features in place. Requiring equipment to be washed prior to entering the project area and limiting operations to the dry season will ensure that the risk of root disease spread and infection of uninfected areas is kept low (EA, Chapter 3, page 198).

Clean Water Act, Porter-Cologne Act, and Basin Plan: Under the Federal Clean Water Act, the Environmental Protection Agency delegated its authority for regulation of water quality on Federal Lands in California to the State Regional Water Quality Control Board. A management agency agreement between the U.S. Forest Service and the North Coast Regional Water Quality Control Board was developed to cover management activities on National Forest Service lands.

The management agency agreement requires the U.S. Forest Service to implement the state certified and Environmental Protection Agency approved water quality management program and practices referred to as Best Management Practices (BMPs) to protect water quality from sources of pollution. Both the program and practices were developed in compliance with the Clean Water Act requirements and are consistent with the California Porter Cologne Water Quality Act and with the North Coast Basin Plan (EA, Appendix E).

The proposed action is not expected to have a detrimental effect on the water quality objectives for suspended sediment, settleable material, turbidity or temperature. The North Coast Regional Water Quality Control Board's Basin Plan standards set for each parameter will not be exceeded and adverse effects to beneficial uses are not anticipated. No significant water quality effects were predicted to occur from implementing the proposed action. Riparian Reserves will undergo long-term improvement of conditions and water quality will be maintained so that domestic water users and other beneficial uses such as fisheries and aquatic habitat will not be impacted by activities.

The EA (Chapter 3, pages 108-109), addresses the effects of the project on federally Threatened coho salmon and their designated Critical Habitat. The fish biologist for the project determined that the action will have no effect on coho salmon or coho Critical Habitat.

Executive Order 12898, Environmental Justice: This Federal order requires an assessment of whether there would be disproportionate effects to minority or low-income populations. Although there are minorities and low-income people living in the North Coastal California area, they will not be disproportionately affected as there will be no effect on cultural properties, and access will not be changed in the proposed action. All people will benefit by the reduction in fire risk in and around the Gasquet and Big Flat communities (EA, Chapter 3 page 207).

Implementation Date

Implementation of this project is expected to take place from 2016 to 2031. Fuelbreak corridors will be maintained every 5- 15 years (1 to 3 entries) as needed to maintain desired conditions.

MERV GEORGE JR. Date
Forest Supervisor, Six Rivers National Forest

Appendix A: Response to Objection

On September 5, 2014, an objection letter was submitted by Conservation Congress. As required by 36 CFR 218.32(b), the reviewing officer provided a written response to issues raised in the objection letter. The reviewing officer found that the Forest Supervisor's rationale for this project is clear and the reasons for the project are logical and responsive to direction contained in the Six Rivers Land and Resource Management Plan. The reviewing officer determined that the SRNF could proceed with issuance of a Decision Notice but issued instructions to the Forest Supervisor to amend the project record concurrently with issuance of the final Decision Notice to address some of the concerns raised in the objection.

The instructions to the Forest Supervisor are as follows:

1) Provide supplemental cumulative effects analysis and/or clarification of analysis conducted for: 1) instances of subsequent entries into the Gordon Hill Project fuel breaks for fuels maintenance activities over the next 5 to 15 years, and 2) past, present and reasonably foreseeable future actions as listed in Appendix D of the EA and how those actions may affect Northern spotted owl and its habitat.

2) Correct the inconsistency between the EA's proposed action and the Silviculture Report. The Silviculture Report incorrectly states that trees with 20" dbh or larger will not be removed, but the proposed action indicated incidental felling of 20" dbh and larger trees for access to temporary roads and landings.

3) Provide clarification on how the Gordon Hill Project analysis met protocol survey requirements for northern spotted owl.

4) Document consideration of new science raised by the objector during the objection period that was not previously considered (e.g. Odion et al., 2014, and Lee et al., 2012).

Responses:

1) Provide supplemental cumulative effects analysis and/or clarification of analysis conducted for: 1) instances of subsequent entries into the Gordon Hill Project fuel breaks for fuels maintenance activities over the next 5 to 15 years, and 2) past, present and reasonably foreseeable future actions as listed in Appendix D of the EA and how those actions may affect Northern spotted owl and its habitat.

The objection claimed that:

"There is also no discussion of future projects other than Big Flat. However, there are likely to be many of these, given the pressure to reduce fuels…. Six fuelbreaks were constructed near Gasquet in 2003; they will undoubtedly need maintenance, which could affect NSO.

"Fuels maintenance will be performed on treatment areas as needed every 3-10 years or as funding allows." This foreseeable impact is not analyzed in the CEA" [cumulative effects analysis]

Please note that the Environmental Assessment (EA) states that fuels maintenance treatments will be conducted every 5 to 15 years. The "3-10 years" described in the Biological Assessment (BA) is incorrect.

The Interdisciplinary Team reviewed Appendix D and the wildlife cumulative effects analysis of the EA and found that future maintenance on the Gordon Hill project and all other fuels projects within the analysis area (in addition to the Big Flat Project) were discussed. For clarification, fuels maintenance actions were addressed as part of the proposed action (Gordon Hill) or as on-going or "present" projects (Gasquet Community Protection projects).

The definition of cumulative effects under NEPA is "the incremental environmental impact or effect **of the proposed action**, together with impacts of past, present, and reasonably foreseeable future actions" (emphasis added). Fuelbreak maintenance is part of the proposed action (EA Ch. 2, pg. 4; BA pg. 11).

Cumulative effects of the proposed action to wildlife, including the northern spotted owl (NSO), were described in detail in the EA and BA (EA Ch. 3, pgs. 178-182 and Appendix D; BA pgs. 79-83). The action area discussed in the wildlife cumulative effects analysis (CEA; EA Ch. 3., pg. 180, BA pg. 81) that defines the context of the analysis was described in the EA (Ch. 3, pg. 146) and BA (Ch. 3 pg. 41) as the planning area extended to include the entire 1.3 mile home ranges of four owl territories that were affected by the project.

The CEA discussed how past timber harvest activities and suppression of wildfire in the Smith basin has led to changes in seral stages and increases in fuels and defines the environmental baseline in the action area. There has been a reduction in old-growth forests and an increase in shrub, pole, and early mature forests (EA Ch. 3., pgs. 178-179; BA pgs. 79-80). The CEA determined that the Gordon Hill Project will facilitate restoration by thinning plantations and young natural stands (EA Ch. 3., pg. 178; BA pg. 79). Accelerating the development of late-successional characteristics, and protecting existing habitat (through fuels reduction), will move the area toward the historic range of variability of seral stages and reduce fragmentation of habitat, improving habitat conditions for Threatened, Endangered, Sensitive and Proposed species (TESP; EA Ch. 3., pg. 180; BA pg. 81). The **beneficial cumulative effects** include the reduction of habitat fragmentation and the development of late-seral conditions (emphasis added; EA Ch. 3., pg. 178; BA pg. 79).

Maintenance activities on the fuel break will be conducted using all the project design features described in the EA (EA Ch. 2 pgs. 16-26; BA pgs. 25-33). The areas may be retreated by utilizing a combination of treatments described in the EA and BA (EA Ch. 2, pg. 4; BA pg. 11). Understory burning in many cases will be prescribed to help maintain and sustain the desired fuel loading in these units (EA Ch. 2 pg. 4; BA pg. 11). Site-specific review by a fuels specialist will be conducted prior to understory burning to ensure that a low intensity underburn can be achieved (EA Ch. 2 pg. 4; BA pg. 11). In addition, it is a standard practice that future maintenance activities will have an interdisciplinary team review before actions occur to ensure no new conditions exist that would change the level of effects or would require additional analysis.

Maintenance actions may occur on 0.07% of the northern spotted owl nesting /roosting habitat in the Gordon Hill Project area (EA Ch. 3, pg. 151; BA pg. 61) and 4% of the foraging habitat (EA Ch. 3, pg. 169; BA pg. 76). Combined with the adjacent Big Flat project, the maximum amount of acres treated within any owl home range for the two project combined is 2% of nesting/roosting and 20% of foraging (EA Ch.3, pg. 181; BA pg. 82) within affected NSO activity centers. The combined effects of the projects within the action area are of low intensity with 0.14% of the N/R and 6% of the foraging habitat being treated. All treated habitat will remain suitable immediately post project. Although current habitat function has been or will be maintained in all treated areas (i.e. 100% current habitat function will be maintained), approximately 98% of the available nesting/roosting in the affected territories (and action area) and 80% of the foraging habitat in the affected territories (94% of the total foraging habitat in the action area) will be left untreated and available as alternative habitat for the use by spotted owls (EA Ch.3, pg. 181; BA pg. 82).

A post-implementation review was conducted of the Big Flat project by the interagency Level 1 Consultation Team. It was agreed by the Level 1 Team these types of treatments will have a beneficial effect on the future habitat conditions of the area and will create more alternative habitats for owls to use as additional treatments occur on the landscape (EA Ch.3, pg. 181; BA pg. 82).

The wildlife Cumulative Effects analysis in the EA and BA also states:

"The trend for wildlife habitats on the NRA is towards recovery. Since the 1990 NRA Act, timber harvest on the NRA has been limited and geared towards habitat restoration (thinning in younger stands). Fuel treatments have been developed to help restore natural fire regimes and to protect existing habitats. …. Accelerating the development of late-successional characteristics, and protecting existing habitat, will move the area toward the historic range of variability of seral stages and reduce fragmentation of habitat, improving habitat conditions for TESP species " (EA Ch. 3, pg. 180; BA pg. 81).

In addition, limited operating periods have been established for all activities within 0.25 miles of each activity center. Updated surveys will be maintained throughout the life of the project or additional limited operating periods will be implemented on activities within 0.25 miles of nesting/roosting habitat without up-to-date surveys (EA Ch. 3, pg. 162; BA pg. 72), therefore

there will be no disturbance to nesting owls from project activities (including future maintenance activities) during the breeding season.

The "Cumulative Effects Analysis Assumptions" for the project (EA Ch. 3, page 33) stated that the list of projects addressed in the cumulative effects analyses was provided in Appendix D of the EA. The Gasquet Community Protection Project (CPP) was addressed in Appendix D. The EA described "reasonably foreseeable" as future actions including private, county, state, and federal actions that are in any stage of project planning and those for which decisions have been made and **are awaiting implementation (**emphasis added; EA Appendix D, pg. 277). The Gasquet CPP project was included in the "Implementation in Progress" section of Appendix D and described that fuels maintenance was "on-going". To clarify this statement, fuels treatment was completed in 2009, and the effects were considered as part of the environmental baseline for the project. The Gasquet CPP relies on maintenance treatments for effectiveness and is therefore considered for the purposes of the cumulative effects analysis as "present" project, not "awaiting implementation". The incremental impacts of fuelbreak maintenance were incorporated into the cumulative effects analysis and were found to have no significant effect due to the low intensity of disturbance (operations are short in duration and occur outside of breading season), low magnitude (habitat will remain suitable immediately following implementation), and small scale (low percentage of available habitat treated), occurring at most in 5 year intervals.

The EA and BA found that all treated acres in the project will remain suitable immediately post project (EA Ch. 3, Pgs.148, 149, 151, 153, 157, 158, 161, 162, and 181; BA pgs. 57, 58, 61, 62, 63, 65, 66, 68, 69, 70, 71, 72, 73, and 82). The USFWS concurred that there would be no adverse effects to the NSO from Gordon Hill Project (EA Ch. 3, pg. 162; BA pgs. 2, 3, 82, and 83).

The CEA found that all treatment areas from <u>all</u> vegetation management projects in the action area will remain suitable immediately post project (EA Ch. 3, pg.181; BA pg. 82). The project was determined to have no negative cumulative effects to Threatened, Endangered, Proposed, or Forest Service Sensitive species; management indicator species, neotropical migrants, or other wildlife species (EA Ch. 3 pg. 182). The project, when considered with the past, present, and reasonably foreseeable future actions, will have no cumulative impacts and therefore no significant effect to the NSO or critical habitat.

2) **Correct the inconsistency between the EA's proposed action and the Silviculture Report. The Silviculture Report incorrectly states that trees with 20" dbh or larger will not be removed, but the proposed action indicated incidental felling of 20" dbh and larger trees for access to temporary roads and landings**.

The Silviculturist reviewed the Silviculture Report (SR) and found that the project was consistent with the prescribed treatments, and that no modification to the SR was needed. For clarification, the SR provided the detailed prescriptions for each unit in the project. For units in LSR, the SR

required that no 20" trees would be removed (meaning none would be harvested) as part of the prescription. As stated in the EA, a limited number of 20" trees would be cut in the LSR for logistical purposes only; however, all would be left on site as downed woody debris. No 20" trees will be removed from LSRs, which is consistent with the SR.

3) Provide clarification on how the Gordon Hill Project analysis met protocol survey requirements for northern spotted owl.

The Forest met the protocol survey requirements for the northern spotted owl (BA pgs. 43-48); however additional "not-to-protocol" survey information was also included in the BA. The BA displayed protocol and non-protocol survey results for each activity center in the project. The protocol requires two years of surveys to be considered complete. In addition to the three years of surveys conducted to protocol, the Forest conducted status surveys at every AC on the Forest in 2010 and 2011. The Forest-wide survey effort was not considered "to protocol" because each AC only received one year of survey. However each AC was surveyed using the methods described within the draft 2010 *Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls*; therefore, each AC was surveyed to protocol in the year of survey. The information from 2010-2011 Forest-wide AC status review project was reported in the Gordon Hill BA/BE as additional information in Tables10-17 of the BA/BE. In addition, yearly surveys of the project will continue as required by protocol until implementation is completed.

4) Document consideration of new science raised by the objector during the objection period that was not previously considered (e.g. Odion et al., 2014, and Lee et al., 2012).

The objector provided the following comments and referenced new literature she felt applied to the Gordon Hill Project.

"A. Throughout the EA, a concern about fire destroying NSO habitat is expressed. See, e. g., id. at 6. However, recent research shows that California spotted owls, a relative of NSO, forage in burned areas, even areas that burned severely. Bond et al, 2009. Further research by Lee et al, 2012, showed the NSO use of burned versus unburned areas did not differ, even with up to 32 percent of an area severely burned. Odion et al. 2014 shows logging to reduce wildfire in owl habitat often reduces half the basal area and detrimentally impacts habitat. Wildfire is speculative at best and if were to occur would impact far less habitat than logging, and would continue to be used by owls.

Existing NSO habitat could burn under the right conditions (prolonged very dry conditions) because the relatively dense, multi-layered stands have a considerable amount of fuel in them. But the fact that NSO habitat could burn is not a reason to log it now. It would be impossible to

log enough to protect a significant amount of NSO habitat without removing, downgrading, or degrading the habitat. See Odion et al, 2014."

Two of three publications cited were not addressed in the BA for the project; therefore the Six Rivers National Forest/Arcata Fish and Wildlife Level 1 Consultation Team reviewed the publications in relation to the Gordon Hill Project. The Level 1 team determined that neither publication is applicable to the Gordon Hill Project. The two publications reviewed are:

Odion, Dennis C., Chad T. Hanson, Dominick. A. DellaSala, William L. Baker and Monica L. Bond, 2014. Effects of Fire and Commercial Thinning on Future Habitat of the Northern Spotted Owl. The Open Ecology Journal, 2014, 7, 37-51.

Lee, Derek, E., Monica L. Bond, and Rodney B. Siegel, 2012. Dynamics of Breeding season Site Occupancy of the California Spotted Owl in Burned Forests. *The Condor* 114(4):792–802. The Cooper Ornithological Society, 2012.

Odion et al., 2014

Odion et al., 2014 stated that NSO habitat lost through high-intensity fire would be much less over time than habitat lost through thinning. However, Odion et al., 2014 only evaluated thinning projects in dense, mature or late-successional habitat that removed key habitat features and treatments that:

"..may remove up to one-half of forest basal area, and may also include patch cutting or small clear cuts.."

"..which is mostly well below the minimum level known to function as nesting and roosting habitat".

This modeling effort is built on numerous assumptions, any of which could invalidate the conclusions if found to be false. The primary assumption that makes the conclusions not applicable to Gordon is that the authors assume all suitable habitats treated by thinning are removed (become unsuitable). All habitats thinned for the Gordon project are maintained as suitable NSO habitat post-treatment. Also, while most of the thinning acres in their model were late-successional forests, only 12 acres of Gordon are in late-successional and the removal of understory trees less than 8-inch dbh within 50 ft of high-use roads will not affect suitability. The authors also assume that thinning in mid-successional forest prevents or slows these forests from developing into dense, late-successional forest, which is not supported by other research findings (provided key habitat characteristics are maintained and restored).

There are many examples, both published and unpublished, that indicate fuel treatments reduce fire severity and assist with wildfire control efforts. The 2011 NSO Revised Recovery Plan acknowledges the need for, and encourages the use of, fuels treatments that do not remove suitable NSO habitat.

The July 22, 2014 BA discusses in detail that the proposed project will not remove nesting, roosting or foraging habitat, and that all treatment areas will remain suitable post-project. Key habitat features are being maintained throughout the project area.

As stated in the July 22, 2014 BA, the 2011 RP identifies stand-replacing wildfire as one of the three top threats to the recovery of species stating "currently the primary source of habitat loss is catastrophic wildfire …." The RP further notes that wildfire size and frequency have been increasing in the western US and that acres burned are expected to continue to increase due to climate changes and past land management practices. This overall increase in acres burned translates to a corresponding increase in the acres of spotted owl habitat lost to fire. While the risk of habitat loss to wildfire varies by location, the 2011 RP emphasized that:

"The Service continues to recommend that active forest management and disturbance-based principles be applied throughout the range of the spotted owl with the goal of maintaining or restoring forest ecosystem structure, composition and processes so they are sustainable and resilient under current and future climate conditions in order to provide for long-term conservation of the species."

"Managing for resilient forests should also be considered a fundamental recovery goal for spotted owls."

The Gordon Hill project was designed to reduce hazardous fuel loading in strategically located, high-risk areas and to protect existing late-successional habitat as well as to accelerate development of late-successional habitat characteristics in plantations and young natural stands.

Odion et al., 2014 states:

"Next, we calculated the effects of varying levels of thinning, and treatment efficacy (in terms of the effect on high-severity fire rotation intervals), over the study period. According to an analysis of a spotted owl landscape by Lehmkuhl *et al.* (2007), a "best" scenario for minimizing the short-term adverse impacts of thinning while reducing fire frequency and severity was one that treated only 22% of the landscape, and limited thinning in nesting, roosting, and foraging habitat to 21% of the area of this habitat."

As stated in the BA, fuels reduction treatments may modify 12 acres of moderate quality nesting/roosting habitat through the removal of brush and small diameter trees (8" dbh or less) within 50 ft. of the road; however, all existing nesting habitat characteristics would be maintained and the stands would still function as N/R habitat immediately post-project. There are 15,664 acres of N/R habitat within the action area. Even though all treatment areas will maintain their current habitat function, the amount of N/R habitat within the planning area proposed for treatment would be approximately 0.07% percent (99.93% of the N/R habitat in the action area will not receive any treatment). All treatment areas will maintain their current habitat function and therefore will remain suitable post-project.

There are 14,958 acres of potential foraging habitat in the action area. Of the 555 acres of foraging being treated, 6 acres of moderate quality foraging and 191 acres of low quality foraging will be modified through the creation of a shaded fuelbreak and 358 acres will be modified through commercial thinning. Approximately 4% of the potential foraging habitat in the action area will receive treatment. Although all treatment areas will maintain their current habitat

function and will remain suitable post-project, 96% of the F habitat in the action area will not receive any treatment.

Odion et al. 2014 goes on to say that

"The 2011 Recovery Plan for the Northern Spotted Owl, the blueprint for management of this species on federal lands in the region (USFWS 2011), contains the proviso that long-term benefits to spotted owls of forest thinning treatments must clearly outweigh adverse impacts (USFWS 2011)"

The USFWS concurred that the Gordon Hill project would not adversely affect the NSO in the short-term and would provide long-term benefits to the owl. The USFWS determined that the project was consistent with the 2011 NSO RP.

Lee et al., 2012

Lee et al. 2012, found that territory occupancy of California spotted owls was "not diminished by forest fires of varying severities" and found "no significant effect of fire on occupancy dynamics for up to 7 years post-fire" but that logging of approximately "20% of mature conifer forest within the 400-ha circle surrounding a site appears to be a threshold beyond which California Spotted Owl occupancy declines".

The authors claim that even when, "on average", 32% of suitable habitat is burned around ACs there was not a problem for CSO "persistence on the landscape". However, of the sites they classified as "burned" some only had very tiny amounts (down to a proportion of 0.001%) of high intensity burn within a 400-ha circle around the AC. Thus, the 32% figure is somewhat misleading, and some unknown number of the "burned" sites are really not burned (no effect would be expected there). The authors admit that low amounts of burned habitat, below some unknown threshold, may result in no effect on owls. This methodology could be why their statistical significance regarding probability of extinction in burned vs. unburned was only $P = 0.09$. Ramsey and Schafer (2002) consider this level of P to be "suggestive, but inconclusive" relative to biological significance. Had the authors limited samples to CSO sites where significant amounts of suitable habitat in the core area were burned with high severity (the very wildfire problem the agencies are concerned with), their results would have likely shown a statistical and biological difference between burned and unburned sites. The authors themselves note that at 8 of 41 "burned" sites where >50% of suitable habitat was burned with high severity (that were resurveyed post-fire) fully 37% of the owl sites went locally extinct. Under that scenario, they can still claim that CSO are "persistent on the landscape" (i.e., there are still some left); however, the agencies would consider that level of loss of NSO sites something to be avoided. Along the same lines, the authors cite Bond et al. (2009) as indicating that CSO nest and roost in unburned to moderately burned patches, while patches burned at high severity provide foraging habitat. Again, conversion of nesting/roosting to foraging as a result of wildfire is something the agencies consider to be detrimental to NSO, even if some owls still persist on the landscape.

In contrast to the findings for the CSO, Clark et al. (2011) found that survival rates were lower for radio-tagged NSO with territories within a burn perimeter or those displaced by fire, compared to those with territories outside of the burn area.

If the findings in Lee et al (2012) were to be considered valid for the NSO, then one could counter that, if burning of 32% of the suitable habitat will maintain spotted owl "persistence on the landscape", then it would seem to follow that thinning that maintains current habitat suitability and treats a much lower proportion of the area within a home range would also not be a problem for spotted owls persistence.

As stated above, fuels reduction treatments may modify 12 acres of mature conifer forest through the removal of brush and small diameter trees (8" dbh or less) within 50 ft. of the road; however, all existing habitat characteristics would be maintained and the stands would still function as N/R habitat immediately post-project. The amount of N/R habitat within the planning area proposed for treatment would be approximately 0.07% percent (99.93% of the N/R habitat in the action area will not receive any treatment). All treatment areas will maintain their current habitat function and therefore will remain suitable post-project.

Literature cited:

Clark, D.A., R.G. Anthony, and L.S. Andrews, 2011. Survival rates of northern spotted owls in post-fire landscapes of southwest Oregon; J. Raptor Res. 45(1):38–47

USDI Fish and Wildlife Service. 2011. Final Revised Recovery Plan for the Northern Spotted Owl, Strix occidentalis caurina. USFWS, Portland, Oregon.

Ramsey, F.L. and D.W. Schafer. 2002. The Statistical Sleuth, 2nd Edition. Duxbury.