

Data Submitted (UTC 11): 9/18/2025 4:52:12 AM

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Comments: Please see attached file submitted on behalf of SFL et al,

September 17, 2025

Eldorado National Forest, Attn: MAC Project

100 Forni Road

Placerville, CA 95667

Submitted electronically via comment portal:

<https://cara.fs2c.usda.gov/Public/CommentInput?project=65796>

Re: Comments on the chapters 1 and 2 of the Draft Environmental Impact Statement

Scoping Notice for the Mokelumne Amador Calaveras Forest Resilience Project

(MAC Project) (<https://www.fs.usda.gov/project/?project=65796>)

To the Project Team,

This letter is in response to the invitation to comment on Chapters 1 and 2 of the Draft Environmental Impact Statement (DEIS) for the Mokelumne Amador Calaveras Forest Resilience Project (MAC Project) on the Eldorado and Stanislaus National Forests. The MAC Project proposes a variety of treatments in a roughly 250,000-acre project area. The purposes of the proposed action include reducing safety hazards across public lands, improving and protecting wildlife habitat and biodiversity, and promoting a fire-resilient landscape.

We support land management actions that reduce wildfire risk for people and nature while maintaining and protecting sensitive species and ecosystems. We are especially supportive of actions that restore the function of beneficial fire to landscapes, since it is through this natural disturbance process that resilience will be restored and biodiversity conserved. We also support meadow, stream and riparian area restoration.

We have reviewed Chapters 1 and 2, appendices and supporting maps and submit the following comments with the goal of achieving a project that strikes the right balance between restoring landscape resilience, conserving biodiversity, and reducing risk to human communities and infrastructure.

Thank you for considering our comments. Please add each of the parties below to the notification list for the DEIS. If you have questions about these comments, please contact Susan Britting.

Sincerely,

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Comments on Chapters 1 and 2 of the DEIS for the MAC Project

I. Prescribed Fire

We appreciate that the Proposed Action (p. 23) includes the application of prescribed fire across the entire project area. Paired with well-designed fuel reduction treatments prescribed fire treatments will be the surest way to improve forest resilience. We also note that once analyzed in an environmental decision-making document, an unplanned ignition that burns within desired conditions in the project area can be counted toward the achievement of beneficial fire in the bioregion.

II. Use of Herbicides

We are generally opposed to the use of herbicides, but make limited exceptions for controlling invasive plants. For this project, we are also willing to not object to the application of herbicides to 300 acres per year per range district for fuel break maintenance, as described in the proposed action. We strongly believe that fuel break maintenance should utilize other practices and not be dependent on chemicals for maintenance.

III. Mechanical Treatments in Inventoried Roadless Areas (IRAs)

We appreciate that temporary roads will not be constructed within IRAs and that mechanical treatment will not be completed in these areas.

IV. Wild and Scenic River Issues Remain Unresolved.

Determining the level of treatment and crafting treatments to protect the eligibility of the North Fork Mokelumne for National Wild and Scenic River protection remain unresolved.

A. History of the North Fork Mokelumne River's Wild and Scenic status.

Approximately 17 miles of the North Fork Mokelumne River from Salt Springs Dam to the Tiger Creek afterbay were determined eligible for National Wild and Scenic River protection by the Forest Service in the 1988 Eldorado National Forest Land and Resource Management Plan. The river was determined eligible because it was free-flowing and possessed outstandingly remarkable history/culture value associated with the Mokelumne Archaeological Special Interest Area.

A subsequent suitability study was completed by the Forest Service in 1990 and the Agriculture Secretary recommended to Congress in 1994 that the 6.5-mile segment of the North Fork between Salt Springs Dam to one mile downstream of the Bear River confluence be added to the National Wild and Scenic Rivers System. At this point, the remaining 10.5 miles of the river lost the administrative protection of its free-flowing character and outstandingly remarkable cultural value provided by agency guidelines.

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The Forest Service made this decision to allow for future water and hydroelectric resources development on the 10.5 mile stretch of the river below the 6.5-mile suitable (recommended) segment. Proposed by the Amador Water Agency, the Devil's Nose Dam was at the time being studied under a preliminary permit and subsequent license application to the Federal Energy Regulatory Commission (FERC). FERC ultimately rejected the license application for the Devil's Nose Dam due its economic infeasibility. But the Forest Service never reconsidered its decision finding the 10.5-mile segment of the river to be unsuitable, even though the dam project that was the basis of the decision was no longer practical or reasonable.

B. Concerns about project impacts on the eligibility of the North Fork Mokelumne.

During public scoping for the MAC Project, conservationists raised serious concerns about proceeding with proposed treatments in the Wild and Scenic River (WSR) corridor of both the suitable and formerly eligible segments of the North Fork. We believe that WSR eligibility should be reinstated for the 10.5-mile segment determined unsuitable in 1990 because the dam project that this decision was intended to accommodate is no longer viable. In addition, new

circumstances and information strongly support our contention that the entire river possesses more outstandingly remarkable values than just the cultural value identified in the 1988 and 1990 documents.

Acknowledging all 17 miles of the North Fork as eligible and identifying additional outstandingly remarkable values are crucial to an adequate analysis of project impacts under NEPA. But in its response to public scoping comments, the Forest Service stated that "Reassessment of the North Fork Mokelumne proposed W&S river segments and to consider additional outstandingly remarkable values is outside the scope of the MAC project's purpose and needs." (RTC, pg. 19) It may be technically true that reassessing the unsuitable segment of the river for eligibility and identifying additional outstanding values for both segments is outside the scope of fuels treatment project, but failure to do so will result in an inadequate NEPA analysis.

C. Managed fire should be reintroduced into the WSR corridor after the NEPA process considers the eligibility of the entire segment and additional outstandingly remarkable values are identified and protected.

We support the critical reintroduction of managed fire in the entire 17-mile WSR corridor and we appreciate and acknowledge the Forest Service's proposal to avoid extensive mechanical treatments for forest thinning and fuel reduction in the suitable segment. But a full and proper NEPA analysis logically requires a reassessment of the river's outstanding values and treating the 10.5 mile formerly eligible segment as eligible and protected under agency guidelines. Without this full analysis and reassessment, the entire 17-mile river corridor would have to be removed from the MAC project to ensure that adverse impacts are avoided. We believe the river corridor needs at least some level of treatment, but only if the formerly eligible segment is reinstated and additional outstandingly remarkable values are considered and identified. Only by accomplishing this will a thoughtful and effective project be implemented that fully protects the SFL et al. comments on chapters 1 & 2 of the MAC Project (9/17/25) 4 river and its free-flowing condition and outstandingly remarkable values, while ensuring that fuels are treated in a manner to reduce the threat of catastrophic fire.

D. New circumstances and information strongly suggest that the entire North Fork Mokelumne possesses more outstandingly remarkable values than just the cultural value identified by the Forest Service.

Since the North Fork was found to possess an outstandingly remarkable cultural value and therefore was eligible for National Wild and Scenic River protection, a number of subsequent studies support the idea that the river possesses more than just an outstanding cultural value, including:

State Extraordinary Values - A legislatively mandated state study of the Mokelumne (including the North Fork) in 2018 found the river to possess extraordinary scenery and recreation values. Federal outstandingly remarkable values and state extraordinary values are virtually synonymous. Both are used to determine the eligibility of candidate rivers and federal and state law both require that the rivers be managed to protect these values. There is considerable overlap and agreement in the identification of these values when both federal and state studies have been conducted for the same river. The California Legislature agreed that the Mokelumne (including the North Fork) possesses outstanding scenery and recreation values and protected the river in the state system in 2018.

BLM WSR Study - In 2007, the BLM Mother Field Office conducted a federal WSR study of the 20.2-mile-long North Fork and main stem Mokelumne River between Tiger Creek Dam and 100 feet below Highway 49. The agency determined that the river possesses outstandingly remarkable scenery, culture, and hydrology (water quality) values and recommended it be designated. BLM and Forest Service guidelines to identify outstandingly remarkable values are quite similar.

FERC Project 137 Relicensing - The FERC relicensing of PG&E's Mokelumne Hydroelectric Project 137 resulted in detailed fish and wildlife studies. The studies confirmed that the Mokelumne canyon (including the North Fork) is rich in critical habitat for the threatened California spotted owl and identified the river as supporting threatened foothill yellow-legged frog, which is in dire shape generally in the central Sierra Nevada. Further, studies show that the Mokelumne population is genetically distinct from other Sierra populations and that the Mokelumne population has unique strategies for surviving in river flows controlled by upstream dams.

Updated Agency Guidelines - The Forest Service Handbook guidelines for studying potential WSRs, and specifically for determining how outstandingly remarkable values are identified, have been updated and greatly expanded since the 1988 study. The expanded guidelines facilitate eligibility determinations. The Inyo, Sequoia, and Sierra National Forests all completed WSR inventories in the first round of Forest Plans in the 1980s under the original guidelines. The 2018-2019 revisions of these plans identified many additional eligible stream segments, in part because the expanded detailed guidelines facilitated the identification of outstandingly remarkable values.

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Taken together, these studies support our contention that the North Fork Mokelumne also possesses outstandingly remarkable scenery, recreation, and wildlife values that require recognition and protection in the context of the MAC Project. The state WSR study also concluded that the North Fork between the Bear River confluence and Tiger Creek Afterbay (the segment determined unsuitable by the Forest Service) is eligible for Wild classification. State and federal law provide identical definitions of wild, scenic, and recreational river classifications. This suggests that the river downstream of the Bear River confluence should be managed and protected as a Wild River and not Scenic (as identified by the Forest Service).

E. Treatment acreage numbers in the WSR corridor do not comply with the legislatively established limit of 320 acres average per mile for National WSRs.

According to Tables 1, 5, and 7, the project proposes 5,754 acres of forest thinning, fuel reduction, and fuel breaks in the 10.5-mile formerly eligible segment. In contrast, the project proposes only 353 acres of fuelbreaks in the 6.5-mile suitable segment with no further mechanical treatments proposed. Both segments will be subject to a lot of prescribed fire - 24,132 acres to be specific. This is the sum of acreage of all proposed treatments in the eligible and suitable WSR corridor from Tables 1, 5, 7, and 9. But there is something wrong with these numbers. By law, WSR corridors may average no more than 320 acres per mile. That's 5,440 acres for the entire 17-mile-long corridor and yet the total acreage of forest thinning, fuel reduction, and fuelbreaks in the WSR corridors is 6,107 acres, plus 24,132 acres of prescribed fire. The acreage numbers appear to be far beyond a simple overlap of different treatments.

Table 1. Proposed MAC Project Treatment Acreage in North Fork Mokelumne WSR

Corridor

ACTIVITY SUITABLE WSR ELIGIBLE WSR TOTAL WSR

Forest Thinning 0 3,281 3,281

Fuel Reduction 0 1,765 1,765

Fuelbreaks 353 708 1,061

SUBTOTAL 353 5,754 6,107

Fire Rx 9,557 8,468 18,025

TOTAL 9,910 14,222 24,132

(Source: Tables 1, 5, 7, 9 on PA pages 9, 18, 20, and 23 respectively)

F. Response to WSR scoping comments (RTC pg. 19).

We've already noted our concern that the Forest Service believes that reassessing the North Fork Mokelumne and identifying additional outstanding values is "outside the scope of the MAC project's purposes and need." Although we appreciate the agency's commitment to analyze the proposed project's potential impacts on the eligible and suitable segments of the North Fork Mokelumne, we don't believe the analysis will be adequate because the river's obvious outstanding scenery, recreation, and wildlife values are being ignored. We do appreciate the analysis including the suitable segments of the North Fork Stanislaus and the eligible segments SFL et al. comments on chapters 1 & 2 of the MAC Project (9/17/25) 6 of the North Fork Mokelumne's tributaries. We will look forward to reviewing and commenting on this analysis when the full DEIS is released for public comment.

G. Reassessment of the 10.5-mile segment of the North Fork and identification of additional outstandingly remarkable values need not require a full-on study.

We do not want WSR issues to delay analysis and implementation of the MAC Project. We believe reconsideration of the eligibility of the 10.5-mile segment and identification of additional outstandingly remarkable values can be done internally within the agency through one or more meetings of their resource specialists in the next few months. This process would be enhanced by providing opportunities for public review and comment in the MAC DEIS. Several Forests have made commitments to consider WSR eligibility at the project level, if the project potentially impacts possible WSR values.

V. Diameter Limits

There has been extensive discussion in meetings with the Amador-Calaveras Consensus Group (ACCG) about the diameter limits that would be applied to vegetation management actions in the MAC project. It generally has been understood that this project would apply a 20" diameter limit in protected activity centers (PACs) and a 30" diameter limit in all other locations. Exceptions to this of up to 35" DBH would be allowed for operability. Table 2 (p. 10) in the document under review appropriately characterizes this. These diameter limits are also reinforced in your agency's response to comments.

We are, however, concerned about inconsistencies in the presentation of diameter limits in other parts of the review document that would likely lead to confusion and misapplication of Table 2.

First, we note that Table 2, specifying the diameter limits, references "forest thinning" and the table only appears in Section 2.1.A. that describes "forest thinning." The discussion in section 2.1.A. is geographically limited to the areas selected for forest thinning. For example, "forest thinning" is estimated to occur on 78,793 acres as shown in Table 1. Forest thinning is referred to generally in the section on fuel breaks, but it is unclear if the diameter limits in Table 2 apply to the forest thinning to be completed in fuelbreaks. To resolve this concern, we ask that the discussion on diameter limits be inserted prior to section 2.1.A. and that the text be revised to make clear that the limits apply to vegetation activities targeting live trees.

Second, the proposed action specifies certain diameter limits, but these are not properly reflected in the forest plan amendment presented in Appendix C. Appendix C fails to limit tree removal in SFL et al. comments on chapters 1 & 2 of the MAC Project (9/17/25) 7 PACs to trees less than 20" DBH and outside of PACs to trees less than 30" DBH. Instead, new standard STD-PROJ-01 (Appendix C, p. 66) allows the removal of trees outside of territories up to 40" DBH under a laundry list of exceptions. We also note that the section on management requirements and best management practices addresses diameter limits, but limits that reference to PACs and territories, i.e., "xiii. Ensure PAC and Territory DBH limits are met as defined in Table 2" (review document, p. 39). These inconsistencies need to be resolved before completing the environmental analysis. To resolve this concern, we ask that the specific diameter limits reflected in Table 2 be integrated into STD-PROJ-01 in Appendix C.

We are deeply concerned about these inconsistencies in the portrayal of diameter limits in these sections. We ask that they be revised as suggested above. If the sections and Appendix C are not revised to reflect the application of the diameter limits in Table 2 across the project area, we will not be able to support the project and will need to oppose it.

VI. Regional Direction on Forest Plan Amendments for California Spotted Owl (CSO)

The proposed action and project specific forest plan amendment depart in significant ways from direction provided by the Regional Office in June 2024 on forest plan amendments that address CSO (USDA Forest Service 2024a). The departures presented in Appendix C allow for greater habitat degradation and less conservation for CSO. The plan amendment components were provided by the Regional Office in June 2024 to "ensure consistency and efficiency in project planning and Endangered Species Act consultation." (USDA Forest Service 2024b). "The amendment components were developed collaboratively based on forest plan content in the 2023 Sierra and Sequoia Forest Plans and modified based on 1) lessons learned from recent project-specific forest plan amendments, 2) feedback from internal and external engagement, and 3) the draft California Spotted Owl programmatic consultation." (Ibid.) The SERAL I and SERAL II projects were among those considered when the plan component wording was developed. Specific wording from the SERAL I and II projects was considered and rejected for inclusion in the amendment package developed by the Regional Office. The direction to use the provided language was conveyed by the Regional Forester to all units within the range of CSO on June 25, 2024 (USDA Forest Service 2024c). Lastly, this direction on project specific forest plan amendments is posted on the Region 5 planning website.

To our surprise, the response to comments document claims without reference to new memos or other documentation that in relation to CSO "There has been a change in leadership and agency direction since the MAC project scoping period." (RTC, p. 3) The information provided in the response implies that the direction issued by the Regional Office in June 2024 is no longer relevant. Please provide to us the documentation of the change in direction and the science-based reasoning used to support any change.

This claim about change in direction made in the response to comments is especially disturbing since the amendment document was developed in coordination with the US Fish and Wildlife Service, the agency who is the expert on declining and at-risk species such as CSO. The status of CSO is no less threatened than a year ago, yet the Forest Service is disregarding direction that is based on coordination with the experts on at-risk species. See for example the draft conservation measures that were developed for inclusion in the programmatic biological opinion that the SFL et al. comments on chapters 1 & 2 of the MAC Project (9/17/25) 8 Forest Service and US Fish and Wildlife Service were working on in late 2024 (USDI Fish and Wildlife Service 2024). These conservation measures are consistent with the direction given by the Regional Office in June 2024 and not consistent with key measures included in Appendix C of the MAC project.

At a minimum, we are seeking an approach to CSO conservation that is consistent throughout its range, supported by the US Fish and Wildlife Service, and consistent with the CSO forest plan amendments issued by the Regional Office in June 2024. This reversal in the MAC project to amendment language that was never endorsed by the Regional Office and that provides less conservation for CSO is not acceptable to us.

VII. "Using Landscape Condition Metrics" (planning document)

We reviewed the document titled "Using Landscape Planning Metrics" and have questions about the section "C. California Spotted Owl Habitat" (p. 4). This section describes how CWHR was used to set priorities in the planning software ForSys. The description of how priority was set based on categories of CWHR type is not intuitive and would benefit from additional narrative. For instance, the priority values decline as habitat quality increases, i.e., the value for highest quality habitat (CWHR 5D) is the lowest numerical value. Possibly, the priority ranking here was intended to reflect priority for treatment and not for conservation, but we are not sure.

We also note that this PDF document has some formatting issues. The document is 6 pages long. However, if one looks at the "bookmarks" in the left side menu of the document, there is an extensive outline that appears to be unrelated to the 6-page document.

VIII. Appendix B - additional table

A single table (Table B-01. California Wildlife Habitat Relationship Classification) is provided in Appendix B. With the exception of the last column, this table defines the CWHR types for conifer types. Please explain the science basis for the final column "Successional Class" and explain how this definition has been used or will be used in planning.

We are especially concerned about the use of the terms "open" and "closed" and the use of 40 percent canopy cover as the break point between these two categories. The CWHR system recognizes moderate canopy closure as 40-60% canopy cover, does not use the term "closed", and assigns a canopy cover of less than 10% to "open."

We are aware that LANDFIRE uses 40% as the break point between "open" and "closed" for pine types (0610310 California Montane Jeffrey Pine (-Ponderosa Pine) Woodland), but for mixed conifer (0610270 Mediterranean California Dry-Mesic Mixed Conifer Forest and Woodland) the break point is 50% cover.

The distinctions here are important specifically to the management of CSO, since the 2019

conservation strategy (USDA Forest Service 2019) and the forest plan amendments developed by the Regional Office (USDA Forest Service 2024) both highlight the importance denser canopy cover.

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IV. Plan Components to Improve Management in Old Forest Habitats

We raised in our scoping comments the inclusion of the following plan components in the project specific forest plan amendment to improve management of old forest habitats. Since the response to comments, dismissed these ideas without discussion we raise them again as a mechanism to reduce impacts to old forest habitat and improve the project design. The plan components below could also be added to section 2.2 Management Requirements and Best Management Practices.

Plan Component from Direction

USDA Forest Service

2024a

GDL-SNAG-01 To provide habitat for nesting, roosting, and denning wildlife, maintain a generally continuous supply of snags and live decadent trees suitable for cavity dwelling wildlife across a landscape.

Retain some mid- and large diameter live trees that are currently in decline, have substantial wood defect, or that have desirable characteristics (teakettle branches, large diameter broken top, large cavities in the bole) to serve as future replacement snags and to provide nesting structure.

Consider vegetation type and landscape position, potential prescribed burning and fire suppression line locations, and site conditions (such as riparian areas and ridge tops), avoiding uniformity across large areas.

General guidelines for large-snag retention are as follows:

- westside mixed conifer and ponderosa pine types - 25-40 of the largest snags per 10 acres
- red fir forest type - 30 - 50 of the largest snags per 10 acres
- eastside pine and eastside mixed conifer forest types - 15-30 of the largest snags per 10 acres
- westside hardwood ecosystems - 25-40 of the largest snags (hardwood or conifer) per 10 acres

Retain snags larger than 15 inches dbh (preferentially greater than 20 inches dbh) to meet this guideline. Retain snags in an irregular patchwork, with clumps and concentrations in drainages and on north- and east-facing slopes.

When some snags are expected to be lost due to hazard removal or the effects of prescribed fire, consider these potential losses during project planning to achieve desired snag retention levels.

DC-OLD-01 Old-forest areas are clumps and patches of old-forest components such as old trees, snags, and large downed logs. These areas are irregularly distributed across the landscape and interspersed with

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Plan Component from Direction
USDA Forest Service
2024a

stands of younger trees, shrubs, meadows, other herbaceous vegetation, and unvegetated patches.

DC-OLD-02 The composition, structure, and functions of old forests and surrounding landscapes are resilient to fire, drought, insects, pathogens, and climate change. Fire occurs as a key ecological process in forest types that are adapted to fire, creating, restoring, and maintaining ecosystem resilience and fire-related composition and structure.

DC-OLD-03 The landscape contains a mosaic of vegetation types and structures that provide foraging and breeding habitat, movement, and connectivity for a variety of old-forest-associated species. Areas of moderate to high canopy cover composed primarily of large trees provide habitat connectivity for old-forest-associated species in key habitat corridors such as canyon bottoms and drainages.

DC-OLD-04 Old forests are composed of both vigorous trees and decadent trees. Clumps of large trees, snags, large logs, and decadent older trees are maintained on the landscape in sufficient numbers to benefit wildlife and are distributed throughout the planning area, considering constraints imposed by climate change, fire, insects, disease, and drought.

DC-OLD-05 Coarse woody debris is distributed in patches and the density of large downed logs varies by vegetation type. Surface dead wood levels are sufficient to provide for wildlife and legacy soil microbial populations.

Acres of suitable habitat treated will be tracked yearly inside and
STD-MON-01

outside of territories, and owl occupancy in the project area will be monitored pre- and post-implementation following the Regional California spotted owl monitoring framework.

X. References

USDA Forest Service 2019. Conservation Strategy for the California Spotted Owl in the Sierra Nevada. Version 1.0. Pacific Southwest Region. R5-TP-043. April 2019.

USDA Forest Service 2024a. Project-specific Forest Plan Amendments for California Spotted Owl Habitat 2004 Sierra Nevada Forest Plan Amendment Forests: Modoc, Lassen, Plumas, Tahoe, Eldorado, and Stanislaus National Forests. Pacific Southwest Region.
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https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd1188678.pdf Attached to these comments as Appendix A.

USDA Forest Service 2024b. Forest Service CSO Amendment_FactSheet_062024. Pacific Southwest Region. Attached to these comments as Appendix B.

USDA Forest Service 2024c. Forest Service CSO Amendment_CoverLetter_062524 Pacific Southwest Region. Attached to these comments as Appendix C.

USDI Fish and Wildlife Service 2024. Draft conservation measures for the programmatic biological opinion for California spotted owl. Attached to these comments as Appendix D.

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Attachment A - 1

Project-specific Forest Plan Amendments for California Spotted Owl Habitat

2004 Sierra Nevada Forest Plan Amendment Forests:
Modoc, Lassen, Plumas, Tahoe, Eldorado, and Stanislaus National Forests

Photo Credit: Gretchen Jehle

Attachment A - 2

Introduction

New Best Available Scientific Information (BASI) and the cumulative effects of climate change and wildfire on California Spotted Owl (CSO) habitat has driven the need to update guidance provided in the 2004 Sierra Nevada Forest Plan Amendment (Framework). These revised management approaches are further described in the 2019 California Spotted Owl Strategy (Strategy).

The amendment components included in this document apply to forests pursuing project-specific forest plan amendments to the Framework components to conduct vegetation and fuels reduction treatments in CSO habitat. The Framework forests include the Modoc, Lassen, Plumas, Tahoe, Eldorado, and Stanislaus National Forests. Other forests in the range of the Sierra Nevada CSO Distinct Population Segment are also allowed to pursue project specific amendments using the same components; however, they will instead be amending their Land Management Plans (LMPs). LMP forests include the Lake Tahoe Basin Management Unit and the Inyo, Sierra, and Sequoia National Forests. All forests are required to reach out to the Regional Office for direction on their specific amendments.

The Forest Supervisor is the Responsible Official for projects that choose to use a project-specific forest plan amendment. Vegetation management projects are not required to include a forest plan amendment and are encouraged not to do so if project objectives can be met with the current Framework standards and guidelines. However, if a line officer chooses to amend the Framework, you must use at minimum the required set of components.

What's Changing

Two important changes from the Framework to project level content amendments include shifting from CSO Home Range Core Areas (HRCAs) to CSO Territories and the opportunity for more treatments within Protected Activity Centers (PACs). Additional modifications include new required components for locating treatments and landings, updates to limited operating periods, requirements for habitat conditions within and outside of territories, and optional project level content that could reduce impact to CSO persistence.

Document Summary

The document is broken into seven sections: (1) Specific definitions for component language, (2) CSO PACs, (3) CSO Territories, (4) Project-Wide Components, (5) Prescribed Fire, (6) Post-fire Disturbances, and (7) Monitoring. Plan components (FSH 1909.12 Sect. 22.1) are uniquely identified with a component ID designating them as a designation (DES), desired condition (DC), management object/intent (MGT), standard (STD), guideline (GDL), suitability component (SUIT), or monitoring component (MON). IDs also include the designated area or general attribute that they pertain to (i.e. TERR components apply to territories). Each component is also identified as Required, Required with Choice, Do Not Amend, or Optional. Required components are necessary for every project that pursues an amendment for treatments in CSO habitat. Required with Choice amendment components are necessary for every project, however the line officer will determine which of the two options best fit with the scope and goal of the project. Ideally, they will choose either all of option A or all of option B depending on their desired activity and likely ability to reach a FONSI. If necessary, you may choose to use some A components and some B components. Do Not Amend

Attachment A - 3
components include existing 2004 Sierra Nevada Forest Plan Amendment components that cannot be removed for projects. Lastly, Optional amendment components are left to the discretion of the line officer, although they are highly recommended. Including these components will improve project alignment with the CSO Strategy and strengthen the overall project.

Appendices A and B include a list of necessary components depending on desire to pursue a align with a Not Likely to Adversely Affect designation across the project or analyze for potential significant effects. Appendix C includes a list of all the optional components. Appendix D includes a list and map of the high-risk firesheds. Appendix E includes the CWHR definitions utilized within this document.

Amendment language changes are identified in tabular form. Language removed from the 2004 Framework are identified with red strikethrough. New/replacement language will have red font. Comments will be in italics.

The new sentence requires no further editing. Hence, a sentence such as "The quick brown fox jumps over the lazy dog" can be edited to read "The brown dog chased the slow fox" using the following method:

ID Exp-SENT-01

Action Modify component language

Original

The quick brown fox jumps over the lazy dog.

Sentence

New (If you have a fast dog)

Sentence The brown dog chases the slower red fox.

Adapted to correct the nonexistence of the species Brown Fox (*Vulpes apsens*) to a common Red Fox (*Vulpes vulpes*), a red fox has a top speed between 30-40

Reference

mph. A greyhound can outrun it by reaching a top speed of 45mph within 6 strides.

This document is best viewed in Web Layout format to reduce confusion of tables that extend over multiple pages. To turn on Web Layout, go to the View tab on the Microsoft Word Ribbon and click Web Layout, found within the Views subribbon.

Figure 1. Locaoti n of Web Layout in Microsoft Word.

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Attachment A - 5

I. SPECIFIC DEFINITIONS FOR CALIFORNIA SPOTTED OWL AMENDMENTS

Amendment components included within this document require specific language that have meanings that may differ from other documents or applications. Table 1 defines specific terms that are required for conformity to each component.

Table 1. Definitions used in amendments. Identification column shows how the term is emphasized in the components.

Term Identification Definition

Very large very large Trees 36 inches DBH or greater.

[trees]

Large [trees] large Trees 30 inches DBH or greater. Includes very large trees.

Very large very large Snags 45 inches in diameter or greater.

snags snags

High [canopy high Canopy cover for the defined area is 60.0% or greater.
cover]

Moderate moderate Canopy cover for the defined area is 40.0-59.9%.

[canopy

cover]

Moderately moderately Canopy cover for the defined area is 50.0-59.9%.

high [canopy high

cover]

1

Highest HQNR HQNR habitat are areas preferred by CSO for nesting and roosting. It

Quality habitat includes all of the following:

Nesting and a. Forests within CWHR classes 6, 5D, 5M with greater than 50 percent

Roosting canopy cover;

Habitat b. Trees in the dominant and co-dominant crown classes averaging 24

inches DBH or greater,

c. Large and/or tall trees (greater than 150 feet tall) and some very large trees.

- d. High or moderately high canopy cover with areas greater than 70 percent, including hardwoods;
- e. Two or more tree canopy layers; and
- f. Contains some very large snags and snags and down woody material levels on the high end of the range appropriate for the forest type.

Operationally, using CWHR classes 6, 5D, and 5M when designing projects is acceptable.

Attachment A - 6

2

Best Available BANRF habitat is important for CSO for foraging and may provide Nesting, habitat conditions that support current spotted owl reproduction in the absence of Roosting, and preferable HQNR. BANRF habitat include the following:

Foraging a. Forests within CWHR classes of 5M, 4D, or 4M with very large Habitat remnant trees;

b. Trees in the dominant and co-dominant crown classes ideally average 20 inches QMD or greater and including some large trees;

c. High or moderately high canopy cover, including hardwoods, or moderate canopy cover in trees greater than 20 inches DBH where higher canopy cover is not available;

BANRF habitat should be selected based on areas that may also include:

d. Two or more tree canopy layers; and

e. Contains some very large snags and medium to large snags and down woody materials levels as on the moderate to high end of the range appropriate for the forest type.

Operationally, using stands with CWHR classes 4D and 4M when designing projects is acceptable.

Suitable No special Suitable habitat for CSO includes both HQNR and BANRF habitat. Stands habitat designation outside of these designations are classified as unsuitable.

Operationally, this includes CWHR classes 6, 5D, 5M, 4D, and 4M.

Maintain maintain Maintaining a habitat type will keep its habitat classification in HQNR and habitat BANRF. Treatments may still occur, but they cannot result with the stand downgrading to a lower habitat type or being removed from suitable habitat (i.e. HQNR ? HQNR, BANRF ? BANRF).

Operationally for HQNR, CWHR classes 6, 5D, and 5M ? 6, 5D, and 5M.

Operationally for BANRF, CWHR classes 4D and 4M ? 4D and 4M.

Improve improve Improving a habitat occurs when treatments improve the habitat quality via habitat thinning or removal of smaller trees that increase overall QMD. HQNR can be improved within the HQNR classification. BANRF ? HQNR.

Operationally for BANRF, CWHR classes 4D and 4M ? 5D and 5M.

Downgrade Not used in Downgrading occurs when altering a habitat so that it no longer functions in habitat components the same way pre-treatment but still serves as suitable habitat for CSO.

Characterized by HQNR ? BANRF. BANRF cannot be downgraded, reduction of quality results in habitat removal.

Operationally for HQNR, this occurs when CWHR classes 6, 5D, or 5M ? 4D or 4M.

Operationally for HQNR, this occurs when CWHR classes 4D or 4M ?
unsuitable habitat.

Habitat removal occurs when suitable habitat loses its functionality for CSO
Remove Not used in nesting, roosting, foraging, or dispersal habitat post activity.
habitat components

Operationally, HQNR or BANRF ? unsuitable habitat.

Attachment A - 7

Retain is used in these components to keep the described element during
treatments. Often this explicitly means to keep certain features (snags,
No special clumps, large trees, corridors, etc.), but it can also be used to specify the
Retain

designation extent, or area, of habitat that is to be kept. In these instances, treatments can
still occur as long as the extent of acreage is not reduced beyond the
specified threshold.

Occupancy Occupancy and historical occupancy status shall be assessed as defined in the
Status 2019 Conservation Strategy for the California Spotted Owl in the Sierra
Nevada, or more current guidance provided by the Pacific Southwest region.

Unknown Nesting and roosting habitat of unknown occupancy is a contiguous patch of
occupancy at least 300 acres of HQNR or BANRF habitat not overlapping with known
territories and not surveyed during the prior three years.

1

Adapted from the CSO Strategy Habitat Suitability and Quality (p. 22-23) and Approach 1: PACs 1.C and 4.C
(p. 26 and 28, respectively).

2

Adapted from the CSO Strategy Habitat Suitability and Quality (p. 22) and Approach 1: PACs 1.C and 4.C (p.
26 and 28, respectively).

3

Adapted from the CSO Strategy Approach 1: Narrative, Paragraph 3 (p. 25).

Attachment A - 8

II. PROTECTED ACTIVITY CENTERS (PACS)

1) Designation of PACs

ID DES-PAC-01

Action Modify component language - CSO PAC Designation

Type Required for all amendments

Applies PACs

California Spotted Owl Protected Activity Center (PACs) Designation. California spotted
owl protected activity centers (PACs) are delineated surrounding each territorial owl activity
center detected on National Forest System lands since 1986. Owl activity centers are
designated for all territorial owls based on: (1) the most recent documented nest site, (2) the
most recent known roost site when a nest location remains unknown, and (3) a central point
Existing based on repeated daytime detections when neither nest or roost locations are known.
direction

from the PACs are delineated to: (1) include known and suspected nest stands and (2) encompass the
2004 best available 300 acres of habitat in as compact a unit as possible. The best available habitat
Framework is selected for California spotted owl PACs to include: (1) two or more tree canopy layers; (2)
ROD trees in the dominant and co-dominant crown classes averaging 24 inches dbh or greater; (3)
at least 70 percent tree canopy cover (including hardwoods); and (4) in descending order of
priority, CWHR classes 6, 5D, 5M, 4D, and 4M and other stands with at least 50 percent
canopy cover (including hardwoods). Aerial photography interpretation and field verification
are used as needed to delineate PACs.

p. 37

California Spotted Owl Protected Activity Center (PACs) Designation. California spotted owl protected activity centers (PACs) are defined by the following characteristics:

- * National Forest System lands surrounding territorial owls based on a documented nest site; recent roost site if nest location is unknown; or central point of repeated daytime detections when neither nest nor roost locations are known.

- * 300 acres of nesting and roosting habitat in as compact a unit as possible, including all Project-

the elements (a through f) defined under HQNR habitat or, if HQNR is scarce, areas specific plan

including at least the elements a through c listed under BANRF habitat.
amendment

- * Includes sites that provide the most sustainable nesting and roosting habitat that currently meets near-term habitat needs to support reproductive success and can be resilient to natural disturbances and climate change.

PACs may be delineated using a variety of tools including field verification, aerial photography interpretation or other remotely sensed data as needed.

See HQNR and BANRF in Section 1 for definitions. Incorporates CSO Strategy Approach 1: Reference

PACs 1.C and 1.D (p. 26).

Attachment A - 9

ID DES-PAC-02

Action Modify component language - CSO PAC Designation

Type Optional

Applies PACs

California Spotted Owl Protected Activity Centers Designation:

Existing

PACs are maintained regardless of California spotted owl occupancy status. However, after a direction

stand replacing event, evaluate habitat conditions within a 1.5-mile radius around the activity from the

center to identify opportunities for re-mapping the PAC. If there is insufficient suitable 2004

habitat for designating a PAC within the 1.5-mile radius, the PAC may be removed from the Framework

network.

ROD

p. 37

California Spotted Owl Protected Activity Centers Designation:

PAC retirement after disturbance or long-term lack of occupancy

Existing PACs and territories may not be retired unless loss of suitable habitat or long-term occupancy criteria are met as defined in the 2019 Conservation Strategy for the California Spotted Owl in the Sierra Nevada, or more current guidance for the Pacific Southwest Region.

Project-

specific plan

Before authorizing vegetation treatments in California spotted owl territories affected by a

amendment

large-scale, high-severity disturbance event, assess habitat conditions within a 1.5-mile radius of the most recent nest (where the nest is not known, the most recent daytime roost) to determine whether to modify or retire existing PACs and territories following the 2019 Conservation Strategy for the California Spotted Owl in the Sierra Nevada, or more current guidance from the Pacific Southwest Region. If adequate suitable habitat remains, modify the boundary of the PAC to encompass the best remaining 300 acres of HQNR and BANRF habitat as per DES-PAC-01.

This was adapted from SPEC-CSO-STD 05 and 06 in the Sierra LMP (p. 65) and incorporates Reference

CSO Strategy Approach 1: PACs 3.B.1, 3.B.2, 3.C.1, 3.C.2, and 3.D (p. 27).

Attachment A - 10

2) Desired Conditions and Management Intent for PACs

ID DC-PAC-01

Action Modify component language - PAC Desired Conditions

Type Optional

Applies PACs

California Spotted Owl Protected Activity Centers Desired Conditions:

Existing

Stands in each PAC have: (1) at least two tree canopy layers; (2) dominant and co-dominant direction

trees with average diameters of at least 24 inches DBH; (3) at least 60 to 70 percent canopy from the

cover; (4) some very large snags (greater than 45 inches DBH); and (5) snag and down woody 2004

material levels that are higher than average.

Framework

ROD

p. 37

California Spotted Owl Protected Activity Centers Desired Conditions:

PACs provide high-quality nesting and roosting habitat that contributes to successful reproduction of California spotted owls. PACs encompass habitat that is essential for nesting and roosting, as defined by the following characteristics: The habitat has a high canopy cover Project- (including large clumps of more than 70 percent canopy cover), with multiple layers of tree specific plan canopy, and many large trees, very large trees, and snags (including some greater than 45 amendment inches in diameter). Basal area and tree density tend toward the upper end of the range of desired conditions for the vegetation type. Large tree density, snag density, and coarse woody debris align with the old-forest desired conditions for the relevant forest vegetation type.

Operationally, this desired condition would correspond with CWHR 6 and 5D.

This was adapted from SPEC-CSO-DC 01 in the Sierra LMP (p. 64) and incorporates CSO

Reference

Strategy Approach 1 Narrative (p. 25).

Attachment A - 11

ID MGT-PAC-01

Action Modify component language - Fires and Fuel Management Strategy

Type Required for all amendments

Applies PACs

Direction for locating area treatments is included in the standards and guidelines in Part D of Existing this appendix. Treatment patterns are to be developed using a collaborative, multi-stakeholder direction approach. Resource considerations factored into the strategic placement of fuels treatments from the include objectives for locating treatments to overlap areas of condition class 2 and 3, high 2004 density stands, and pockets of insect and disease. Treatment areas are located to avoid PACs Framework to the greatest extent possible.

ROD

p. 35

Direction for locating area treatments is included in the standards and guidelines in Part D of this appendix. Treatment patterns are to be developed using a collaborative, multi-stakeholder

approach. Resource considerations factored into the strategic placement of fuels treatments Project-

include objectives for locating treatments to overlap areas of condition class 2 and 3, high specific plan

density stands, and pockets of insect and disease. Treatment areas should only overlap PACs amendment

to the extent necessary to reduce the threat of habitat loss due to wildfire. Treatments shall avoid reducing habitat quality in the HQNR habitat within PACs.

Reference Component edited for consistency of Framework language regarding DCs and treatments.

Attachment A - 12

3) Standards and Guidelines for PACs

ID STD-PAC-01

Action Remove components and add new language - S&G 7 (within PACs), 72, 73, and 74.

Type Required for all amendments

Applies PACs

S&G 7. For mechanical thinning treatments in mature forest habitat (CWHR types 4M, 4D, 5M, 5D, and 6) outside WUI defense zones:

* Within California spotted owl PACs: Where treatment is necessary, remove only material needed to meet project fuels objectives. Focus on removal of surface and ladder fuels.

S&G 72. Mechanical treatments may be conducted to meet fuels objectives in protected activity centers (PACs) located in WUI defense zones. In PACs located in WUI threat zones, mechanical treatments are allowed where prescribed fire is not feasible and where avoiding PACs would significantly compromise the overall effectiveness of the landscape fire and fuels strategy. Mechanical treatments should be designed to maintain habitat structure and function of the PAC.

Existing

direction S&G 73. While mechanical treatments may be conducted in protected activity centers (PACs) from the located in WUI defense zones and, in some cases, threat zones, they are prohibited within a 2004

500-foot radius buffer around a spotted owl activity center within the designated PAC.

Framework

Prescribed burning is allowed within the 500-foot radius buffer. Hand treatments, including ROD handline construction, tree pruning, and cutting of small trees (less than 6 inches DBH), may be conducted prior to burning as needed to protect important elements of owl habitat.

Treatments in the remainder of the PAC use the forest-wide standards and guidelines for mechanical thinning.

S&G 74. In PACs located outside the WUI, limit stand-altering activities to reducing surface and ladder fuels through prescribed fire treatments. In forested stands with overstory trees 11 inches dbh and greater, design prescribed fire treatments to have an average flame length of 4 feet or less. Hand treatments, including handline construction, tree pruning, and cutting of small trees (less than 6 inches dbh), may be conducted prior to burning as needed to protect important elements of owl habitat.

p. 50 and 60

Attachment A - 13

In California spotted owl PACs, all management activities must maintain or improve habitat quality in HQNR habitat by:

1. Maintaining or improving existing CWHR class (do not reduce 5D to 5M);
2. Retaining clumps of the largest available trees greater than 24 inches DBH; and
3. Retaining at least two canopy layers at the stand/patch scale in areas where large trees occur.

Where necessary to increase long-term resilience, vegetation treatments that may reduce near-term habitat quality may be authorized in up to 100 acres of a PAC outside of HQNR habitat*. Throughout PACs all vegetation treatments must:

* Retain the largest/oldest trees, known nest trees, and other large trees and snags with cavities, deformities, broken tops, or other habitat features of value to old forest species;

* Retain connected areas of moderate (at least 40 percent) and high (at least 60 percent) canopy cover between the known nest site (if nest site is not known, use the most recent known roost site) and areas in the rest of the PAC;

* Avoid mechanical treatments within a 10-acre area surrounding the most recent known nest;

Project- * Avoid creating new landings, new temporary roads, or canopy gaps larger than 0.25 specific plan acres comprising no more than 5 acres in total;
amendment

* Increase the QMD of trees at the PAC scale; and

* Maintain the average canopy cover of the PAC above 50 percent.

Prescribed burning is allowed within the 10 acres surrounding a nest tree or structure. Pre-treatment in preparation of prescribed burning may be conducted prior to burning, as needed, including handline construction, tree pruning, and cutting of small trees (less than 8 inches DBH).

Exceptions*:

* This standard may be modified as specified in WUI defense zones or when constructing a fuelbreak where avoiding overlap with a PAC is not feasible. To limit fragmentation and maintain connectivity of HQNR and BANRF habitat, construction of fuelbreaks should avoid intersecting with California spotted owl PACs. Treatments

in WUI defense zones and creation of a fuelbreaks must:

- o Avoid the 10 acres surrounding the most recent known nest site;
- o Avoid existing HQNR habitat; and
- o Maintain at least 40 percent overstory canopy cover and 10 percent understory cover in shaded fuelbreaks, whenever fuels and fire behavior objectives can be met with this level of vegetation retention.

This was adapted from SPEC-CSO-STD 02 and SPEC-CSO-GDL 02 in the Sierra LMP (p. 64 and 66, respectively) and SERAL. It incorporates CSO Strategy Approach 1: Narrative

Reference

Paragraph 2, PACs 4.C, 4.F, and 4.G as well as CSO Strategy Approach 2: 3.A (p. 25, 28 and 31, respectively).

Notes: Remove exceptions if they do not apply to the project. If conducting prescribed burning in PACs, use GDL-PAC-PB to reduce adverse significant effects. *Treatments that remove BANRF habitat from PACs will receive a Class 3 (LAA) designation per conservation measure 5 of the draft Programmatic Biological Assessment.

Attachment A - 14

ID GDL-PAC-PB

Action Add guideline for prescribed burning

Type Required for all projects using prescribed burning in PACs

Applies Entire Project Area

S&G 74.

In PACs located outside the WUI, limit stand-altering activities to reducing surface and ladder Existing

fuels through prescribed fire treatments. In forested stands with overstory trees 11 inches dbh direction

and greater, design prescribed fire treatments to have an average flame length of 4 feet or less. from the

Hand treatments, including handline construction, tree pruning, and cutting of small trees (less 2004

than 6 inches dbh), may be conducted prior to burning as needed to protect important elements Framework

of owl habitat.

ROD

p. 60

If project treatment includes prescribed burning in PACs, include this language:

To restore forest vegetation within California spotted owl PAC, when practical based on existing conditions, use prescribed fire, alone or in combination with mechanical thinning,

Project-

specific To minimize loss or damage to known nest and roost trees, include mitigation measures when plan conducting prescribed fire in PACs.

amendment

To minimize impacts to overstory canopy and provide conditions for continued use for nesting and roosting within PACs, reduce fuel loads with thinning and/or prescribed burning to minimize the risk of high-severity fire and promote conditions that lead to lower intensity predicted fire effects (generally flame lengths averaging 4 to 6 feet).

This was adapted from SPEC-CSO-GDL 05 and 06 in the Sierra LMP (p. 66) and incorporates

Reference

CSO Strategy Approach 1: PACs 4.D and 4.E (p. 31) and Approach 2: 7 (p. 33).

Attachment A - 15

ID STD-PAC-02

Action Modify component language - S&G 33.

Type Required for all amendments

Applies PACs

S&G 33: Conduct surveys in compliance with the Pacific Southwest Region's survey

Existing

protocols during the planning process when proposed vegetation treatments are likely to direction

reduce habitat quality in suitable California spotted owl habitat with unknown occupancy. from the

Designate California spotted owl protected activity centers (PACs) where appropriate based on 2004

survey results.

Framework

ROD

p. 54

S&G 33: Before authorizing and before implementing mechanical vegetation treatments within existing PACs or vegetation treatments in CSO nesting and roosting habitat of unknown occupancy, forests must follow current guidance for the Pacific Southwest region

Project-

to:

specific

- * Determine occupancy status;

plan

- * Identify owl nest sites (where nest location is not known, the most recent daytime amendment

roost); and

- * Delineate new or modify existing PACs and territories, as necessary, within the project area.

This was adapted from SPEC-CSO-STD 01 in the Sierra LMP (p. 64) and incorporates CSO Reference

Strategy Approach 1: PACs 1.A, 3.A.1, 3.A.2, and 3.A.3 (p. 26-27).

Notes: This standard includes nesting and roosting habitat (HQNR and BANRF habitat) of unknown occupancy outside of PACs.

Attachment A - 16

ID STD-PAC-03

Action Replace components - S&G 75 and 77

Type Optional

Applies PACs

S&G 75. For California spotted owl PACs: Maintain a limited operating period (LOP), prohibiting vegetation treatments within approximately ¼ mile of the activity center during the breeding season (March 1 through August 31), unless surveys confirm that California spotted owls are not nesting. Prior to implementing activities within or adjacent to a California spotted owl PAC and the location of the nest site or activity center is uncertain,

Existing

conduct surveys to establish or confirm the location of the nest or activity center.

direction

from the

S&G 77. The LOP may be waived for vegetation treatments of limited scope and duration, 2004

when a biological evaluation determines that such projects are unlikely to result in breeding Framework

disturbance considering their intensity, duration, timing and specific location. Where a ROD

biological evaluation concludes that a nest site would be shielded from planned activities by topographic features that would minimize disturbance, the LOP buffer distance may be modified.

p. 60

Limited Operating Period (LOP)

To minimize disturbance that may lead to breeding failure, during the early breeding season (March 1 to July 9, or following current Pacific Southwest regional guidance) apply a LOP within 0.25 mile of the nest prohibiting:

- * activities that only generate noise or smoke (e.g., prescribed burning, hand thinning);
- * discretionary low-level helicopter flights or hovering over nests; and
- * discretionary landing of helicopters.

For mechanical treatment, including helicopter logging, within approximately 0.25 mile of the nest or known roost site, apply a LOP during the breeding season from March 1 to August 31 or following current Pacific Southwest regional guidance.

Where the location of a nest site within a PAC is unknown, apply the limited operating period to the entire PAC or determine the nest site location.

Project-

specific plan Exceptions:

amendment The limited operating period may be modified or waived by the responsible official under the following circumstances:

1. Waived if monitoring or surveys indicate that nesting owls are absent (refer to current Pacific Southwest regional guidance).
2. Waived or modified for activities addressing imminent threats to life and property.
3. Waived or modified for activities of limited scope and duration, if a biologist determines that such activity is unlikely to result in breeding disturbance based on the intensity, duration, timing, and specific location.
4. The limited operating period buffer distance may be modified based upon a biologist's evaluation of the area needed to shield a nest site from disturbance considering topographic features, vegetation, or other screening.
5. Waived or modified for prescribed burning in up to 10 percent of PACs per year per national forest where necessary to facilitate the benefits of using early season prescribed fire.*

Attachment A - 17

This was adapted from SPEC-CSO-GDL 08 in the Sierra LMP (p. 67) and incorporates CSO Reference Strategy Approach 1: PACs 2A and 2B (p. 26). It also aligns with Conservation Measure 2 of the draft Programmatic Biological Assessment.

*Early spring burning may lead to adverse effects and results in a LAA determination in the Programmatic BA.

ID STD-PAC-04

Action Add standard for DBH Limits in PACs

Type Optional

Applies PACs

Existing

direction

from the

[None]

2004

Framework

ROD

Project-

When conducting mechanical thinning within California spotted owl PACs, retain live conifer

specific plan

trees greater than 20 inches DBH.

amendment

This was adapted from SERAL and reduces likelihood of significant adverse effects. Consider

Reference

adding if pursuing a FONSI.

ID GDL-PAC-01

Action Modify component language - S&G 1.

Type Required for all amendments

Applies PACs

S&G 1. Strategic placement of fuels treatments should also consider objectives for locating treatment areas to overlap with areas of condition class 2 and 3, high density stands, and Existing pockets of insect and disease. Avoid PACs to the greatest extent possible when locating area direction treatments. Incorporate areas that already contribute to wildfire behavior modification, from the including timber sales, burned areas, bodies of water, and barren ground, into the landscape 2004 treatment area pattern. Identify gaps in the landscape pattern where fire could spread at some Framework undesired rate or direction and use treatments (including maintenance treatments and new ROD fuels treatments) to fill identified gaps.

p. 49

Attachment A - 18

S&G 1. Strategic placement of fuels treatments should also consider objectives for locating treatment areas to overlap with areas of condition class 2 and 3, high density stands, and pockets of insect and disease. Treatment areas should only overlap PACs to the extent Project- necessary to reduce the threat of habitat loss due to wildfire. Treatments shall avoid reducing specific plan habitat quality in the HQNR habitat within PACs. Incorporate areas that already contribute amendment to wildfire behavior modification, including timber sales, burned areas, bodies of water, and barren ground, into the landscape treatment area pattern. Identify gaps in the landscape pattern where fire could spread at some undesired rate or direction and use treatments (including maintenance treatments and new fuels treatments) to fill identified gaps.

Component edited for consistency of Framework language regarding DCs, Standards, and

Reference

allowable treatments.

Attachment A - 19

ID GDL-PAC-02

Action Replace component - S&G 71

Type Optional

Applies PACs

S&G 71. Within the assessment area or watershed, locate fuels treatments to minimize impacts to PACs. PACs may be re-mapped during project planning to avoid intersections with treatment areas, provided that the re-mapped PACs contain habitat of equal quality and include known nest sites and important roost sites. Document PAC adjustments in biological evaluations.

When treatment areas must intersect PACs and choices can be made about which PACs to enter, use the following criteria to preferentially avoid PACs that have the highest likely contribution to owl productivity:

* lowest contribution to productivity: PACs presently unoccupied and historically occupied by territorial singles only.

Existing * PACs presently unoccupied and historically occupied by pairs,

direction * PACs presently occupied by territorial singles,

from the * PACs presently occupied by pairs,

2004 * highest contribution to productivity: PACs currently or historically reproductive.

Framework

ROD Historical occupancy is considered occupancy since 1990. Current occupancy is based on surveys consistent with survey protocol (March 1992) in the last 2-3 years prior to project planning. These dates were chosen to encompass the majority of survey efforts and to include breeding pulses in the early 1990s when many sites were found to be productive. When designing treatment unit intersections with PACs, limit treatment acres to those necessary to achieve strategic placement objectives and avoid treatments adjacent to nest stands whenever possible.

If nesting or foraging habitat in PACs is mechanically treated, mitigate by adding acreage to the PAC equivalent to the treated acres using adjacent acres of comparable quality wherever possible.

p. 59-60

To minimize potential impacts to California spotted owl reproductive success, vegetation treatments that may reduce habitat quality in the near term should be minimized or avoided in PACs with the highest likely contribution to reproductive success, otherwise occupancy Project- status is prioritized as follows (from highest to lowest priority for treatment):
specific plan 1. Currently unoccupied and historically occupied by territorial singles only.
amendment 2. Currently unoccupied and historically occupied by pairs.

3. Currently occupied by territorial singles.

4. Currently occupied by pairs.

5. Currently occupied by pairs and currently or recently reproductive.

This was adapted from SPEC-CSO-GDL 01 in the Sierra LMP (p. 66) and incorporates CSO Reference

Strategy Approach 1: Narrative (p. 25) and 4.B (p. 28).

Attachment A - 20

III. CSO TERRITORIES

1) Designation: Convert Home Range Core Areas (HRCAs) to Territories

ID DES-TERR-01

Action Modify component language - Old Forest Ecosystem and Associated Species Strategy

Type Required for all amendments

Applies CSO Territories

Existing A network of land allocations, including California spotted owl and northern goshawk direction protected activity centers (PACs), California spotted owl home range core areas, forest from the carnivore den sites, and the southern Sierra fisher conservation area, with management 2004 direction [...]

Framework

ROD p. 31

Project- A network of land allocations, including California spotted owl and northern goshawk specific plan protected activity centers (PACs), California spotted owl territories, forest carnivore den sites, amendment and the southern Sierra fisher conservation area, with management direction [...]

Component edited for consistency of Framework language regarding shift from HRCAs to

Reference

Territories.

ID DES-TERR-02

Action Modify component language - CSO HRCA Designation

Type Required for all amendments

Applies CSO Territories

California Spotted Owl Home Range Core Areas (HRCAs) Designation. A home range core area is established surrounding each territorial spotted owl activity center detected after 1986. The core area amounts to 20 percent of the area described by the sum of the average breeding pair home range plus one standard error. Home range core area sizes are as follows: 2,400 acres on the Hat Creek and Eagle Lake Ranger Districts of the Lassen National Forest, 1,000 acres on the Modoc, Inyo, Humboldt-Toiyabe, Plumas, Tahoe, Eldorado, Lake Tahoe Existing

Basin Management Unit and Stanislaus National Forests and on the Almanor Ranger District direction

of Lassen National Forest, and 600 acres of the Sequoia and Sierra National Forests. from the

2004

Aerial photography is used to delineate the core area. Acreage for the entire core area is Framework

identified on national forest lands. Core areas encompass the best available California spotted ROD

owl habitat in the closest proximity to the owl activity center. The best available contiguous habitat is selected to incorporate, in descending order of priority, CWHR classes 6, 5D, 5M, 4D and 4M and other stands with at least 50 percent tree canopy cover (including hardwoods). The acreage in the 300-acre PAC counts toward the total home range core area. Core areas are delineated within 1.5 miles of the activity center.

Attachment A - 21

When activities are planned adjacent to non-national forest lands, circular core areas are delineated around California spotted owl activity centers on non-national forest lands. Using the best available habitat as described above, any part of the circular core area that lies on national forest lands is designated and managed as a California spotted owl home range core area.

p. 39

California Spotted Owl Territories Designation Territories are defined by the following characteristics: A 1,000-acre circle, which includes the 300-acre PAC, surrounding territorial owls, centered on a documented nest site or roost site if nest location is unknown or central point of repeated daytime detections when neither nest nor roost locations are known.

- * Territory boundaries should include the entire PAC and be adjusted to include suitable habitat in the most sustainable areas (moist vegetation types and site conditions, often in drainages or on north-facing slopes) and to exclude unsuitable habitat.

- * Contains diverse structural and seral conditions to facilitate nesting, roosting, and foraging.

- * May overlap adjacent territories.

Project-

- * Territories are established and retired together with PACs.

specific plan

amendment

Contextually required for all projects that are adjacent to non-national forest lands that have known CSO nest sites:

When activities are planned adjacent to non-national forest lands containing known CSO nest stands, a 1,000-acre circle territory should be delineated around known CSO activity centers on non-national forest lands. Any part of the circular core area that lies on national forest lands is designated and managed as a CSO territory.

Incorporates CSO Strategy Approach 1: Narrative (p. 25) and Territory/Watershed 1.A and 1.B (p. 28). Distinction of 800 acres are not included for the Inyo, Sierra, and Sequoia NFs Reference

because they have completed LMP revisions. Contextually required language comes from the SERAL project.

Attachment A - 22

2) Desired Conditions and Management Objectives

IMPORTANT: Select either DC-TERR-1A or DC-TERR-1B depending on your preference for discretion with likelihood to increase adverse effects.

ID DC-TERR-1A

Action Replace HRCA desired condition with Territory desired condition

Required for all amendments - less likely for adverse effects.

Type

For more discretion with likely adverse effects, use DC-TERR-1B (below).

Applies CSO Territories

California Spotted Owl Home Range Core Areas (HRCAs) Desired Conditions

HRCAs consist of large habitat blocks that have: (1) at least two tree canopy layers; (2) at least 24 inches DBH in dominant and co-dominant trees; (3) a number of very large (greater than 45 inches DBH) old trees; (4) at least 50 to 70 percent canopy cover; and (5) higher than average levels of snags and down woody material.

p. 40 (repeated on p. 46)

Existing California Spotted Owl Home Range Core Areas (HRCAs) Management Objectives:

direction Establish and maintain a pattern of fuels treatments that is effective in modifying wildfire

from the behavior. Design treatments in HRCAs to be economically efficient and to promote forest 2004 health where consistent with habitat objectives.

Framework

ROD California Spotted Owl Home Range Core Areas (HRCAs) Management Intent:

Treat fuels using a landscape approach for strategically placing area treatments to modify fire behavior. Retain existing suitable habitat, recognizing that habitat within treated areas may be modified to meet fuels objectives. Accelerate development of currently unsuitable habitat (in non-habitat inclusions, such as plantations) into suitable condition. Arrange treatment patterns and design treatment prescriptions to avoid the highest quality habitat (CWHR types 5M, 5D, and 6) wherever possible.

p. 46

California Spotted Owl Territories Desired Conditions

At least 60 percent of each California spotted owl territory, including the PAC, consists of HQNR habitat in large enough patches to provide interior stand conditions (generally 1 to 2 tree heights from an edge) surrounded by BANRF, preferably with a greater proportion of Project- HQNR to BANRF, particularly closer to the nest. The remainder of the territory consists of a specific plan diversity of many different structure and canopy classes.

amendment

For areas where multiple territories comprise over 75 percent of a watershed (typically a HUC 12 unit and greater than 10,000 acres in size) at least 30-50 percent of the watershed consists of the HQNR and BANRF habitat and the remainder of the territory consists of a diversity of many different structure and canopy classes.

OR

Attachment A - 23

ID DC-TERR-1B

Action Replace HRCA desired condition with Territory desired condition

Required for all amendments - more likely to have adverse effects.

Type

Use DC-TERR-1A instead (above) if trying to reach a FONSI.

Applies CSO Territories

California Spotted Owl Home Range Core Areas (HRCAs) Desired Conditions

HRCAs consist of large habitat blocks that have: (1) at least two tree canopy layers; (2) at least 24 inches DBH in dominant and co-dominant trees; (3) a number of very large (greater than 45 inches DBH) old trees; (4) at least 50 to 70 percent canopy cover; and (5) higher than average levels of snags and down woody material.

p. 40 (repeated on p. 46)

Existing California Spotted Owl Home Range Core Areas (HRCAs) Management Objectives:

direction Establish and maintain a pattern of fuels treatments that is effective in modifying wildfire from the behavior. Design treatments in HRCAs to be economically efficient and to promote forest 2004 health where consistent with habitat objectives.

Framework

ROD California Spotted Owl Home Range Core Areas (HRCAs) Management Intent:

Treat fuels using a landscape approach for strategically placing area treatments to modify fire behavior. Retain existing suitable habitat, recognizing that habitat within treated areas may be modified to meet fuels objectives. Accelerate development of currently unsuitable habitat (in non-habitat inclusions, such as plantations) into suitable condition. Arrange treatment patterns and design treatment prescriptions to avoid the highest quality habitat (CWHR types 5M, 5D,

and 6) wherever possible.

p. 46

California Spotted Owl Territories Desired Conditions

At least 50 to 60 percent (depending on the terrestrial vegetation type and site conditions) of each California spotted owl territory, including the PAC, consists of HQNR habitat in large enough patches to provide interior stand conditions (generally 1 to 2 tree heights from an edge) surrounded by BANRF, preferably with a greater proportion of HQNR to BANRF, Project-

particularly closer to the nest. The remainder of the territory consists of a diversity of many specific plan

different structure and canopy classes.

amendment

For areas where multiple territories comprise over 75 percent of a watershed (typically a HUC 12 unit and greater than 10,000 acres in size) at least 30-50 percent of the watershed consists of the HQNR and BANRF habitat and the remainder of the territory consists of a diversity of many different structure and canopy classes.

This was adapted from SPEC-CSO-DC 02 in the Sierra LMP (p. 64) and incorporates CSO Reference Strategy Approach 1: Territory/Watershed 2A (p. 26). It aligns with Conservation Measure number 6 in the Draft Programmatic Biological Assessment.

Attachment A - 24

3) S&G: Treatments within Territories

IMPORTANT: Select either STD-TERR-1A or STD-TERR-1B depending on your preference for discretion with likelihood to increase adverse effects.

ID STD-TERR-1A

Action Replace component language - S&G 7.

Required for all amendments - less likely for adverse effect.

Type

For more discretion with likely adverse effects, use STD-TERR-1B (below).

Applies CSO Territories

S&G 7. For mechanical thinning treatments in mature forest habitat (CWHR types 4M, 4D, 5M, 5D, and 6) outside WUI defense zones:

- * Design projects to retain at least 40 percent of the existing basal area. The retained basal area should generally be comprised of the largest trees.

- * Where available, design projects to retain 5 percent or more of the total treatment area in lower layers composed of trees 6 to 24 inches dbh within the treatment unit.

- * Design projects to avoid reducing pre-existing canopy cover by more than 30 percent within the treatment unit. Percent is measured in absolute terms (for example, canopy cover at 80 percent should not be reduced below 50 percent.)

- * Within treatment units, at a minimum, the intent is to provide for an effective fuels treatment. Where existing vegetative conditions are at or near 40 percent canopy cover, projects are to be designed remove the material necessary to meet fire and fuels Existing objectives.

direction * Within California spotted owl Home Range Core Areas: Where existing vegetative from the

conditions permit, design projects to retain at least 50 percent canopy cover averaged

2004

within the treatment unit. Exceptions are allowed in limited situations where
Framework

additional trees must be removed to adequately reduce ladder fuels, provide sufficient
ROD

spacing for equipment operations, or minimize re-entry. Where 50 percent canopy
cover retention cannot be met for reasons described above, retain at least 40 percent
canopy cover averaged within the treatment unit.

* Outside of California spotted owl Home Range Core Areas: Where existing
vegetative conditions permit, design projects to retain at least 50 percent canopy cover
within the treatment unit. Exceptions are allowed where project objectives require
additional canopy modification (such as the need to adequately reduce ladder fuels,
provide for safe and efficient equipment operations, minimize re-entry, design cost
efficient treatments, and/or significantly reduce stand density.) Where canopy cover
must be reduced below 50 percent, retain at least 40 percent canopy cover averaged
within the treatment unit.

p. 50-51

1. When a territory contains less than 60 percent HQNR and BANRF habitat, maintain or
improve all HQNR and BANRF habitat wherever it exists throughout the territory.

Project-

1

specific plan 2. When a territory contains 60 percent or more HQNR and BANRF habitat, retain at least
amendment 60% suitable habitat. Treatments will promote heterogenous structure across the territory
and prioritize maintaining or improving HQNR habitat in drainages and north- or east-
facing slopes.

1

Retain refers to the extent of habitat. It does not prevent treatments.

Attachment A - 25

OR

ID STD-TERR-1B

Action Replace component language - S&G 7.

Required for all amendments - more likely to have adverse effects.

Type

Use STD-TERR-1A instead (above) if trying to reach a FONSI.

Applies CSO Territories

S&G 7. For mechanical thinning treatments in mature forest habitat (CWHR types 4M, 4D,
5M, 5D, and 6) outside WUI defense zones:

* Design projects to retain at least 40 percent of the existing basal area. The retained
basal area should generally be comprised of the largest trees.

* Where available, design projects to retain 5 percent or more of the total treatment area
in lower layers composed of trees 6 to 24 inches dbh within the treatment unit.

* Design projects to avoid reducing pre-existing canopy cover by more than 30 percent
within the treatment unit. Percent is measured in absolute terms (for example, canopy
cover at 80 percent should not be reduced below 50 percent.)

* Within treatment units, at a minimum, the intent is to provide for an effective fuels
treatment. Where existing vegetative conditions are at or near 40 percent canopy
cover, projects are to be designed remove the material necessary to meet fire and fuels

Existing
objectives.

direction

* Within California spotted owl Home Range Core Areas: Where existing vegetative
from the

conditions permit, design projects to retain at least 50 percent canopy cover averaged 2004

within the treatment unit. Exceptions are allowed in limited situations where

Framework

additional trees must be removed to adequately reduce ladder fuels, provide sufficient ROD

spacing for equipment operations, or minimize re-entry. Where 50 percent canopy cover retention cannot be met for reasons described above, retain at least 40 percent canopy cover averaged within the treatment unit.

* Outside of California spotted owl Home Range Core Areas: Where existing vegetative conditions permit, design projects to retain at least 50 percent canopy cover within the treatment unit. Exceptions are allowed where project objectives require additional canopy modification (such as the need to adequately reduce ladder fuels, provide for safe and efficient equipment operations, minimize re-entry, design cost efficient treatments, and/or significantly reduce stand density.) Where canopy cover must be reduced below 50 percent, retain at least 40 percent canopy cover averaged within the treatment unit.

p. 50-51

Attachment A - 26

1. In California spotted owl territories that do not currently meet the territory desired condition (DC-TERR-01B), maintain or improve all HQNR and BANRF habitat wherever it exists throughout the territory.

2. If DC-TERR-01 has been met,

1

a. When a territory consists of a majority of moist habitat types and contains 60 percent or

2

more HQNR and BANRF habitat, retain at least 60% suitable habitat. Treatments will promote heterogenous structure across the territory and prioritize maintaining or improving HQNR habitat in drainages and north- or east-facing slopes.

1

b. When a territory consists of a majority of moist habitat types and contains less than 60 percent HQNR and BANRF habitat, maintain or improve all HQNR and BANRF habitat wherever it exists throughout the territory. Treatments will promote heterogenous structure across the territory.

Project-

1

c. When a territory consists of a majority of dry habitat types and contains 60% or more specific plan

2

HQNR and BANRF habitat, retain at least 50% suitable habitat. Treatments will amendment

promote heterogenous structure across the territory and prioritize maintaining or improving HQNR habitat in drainages and north- or east-facing slopes.

1

d. When a territory consists of a majority of dry habitat types and contains less than 60 percent HQNR and BANRF habitat, maintain or improve all HQNR habitat wherever

2

it exists throughout the territory, and retain at least 50 percent of suitable habitat.

Treatments will promote heterogenous structure across the territory.

Exception:

3

* For territories occurring in WUI defense zones, within high risk fireshed areas , or in

2

territories that contain unavoidable placement of fuelbreaks, retain at least 40 percent of the territory (including the PAC) in suitable habitat. Treatments will promote heterogenous structure across the territory and prioritize maintaining or improving HQNR habitat in drainages and north- or east-facing slopes.

This was adapted from various components in the Sierra LMP and incorporates CSO Strategy

Reference

Approach 2: 1.A.1 (p. 30).

1

Moist and dry habitat types can be determined based on vegetation type or physiographical attributes such as ridge tops and south or west facing slopes for dry territories and drainages and north or west facing slopes for moist.

2

Retain refers to the extent of habitat. It does not prevent treatments.

3

High risk fireshed areas are Fireshed Registry Project Areas (areas delineated by regular-sized units as specified in RMRS-GTR-425) that have a Managed Stands Average Annual Exposure greater than or equal to 3.0. For a list of these areas, see Table D1 and Figure D1.

Attachment A - 27

ID STD-TERR-02

Action Add new standard.

Type Required for all amendments

Applies CSO Territories

Existing

direction

from the

[None]

2004

Framework

ROD

When mechanical treatments create canopy gaps within California spotted owl territories, but outside of PACs, individual openings shall not exceed 1.25 acres (and should generally not

Project-

exceed 0.5 acre) and shall not comprise more than 30 percent of the total area in the territory. specific plan

This includes openings created for the construction of landings or temporary roads (restricted amendment

to 1.0 mile or less).

This was adapted from SPEC-CSO-STD 04 in the Sierra LMP (p. 65) and incorporates CSO

Reference

Strategy Approach 2: 1.A.2 (p. 31).

ID GDL-TERR-01

Action Add new guideline.

Type Required for all amendments

Applies Territory or Project Area

Existing

direction

from the

[None]

2004

Framework

ROD

To promote high-quality nesting and denning habitat for old-forest-associated species, thinning in CSO territories to increase heterogeneity and resilience should retain the oldest and largest trees and Project-

large trees with habitat features (such as deformities, broken tops, large branches, and cavities) that specific plan

benefit these wildlife species. Desired conditions for large tree density vary by vegetation type and amendment

site conditions.

This was adapted from TERR-OLD-GDL 01 in the Sierra LMP (p. 45) and incorporates CSO Reference Strategy Approach 2: 3.A, 3.B, and 3.C (p. 31). This guideline can be expanded to the landscape scale within mature/old forest (5D/5M and 4D/4M) to align with the Sierra LMP.

Notes: To reduce likelihood of significant adverse effects, consider expanding the guideline for the project area (within 4M, 4D, 5M, and 5D) and not limit guideline solely to territories.

Attachment A - 28

ID GDL-TERR-02

Action Add new guideline.

Type Required for all amendments

Applies CSO Territories

Existing

direction

from the

[None]

2004

Framework

ROD

To facilitate development of future nest sites, vegetation treatments in California spotted owl territories should:

Project-

* Promote growth of trees greater than 24 inches DBH and especially large trees, and specific plan

* Retain clumps or groups of trees greater than 24 inches DBH and/or 100 feet tall, and amendment

especially trees greater than 30 inches DBH and/or 150 feet tall, with canopy cover greater than 60 to 70 percent.

This was adapted from SPEC-CSO-GDL 03 in the Sierra LMP (p. 66) and incorporates CSO Reference

Strategy Approach 1: Territory/Watershed Scale 2.C.1, 2.C.2, and 2.C.3 (p. 29).

ID GDL-TERR-03

Action Add guideline for DBH Limits in Territories

Type Optional

Applies CSO Territories

Existing

direction

from the

[None]

2004

Framework

ROD

When conducting mechanical thinning treatments in California spotted owl territories, retain

Project-

live shade-intolerant conifers greater than 24 inches DBH.

specific plan

amendment

This was adapted from SERAL and reduces likelihood of significant adverse effects. Consider

Reference

adding if pursuing a FONSI.

Attachment A - 29

IV. PROJECT-WIDE COMPONENTS

1) Desired Conditions

ID DC-SNAG-01

Action Add desired conditions for large snags

Type Optional

Applies Entire Project Area

Existing

direction

from the

[None]

2004

Framework

ROD

Project- Large snags are scattered across the landscape, generally occurring in clumps rather than specific plan uniformly and evenly distributed, meeting the needs of species that use snags and providing amendment for future downed logs.

This was adapted from TERR-OLD-DC 06 in the Sierra LMP (p. 45) and incorporates CSO

Reference

Strategy Approach 2: 3A (p. 31).

Attachment A - 30

ID DC-ECOS-01

Action Add desired conditions for ecosystems

Type Optional

Applies Entire Project Area

Existing

direction from

the 2004 [None]

Framework

ROD

Persistent populations of native, and desirable nonnative, plant and animal species are supported by healthy ecosystems, essential ecological processes, and land stewardship

Project-

activities, and reflect the diversity, quantity, quality, and capability of natural habitats on the specific plan

Forest. These ecosystems are also resilient to uncharacteristic fire, climate change, and other amendment

stressors, and this resilience supports the long-term sustainability of plant and animal communities.

This was adapted from SPEC-FW-DC 01 in the Sierra LMP (p. 48) and incorporates CSO

Reference

Strategy Approach 1: Narrative (p. 25) and Approach 2: Narrative (p. 29-30).

ID DC-ECOS-02

Action Add desired conditions for ecological conditions

Type Optional

Applies Entire Project Area

Existing

direction from

the 2004 [None]

Framework

ROD

Ecological conditions for at-risk species support self-sustaining populations within the inherent capabilities of the plan area, including minimizing impacts from threats (such as disease and other site-specific threats). Ecological conditions provide habitat conditions that

Project-

specific plan * contribute to the survival, recovery, and delisting of species under the Endangered amendment Species Act;

* preclude the need for listing new species;

* and improve conditions for species of conservation concern.

This was adapted from SPEC-FW-DC 02 in the Sierra LMP (p. 48) and incorporates CSO

Reference

Strategy Approach 1: Narrative (p. 25).

Attachment A - 31

ID DC-OLD-01

Action Add desired conditions for old forest

Type Optional

Applies Entire Project Area

Existing

direction from
the 2004 [None]
Framework

ROD

Old-forest areas are clumps and patches of old-forest components such as old trees, snags,
Project-

and large downed logs. These areas are irregularly distributed across the landscape and
specific plan

interspersed with stands of younger trees, shrubs, meadows, other herbaceous vegetation,
amendment

and unvegetated patches.

This was adapted from TERR-OLD-DC 03 in the Sierra LMP (p. 44) and incorporates CSO
Reference

Strategy Approach 2: Narrative (p. 29-30), 1.A (p. 30-31), and 3A-D (p. 31-32).

ID DC-OLD-02

Action Add desired conditions for old forest

Type Optional

Applies Entire Project Area

Existing

direction from

the 2004 [None]

Framework

ROD

The composition, structure, and functions of old forests and surrounding landscapes are

Project-

resilient to fire, drought, insects, pathogens, and climate change. Fire occurs as a key

specific plan

ecological process in forest types that are adapted to fire, creating, restoring, and maintaining
amendment

ecosystem resilience and fire-related composition and structure.

This was adapted from TERR-OLD-DC 01 in the Sierra LMP (p. 44) and incorporates CSO

Reference

Strategy Approach 2: Narrative (p. 29-30).

Attachment A - 32

ID DC-OLD-03

Action Add desired conditions for old forest

Type Optional

Applies Entire Project Area

Existing

direction from

the 2004 [None]

Framework

ROD

The landscape contains a mosaic of vegetation types and structures that provide foraging and

Project- breeding habitat, movement, and connectivity for a variety of old-forest-associated species.

specific plan Areas of moderate to high canopy cover composed primarily of large trees provide habitat

amendment connectivity for old-forest-associated species in key habitat corridors such as canyon bottoms and drainages.

This was adapted from TERR-OLD-DC 02 in the Sierra LMP (p. 44) and incorporates CSO

Reference

Strategy Approach 2: Narrative (p. 29-30).

ID DC-OLD-04

Action Add desired conditions for old forest

Type Optional

Applies Entire Project Area

Existing

direction from

the 2004 [None]

Framework

ROD

Old forests are composed of both vigorous trees and decadent trees. Clumps of large trees, Project-

snags, large logs, and decadent older trees are maintained on the landscape in sufficient specific plan

numbers to benefit wildlife and are distributed throughout the planning area, considering amendment

constraints imposed by climate change, fire, insects, disease, and drought.

This was adapted from TERR-OLD-DC 05 in the Sierra LMP (p. 45) and incorporates CSO

Reference

Strategy Approach 2: Narrative (p. 29-30), 1.A (p. 30-31), and 3A-D (p. 31-32).

Attachment A - 33

ID DC-OLD-05

Action Add desired conditions for old forest

Type Optional

Applies Entire Project Area

Existing

direction

from the

[None]

2004

Framework

ROD

Project- Coarse woody debris is distributed in patches and the density of large downed logs varies by specific plan vegetation type. Surface dead wood levels are sufficient to provide for wildlife and legacy soil amendment microbial populations.

This was adapted from TERR-OLD-DC 07 in the Sierra LMP (p. 45) and incorporates CSO

Reference

Strategy Approach 2: 5.A (p. 32).

ID DC-OLD-06

Action Add desired conditions for old trees

Type Optional

Applies Entire Project Area

Existing

direction

from the

[None]

2004

Framework

ROD

For mechanical thinning treatments in mature forest habitat (CWHR classes 4M, 4D, 5M, 5D, and 6) outside WUI defense zones:

Where old trees larger than 24 inches DBH exist, the number and density of old trees vary by topographic position and soil moisture. In general, more large and old trees are found on moister sites; on lower slopes, bottoms, and north and east aspects, especially where soils are Project-

deeper. Large trees are well distributed but are often clumpy. The densities vary by forest specific plan

type.

amendment

Trees greater than 40 inches DBH, generally over 150 years old, represent the oldest trees, and comprise a significant proportion of large and old trees. In areas of high soil productivity, trees may grow to large sizes in fewer than 100 years. On low and very low soil productivity sites, the oldest trees may be smaller in diameter. Enough younger trees are present to provide for recruitment of old trees over time.

This was adapted from TERR-OLD-DC 04 in the Sierra LMP (p. 44-45) and incorporates

Reference

CSO Strategy Approach 2: 1.A, 2, and 3 (p. 30-31).

Attachment A - 34

ID MAN-NEST-01

Action Add desired conditions for CSO nest sites across landscape

Type Optional

Applies Entire Project Area

Existing

direction

from the

[None]

2004

Framework

ROD

Project- The _____ National Forest supports conditions for a sustainable network of dynamic, specific plan resilient, and widely distributed California spotted owl nest or roost sites and habitat across amendment heterogeneous landscapes.

Adapted from the CSO Strategy Desired Conservation Outcomes (p. 20) and Approach 1

Reference

Narrative, Paragraph 2 (p. 25).

2) Project-wide Standards and Guidelines

IMPORTANT: Select either STD-DBH-1A or STD-DBH-1B depending on your preference for discretion with likelihood to increase adverse effects.

ID STD-PROJ-1A

Action Modify component language - S&G 6.

Required for all amendments - less likely for adverse effect.

Type

For more discretion with likely adverse effects, use STD-PROJ-1B (below).

Applies Entire Project Area

Existing S&G 6. For all mechanical thinning treatments, design projects to retain all live conifers 30 direction inches DBH or larger. Exceptions are allowed to meet needs for equipment operability.

from the
2004 p. 50

Framework

ROD

S&G 6. For all thinning treatments, retain live conifer trees greater than 30 inches DBH

Project-

except in the case of imminent threat to life and property. When required and on an incidental specific plan

basis, individual trees less than 35 inches DBH may be removed for equipment operability.

amendment

OR

Attachment A - 35

ID STD-PROJ-1B

Action Modify component language - S&G 6.

Required for all amendments - more likely to have adverse effects.

Type

Use STD-PROJ-1A instead (above) if trying to reach a FONSI.

Applies Entire Project Area

Existing S&G 6. For all mechanical thinning treatments, design projects to retain all live conifers 30 direction inches DBH or larger. Exceptions are allowed to meet needs for equipment operability.

from the
2004 p. 50

Framework

ROD

S&G 6. For all treatments, design projects to retain live conifer trees greater than 30 inches DBH except in the case of imminent threat to life and property, or if one of the conditions below is met:

a) When required for equipment operability, individual trees less than 35 inches DBH may be removed on an incidental basis.

b) Outside of California spotted owl territories and where necessary to move towards vegetation desired conditions, live trees greater than 30 inches but less than 40 inches Project-

DBH may be felled to create coarse woody debris (where it's lacking), or removed, specific plan

under the following limited circumstances:

amendment

o When removing trees is needed for aspen, oak, or meadow restoration treatments or for cultural or Tribal importance.

o In overly-dense stands to favor retention or promote the growth of even larger or older shade-intolerant trees.

- o To improve the growth and vigor of rust-resistant sugar pine trees greater than 16 inches DBH by reducing competition from surrounding trees; or
- o Within homogeneous plantations, to reduce loss of large trees due to competition in overly dense stands.

This was adapted from TERR-FW-STD 01 in the Sierra LMP (p. 27) and incorporates CSO Reference

Strategy Approach 2: 3.D (p. 32).

Attachment A - 36

ID STD-PROJ-02

Action Add new standard.

Type Required for all amendments

Applies Entire Project Area

Existing

direction

from the

[None]

2004

Framework

ROD

Known nest, roost, rest, or den trees used by at-risk species, including surrounding trees that Project-

provide beneficial thermal or predatory protection, must not be purposefully removed, except specific plan

for the reasonably unavoidable removal of hazard trees and as required to meet other State or amendment

Federal regulatory requirements.

This was adapted from SPEC-FW-GDL 02 in the Sierra LMP (p. 49) and incorporates CSO Reference

Strategy Approach 1 Introduction (p. 25).

ID GDL-PROJ-01

Action Add new guideline.

Type Required for all amendments

Applies Entire Project Area

Existing

direction

from the

[None]

2004

Framework

ROD

To promote habitat connectivity at the watershed scale, when conducting vegetation

Project-

treatments in California spotted owl territories, retain connected areas of moderate and high specific plan

canopy cover in large/tall trees.

amendment

This was adapted from SPEC-CSO-GDL 04 in the Sierra LMP (p. 66) and incorporates CSO Reference Strategy Approach 1: Territory/Watershed Scale 2.C (p. 29).

Attachment A - 37

ID GDL-PROJ-02

Action Add new guideline.

Type Required for all amendments

Applies Entire Project Area

Existing

direction

from the

[None]

2004

Framework

ROD

To provide for continued availability of patches of nesting, roosting, and foraging habitat (6, 5D, 5M, and 4D in descending order of priority), in ecologically sustainable areas, consider aspect and position on slope as follows:

* On north and east facing slopes, drainages, swales and canyon bottoms - when

Project-

conducting treatments to improve resilience - maintain patches of large/tall trees with

specific plan

moderate and high canopy cover large enough to provide beneficial thermal or

amendment

predatory protection, amongst more heterogenous conditions. To facilitate movement,

retain connectivity between patches when possible.

* On south- and west-facing slopes and on ridges, prioritize restoration toward forest conditions resistant to stressors.

This was adapted from various components in the Sierra LMP and incorporates CSO Strategy

Reference

Approach 2: 1.A.1 (p. 30).

Attachment A - 38

ID GDL-PROJ-03

Action Add guideline for old forest connectivity

Type Required for all amendments

Applies Entire Project Area

S&G 27-31 pertain to old growth forest and are similar in intent - consider whether to add or replace them with amendment.

S&G 27. Minimize old forest habitat fragmentation. Assess potential impacts of fragmentation on old forest associated species (particularly fisher and marten) in biological evaluations.

Existing S&G 28. Assess the potential impact of projects on the connectivity of habitat for old forest direction associated species.

from the S&G 29. Consider retaining forested linkages (with canopy cover greater than 40 percent)

2004 that are interconnected via riparian areas and ridgetop saddles during project-level analysis. Framework S&G 30. If fishers are detected outside the southern Sierra fisher conservation area, evaluate ROD habitat conditions and implement appropriate mitigation measures to retain suitable habitat within the estimated home range. Institute project-level surveys over the appropriate area, as determined by an interdisciplinary team. S&G 31. Identify areas for acquisition, exchange, or conservation easements to enhance connectivity of habitat for old forest associated species.

p. 50-51

To promote connectivity of old-forest habitat by prioritizing restoration-focused treatments in Project-specific plan areas between isolated old-forest patches, avoid creating large areas of open canopy habitat (vegetation cover less than 30 percent) that would isolate patches of old, dense forest and amendment limit wildlife movement.

This adapted from SPEC-CSO-GDL 04 in the Sierra LMP (p. 66) and incorporates CSO Reference Strategy Approach 1: Territory 2.C (p. 29).

ID STD-SNAG-01

Action Add standard for snag retention

Type Optional

Applies Entire Project Area

Existing

direction

from the

[None]

2004

Framework

ROD

Project-

specific plan Retain all snags greater than 45 inches diameter unless they pose a threat to life or property. amendment

Reference This was adapted from SPEC-CSO-DC 01 in the Sierra LMP (p. 64).

Attachment A - 39

ID GDL-SNAG-01

Action Modify guideline for snag retention

Type Optional

Applies Entire Project Area

S&G 11. Determine snag retention levels on an individual project basis for vegetation treatments. Design projects to implement and sustain a generally continuous supply of snags and live decadent trees suitable for cavity nesting wildlife across a landscape. Retain some mid- and large diameter live trees that are currently in decline, have substantial wood defect, or that have desirable characteristics (teakettle branches, large diameter broken top, large cavities in the bole) to serve as future replacement snags and to provide nesting structure. When determining snag retention levels and locations, consider land allocation, desired condition, landscape position, potential prescribed burning and fire suppression line locations, and site conditions (such as riparian areas and ridge tops), avoiding uniformity across large areas.

General guidelines for large-snag retention are as follows:

- * westside mixed conifer and ponderosa pine types - four of the largest snags per acre

Existing

- * red fir forest type - six of the largest snags per acre

direction

- * eastside pine and eastside mixed conifer forest types - three of the largest snags per acre

2004

2004

- * westside hardwood ecosystems - four of the largest snags (hardwood or conifer) per

Framework

acre

ROD

- o where standing live hardwood trees lack dead branches - six of the largest snags per acre (where they exist to supplement wildlife needs for dead material).

Use snags larger than 15 inches dbh to meet this guideline. Snags should be clumped and distributed irregularly across the treatment units. Consider leaving fewer snags strategically located in treatment areas within the WUI.

When some snags are expected to be lost due to hazard removal or the effects of prescribed fire, consider these potential losses during project planning to achieve desired snag retention levels.

p. 51-52

Attachment A - 40

S&G 11.

To provide habitat for nesting, roosting, and denning wildlife, maintain a generally continuous supply of snags and live decadent trees suitable for cavity dwelling wildlife across a landscape.

Retain some mid- and large diameter live trees that are currently in decline, have substantial wood defect, or that have desirable characteristics (teakettle branches, large diameter broken top, large cavities in the bole) to serve as future replacement snags and to provide nesting structure.

Consider vegetation type and landscape position, potential prescribed burning and fire suppression line locations, and site conditions (such as riparian areas and ridge tops), avoiding uniformity across large areas.

Project-

General guidelines for large-snag retention are as follows:

specific plan

- * westside mixed conifer and ponderosa pine types - 25-40 of the largest snags per 10

amendment

acres

- * red fir forest type - 30 - 50 of the largest snags per 10 acres

- * eastside pine and eastside mixed conifer forest types - 15-30 of the largest snags per 10 acres

* westside hardwood ecosystems - 25-40 of the largest snags (hardwood or conifer) per 10 acres

Retain snags larger than 15 inches dbh (preferentially greater than 20 inches dbh) to meet this guideline. Retain snags in an irregular patchwork, with clumps and concentrations in drainages and on north- and east-facing slopes.

When some snags are expected to be lost due to hazard removal or the effects of prescribed fire, consider these potential losses during project planning to achieve desired snag retention levels.

Reference This incorporates CSO Strategy Approach 2: 3A-D (p. 31-32).

Attachment A - 41

3) Forest-wide Production Suitability

ID SUIT-CSO-01

Action Add timber suitability

Type Optional

Applies Entire Project Area

Existing

direction

from the

[None]

2004

Framework

ROD

Project-

California spotted owl PACs are not suitable for timber production. Timber harvest may be specific plan

authorized for safety and restoration toward desired conditions.

amendment

Reference 36 CFR 219.15(d)(4)

V. PRESCRIBED FIRE

ID GDL-RXB-01

Action Add guideline for prescribed burning

Type Optional

Applies Entire Project Area

Existing

direction

from the

[None]

2004

Framework

ROD

Attachment A - 42

Firing patterns, burn unit layout, and other firing and holding methods during burning should limit the killing of large old trees and loss of very large snags. Consider preventing delayed

tree mortality caused by smoldering at the base of large old trees and consider constructing fireline around large old trees and very large snags to reduce the risk of tree ignition while addressing firefighter safety. Limit fire intensity in areas with large old trees and very large snags where possible.

Project-
OR
specific

plan

To retain large old trees and very large snags important to old forest associated species, amendment

where possible given firefighter safety, prescribed burning operations should:

- * construct fireline around large trees and very large snags where appropriate;
- * develop firing patterns, burn unit layout, and firing and holding methods to:
- * avoid igniting large trees and very large snags;
- * limit fire intensity in areas with large old trees and very large snags.

Both have the same intent.

This was adapted from TERR-OLD-GDL 02 in the Sierra LMP (p. 107) and incorporates CSO

Reference

Strategy Approach 2: 3 (p. 31).

Notes: Treatments with prescribed burning and retention of nest trees and snags are not adequately considered in the Framework . Existing components limited thinning to 6" or less with no indication of spatial extent.

Burning standards and guidelines are added to direct operations that help produce DCs and management objectives within CSO PACs and Territories that provide the beneficial future habitat.

ID GDL-RXB-02

Action Add guideline for prescribed burning

Type Optional

Applies Entire Project Area

Existing

direction

from the

[None]

2004

Framework

ROD

To minimize the spatial extent of high-severity fire impacts on habitat in California spotted

Project-

owl territories, when implementing prescribed fire in the portion of the territory outside of the specific plan

PAC, limit the size of high-severity burn patches to generally not exceed 10 acres and to amendment

avoid exceeding 100 acres.

This was adapted from SPEC-CSO-GDL 07 in the Sierra LMP (p. 66) and incorporates CSO

Reference

Strategy Approach 2: 6.C.2 (p. 33).

Attachment A - 43

VI. POST-FIRE DISTURBANCE

ID DC-FIRE-01

Action Add desired conditions for forests post-fire

Type Optional

Applies Entire Project Area

Existing

direction

from the

[None]

2004

Framework

ROD

To provide future habitat for old-forest-associated species following a large-scale, high-severity disturbance in an area that had large trees and high canopy cover prior to the disturbance, identify, retain and promote the best available patches of remaining high-quality Project-

nesting, foraging, and denning habitat (6, 5D, 5M, 4D, 4M in descending order of priority).

specific plan

Desired conditions for amount, location, and configuration of retention should be informed by amendment

site conditions, aspect, position on slope, and the potential to restore habitat connectivity.

Exception: Modify as needed in WUI defense.

This was adapted from MA-WHMA-GDL 01 in the Sierra LMP (p. 107) and incorporates

Reference

CSO Strategy Approach 2: 7 (p. 33).

ID STD-DNA-01

Action Do Not Amend

Type Amendments Not Optional (Do Not Amend)

Applies Entire Project Area

Existing S&G 16. Outside of WUI defense zones, salvage harvests are prohibited in PACs and known direction den sites unless a biological evaluation determines that the areas proposed for harvest are from the rendered unsuitable for the purpose they were intended by a catastrophic stand-replacing 2004 event.

Framework

ROD p. 53

Reference See DES-PAC-02 for more information on retiring PACs prior to salvage harvest.

Attachment A - 44

VII. MONITORING

ID STD-MON-01

Action Add monitoring standard

Type Optional

Large landscape projects are strongly recommended, but not required, include this

Applies

component. Work with the RO to determine if the component should be included.

Acres of suitable habitat treated will be tracked yearly inside and outside of territories, and

Project-

owl occupancy in the project area will be monitored pre- and post-implementation following specific plan the Regional California spotted owl monitoring framework. amendment Reference See Region Office guidance on CSO Monitoring for more information.

Attachment A - 45

VIII. APPENDIX A: REQUIRED AMENDMENTS FOR PROJECTS SEEKING A FONSI

Table A1. List of all Required Amendments for Projects seeking a FONSI. These align closely with the Programmatic Biological Assessment's Class 1 Conservation Measures.

Group ID

PACs DES-PAC-01

PACs MGT-PAC-01

PACs GDL-PAC-01

PACs STD-PAC-01

PACs GDL-PAC-PB

PACs STD-PAC-02

Territories DES-TERR-01

Territories DES-TERR-02

Territories DC-TERR-1A

Territories STD-TERR-1A

Territories STD-TERR-02

Territories GDL-TERR-01

Territories GDL-TERR-02

Project-Wide STD-PROJ-1A

Project-Wide STD-PROJ-02

Project-Wide GDL-PROJ-01

Project-Wide GDL-PROJ-02

Project-Wide GDL-PROJ-03

Post-Fire Disturbance STD-DNA-01

Attachment A - 46

Table A2. Amendment components required for projects seeking a FONSI. This table can be copied into the project documentation.

ID Action Existing Direction from 2004 Framework Project-Specific Plan Amendment Applies

California Spotted Owl Protected Activity Center (PACs) Designation.

California Spotted Owl Protected Activity Center (PACs) Designation. California

California spotted owl protected activity centers (PACs) are delineated spotted owl protected activity centers (PACs) are defined by the following surrounding each territorial owl activity center detected on National Forest characteristics:

System lands since 1986. Owl activity centers are designated for all

* National Forest System lands surrounding territorial owls based on a territorial owls based on: (1) the most recent documented nest site, (2) the documented nest site; recent roost site if nest location is unknown; or most recent known roost site when a nest location remains unknown, and central point of repeated daytime detections when neither nest nor roost

(3) a central point based on repeated daytime detections when neither nest locations are known.

Modify or roost locations are known.

* 300 acres of nesting and roosting habitat in as compact a unit as component

possible, including all the elements (a through f) defined under HQNR

DES-PAC-01 language - PACs are delineated to: (1) include known and suspected nest stands and PACs habitat or, if HQNR is scarce, areas including at least the elements a

CSO PAC (2) encompass the best available 300 acres of habitat in as compact a unit

Designation as possible. The best available habitat is selected for California spotted through c listed under BANRF habitat.

* Includes sites that provide the most sustainable nesting and roosting

owl PACs to include: (1) two or more tree canopy layers; (2) trees in the

dominant and co-dominant crown classes averaging 24 inches dbh or habitat that currently meets near-term habitat needs to support

greater; (3) at least 70 percent tree canopy cover (including hardwoods); reproductive success and can be resilient to natural disturbances and

and (4) in descending order of priority, CWHR classes 6, 5D, 5M, 4D, and climate change.

4M and other stands with at least 50 percent canopy cover (including

PACs may be delineated using a variety of tools including field verification,

hardwoods). Aerial photography interpretation and field verification are

aerial photography interpretation or other remotely sensed data as needed.

used as needed to delineate PACs. p. 37

Direction for locating area treatments is included in the standards and Direction for locating area treatments is included in the standards and guidelines

Modify guidelines in Part D of this appendix. Treatment patterns are to be in Part D of this appendix. Treatment patterns are to be developed using a

component developed using a collaborative, multi-stakeholder approach. Resource collaborative, multi-stakeholder approach. Resource considerations factored into

language - considerations factored into the strategic placement of fuels treatments the strategic placement of fuels treatments include objectives for locating

MGT-PAC-01 PACs

Fires and Fuel include objectives for locating treatments to overlap areas of condition treatments to overlap areas of condition class 2 and 3, high density stands, and

Management class 2 and 3, high density stands, and pockets of insect and disease. pockets of insect and disease. Treatment areas should only overlap PACs to the

Strategy Treatment areas are located to avoid PACs to the greatest extent possible. extent necessary to reduce the threat of habitat loss due to wildfire. Treatments

p. 35 shall avoid reducing habitat quality in the HQNR habitat within PACs.

S&G 1. Strategic placement of fuels treatments should also consider objectives

S&G 1. Strategic placement of fuels treatments should also consider

for locating treatment areas to overlap with areas of condition class 2 and 3, high

objectives for locating treatment areas to overlap with areas of condition

density stands, and pockets of insect and disease. Treatment areas should only

class 2 and 3, high density stands, and pockets of insect and disease. Avoid

overlap PACs to the extent necessary to reduce the threat of habitat loss due to

Modify PACs to the greatest extent possible when locating area treatments.

wildfire. Treatments shall avoid reducing habitat quality in the HQNR habitat

component Incorporate areas that already contribute to wildfire behavior modification,

GDL-PAC-01 within PACs. Incorporate areas that already contribute to wildfire behavior PACs

language - including timber sales, burned areas, bodies of water, and barren ground,

modification, including timber sales, burned areas, bodies of water, and barren
S&G 1. into the landscape treatment area pattern. Identify gaps in the landscape
ground, into the landscape treatment area pattern. Identify gaps in the landscape
pattern where fire could spread at some undesired rate or direction and use
pattern where fire could spread at some undesired rate or direction and use
treatments (including maintenance treatments and new fuels treatments) to
treatments (including maintenance treatments and new fuels treatments) to fill
fill identified gaps.

identified gaps.

Remove In California spotted owl PACs, all management activities must maintain or
S&G 7. For mechanical thinning treatments in mature forest habitat

STD-PAC-01 components improve habitat quality in HQNR habitat by: PACs
(CWHR types 4M, 4D, 5M, 5D, and 6) outside WUI defense zones:

and add new

Attachment A - 47

language - 1. Maintaining or improving existing CWHR class (do not reduce 5D to

* Within California spotted owl PACs: Where treatment is

S&G 7 (within necessary, remove only material needed to meet project fuels 5M);

PACs), 72, 73, 2. Retaining clumps of the largest available trees greater than 24 inches
objectives. Focus on removal of surface and ladder fuels.

and 74. DBH; and

S&G 72. Mechanical treatments may be conducted to meet fuels 3. Retaining at least two canopy layers at
the stand/patch scale in areas

where large trees occur.

objectives in protected activity centers (PACs) located in WUI defense

zones. In PACs located in WUI threat zones, mechanical treatments are
allowed where prescribed fire is not feasible and where avoiding PACs Where necessary to increase long-term
resilience, vegetation treatments that may

reduce near-term habitat quality may be authorized in up to 100 acres of a PAC

would significantly compromise the overall effectiveness of the landscape

fire and fuels strategy. Mechanical treatments should be designed to outside of HQNR habitat. Throughout PACs
all vegetation treatments must:

maintain habitat structure and function of the PAC. * Retain the largest/oldest trees, known nest trees, and other
large trees

and snags with cavities, deformities, broken tops, or other habitat

S&G 73. While mechanical treatments may be conducted in protected features of value to old forest
species;

activity centers (PACs) located in WUI defense zones and, in some cases, * Retain connected areas of moderate
(at least 40 percent) and high (at

threat zones, they are prohibited within a 500-foot radius buffer around a

least 60 percent) canopy cover between the known nest site (if nest site

spotted owl activity center within the designated PAC. Prescribed burning

is not known, use the most recent known roost site) and areas in the rest

is allowed within the 500-foot radius buffer. Hand treatments, including of the PAC;

handline construction, tree pruning, and cutting of small trees (less than 6

* Avoid mechanical treatments within a 10-acre area surrounding the

inches DBH), may be conducted prior to burning as needed to protect

most recent known nest;

important elements of owl habitat. Treatments in the remainder of the PAC

* Avoid creating new landings, new temporary roads, or canopy gaps use the forest-wide standards and guidelines for mechanical thinning. larger than 0.25 acres comprising no more than 5 acres in total;

* Increase the QMD of trees at the PAC scale; and

S&G 74. In PACs located outside the WUI, limit stand-altering activities

* Maintain the average canopy cover of the PAC above 50 percent.

to reducing surface and ladder fuels through prescribed fire treatments. In

forested stands with overstory trees 11 inches dbh and greater, design Prescribed burning is allowed within the 10 acres surrounding a nest tree or prescribed fire treatments to have an average flame length of 4 feet or less. structure. Pre-treatment in preparation of prescribed burning may be conducted Hand treatments, including handline construction, tree pruning, and prior to burning, as needed, including handline construction, tree pruning, and cutting of small trees (less than 6 inches dbh), may be conducted prior to cutting of small trees (less than 8 inches DBH). burning as needed to protect important elements of owl habitat.

Exceptions:

This standard may be modified as specified in WUI defense zones or when constructing a fuelbreak where avoiding overlap with a PAC is not feasible. To limit fragmentation and maintain connectivity of HQNR and BANRF habitat, construction of fuelbreaks should avoid intersecting with California spotted owl PACs. Treatments in WUI defense zones and creation of a fuelbreaks must:

* Avoid the 10 acres surrounding the most recent known nest site;

* Avoid existing HQNR habitat; and

* Maintain at least 40 percent overstory canopy cover and 10 percent understory cover in shaded fuelbreaks, whenever fuels and fire behavior objectives can be met with this level of vegetation retention.

Attachment A - 48

To restore forest vegetation within California spotted owl PAC, when practical based on existing conditions, use prescribed fire, alone or in combination with S&G 74.

mechanical thinning,

In PACs located outside the WUI, limit stand-altering activities to

Modify reducing surface and ladder fuels through prescribed fire treatments. In GDL-PAC-

To minimize loss or damage to known nest and roost trees, include mitigation guideline for forested stands with overstory trees 11 inches dbh and greater, design PB measures when conducting prescribed fire in PACs.

prescribed prescribed fire treatments to have an average flame length of 4 feet or less. PACs

(contextual

burning - Hand treatments, including handline construction, tree pruning, and To minimize impacts to overstory canopy and provide conditions for continued addendum)

S&G 74 cutting of small trees (less than 6 inches dbh), may be conducted prior to use for nesting and roosting within PACs, reduce fuel loads with thinning and/or burning as needed to protect important elements of owl habitat. prescribed burning to minimize the risk of high-severity fire and promote

conditions that lead to lower intensity predicted fire effects (generally flame lengths averaging 4 to 6 feet).

S&G 33: Before authorizing and before implementing mechanical vegetation treatments within existing PACs or vegetation treatments in CSO nesting and S&G 33: Conduct surveys in compliance with the Pacific Southwest roosting habitat of unknown occupancy, forests must follow current guidance for Region's survey protocols during the planning process when proposed Modify

the Pacific Southwest region to:

vegetation treatments are likely to reduce habitat quality in suitable component

California spotted owl habitat with unknown occupancy. Designate * Determine occupancy status; PACs STD-PAC-02

language -

California spotted owl protected activity centers (PACs) where appropriate * Identify owl nest sites (where nest location is not known, the most

S&G 33.

based on survey results. recent daytime roost); and

* Delineate new or modify existing PACs and territories, as necessary, within the project area.

Modify

component

language - Old A network of land allocations, including California spotted owl and A network of land allocations, including California spotted owl and northern

DES-TERR-

Forest northern goshawk protected activity centers (PACs), California spotted goshawk protected activity centers (PACs), California spotted owl territories,

Territories

Ecosystem and owl home range core areas, forest carnivore den sites, and the southern forest carnivore den sites, and the southern Sierra fisher conservation area, with

01

Associated Sierra fisher conservation area, with management direction [...] p. 31 management direction [...]

Species

Strategy

California Spotted Owl Home Range Core Areas (HRCAs)

California Spotted Owl Territories Designation Territories are defined by the Designation. A home range core area is established surrounding each following characteristics: A 1,000-acre circle, which includes the 300-acre PAC, territorial spotted owl activity center detected after 1986. The core area surrounding territorial owls, centered on a documented nest site or roost site if amounts to 20 percent of the area described by the sum of the average nest location is unknown or central point of repeated daytime detections when breeding pair home range plus one standard error. Home range core area neither nest nor roost locations are known.

sizes are as follows: 2,400 acres on the Hat Creek and Eagle Lake Ranger

* Territory boundaries should include the entire PAC and be adjusted to Districts of the Lassen National Forest, 1,000 acres on the Modoc, Inyo, include suitable habitat in the most sustainable areas (moist vegetation DES-TERR-

Humboldt-Toiyabe, Plumas, Tahoe, Eldorado, Lake Tahoe Basin Territories types and site conditions, often in drainages or on north-facing slopes)

02

Management Unit and Stanislaus National Forests and on the Almanor and to exclude unsuitable habitat.

Ranger District of Lassen National Forest, and 600 acres of the Sequoia

* Contains diverse structural and seral conditions to facilitate nesting, and Sierra National Forests. roosting, and foraging.

* May overlap adjacent territories.

Aerial photography is used to delineate the core area. Acreage for the

* Territories are established and retired together with PACs.

entire core area is identified on national forest lands. Core areas

encompass the best available California spotted owl habitat in the closest

Attachment A - 49

proximity to the owl activity center. The best available contiguous habitat Contextually required for all projects that are adjacent to non-national forest

is selected to incorporate, in descending order of priority, CWHR classes lands that have known CSO nest sites: 6, 5D, 5M, 4D and 4M and other stands with at least 50 percent tree When activities are planned adjacent to non-national forest lands containing

canopy cover (including hardwoods). The acreage in the 300-acre PAC known CSO nest stands, a 1,000-acre circle territory should be delineated around

counts toward the total home range core area. Core areas are delineated known CSO activity centers on non-national forest lands. Any part of the circular

within 1.5 miles of the activity center. core area that lies on national forest lands is designated and managed as a CSO

territory.

When activities are planned adjacent to non-national forest lands, circular core areas are delineated around California spotted owl activity centers on non-national forest lands. Using the best available habitat as described above, any part of the circular core area that lies on national forest lands is designated and managed as a California spotted owl home range core area.

California Spotted Owl Home Range Core Areas (HRCAs) Desired Conditions

HRCAs consist of large habitat blocks that have: (1) at least two tree canopy layers; (2) at least 24 inches DBH in dominant and co-dominant trees; (3) a number of very large (greater than 45 inches DBH) old trees; (4) at least 50 to 70 percent canopy cover; and (5) higher than average California Spotted Owl Territories Desired Conditions levels of snags and down woody material.

At least 60 percent of each California spotted owl territory, including the PAC,

consists of HQNR habitat in large enough patches to provide interior stand

California Spotted Owl Home Range Core Areas (HRCAs)

conditions (generally 1 to 2 tree heights from an edge) surrounded by BANRF,

Replace HRCAs Management Objectives:

preferably with a greater proportion of HQNR to BANRF, particularly closer to desired Establish and maintain a pattern of fuels treatments that is effective in the nest. The remainder of the territory consists of a diversity of many different DC-TERR- condition with modifying wildfire behavior. Design treatments in HRCAs to be structure and canopy classes. Territories

Territory economically efficient and to promote forest health where consistent with 1A

desired habitat objectives.

For areas where multiple territories comprise over 75 percent of a watershed condition

(typically a HUC 12 unit and greater than 10,000 acres in size) at least 30-50 California Spotted Owl Home Range Core Areas (HRCAs) percent of the watershed consists of the HQNR and BANRF habitat and the Management Intent:

remainder of the territory consists of a diversity of many different structure and Treat fuels using a landscape approach for strategically placing area canopy classes.

treatments to modify fire behavior. Retain existing suitable habitat, recognizing that habitat within treated areas may be modified to meet fuels objectives. Accelerate development of currently unsuitable habitat (in non-habitat inclusions, such as plantations) into suitable condition. Arrange treatment patterns and design treatment prescriptions to avoid the highest quality habitat (CWHR types 5M, 5D, and 6) wherever possible.

S&G 7. For mechanical thinning treatments in mature forest habitat

1. When a territory contains less than 60 percent HQNR and BANRF (CWHR types 4M, 4D, 5M, 5D, and 6) outside WUI defense zones:

habitat, maintain or improve all HQNR and BANRF habitat

Modify * Design projects to retain at least 40 percent of the existing basal wherever it exists throughout the territory.

STD-TERR-

component area. The retained basal area should generally be comprised of 2. When a territory contains 60 percent or more HQNR and BANRF

Territories

1

language - the largest trees. habitat, retain at least 60% suitable habitat. Treatments will promote 1A

S&G 7. heterogenous structure across the territory and prioritize maintaining

* Where available, design projects to retain 5 percent or more of the total treatment area in lower layers composed of trees 6 to 24 or improving HQNR habitat in drainages and north- or east-facing slopes.

inches dbh within the treatment unit.

Attachment A - 50

* Design projects to avoid reducing pre-existing canopy cover by more than 30 percent within the treatment unit. Percent is measured in absolute terms (for example, canopy cover at 80 percent should not be reduced below 50 percent.)

* Within treatment units, at a minimum, the intent is to provide for an effective fuels treatment. Where existing vegetative

conditions are at or near 40 percent canopy cover, projects are to be designed remove the material necessary to meet fire and fuels objectives.

* Within California spotted owl Home Range Core Areas:

Where existing vegetative conditions permit, design projects to retain at least 50 percent canopy cover averaged within the treatment unit. Exceptions are allowed in limited situations where additional trees must be removed to adequately reduce ladder fuels, provide sufficient spacing for equipment operations, or minimize re-entry. Where 50 percent canopy cover retention cannot be met for reasons described above, retain at least 40 percent canopy cover averaged within the treatment unit.

* Outside of California spotted owl Home Range Core Areas:

Where existing vegetative conditions permit, design projects to retain at least 50 percent canopy cover within the treatment unit. Exceptions are allowed where project objectives require additional canopy modification (such as the need to adequately reduce ladder fuels, provide for safe and efficient equipment operations, minimize re-entry, design cost efficient treatments, and/or significantly reduce stand density.) Where canopy cover must be reduced below 50 percent, retain at least 40 percent canopy cover averaged within the treatment unit.

When mechanical treatments create canopy gaps within California spotted owl territories, but outside of PACs, individual openings shall not exceed 1.25 acres
STD-TERR-

Add new

[None] (and should generally not exceed 0.5 acre) and shall not comprise more than 30 Territories
standard

02

percent of the total area in the territory. This includes openings created for the construction of landings or temporary roads (restricted to 1.0 mile or less).

To promote high-quality nesting and denning habitat for old-forest-associated species, thinning in CSO territories to increase heterogeneity and resilience

GDL-TERR- Add new should retain the oldest and largest trees and large trees with habitat features

[None] Territories

guideline (such as deformities, broken tops, large branches, and cavities) that benefit these

01

wildlife species. Desired conditions for large tree density vary by vegetation type and site conditions.

GDL-TERR- Add new To facilitate development of future nest sites, vegetation treatments in California

[None] Territories

guideline spotted owl territories should:

02

Attachment A - 51

* Promote growth of trees greater than 24 inches DBH and especially large trees, and

* Retain clumps or groups of trees greater than 24 inches DBH and/or 100 feet tall, and especially trees greater than 30 inches DBH and/or 150 feet tall, with canopy cover greater than 60 to 70 percent.

Modify S&G 6. For all thinning treatments, retain live conifer trees greater than 30

S&G 6. For all mechanical thinning treatments, design projects to retain STD-PROJ- component inches DBH except in the case of imminent threat to life and property. When Project- all live conifers 30 inches DBH or larger. Exceptions are allowed to meet language - required and on an incidental basis, individual trees less than 35 inches DBH may wide

1A

needs for equipment operability.

S&G 6. be removed for equipment operability.

Known nest, roost, rest, or den trees used by at-risk species, including surrounding trees that provide beneficial thermal or predatory protection, must

STD-PROJ- Add new Project-

[None] not be purposefully removed, except for the reasonably unavoidable removal of standard wide

02

hazard trees and as required to meet other State or Federal regulatory requirements.

To promote habitat connectivity at the watershed scale, when conducting

GDL- Add new Project-

[None] vegetation treatments in California spotted owl territories, retain connected areas guideline wide

PROJ-01

of moderate and high canopy cover in large/tall trees.

To provide for continued availability of patches of nesting, roosting, and foraging habitat (6, 5D, 5M, and 4D in descending order of priority), in ecologically sustainable areas, consider aspect and position on slope as follows:

- * On north and east facing slopes, drainages, swales and canyon bottoms - when conducting treatments to improve resilience - maintain patches

GDL-

Add new Project-

[None] of large/tall trees with moderate and high canopy cover large enough guideline wide

PROJ-02

to provide beneficial thermal or predatory protection, amongst more heterogenous conditions. To facilitate movement, retain connectivity between patches when possible.

- * On south- and west-facing slopes and on ridges, prioritize restoration toward forest conditions resistant to stressors.

[S&G 27-31 pertain to old growth forest and are similar in intent - consider whether to add or replace them with amendment.]

S&G 27. Minimize old forest habitat fragmentation. Assess potential impacts of fragmentation on old forest associated species (particularly fisher and marten) in biological evaluations.

Add/modify S&G 28. Assess the potential impact of projects on the connectivity of To promote connectivity of old-forest habitat by prioritizing restoration-focused

GDL-

guideline for habitat for old forest associated species. treatments in areas between isolated old-forest patches, avoid creating large areas Project-

old forest S&G 29. Consider retaining forested linkages (with canopy cover greater of open canopy habitat (vegetation cover less than 30 percent) that would isolate

wide

PROJ-03

connectivity than 40 percent) that are interconnected via riparian areas and ridgetop patches of old, dense forest and limit wildlife movement.

saddles during project-level analysis.

S&G 30. If fishers are detected outside the southern Sierra fisher conservation area, evaluate habitat conditions and implement appropriate mitigation measures to retain suitable habitat within the estimated home range. Institute project-level surveys over the appropriate area, as determined by an interdisciplinary team.

Attachment A - 52

S&G 31. Identify areas for acquisition, exchange, or conservation easements to enhance connectivity of habitat for old forest associated species.

S&G 16. Outside of WUI defense zones, salvage harvests are prohibited in PACs and known den sites unless a biological evaluation determines that Project-STD-DNA-01 Do Not Amend [Do not remove]
the areas proposed for harvest are rendered unsuitable for the purpose they were intended by a catastrophic stand-replacing event.

Attachment A - 53

IX. APPENDIX B: REQUIRED AMENDMENTS FOR PROJECTS EVALUATING SIGNIFICANT EFFECTS

Table B1. List of all Required Amendments for Projects that are evaluating potential significant effects. These align closely with the Programmatic Biological Assessment's Class 2 and Class 3 Conservation Measures.

Group ID

PACs DES-PAC-01

PACs MGT-PAC-01

PACs GDL-PAC-01

PACs STD-PAC-01

PACs GDL-PAC-PB

PACs STD-PAC-02

Territories DES-TERR-01

Territories DES-TERR-02

Territories DC-TERR-1B

Territories STD-TERR-1B

Territories STD-TERR-02

Territories GDL-TERR-01

Territories GDL-TERR-02

Project-Wide STD-PROJ-1B

Project-Wide STD-PROJ-02

Project-Wide GDL-PROJ-01

Project-Wide GDL-PROJ-02

Project-Wide GDL-PROJ-03

Post-Fire Disturbance STD-DNA-01

Attachment A - 54

Table B2. Amendment components required for projects that are examining significant effects. This table can be

copied into the
project documentation.

ID Action Existing Direction from 2004 Framework Project-Specific Plan Amendment Applies
California Spotted Owl Protected Activity Center (PACs) Designation.

California Spotted Owl Protected Activity Center (PACs) Designation. California
California spotted owl protected activity centers (PACs) are delineated
spotted owl protected activity centers (PACs) are defined by the following
surrounding each territorial owl activity center detected on National Forest
characteristics:

System lands since 1986. Owl activity centers are designated for all
* National Forest System lands surrounding territorial owls based on a
territorial owls based on: (1) the most recent documented nest site, (2) the
documented nest site; recent roost site if nest location is unknown; or
most recent known roost site when a nest location remains unknown, and
central point of repeated daytime detections when neither nest nor roost
(3) a central point based on repeated daytime detections when neither nest
locations are known.

Modify or roost locations are known.

* 300 acres of nesting and roosting habitat in as compact a unit as
component

possible, including all the elements (a through f) defined under HQNR
DES-PAC-01 language - PACs are delineated to: (1) include known and suspected nest stands and PACs
habitat or, if HQNR is scarce, areas including at least the elements a
CSO PAC (2) encompass the best available 300 acres of habitat in as compact a unit
through c listed under BANRF habitat.

Designation as possible. The best available habitat is selected for California spotted

* Includes sites that provide the most sustainable nesting and roosting
owl PACs to include: (1) two or more tree canopy layers; (2) trees in the
dominant and co-dominant crown classes averaging 24 inches dbh or habitat that currently meets near-term
habitat needs to support
greater; (3) at least 70 percent tree canopy cover (including hardwoods); reproductive success and can be
resilient to natural disturbances and
climate change.

and (4) in descending order of priority, CWHR classes 6, 5D, 5M, 4D, and
4M and other stands with at least 50 percent canopy cover (including
PACs may be delineated using a variety of tools including field verification,
hardwoods). Aerial photography interpretation and field verification are
aerial photography interpretation or other remotely sensed data as needed.
used as needed to delineate PACs. p. 37

Direction for locating area treatments is included in the standards and Direction for locating area treatments is
included in the standards and guidelines

Modify guidelines in Part D of this appendix. Treatment patterns are to be in Part D of this appendix. Treatment
patterns are to be developed using a
component developed using a collaborative, multi-stakeholder approach. Resource collaborative, multi-
stakeholder approach. Resource considerations factored into
language - considerations factored into the strategic placement of fuels treatments the strategic placement of
fuels treatments include objectives for locating

MGT-PAC-01 PACs

Fires and Fuel include objectives for locating treatments to overlap areas of condition treatments to overlap areas
of condition class 2 and 3, high density stands, and

Management class 2 and 3, high density stands, and pockets of insect and disease. pockets of insect and

disease. Treatment areas should only overlap PACs to the extent necessary to reduce the threat of habitat loss due to wildfire. Treatments

p. 35 shall avoid reducing habitat quality in the HQNR habitat within PACs.

S&G 1. Strategic placement of fuels treatments should also consider objectives

S&G 1. Strategic placement of fuels treatments should also consider

for locating treatment areas to overlap with areas of condition class 2 and 3, high

objectives for locating treatment areas to overlap with areas of condition

density stands, and pockets of insect and disease. Treatment areas should only

class 2 and 3, high density stands, and pockets of insect and disease. Avoid

overlap PACs to the extent necessary to reduce the threat of habitat loss due to

Modify PACs to the greatest extent possible when locating area treatments.

wildfire. Treatments shall avoid reducing habitat quality in the HQNR habitat

component Incorporate areas that already contribute to wildfire behavior modification,

GDL-PAC-01 within PACs. Incorporate areas that already contribute to wildfire behavior PACs

language - including timber sales, burned areas, bodies of water, and barren ground,

modification, including timber sales, burned areas, bodies of water, and barren

S&G 1. into the landscape treatment area pattern. Identify gaps in the landscape

ground, into the landscape treatment area pattern. Identify gaps in the landscape

pattern where fire could spread at some undesired rate or direction and use

pattern where fire could spread at some undesired rate or direction and use

treatments (including maintenance treatments and new fuels treatments) to

treatments (including maintenance treatments and new fuels treatments) to fill

fill identified gaps.

identified gaps.

Attachment A - 55

In California spotted owl PACs, all management activities must maintain or improve habitat quality in HQNR habitat by:

1. Maintaining or improving existing CWHR class (do not reduce 5D to 5M);

2. Retaining clumps of the largest available trees greater than 24 inches DBH; and

S&G 7. For mechanical thinning treatments in mature forest habitat

3. Retaining at least two canopy layers at the stand/patch scale in areas

(CWHR types 4M, 4D, 5M, 5D, and 6) outside WUI defense zones:

where large trees occur.

* Within California spotted owl PACs: Where treatment is

necessary, remove only material needed to meet project fuels

Where necessary to increase long-term resilience, vegetation treatments that may objectives. Focus on removal of surface and ladder fuels.

reduce near-term habitat quality may be authorized in up to 100 acres of a PAC

outside of HQNR habitat. Throughout PACs all vegetation treatments must:

S&G 72. Mechanical treatments may be conducted to meet fuels

* Retain the largest/oldest trees, known nest trees, and other large trees

objectives in protected activity centers (PACs) located in WUI defense

and snags with cavities, deformities, broken tops, or other habitat

zones. In PACs located in WUI threat zones, mechanical treatments are

features of value to old forest species;

allowed where prescribed fire is not feasible and where avoiding PACs

- * Retain connected areas of moderate (at least 40 percent) and high (at least 60 percent) canopy cover between the known nest site (if nest site fire and fuels strategy. Mechanical treatments should be designed to is not known, use the most recent known roost site) and areas in the rest

Remove

maintain habitat structure and function of the PAC.

of the PAC;

components

- * Avoid mechanical treatments within a 10-acre area surrounding the and add new S&G 73. While mechanical treatments may be conducted in protected most recent known nest;

language - PACs

STD-PAC-01 activity centers (PACs) located in WUI defense zones and, in some cases,

- * Avoid creating new landings, new temporary roads, or canopy gaps

S&G 7 (within threat zones, they are prohibited within a 500-foot radius buffer around a larger than 0.25 acres comprising no more than 5 acres in total;

PACs), 72, 73, spotted owl activity center within the designated PAC. Prescribed burning

- * Increase the QMD of trees at the PAC scale; and

and 74.

is allowed within the 500-foot radius buffer. Hand treatments, including

- * Maintain the average canopy cover of the PAC above 50 percent.

handline construction, tree pruning, and cutting of small trees (less than 6

inches DBH), may be conducted prior to burning as needed to protect

Prescribed burning is allowed within the 10 acres surrounding a nest tree or

important elements of owl habitat. Treatments in the remainder of the PAC

structure. Pre-treatment in preparation of prescribed burning may be conducted

use the forest-wide standards and guidelines for mechanical thinning.

prior to burning, as needed, including handline construction, tree pruning, and

cutting of small trees (less than 8 inches DBH).

S&G 74. In PACs located outside the WUI, limit stand-altering activities

to reducing surface and ladder fuels through prescribed fire treatments. In

Exceptions:

forested stands with overstory trees 11 inches dbh and greater, design

This standard may be modified as specified in WUI defense zones or when

prescribed fire treatments to have an average flame length of 4 feet or less.

constructing a fuelbreak where avoiding overlap with a PAC is not feasible. To

Hand treatments, including handline construction, tree pruning, and

limit fragmentation and maintain connectivity of HQNR and BANRF habitat,

cutting of small trees (less than 6 inches dbh), may be conducted prior to

construction of fuelbreaks should avoid intersecting with California spotted owl

burning as needed to protect important elements of owl habitat.

PACs. Treatments in WUI defense zones and creation of a fuelbreaks must:

- * Avoid the 10 acres surrounding the most recent known nest site;

- * Avoid existing HQNR habitat; and

- * Maintain at least 40 percent overstory canopy cover and 10 percent

understory cover in shaded fuelbreaks, whenever fuels and fire

behavior objectives can be met with this level of vegetation retention.

Attachment A - 56

To restore forest vegetation within California spotted owl PAC, when practical based on existing conditions, use prescribed fire, alone or in combination with S&G 74.

mechanical thinning,

In PACs located outside the WUI, limit stand-altering activities to

Modify reducing surface and ladder fuels through prescribed fire treatments. In GDL-PAC-

To minimize loss or damage to known nest and roost trees, include mitigation guideline for forested stands with overstory trees 11 inches dbh and greater, design PB measures when conducting prescribed fire in PACs.

prescribed fire treatments to have an average flame length of 4 feet or less. PACs

(contextual

burning - Hand treatments, including handline construction, tree pruning, and To minimize impacts to overstory canopy and provide conditions for continued addendum)

S&G 74 cutting of small trees (less than 6 inches dbh), may be conducted prior to use for nesting and roosting within PACs, reduce fuel loads with thinning and/or burning as needed to protect important elements of owl habitat. prescribed burning to minimize the risk of high-severity fire and promote

conditions that lead to lower intensity predicted fire effects (generally flame lengths averaging 4 to 6 feet).

S&G 33: Before authorizing and before implementing mechanical vegetation treatments within existing PACs or vegetation treatments in CSO nesting and

S&G 33: Conduct surveys in compliance with the Pacific Southwest roosting habitat of unknown occupancy, forests must follow current guidance for Region's survey protocols during the planning process when proposed

Modify

the Pacific Southwest region to:

vegetation treatments are likely to reduce habitat quality in suitable component

California spotted owl habitat with unknown occupancy. Designate * Determine occupancy status; PACs

STD-PAC-02

language -

California spotted owl protected activity centers (PACs) where appropriate * Identify owl nest sites (where nest location is not known, the most

S&G 33.

based on survey results. recent daytime roost); and

* Delineate new or modify existing PACs and territories, as necessary, within the project area.

Modify

component

language - Old A network of land allocations, including California spotted owl and A network of land allocations, including California spotted owl and northern

DES-TERR-

Forest northern goshawk protected activity centers (PACs), California spotted goshawk protected activity centers

(PACs), California spotted owl territories,

Territories

Ecosystem and owl home range core areas, forest carnivore den sites, and the southern forest carnivore den sites, and the southern Sierra fisher conservation area, with

01

Associated Sierra fisher conservation area, with management direction [...] p. 31 management direction [...]

Species

Strategy

California Spotted Owl Home Range Core Areas (HRCAs)

California Spotted Owl Territories Designation Territories are defined by the Designation. A home range core area is established surrounding each following characteristics: A 1,000-acre circle, which includes the 300-acre PAC, territorial spotted owl activity center detected after 1986. The core area surrounding territorial owls, centered on a documented nest site or roost site if amounts to 20 percent of the area described by the sum of the average nest location is unknown or central point of repeated daytime detections when breeding pair home range plus one standard error. Home range core area neither nest nor roost locations are known.

sizes are as follows: 2,400 acres on the Hat Creek and Eagle Lake Ranger

* Territory boundaries should include the entire PAC and be adjusted to Districts of the Lassen National Forest, 1,000 acres on the Modoc, Inyo, include suitable habitat in the most sustainable areas (moist vegetation DES-TERR-

Humboldt-Toiyabe, Plumas, Tahoe, Eldorado, Lake Tahoe Basin Territories types and site conditions, often in drainages or on north-facing slopes)

02

Management Unit and Stanislaus National Forests and on the Almanor and to exclude unsuitable habitat.

Ranger District of Lassen National Forest, and 600 acres of the Sequoia

* Contains diverse structural and seral conditions to facilitate nesting, and Sierra National Forests. roosting, and foraging.

* May overlap adjacent territories.

Aerial photography is used to delineate the core area. Acreage for the

* Territories are established and retired together with PACs.

entire core area is identified on national forest lands. Core areas

encompass the best available California spotted owl habitat in the closest

Attachment A - 57

proximity to the owl activity center. The best available contiguous habitat Contextually required for all projects that are adjacent to non-national forest

is selected to incorporate, in descending order of priority, CWHR classes lands that have known CSO nest sites: 6, 5D, 5M, 4D and 4M and other stands with at least 50 percent tree When activities are planned adjacent to non-national forest lands containing

canopy cover (including hardwoods). The acreage in the 300-acre PAC known CSO nest stands, a 1,000-acre circle territory should be delineated around

counts toward the total home range core area. Core areas are delineated known CSO activity centers on non-national forest lands. Any part of the circular

within 1.5 miles of the activity center. core area that lies on national forest lands is designated and managed as a CSO

territory.

When activities are planned adjacent to non-national forest lands, circular core areas are delineated around California spotted owl activity centers on non-national forest lands. Using the best available habitat as described above, any part of the circular core area that lies on national forest lands is designated and managed as a California spotted owl home range core area.

California Spotted Owl Home Range Core Areas (HRCAs) Desired Conditions

HRCAs consist of large habitat blocks that have: (1) at least two tree canopy layers; (2) at least 24 inches DBH in dominant and co-dominant trees; (3) a number of very large (greater than 45 inches DBH) old trees; (4) at least 50 to 70 percent canopy cover; and (5) higher than average California Spotted Owl Territories Desired Conditions

levels of snags and down woody material. At least 50 to 60 percent (depending on the terrestrial vegetation type and site

conditions) of each California spotted owl territory, including the PAC, consists

California Spotted Owl Home Range Core Areas (HRCAs) of HQNR habitat in large enough patches to provide interior stand conditions

Replace HRCA Management Objectives: (generally 1 to 2 tree heights from an edge) surrounded by BANRF, preferably

desired Establish and maintain a pattern of fuels treatments that is effective in with a greater proportion of HQNR to BANRF, particularly closer to the nest.

DC-TERR- Condition with modifying wildfire behavior. Design treatments in HRCAs to be The remainder of the territory consists of a diversity of many different structure

Territories

Territory economically efficient and to promote forest health where consistent with and canopy classes.

1B

Desired habitat objectives.

Condition For areas where multiple territories comprise over 75 percent of a watershed

California Spotted Owl Home Range Core Areas (HRCAs) (typically a HUC 12 unit and greater than 10,000 acres in size) at least 30-50

Management Intent: percent of the watershed consists of the HQNR and BANRF habitat and the

Treat fuels using a landscape approach for strategically placing area remainder of the territory consists of a diversity of many different structure and

treatments to modify fire behavior. Retain existing suitable habitat, canopy classes.

recognizing that habitat within treated areas may be modified to meet fuels

objectives. Accelerate development of currently unsuitable habitat (in non-

habitat inclusions, such as plantations) into suitable condition. Arrange

treatment patterns and design treatment prescriptions to avoid the highest

quality habitat (CWHR types 5M, 5D, and 6) wherever possible.

1. In California spotted owl territories that do not currently meet the territory

S&G 7. For mechanical thinning treatments in mature forest habitat

desired condition (DC-TERR-01B), maintain or improve all HQNR and

(CWHR types 4M, 4D, 5M, 5D, and 6) outside WUI defense zones:

Modify BANRF habitat wherever it exists throughout the territory.

STD-TERR- component

Territories

* Design projects to retain at least 40 percent of the existing basal

language - 2. If DC-TERR-01 has been met,

1B

area. The retained basal area should generally be comprised of

1

&G 7. a. When a territory consists of a majority of moist habitat types and the largest trees.

2

contains 60 percent or more HQNR and BANRF habitat, retain at least 60% suitable habitat. Treatments will promote heterogenous

Attachment A - 58

structure across the territory and prioritize maintaining or improving

* Where available, design projects to retain 5 percent or more of the total treatment area in lower layers composed of trees 6 to 24 HQNR habitat in drainages and north- or east-facing slopes.

1

b. When a territory consists of a majority of moist habitat types and inches dbh within the treatment unit.

contains less than 60 percent HQNR and BANRF habitat, maintain or

* Design projects to avoid reducing pre-existing canopy cover by improve all HQNR and BANRF habitat wherever it exists throughout more than 30 percent within the treatment unit. Percent is the territory. Treatments will promote heterogenous structure across the measured in absolute terms (for example, canopy cover at 80 territory.

percent should not be reduced below 50 percent.) 4

c. When a territory consists of a majority of dry habitat types and

2

contains 60% or more HQNR and BANRF habitat, retain at least 50%

* Within treatment units, at a minimum, the intent is to provide for suitable habitat. Treatments will promote heterogenous structure across an effective fuels treatment. Where existing vegetative the territory and prioritize maintaining or improving HQNR habitat conditions are at or near 40 percent canopy cover, projects are to in drainages and north- or east-facing slopes.

be designed remove the material necessary to meet fire and fuels

1

d. When a territory consists of a majority of dry habitat types and objectives.

contains less than 60 percent HQNR and BANRF habitat, maintain or

* Within California spotted owl Home Range Core Areas: improve all HQNR habitat wherever it exists throughout the territory,

5

Where existing vegetative conditions permit, design projects to and retain at least 50 percent of suitable habitat. Treatments will

retain at least 50 percent canopy cover averaged within the promote heterogenous structure across the territory. treatment unit. Exceptions are allowed in limited situations

where additional trees must be removed to adequately reduce Exception:

ladder fuels, provide sufficient spacing for equipment

* For territories occurring in WUI defense zones, within high risk

6

operations, or minimize re-entry. Where 50 percent canopy

fireshed areas , or in territories that contain unavoidable placement of

2

cover retention cannot be met for reasons described above, retain fuelbreaks, retain at least 40 percent of the

territory (including the
at least 40 percent canopy cover averaged within the treatment
PAC) in suitable habitat. Treatments will promote heterogenous
unit.

structure across the territory and prioritize maintaining or improving
HQNR habitat in drainages and north- or east-facing slopes.

* Outside of California spotted owl Home Range Core Areas:

Where existing vegetative conditions permit, design projects to
retain at least 50 percent canopy cover within the treatment unit.
Exceptions are allowed where project objectives require
additional canopy modification (such as the need to adequately
reduce ladder fuels, provide for safe and efficient equipment
operations, minimize re-entry, design cost efficient treatments,
and/or significantly reduce stand density.) Where canopy cover

4

Moist and dry habitat types can be determined based on vegetation type or physiographical attributes such as
ridge tops and south or west facing slopes for dry
territories and drainages and north or west facing slopes for moist.

5

Retain refers to the extent of habitat. It does not prevent treatments.

6

High risk fireshed areas are Fireshed Registry Project Areas (areas delineated by regular-sized units as
specified in RMRS-GTR-425) that have a Managed

Stands Average Annual Exposure greater than or equal to 3.0. For a list of these areas, see Table 8 and Figure 1

Attachment A - 59

must be reduced below 50 percent, retain at least 40 percent
canopy cover averaged within the treatment unit.

When mechanical treatments create canopy gaps within California spotted owl
territories, but outside of PACs, individual openings shall not exceed 1.25 acres

STD-TERR- Add new

[None] (and should generally not exceed 0.5 acre) and shall not comprise more than 30 Territories
standard

02

percent of the total area in the territory. This includes openings created for the
construction of landings or temporary roads (restricted to 1.0 mile or less).

To promote high-quality nesting and denning habitat for old-forest-associated
species, thinning in CSO territories to increase heterogeneity and resilience

GDL-TERR- Add new should retain the oldest and largest trees and large trees with habitat features

[None] Territories

01 guideline (such as deformities, broken tops, large branches, and cavities) that benefit these
wildlife species. Desired conditions for large tree density vary by vegetation type
and site conditions.

To facilitate development of future nest sites, vegetation treatments in California
spotted owl territories should:

* Promote growth of trees greater than 24 inches DBH and especially

GDL-TERR-

Add new

[None] large trees, and Territories

guideline

02

* Retain clumps or groups of trees greater than 24 inches DBH and/or 100 feet tall, and especially trees greater than 30 inches DBH and/or 150 feet tall, with canopy cover greater than 60 to 70 percent.

S&G 6. For all treatments, design projects to retain live conifer trees greater than 30 inches DBH except in the case of imminent threat to life and property, or if one of the conditions below is met:

a) When required for equipment operability, individual trees less than 35 inches DBH may be removed on an incidental basis.

b) Outside of California spotted owl territories and where necessary to move towards vegetation desired conditions, live trees greater than 30 inches but less than 40 inches DBH may be felled to create coarse

Modify

S&G 6. For all mechanical thinning treatments, design projects to retain woody debris (where it's lacking), or removed, under the following

STD-PROJ- component Project-

all live conifers 30 inches DBH or larger. Exceptions are allowed to meet limited circumstances:

language - wide

1B

needs for equipment operability. o When removing trees is needed for aspen, oak, or meadow

S&G 6.

restoration treatments or for cultural or Tribal importance.

o In overly-dense stands to favor retention or promote the growth of even larger or older shade-intolerant trees.

o To improve the growth and vigor of rust-resistant sugar pine trees greater than 16 inches DBH by reducing competition from surrounding trees; or

o Within homogeneous plantations, to reduce loss of large trees due to competition in overly dense stands.

Known nest, roost, rest, or den trees used by at-risk species, including surrounding trees that provide beneficial thermal or predatory protection, must

STD-PROJ- Add new Project-

[None] not be purposefully removed, except for the reasonably unavoidable removal of standard wide

02

hazard trees and as required to meet other State or Federal regulatory requirements.

Attachment A - 60

To promote habitat connectivity at the watershed scale, when conducting

GDL- Project-

Add new

[None] vegetation treatments in California spotted owl territories, retain connected areas guideline

wide

PROJ-01

of moderate and high canopy cover in large/tall trees.

To provide for continued availability of patches of nesting, roosting, and foraging habitat (6, 5D, 5M, and 4D in descending order of priority), in ecologically sustainable areas, consider aspect and position on slope as follows:

* On north and east facing slopes, drainages, swales and canyon bottoms

- when conducting treatments to improve resilience - maintain patches

GDL- Add new Project-

[None] of large/tall trees with moderate and high canopy cover large enough guideline wide

PROJ-02

to provide beneficial thermal or predatory protection, amongst more heterogenous conditions. To facilitate movement, retain connectivity between patches when possible.

* On south- and west-facing slopes and on ridges, prioritize restoration toward forest conditions resistant to stressors.

[S&G 27-31 pertain to old growth forest and are similar in intent - consider whether to add or replace them with amendment.]

S&G 27. Minimize old forest habitat fragmentation. Assess potential impacts of fragmentation on old forest associated species (particularly fisher and marten) in biological evaluations.

S&G 28. Assess the potential impact of projects on the connectivity of habitat for old forest associated species.

Add/modify S&G 29. Consider retaining forested linkages (with canopy cover greater To promote connectivity of old-forest habitat by prioritizing restoration-focused

GDL- Project-

guideline for than 40 percent) that are interconnected via riparian areas and ridgetop treatments in areas between isolated old-forest patches, avoid creating large areas old forest saddles during project-level analysis. of open canopy habitat (vegetation cover less than 30 percent) that would isolate

wide

PROJ-03

connectivity S&G 30. If fishers are detected outside the southern Sierra fisher patches of old, dense forest and limit wildlife movement.

conservation area, evaluate habitat conditions and implement appropriate mitigation measures to retain suitable habitat within the estimated home range. Institute project-level surveys over the appropriate area, as determined by an interdisciplinary team.

S&G 31. Identify areas for acquisition, exchange, or conservation easements to enhance connectivity of habitat for old forest associated species.

S&G 16. Outside of WUI defense zones, salvage harvests are prohibited in PACs and known den sites unless a biological evaluation determines that Project-STD-DNA-01 Do Not Amend [Do not remove] the areas proposed for harvest are rendered unsuitable for the purpose they wide were intended by a catastrophic stand-replacing event.

Attachment A - 61

X. APPENDIX C: OPTIONAL AMENDMENTS

Table C1. Optional amendment components.

Group ID

PACs DES-PAC-02

PACs DC-PAC-01

PACs STD-PAC-03

PACs STD-PAC-04

PACs GDL-PAC-02

Territories GDL-TERR-03

Project-wide DC-SNAG-01
Project-wide DC-ECOS-01
Project-wide DC-ECOS-02
Project-wide DC-OLD-01
Project-wide DC-OLD-02
Project-wide DC-OLD-03
Project-wide DC-OLD-04
Project-wide DC-OLD-05
Project-wide DC-OLD-06
Project-wide MAN-NEST-01
Project-wide STD-SNAG-01
Project-wide GDL-SNAG-01
Project-wide SUIT-CSO-01
Prescribed Fire GDL-RXB-01
Prescribed Fire GDL-RXB-02
Post-Fire Disturbance DC-FIRE-01

Attachment A - 62

Table C2. Optional amendment components. You may retain the Framework language or amend it using these components.

ID Action Existing Direction from 2004 Framework Project-Specific Plan Amendment Applies
California Spotted Owl Protected Activity Centers Designation:

PAC retirement after disturbance or long-term lack of occupancy
Existing PACs and territories may not be retired unless loss of suitable habitat or
long-term occupancy criteria are met as defined in the 2019 Conservation
California Spotted Owl Protected Activity Centers Designation:
Strategy for the California Spotted Owl in the Sierra Nevada, or more current

Modify guidance for the Pacific Southwest Region.

PACs are maintained regardless of California spotted owl occupancy status.
component

DES-PAC- However, after a stand replacing event, evaluate habitat conditions within a
language - Before authorizing vegetation treatments in California spotted owl territories
PACs

1.5-mile radius around the activity center to identify opportunities for re-
02

CSO PAC affected by a large-scale, high-severity disturbance event, assess habitat
mapping the PAC. If there is insufficient suitable habitat for designating a
Designation conditions within a 1.5-mile radius of the most recent nest (where the nest is not
PAC within the 1.5-mile radius, the PAC may be removed from the network.
known, the most recent daytime roost) to determine whether to modify or retire
p. 37

existing PACs and territories following the 2019 Conservation Strategy for the
California Spotted Owl in the Sierra Nevada, or more current guidance from the
Pacific Southwest Region. If adequate suitable habitat remains, modify the
boundary of the PAC to encompass the best remaining 300 acres of HQNR and
BANRF habitat as per DES-PAC-01.

Modify California Spotted Owl Protected Activity Centers Desired Conditions:
component PACs provide high-quality nesting and roosting habitat that contributes to

language - California Spotted Owl Protected Activity Centers Desired Conditions: successful reproduction of California spotted owls. PACs encompass habitat that

PAC Desired Stands in each PAC have: (1) at least two tree canopy layers; (2) dominant is essential for nesting and roosting, as defined by the following characteristics:

Conditions and co-dominant trees with average diameters of at least 24 inches DBH; (3) The habitat has a high canopy cover (including large clumps of more than 70

DC-PAC-01 at least 60 to 70 percent canopy cover; (4) some very large snags (greater percent canopy cover), with multiple layers of tree canopy, and many large PACs

than 45 inches DBH); and (5) snag and down woody material levels that are trees, very large trees, and snags (including some greater than 45 inches in

higher than average. p. 37 diameter). Basal area and tree density tend toward the upper end of the range of desired conditions for the vegetation type. Large tree density, snag density, and

coarse woody debris align with the old-forest desired conditions for the relevant forest vegetation type.

S&G 75. For California spotted owl PACs: Maintain a limited operating Limited Operating Period (LOP) period (LOP), prohibiting vegetation treatments within approximately ¼ mile To minimize disturbance that may lead to breeding failure, during the early

of the activity center during the breeding season (March 1 through August breeding season (March 1 to July 9, or following current Pacific Southwest

31), unless surveys confirm that California spotted owls are not nesting. regional guidance) apply a LOP within 0.25 mile of the nest prohibiting:

Prior to implementing activities within or adjacent to a California spotted * activities that only generate noise or smoke (e.g., prescribed burning,

Replace

owl PAC and the location of the nest site or activity center is uncertain, hand thinning);

STD-PAC- Components

conduct surveys to establish or confirm the location of the nest or activity PACs

* discretionary low-level helicopter flights or hovering over nests; and

- S&G 75

03

center.

* discretionary landing of helicopters.

and 77

For mechanical treatment, including helicopter logging, within approximately

S&G 77. The LOP may be waived for vegetation treatments of limited scope

0.25 mile of the nest or known roost site, apply a LOP during the breeding

and duration, when a biological evaluation determines that such projects are

season from March 1 to August 31 or following current Pacific Southwest

unlikely to result in breeding disturbance considering their intensity, regional guidance.

duration, timing and specific location. Where a biological evaluation

Attachment A - 63

concludes that a nest site would be shielded from planned activities by

topographic features that would minimize disturbance, the LOP buffer

Where the location of a nest site within a PAC is unknown, apply the limited

distance may be modified.

operating period to the entire PAC or determine the nest site location.

Exceptions:

The limited operating period may be modified or waived by the responsible official under the following circumstances:

1. Waived if monitoring or surveys indicate that nesting owls are absent (refer to current Pacific Southwest regional guidance).
2. Waived or modified for activities addressing imminent threats to life and property.
3. Waived or modified for activities of limited scope and duration, if a biologist determines that such activity is unlikely to result in breeding disturbance based on the intensity, duration, timing, and specific location.
4. The limited operating period buffer distance may be modified based upon a biologist's evaluation of the area needed to shield a nest site from disturbance considering topographic features, vegetation, or other screening.
5. Waived or modified for prescribed burning in up to 10 percent of PACs per year per national forest where necessary to facilitate the benefits of using early season prescribed fire.*

Add

STD-PAC-

Standard for When conducting mechanical thinning within California spotted owl PACs,

[None] PACs

PAC DBH retain live conifer trees greater than 20 inches DBH.

04

Limit

S&G 71. Within the assessment area or watershed, locate fuels treatments to minimize impacts to PACs. PACs may be re-mapped during project planning To minimize potential impacts to California spotted owl reproductive success, to avoid intersections with treatment areas, provided that the re-mapped vegetation treatments that may reduce habitat quality in the near term should be PACs contain habitat of equal quality and include known nest sites and minimized or avoided in PACs with the highest likely contribution to important roost sites. Document PAC adjustments in biological evaluations. reproductive success, otherwise occupancy status is prioritized as follows (from Replace highest to lowest priority for treatment):

GDL-PAC-

Component When treatment areas must intersect PACs and choices can be made about 1. Currently unoccupied and historically occupied by territorial singles

PACs

02

- S&G 71 which PACs to enter, use the following criteria to preferentially avoid PACs only. that have the highest likely contribution to owl productivity: 2. Currently unoccupied and historically occupied by pairs.

* lowest contribution to productivity: PACs presently unoccupied and 3. Currently occupied by territorial singles. historically occupied by territorial singles only. 4. Currently occupied by pairs.

* PACs presently unoccupied and historically occupied by pairs, 5. Currently occupied by pairs and currently or recently reproductive.

* PACs presently occupied by territorial singles,

Attachment A - 64

* PACs presently occupied by pairs,

* highest contribution to productivity: PACs currently or historically

reproductive.

Historical occupancy is considered occupancy since 1990. Current occupancy is based on surveys consistent with survey protocol (March 1992) in the last 2-3 years prior to project planning. These dates were chosen to encompass the majority of survey efforts and to include breeding pulses in the early 1990s when many sites were found to be productive. When designing treatment unit intersections with PACs, limit treatment acres to those necessary to achieve strategic placement objectives and avoid treatments adjacent to nest stands whenever possible.

If nesting or foraging habitat in PACs is mechanically treated, mitigate by adding acreage to the PAC equivalent to the treated acres using adjacent acres of comparable quality wherever possible.

Add

Guideline

GDL- When conducting mechanical thinning treatments in California spotted owl for DBH [None] Territories

territories, retain live shade-intolerant conifers greater than 24 inches DBH.

TERR-04

Limits in

Territories

Add Desired

Large snags are scattered across the landscape, generally occurring in clumps

DC-SNAG- Conditions Project-

[None] rather than uniformly and evenly distributed, meeting the needs of species that for large

wide

01

use snags and providing for future downed logs.

snags

Persistent populations of native, and desirable nonnative, plant and animal

Add Desired species are supported by healthy ecosystems, essential ecological processes, and

DC-ECOS- Project-

Conditions land stewardship activities, and reflect the diversity, quantity, quality, and

[None]

for capability of natural habitats on the Forest. These ecosystems are also resilient to

wide

01

ecosystems uncharacteristic fire, climate change, and other stressors, and this resilience

supports the long-term sustainability of plant and animal communities.

Ecological conditions for at-risk species support self-sustaining populations

within the inherent capabilities of the plan area, including minimizing impacts

Add Desired

from threats (such as disease and other site-specific threats). Ecological

Conditions

DC-ECOS- conditions provide habitat conditions that Project-

for [None]

* contribute to the survival, recovery, and delisting of species under the

wide

02

ecological

Endangered Species Act;

conditions

* preclude the need for listing new species;

* and improve conditions for species of conservation concern.

Old-forest areas are clumps and patches of old-forest components such as old

Add Desired

DC-OLD- trees, snags, and large downed logs. These areas are irregularly distributed Project-

Conditions [None]

across the landscape and interspersed with stands of younger trees, shrubs, wide

01

for old forest

meadows, other herbaceous vegetation, and unvegetated patches.

Attachment A - 65

The composition, structure, and functions of old forests and surrounding

Add Desired landscapes are resilient to fire, drought, insects, pathogens, and climate change.

DC-OLD-

Project-

Conditions [None] Fire occurs as a key ecological process in forest types that are adapted to fire,

wide

02

for old forest creating, restoring, and maintaining ecosystem resilience and fire-related

composition and structure.

The landscape contains a mosaic of vegetation types and structures that provide

Add Desired foraging and breeding habitat, movement, and connectivity for a variety of old-

DC-OLD- Project-

Conditions [None] forest-associated species. Areas of moderate to high canopy cover composed

wide

03

for old forest primarily of large trees provide habitat connectivity for old-forest-associated

species in key habitat corridors such as canyon bottoms and drainages.

Old forests are composed of both vigorous trees and decadent trees. Clumps of

Add Desired large trees, snags, large logs, and decadent older trees are maintained on the

DC-OLD- Project-

Conditions [None] landscape in sufficient numbers to benefit wildlife and are distributed throughout

wide

04

for old forest the planning area, considering constraints imposed by climate change, fire,

insects, disease, and drought.

Add Desired Coarse woody debris is distributed in patches and the density of large downed

DC-OLD- Project-

Conditions [None] logs varies by vegetation type. Surface dead wood levels are sufficient to

05 wide

for old forest provide for wildlife and legacy soil microbial populations.

For mechanical thinning treatments in mature forest habitat (CWHR classes 4M,

4D, 5M, 5D, and 6) outside WUI defense zones:

Where old trees larger than 24 inches DBH exist, the number and density of old

trees vary by topographic position and soil moisture. In general, more large and

old trees are found on moister sites; on lower slopes, bottoms, and north and east

Add Desired aspects, especially where soils are deeper. Large trees are well distributed but are

DC-OLD- Project-

Conditions [None] often clumpy. The densities vary by forest type.

wide

06

for old forest

Trees greater than 40 inches DBH, generally over 150 years old, represent the oldest trees, and comprise a significant proportion of large and old trees. In areas of high soil productivity, trees may grow to large sizes in fewer than 100 years. On low and very low soil productivity sites, the oldest trees may be smaller in diameter. Enough younger trees are present to provide for recruitment of old trees over time.

Add Desired

Conditions The _____ National Forest supports conditions for a sustainable network of

MAN- Project-

for CSO nest [None] dynamic, resilient, and widely distributed California spotted owl nest or roost

NEST-01 wide

sites across sites and habitat across heterogeneous landscapes.

landscape

Add

STD- standard for Retain all snags greater than 45 inches diameter unless they pose a threat to life Project- [None]

snag or property.

wide

SNAG-01

retention

S&G 11. Determine snag retention levels on an individual project basis for To provide habitat for nesting, roosting, and denning wildlife, maintain a

GDL- Modify Project-

vegetation treatments. Design projects to implement and sustain a generally generally continuous supply of snags and live decadent trees suitable for cavity guideline for

wide

SNAG-01

continuous supply of snags and live decadent trees suitable for cavity nesting dwelling wildlife across a landscape.

Attachment A - 66

snag wildlife across a landscape. Retain some mid- and large diameter live trees

retention that are currently in decline, have substantial wood defect, or that have Retain some mid- and large diameter live trees that are currently in decline, have

desirable characteristics (teakettle branches, large diameter broken top, large substantial wood defect, or that have desirable characteristics (teakettle

cavities in the bole) to serve as future replacement snags and to provide branches, large diameter broken top, large cavities in the bole) to serve as future

nesting structure. When determining snag retention levels and locations, replacement snags and to provide nesting structure.

consider land allocation, desired condition, landscape position, potential

prescribed burning and fire suppression line locations, and site conditions Consider vegetation type and landscape position, potential prescribed burning

(such as riparian areas and ridge tops), avoiding uniformity across large and fire suppression line locations, and site conditions (such as riparian areas

areas. and ridge tops), avoiding uniformity across large areas.

General guidelines for large-snag retention are as follows: General guidelines for large-snag retention are as follows:

- * westside mixed conifer and ponderosa pine types - four of the * westside mixed conifer and ponderosa pine types - 25-40 of the largest

snags per 10 acres

largest snags per acre

- * red fir forest type - 30 - 50 of the largest snags per 10 acres

- * red fir forest type - six of the largest snags per acre

- * eastside pine and eastside mixed conifer forest types - 15-30 of the

- * eastside pine and eastside mixed conifer forest types - three of the

largest snags per 10 acres

largest snags per acre

- * westside hardwood ecosystems - 25-40 of the largest snags (hardwood

- * westside hardwood ecosystems - four of the largest snags

or conifer) per 10 acres

(hardwood or conifer) per acre

o where standing live hardwood trees lack dead branches -

Retain snags larger than 15 inches dbh (preferentially greater than 20 inches

six of the largest snags per acre (where they exist to

dbh) to meet this guideline. Retain snags in an irregular patchwork, with clumps

supplement wildlife needs for dead material).

and concentrations in drainages and on north- and east-facing slopes.

Use snags larger than 15 inches dbh to meet this guideline. Snags should be

When some snags are expected to be lost due to hazard removal or the effects of

clumped and distributed irregularly across the treatment units. Consider

prescribed fire, consider these potential losses during project planning to achieve

leaving fewer snags strategically located in treatment areas within the WUI.

desired snag retention levels.

When some snags are expected to be lost due to hazard removal or the

effects of prescribed fire, consider these potential losses during project

planning to achieve desired snag retention levels.

SUIT-CSO- Add Timber California spotted owl PACs are not suitable for timber production. Timber Project-

[None]

Suitability harvest may be authorized for safety and restoration toward desired conditions.

wide

01

Firing patterns, burn unit layout, and other firing and holding methods during

burning should limit the killing of large old trees and loss of very large snags.

Consider preventing delayed tree mortality caused by smoldering at the base of

Add

large old trees and consider constructing fireline around large old trees and very

Guideline

GDL-RXB- large snags to reduce the risk of tree ignition while addressing firefighter safety. Prescribed

for [None]

Limit fire intensity in areas with large old trees and very large snags where

Fire
01
prescribed
possible.
burning

OR

Attachment A - 67

To retain large old trees and very large snags important to old forest associated species, where possible given firefighter safety, prescribed burning operations should:

- * construct fireline around large trees and very large snags where appropriate;
- * develop firing patterns, burn unit layout, and firing and holding methods to:
- * avoid igniting large trees and very large snags;
- * limit fire intensity in areas with large old trees and very large snags.

Both have the same intent.

Add

To minimize the spatial extent of high-severity fire impacts on habitat in

Guideline

GDL-RXB- California spotted owl territories, when implementing prescribed fire in the Prescribed for [None]

portion of the territory outside of the PAC, limit the size of high-severity burn

Fire

02

prescribed

patches to generally not exceed 10 acres and to avoid exceeding 100 acres.

burning

To provide future habitat for old-forest-associated species following a large-scale, high-severity disturbance in an area that had large trees and high canopy cover prior to the disturbance, identify, retain and promote the best available

Add Desired

patches of remaining high-quality nesting, foraging, and denning habitat (6, 5D,

DC-FIRE- Conditions Post-Fire

[None] 5M, 4D, 4M in descending order of priority). Desired conditions for amount, for forests

Disturbance

01

location, and configuration of retention should be informed by site conditions,

post-fire

aspect, position on slope, and the potential to restore habitat connectivity.

Exception: Modify as needed in WUI defense.

Acres of suitable habitat treated will be tracked yearly inside and outside of

Add

STD-MON- territories, and owl occupancy in the project area will be monitored pre- and Project-monitoring [None]

post-implementation following the Regional California spotted owl monitoring

01 wide

standard
framework.
Attachment A - 68

XI. APPENDIX D: HIGH RISK FIRESHEDS

Figure D1. Map of Fireshed Registry Project Areas that may use alternate STD-TERR-1B.

Attachment A - 69

Table D1. Fireshed Registry Project Areas that may use alternate DC-TERR-01.

Average Annual

Project Area

Fireshed Name Acres Exposure (Managed

1

ID

Stands)

Martinez, California 17099 27,958 10.56

Martinez, California 17095 23,922 9.64

Martinez, California 17097 27,958 9.04

Oakhurst, California 18808 24,211 7.37

Martinez, California 17093 27,382 6.30

Martinez, California 17101 29,111 5.77

Martinez, California 17098 28,247 5.66

Martinez, California 17094 26,806 4.64

Oakhurst, California 18814 27,668 4.62

Lake Forest, California 15269 30,263 3.96

1

Fireshed Registry Project Areas are areas delineated by regular-sized units as specified in RMRS-GTR-425.

They are not NEPA

Project Areas.

XII. APPENDIX E: CALIFORNIA WILDLIFE HABITAT RELATIONSHIPS

Table E1. Suitable habitat for the CSO using the California Wildlife Habitat Relationships (CWHR). Taken from Table 2 of the 2019 CSO Strategy.

CHWR Tree Size CWHR Canopy Class Canopy Cover

Classification QMD

4D 11 to 24" Dense cover 60 to 100 percent

4M 11 to 24" Moderate cover 40 to 59 percent

5D more than 24" Dense cover 60 to 100 percent

5M more than 24" Moderate cover 40 to 59 percent

6 more than 24" Multilayered canopy with dense cover

Attachment A - 70

XIII. ACRONYMS, ABBREVIATIONS, AND GLOSSARY

Basal Area. The cross-sectional surface area, at DBH, of an individual tree

BA

or tree boles in an area.

CSO California Spotted Owl (*Strix occidentalis occidentalis*)
 California Wildlife Habitat Relationships. See Table 2. in the 2019 CSO
 CWHR
 Strategy for further definition.
 DBH Diameter at breast-height.
 Mechanical
 The felling and removal of trees using heavy machinery.
 Treatment
 Any structure in or on which a CSO breeding pair has chosen for their nest
 Nest Structure
 site.
 PAC Protected Activity Center.
 Quadratic Mean Diameter. The diameter of a tree that has the average basal
 QMD
 area of trees in the stand.
 rSDI Relative Stand Density Index. See SDI.
 Stand Density Index. Used to predict carrying capacity and competition of a
 SDI
 stand.
 Uniform collection of trees in a contiguous area that is distinguishable from
 Stand
 other collections of trees and managed separately.
 Vegetation
 Activities that alter the vegetative condition of the treatment area.
 Treatment

Attachment B - 1

Pacific Southwest Region | June 2024
 Region 5 California Spotted Owl Project-Specific Plan
 Amendment
 Tahoe Basin Management Unit) or the Framework
 Background
 (Eldorado, Lassen, Modoc, Plumas, Stanislaus, and
 Recent projects within the 2004 Sierra Nevada
 Tahoe national forests) must use the Region 5
 Forest Plan Amendment (i.e., "Framework")
 project-specific amendment.
 footprint have been incorporating project-specific
 plan amendments regarding California spotted owl
 (CSO) habitat. These amendments are intended to
 align with the management recommendations in the
 2019 California Spotted Owl Conservation Strategy
 (Conservation Strategy).

January 2024 Regional Forester Direction

A letter from Regional Forester Jennifer Eberlien
 directed Framework forests with projects that
 contain Conservation Strategy related amendments
 to coordinate with the Regional Office and use

consistent amendment language. In response, Region 5 Ecosystem Planning, working with Region 5 Ecosystem Management, has developed plan amendment components that are required for Figure 1 Region 5 forests falling within the footprint of the 2004 projects that 1) may impact California spotted owl Sierra Nevada Forest Plan Amendment (outlined in red) are required to use the June 2024 Region 5 amendment components if pursuing a habitat in the Sierra Nevada and 2) are pursuing a project-specific amendment that would affect California spotted owls. project-specific forest plan amendment.

Is the project-specific plan amendment process June 2024 Project-Specific Plan required for all projects?

Amendment Components

No, the amendment process is NOT required. If The Region 5 California Spotted Owl Project-forests choose to align projects with the Framework Specific Plan Amendment components incorporate or their existing land management plan, there is no updated scientific information given the need to need for an amendment.

update our management approaches due to wildfire

How were the project-specific plan amendment threats to California spotted owl. The amendment components developed?

components are provided to ensure consistency and The amendment components were developed efficiency in project planning and Endangered collaboratively based on forest plan content in the Species Act consultation.

2023 Sierra and Sequoia Forest Plans and modified Projects that require a project-specific amendment based on 1) lessons learned from recent project-to align with their revised land management plans specific forest plan amendments, 2) feedback from (Inyo, Sierra, and Sequoia national forests and Lake Attachment B - 2

internal and external engagement, and 3) the draft process of incorporating the amendment California Spotted Owl programmatic consultation. components into projects.

How does the project-specific plan amendment How do we get started? differ from the Framework?

If your forest is considering a project-specific plan

The project-specific plan amendment addresses amendment, contact Region 5 Ecosystem wildfire threats to both forest and owls by balancing Planning for support as early as possible, ideally treatments with habitat conservation. Specifically, prior to scoping. Early coordination is especially the project-specific plan amendment components important because the amendment will affect differ from the Framework plan content in the project design and there are specific public following ways: notification requirements throughout the amendment process. Through early and continued

* Shifts from mapping home range core areas

coordination, we can ensure the intent of the (HRCAs) to territories;

amendment is carried out in the project design and

- * Allows more intensive treatment in reflected in the analysis efficiently and effectively. territories;

- * Allows for more reduction of canopy cover in territories;

Project

Pre-scoping Project Design

- * Includes a wider range of suitable habitat in Analysis

the desired condition, and steers activities to produce more heterogenous habitat;

- * Allows limited treatments in protected

Figure 2 If considering a project-specific plan amendment, engage with the regional office prior to scoping, and during project design activity centers (PACs); and analysis.

- * Contains plan content with lower habitat retention thresholds in wildland urban interface (WUI) Defense Zones, fuelbreaks, components be shared publicly? and areas identified as being very high risk We will publish the project-specific plan amendment in fire risk assessments.

components on the Region 5 planning website (external).

Forest staff and leadership are encouraged to share the

Do the project-specific plan amendment website link with partners and other interested components align with Endangered Species Act stakeholders, as appropriate. consultation?

Where can I find more information or support?

The project-specific plan amendment components

- * Project-specific plan amendment components are in-line with the options in the programmatic and supporting resources are available at the Biological Assessment that Region 5 Ecosystem CSO Project Specific Plan Amendment Management developed in coordination with the SharePoint site (internal).

U.S. Fish and Wildlife Service. The amendment can * Region 5 guidance for mapping CSO territories is also available on Pinyon (internal).

guide project design to align with the programmatic

consultation, which will significantly increase * For more information about the amendment process, contact Regional Planner, Michael project planning efficiency.

Carson, michael.carson@usda.gov.

Can changes be made to the project-specific plan

amendment components?

The project-specific plan amendment components are a "living document" that may be updated by the Regional Office based on what we learn through the

Logo Department Organization Information Organization Address Information
Attachment C - 1
Forest Service Pacific Southwest Region Regional Office, R5
1323 Club Drive
Vallejo, CA 94592

(707) 562-8737
TDD: (707) 562-9240

File Code: 1920; 2670 Date: June 25, 2024

Route To:

Subject: R5 CSO Project-Specific Plan Amendment

To: Forest Supervisors for Eldorado, Inyo, Lassen, Modoc, Plumas, Stanislaus, Sequoia, Sierra, and Tahoe National Forests and the Lake Tahoe Basin Management Unit

In January 2024, Regional Forester Jennifer Eberlien directed forests with projects that contain 2019 California Spotted Owl (CSO) Conservation Strategy-related amendments to work with the Regional Office on the plan amendment process and use consistent amendment language. In support of that updated policy, Region 5 Ecosystem Planning, working with Region 5 Ecosystem Management, has developed plan amendment components (attached) that are required for projects that may impact California spotted owl habitat in the Sierra Nevada and are pursuing a project-specific forest plan amendment.

Forests are not required to pursue project-specific amendments if projects align with their revised land management plans (Inyo, Sierra, and Sequoia national forests and Lake Tahoe Basin Management Unit) or the 2004 Sierra Nevada Forest Plan Amendment "Framework" (Eldorado, Lassen, Modoc, Plumas, Stanislaus, and Tahoe National Forests).

The new amendment components incorporate updated scientific information based on the 2019 California Spotted Owl Conservation Strategy and the need to adapt our management approaches due to wildfire threats to spotted owl habitat. The amendment components were developed collaboratively based on forest plan content in the 2023 Sierra and Sequoia Forest Plans and modified based on lessons learned from recent project-specific forest plan amendments, feedback from internal and external engagement, and the draft CSO Programmatic Consultation. The plan amendment components may be updated by the Regional Office based on lessons learned as the components are incorporated into projects.

A key outcome of the collaborative process was alignment with the draft programmatic Biological Assessment that Ecosystem Management developed in coordination with the U.S. Fish and Wildlife Service. You can use the amendment to guide your project design in a way that will align with the programmatic consultation, which will significantly increase the efficiency of your planning process.

This information will be shared with biologists, planners, and natural resource staff on your forests in the coming weeks and supporting materials will be available on the CSO Project Specific Plan Amendment SharePoint site (internal) as they become available. We will also be publishing the amendment components on our public-facing Region 5 planning website

(expected publication week of July 1) and encourage you to share a link to the website with interested partners and stakeholders, as appropriate. If you have any questions about the plan America's Working Forests - Caring Every Day in Every Way Printed on Recycled Paper Attachment C - 2

Forest Supervisors for Eldorado, Inyo, Lassen, Modoc, Plumas, Stanislaus, Sequoia, Sierra, and Tahoe National Forests and the Lake Tahoe Basin Management Unit 2 amendment components or amendment process, please contact Regional Planner Michael Carson, Michael.Carson@usda.gov.

DEB BUMPUS
Director, Ecosystem Planning (Acting)

Project-specific Plan Amendment Components, Fact Sheet

cc: Liz Berger, Diana Craig, Michael Carson, Talitha Derksen

Conservation measures for draft PBO for California spotted owl (USFWS and Forest Service) Attachment D - 1
Project-specific Surveys (as referenced in Conservation Measure Classes 1, 2, and 3)
Conduct surveys for owls in areas where management activities may manipulate (e.g., downgrade, maintain/improve, or remove) owl habitat, disrupt essential breeding activities, or injure or otherwise harm owls. Unless otherwise agreed to by the Service, callback or acoustically assisted survey methodology should follow the latest protocols approved by the Service for the purposes of this programmatic consultation. In areas where barred owls are believed to be absent, the current protocols are Forest Service (1993) and Kramer et al. (2023). In areas where barred owls are known to occur or could be present, the current protocols are Service (2012) and Service (2021 and subsequent updates). If surveys are not conducted or do not follow Service-approved methods, assume owls are present in suitable nesting/roosting and foraging habitat.

Conservation Measures for Vegetation Management Activities
Table X: Comparison of Class 1, 2, and 3 conservation measures for vegetation management activities.
Underlined text emphasizes differences between classes, italicized text emphasizes repetition between classes.

Class 1 (Vegetation Management)	Class 2 (Vegetation Management)	Class 3 (Vegetation Management)
1. Designate activity centers and Protected Activity Centers (PACs):	1. Same as Class 1 Measure #1.	1. Same as Class 1 Measure #1.
a. Survey areas that may elicit a response from a resident owl or pair of owls (e.g., nesting/roosting, foraging habitat) in advance of any management activities that would affect owls, following Service-approved survey methods.		
i. If surveys are not conducted or do not follow Service-approved methods, assume owls are present in suitable nesting/roosting and foraging habitat.		
b. Designate owl activity centers and PACs where appropriate based on		

Conservation measures for draft PBO for California spotted owl (USFWS and Forest Service) Attachment D - 2
Class 1 (Vegetation Management) Class 2 (Vegetation Management) Class 3 (Vegetation Management)
survey results, following applicable
Forest Service Forest Plan direction.

2. Protect individual owls and active nesting: 2. Protect individual owls and active nesting: 2. Protect individual owls and active nesting:

a. Implement a limited operating period

a. In coordination with the Service during a. In coordination with the Service during
within 0.25 mile of an active nest or

consultation, limited operating periods consultation, limited operating periods
roost site (if known) or within a PAC

(March 1-July 9 for noise and smoke (March 1-July 9 for noise and smoke
(if active nest/roost site is not known),

disturbance; March 1-August 31 for disturbance; March 1-August 31 for
or in and within 0.25 mile of

habitat manipulation) outside of an habitat manipulation) outside of an
nesting/roosting habitat (if surveys

active nest stand may be modified in active nest stand may be modified in
were not conducted in habitat). For

size or timing. A biological analysis size or timing. A biological analysis in
activities that only generate noise or

conducted by the Forest or District a Project Documentation Form should
smoke (e.g., prescribed burning, hand

Biologist and associated rationale that describe methods for minimizing or
thinning), implement a limited

concludes that a project may still avoiding disturbance to owls during the
operating period from March 1 through

minimize or avoid breeding disturbance reproductive season to the greatest
July 9. For habitat-manipulating

or failure must be provided in the extent possible. The biological analysis
activities (e.g., mechanical treatments,

Project Documentation Form during the should consider the intensity, duration,
large-scale hazard tree removal),

consultation process. The biological timing, specific location of the activity,
implement a limited operating period

analysis should consider the intensity, and other relevant factors such as
from March 1 through August 31.

duration, timing, specific location of the topography and vegetation that buffers
activity, and other relevant factors such sound levels.

i. Limited operating periods may be
as topography and vegetation that

discontinued in a given year if

i. Same as Class 2 Measure #2.a.i.

buffers sound levels.

protocol-level surveys for

determining reproductive status

i. In an active nest stand, the full

confirm owls are not nesting or

limited operating periods (March 1-

fledglings have dispersed in that

July 9 for noise and smoke
calendar year.
disturbance; March 1-August 31 for
habitat manipulation) must be
ii. Transient, short duration activities
implemented. These limited
outside of the nest stand that take
operating periods may be

Conservation measures for draft PBO for California spotted owl (USFWS and Forest Service) Attachment D - 3
Class 1 (Vegetation Management) Class 2 (Vegetation Management) Class 3 (Vegetation Management)
place over the course of one day or discontinued in a given year if
less do not need to follow the protocol-level surveys for
limited operating periods (for determining reproductive status
example, clearing a few hazard confirm owls are not nesting or
trees using a chainsaw along a trail, fledglings have dispersed in that
repairing potholes along a road). calendar year.
The Forest Service may coordinate

with the Service to ensure proposed

activities fit within this exception to
the limited operating period.

3. Maintain or enhance special habitat 3. Same as Class 1 Measure #3. 3. Same as Class 1 Measure #3,
except:

elements for owls throughout the project
a. To the extent practicable, retain large,
area:
old trees and snags while maintaining
a. To support current and future owl life
enough to support habitat function and
history activities, retain enough large,
to develop future nesting sites.
old trees and snags.

i. Maintain and promote large, old,
and structurally complex trees and
snags throughout the landscape to
provide and promote quality owl
nesting and roosting habitat (i.e.,
containing decadent structures or
attributes that require decades to
develop).

ii. Maintain the largest/tallest trees
(generally greater than 150 feet tall
and/or 30 inches dbh), especially
where biophysical conditions are

Conservation measures for draft PBO for California spotted owl (USFWS and Forest Service) Attachment D - 4
Class 1 (Vegetation Management) Class 2 (Vegetation Management) Class 3 (Vegetation Management)
likely to be sustainable to support
both high canopy cover and
large/tall trees in the future.

b. To support current and future nesting sites, retain enough live trees more than 30 inches dbh in occupied PACs, territories, and throughout the landscape. Removal of live trees greater than 30 inches dbh may occur in the following specific circumstances as described below and/or determined in collaboration with the Service.

i. Removal of select shade-tolerant trees to promote retention and growth of existing shade-intolerant pine species in the same area of comparable size, such as ponderosa pine or sugar pine, or shade-intolerant broadleaved species, such as black oak or aspen.

ii. Removal of select shade-tolerant trees to promote the establishment, growth, and development of stands with multiple size and age classes and create small gaps to increase resilience of owl habitat to natural disturbances (e.g., large-scale wildfire; tree mortality due to drought, insects, and disease).

Conservation measures for draft PBO for California spotted owl (USFWS and Forest Service) Attachment D - 5
Class 1 (Vegetation Management) Class 2 (Vegetation Management) Class 3 (Vegetation Management)

iii. Thinning of trees in homogeneous plantations where large diameter trees are at risk due to competition.

iv. Removal of conifers for restoration of other key habitat types such as meadows, oaks, or aspen groves or for cultural or Tribal importance.

v. In the case of imminent threat to life and property.

c. To maintain habitat for prey populations and promote ecological processes, manage forest stands for coarse woody debris.

i. Align density of coarse woody debris, including large downed logs in varying states of decay, with old-forest desired conditions for the relevant forest vegetation type according to applicable Forest Service Forest Plan.

4. Foster development of nesting/roosting habitat and habitat connectivity at the watershed scale and importantly at the PAC 4. Same as Class 1 Measure #4. 4. Same as Class 1 Measure #4.

and territory scale:

a. To develop future nesting sites, retain clumps or groups of largest/tallest trees (generally greater than 150 feet tall

Conservation measures for draft PBO for California spotted owl (USFWS and Forest Service) Attachment D - 6
Class 1 (Vegetation Management) Class 2 (Vegetation Management) Class 3 (Vegetation Management)
and/or 30 inches dbh) with high canopy cover (generally greater than 70 percent).

b. To promote habitat connectivity at the watershed scale, retain connected areas of moderate (generally at least 40 percent) and high (generally at least 60 percent) canopy cover with the largest/tallest trees (generally greater than 150 feet tall and/or 30 inches dbh).

c. Increase resiliency to natural disturbances (e.g., large-scale wildfire; tree mortality due to drought, insects, and disease) at the watershed scale by reducing tree density of smaller trees that are competing with larger trees. Thinning treatments should be designed to minimize the loss of and to recruit large and very large trees and snags (e.g., generally at least 24 inches dbh for large trees and at least 45 inches dbh for very large snags).

5. When treating within PACs, retain existing 5. Same as Class 1 Measure #5, except: 5. When treating within PACs, retain all

habitat types (i.e., nesting/roosting, existing nesting/roosting habitat.

c. Maintain or increase the quadratic mean foraging) and habitat function. Habitat may Nesting/roosting habitat may be diameter for the PAC as a whole. be maintained/improved. Do not maintained/improved. Do not downgrade or downgrade or remove existing habitat of remove existing nesting/roosting habitat. any type:

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Class 1 (Vegetation Management) Class 2 (Vegetation Management) Class 3 (Vegetation Management)

a. Avoid mechanical treatments within a a. Same as Class 1 Measure #5.a.
10-acre nest stand surrounding the most

b. Retain historic and recent known owl recent known nest tree or nest structure. nest trees or known nest structures,

b. Retain historic and recent known owl with the rare exception of hazard trees nest trees or known nest structures. that are a threat to life or property.

c. Increase the quadratic mean diameter c. Maintain or increase the quadratic mean

for the PAC as a whole. diameter within nesting/roosting habitat throughout the PAC.

d. Maintain a minimum of 50 percent canopy cover, averaged at the PAC d. Maintain sufficient canopy cover for scale. nesting/roosting habitat based on the best available science.

e. Use existing landings or other openings for equipment staging to the greatest e. Same as Class 1 Measure #5.e. extent possible. If new staging areas

f. Same as Class 1 Measure #5.f. must be created, canopy gaps must be less than 0.25 acre.

f. Prescribed fire and/or hand treatments are acceptable within a nest stand outside of the Limited Operating Period (refer to Class 1 Conservation Measure #2).

i. To maintain habitat function and to avoid loss or damage to known nest trees, include mitigation measures when conducting prescribed fire in PACs (e.g., prepare burn units by initially reducing fuel loads with hand treatments, raking around nest

Conservation measures for draft PBO for California spotted owl (USFWS and Forest Service) Attachment D - 8 Class 1 (Vegetation Management) Class 2 (Vegetation Management) Class 3 (Vegetation Management) trees, putting lines around nest trees).

6. When mechanically treating within 6. When mechanically treating within 6. When mechanically treating within territories and outside of PACs:

territories and outside of PACs: territories and outside of PACs:

a. If territory contains at least 60% habitat

a. If territory contains at least 60% habitat a. If territory contains at least 40% habitat

(i.e., nesting/roosting, foraging) pre-

(i.e., nesting/roosting, foraging) pre- (i.e., nesting/roosting foraging) pre-

treatment, retain at least 60% of the treatment, retain at least 40-59% of the treatment, retain at least 40% of the habitat in the territory in priority of habitat in the territory. Habitat may be

habitat in the territory in priority of

nesting, roosting, then foraging habitat. maintained/improved.

nesting, roosting, then foraging habitat.

Habitat may be maintained/improved.

Habitat may be maintained/improved.

[Territory percentages include PAC

[Territory percentages include PAC

acres.]

[Territory percentages include PAC

acres.]

acres.]

i. Same as Class 1 Measure #6.a.i.

i. Same as Class 1 Measure #6.a.i.

i. Territories with moist vegetation

ii. Same as Class 1 Measure #6.a.ii.
types and site conditions (e.g.,

ii. Same as Class 1 Measure #6.a.ii.
b. If territory contains less than 40%
mesic conditions and at higher
b. If territory contains between 40-59% habitat (i.e., nesting/roosting, foraging)
elevations in the watershed) should
habitat (i.e., nesting/roosting, foraging) pre-treatment, retain all existing habitat
contain more of this habitat than
pre-treatment, retain all existing in the territory. Habitat may be
those with dry vegetation types and
nesting/roosting habitat while retaining maintained/improved.
site conditions (e.g., drier
at least 40% of the total habitat in the
[Territory percentages include PAC
conditions and at lower elevations
territory. Habitat may be
in the watershed). Territories may
acres.]
maintained/improved.
contain a mix of vegetation types

i. Same as Class 1 Measure #6.a.i.
and site conditions. Project analyses [Territory percentages include PAC
should consider site conditions. ii. Same as Class 1 Measure #6.a.ii.
acres.]

ii. Promote forest heterogeneity in the

i. Same as Class 1 Measure #6.a.i.
remainder of the territory by

ii. Same as Class 1 Measure #6.a.ii.
managing for many different

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Class 1 (Vegetation Management) Class 2 (Vegetation Management) Class 3 (Vegetation Management)
structure and canopy classes at the c. If territory contains less than 40%
stand level and territory level habitat (i.e., nesting/roosting, foraging)
(consistent with characteristics of pre-treatment, retain all existing
the terrestrial vegetation type). nesting/roosting and foraging habitat in
the territory. Habitat may be

b. If territory contains less than 60%
maintained/improved.
habitat (i.e., nesting/roosting, foraging)
[Territory percentages include PAC
pre-treatment, retain all existing
acres.]
nesting/roosting and foraging habitat in
the territory. Habitat may be

i. Same as Class 1 Measure #6.a.i.
maintained/improved.

ii. Same as Class 1 Measure #6.a.ii.
[Territory percentages include PAC
acres.]

i. Same as Class 1 Measure #6.a.i.

ii. Same as Class 1 Measure #6.a.ii.

Conservation Measures for Other Activity Types Not Associated with Vegetation Management

Table X: Comparison of Class 1 and 2 conservation measures for other activity types not associated with vegetation management. Underlined text

emphasizes differences between classes, italicized text emphasizes repetition between classes. Refer to the vegetation management conservation

measures for projects that are unable to follow Class 1 or Class 2 measures for other activity types.

Class 1 (Other Activity Types) Class 2 (Other Activity Types)

1. Designate activity centers and Protected Activity Centers (PACs): 1. Same as Class 1 Measure #1.

a. Survey areas that may elicit a response from a resident owl or pair of owls (e.g., nesting/roosting, foraging habitat) in advance

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Class 1 (Other Activity Types) Class 2 (Other Activity Types)

of any management activities that would affect owls, following

Service-approved survey methods.

i. If surveys are not conducted or do not follow Service-approved methods, assume owls are present in suitable nesting/roosting and foraging habitat.

b. Designate owl activity centers and PACs where appropriate based on survey results, following applicable Forest Service Forest Plan direction.

2. Protect individual owls and active nesting: 2. Protect individual owls and active nesting:

a. Implement a limited operating period within 0.25 mile of an a. In coordination with the Service during consultation, the limited

active nest or roost site (if known) or within a PAC (if active operating period (March 1 through July 9 for noise disturbance)

nest/roost site is not known), or in and within 0.25 mile of outside of an active nest stand may be modified in size or timing.

nesting/roosting habitat (if surveys were not conducted in A biological analysis conducted by the Forest or District habitat). For activities that generate noise to levels that could Biologist and associated rationale that concludes that a project

impact an owl, implement a limited operating period from may still minimize or avoid breeding disturbance or failure must

March 1 through July 9. be provided in the Project Documentation Form during the consultation process. The biological analysis should consider the

i. The limited operating period may be discontinued in a given intensity, duration, timing, specific location of the activity, and year if protocol-level surveys for determining reproductive other relevant factors such as topography and vegetation that status confirm owls are not nesting in that calendar year. buffers sound levels.

ii. Transient, short duration activities outside of the nest stand

i. In an active nest stand, the full limited operating period that take place over the course of one day or less do not need (March 1-July 9) must be implemented. The limited

to follow the limited operating period (for example, clearing operating period may be discontinued in a given year if a few hazard trees using a chainsaw along a trail, repairing protocol-level surveys for determining reproductive status

potholes along a road). The Forest Service may coordinate confirm owls are not nesting in that calendar year. with the Service to ensure proposed activities fit within this exception to the limited operating period.

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Class 1 (Other Activity Types) Class 2 (Other Activity Types)

iii. Activities that are within high use developed areas do not need to follow the limited operating period. The Forest Service may coordinate with the Service to ensure proposed activities fit within this exception to the limited operating period.

3. Do not remove suitable habitat nor reduce habitat function in 3. If removing or reducing habitat function, see vegetation

territories. management conservation measures.

4. Do not use rodenticides in suitable owl habitat. 4. Avoid or limit the use of rodenticides in occupied territories.

5. Limit the removal of large trees, snags, or logs to only those that are necessary to achieve project goals.

Class 3 (Other Activity Types)

Projects implementing other activity types that are not able to follow Class 1 or Class 2 conservation measures, the scale and scope of the project

is similar to the vegetation management activities because these projects will result in significant effects to owls due to the removal or reduction

of suitable owl habitat. For projects not able to follow Class 1 or Class 2 Other Activity Types conservation measures, refer to the Vegetation

Management conservation measures.

Conservation measures for draft PBO for California spotted owl (USFWS and Forest Service) Attachment D - 12 Definitions

Definitions are based on best available scientific information from peer-reviewed primary literature, species assessments, and conservation strategies and also adapted based on existing regulatory documents such as Forest Plans and programmatic consultations.

Areas of ecological importance at different spatial scales

Known nest tree: A specific tree that has been documented to support a CSO nest.

Suitable nest tree: A tree that is of the appropriate size, type, and condition to potentially support a CSO nest. California spotted owls' nest trees are a subset of large live trees or snags. Nest tree size varies by tree type, with an average size of 49 inches dbh and 103 feet tall for conifers (North et al. 2000, Verner et al. 1992), compared to an average size of 30 inches dbh and 55 feet tall for hardwoods (Gutiérrez et al. 1992) in the Sierra Nevada. Spotted owls rely on trees with multi-layered high canopy cover with open cavities (created by fallen branches, woodpeckers, etc.), broken tops, platforms, and old raptor nests (Gutiérrez et al. 2020). The nest tree chosen within a territory is typically one of the oldest and largest live or dead trees within the nesting territory with many defects like cracks, disease scars, or decaying wood (Verner et al. 1992; North et al. 2000). CSOs tend to avoid nest trees close to forest edges with sharp contrast, such as large trees adjacent to shrubs (Phillips et al. 2010).

Nest stand: Forest stand containing the location of a nest and used for egg development through juvenile post-fledge rearing. Nest stands have fine-scale habitat features important for breeding, including high canopy cover (in general, at least 70 percent), abundant large trees (typically more than 24 inches dbh), multiple canopy layers dominated by medium-sized trees (12 to 24 inches dbh) and higher-than-average basal area (185 to 350 square feet per acre) (Bias and Gutierrez 1992, Blakesly et al. 2005, Chatfield 2005, Gutierrez et al. 1992, Moen and Gutierrez 1997,

North et al. 2000, Roberts et al. 2011, Verner et al. 1992). CSOs selection for tall tree cover is greatest within the nest stand (approximately 10 acres surrounding a nest) compared to the protected activity center or territory (North et al. 2017a). For the purposes of this document, we consider the nest stand to be the 10-acre area surrounding an active nest.

Activity center: Area around an active nest (if known), suspected nest stand, or area of repeated roosting, based on owl territorial behavior. Activity centers are where CSO have long-term nesting and roosting use within the territory (Verner et al. 1992; Gutiérrez et al. 2017).

Protected activity center: A land allocation designated by the Forest Service to protect the best available 300 acres of nesting/roosting habitat surrounding and including a known activity center in as compact an area as possible.

Territory (also called Core Area): The area in a home range that is defended by a resident single or pair of owls from members of the same species. A territory is consistently used for nesting, roosting, and foraging and contains essential habitat for survival and reproduction (Bingham and Noon 1997, Blakesley et al. 2005, Gutiérrez et al. 1995, Rosenberg and McKelvey 1999, Swindle et al. 1999, Williams et al. 2011). Scientists in the central Sierra Nevada have defined the core area as a radius equal to half the mean-nearest-neighbor distance between the centers of adjacent owl sites. This equates to a distance of 0.7 mile and an area of 1,000 acres (Jones et al. 2017, Seamans and Gutiérrez 2007, Tempel et al. 2014). For the purposes of this document, we consider territory size to be 800 acres in the southern Sierra Nevada National Forests (Inyo, Sierra, and Sequoia) and 1,000 acres in the north and central Sierra Nevada National Forests (Modoc, Lassen, Plumas, Tahoe, Eldorado, Stanislaus and Lake Tahoe Basin Management Unit) to align with core use areas (Tempel et al. 2016). The size varies along a latitudinal gradient because owl home ranges are smaller in the southern Sierra Nevada than in the northern and central Sierra Nevada (Gutiérrez et al. 2017). Territories are generally mapped as a circular core around an activity center regardless of current vegetation conditions and administrative boundaries. Territories may be adjusted on a case-by-case basis based on known owl location data or to include the most sustainable areas of high-quality habitat and exclude areas unlikely to support suitable habitat.

Home Range: The area used by an individual to meet its life history requirements. A home range typically includes all nesting, roosting, foraging, and territorial activities. CSOs establish large home ranges averaging 3,160 acres (Roberts 2017), though home range sizes are highly variable (1,500 to 5,400 acres), and estimates vary by study, latitude, elevation, diet, and individual (Forest Service 2019).

Conservation measures for draft PBO for California spotted owl (USFWS and Forest Service) Attachment D - 14 Habitat types and habitat treatment impacts

Nesting/roosting habitat: CSOs nest and roost in areas that are generally characterized as mature forest with multistoried or complex structure and that have larger/taller trees, higher canopy cover, and larger amounts of coarse woody debris (i.e., fallen dead trees and the remains of large branches on the ground) than other sites available for use within the territory. Important characteristics include but are not limited to large/tall trees (more than 24 inches QMD, but preferably more than 30 inches QMD), moderate to high canopy cover (typically 70% or higher for high canopy cover, may vary based on site conditions), multiple layers in the mid and upper canopies, and high habitat heterogeneity. Nesting habitat contains high canopy cover and trees with potential nest structures such as cavities, platforms, and deformities.

Foraging habitat: CSOs foraging habitat is composed of a diversity of vegetation types and seral

stages (Roberts 2017). Foraging habitat may include the habitat characteristics described above for nesting/roosting habitat, but may also include younger forests, areas with medium-sized trees (11 to 24 inches QMD), and small open areas. A mosaic of mature closed-canopy forest intermixed with open-canopy patches may promote higher prey diversity and abundance (Franklin et al. 2000, Tempel et al. 2014, Ward et al. 1998, Zabel et al. 1995). Some studies suggest CSOs tend to select edge habitat for foraging (Eyes 2014, Eyes et al. 2017, Roberts 2017, Williams et al. 2011). Outside the nest stand, habitat heterogeneity appears important for prey populations and CSO foraging.

Dispersal habitat: Dispersal habitat is essential to maintaining stable populations by filling territorial vacancies when resident California spotted owls die or leave their territories, and to providing adequate gene flow across the range of the species. There is little information available about CSO dispersal and dispersal habitat. Dispersal habitat is described for northern spotted owl as 50 percent of the forest matrix outside of activity centers in stands with an average of 11 inches dbh and 40 percent canopy closure (Thomas et al. 1990). This contrasts with dispersal for Mexican spotted owls, which may move across large areas of unforested habitat to access suitable habitat on different mountain ranges (Gutiérrez et al. 1995, Gutiérrez et al. 2017). At a minimum, dispersal habitat for CSO, contains stands with adequate tree size and canopy closure to provide roosting opportunities, protection from avian predators, and at least minimal foraging opportunities.

Habitat downgraded (downgrade): Refers to situations in which vegetation treatments reduce habitat elements to the degree the habitat will not function in the capacity that exists pre-treatment, but the activities will not remove habitat entirely (i.e., changing nesting/roosting habitat to foraging habitat or foraging habitat to dispersal habitat).

Habitat maintained or habitat improved: Refers to activities that change forest stand characteristics but maintain or improve the components of spotted owl habitat within the stand such that the habitat continues to support or to promote spotted owls' life history requirements (i.e., the functionality of the habitat as nesting, roosting, foraging, or dispersal habitat remains intact post activity). For example, the habitat is maintained if an area that functioned as foraging habitat pre-treatment, still provides such function post-treatment, but perhaps is more limited due to a temporary reduction in prey base. For example, the habitat is improved if dense understory is Conservation measures for draft PBO for California spotted owl (USFWS and Forest Service) Attachment D - 15 thinned to increase the overall QMD of the stand while retaining multistory canopy important to nesting/roosting habitat.

Habitat removed: Represents a complete loss of habitat function following a treatment (i.e., an area that functioned as nesting/roosting, foraging, or dispersal habitat for California spotted owls before the treatment, no longer provides any habitat function for California spotted owls post-treatment). For example, an area that previously functioned as suitable habitat but no longer contains habitat features that would support owl life history activities.

Mechanical treatment: Machine-based fuels reduction and tree harvest (for example, use of ground-based heavy equipment such as feller-bunchers and skidders or aerial-based systems such as cable yarding systems or helicopter). Excludes hand thinning with chainsaws.

Quadratic mean diameter (QMD): A measure of central tendency or measure of average tree diameter in a stand, which is considered more appropriate than arithmetic mean for characterizing the group of trees which have been measured.

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