

February 8, 2025

USDA Forest Service  
Attn: Tara Jones/South Fork Management Unit  
111 Trinity Street  
Hayfork, CA 96041.

<https://www.fs.usda.gov/project/?project=64536>

Re: Hyampom Community Wildfire Risk Reduction Project

I appreciate the opportunity to provide comments on the Hyampom Community Wildfire Risk Reduction Project Scoping Proposal and hope that my expertise is helpful.

Hyampom  
Community Wildfire Risk Reduction Project  
Shasta-Trinity National Forest  
Northern Spotted Owl  
Public Comments Submitted by Tonja Chi, MS<sup>1</sup>,  
February 9, 2025

## INTRODUCTION

I reviewed the Hyampom Community Wildfire Risk Reduction Project Scoping Proposal (uploaded for public access on January 9, 2025), Wildlife Biological Assessment (May 23, 2024), Preliminary Environmental Assessment (January 2025), U.S. Fish and Wildlife Service Letter of Concurrence (July 2, 2024), project maps, proposed treatment plan, Northern Spotted Owl Final Critical Habitat, and California Natural Diversity Database (northern spotted owl and barred owl data. Accessed: January 7, 2025). I am a professional field researcher and have prepared public comments utilizing my expertise in wildlife biology and ecology (spotted owls, mixed conifer forest ecosystems, and post-fire forest ecology) to carefully evaluate the information shared in preliminary planning documents by Shasta-Trinity National Forest. I am concerned about the irreparable harm project impacts will have on northern spotted owls (NSO) and their habitat at ten Activity Centers and how this will further threaten recovery of the species. These Critical Habitat Units and the California Klamath physiographic province function as a demographic support system to NSO recovery in this portion of the range and act as the largest source population for recruitment to replenish populations of neighboring regions (Schumaker et al. 2014).

These Activity Centers have one or more of the following important characteristics: historic reproduction, occupancy in the last 10 years, high percentage of total habitat to be altered by the project, or barred owls detected in the immediate area.

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<sup>1</sup> See attached summary of qualifications.

Barred owl and spotted owl resource requirements largely overlap with one another and barred owls have a significant advantage over spotted owls due to their larger size, aggressiveness, and less restrictive life history needs. My gravest concerns stem from the competitive dominance barred owls exert over spotted owls where they coexist with finite resources. The presence of barred owls is alarming because they are the primary cause of range-wide NSO population decline, known as stressors on spotted owl survival, and have been regularly detected in the project. Barred owls have become solidly established and concentrated in the 15-mile swath of habitat north/northwest of the project area (Figure 1) with multiple years (2018, 2019, and 2020) of reproductive success and are expanding (into the project area) where barred owl detections are increasing in number, with a pair detected twice in 2023.

Fuels treatments manipulate spotted owl habitat resulting in short term degradation and reduced suitability for NSO (habitat and prey specialists) and create conditions favoring a generalist species more resilient to change, the barred owl. In this project, the effects of habitat alteration will immediately reduce the total resource availability for food, reproduction, and shelter. The reduction in habitat quantity will increase the competition with barred owls for these limited resources, amplifying the negative effects of barred owl presence on spotted owls, and decreasing the likelihood of spotted owl survival.

Increasing barred owl populations overlapping with NSO throughout the range, have been credited with the highest level of threat to the continued survival and recovery of NSO (Franklin et al. 2021). Implementation of treatments in spotted owl Activity Centers will reduce the suitability for spotted owls and accelerate potential territory abandonment while simultaneously creating more favorable stand characteristics for barred owl territory establishment, ultimately accelerating barred owl expansion and spotted owl population demise. Management activities will reduce and degrade essential spotted owl habitat in spotted owl Activity Centers (already below desired habitat threshold values) in this landscape where spotted owl high-quality habitat remains scarce, while simultaneously encouraging establishment and expansion of barred owls into these areas.

Analysis of project effects to northern spotted owls by the Shasta Trinity Forest Service Hyampom Community Wildfire Risk Reduction Project documents (Biological Assessment and Preliminary Environmental Assessment) and the U.S. Fish and Wildlife Service Letter of Concurrence fail to discuss or address the compounding level of threat created by additive effects of two primary stressors (habitat degradation and barred owl competition) facing northern spotted owl. These documents clearly do not utilize and integrate the best scientific and commercial data available for their analysis, plainly seen by the lack of key references detailing spotted owl and barred owl behavioral interactions, and do not acknowledge the established barred owl population neighboring the project to the north. This project will have a profoundly negative impact on the northern spotted owls in this region.

## BACKGROUND

The NSO is a Federally listed species, protected by the Endangered Species Act. It was originally listed as threatened in 1990 by the United States Fish and Wildlife Service (USFWS 1990) and USFWS has just completed another review to evaluate and update status and current threats. Since 1990 and despite protected status, NSO populations have continued to decrease throughout

their range annually, as represented by steadily declining numbers in all demographic study sites<sup>2</sup>. These alarming rates of population declines prompted the USFWS to warrant the change in status from the less serious ‘threatened’ to ‘endangered’, although it was precluded from formal change by higher priority species (USFWS 2020).

The northern spotted owl is rapidly moving toward extinction due to one or more range-wide conditions; dynamic threats that may shift in time as we gain knowledge through observation; insight gained from field observations and the most recently published science. The Revised Recovery Plan (USFWS 2011) identified the following threats: 1) **Competition with barred owl**; 2) **Ongoing loss of habitat as a result of timber harvest**; 3) **Habitat loss or degradation from stand replacing wildfire and other disturbances**; 4) **Loss of amount and distribution of spotted owl habitat as a result of past activities and disturbances**. In 2011, there was no established order of significance to evaluate one threat being greater than another.

Published studies since 2011 now recognize competition with barred owls to be **the** primary and most immediate threat facing NSO range-wide population survival (Dugger et al. 2016, Franklin et al. 2021). Extensive scientific data sets from 26 years of long term NSO demographic study sites have provided the framework to demonstrate the complex interspecific relationships between NSO and barred owls. Downward trends define the populations with annual declines of 6-9% on 6 study areas and 2-5% annually on 5 other study areas. These have resulted in measurements of reduced apparent survival, declining recruitment, increased territorial extinction, decreased territorial colonization, reduced fecundity, and reduced occupancy (Dugger et al. 2016, Franklin et al. 2021). The NSO is travelling toward extinction as barred owl numbers continue to increase across the landscape (Franklin et al. 2021). Furthermore, wildfire effects and severely burned forests need further examination as they may still be biologically valuable habitat for NSO in the absence of post-fire logging (Chi 2024, Bond et al. 2022, Lee and Bond 2015). Additional threats are just as harmful as barred owl competition but are less widespread and more localized in nature. These factors also contribute to accelerated population decline and continue to threaten NSO survival due to habitat degradation and loss resulting from timber harvest (including fuels treatments), climate change, and increasing incidence of fire on the landscape.

## GENERAL COMMENTS

The local NSO population within the proposed project area has at least 23 northern spotted owl Activity Centers (ACs), with ten located in USFWS-designated spotted owl Critical Habitat. Critical Habitat protects locations with habitat qualities crucial to support NSO pairs and their fundamental biological life history requirements. It is recognized that designated Critical Habitat may (in theory) need “special management” to improve overall habitat value and increase resilience to wildfire and insect infestations. However, spotted owls are sensitive not only to loss of large mature forest used to nest and roost, but also sensitive to fuels treatments resulting in loss of canopy and ladder fuels (Long and Wolfe, 2019). Spotted owls may experience loss of fitness after fuels treatments are conducted due to temporary degradation and reduction of resources, making them more vulnerable to barred owl mediated extinction (Long and Wolfe 2019). The barred owl’s

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<sup>2</sup> Franklin et al. 2021 recently reported annual declines translating to  $\leq 35\%$  of the populations remaining on 7 study areas since 1995.

dominant competitive presence coupled with habitat degradation will reduce availability of resources needed by both species, overwhelmingly favoring the barred owl, and negatively affect the spotted owl survival, productivity, recruitment, and population viability (Long and Wolfe 2019).

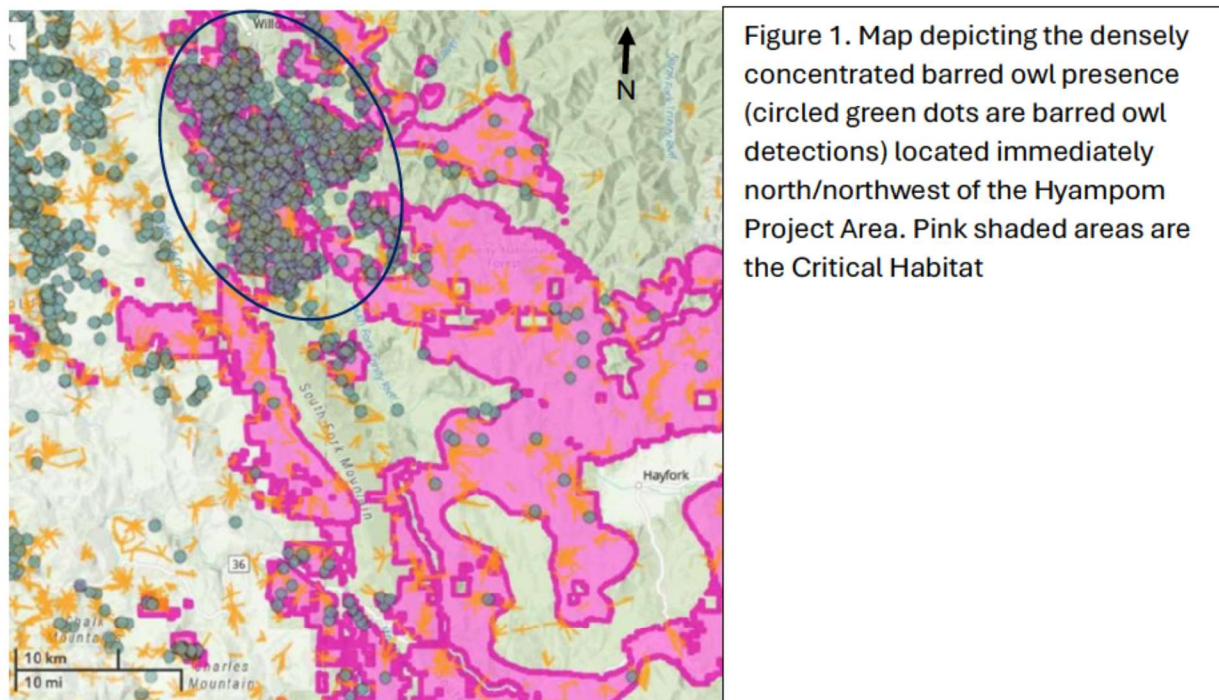
When barred owls are present and sharing the landscape with spotted owls, competitive interactions and impacts to spotted owls are a crucial component to consider before implementing any habitat modification. The presence of barred owls increases competition for fundamental limited resources between the species and amplifies conflict when habitat manipulation reduces resource availability. The combined stressors of degraded habitat and barred owl presence may therefore increase competitive pressure and heighten the risk of AC abandonment by spotted owls. In the presence of coexisting spotted owls and barred owls, maintenance of high-quality habitat is necessary to reduce competition between the species (Dugger 2016, Wiens 2014).

Although the future threat of habitat loss from wildfire is a concern for northern spotted owl survival, there are still many unknowns regarding how much fire benefits or adversely affects northern spotted owl habitat (USFWS 2011). However, the heavily concentrated presence of barred owls is a current imminent danger to these spotted owls. The management of forests through initiation of fuels treatments result in temporary degradation and reduced quality. Spotted owls currently need the stability of intact high-quality habitat to persist under the present threat of competition with barred owls. Fuels reductions are not meant to result in resident owls abandoning Activity Centers for the sake of the theoretical promise of improved future habitat. As the populations of northern spotted owls continue to plummet range-wide, reduction or removal of *any* currently occupied habitat, at the risk of temporary or permanent displacement is not advised. Treatments that will reduce or remove quality spotted owl habitat will accelerate trending population declines and be a massive failure to protect the existing spotted owl population. Without extant spotted owls, there is no population to benefit from the future habitat created by forest managed for resilience.

## PROJECT OBSERVATIONS

The Hyampom Community Wildfire Risk Reduction Project Scoping Proposal has at least 23 NSO Activity Centers entirely or partially within the project. Ten Activity Centers are located in Critical Habitat and 13 are not. I have identified ten Activity Centers of high-risk concern due to one or more of the following: historic reproduction, occupancy in the last 10 years, high percentage of total habitat to be altered by the project, or barred owls detected in the immediate area.

Recent spotted owl survey efforts have not been consistent for these Activity Centers. An evaluation (accomplished by conducting protocol level surveys) of potential effects to NSO due to the proximity of a formidable, barred owl population must occur to understand the extent of impacts and status of each Activity Center. Protocol level surveys, although not perfect, were designed to detect spotted owls in the presence of barred owls, as spotted owls are less responsive to call surveys when barred owls are present (USFWS 2012). In addition, it may be difficult to detect spotted owl reproduction at an occupied site in the presence of barred owl where reproduction may go undetected (Mangan 2018) and thus reemphasizes the need for protocol surveys and careful observation especially when pairs are present.



The extensive barred owls in the region (Figure 1) warrant the need for protocol level surveys at all 23 of the Activity Centers. However, based on available NSO habitat and survey data, and to avoid unauthorized take, the following high-risk Activity Centers absolutely require surveys: HUM0275, TRI0082, TRI0142, TRI0155, TRI0252, TRI0257, TRI0258, TRI0275, TRI0343, TRI0499. It should be noted that all Activity Centers located within fire perimeters that have not undergone post-fire salvage logging, should also be surveyed. The practice of assuming severely burned habitat as unsuitable for nesting and roosting spotted owls has not been confirmed and needs to be further investigated (Chi 2024, Bond et al. 2022, Lee and Bond 2015).

A careful review of the ten high risk ACs and associated significant information are listed below and can be seen summarized in Table 1. Despite a considerable lack of surveys reported for all owl Activity Centers in the last 30 years, these are the ACs that have had recent occupancy by spotted owl pairs although no reproduction was reported: four (HUM0127, TRI0142, TRI0343, and TRI0499) have had recent spotted owl detections within the last 10 years, two (HUM0275 and TRI0343) are considered currently “occupied”, four (TRI0082, TRI0142, TRI0155, and TRI0252) have historic nests associated with them, seven (TRI0082, TRI0142, TRI0155, TRI0252, TRI0257, TRI0343, and TRI0499) will have a large percent of the entire area treated, and five (TRI0155, TRI0252, TRI0257, TRI0258, and TRI0343) have been identified as overlapping with barred owl activity. Although barred owls have not been identified in all of the ACs, there is such a large, infiltration of barred owl within a close distance, that each Activity Center may be vulnerable to barred owls. In addition, without extensive species-specific protocol survey efforts, confirmation of spotted owl and barred owl presence and absence is inconclusive.



Number	Surveys Necessar	Notes	County	Critical Habitat	Comments
HUM0275	YES	2016 AMAF Day. Most recent surveys reported in 2016. BA: M detected 2023.	Humboldt	Yes	OCCUPIED; Core located halfway outside project boundary. Not far from Sims Fire boundary. NRF habitat present; small areas to be treated on the outer edge
TRI0082	YES	Only pre-2000 data [1990, 1986, 1981 UF/UM single detections; 1982 Nest UMUF; 1981 (2x) UF Day; 1981 (2x) UMUF]. Few recent surveys conducted. Owls could be present and undetected. Most recent survey reported in 1990. BA: No detection since 1996, Surveys conducted 2015 - 2019, 2023 (protocol?)	Trinity	Yes	Large percent treatment (26 acres NR Habitat to be treated in core); contiguous NRF Habitat present; No recent surveys on record
TRI0142	YES	Only pre-2000 data [1991 Nest AMAF (1 young); 1991 (2x) AM/AF Day; 1992 Nest UMUF (1 young)]. No recent surveys recorded. Owls could be present and undetected. Most recent survey reported in 1991. BA: 2005 Nest, single detections 2008, 2010, 2020, 2022, pair occupancy 2018, No detection 2023 (protocol?)	Trinity	No	Identified in BA as Sims Fire and 2015 fire. Core treatment. No historic cutting in the core; Overlaps on project boundary
TRI0155	YES	Only pre-2000 data [1990 Nest UMUF (1 young); 1990 (2x), 1990 (UUUF), 1984 UMUF; 1990 (10x), 1984 (2x) UU/UM/UF single detections]. No recent surveys recorded. Owls could be present and undetected. No surveys recorded since 1990. BA: No detection 2023 (protocol?)	Trinity	Yes	Large percent treatment; BO detected in the outer HR; contiguous NRF habitat present; overlaps with private property, Near 2023 BO pair
TRI0252	YES	Only pre-2000 data [1995, 1995 (AM, 2x) UM Day; 1995 (AM), 1990 UM single detections; 1994 (AMAF), 1990 (UMUF) Nest (1 young); 1994 (3x) AMAF Day; 1990 (2x) UMUF]. No recent surveys recorded. Very few surveys reported. Owls could be present and undetected. Most recent survey reported in 1995. BA: "no detections in 12 years of surveys since 1995, surveyed 2020-2023, 2008 wildfires"	Trinity	Yes	Large percent treatment; BO detected in the core; very little habitat; FD Habitat only
TRI0257	YES	2010 AMUF Day. Most recent survey reported in 2010. BA: No detection 2023 (protocol?), "heavily impacted by wildfire in 2018"	Trinity	No	Large percent treatment (almost all); BO detected throughout; very little habitat; D Habitat only; Near 2023 BO pair
TRI0258	YES	Only pre-2000 data [1999, 1992 (2x), 1990 UU/UM/UF single detections; 1998 Nest AMAF; 1998 (AMAF), 1998, 1991, 1990 (5x) UMUF]. No recent surveys recorded. Owls could be present and undetected. Most recent survey reported in 2003. BA: No detections 2010 and 2023 (protocol?), 2015 wildfire	Trinity	No	BO detected throughout; Small area to be treated; FD Habitat only
TRI0275	YES	Only pre-2000 data [1990 UMUF; 1990 (5x) UM/UU single detections]. No recent surveys recorded. Very few surveys reported and only in one year. No known nests or young. Owls could be present and undetected. Most recent survey reported in 1990. BA: 2015 wildfire, no other information, was this surveyed?	Trinity	No	Mostly outside project boundary; Identified in BA as 2015 wildfire; patchy/limited NRF Habitat; Partial treatment within; Overlaps on project boundary; Near 2023 BO pair
TRI0343	YES	2020 AMAF Day. Most recent surveys reported in 2020. BA: Single male detections 2021, 2022, 2023	Trinity	No	OCCUPIED; Large percent treatment; NSO Pair; BO detected in the outer HR, Sims Fire 2004, Rockwell et al 2017, extensive timber harvest Bennett Peak cc 1957-1958, Grapevine cc 1980. No post-fire salvage logging
TRI0499	YES	2017 AMSF Day. Most recent surveys documented in 2019	Trinity	Yes	Large percent treatment (almost entire area?); contiguous NRF Habitat present; No recent surveys on record; NOT ON APPENDIX 1 MAP

**Table 1 Summary of high risk Activity Centers and pertinent information**

Fuels treatments are not reasonable in the presence of the behaviorally and competitively advantaged barred owl population. These treatments will not maintain or improve spotted owl wildlife habitat (in the short term) or reduce wildfire risk. Thinning and removing trees across all species and diameter classes will reduce the complexity and structure of the forest and make it less suitable for current spotted owl use and occupancy. The simplification of the forest structure makes it more suitable for the less specialized needs consistent with barred owl requirements. In addition, opening the canopy and removing the understory layers will increase the airflow, reduce the humidity, and dry out the understory, *increasing* susceptibility to fire, especially under increasing wind, heat, and low humidity conditions.

## CONCLUDING STATEMENT

Spotted owls are highly sensitive to habitat alteration and fragmentation making the quantity, quality, size and spatial configuration of available high-quality habitat a critical issue. Spotted owls in this area currently occupy the only available high-value habitat found on fragmented patches of publicly managed lands to meet their life history needs. Any alteration of this limited habitat will result in a loss of the fundamental NSO resources (temporary or permanent) required for nesting, roosting, and foraging. Reduction in available resources will increase competition with barred owls

(Weins et al. 2014, Dugger et al. 2011, Forsman et al. 2011). Barred owls are currently found throughout the project and are firmly established immediately north of the project (Figure 1). Management activities will further destabilize this population of owls by reducing habitat quality for northern spotted and make the habitat more hospitable for barred owls. Immediate effects of proposed treatments would deter northern spotted owl use and promote occupancy by barred owls, thereby increasing expansion of barred owls into all treated areas.

There is overwhelming science supporting the negative influence barred owls alone exert on spotted owls resulting in immediate threats to the population viability where these two species coexist (Long and Wolfe 2019). Existing scientific literature reports a decline in spotted owl habitat use following loss of structural complexity and heterogeneity associated with forest management: timber removal, stand manipulation, or fuels treatments. Such activities at a minimum have short-term effects, reduce habitat value, and lower the quality to spotted owls for nesting, roosting, and foraging. These factors often result in reduced occupancy or abandonment of territories (Gallagher et al. 2019, Seamans and Gutierrez 2007, Stephens et al. 2014) and have potential to displace NSO from Activity Centers (Forsman et al. 1984, Meiman et al. 2003). The combined impacts of both of these stressors guarantee the loss of northern spotted owl in these areas.

Land managers are not recommended to implement fuels treatments in spotted owl territories. Spotted owls are highly sensitive to temporal changes in their existing habitat and should have spatially distributed complex high-canopy forest available (Tempel et al. 2014).

Please keep me informed of any future developments on this project by contracting me at:

[REDACTED].

Sincerely,



Tonja Y. Chi

Cc: Denise Boggs, Director, Conservation Congress

#### LITERATURE CITED

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