

Draft Attachment A Take Avoidance Analysis - Coast

The following guidance is intended to address avoidance of incidental take of NSO through timber harvest in the Coast Forest District from the coast to the eastern edge of the Redwood component. The eastern portion of the Coastal Forest District does not contain a Redwood component and the Interior Incidental Take Avoidance Guidelines (Attachment B) should be applied to proposed timber harvest when no Redwood is present in the plan area.

Maintaining Home Range Habitat Above Thresholds

An NSO home range in California is considered to be all of the area within the 1.3 mile radius around an activity center. There are two sources of information that are used in conjunction to determine if a proposed timber harvest is located within an NSO home range: surveys, and the California Department of Fish and Game (CDFG) NSO Database.

NSO surveys in the Coast Forest District have historically been conducted in compliance with either the **Protocol for Surveying Proposed Management Activities that May Impact Northern Spotted Owls**, Revised March 17, 1992, or in accordance with the AFWO modifications to the same. Surveys conducted under this protocol and the modifications established a large number of known NSO activity centers in the Coast Forest District. The CDFG NSO database records survey results and maps locations of known NSO activity centers; however, the database does not record the areas that have been surveyed. Consequently, if the NSO database does not contain any records of known NSO locations within a 1.3 mile radius of a proposed timber harvest that does not necessarily mean there are no NSO activity centers located within 1.3 miles. A combination of survey data and the NSO database reports will be needed to establish that a proposed timber harvest is not within a home range of an NSO.

Surveys

In February 2010, the USFWS released a new draft NSO Survey Protocol that recognized the negative influence of the invasive Barred Owl (*Strix varia*) on the detectability of spotted owls. Included with the release of the new 2010 draft NSO Survey Protocol was a memo from the USFWS Regional Office in Sacramento that provided California-specific instruction on the transition from the March 17, 1992, protocol. The memo stated that "The Service does not regulate or mandate the use of the draft 2010 Protocol," and that the draft 2010 Protocol will be finalized after the 2012 survey season. However, project proponents still must make credible arguments that their proposed timber harvests avoid incidental take of NSO to have the proposed timber harvests approved by CALFIRE.

The increasing presence of Barred owls on the landscape has been shown to suppress response by spotted owls to surveys. As a result, applying the AFWO modified 1992 Survey Protocol and not recording detections of spotted owls is less and less likely to mean that no spotted owls are present. Until the draft 2010 Protocol is finalized, utilization of part or all of the draft 2010 Protocol may be necessary to make a credible argument for incidental take avoidance.

Managed timberland in the Coast Forest District has been surveyed since 1991. Many properties, especially those with approved NTMPs, have been surveyed for many years and the CDFG database contains hundreds of known NSO sites within the Coast Forest District. Those properties that have been surveyed to the AFWO modifications to the 1992 Protocol repeatedly without recording spotted owl detections in the years prior to the Barred owl invasion may not have been part of a spotted owl home range or may not have contained part of a spotted owl core area. The presence of Barred owls within the established territories of spotted owls has been shown to displace spotted owls from their core areas. As a result, some properties on which surveys formerly did not record NSO detections may at any time in the future be occupied by spotted owls. Therefore, until the draft 2010 Survey Protocol is finalized, it is recommended that surveys conducted otherwise according to the AFWO modifications to the 1992 NSO Survey Protocol should be augmented by adding Barred owl calls to provide evidence that Barred owls are not present to suppress spotted owl responses.

If no survey history exists for a proposed project area, a two-year protocol following either the AFWO modified 1992 Protocol, the draft 2010 Protocol, or some combination of both is recommended. A one-year survey following the AFWO modified 1992 Protocol is acceptable until the 2010 Protocol is no longer draft. The survey methodology is less important than the results if surveys result in the detection of known, or the establishment of new, NSO activity centers. If surveys do not result in NSO detections or the reoccupancy of known NSO activity centers, the survey methodology will become increasingly critical. As the barred owl invasion worsens it is anticipated that more of the landscape will need to have the draft 2010 Protocol applied.

Expedited Surveys for Early Timber Operations (Fully Surveyed Lands only)

When a proposed harvest area and all the suitable habitat within a 0.7 mile radius has been fully surveyed the prior two consecutive years using the appropriate protocol/methodology for the conditions, third year surveys may be expedited. If survey results indicate that there are no NSO located within 0.5 mile of the proposed harvest area, the third year survey effort may consist of three survey visits conducted early in the season, (e.g. three surveys in March), weather permitting. These early surveys must be separated by a minimum of six days. If known NSO activity centers are located within 0.5 mile of proposed timber operations, all known sites within 0.5 mile of the proposed harvest area must be monitored for occupancy. If detections of NSO are recorded within their core areas, or within 1,000 feet of the known activity centers, the expedited three visit strategy above may be applied and completed early. If no response can be obtained from known NSO activity centers located within 0.5 mile of the proposed harvest area, the harvest area and out 0.25 mile must be surveyed to the appropriate protocol. Once surveys are completed, survey results shall be provided to CAL FIRE in the form of a minor deviation and incorporated into the THP.

Home Range Habitat & Operational Protection Measures

A. When a proposed harvest area is located between the 0.7-mile and 1.3-mile radii of an NSO Activity Center:

1. The proposed timber harvest must maintain 836 acres of suitable NSO habitat between 0.7 miles and 1.3 miles of all Activity Centers.

B. When a proposed harvest area is located within a 0.7-mile radius of a known NSO Activity Center:

1. At least 500 acres of suitable NSO habitat must be retained;
2. At least 200 of the 500 acres must be Nesting/Roosting Habitat (minimum 60% canopy of trees ≥ 11 inches DBH);
3. The remaining acres of the 500 acre minimum must be Foraging Habitat (minimum 40% canopy of trees ≥ 11 inches DBH and 75 ft² basal area per acre of trees ≥ 11 inches DBH).

C. No more than 1/3 of the remaining suitable habitat in excess of 500 acres within 0.7 miles of an Activity Center may be removed during the life of the harvest operation under consideration.

Protecting Core Area Habitat

Accuracy of NSO activity center location

- 1) Accurately mapping the location of the activity center is critical to the protection of core area habitat. Because activity centers can move from year to year, activity center locations are more accurate when plotted as a result of surveys conducted during the year of operations than the locations in the CDFG database.
- 2) In the absence of access to habitat surrounding the proposed harvest area, the CDFG NSO database provides the next best activity center location information. All activity centers found during surveys or contained in the CDFG database are protected until determined by the USFWS that they do not qualify for ESA protection.

Core Area Habitat Protection

- 1) Once an activity center has been accurately mapped, a core area topographic polygon that contains the highest quality habitat that is contiguous with or adjacent to, but not less than 500 feet from, the activity center must be identified. No timber harvest is allowed within the core area topographic polygon unless the polygon is greater than 100 acres in size, or within lesser quality habitat located within 1,000 feet of the activity center unless the operations are conducted outside the breeding season and the silviculture will improve NSO habitat conditions;
- 2) If the contiguous core area topographic polygon is larger than 100 acres, operations may be conducted up to within 1,000 feet of an activity center provided the timber harvest retain at least 66% pre-harvest basal area, but not less than 100 ft² basal area of trees ≥ 11 inches DBH on those acres;

- 3) If the remaining acres of Nesting/Roosting Habitat needed to retain a minimum of 200 within 0.7 mile of an Activity Center is not contiguous or not within the same drainage, timber harvest within those acres is allowed provided the harvest retain $\geq 60\%$ canopy cover of trees ≥ 11 inches DBH. Nest/Roost habitat in excess of 200 acres within 0.7 mile of an activity center may be removed.

Protecting Reproduction

A 0.25 mile seasonal restriction on timber harvest applies to every known NSO activity center from the start of the breeding season on February 1st until non-nesting is determined via a site monitoring visit on or after May 15th. Use of existing roads is not restricted during this period, unless the road must be opened prior to use and the road passes within 500 feet of the activity center.

If non-nesting cannot be determined either due to lack of access, or inconclusive efforts to establish non-nesting at the activity center, the 0.25 mile seasonal restriction stays in effect for timber harvest until after July 31st. The seasonal restriction within 0.25 mile of all activity centers is lifted for all road use, maintenance, and all other projects that do not result in the loss or degradation of suitable NSO habitat after July 9th.

A. Timber Harvest operations within the 100-acre core polygon of an NSO Activity Center:

1. Outside the breeding season (August 1-January 31), limited timber operations (road use and maintenance, map point work, cable yarding, tail-hold placements and loading) may be conducted, provided no trees ≥ 11 inches DBH are removed by the operations.
2. During the breeding season (February 1-July 31) no timber operations other than the use of existing, permanent, year-round roads, except as allowed below (B, C, D, and E).

B. THP operations outside the 100-acre core polygon of an NSO Activity Center:

1. Outside the breeding season (August 1-January 31), full timber operations may be conducted.
2. During the breeding season (February 1-July 31): no timber operations other than use, maintenance, and map point work on existing, permanent, year-round roads, except as allowed below (C, D, E, and F).

C. For NSO Activity Centers where surveys have determined presence, but reproductive status has not been determined:

1. Full timber operations (except helicopter yarding or staging) may be conducted only on those THP areas > 0.25 mile from the Activity Center.
2. Helicopter yarding and staging may occur only on those THP areas > 0.5 mile from the Activity Center.

D. For NSO Activity Centers where reproductive status has been determined to be non-nesting:

1. Limited timber operations (road use and maintenance, map point work, use of existing tractor roads, tail-hold placements and loading) may be conducted within the 100-acre core polygon of the Activity Center provided no trees ≥ 11 inches DBH are removed by the operations.
2. Full timber operations, including helicopter yarding and staging, may be conducted within 0.25 mile but not within the 100-acre core polygon of the Activity Center. Helicopter fly-overs shall not occur within 1000 ft of the Activity Center

E. For NSO Activity Centers where reproductive status has been determined to be nesting:

1. For Activity Centers where fledging status has not been determined, full timber operations may be conducted only on those THP areas > 0.25 mile from the Activity Center until the end of the breeding season.
2. Helicopter yarding and staging may occur only on those THP areas > 0.5 mile from the Activity Center.

F. For NSO Activity Centers where fledging status has been determined (either nest failure or fledging success):

1. Full timber operations, including helicopter yarding and staging, may be conducted within 0.25 mile but not within the 100-acre core polygon of the Activity Center. Helicopter fly-overs shall not occur within 1000 feet of the Activity Center.

2. Limited timber operations (road use and maintenance, map point work, use of existing tractor roads, tail-hold placements and loading) may be conducted within the 100-acre core polygon of the Activity Center, provided no trees ≥ 11 inches DBH are removed by the operations.

G. For any NSO Activity Center, regardless of reproductive status:

1. If NSO move to a new location (>1000 feet from the historic Activity Center) and attempt to nest (reproductive behavior confirmed), request technical assistance from USFWS as to the status of the historic Activity Center.

February Extensions for Timber Operations:

Extensions allow for the continuance of active timber operations past February 1, provided the noise generated by the continuation of timber operations is confined to the same topographic boundaries as the operations conducted for at least 5 days prior to February 1. The on-going operations may be extended until February 28, provided;

1. The on-going timber operations are >0.25 mile from any known NSO Activity Center,
2. Only on-going operations are extended. Felling may be completed, and yarding/skidding may be completed, but extensions do not apply to yarding/skidding after felling is complete in a unit during the extension period.
3. Timber operations must have commenced a minimum of 5 days prior to February 1.
4. Plan proponents shall provide to CAL FIRE a description of the timber operations and THP Operations Map(s) indicating the harvest unit(s) proposed for extensions into February in the form of a minor deviation. No timber operations shall be conducted until CAL FIRE approves the minor deviation and incorporates it into the THP.