Mr. Chris Browder  
California Department of Forestry and Fire Protection  
P.O. Box 944246  
Sacramento, California 94244-2460

Subject: Technical Assistance for Determination of Unoccupied and Abandoned Status for Northern Spotted Owl Sites

Dear Mr. Browder:

This is in response to your February 13, 2008, request for U.S. Fish and Wildlife Service (Service) technical assistance requesting clarification of the process the Service uses for determination of “unoccupied” and “abandoned” status for Northern Spotted Owl (Strix occidentalis caurina) (NSO) sites. You requested that the Service specifically address whether the survey requirements in the Service-endorsed NSO survey protocol (USFWS 1992) may be used to support a request for “abandoned” status for an historical NSO site.

Rigorous determination of the presence and status of NSO in the vicinity of proposed timber management projects is critical for avoiding take of listed species under Section 9 of the Endangered Species Act. If surveys fail to detect owls that are present (false negative) or if owls move into an area following surveys, the potential exists for timber harvest to result in take.

The Service does not rely solely on the “three surveys per year for three years” method described in the 1992 survey protocol to determine the status (unoccupied or abandoned) of a NSO activity center. For a given activity center, we estimate the likelihood of occupancy and the potential for re-occupancy of the site by NSO through the evaluation of the history of NSO surveys and status in the area, and the quality of recent surveys. Survey information is used, in combination with current habitat conditions and history of management activities, to determine the status of an individual NSO site.

Unoccupied Sites
The NSO survey protocol contains a provision that addresses the survey requirements for determination of “unoccupied” status at historic activity centers. This guidance (inserted below) does not address the permanence of unoccupied status (i.e., abandoned). Occupancy is an annual rate and is not equivalent to “abandoned,” which is a permanent status. In addition, the guidance for unoccupied status, provided in the USFWS 1992 survey protocol, assumes strict adherence to the field methods described in the survey protocol. Service records have documented that this assumption is frequently not met in surveys conducted in support of timber harvest plans.
From the 1992 Protocol for Surveying Proposed Management Activities that May Impact Northern Spotted Owls:

Determining Unoccupied Status of an Historically Occupied Site:

- If no responses have been obtained from an historical site after 3 years of survey (using the guidelines established in this document), the site may be considered unoccupied, barring other evidence to the contrary.

New research information available on NSO site occupancy indicates that sites may be unoccupied (or NSOs fail to respond) for more than 3 years and then subsequently are utilized by nesting NSO. The Yreka Fish and Wildlife Office has records from our review of timber harvest plans where 3 or more years of surveys failed to detect NSO within historic sites, and where owls were then later determined to be present. In addition, it has been recently noted among NSO research biologists that NSO seem to exhibit reduced responses when barred owls are present.

**Abandoned Sites**
The NSO survey protocol does not contain a process to assist Service biologists in determining whether or not an activity center has been permanently abandoned. The Service utilizes available information on survey history, habitat conditions within the home range, and changes to habitat that may have occurred since the NSO site was first identified to reach a determination of permanent site abandonment.

**Survey History**
The Service evaluates historical survey information from the California Department of Fish and Game Northern Spotted Owl Database (database) and more recent survey information provided by the applicant (usually covering the previous 3 to 5 years). Information provided in the database provides the historical reference point for the year in which an owl was first detected, the subsequent amount of survey effort in the vicinity of the detection, an indication of the owl status at the site (pair, resident single, unknown), and may provide documentation of previous reproductive behavior at the site. The outcome of this evaluation is used by the Service to assist us in determining the likelihood that the site has provided for owl occupancy historically.

To further evaluate the likelihood of site abandonment by NSO, the Service requires more detailed survey information, usually spanning more than the previous 3 years. The Service requests maps of survey routes, aerial photos or digital imagery of the habitat within 1.3 miles of the historic site, data sheets of road and/or walk-in surveys, and any follow up visits that may have been completed. In many instances, the Service has requested that additional call points be added to improve coverage of the activity center out to 1.3 miles. In addition to night surveys, the Service has requested daytime stand searches of areas of nesting/roosting habitat within 0.7 mile of the historic location.

In some cases, our evaluation of the survey history reveals that NSO have not abandoned the historic activity center, but have moved to an alternate nest site within their core area or home range. Territorial NSOs may shift nest areas in response to habitat changes; presence of predators or competitors such as great horned owls, northern goshawks, or barred owls; or other factors. In these cases, the original nest area is not considered "abandoned," it is simply part of the nesting habitat used over time by the NSO.
**Home Range Condition**

The 2004 NSO 5-Year Review summarized information from a number of NSO studies that found that the majority of these studies, throughout the species range, suggest a correlation between the amount of mature and old-growth forests and the probability of NSO occupancy in a landscape. Service staff in Yreka Fish and Wildlife Office use the new information contained in these studies, in combination with our descriptions of quality and amounts of habitat for the interior Klamath province, to evaluate the likelihood that an historical NSO site will continue to support occupancy by NSO. Both field review and aerial photo interpretation are necessary to evaluate whether or not the current condition of the NSO site appears to contain the types, distribution, and amounts of habitat found in occupied sites on both federal and non-federal lands. In particular, the Service considers whether previous timber harvest operations or other events have resulted in recent changes in suitable NSO habitat that may have caused NSO to move to alternate nesting habitat, or rendered the home range unsuitable for occupancy.

In summary, the Service does not concur that the sole use of 3 years of protocol surveys is appropriate to determine permanent abandonment of historic NSO sites. There is no single, reliable criterion that can be used to make this determination. Rather, the combined evaluation of habitat conditions, survey results, and survey quality may be used to support determination of abandoned status.

Sincerely,

Phil Detrich  
Field Supervisor

cc:
Vicki Campbell, Region 8, Sacramento, CA
William Schultz, CAL FIRE, Redding, CA