

Northern Spotted Owls and Forestry

Wildlife in Managed Forests:
Reference Series

Northern spotted owls (NSOs) (*Strix occidentalis caurina*) are protected in Oregon by the state and federal Endangered Species Acts, where they are listed as threatened. The species also receives protections through the Oregon Forest Practices Act (FPA).

NSOs are medium-size owls that live in heavily forested areas within and west of the Cascade Mountains. NSOs are dark brown with white spots on the head and breast. Their tails are barred with white.

NSOs inhabit mature forest stands with large trees forming a multi-layered, multi-species canopy. They require dense canopy closure (>60%), and forests with large standing and fallen dead trees, and many trees with deformities (such as cavities and broken tops).

NSOs prey primarily upon small mammals, including wood rats and flying squirrels. They will also prey upon insects, other birds and juveniles of larger mammals. They are “perch and pounce” hunters, and require adequate space beneath the forest canopy to fly and capture prey.

WHAT ARE SOME THREATS TO THE NSO?

NSO must compete with increasing barred owl populations for nesting habitat and food. In addition, timber harvest was historically, and still is today, a threat to NSO habitat. Timber harvest (especially near NSO activity centers) poses threats to nesting NSOs.

WHAT IS MOST LIKELY TO DISTURB A NESTING NSO?

- Timber harvest
- Road construction
- Low-flying aircraft



WHEN DO NORTHERN SPOTTED OWLS NEST?

Critical nesting period:
Mar 15 - Sep 30

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Non-breeding season	Courtship behavior	Egg laying/ incubation	Hatching	Fledging	Parental care continues	Non-breeding season			Non-breeding season		

WHAT DOES THE FPA REQUIRE FOR NESTING SITES?

- Protect the resource site, which consists of a 70-acre “core area” surrounding an NSO nest site or activity center of a pair of owls
- The shape of the 70-acre core area may depend upon the characteristics of the forest: It must encompass the activity center or nest tree and consist of forest stands that come closest to the habitat desired by NSOs
- Seasonal restrictions

HOW DO I PROTECT THE RESOURCE SITE?

- Maintain the suitable habitat for NSO within the core area. Forest practices that do not maintain the suitability of the core area are prohibited. Generally, timber harvests within the core area are not allowed.
- Restrict operations within 0.25 mile of a nest site between March 1 and September 30. This may be waived if it can be shown that there are no NSOs present or they are not nesting.
- Maintain protections to NSO resource sites until there is reliable evidence (usually protocol surveys) that the site is no longer occupied by owls.

SOURCES & MORE INFORMATION

Oregon Forest Practices Act:
<http://www.oregon.gov/odf/Pages/lawsrules.aspx>

Cornell Lab of Ornithology

Northern spotted owl Information site: www.fws.gov/oregon-fwo/species/data/northernspottedowl/main.asp

HOW DO I MAINTAIN SUITABLE HABITAT?

Suitable NSO habitat means habitat that provides nesting, roosting and foraging opportunities. Important habitat elements may include high canopy closure, a multi-layered, multi-species canopy with large overstory trees and a presence of broken-topped trees or other nesting platforms (e.g., mistletoe clumps), as well as snags and logs. The appearance and structure of these forests will vary across the range of the spotted owl, particularly in dry eastside forests. Maintaining or managing for these types of habitat conditions, both within core areas and within the larger home range area (up to 1.5 miles from a nest site) is likely to benefit spotted owls.

Maintain suitable habitat by:

- Limiting or prohibiting timber harvest activities within the core area
- Submitting a Notification of Operation to ODF when working within 1/2 mile of an NSO resource site
- If ODF finds that the proposed operation will be in conflict with an NSO resource site, submitting a written plan for review by ODF



Photo by Christine Maynard.



ABOUT OFRI

The Oregon Forest Resources Institute was created by the Oregon Legislature in 1991 to advance public understanding of forests, forest products and forest management and to encourage sound forestry through landowner education.

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Oregon Forest
Resources Institute

317 SW Sixth Ave., Suite 400
Portland, OR 97204-1705
971-673-2944
OregonForests.org