"STEWARDSHIP IN FORESTRY"

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FOREST PRACTICE NOTES

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OREGON DEPARTMENT OF FORESTRY
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OSPREY

PREFACE

Administrative rules adopted by the Oregon Board of Forestry identify the osprey as a bird that uses a "sensitive bird nesting site." Site-specific protection rules for osprey resource sites are now in effect in the Oregon Forest Practices Act.

The forest practice rules in this document are minimum standards for protection. Other management practices can further maintain or enhance an osprey's nesting sites. For a complete set of the forest practice rules for your area, as well as further information about identifying and protecting osprey nesting sites, contact your local Oregon Department of Forestry office. A forest practices forester or service forester familiar with your area will gladly assist you.

ABOUT OSPREY

The osprey is a fish-eating, raptorial bird that is widely distributed throughout the Pacific and Atlantic coast states, Great Lakes region, portions of Idaho, Montana, and in Wyoming where large water bodies exist. Osprey also occur over large areas of Alaska and Canada.

Osprey are primarily summer residents in North America. They winter in the Caribbean and Central/South America. Adult osprey usually migrate out of Oregon in September, while fledglings may remain in the area longer.

Nesting osprey are almost always associated with aquatic habitats such as rivers, lakes, estuaries, sea coasts and reservoirs. They usually arrive on the breeding grounds in late March or early April. Courtship and nest construction continue for one month. Eggs may be laid from late April into early June. A clutch usually consists of three eggs. Incubation lasts from 38 to 43 days. Young remain in the nest for about eight weeks. Fledged young remain at or near the nest site for about two months. Osprey do not become sexually mature until their third year.

POPULATION

Osprey populations in many parts of the country declined drastically during the middle part of this century. Poor reproduction was linked to the use of DDT and other persistent chemicals that caused reductions in egg shell thickness. A ban on the use of DDT in the United States has been paralleled by an increase in osprey production. Because of its susceptibility to pesticide contamination, the osprey is listed as a "national species of special emphasis" by the U.S. Fish and Wildlife Service.

The literature has documented an increase in the Oregon osprey population over the past 20 years. The increase may be partially a result of the creation of reservoirs, which provide new foraging habitat for osprey, and due to the ban of DDT.

The exact number of osprey currently nesting in Oregon is unknown. The Department of Forestry's most recent resource inventory database contains 890 osprey nest site locations. Of these, 47 percent are on privately owned lands, and 49 percent are on federal lands. The majority of these nest sites occur west of the crest of the Cascade Mountains, with major concentrations occurring along the Umpqua and Rogue rivers and around several lakes and reservoirs. Osprey nest sites on private lands make a substantial contribution to the total osprey population in Oregon.

The number of reliable nest sites may not be used as an estimate of the osprey breeding population. Many of these sites are probably alternate nests that are not occupied every year. Of the 890 nest sites, 390 (44 percent) are listed as active and 205 (23 percent) are listed as occupied. Furthermore, 5 to 10 percent of occupied nests within an osprey population are used by two-year-old birds. These immature pairs may be associated with nests, but they do not lay eggs or exhibit brooding behavior. Therefore, the number of osprey breeding pairs in Oregon is likely much fewer than the number of inventoried nests.

DEFINITIONS

The nest tree and alternate nests

Historically, most osprey have nested in the tops of snags or live trees with broken tops. In certain portions of the osprey's range, the availability of suitable nesting trees has declined, resulting in the use of alternate structures, such as channel markers, duck blinds, pilings, transmission line poles, and other man-made platforms.

In areas where pesticide contamination is no longer causing problems with reproduction, one of two factors usually limits osprey populations: food availability

OWNERSHIP	NUMBER OF NESTS						
	Active	Occupied	Located	Inactive	Unknown	Total	Percent of Oregon osprey population
PRIVATE	148	133	45	39	50	415	47%
BLM	118	49	5	40	21	233	26%
USFS	91	15	4	35	33	178	20%
ACOE	18	2	2	13	3	38	4%
COUNTY/ CITY	9	2	0	1	0	12	1%
STATE PARKS	2	3	1	2	0	8	<1%
ODF	4	1	1	0	0	6	<1%
TOTAL	390	205	58	130	107	890	
	44%	23%	6%	15%	12%		100%

or nest site availability. In an area with abundant nesting structures, significant changes in productivity were related to food availability.

However, in an area where suitable nest sites were thought to be limited, providing supplemental food had no significant impact on osprey productivity. Construction of nesting platforms has led to an increase in the osprey population.

The lack of suitable nest sites is limiting to many osprey populations. On the Umpqua River, it is likely that construction of artificial nesting structures between 1981 and 1985 allowed the osprey population to expand by attracting additional nesting pairs to suitable locations.

The types of structures on which osprey build their nests may vary considerably, but most successful nest structures have two characteristics in common:

1. The structure provides maximum visibility of the surrounding terrain. A duck blind or stake only 4 feet above water level may suffice in lakes or marshes, whereas the tallest pine or fir may be required in a dense forest. Low nests, near the ground, are susceptible to predators.
2. The structure provides adequate support for the nest and birds. A typical osprey nest is 4 to 6.5 feet in diameter and 1 to 2 feet deep. Sticks up to 7 feet long may be used as nesting material, and the inner portion is lined with grass, bark, and mud. To successfully support such a large nest, the supporting structure must be relatively large and stable.

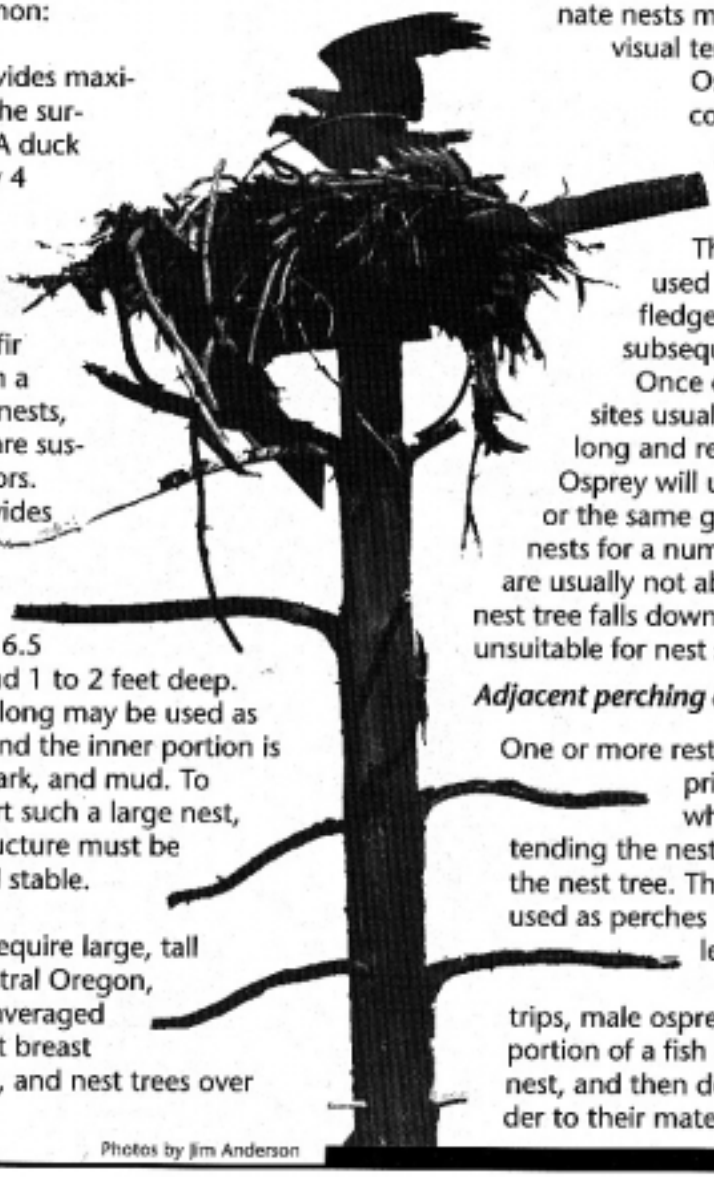
Tree-nesting osprey require large, tall trees for nesting. In central Oregon, nest trees in the forest averaged 43 inches in diameter at breast height and 120 feet tall, and nest trees over water averaged 23 inches in diameter at breast height and 30 feet tall. On the Umpqua River, suitable osprey nest trees have a broken top with a minimum 12-inch diameter, and range from 25 to 60 inches in diameter at breast height and 100 to 150 feet in height. The most important diameter measurement is at the broken top of the nest tree. This top must be large enough to provide adequate support for the nest and birds.

Osprey pairs often construct alternate nests within their nesting territory and may switch between them from year to year. The reason for multiple nests is not fully understood. Alternate nests may facilitate successful reproduction—if the primary nest is destroyed or made unsuitable—because the time and energy required to build a new nest might preclude nesting in the same season. Alternate nests may also serve as visual territory markers. Osprey sometimes construct "frustration nests" after an unsuccessful nesting attempt. These nests may be used to successfully fledge young in subsequent years.

Once established, nesting sites usually have a history of long and repeated use. Osprey will use the same nest, or the same group of alternate nests for a number of years. Nests are usually not abandoned until the nest tree falls down or becomes unsuitable for nest support.

Adjacent perching and fledging tree(s)

One or more resting perches, used primarily by the male when not fishing or tending the nest, are usually near the nest tree. These trees are also used as perches by fledglings when learning to fly. After foraging trips, male osprey generally eat a portion of a fish at a perch near the nest, and then deliver the remainder to their mates at the nest.



Photos by Jim Anderson

Replacement tree(s)

The osprey in Oregon usually nest in large snags and broken-top trees that inherently do not have a long life span.

Because of the transitory nature of most natural nest sites, and the fact that availability of suitable nest sites is limited in many osprey populations, management to maintain replacement trees is necessary to preserve osprey populations through time.

Resource Site

For the osprey, the resource site is the active nest tree and any identified key components. The key components are perching and fledging trees, and replacement trees. An active nest tree is one that has been used by the osprey within the past five nesting seasons. No protection is required for an abandoned resource site.

PROTECTION GOAL

The goal of osprey resource site protection is to avoid resource site abandonment or reduction in productivity of osprey resource sites. This is done by maintaining the integrity of the resource site and by avoiding disturbance during the critical period of use. Although the Department of Forestry encourages management practices that lead to resource site enhancement, protection rules address resource site maintenance.

Implementation of protection requirements may not eliminate all effects of an operation at a resource site, but will reduce any adverse effects to an acceptable level. Some losses of nesting, fledging, or perching trees within a nesting territory may result in a shift in use to other suitable trees within the territory. However, when there are large decreases in the number of suitable trees, the birds often abandon the resource site, or nesting success declines. Each nesting territory contains the same key components; however, the location and number of key components may vary in each territory.

DETERMINING PROTECTION

The Oregon Board of Forestry determined that the osprey qualifies as a species that uses sensitive nesting sites because it nests in a type of tree (large, prominent snags or broken-top trees) that is not generally maintained under standard forest practice rules.

When an ODF forest practices forester identifies the resource site, the forest operator must provide the following protection measures:

- During forest operations, the key components of the resource site are retained and protected from damage. The operation is designed to protect these trees from windthrow.
- During the critical period of use, the active nest tree and any perch tree identified as a key component are protected from disturbance. From March 1st through September 15th, forest operations are not permitted within 600 feet of the active nest tree or perch tree unless the state forester determines that the operations do not cause the birds to flush from these trees. The critical period of use may be modified by the state forester.

There are no exceptions permitted for protection of the resource site because Osprey are territorial nesters, and each territory is important to the population. If a resource site is

Photo by Jim Anderson

eliminated, it is not easily replaced because availability of suitable nest structures is frequently limited.

However, removal of a resource site may be permitted if replacement nest trees or replacement key components are provided by the operator or landowner. Replacement is not considered an exception, since the productivity of the nesting territory is maintained. Replacement may be considered by the state forester when:

- Alternate forest practices which retain and protect the resource site are not economically feasible; and
- The productivity of the nesting territory is not reduced.

There are exceptions based on the time of year (temporal exceptions) where the resource site may be disturbed. These exceptions are permitted when:

- Nest disruption or failure for a season does not affect the local population; and
- There are no economically feasible forest practices that avoid disturbance to the resource site during the critical period of use.

Factors considered by the state forester before granting a temporal exception include:

1. The size of the local population;
2. The contribution of the resource site in question to the local population; and
3. The feasibility of alternate forest practices that do not cause disturbance.

(A complete set of the forest practice rules about protecting osprey nesting sites is available from your local Oregon Department of Forestry office.)

Photo by Jim Anderson

Tips for Osprey Habitat Enhancement

Osprey prefer to nest and roost in large, prominent snags and broken-top trees, neither of which are as commonly available as in years past. Landowners who desire enriched wildlife habitat, such as for osprey, should consider cultivating specific snag management areas.

Osprey can be encouraged to nest in trees artificially altered for this purpose. Cutting the top from a large dead or dying tree creates a platform upon which a nest can be built. Other snags left near the nest tree provide roosting opportunities for hunting osprey.

WHERE TO CALL FOR ASSISTANCE

If you should have questions, please contact one of the Department of Forestry offices listed below. Local forest practices foresters are available to assist you in understanding the requirements of the Oregon Forest Practices Act.

NORTHWEST OREGON REGION

Astoria
Route 1, Box 950
Astoria, OR 97103
325-5451

Columbia City
405 E. Street
Columbia City, OR 97018
397-2636

Dallas
825 Oak Villa Road
Dallas, OR 97338
623-8146

Florence
P.O. Box 460
Florence, OR 97439
997-8713

Forest Grove
801 Gales Creek Road
Forest Grove, OR 97116
357-2191

Molalla
14995 S. Hwy. 211
Molalla, OR 97038
829-2216

Philomath
24533 Alsea Hwy.
Philomath, OR 97370
929-3266

Sandy
17710 SE 412th Ave.
Sandy, OR 97055
668-4646

Santiam
22965 N. Fork Rd. SE
Lyons, OR 97358
859-2151

Springfield
3150 Main St.
Springfield, OR 97478
726-3588

Sweet Home
4690 Hwy. 20
Sweet Home, OR 97386
367-6108

Tillamook
4907 E. Third St.
Tillamook, OR 97141-2999
842-2545

Toledo
763 NW Forestry Rd.
Toledo, OR 97391
336-2273

Veneta
P.O. Box 157
Veneta, OR 97487
935-2283

SOUTHWEST OREGON REGION

Central Point
5286 Table Rock Rd.
Central Point, OR 97502
664-3328

Coos Bay
300 Fifth St., Bay Park
Coos Bay, OR 97420
267-4136

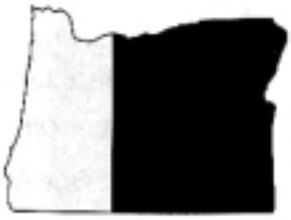
Gold Beach
P.O. Box 603
Gold Beach, OR 97444
247-6565

Grants Pass
5375 Monument Dr.
Grants Pass, OR 97526
474-3152

Reedsport
2925 Longwood Dr.
Reedsport, OR 97467
271-3332

Roseburg
1758 NE Airport Rd.
Roseburg, OR 97470
440-3412

Springfield
3150 Main St.
Springfield, OR 97478
726-3588



EASTERN OREGON REGION

Fossil
Star Route
Fossil, OR 97830
763-2575

John Day
400 NW 9th
P.O. Box 546
John Day, OR 97845
575-1139

Klamath Falls
3400 Greensprings Dr.
Klamath Falls, OR 97601
883-5681

LaGrande
611 20th St.
LaGrande, OR 97850
963-3168

Lakeview
2290 North 4th St.
Lakeview, OR 97630
947-3311

Pendleton
1055 Airport Rd.
Pendleton, OR 97801
276-3491

Prineville
220710 Ochoco Hwy.
Prineville, OR 97754
447-5658

The Dalles
3701 W. 13th
The Dalles, OR 97058
296-4626

Wallowa
Rt. 1, Box 80
Wallowa, OR 97885
886-2881

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2600 STATE STREET
SALEM, OR 97310
378-4115

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