

Bald Eagle Technical Report

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Introduction

The bald eagle has been removed from both the federal and Oregon endangered species lists. The Oregon Forest Practices Act (FPA) still identifies bald eagle nesting, roosting, and foraging perch sites as resource sites used by threatened and endangered species and includes rules for their protection (OAR 629-665-0200, OAR 629-665-0220 through 629-665-0240). When a threatened or endangered species is delisted by the Oregon Fish and Wildlife Commission and/or the U.S. Fish and Wildlife Service (USFWS), the Board of Forestry (Board) must determine whether continued rules for protection of the species' resource sites are warranted (Figure 1). If the Board determines that continued protection rules are warranted, then rules shall be promulgated under the appropriate statutory authority. If the Board determines that continued protection rules are not warranted, existing rules must be repealed.

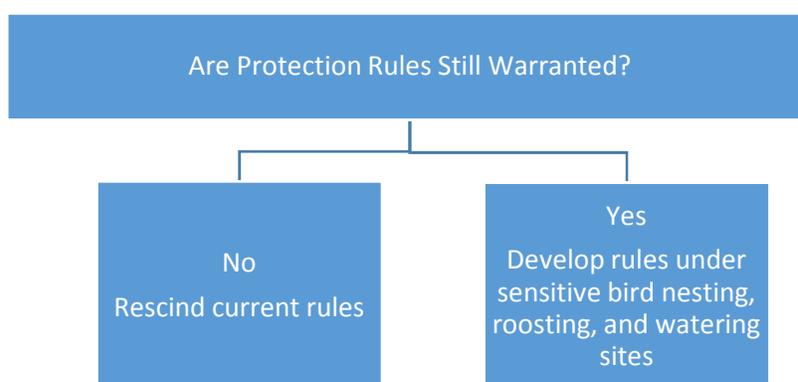


Figure 1: Decision space for the Board of Forestry for action on the Bald Eagle rules under the FPA.

This technical report includes information to assist the Board in determining whether continued rules for protection of bald eagle nesting, winter roosting, and foraging perch sites are still warranted. In addition, should the Board determine that rules are still warranted, this report contains additional information to assist the board with key decisions for rule development. New rules would be promulgated under the Sensitive Bird Nesting, Roosting, and Watering Sites rules (OAR 629-665-0100).

OAR 629 Division 680 (Process to inventory and protect special resources on forest lands) contains information to direct the Board's review process. OAR 629-680-0100 (4) directs the Board to determine if continued protection of a delisted species is still warranted, but does not provide details as to how this review shall be conducted. In contrast, OAR 629-680-0200 explains the process for developing rules for species under the Bird Nesting, Roosting, and Watering Sites rules (OAR 629-665-0100) and includes very specific information that the Board shall review during their decision-making process.

The technical report is formatted to assist the Board with both decisions (see Figure 2). The first section of the paper addresses topics pertinent to the question of whether or not continued rules are warranted. The second section lays out possible new rules for the Board to consider, should they decide that protection is still warranted.

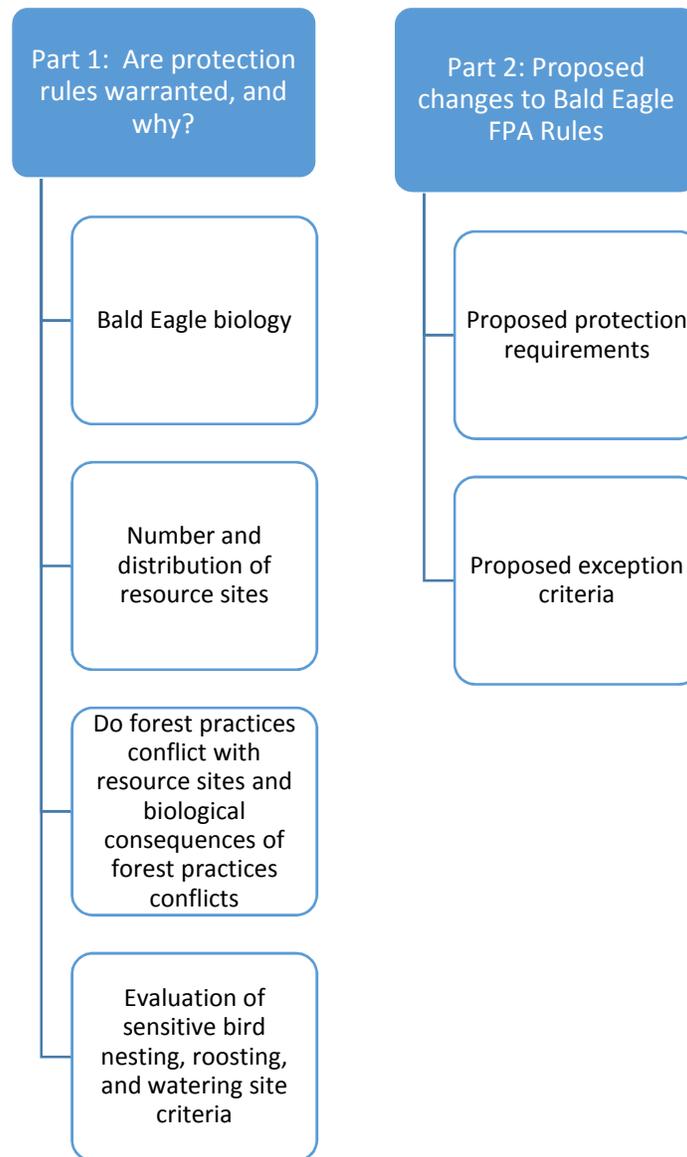


Figure 2: Summary diagram of the structure of this technical report. Part 1 provides information to help the Board with the decision of whether protection rules under the FPA are still warranted and also provides background information to help inform any new rules. Part 2 lays out options for continued rules for bald eagles under the FPA, and proposed exception criteria.

Part 1: Are Protection Rules Warranted and Why?

History of Bald Eagle Protections

The bald eagle was selected as the National Emblem in 1782 by Congress and continues to be an important symbol for the nation. It also has long been, and continues to be, an important symbol for Native American and First Nation cultures throughout North America (Buehler 2000). Because of the symbolic importance of the bald eagle, as well as its visible nature, it is a species for which many people value and care about its status.

The bald eagle experienced steep population declines in the early to mid-1900's. Early causes included habitat loss and illegal shooting. After World War II, effects from the pesticide DDT had a significant effect on populations. DDT contamination of eagle food resources led to thinning of eggshells, ultimately resulting in low reproductive success as eggs were frequently crushed by the weight of incubating adults. Populations declined to the point that the species was threatened with possible extinction (Buehler 2000).

The Bald Eagle Protection Act (hereafter, Eagle Act) was created in 1940 in response to the population declines¹. The Eagle Act prohibited any taking or possession of bald eagles or their parts (e.g., feathers, eggs, etc.). The bald eagle was later listed by the U.S. Fish and Wildlife Service under the Endangered Species Preservation Act in 1967, the Endangered Species Conservation Act in 1969, and the Endangered Species Act in 1978.

In Oregon, the bald eagle was first recognized as a threatened species by the Oregon Fish and Wildlife Commission in 1975, however this original list was used for administrative and planning purposes only and was not adopted through state administrative rules. They were formally added to the state ESA (ORS 496.171 to 496.192 and 498.026) in 1987 through the grandfathering provision requiring all native species on federal T&E lists to be added to the state ESA list.

DDT, the pesticide thought to be the primary cause for population declines after World War II, was banned in the United States in 1972.

Population recovery

After being listed under the federal Endangered Species Act, bald eagle populations recovered throughout the contiguous United States. In Oregon, breeding populations increased from an

¹ The Bald Eagle Protection Act was later renamed the Bald and Golden Eagle Protection Act when protection was also afforded to the golden eagle

estimated 66 breeding areas² in 1978 to over 700 breeding areas in 2010. The bald eagle nesting population growth rate in Oregon was exponential and averaged a 7.3 percent increase annually during this time period. Population increases were most pronounced along the lower Columbia River and in the Willamette Valley. Northeast Oregon also saw significant increases in number of breeding areas. Reproductive success also improved during the same time period which indicated that the population was healthy (Oregon Department of Fish and Wildlife (ODFW) 2012, Isaacs and Anthony 2011).

Delisting history

The bald eagle was removed from the federal Endangered Species Act (ESA) list in July 2007. The Oregon Fish and Wildlife Commission delisted the bald eagle from the State List of Threatened and Endangered Species (Oregon Administrative Rules (OAR) 635-100-0125) in 2012. ODFW determined that due to continued population increase, expansion and reoccupation of the historic range, increased nesting density, and high annual productivity, bald eagle populations in Oregon had recovered. They also determined that adequate protection standards were in place under the federal Eagle Act and the Migratory Bird Treaty Act. ODFW recommended that the bald eagle no longer required protection as a threatened species under the Oregon Endangered Species Act (ODFW 2012).

Existing Federal Protections for Bald Eagles

Bald eagles still receive federal protection under the Eagle Act as well as the Migratory Bird Treaty Act. Protection standards under the Eagle Act are similar to those in the federal ESA in that the Act prohibits anyone from “taking” eagles without a permit issued by the Secretary of Interior. “Take” is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” The Eagle Act primarily covers protection of bald eagle nesting and winter roosting sites. This act includes both structural/habitat protection and protection from disturbance. Under the Eagle Act, disturbance “means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best available scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior (USFWS 2007).

The USFWS published the “National Bald Eagle Management Guidelines,” which provides landowners with a set of recommendations for how to proactively protect and avoid disturbing bald eagles (USFWS 2007). Although the management guidelines are not regulatory nor are they intended to ensure that take will not occur, the USFWS considers them as prudent

² Breeding area is a term used by researchers to represent an area used by a pair of bald eagles over time. A breeding area may have multiple eagle nesting trees.

measures to protect eagles and indicates that “enforcement efforts will be focused on individuals or entities who take bald eagles without implementing appropriate measures recommended by the guidelines.” The National Bald Eagle Management Guidelines includes recommendations specific to forestry operations and protection of nest trees. Standards to avoid possible take of winter roosting areas and protection of foraging areas are addressed in the self-certification process under the Eagle Act (see appendix A).

Summary of current Forest Practices Act rules for Bald Eagles in Oregon

The FPA rules for the bald eagle were implemented in October, 1991. Under OAR 629, Division 665-0200 there are separate rules groups specific to bald eagle nesting sites³, roosting sites, and foraging perches.

Nesting sites (OAR 629-665-0220)

Nesting site rules include standards for structural protection of nest trees, as well as protection from disturbance. Nest trees are protected indefinitely as long as the tree is capable of supporting a nest structure. If the nest tree falls and there are suitable replacement trees available, the resource site is protected for five years. Activities that may disturb nesting eagles during the critical use period are restricted within ¼ mile, or within ½ mile if the operation is within line of sight from the nest. Exceptions are allowed if the landowner/ operator has an incidental take permit under the federal ESA⁴.

Winter Roost Sites (OAR 629-665-0230)

Roosting site rules only protect communal winter roosting sites. A winter roosting site is where multiple bald eagles perch at night. FPA rules include standards for both structural protection of the roosting trees as well as protection from disturbance. Only winter roost sites used within the last five years are protected. Activities that may disturb roosting eagles are restricted during the critical use period within ¼ mile, or within ½ mile if within line of sight. Exceptions under this rule are allowed only if the landowner/ operator has an incidental take permit under the federal ESA³.

Foraging Perches (OAR 629-665-0240)

The FPA protects foraging perches that are habitually used by bald eagles. The foraging perch tree and any identified site-specific key components are protected. The rule indicates that operations should not cause excessive disturbance during critical use periods. Critical use

³ The term nesting site refers to the definition in the FPA (OAR 629-665-0220 (1)(a)) and refers to an individual nest tree.

⁴ Although this exceptions clause is still in the current FPA rules for bald eagles, it is no longer valid because the ESA no longer applies to bald eagles (thus take permits under the ESA are not available).

periods for foraging perches are developed on a site-specific basis. Both temporal and structural exceptions are allowed under the rule.

Bald Eagle Biology and Population Trends

The ODFW delisting report for bald eagles (ODFW 2012) contains a summary of the biology and population status of bald eagles. This report is largely based on the publication by Isaacs and Anthony (2011) on their 30-year study of the population and nesting biology of bald eagles in Oregon. Nationwide, the most recent summary on the ecology of the bald eagle can be found in the *Birds of North America* species account for the bald eagle (Buehler 2000). Unless otherwise noted, our summary of the biology of bald eagles is derived from these sources.

Nesting

Bald eagles nest in tall, large-diameter trees near significant bodies of water such as estuaries, rivers, reservoirs and natural lakes. A majority (> 60%) of nest trees are located within ¼ mile, and nearly all are within two miles of large bodies of water. Because bald eagles build such large nests, typically to 5-6 feet in diameter and 2-4 feet deep, they require large trees with stout branches for nesting. Many nesting trees in Oregon are over 40 inches diameter and 125 feet tall. Douglas-fir is the favored species for nest trees on the west side of the Cascade Crest and ponderosa pine on the east side. There has been an increase in use of hardwoods for nesting, mostly black cottonwood, as bald eagle populations have expanded along large rivers such as the Columbia and Willamette.

Although eagles may build and repair nest structures any time of the year, most nest building occurs in February through June. Eggs are laid between mid-February and April and hatch in late March to late May. Eagle chicks fledge in late June through August (Isaacs and Anthony 2003).

Nesting habitat was thought to be a limiting factor to bald eagle populations at the time the FPA rules were initially developed (ODF 1991). ODFW does not believe that nesting habitat is currently limiting population growth (ODFW 2012). This change of perspective is likely due to the fact that when the original ODF technical report was developed, bald eagles were thought to nest primarily in contiguous stands of old-growth or mature coniferous forests. Although these stands do continue to provide important nesting habitat, as bald eagle populations recovered they began to nest in new areas such as younger conifer stands with individual residual old-growth trees and riparian areas with large-diameter hardwoods, such as black cottonwood. Although nesting habitat does not seem to be currently limiting, it could become so as populations reach carrying capacity. In addition, loss of habitat, especially at large scales, would be expected to have a negative impact on populations.

Winter Roosting

During winter, bald eagles will roost communally at night in particular trees or stands of trees. Bald eagles select dense stands with a remnant component of mature, open grown trees for roosting in winter. Roost trees are usually the super-dominant, mature trees with an open branch structure. Roosting stands are near foraging areas and in protected locations (e.g., protected from wind). The same areas are often used repeatedly throughout the winter months. The size of eagle roosting groups can vary from just a few birds to over 500. The reasons that bald eagles roost communally in winter are not known, but could be due to improved thermoregulation or an increased opportunity to locate food resources. ODFW (2012) indicated that winter roosting habitat does not appear to be limiting eagle populations at this time in Oregon.

Foraging Perches

Bald eagles habitually perch in one or more trees near their foraging areas. The perch serves as a location to scan foraging areas for prey or carrion, and as a location to consume captured food. Foraging perches are not well studied. However, it is likely that individual bald eagles use multiple foraging perches, if additional perches are available.

Number and distribution of sites on private and public lands

ODF maintains a database of known locations of bald eagle nesting sites, winter roosting sites, and foraging perches for the purpose of administering the FPA. The database was developed from information provided by ODFW, the Oregon Cooperative Fish and Wildlife Research Unit, the Oregon Eagle Foundation, and the USFWS.

Nesting Sites

ODF's database contains nesting site information collected during the Oregon Cooperative Fish and Wildlife Research Unit's 30-year study (1979 – 2007) of bald eagles in Oregon (Isaacs and Anthony 2011). The state-wide bald eagle surveys ended in 2007. A partial update from a smaller subset of eagle surveys and volunteer surveys was received in 2010. Since 2010, additions and updates to the database have been restricted to nesting site information compiled by the Klamath Falls USFWS office and incidental observations made by ODF Staff. Currently, there are 1,577 nesting site locations in the ODF database (each nest site represents an individual nest tree).

In 2011, Isaacs and Anthony summarized the distribution of known bald eagle nesting sites in Oregon between 1979 and 2007. They reported 40% of nesting sites were located on private ownership, 40% were on Bureau of Land Management (BLM) and US Forest Service (USFS)

lands, and the remaining 20% were on other ownerships (e.g., state-owned, local governments, federal wildlife refuges, etc.).

Winter Roosting Sites

ODF's database contains 130 known winter roosting sites. These locations were compiled from several studies of winter roosting ecology of eagles in Oregon (DellaSala et al. 1987, Hohmann 1998, Hunnicutt 1989, Isaacs and Anthony 1984, Isaacs et al. 1987, Isaacs et al. 1992, and Isaacs et al. 1993). Of the known winter roosting locations in the ODF database, 53% were located on private ownership, 46% on federal ownership, and 1% on other ownership classes.

There are likely additional winter roosting locations that ODF is not aware of, however it is unclear how many additional sites exist. ODF does not know if all winter roosting sites in the database are still active. To our knowledge, winter roosting sites have not been monitored since the original studies from which our database was developed. These studies were only one to two years in length, thus the long-term use of most of the roosting areas is unknown.

Foraging Perches

ODF's database also contains a small set of records for known foraging perches. The origin of these data are unknown, however they were likely provided by ODFW during early efforts to build ODF's database of known resource sites protected under the FPA. Because bald eagles can use most any large tree near a foraging area as a perch, ODF's inventory represents only a small subset of perch trees that are used by eagles. ODF is unaware of any other inventories of foraging perch sites in Oregon.

ODF's database includes 28 bald eagle foraging perch trees. Of these, 96% are on private ownership and 4% on federal ownership. Due to the small sample size and unknown nature of these data, the percentages noted above likely do not reflect the actual distribution of foraging perches on ownerships in Oregon.

Do Forest Practices Conflict with Resource Sites & Biological Consequences of Forest Practices Conflicts

Timber harvest is the primary forest practice that conflicts with nesting, winter roosting, and use of foraging perches by eagles. Both clearcut and partial harvesting can modify habitat. Habitat modification directly impacts the species when resource sites are removed or altered (e.g., cutting of a nesting tree). Indirect impacts arise when harvest occurs near resource sites such that key components are lost or sites become more exposed to the elements (e.g., prone to windthrow, loss of thermal buffering of winter roost areas). Ultimately the indirect effects of forest practices can lead to abandonment, reduced survival, or reduced reproductive success.

Other forest practices may conflict with nesting, winter roosting, and foraging perch sites by causing a disturbance during critical use periods. Forest Practices that may cause a disturbance-related conflict includes timber felling, yarding, operation of chainsaws, use of heavy equipment, blasting, operation of aircraft (e.g., for application of herbicides), and in some situations, burning. The impacts of disturbance vary by resource type. For nesting sites, disturbance may cause bald eagle pairs to abandon their nests, to feed young less frequently, or to leave eggs or chicks unattended, which ultimately reduces reproductive success.

At the time of FPA rule development for bald eagles, available research indicated that bald eagles were sensitive to disturbance caused by forest practices and that nesting success could be negatively impacted. However, more recently ODFW has indicated that, in general, bald eagles have become more adapted to disturbance (ODFW 2012). Guinn (2013) suggested that bald eagles have experienced a generational habituation to disturbance, where eaglets exposed to human activity while in the nest are less likely to be disturbed by human activity when they are nesting adults. Furthermore, habituated eagles are more likely to select nesting sites nearer to human activity than their ancestors. Thus, although forest practices may still pose a conflict for nesting sites by causing a disturbance, it seems like nesting eagles have adapted to some level of disturbance and that distances at which point a nesting pair would be affected are less than previously thought. However, bald eagles pairs nesting in remote areas may still be somewhat sensitive to disturbing activities. The USFWS recommends relatively short distances (660 feet) within which most forest practices should be restricted to avoid disturbance to eagles; activities such as use of aircraft and blasting are recommended to be avoided within 1000 feet and ½ mile, respectively (USFWS 2007).

At winter roosting sites, disturbance may cause eagles to flush from the site temporarily or abandon it altogether. Because foraging resources are limited in winter and climate conditions can be extreme, excessive flushing may result in eagles being more exposed to the elements or to expend energy resources to the point that survival may be impacted. In addition, if disturbance causes eagles to find alternate roosting sites, they may have to travel farther from roosting areas to their foraging areas.

For foraging perches, disturbance may cause eagles to be less successful in foraging or to relocate to other foraging areas. McGarigal and others (1991) used boats to test how foraging eagles responded to disturbance. They showed that when disturbance pressure was increased near an eagle perch tree, eagles would cease foraging while the disturbance was ongoing rather than move to a new foraging area. Although this study was limited in the type of disturbance, it documents that disturbance can cause bald eagles to change their foraging behavior. The

impacts of disturbance depend on the availability of alternate foraging perch trees. If alternate perches are unavailable, foraging efficiency will decrease, potentially reducing survival or nesting productivity.

Evaluation of whether the species meets the criteria for listing as a Sensitive Bird Nesting, Roosting, and Watering Site

As part of the Board’s rule review process, when a species is no longer listed as a threatened or endangered species, the Board needs to consider if the species still warrants protection, and if so, develop rules under the appropriate authority. For the bald eagle, the appropriate section for any future rules for the bald eagle is under OAR 629-665-0100 (Sensitive Bird Nesting, Roosting and Watering Site). In the event that the Board should decide that protection is still warranted, ODF has conducted an assessment to determine if the bald eagle meet the criteria for listing as a Sensitive Bird Nesting, Roosting and Watering Site under OAR 629-665-0100. The information contained in this review may also be pertinent to the question of whether or not protection rules are still warranted.

OAR 629-680-0210 lists the criteria to be considered when reviewing a species for consideration under sensitive Bird Nesting, Roosting and Watering Site. These criteria are listed in Table 1. The following section describes the analysis of whether or not the bald eagle sites meets the criteria.

Table 1: Summary of criteria to be evaluated for consideration of development of rules under the Sensitive Bird Nesting, Roosting and Watering Site section of the FPA. Sites must meet Criteria 1 and 2 and at least one of the criteria under 3).

Criteria	Nest Sites	Roost Sites	Perch Sites
(1) Requires site-specific protection in order to assure continuation of species throughout range			
(2) Has a direct probability of being adversely affected by forest practices			
(3) Meets one or more of the following criteria			
3a—where birds concentrate nesting, roosting, or watering use			
3b—number of sites is limited and used by a species with specialized nesting or roosting requirements			
3c—number of sites is declining or expected to decline in the future			
3d—resource sites are protected by the Bald Eagle Protection Act			

629-680-0210(1): Used by a native species and requires site-specific protection in order to assure continuation of species throughout range.

The bald eagle is native to Oregon. Because of the large size of their nests, bald eagles require a large tree with stout branches to support the nest structure. Bald eagles often use the same nesting tree, or a set of alternate nesting trees, year after year. Destruction of existing nesting trees is a concern as an extensive period of time is needed for a tree to grow to a size large enough to support a bald eagle nest structure. Younger, smaller-diameter trees (e.g., < 30 inches dbh) are unlikely to be suitable nesting sites because they do not have the branch structure to support a nest structure (based on nest tree sizes reported in Anthony and Isaacs 1989). Because nearly half of known nesting sites in Oregon occur on private lands, it is ODF's opinion that site-specific protection of nest trees is warranted on nonfederal lands.

Although bald eagles also roost in large-diameter trees in winter, they do not require as large of a tree and can be more flexible as to which trees they roost in as compared to trees selected for nesting. Although most winter roosting sites in the ODF database are on private lands, the inventory is incomplete. Many winter roosting sites likely occur on other ownerships including federal forests, but are not accounted for in the ODF database.

Currently, there is not adequate information to indicate if eagles can easily relocate (e.g., to another ownership) if their roosting site is harvested or disturbed. ODFW (2012) indicated that winter roosting habitat does not appear to be limiting eagle populations at this time. There are some exceptionally large roosting sites that support hundreds of eagles (e.g., Bear Valley in Klamath County). While Bear Valley is located on federal ownership, it is not known if other extremely large winter roosts exist in Oregon on nonfederal lands. While we did not find published or other information on this topic, it is possible that disturbance or loss of such large roosting sites would stress or disadvantage eagle populations to some unknown degree. It is the Department's opinion that protection of roosting sites may be important for certain populations of eagles in Oregon (e.g., communal roosts used by a large number of birds on an annual basis), but that roost site protection is unnecessary at this time to ensure continuation of the species throughout its range.

Little is known about how forest practices affect bald eagle use of foraging perches. Because perch trees are usually close to the bodies of water used for foraging areas, many perch trees likely fall within Forest Practices rule requirements for riparian management areas (RMAs) for lakes, estuaries, and large fish streams. Perch trees may be subject to harvest if they fall outside protected RMAs or if partial harvest is conducted within RMAs. Removal of a single foraging perch is unlikely to negatively impact eagles unless alternative foraging perches are limited.

Because bald eagles can use a variety of trees as well as artificial structures as foraging perches, it is unlikely that perches are limiting populations. It is ODF's opinion that protection of foraging perches is unnecessary to ensure continuation of the species throughout its range.

629-680-0210(2): Resource site has a direct probability of being adversely affected by forest practices

Nesting, roosting, and foraging perch sites can be adversely affected by forest practices. This can occur through direct loss due to timber harvest. The quality of sites can be reduced if key components are removed through harvest (e.g., replacement trees, perch trees, roost staging trees, buffers). Forest practices may disturb eagles, causing them to flush from nesting, roosting, or foraging perch sites. Excessive flushing due to disturbance can result in reduced nesting success or survival.

It is ODF's opinion that nesting, roosting, and foraging perch sites all have a direct probability of being adversely affected by forest practices.

629-680-0210(3): In addition, resource site must meet one or more of the following criteria (3a, 3b, 3c or 3d):

0210(3)(a) Resource sites are where birds concentrate nesting, roosting, or watering use.

0210(3)(a)(A) Once established, the resource site must have a long and repeated history of use,

0210(3)(a)(B) The numbers of resource sites are limited (occur in fixed amounts), or

0210(3)(a)(C) The resource sites provide special requirements for the species.

Nesting Sites

Bald eagle nesting sites meet this criterion, because these sites are areas of concentrated use during the breeding season. Nesting sites also meet subcategories A and C. Most nesting sites have a long and repeated history of use, although with population expansion, there are many newer territories with recent nest-tree establishment. Nest trees provide structural support for the large and heavy nests that eagles build. Thus they provide a special requirement of the species. Nesting sites also meet subcategory B, especially on private lands, as suitable nesting trees may be limited if adequate replacement trees do not develop over time. Existing nesting trees are often decadent older trees and these older trees will likely begin to decline and fall over the next couple of decades. Due to the relatively short harvest rotations often observed on private lands, it is unclear if adequate replacement trees will develop on that ownership.

Winter Roosting Sites

Winter roosting sites meet this criterion because they are areas of concentrated use during the winter season. They furthermore meet subcategories A and C. Once established, bald eagles often repeatedly use the same stand of trees for roosting in winter. This is especially true for large roosting sites. Some areas have many eagles roosting every winter. Roosting areas provide key habitat areas which promote winter survival of bald eagles.

Foraging Perch Sites

Foraging perch sites meet this criterion in certain circumstances. Perch sites may have concentrated use, especially if other suitable perch sites are not available near key foraging areas. It is ODF's opinion that adequate perch trees are available around foraging areas in most situations.

0210(3)(b) Number of resource sites is limited and used by species with specialized nesting or roosting requirements

0210(3)(b)(A) Once established, the resource site must have a long and repeated history of use,

0210(3)(b)(B) Populations of the species using these resource sites are, or evidence indicates they are, naturally small, or

0210(3)(b)(C) Populations of the species using these resource sites are only found in a few locations in Oregon

According to ODFW (2012), neither nesting nor roosting habitat appears to be limiting populations in Oregon at this time. Although habitat does not appear to be limiting populations statewide, it is ODF's opinion that nesting sites may become limited on private lands as existing nest trees degrade. The shorter harvest rotations on many private lands will prevent trees from growing large enough to support eagle nests. Additionally, nearly half of the nesting areas in Oregon occur on private lands, which represent a significant proportion of the resource sites available in the state. Nesting sites meet subcategory A because once established, they tend to be used for many years. Nesting sites do not meet subcategories B or C.

It is the Department's opinion that winter roosting sites do not meet this criterion. While bald eagles do select large-diameter trees for roosting, eagles appear to have more flexibility in choosing which trees they use for roosting than they do for nesting (Weikel, professional opinion). However, large groups of eagles which have habitually roosted in the same stand of trees may have less flexibility to move to a new stand due to strong site fidelity or lack of alternative habitat. Thus loss of a very large roosting sites due to logging could impact local populations, particularly in the short term. Although most of the winter roosting sites in the ODF database are on private lands, the inventory is incomplete. It is likely that suitable winter

roosting sites also occur on other ownerships including federal forests. It is ODF's opinion that the number of possible winter roosting locations is not limited or likely to become more limited in the future if FPA rules are repealed.

Although foraging perch sites are not addressed in the delisting report (ODFW 2012), it is ODF's opinion that foraging perch sites are not limited in most areas.

0210(3)(c) Number of resource sites is declining and expected to decline in the future

0210(3)(c)(A) Once established, the resource site must have a long and repeated history of use,

0210(3)(c)(B) Populations of the species using these resource sites are, or evidence indicates they are, naturally small, or

0210(3)(c)(C) Populations of the species using these resource sites are only found in a few locations in Oregon

Nesting Sites

It is unlikely that the number of nesting sites is declining on most ownerships. However, it is possible nesting sites on private lands could decline in the future. With the exception of nesting sites along the Willamette and Columbia Rivers, a majority of the nesting trees in Oregon are large diameter conifers. On private lands, many of the nesting trees are residual old-growth trees or located in small patches of older timber. It is expected that through natural processes, these trees and patches will degrade over time to the point that they cannot support nesting eagles. In the absence of site-specific protection, additional nest trees could be lost due to direct cutting of trees. It is also expected that recruitment of similar-sized timber on private lands may be limited because rotation ages tend to be shorter than the amount of time needed for a tree to grow large enough to support a nest structure. Thus, in the future, the number of nesting trees on private lands may be fewer as a result of current forest practices.

Roosting and Foraging Perch Sites

It is unlikely that the number of roosting and foraging perch sites is declining or will decline in the future. Unlike nesting sites, bald eagles can find adequate roosting and foraging perch habitat in a wider range of stand conditions.

0210(3)(d) The resource sites are protected by the Bald Eagle Protection Act

This criterion is met because nesting, winter roosting, and foraging perch sites are all protected under the Bald and Golden Eagle Protection Act.

In order to meet the criteria for listing under the Sensitive Bird Nesting, Roosting, and Watering Sites rules, resource sites must meet Criteria 1 and 2 and at least one of the criteria listed under

Criteria 3. Results of analysis are shown in Table 2. It is ODF’s opinion that bald eagle nesting sites qualify for continued protection because they meet all three criteria. Winter roosting sites do not qualify because they do not meet criteria 1, although they do meet Criteria 2 and 3. Similarly, foraging perches do not qualify because they do not meet criteria 1, although they do meet Criteria 2 and 3.

Table 2: Summary of analysis of whether the bald eagle meets criteria for development of rules under the Sensitive Bird Nesting, Roosting and Watering Site rules in the FPA. Sites must meet all three criteria for rule development.

Criteria	Nest Sites	Roost Sites	Perch Sites
(1) Requires site-specific protection in order to assure continuation of species throughout range	Y	N	N
(2) Has a direct probability of being adversely affected by forest practices	Y	Y	Y
(3) Meets one or more of the following criteria			
3a—where birds concentrate nesting, roosting, or watering use	Y	Y	N
3b—number of sites is limited and used by a species with specialized nesting or roosting requirements	Y	N	N
3c—number of sites is declining or expected to decline in the future	Y	N	N
3d—resource sites are protected by the Bald Eagle Protection Act	Y	Y	Y
Overall Conclusion (are all 3 criteria met)	Y	N	N

Role of existing federal protection under the Bald and Golden Eagle Act

The above review of bald eagle nesting, roosting, and foraging perch sites was conducted without regard of regulatory protections under the Bald and Golden Eagle Protection Act. Although the Eagle Act affords protection to eagle nests and winter roosts, the breadth of the regulatory authority of the USFWS appears to be limited. Protection of nesting habitat is limited to the actual nest tree. Nest trees are protected as long as the nest structure is present, but not once a nest falls out of a tree. Enforcement can be taken for actions that cause direct harm to an eagle such as cutting of a nest tree or excessive disturbance such that a nesting attempt fails. However, it is our understanding that the USFWS has limited authority to require protection beyond individual nest or roost trees or to require restriction of activities that *may* disturb birds. Enforcement is likely limited to those activities where take has already occurred.

The USFWS developed guidelines to help minimize impacts to and to minimize chance of take of bald eagles under the Eagle Act (www.fws.gov/pacific/eagle, USFWS 2007, Appendix A). In the National Bald Eagle Management Guidelines, it indicates that “the US Fish and Wildlife Service strongly encourages adherence to these guidelines to ensure that bald and golden eagle populations will continue to be sustained,” and “The Service will prioritize its enforcement efforts to focus on those individuals or entities who take bald eagles or their parts, eggs, or nests without implementing appropriate measures recommended by the guidelines.” Thus, the 2007 guidelines provide a tool for landowners to proactively protect eagle sites and to minimize their risk of “take” under the Eagle Act. However, the guidelines are voluntary in nature.

The 2007 Eagle Act guidelines focus primarily on nesting trees. In addition to the Bald Eagle Management Guidelines (USFWS 2007), the USFWS also has an online tool available to landowners to determine if their project may need a take permit under the Eagle Act (available at www.fws.gov/pacific/eagle). This tool can be used to self-certify that the operation is not likely to disturb eagles and is unlikely to take eagles in violation of the Eagle Act. The self-certification tool addresses nest trees, winter roosting areas, and foraging areas.

Recommended voluntary protection standards for nest trees in the Bald Eagle Management Guidelines (USFWS 2007) are similar to those in the FPA, except distances for seasonal restrictions are shorter under the USFWS guidelines. Generally, 330’ habitat buffers are recommended to protect nesting eagles. To avoid disturbing eagles, most forest practices are restricted within 660’ of nesting, roosting, and foraging perch sites. Use of aircraft is restricted within 1000 feet and blasting within ½ mile of nesting eagles.

Role of Tribal Cultural Considerations

The bald eagle is an important symbol within many Native American cultures, including tribes within Oregon. Bald eagles continue to play an important role in Native American cultures, even in modern times. During external outreach for this project, we received input from the Nez Perce Tribe. They indicated that the bald eagle continues to play an important role in the culture of the Nez Perce people and that the Tribe supports maintenance of healthy populations of bald eagles throughout the region.

The cultural importance of the bald eagle to Oregon’s Native American Tribes should be taken into consideration during the Board of Forestry’s decision making process.

Part 2: BOF decision space for possible changes to Bald Eagle FPA Rules

The general structure of the decision space for the Board of Forestry is shown in Figure 3. Individual decisions should be made for each of the rule groups: bald eagle nesting, winter roosting, and foraging perch sites. If the Board decides that continued protection under the FPA is not warranted for eagle nesting, winter roosting, or foraging perch sites, the pertinent rules will be rescinded and no other analysis is required. However, if the Board decides that continued protection is warranted, additional information is needed to help inform discussion of new protection rules under the Sensitive Bird Nesting, Roosting, and Watering Site section of the FPA (OAR 629-665-0100). Part 2 of this technical report describes the decision space for rule changes and summarizes results from the OAR 629-680-0210 analysis (see part 1 of this report), which evaluated whether the species/sites meet criteria for listing as Sensitive Bird Nesting, Roosting, and watering sites under the FPA.

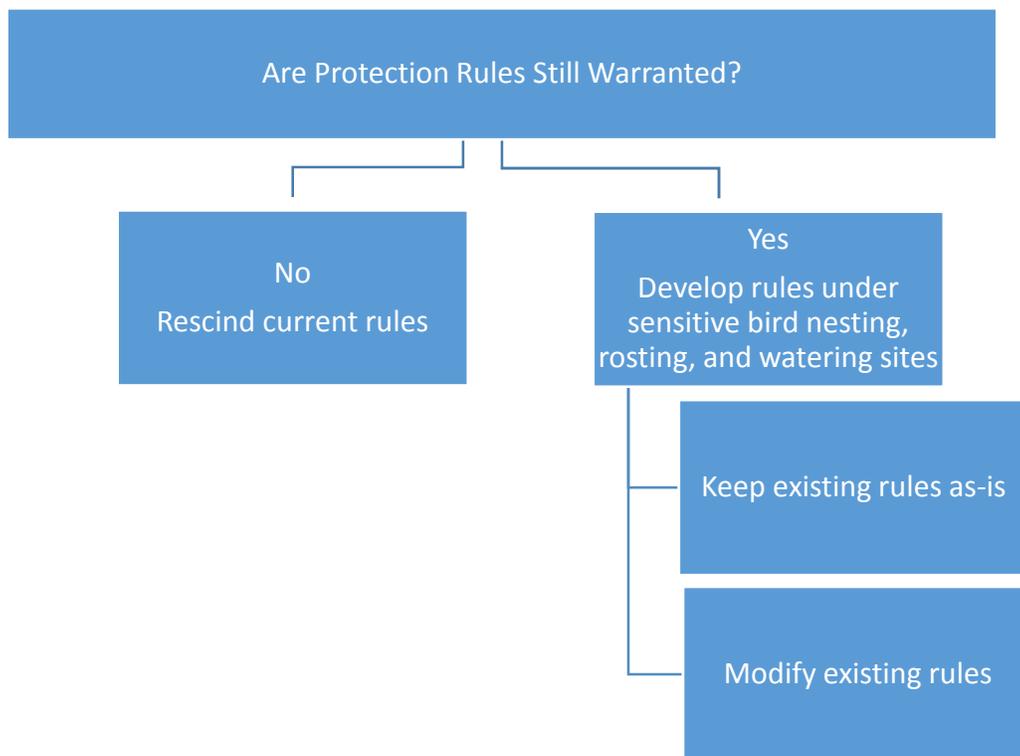


Figure 3: Decision space for the Board of Forestry for Bald Eagle FPA rules, showing generalized rule options should the Board decide that protection is still warranted for Bald Eagle nesting, winter roosting, or perching sites.

Protection Not Warranted—Rescind Current Rules

Should the FPA rules for bald eagles be rescinded, sites would still be protected under the Bald and Golden Eagle Act. However, as previously discussed, the regulatory authority of the USFWS under the Eagle Act may be limited.

Based on the analysis in Part 1 of this technical report, it appears there is support for a decision to rescind the FPA rules for winter roosting sites and foraging perch sites. It does not appear that these resource sites are limiting bald eagle populations and are not expected to limit populations should FPA rules be rescinded. Based on the Department's analysis, neither winter roosting sites nor foraging perch sites met criteria to be added as protected resource sites under the Sensitive Bird Nesting, Roosting, and Watering Site rules (Table 2). However, as noted previously, very large winter roosting sites could be important at the scale of local populations. Loss of large winter roosting sites due to timber harvest could have a disproportionate impact for local wintering populations. Additional monitoring and research on bald eagle winter roost use is needed.

Protection Warranted

Based on the analysis in Part 1 of this technical report, it appears there is decision space to either keep FPA rules for bald eagle nesting sites or to rescind the rules.

Although ODFW reported in their delisting report that nesting habitat did not appear to be limiting to bald eagle populations at this time, eagle nesting habitat could become limiting should rules be rescinded. Because of the large size of their nest trees and the fact that almost half are located on private lands, private forestlands will continue to play a significant role in providing nesting habitat for eagles.

Should the Board of Forestry decide to maintain rules for bald eagle nesting sites in the Forest Practices Act, there are two general options for rules under OAR 629-665-0100. The board could choose to keep the existing FPA rules as-is or they could choose to make modifications to existing rules. To help the Board understand what these two options may look like, ODF staff has prepared a summary of the existing rules and described some possible options for a modified rule structure. These are summarized below:

Option 1: Keep Existing Rules

The Board could decide to maintain existing rules for bald eagle nesting sites and to move them as-is to the Sensitive Bird Nesting, Roosting, and Watering Site section of the FPA (i.e., move from OAR 629-665-0200 to OAR 629-665-0100). The current rules for nesting sites include:

- Definition of a nesting site as one that has been used in the past, and is structurally capable of supporting a nest structure (this effectively means that all nesting trees that are structurally sound are protected under the FPA indefinitely)
- A 330 foot buffer around all nesting trees which should include
 - Replacement nesting trees
 - Perching and fledging trees (perching trees in this case are not related to foraging, they are trees used by adults and recently fledged young to perch near the nest tree).
 - Buffer to protect from wind
- Seasonal restrictions during a critical use period of January 1 to August 31.
- Seasonal restrictions within ¼ mile of an active nest tree
- Seasonal restrictions up to ½ mile of an active nest tree if the nest is within line of sight of the operation.

One justification for maintaining existing rules for bald eagle nesting sites is that monitoring has shown that the rules appear to be effective at maintaining bald eagle occupancy and productivity. Isaacs et al. (2005) researched the effects of forest management on nesting bald eagles in Oregon. This study was designed to specifically look at the effectiveness of Oregon's Forest Practices Act rules at protecting nesting eagles. They compared nesting occupancy and productivity rates on federal versus non-federal lands and on non-federal lands both before and after implementation of FPA rules. In addition, they looked at the relationship between occupancy and productivity and the extent and number of forest operations conducted within ½ mile of nest sites. They found that the current Forest Practices Act rules for bald eagle nest sites appeared to be effective. They found occupancy and productivity rates were similar on private and public lands, and that implementation of the FPA did not affect those vital rates on non-federal lands. In addition, there was no evidence that forest operations (e.g., timber harvest, road building) nearby reduced occupancy or productivity rates. They concluded that the FPA rules achieve the protection goal of preventing resource destruction or reduced productivity of nest sites. The Isaacs et al. (2005) study looked at patterns of eagle occupancy and productivity under existing FPA rules; they did not study a range of protection levels. It is possible that less restrictive rules could be equally effective, but this is unknown as the study was not designed to look at this question. There have not been any research studies on effectiveness of FPA rules for winter roosting sites or perching sites.

Should the Board decide to keep the existing rule structure for bald eagle nesting sites, ODF expects the transition to be smooth for Stewardship Foresters as well as landowners and operations.

Option 2: Modify Rules

Habitat Buffers: Another option for the Board of Forestry would be to modify existing rules for bald eagle nesting sites. The Department suggests that any modified rules maintain some form of a habitat buffer around nesting trees and retention of key components such as replacement trees and perch trees. The existing 330 foot buffer has been shown to be effective (see Isaacs et al. 2005) and it is consistent with the buffer distance recommended by the US Fish and Wildlife Service (USFWS 2007). A 330 foot buffer appears to be adequate for protecting the nest tree from wind throw as well as maintaining perch and replacement trees.

Seasonal Restrictions: The Department recommends that any modification to the nesting site rules include a reduction in the distance within which forest practices are restricted during the nesting season. The Department believes that the ½ mile line of sight restriction zone is no longer needed for bald eagles. In addition, based on conversations with landowners and Stewardship Foresters, the ½ mile line of sight zone has resulted in significant constraints to landowners and operators. Bald eagles appear to be more acclimated to human activity on the landscape than in the past (Guinn 2013, Weikel professional observation).

Two options for reducing the seasonal restriction distance include using a ¼ mile distance as an outer limit or using a dual approach with 660 feet and 1000 feet distances for most activities and aircraft, respectively. A ¼ mile seasonal restriction distance would be consistent with how ODF administers similar rules for the great-blue heron and the northern spotted owl. The ¼ mile would provide the outer boundary within which activities could be restricted, but the actual distance could be reduced further based on a site-specific analysis. This site-specific analysis is already allowed under the current Forest Practices Act rules.

Alternatively, the Board could decide to use the same seasonal restriction distances as indicated in the Bald Eagle Management Guidelines. This option would be more prescriptive. Most forest practices would be restricted within 660 feet. However, use of aircraft would be restricted within 1000 feet. The 660 foot distance is similar to the distance used for seasonal restrictions for osprey in existing rules.

The Department suggests that the ¼ mile seasonal restriction distance would be the simpler to implement than the 660'/ 1000' distances. This approach is consistent with existing rules for other protected wildlife species. Isaacs et al. (2005) demonstrated that existing rules appear to be effective at maintaining bald eagle nesting site occupancy and productivity. The suggested modified rule (habitat buffer plus ¼ mile seasonal restriction distance) would maintain most of the components of the rules studied by Isaacs et al. (2005).

Exceptions: Exception clauses are allowed under OAR 629-665-0010 (3) if the Board of Forestry develops such criteria during the rule making process for protected wildlife species. Exceptions are allowed by rule for most wildlife species protected under Division 665. Exception clauses describe procedures and criterion to be met for operations that cannot proceed without a structural or temporal exception to the standard rules.

Under the current bald eagle rules, structural or temporal exemptions to the FPA are allowed only if the operator has an applicable incidental take permit issued by the USFWS under the Endangered Species Act (ESA). Because the bald eagle is no longer a listed species under the ESA, this exemption criteria is no longer applicable.

Because the Bald Eagle is still protected under Bald and Golden Eagle Protection Act, the Department recommends that the exception rules for Bald Eagle nesting sites be changed to reflect this federal law. The USFWS issues “take” permits under the Eagle Act. Two types of take permits may be issued under the Eagle Act: permits for direct take/loss of birds or nest sites and “disturbance” permits which allow for indirect take. Disturbance take permits, allow for take (e.g., a failed nesting attempt, abandonment of a winter roosting site, etc.) that may occur due to otherwise lawful activities such as timber harvest. A federal Eagle Act permit for activities such as removal of a nest tree or conducting forest practices within ¼ mile of an active nest would be sufficient for ODF to exempt a landowner or operator from FPA rules for eagle nesting sites. It will be important that the USFWS is able to issue take permits to landowners for timber operations, as appropriate under the Eagle Act, in order for this exception to work. At present, ODF is not certain how frequently the USFWS may receive such requests. If many requests are received, it is likely landowners may experience a delay as the Oregon USFWS office has limited staffing that works on eagle permit issues.

Criteria for Site Abandonment: Under OAR 629-665(2)(a), resource sites shall receive protection when the State Forester determines that they are an “active resource site”. What constitutes an active resource site is specific to each type of resource site and is defined in rule. Currently bald eagle nesting sites are considered active if they have been used for nesting in the past (no time limit given) and are still structurally sound, even if a nest is no longer present. If the nest tree falls down or is no longer structurally capable of supporting a nest, the site is still considered active for another five years, but only if replacement trees are present. Bald eagle roosting sites are considered an active resource site if they have been used within the past five years for roosting. Bald eagle perch trees are an active resource site if the site is habitually used by eagles as a vantage point for foraging (no time limit given).

If the Board of Forestry retains rules for bald eagle nesting sites, they will need to either reaffirm the existing definition of an active site or develop a new definition. The Department suggests that indefinite protection is no longer warranted and that a new definition of an active resource site can be created for bald eagle nesting sites. Along with a new definition of an active site, criteria need to be established to determine when a nesting site will meet criteria to be determined an “abandoned” resource site, and thus no longer protected under FPA rules.

A bald eagle nest tree that is not used in any given year is not necessarily “abandoned” and may be used again in the future for nesting. Generally speaking, however, the longer a vacant nest tree is not used for nesting, the lower the likelihood that an eagle will return to nest there in the future. Gaps in use for any particular nest tree may occur because eagles move their nest to a new nest tree, because the eagles are not nesting at all in that given year, or because they have abandoned the site entirely. It is important to have criteria so that landowners can determine if a particular nesting tree is truly abandoned or just experiencing a gap in its use.

Bald eagles often have multiple alternate nest trees within their nesting territory. Whereas some birds will use the same nest tree continuously year after year, other eagles will occasionally move between nest trees. This may occur because of damage or destruction to their nest or after a failed nesting attempt. When an eagle moves to a new nest tree, it does not mean that the previously used nest tree has no value. If the tree is structurally sound, it may be used again for nesting. The probability that a tree will be reused generally declines over time. According to Isaacs and Anthony (2011), many of the bald eagle nests in Oregon between 1978 and 2007 were used continuously. When there were gaps in use, the duration of gaps ranged from one year to 12 years. Duration of gaps were most often one to three years in length and the probability of reuse appeared to decline over time. This pattern is consistent with results found in a more recent study in New England that specifically examined bald eagle reuse of “alternate” trees (Watts 2015). They found that likelihood of an alternate eagle nest (an alternate tree with an intact nest structure) being reused declined with time, with most nests being reused in the first three years. A similar pattern was observed for trees in which the nest structure was no longer present. Only 10% of the trees that had lost nests were reused, and a majority (71%) of those were reused within the first three years (87% by year five).

The USFWS Management Guidelines (USFWS 2007) recommends that eagle nest trees can be considered inactive after five years of no nesting activity (note however that if the tree still contains an intact nest structure, the USFWS still considers the nest tree as protected and it could not be cut down). The Department suggests that a bald eagle nesting site may be considered an abandoned resource site if eagles are not observed nesting after five years of

documented nonuse. The department recommends that the existing criteria for abandonment for fallen nest trees also be maintained. This states that if a nest tree falls, but there are replacement trees present in the immediate area, the site should be considered active for an additional five years. If there are no replacement trees present, the site can be considered abandoned immediately.

In summary, if the Board decides that protection is warranted for nesting sites, the Department recommends a modified rule for bald eagle nesting sites that contains the following components:

- Definition of an active nesting site as one that has been used within the last five years.
- A habitat buffer around all nesting trees that is approximately 330 foot in radius that contains the following key components (in most cases within, but possibly extending outside the buffer):
 - Replacement nesting trees
 - Perching and fledging trees (perching trees in this case are not related to foraging, but are instead trees used by adults or young to perch near the nest tree).
 - Screening to protect nest tree from wind
- Seasonal restrictions during a critical use period of January 1 to August 31.
- Seasonal restrictions within ¼ mile of an active nest tree; distance can be reduced on a case by case basis.
- Exceptions are allowed if the landowner possesses a valid “take permit” under the Eagle Act.
- Abandonment Criteria that allows for a site to be considered an abandoned resource site if no eagles are observed nesting after five years.

Board of Forestry Decision Space—FPA Rules or Voluntary Measures

ODF believes that the Board has the option to develop new protection guidelines as either administrative rules under OAR 629-665-0100 or as voluntary measures. Should the Board decide to develop new rules as voluntary measures, it will be important that there be a commitment to monitoring. It would be important that the Department be able to track and report on implementation of voluntary protection measures to determine if they are effective at achieving the intended resource benefit.

Conclusion and Department Considerations

The bald eagle has made a significant recovery in Oregon. Whereas they used to be rarely observed, it is now common to see bald eagles throughout the state. Although the bald eagle is still protected under the federal Bald and Golden Eagle Protection Act, there still may be a role

for state protection in Oregon. Bald eagles continue to play an important cultural role for Native American tribes in Oregon and this should be taken into consideration by the Board of Forestry. Nearly ½ of the known nest sites are located on private lands, thus private lands will continue to play an important role in providing bald eagle nesting habitat. In addition, ODF already has the infrastructure in place to interact with landowners, screen proposed operations for known nest sites, and to ensure protection of those sites through administration of the FPA. In contrast, protection of sites only under the Eagle Act would rely on 1) landowners proactively seeking assistance from the USFWS if they are aware of a nest site on or near their property, and 2) enforcement actions by the USFWS, based primarily on complaints (thus often after damage is done).

Based on the analysis presented in this report, the Department suggests the following approach to rule changes:

- There may still be an important role for state-level protection of nesting sites. If rules are maintained under ORS 629-625-0100 the Department suggest a modified rule that includes the following components:
 - Maintain most of the existing protection for bald eagle nesting sites.
 - Only restrict forest practices within ¼ mile during the critical use period; remove the ½ mile line of sight distance from new rules. An alternative approach would be to restrict aircraft within 1000' and most other activities within 660' to achieve alignment with the USFWS Bald Eagle Management Guidelines (USFWS 2007).
 - Modify exception rule to allow for exceptions to the FPA rules if the landowner holds a permit under the Bald and Golden Eagle Act.
 - Allow for abandonment of nesting sites if surveys document no use after five years.
- Existing information suggests that site-level protection for winter roosting sites may not be warranted and that existing rules could be rescinded. However, there could still be a role for state-level protection for very large communal roosts.
- Site level protection for bald eagle foraging perch sites is likely not warranted and these rules may be able to be rescinded.

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Appendix A: Example “self-certification” letter created from USFWS Bald Eagle permitting website (<http://www.fws.gov/pacific/eagle/>)



United States Department of the Interior



FISH AND WILDLIFE SERVICE
911 NE 11th Avenue
Portland, Oregon 97232-4181

In Reply Refer to:
MBSP-MBHP

Dear User,

Thank you for using the U.S. Fish and Wildlife Service - Region 1(Service) Eagle Permit Recommendation Tool (EPRT) to determine risk to eagles. Based on the answers to your questions, we have determined that your project or activity, is consistent with the Service's recommendations for avoiding disturbance of eagles in the Pacific Region (ID, OR, and WA) and is unlikely to take eagles in violation of federal laws.

Below is a record of the questions, and your responses to them, that led us to that determination.

Activity Type: Tree Removal

1.) Is there an eagle nest in the tree, or trees, to be removed?

Response: No

2.) Will the tree removal and all associated activities (e.g. increased human presence, vehicle access, road construction, burning, chain-sawing, and yarding operations, etc.) occur within 1 mile of an eagle nest or roost?

Response: Yes

3.) Are you concerned about impacts to golden eagles, bald eagles, or both from your activity?

Response: Bald Eagles

4.) Will tree removal occur within 660 feet of the bald eagle nest or roost in question?

Response: Yes

5.) Are you concerned about impacts to bald eagle nest(s), roost(s), or both?

Response: Both Nest and Roost

6.) Will tree removal occur during the nesting season (Jan 1 to Aug 31) or roosting season (Oct 15 to Mar 15) in this or any subsequent year?

Response: No

7.) Will tree removal occur within 330 feet of the nearest bald eagle nest or roost?

Response: No

Please print, sign, and date this certificate, and keep in your records for five (5) years after your project or activity is completed. By printing this document, and signing and dating it for your records, you agree that the above responses are true, and that you commit to implement your project as described above. You also agree to revisit the Service's EPRT to determine whether or not technical assistance, or a permit, may be necessary should any details of the project or activity change substantially.

Appendix A: Example “self-certification” letter created from USFWS Bald Eagle permitting website (<http://www.fws.gov/pacific/eagle/>)

User Signature: _____

Date: _____

Name (Print): _____

Title: _____

Physical Address / Location of Project:

Following the Service’s recommendations and implementing your project or activity as described above will substantively reduce the likelihood of take; however, take may occur even if all avoidance and minimization measures above are followed. Though it is not possible to absolve individuals and entities from liability under the Eagle Act if take (defined to include pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb) should occur, the Service prioritizes its enforcement efforts on those individuals or entities who take eagles without implementing appropriate measures recommended by the Service, such as the Bald Eagle Management Guidelines.

You are responsible for determining if additional authorization from federal, state, local, or tribal governments is needed.