

STAFF SUMMARY

Biological Status Assessment For

The American Peregrine Falcon

And

Arctic Peregrine Falcon in Oregon

And Findings on Removal of

Both Subspecies from the State List of

Threatened and Endangered Species

Oregon Department of Fish and Wildlife

April 13, 2007

EXECUTIVE SUMMARY

In May 2006, the Oregon Fish and Wildlife Commission accepted a petition received on March 14, 2007 to remove the American peregrine falcon (*Falco peregrinus tundrius*) and Arctic peregrine falcon (*Falco peregrinus tundrius*) from the State List of Threatened and Endangered Species. That decision obligated the Commission to determine within one year whether the petitioned action is warranted. Under the Oregon Endangered Species Act, the Commission may change the status of species on the state list based on documented and verifiable scientific information. In determining the status of a species, the department must consult with affected agencies, cities, counties, tribes, organizations and the public. A preliminary status assessment of the subspecies and analysis of the petition were provided to 36 entities in Oregon and adjacent states for review and comment. A final assessment is presented herein. The department concludes that sufficient scientific information is available to support removing both the American peregrine falcon and Arctic peregrine falcon from the State List of Threatened and Endangered Species, conditioned upon provisions for future monitoring, falconry take, and reclassification as a state sensitive species.

The report is organized as follows:

- A. Introduction
- B. Biology and Habitat Associations for the species
- C. Summary of the Status and Management of Peregrines in Oregon
- D. Review of the State Delisting Factors
- E. Conclusions on State Delisting and Conditions

BACKGROUND INFORMATION

A. Introduction

On March 14, 2006 the Oregon Fish and Wildlife Commission (Commission) received a revised petition from David L. Peterson requesting that two subspecies of peregrine falcons, the American peregrine falcon (*Falco peregrinus anatum*) and Arctic peregrine falcon (*Falco peregrinus tundrius*), be removed from the State List of Threatened and Endangered Species (hereafter delisting) under the requirements of the Oregon Endangered Species Act (ORS 496.172 et seq., OAR 635-100-0100 et seq.). The Commission subsequently determined May 12, 2006 that the petition contained sufficient scientific information to initiate a status review and to consider delisting both subspecies. The Commission is obligated to make a final determination on the petition within one year of receiving the petition whether the petitioned action is warranted or extend the time period if circumstances require (OAR 635-100-0110(8)). On February 9, 2007 the Commission decided to extend the final determination for two additional months beyond the one-year limitation to address several concerns brought up during the review of the draft staff report.

A draft analysis of the petition and preliminary status review of the two subspecies was prepared by the Oregon Department of Fish and Wildlife (ODFW) for public review by affected agencies, organizations, tribes and interested public. The draft documents were sent to 36 entities including 3 peer reviewers. This document includes a summary of the requirements of the Oregon Endangered Species Act (Oregon ESA), an assessment of the biological status of the peregrine falcon in Oregon and a response to information presented in the petition. The draft assessment was revised based on comments provided by 12 reviewers and updated with 2006 nesting season results. A public comment period was held. In addition, a stakeholders group met in January to further discuss concerns about the adequacy long-term monitoring, funding, and issues of take including falconry.

There are three subspecies of peregrines recognized in North America: American peregrine (*Falco peregrinus anatum*), Arctic peregrine (*F. p. tundrius*), and Peale's peregrine (*F.p. pealei*) (White et al. 2002)(Fig. 1). The American peregrine and the Arctic peregrine are on the state list of Threatened and Endangered Species (OAR 635-100-1125). The Peale's subspecies was never federally listed and thus never added to the state list. The American peregrine nests in Oregon and is present year round in some areas. The Arctic peregrine nests in the tundra regions of Alaska, Canada and Greenland and migrates to wintering areas in Latin America, occasionally through Oregon. The Peale's peregrine nests along the coast of northern Washington, British Columbia and Alaska but may be found in Oregon during the non-breeding seasons (White et al. 2002; Henny and Pagel 2003). As of the end of 2006, peregrines have been found nesting at 131 different locations in Oregon since 1980, primarily in western Oregon (Isaacs 2007). Both subspecies were removed by the U.S. Fish and Wildlife Service (USFWS) from the federal list of Threatened and Endangered Species in the lower 48 states in 1999. Both subspecies and their nests remain federally protected by the federal Migratory Bird Treaty Act (MBTA) unless take is allowed by federal and/or state permit.

State Procedures and Legal Requirements for Delisting

When a petition is received to remove a species from the Oregon Threatened and Endangered Species list (T&E), the Commission enters the first phase of what can be a two-phase process. In the first phase, the Commission needs to determine only whether the petition presents substantial scientific information to justify proceeding to rulemaking. The Commission has defined substantial scientific evidence to mean “that quantum of the best available documented information or evidence that a reasonable person would accept as adequate to support a conclusion. This includes information or evidence that may not have been reviewed by a scientific review panel, but that ODFW considers scientifically reliable” (OAR 635-100-0100(12)). In other words, in the first phase the Commission has to determine whether a petition meets the criteria outlined in rule. If those criteria are met, the Commission directs staff to begin a rulemaking process to formally consider removing the species from the T&E list. That rulemaking process is now nearing completion. The staff now asks the Commission to make findings on the biological factors required by law as prerequisites for delisting a species.

The Oregon ESA (Oregon Revised Statute (ORS) 496.171-496.182) and Oregon Administrative Rules (OAR) 635-100-0080 through 635-100-0113, set out the specific criteria and procedural requirements which must be met before the Commission can add, remove or change the status of a species from the state list of threatened and endangered species. By definition, “species” can mean both a species and subspecies (ORS 496.004 (15)). When considering whether the legal standard for removal of a species from the state list of threatened and endangered species has been satisfied, the Commission must address the five criteria listed below using documented and scientifically verifiable information.

1. the species is not now, nor is it likely to become within the foreseeable future, in danger of extinction throughout any significant portion of its range within the state;
2. the natural reproductive potential of the species is not in danger of failure due to limited population numbers, disease, predation or other natural or human-caused factors affecting its continued existence;
3. most populations of the species are not undergoing imminent or active deterioration of their range or primary habitat;
4. over-utilization of the species or its habitat for commercial, recreational, scientific or educational purposes nor is it likely to occur; and
5. existing state or federal programs or regulations are adequate to protect the species and its habitat.

In the process of making its determination, the Commission is required to consult with affected federal and state agencies, affected cities and counties, affected federally-recognized Indian tribes, the Oregon Natural Heritage Advisory Council, other states having a common interest in the species, and the interested public (ORS 496.176(4); OAR 635-100-0105(10)). This has been accomplished through the rulemaking process.

State Legal Status of peregrines in Oregon

Most native migratory birds including peregrines have been protected by state administrative rules since 1973 (OAR 635-044-0130). Both subspecies of peregrines were added to a working list of threatened and endangered species developed by an interagency task force and later approved by the Oregon Fish and Wildlife Commission in 1975. That list was used for administrative and planning purposes and was not adopted through state administrative rules. In 1987 the Oregon Legislature enacted the OESA which applies to both plants and animals. Under the Oregon ESA, all species and subspecies on the federal list of threatened and endangered species as of May 15, 1987 were grandfathered on to the new state list (ORS 496.176). Since both subspecies of peregrines were on the federal list at the time the OESA was enacted, they immediately became part of the state list.

Effect of Removing Peregrine Falcons from the State T&E List under the Oregon Endangered Species Act

Delisting a species under the OESA has the most direct significance to state agencies that own or manage land. Currently, 16% (N=22) of the known nesting sites are found on state lands managed by either the Oregon Parks and Recreation Department, Oregon Department of Transportation, or Washington Department of Transportation (Columbia River bridge) (Isaacs 2007). For state listed endangered species, state land-owning or managing agencies may be required to develop an endangered species management plan if the Commission has determined the agency has a role to play in the conservation of the species (ORS 496.182 (7) and OAR 635-100-0140). Because of Legislative amendments to the Oregon ESA in 1995, endangered species management plans are not required for species listed prior to that date as is the case for peregrine falcons.

However, both the Oregon Department of Transportation (ODOT) and Oregon Parks and Recreation Department (OPRD) chose to develop management plans for peregrines because of the increasing number of nesting pairs found on lands they administer and the state legal requirement to avoid “take” (ORS 496.026) (ODOT 2002; OPRD 2004). Other major state land-owning agencies include the Department of Forestry and Department of State Lands. Some potential habitat exists on these lands but most have not been surveyed, or surveyed using accepted protocol standards (Pagel 1992).

For other state agencies with a role to play in the conservation of the species, they must consult with ODFW concerning biological aspects of managing the species; consider impacts of their actions on the conservation of the species and habitat; consider survival guidelines (if they have been adopted); and consider their own statutory obligations (OAR 365-100-0150).

Private lands are specifically excluded from most of the protective provisions of the Oregon ESA including conservation of a listed species (ORS 496.192). However, “take” (i.e., to kill or obtain possession or control) of any state listed species is prohibited on any lands (ORS.498.026; OAR 635-100-0100). Currently 18% (N= 24) of the known

peregrine nesting areas in Oregon are believed to be on private land or shared with adjacent federal lands. Private forest lands are currently subject to the state Forest Practices Act (FPA) which requires protection of state listed species through the development of written plans (OAR 629-605-0170(4b)). Requirements of the FPA will no longer apply once peregrines are state delisted.

Peregrines will remain on the list of state protected wildlife once removed from the state T&E list (OAR 635-044-0130). Capturing, taking, or killing peregrines will remain prohibited. Harassing, chasing and disturbance of peregrines is also prohibited unless the Commission allows by rule (ORS498.006). Scientific taking permits will continue to be required to capture birds or take eggs for scientific purposes such as banding and contaminant monitoring (OAR 635-043-0023). Peregrines could be taken for falconry purposes in the future as allowed under federal regulations (U.S. Fish and Wildlife Service 2004), however state falconry rules would have to be amended by the Commission to allow take of peregrines. If the species is delisted, the department will add the peregrine to the ODFW administrative list of "sensitive" species which is a watch list for species that may potentially be eligible for state listing as threatened or endangered (OAR 635-100-0040). The species would remain on the ODFW sensitive species list as long as any uncertainty or concern remains regarding the status of the species. Priority is given to sensitive species for conservation and monitoring. At the same time, peregrine falcons and cliff habitats have been identified as priorities under the new state *Conservation Strategy* (ODFW 2005). Conservation opportunities and programs for strategy species and habitats will be emphasized in the future.

Related Federal Actions

Both subspecies of peregrines were federally listed in 1970 under the Endangered Species Conservation Act of 1969 (Public Law 91-135, 83 Stat. 275). In 1972, the Migratory Bird Treaty Act (MBTA) (which implements international treaties with Canada, Mexico and other countries) was amended to protect all birds of prey in addition to peregrines (16 U.S.C. 703-712). Under the MBTA, it remains illegal to take, pursue, capture, possess, or attempt to capture migratory birds, their parts, eggs, chicks, and nests, unless allowed under a federal permit. Further protection was provided the following year under the more comprehensive federal Endangered Species Act of 1973 as amended (16 U.S.C. 1531 *et seq.*). Among other provisions, it required all federal agencies to undertake programs for the conservation of endangered and threatened species.

In 1976 the U.S. Fish and Wildlife Service (USFWS) appointed the Pacific Coast American peregrine falcon recovery team to develop a regional recovery plan for Washington, Oregon, Nevada and California (USFWS 1982a). Similar recovery teams were appointed for the Rocky Mountains/Southwest states (1977), the Eastern United States (1979) and Alaska (1982). The Alaska Recovery Plan included both the American and Arctic peregrines as both subspecies nest in that state (USFWS 1982b). In 1989 a new Western Peregrine Recovery Team was appointed by the USFWS to develop an Addendum to the original Pacific Coast and Rocky Mountain/Southwest Recovery plans

combined. Although a draft Addendum was produced in 1993, it was never finalized by the USFWS before efforts began to delist the subspecies (USFWS 1993).

By 1984, Arctic peregrines had recovered sufficiently in Alaska such that they were reclassified from endangered to threatened by the USFWS (49 Federal Register [FR] 10520, March 20, 1984). In 1994, after further recovery in Alaska and Canada (Ambrose et al. 1988), the subspecies was completely removed from the federal list of endangered and threatened wildlife (59 FR 50796, October 5, 1994). However, both the 1984 and 1994 notices included the “similarity of appearance” provision of Section 4(e) of the Endangered Species Act. Thus, all peregrines, regardless of subspecies, continued to be considered as still federally endangered while wintering or migrating through the lower 48 states. That provision remained in place until the American peregrine was removed from the federal list of endangered and threatened species in 1999.

The final rule to delist the Arctic peregrine also included a post-delisting monitoring plan that required tracking 3 parameters: 1) number of breeding pairs in selected sample areas; 2) reproductive performance (i.e., number of young produced per territorial pair); and 3) contaminant exposure measured from eggs and blood samples (59 FR 50804, October 5, 1994). Although monitoring is only required for not less than a 5-year period following recovery, efforts still continue to track the nesting success in some areas of Alaska (T. Swem, USFWS, Fairbanks, Alaska, personal communication, October, 2006).

The American peregrine began recovering in a similar pattern in both Alaska and the western lower 48 states (Ambrose et al. 1988; Kiff 1988; Enderson et al. 1995). On June 30, 1995, the FWS published in the Federal Register an advance notice of a proposed rule to remove the American peregrine from the U.S. list of endangered and threatened species (60 FR 34406). Due to federal budgetary constraints, the review process was put on hold for at least two years (Cade 1998). In 1998, the proposed rule to remove the American peregrine falcon in North America from the U.S. list was published (63 FR 45446, August 26, 1998). The final rule followed a year later on August 25, 1999 (64 FR 46542) and also removed the similarity of appearance provision for all free-flying peregrines (including Arctic and Peal’s) within the lower 48 states. Thus, after August 1999, peregrines remained listed only under state statutes such as the Oregon ESA.

Similar to the Arctic peregrine, a national monitoring plan for the American peregrine was approved by the USFWS after several years in development (USFWS 2003). Monitoring began in 2003 for 6 monitoring regions including Alaska. As part of the regional monitoring sample, 30 nest sites are to be sampled in Oregon. The monitoring will be repeated every 3 years until 2015. Similar to the Arctic peregrine monitoring plan, parameters to be measured include territory occupancy, nesting success, and productivity across each region. In addition, addled (unhatched) eggs and feather samples will be collected opportunistically to allow evaluation of environmental contaminants if necessary. Currently the environmental contaminant analysis remains unfunded and few samples have been collected to date in Oregon.

B. Biology and Habitat Requirements

The most recent and comprehensive account on the biology of the peregrine in North America is provided in *The Birds of North America* series (White et al. 2002) and can be reviewed on the internet at: <http://bna.birds.cornell.edu/BNA/>. Henny and Pagel (2003) more recently provided information on the status, general ecology and habitat use in Oregon. The department provides a summary below.

The peregrine falcon is a crow-sized bird of prey that is found almost worldwide in distribution and on every continent except Antarctica (Hickey and Anderson 1969; White et al. 2002). As indicated earlier, 3 subspecies are recognized in North America and all may be found in Oregon during one or more seasons of the year (Fig. 1). Only the American peregrine falcon nests in Oregon and can be found statewide where suitable nesting and foraging habitats exist (Gabrielson and Jewett 1940; Bond 1946; Nelson 1965; Henny and Nelson 1981; Henny and Pagel 2003). Population density in the western states are considered low overall but primarily restricted by availability of suitable nesting habitat, prey abundance and territorial spacing (Ratcliffe 1993; White et al. 2002).

Peregrines usually nest on cliff ledges or in natural cavities of rock formations that are generally inaccessible to ground predators. Cliff heights in Oregon can vary greatly from 35 to 1500 feet but average about 230 feet in the Cascades (Bendire 1892; Henny and Pagel 2003). Nest sites are found at all elevation from almost sea level to over 6000 feet in the Cascades and Wallowa Mountains. Nests are not constructed and consist normally of shallow scrapes in the soil or substrate where 2-4 eggs are laid. Vacant stick nests built by other cliff nesting birds will occasionally be used (Henny and Pagel 2003). Peregrines have been documented using man-made structures in many urban settings (Hickey and Anderson 1965; Ratcliffe 1980; USFWS 2006). Since at least 1994, peregrines have annually nested successfully on various bridges in the Portland metropolitan area in spite of the noise, traffic and ongoing maintenance activities (ODOT 2002). Statewide, birds are known to have nested on at least 9 different highway bridges, an unused rock quarry and on the side of the former Trojan nuclear power plant cooling tower on an artificial nesting platform.

Peregrines feed primarily on birds of all sizes from small geese to songbirds but will occasionally take small mammals and insects (Henny and Pagel 2003; White et al. 2002). Over 90 different prey species have been identified in Oregon and the northwest with preferences shown for pigeons, starlings and gulls (Henny and Pagel 2002; Hayes and Buchanan 2002). Henny and Nelson (1981) recorded 19 avian prey species at one nest site in the southern Cascades.

C. Summary of the Status and Management of Peregrines in Oregon

The decline of peregrines in North America and other parts of the world was ultimately linked to the effects of environmental contaminants, particularly DDT and its breakdown product DDE (Ratcliffe 1967; Peakall and Kiff 1988; Risebrough and Peakall 1988). DDT was utilized during World War II as an insecticide and became widely available

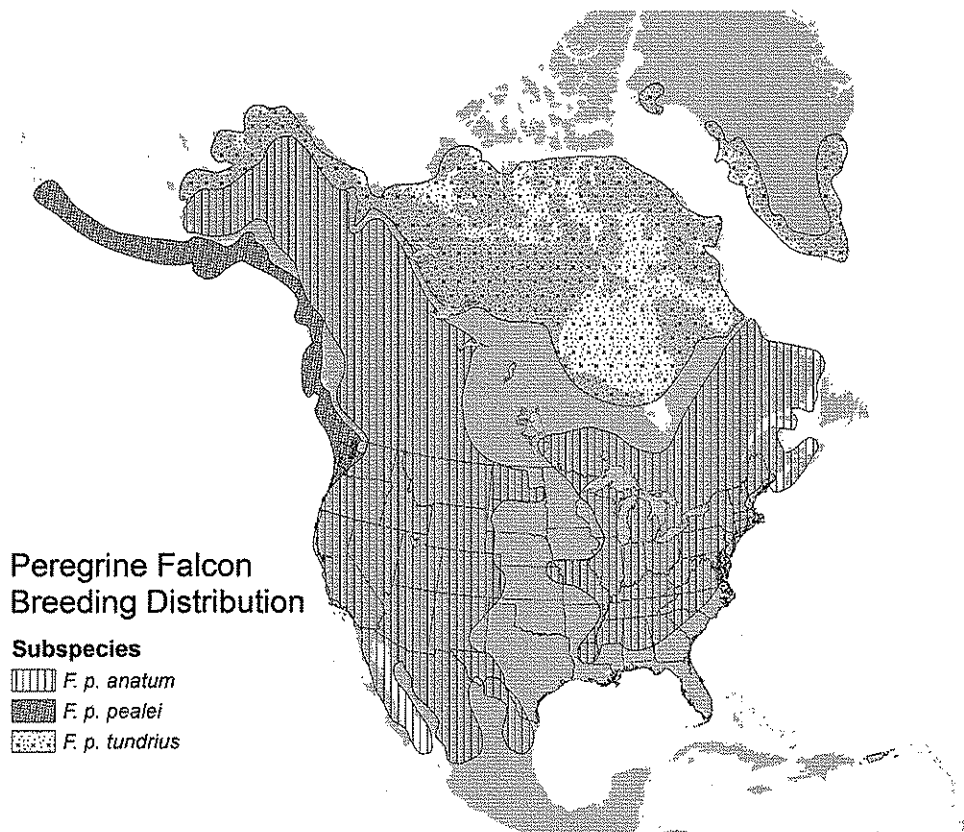


Figure 1. Geographic range of the peregrine falcon in North America; adapted from Washington Department of Fish and Wildlife (2002).

after 1947. It was used extensively in agriculture and insect control until it was restricted in Canada in 1970 and the U.S. in 1972 (Ratcliffe 1980; Risebrough and Peakall 1988; Kiff 1988). Peregrines accumulated DDT/DDE in their tissues by feeding on birds that had eaten DDT-contaminated insects or seeds (DeWeese et al. 1986). In turn, DDE negatively impacts the development of eggs resulting in reduced shell thickness. This can lead to breakage in the eggs or mortality of the embryos (Ratcliffe 1980, 1993; Pagel and Jarman 1991). Peakall and Kiff (1988) found that most declining or extirpated populations had exhibited at least 17% mean eggshell thinning compared to eggs collected prior to 1947.

In Oregon, the first unhatched egg collected from the only known nest in 1979 was 19% thinner than pre-1947 eggs (Henny and Nelson 1981). Three eggs laid in 1980 at the same location failed to hatch and also contained high levels of DDE and chemicals similar to the 1979 egg. Subsequent egg samples from this site and others in Oregon continued to show high levels of egg shell thinning and nesting failures into the 1990's (Pagel and Jarman 1991). Of 14 eggs collected in Oregon between 1991-1997, 2 contained levels of DDE above 15 ppm, although overall levels were lower than earlier samples (Jarman, unpublished data, 1998). Although recent contaminant information for peregrines in Oregon is not available or published, current population and productivity

information from Oregon and other states, indicate populations continue to improve and recover (Green et al. 2006; Isaacs 2007).

Noteworthy for Oregon, more acreage of Oregon forests were sprayed with DDT for insect control between 1945-65 than any northwestern state including California. Although DDT was banned in the United States in 1972, the Forest Service was allowed to use it for the last time in 1974 during a tussock moth outbreak on 427,000 acres in northeastern Oregon, and parts of Washington and Idaho (Henny and Nelson 1981).

With the passage of the federal Endangered Species Act of 1973, state and federal agencies in Oregon recognized the need for a cooperative approach to conservation efforts for listed species. In response to this need, the director of the Oregon Game Commission (now ODFW) established in 1973 what was called the Oregon Endangered Species Task Force. The Task Force had several objectives including developing a common list of endangered wildlife, coordinating inventories, and helping set state priorities for species and habitat management. A working list was developed by the task force utilizing the federal list at the time, limited Oregon literature (e.g., Marshall 1969, Hickey 1965) as well as professional opinions. In 1975 the Oregon Wildlife Commission approved a similar list although it was not adopted by administrative rule. However, state and federal agencies began using the list for cooperative conservation efforts. Both subspecies of peregrines were on the working list due to their federal listing as well as the lack of knowledge of any active nest sites in Oregon.

Nationally, policy direction was beginning to be formulated for federal agencies on endangered, threatened, and sensitive species including coordination and compliance with state laws and conservation of state-listed species (USFWS 1976; Bureau of Land Management 1976). The USFWS began setting up recovery teams under Section 4 of the federal ESA. Because of the continent-wide distribution of the species as well as great public interest heightened by a world-wide decline of the species (Hickey 1965), four peregrine recovery teams were established in the 1970's to address the range of conditions within the lower 48 states and Alaska.

In 1976 a Pacific states recovery team was established that included representatives from the state wildlife agencies of Washington, Oregon, Nevada and California, the U.S. Forest Service, National Park Service, Bureau of Land Management and U.S. Fish and Wildlife Service (USFWS 1982a). Although information on the historical population of all the states was limited, a population delisting objective for the Pacific states region was established of at least 185 nesting pairs distributed throughout the four states and with an average minimum productivity of 1.5 fledged young per active territory over at least a consecutive 5-year period. State population objectives included: a minimum of 30 nesting pairs for Oregon and Washington, 5 in Nevada and 120 in California. Nesting sites were to be distributed among identified regions of the various states that corresponded to historical information or suitable habitats.

As a result of the ongoing recovery efforts and investigations into environmental contaminants in peregrines, Henny and Nelson (1981) compiled available historical

records for Oregon from the literature, museum records, personal contacts and the personal experience of Nelson. They were able to document conservatively a minimum of 39 pairs prior to the 1940's located in all regions of the state with information dating back to 1877 (C. Henny, USGS, Corvallis, Oregon, personal communication, October, 2006). They surveyed those and other areas in 1978-79 and observed only one bird in southeast Oregon. One active nest was discovered by chance later in 1979 at Crater Lake National Park (Henny and Nelson 1981). D. Fenske (*in* Henny and Pagel, 2003) reported compiling information for as many as 90 sites between 1966 and 1985. In hindsight, historical records for Oregon likely have limited connection to what may have been the actual population before the decline of the species. Many areas where peregrines are now nesting (e.g., Cascade and Siskiyou Mountains) have no historical information and were likely all but inaccessible in early decades before extensive road systems were constructed. Pagel reported that approximately 80% of known sites surveyed in 1996 were not at historic locations (Henny and Pagel 2003). Extensive areas, particularly eastern Oregon, have either never been surveyed, not surveyed using an appropriate protocol (Pagel 1992), nor surveyed for many years. Between 1980-2006, peregrines falcons have been observed nesting at 131 locations in Oregon with additional sites suspected in 2006 (Isaacs 2007) (Fig. 2; this includes alternate nesting sites as well).

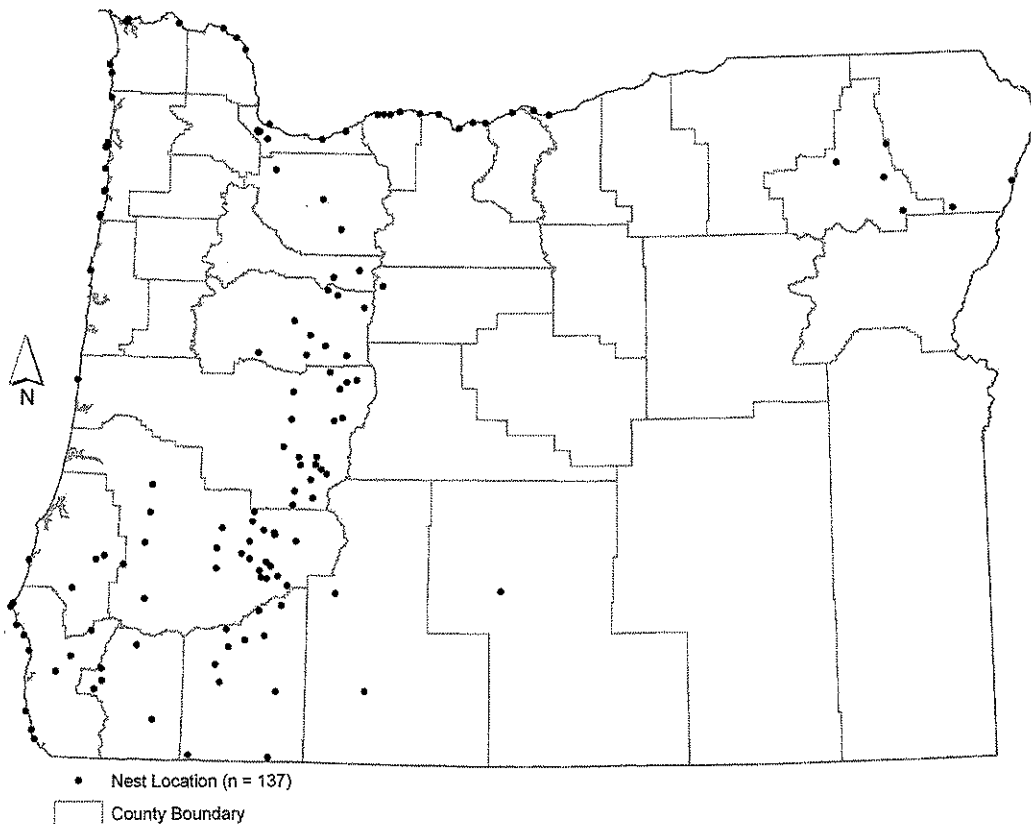


Figure 2. Known distribution of nesting peregrine falcons in Oregon between 1980 and 2006.

As part of recovery efforts, many surveys, both ground and by air, were undertaken by agencies and private individuals during the 1980's to locate active nest sites and

inventory potential nesting habitat. These included the Fremont National Forest, Steen's Mountain, Lake County, Hell's Canyon and Wallowa-Whitman National Forest, southern Oregon Cascades and Klamath Mountains, Oregon coast, Columbia River Gorge, Willamette National Forest and other areas (unpublished reports on file at ODFW, Salem). Although peregrines were observed on a number of these surveys or nesting confirmed, many early efforts lacked adequate on-the-ground field work to determine whether potential sites were occupied. Although techniques to better assess raptor nesting productivity became more standardized in the 1980's (e.g., Steenhof 1987), a survey protocol specifically for peregrines was not recognized in Oregon until 1992, but is now widely used (Pagel 1992). Coordination of peregrine management and surveys continued through the 1990's through an Oregon-Washington interagency working group initiated by the USFWS. ODFW has helped coordinate and secure funding for monitoring efforts in recent years in cooperation with the Bureau of Land Management (BLM), U.S. Forest Service (USFS), U.S. Fish and Wildlife Service, Oregon Parks and Recreation Department, Oregon Department of Transportation, Audubon Society of Portland, the Oregon Eagle Foundation, and Oregon Cooperative Fish and Wildlife Research Unit (Oregon State University). For the last four years, state and federal agencies, private organizations and companies, and many volunteers have contributed to nest site monitoring (Isaacs 2007).

Another key element that has contributed to recovery of the species has been the reintroduction of captive-raised peregrines throughout North America. A number of private organizations including The Peregrine Fund, the Raptor Research Foundation, the North American Foundation, and the Santa Cruz Predatory Bird Research Group, formed in the early 1970's and began producing and releasing captive-raised peregrines throughout the lower 48 states (Cade 1998). State and federal agencies later partnered with these organizations to help fund production and releases which first began on the west coast in 1977 in California (Walton and Thelander 1988). Between 1981 and 1995, 179 captive-reared chicks were released in Oregon through augmenting wild nests, cross-foster into nests of prairie falcons, but primarily hacking (i.e., controlled release) (Henny and Pagel 2003; Haight 1992). By 1998, nearly 7,000 peregrines had been released in the United States and Canada (White et al. 2002).

As active nest sites were located on federal lands, the USFS and BLM began developing site management plans to avoid disturbance to nesting birds (Wahl and Pagel 1992). Site plans provided guidance on seasonal protection of nesting birds through buffer zones, protecting and enhancing habitat, monitoring, and interagency consultation and coordination. A limited number of site plans have been developed on national forests and only one has been implemented on BLM administered lands. As the number of known nest sites increased and with federal delisting in 1999, site plans have been replaced by forest or district-wide plans and policies to protect listed and sensitive species. However, as indicated in the petition, current policy direction for Region 6 of the U.S. Forest Service (Oregon and Washington) and the Bureau of Land Management is to provide protections to peregrines nest sites or their habitat throughout the extent of the federal 5-year monitoring period (USFS 1999; BLM 1999). Nest site management plans are to be developed if a proposed management activity may impact peregrines or their habitats.

BLM Manual 6840 currently requires that the Bureau ensures that actions (by BLM) do not contribute to the need to list, or in this case, re-list, species.

USFS and BLM-administered lands accounted for 58% of known sites in 2006 and extensive habitat remains to be surveyed on both ownerships, especially in eastern Oregon. Six percent of known sites are found on coastal refuge lands managed by the USFWS, and another 16% are located on state-owned land. As indicated earlier, state agencies with known nesting have also developed management plans in recent years that provide guidance and best management practices for known or new sites on state lands (Oregon Department of Forestry 1995; ODOT 2002; OPRD 2004). Under the Oregon ESA, ODFW has issued state incidental take permits (OAR 636-100-0170) to state agencies and private landowners based on site protection and mitigation plans (ODFW, on file).

D. Review of the State Delisting Factors

1. The species is not now, nor is it likely to become within the foreseeable future, in danger of extinction or to become threatened throughout any significant portion of its range within the state

Summary of information in the petition and public comments relevant to factor 1.

Populations of both the Arctic and American peregrine recovered sufficiently to be removed from the federal list of endangered species in 1994 (Alaska only) and 1999 (both American and Arctic) respectively, and continue to increase and reoccupy historical habitats. At the time the American peregrine was federally delisted in 1999, about 80 breeding areas were known in the state. By 2005, 124 breeding areas had been documented in Oregon and much of the state remains to be surveyed (e.g., central, northeast and southeast Oregon). The occupancy rate of sites surveyed each year have averaged about 90% for the past five years. In some locations peregrines are now nesting on bridges in urban environments. Nesting productivity for the past five years has averaged 1.55 young per occupied breeding area which is within the range for maintaining a stable population in Oregon.

Minimum recovery objectives under the Pacific States American peregrine recovery plan (USFW 1982), of which Oregon was a part, have been exceeded for a number of years. Under the recovery plan, delisting in the Pacific region was to be considered after each state contained at least the following number of nesting pairs: California – 120; Oregon - 30; Washington – 30; and Nevada – 5. Productivity was to average 1.5 young per active territory for at least 5 years. Oregon now exceeds those objectives in terms of number of active nest sites by 3-4 times.

The proximal cause for the original decline of the species was introduction and widespread use of the chemical DDT into the environment after World War II for industrial and agricultural use. Once it was determined that DDT and its metabolites were the primary cause of nesting failure for peregrines and other avian species (e.g., bald

eagles, osprey), the chemical was banned in Canada, the U.S., and other countries in the early 1970's.

The U.S. Fish and Wildlife Service initiated a national monitoring program for peregrines in 2003 as required for delisted species under the federal Endangered Species Act (ESA). Monitoring is undertaken in cooperation with the states and involves tracking nesting occupancy and productivity throughout their range in the United States. Samples of eggs and feathers are also to be collected for contaminant analysis. The monitoring program will continue until 2015 with sampling of random sites being conducted every 3 years.

Response and additional information.

The department concludes that the nesting population of American peregrines has significantly increased in many areas of the state and that additional nesting sites will likely be found if systematic surveys were conducted. The department points out that nest site information collected in the past four years has been from monitoring known sites and not from systematically surveying for undocumented sites (Isaacs 2003, 2004, 2005, 2007). Although new sites are being located, some have likely been occupied for a number of years before being discovered.

The department has limited information from the eastern two-thirds of the state due to lack of state and federal resources. However, the department has no reason to believe there are any currently existing factors that would threaten the survival of undocumented nesting sites. Peregrine nesting populations are present and continuing to improve in all adjacent states. The State of Washington reported 135 known nest sites through 2006, Idaho documented 27 occupied sites in 2006 (1.5 fledged young/occupied site), Nevada has documented 19 known territories (15 occupied in 2005), and California over 271 sites since the 1970's with almost 30 new sites in 2006. In spite of limited survey effort to locate previously undocumented nest sites, a number of new sites continue to be located each year in Oregon. Seven new breeding sites were reported in 2006 (Isaacs 2007) and birds have been observed at many other locations that remain to be properly surveyed. Surveys will be conducted in the future in eastern Oregon to begin to assess occupancy and productivity over that portion of their historical range.

The department also concludes that Arctic peregrine falcon breeding population (uncommon winter migrant in Oregon) remains stable based on 10 years of annual monitoring by the USFWS. Additional information from Alaska indicates a continued decrease in organochlorine contaminants, including DDE, in both Arctic and American peregrines (Ambrose et al. 2000). From a low of 15 nesting sites in 1973 along the Colville River in Alaska (one of the long-term monitoring areas for Arctic peregrines), the number of occupied sites with pairs present has averaged about 57 for each of the last 10 monitoring years between 1994 and 2005 (T. Swem, USFWS, Fairbanks, Alaska, personal communication, March 2006). Productivity has averaged 1.1 young per successful pair for the same area and period.

2. The natural reproduction potential of the species remains high and is not in danger of failure due to limited population numbers, disease, predation, or other natural or human-related factors affecting its continued existence;

Summary of Information in the petition and public comments relevant to Factor 2.

The Oregon and regional populations continue to recover and increase with near normal nesting success for occupied breeding areas with known outcomes. Regardless of natural or man-caused mortality, the population continues to expand with new breeding areas being discovered each year for the past 10 years. Much of the state with suitable habitat remains unsurveyed. Various diseases and parasites have been identified in peregrines but have not been reported to significantly affect North American populations. More recently, West Nile virus has emerged in this country including Oregon and whether it will adversely affect the peregrine population is unknown. Similarly, it is not known whether avian influenza could adversely affect peregrines.

Because peregrines nest primarily on cliffs, disturbance from land use practices (e.g., logging) or recreation (e.g., climbing) could adversely affect some nest sites. Some climbing organizations are familiar with potential conflicts during the nesting season and have adopted policies to avoid these areas. In some areas where climbing and hiking trails have caused conflicts, seasonal closures have been established to reduce disturbance. Site management plans with seasonal buffers have been established on many national forests to reduce potential conflicts.

Response and additional information.

The department concludes that the American peregrine falcon meets this criterion, with some reservations. Contaminant information for some Oregon nest sites continued to exhibit high levels of egg shell thinning into the 1990's in some samples (Pagel 1996). Although the current average productivity continues to remain high at nesting sites with known outcomes (Isaacs 2007; Green et al. 2006), the department has no current contaminant information and it remains appropriate to monitor contaminants in peregrines to detect potential problems now or in the future as new man-made chemicals are introduced into the environment. For example, continued monitoring of eggs in Arctic peregrines has detected increases in mercury concentrations over time (Ambrose et al. 2000). The Federal monitoring plan is not designed to detect localized contaminant problems which are still reported in other species in Oregon including bald eagles and ospreys (Buck et al. 2005; Henny et al. 2004). However, both species have been intensively monitored for over two decades in Oregon and continue to increase and recover statewide (Isaacs and Anthony 2005; Henny et al. 2003). Although the national peregrine monitoring plan calls for contaminant monitoring, few samples are being collected and funding is currently unavailable for analysis. To address any uncertainty, the department will develop and undertake with cooperators contaminant monitoring to compliment the national monitoring plan.

Current and future implications of West Nile virus (WNV), and potentially avian influenza are unknown, but dead peregrines collected from other parts of the U.S. have already been impacted by WNV along with over 280 other species of birds (see Center for Disease Control web site: <http://www.cdc.gov/>). In Oregon dead sage grouse and a sick northern harrier from Malheur were confirmed positive for the disease in 2006 (ODFW News Release, August 21, 2006). Such events support the need for a strong cooperative federal/state/private monitoring program for disease that includes peregrines.

The department also concludes the Arctic peregrine falcon meets this criterion based on current post-delisting population and productivity monitoring data summarized under Criterion 1 above.

3. Most populations are not undergoing imminent or active deterioration of range or primary habitat;

Summary of information in the petition and public comments relevant to Factor 3.

Peregrines nest primary on natural cliffs and are found at sea level to the high Cascades as well as drier climates in eastern Oregon in association with lakes and wetlands. Records are limited on historical nesting populations, however potential nesting habitat is abundant and widespread in the state above and beyond known sites. As indicated under criterion 2 above, the nesting population continues to increase including using man-made structures in urban environments.

Under Criterion 5, below, regulatory mechanisms are in place on both federal, state and private lands for the protection of wetland, nesting habitat, and prey species (migratory birds).

An ongoing national monitoring program is in place in cooperation with the states and federal land management agencies and will continue to 2015.

Response and additional information.

The department concludes that this criterion has been met . As indicated under 1, above, the number of known and active Oregon nesting areas continues to increase in spite of a lack of significant or systematic survey effort. Similar population increases are being documented in adjacent states. The Oregon population is part of a larger regional and continental population that continues to improve and will be monitored at least every several years in most states through 2015 as part of the national monitoring program (Kiff 1988; Green et al. 2006).

Peregrines have demonstrated the ability to take a wide range of prey species whether in wild or urban settings, thus prey populations are not considered limiting. Although much of eastern Oregon has not been surveyed for recent nesting by peregrines, the department has no reason to believe that nesting or foraging habitats are being adversely affected

with the exception of some areas of central Oregon along the Deschutes and Crooked rivers exhibiting rapid human population growth.

As indicated earlier, nesting birds have also moved into urban settings such as Portland and are now utilizing artificial structures (e.g., bridges) in many locations.

4. Over utilization of the species and/or its habitat is not occurring, for commercial, recreational, scientific or educational purposes nor is it likely to occur.

Summary of information in the petition and public comments relevant to Factor 4.

Oregon coastal island habitats receive full protection as a national wildlife refuge. Seabird populations (peregrine prey species) are monitored on a regular basis by the U.S. Fish and Wildlife Service. Federal land management agencies have developed nest site management plans over the years for many peregrine nesting areas. The Oregon Department of Transportation developed an endangered species management plan for peregrines nesting on bridges and sites adjacent to public highways.

Peregrines are used in the sport of falconry which is regulated by both the USFWS and states. Take of peregrines is currently prohibited by ODFW while they remain listed. Should peregrines be allowed to be taken in the future, federal regulations prohibit taking more than 5% of the number of young fledged in the state in the previous year.

The national monitoring plan for American peregrines will continue to track peregrine populations and associated nesting habitat in cooperation with state and federal agencies until 2015.

Response and additional information.

The department concludes that this criterion has been met. With the exception of some low elevation nesting sites where urban or residential development have eliminated the likely re-use of historical sites, both present and potential habitats throughout the state are generally inaccessible except for technical climbers, are remote, or circumstances are such that birds have learned to tolerate various levels of human disturbances (e.g., highway bridges). Given basic protection from disturbance during the nesting season, birds are commonly using urban environments and artificial structures in Oregon, are nesting above highways and on cliffs below forest fire towers. Of 438 sites monitored nationally in 2003, 20% of sites were located on artificial structures (USFWS 2003). The number of peregrines now using artificial sites are much higher (64%) in the Midwest and eastern United States where populations had been extirpated by the early 1960's (USFWS 2003).

The number of potential nesting sites in Oregon is not yet limiting and a high percentage of the state remains unsurveyed. Competition with golden eagles and prairie falcons may be naturally limiting in drier areas of the state. Most survey/monitoring work has been conducted in western Oregon in recent decades due potential impacts of forest

management activities (e.g., logging, road construction) and availability of experienced agency personnel. In eastern Oregon the Bureau of Land Management conducted preliminary inventories of potential nesting habitat in portions of all four BLM Districts that extend from central to southeastern Oregon. Approximately 70 sites were rated high for nesting potential and 95 as medium potential (Pagel 1999, 2001a, 2001b, 2003). Similar habitat surveys remain to be conducted on most national forests and private lands in eastern Oregon.

Current state administrative rules are in place that prohibit “take” of the species except for scientific purposes. Basic state falconry regulations are in place but would require amendment should the Commission allow falconry take in the future. The department will establish a working group in the future to determine appropriate methods and numbers for take for the purpose of falconry as authorized under current federal rules. Current federal falconry regulations only allow take of nestling peregrines in 12 western states, thus no migrant Arctic peregrines are being taken for falconry within the Pacific flyway (USFWS 2004).

As pointed out in the petition, rock climbing can be a disturbance factor for some sites and in some popular areas could preclude use by peregrines and other raptors (e.g, Smith Rocks State Park in central Oregon). Seasonal access or climbing closures have been established for several sites however additional educational and outreach may be required in other locations, particularly if interest in the activity increases. This issue needs further attention in concert with recreational climbing organizations and local groups.

5. Existing state or federal programs or regulations are adequate to protect the species and its habitat.

Summary of information in the petition and public comments relevant to Factor 5. Also see information in Factor 4 above.

Peregrines and all other migratory birds are protected at the federal level under the Migratory Bird Treaty Act (MBTA). Under the MBTA there are regulations that authorize the take, possession, and transport of raptors for falconry and their propagation. The MBTA does not currently address protection of habitat.

Peregrines also receive continued protection internationally under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This international agreement has been in place since 1975 and has a goal of ensuring that trade in wild animals and plants does not jeopardize the survival of listed species including peregrine falcons.

Habitat for wetland prey species is provided some protection under Section 404 of the Clean Water Act of 1972. Permits must be obtained before placing any fill material into waters of the United States and mitigation is required.

Pesticides must be registered for use with the Environmental Protection Agency. Testing the effects on wildlife prior must occur prior to registration under the authority of the Federal Insecticide, Fungicide and Rodenticide Act.

The American peregrine population must be monitored for no less than a five-year period after federal delisting. This program began in 2003 and will continue at 3 year intervals until 2015 in cooperation with the USFWS and states including Oregon.

Peregrine nesting sites continue to be given protection on federal lands under the National Forest Management Act (USFS) and Federal Land Management and Policy Act (BLM) and related agency policies for sensitive species. Nesting site plans are in place for a number of areas.

Federal regulations are in place for falconry take of peregrines for states that allow falconry take. The take of peregrines is currently prohibited in Oregon but could be allowed in the future after state delisting. Under the federal regulations the level of take could not exceed 5% of the number of young fledged in the previous year.

Response and additional comments.

The department concludes that this criterion is also met. As pointed out earlier, if the peregrine is removed from the state list of Threatened and Endangered Species, it will remain a state protected species under Oregon Administrative Rules and federally protected species under the Migratory Bird Treaty Act. All requirements for state agencies and current protections under the Oregon ESA will cease. However, as also indicated earlier, the Oregon ESA primarily applies to state land-owning agencies. When the species is delisted, ODFW will continue to work with interested landowners in a voluntary capacity to provide appropriate protections to known nesting sites to prevent harassment or take. As indicated earlier, about 80% of the currently known nesting sites are either on federal or state lands and subject to other legal and agency protections and policies.

Monitoring

Once state delisted, the peregrine will be placed on the department's administrative sensitive species list until further surveys (especially in eastern Oregon), along with more current contaminant monitoring, confirm that peregrines are adequately reproducing in all parts of the state. In order to accomplish this, the department will coordinate a statewide survey of a larger sample of known peregrine nesting territories in concert with each of the remaining 3 national monitoring years in 2009, 2013, and 2015. Because the USFWS national monitoring plan was developed to detect changes in regional nesting populations (e.g., 5 western states), the department conducted a new statistical analysis with the objective of being able to detect a significant change over time (i.e., decrease) within the Oregon nesting population. Based on preliminary information and given the currently known nesting population, the department would need to sample about 60 nesting areas

in addition to the current USFWS sample of 30. The sample size would slowly increase as the population continues to increase.

Between the federal/state sampling years, the department will continue to support coordination of ongoing agency and/or volunteer monitoring and survey efforts, and maintain the existing database. This will also include training of volunteers as well as data quality assurance.

As indicated earlier, a contaminant sampling program sufficient to determine current and future contaminant levels in peregrines will be developed and implemented as funding allows. The intent will be to support and strengthen the national peregrine contaminant monitoring plan within the state and compliment ongoing or future programs with other species (e.g., osprey, bald eagle). After 2015 the need for monitoring will be evaluated with cooperating agencies and partners.

E. Conclusion on sufficiency of information

The department concludes that there is sufficient scientific information available to determine that the two subspecies, the American peregrine and Arctic peregrine, are no longer in danger of extinction or reproductive failure in Oregon. This information includes: the continued decline of environmental contaminants as documented in the literature for peregrines and other species; significant protection of nesting peregrines and associated foraging habitats through federal and state regulatory mechanisms; documented continual increases in the nesting population with adequate levels of productivity; state and federal regulations are in place to administer scientific or recreational take of peregrines; and, established and planned monitoring programs at the national and state level. The department recommends amending the rules to remove the American and Arctic peregrine falcons from the state list of endangered and threatened species.

As conditions of the proposed delisting, the department would undertake the following actions:

1. Coordinate and monitor sufficient breeding areas in each of the three remaining national monitoring years through 2015 (i.e., 2009, 2012, 2015) to detect significant levels of population change. Monitoring needs after 2015 will be evaluated at that time based on both state and national results.
2. Assist in coordination of volunteer and agency monitoring and surveys efforts during interim years (e.g. 2007, 2008, 2010, 2011) and maintain an ongoing database. Coordinate cooperative nesting and habitat surveys in eastern Oregon.
3. Development of a state contaminant monitoring plan to compliment the national monitoring plan and other state and federal contaminant monitoring programs (e.g., bald eagles). Seek funding for sample analysis in cooperation with the USFWS.

4. Establish a working group to advise the department on take of peregrines for falconry;
5. Place the peregrine on the ODFW sensitive species list.

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