# Management of Bald Eagle Nests, Concentration Areas, and Communal Roosts in Virginia: *A Guide for Landowners*

**2012**

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## PREFACE

Few American wildlife success stories are as widely recognized as the recovery of bald eagle populations in the forty-eight coterminous states. Since first listed as a federally endangered species in 1967, cooperative actions to restore and protect eagles and their essential habitats by government agencies, university researchers, non-government conservation agencies and, most significantly, by private and public landowners, have fostered dramatic recovery of our nation's wildlife icon. Having been ceremoniously removed from the *Federal List of Endangered and Threatened Species* in 2007, the bald eagle also is removed from the *Virginia List of Endangered and Threatened Species* effective January 1, 2013.

After delisting, bald eagles and their nests remain protected under Virginia law and pursuant to regulations of the Virginia Department of Game and Inland Fisheries (VDGIF). Eagles and their nests also remain under protection of the federal Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

Providing guidance to landowners wanting to protect eagles and their nests has been a major element of the cooperative programs to achieve this species' recovery, and this publication is merely the most recent in a series of guidance documents released over the last several decades. It is intended to present recent changes in federal and state laws and regulations protecting eagles and their nests, and to recommend measures that landowners may take to protect bald eagles.

After January 1, 2013, applicable Virginia law and VDGIF regulations will no longer prohibit habitat alterations that do not result in taking of an eagle or its nest, or parts thereof. Thus, compliance with these guidelines by landowners is voluntary from the state legal perspective. Federal regulations pursuant to the Bald and Golden Eagle Protection Act, however, prohibit "disturbance" of eagles, which may include certain human activities or alteration of habitat surrounding a nest. This guide presents the *National Bald Eagle Management Guidelines* as released by the U.S. Fish and Wildlife Service, and provides the Department's recommendations for application of those guidelines in Virginia.

Readers who are familiar with the attendant laws and regulations, and with the National Guidelines, may wish to turn directly to *Section VI* of this document, which explains situations where VDGIF recommendations to protect eagles, based on our knowledge of Virginia's eagles, are not identical to the USFWS nationwide guidelines. Similarly, readers who simply want to determine whether their project or land management plans may affect eagles can turn directly to *Section VIII* of this document, as a "quick start" to evaluating their project.

Virginia landowners who share their property with bald eagles have a unique opportunity to become stewards of a national treasure. Providing for the needs of bald eagles will help to ensure the security of other wildlife species, protect natural communities, and enhance the quality of the Commonwealth's rivers and streams. The future of bald eagles in Virginia depends in large measure on proactive and conservation-oriented management of both public and private lands.

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## I. INTRODUCTION AND BACKGROUND

Virginia landowners who share their property with bald eagles have a unique opportunity to become stewards of a national treasure. Not only are bald eagles *(Haliaeetus leucocephalus)* a vital component of riverine and wetland ecosystems, but they also are a flagship indicator of ecosystem health. Providing for their needs will help to ensure the security of other wildlife species, protect natural communities, and enhance the quality of the Commonwealth's rivers and streams. The future of bald eagles in Virginia depends in large measure on proactive and conservation-oriented management of both public and private lands.

As the federal and state agencies with responsibility for conservation and management of wildlife, respectively, the U.S. Fish and Wildlife Service (USFWS) and Virginia Department of Game and Inland Fisheries (VDGIF, Department) are jointly responsible for protecting and managing bald eagles throughout Virginia. Indeed, many Virginia landowners, permitting agencies, academic researchers, non-governmental conservation organizations, and wildlife enthusiasts have cooperated with the VDGIF and USFWS to protect and restore the Commonwealth's bald eagles and the habitats on which they depend. Over the last several decades the Department, the USFWS, the Center for Conservation Biology at The College of William and Mary and Virginia Commonwealth University (CCB), the National Wildlife Federation, and others have cooperated in a program of research, surveys, and interagency consultation to facilitate and monitor recovery of the Commonwealth's bald eagle population. These partners have produced numerous landowner guidelines and management plans for eagles, their nests, and concentration areas through the years, which served as templates for facilitating interagency consultation (Cline 1985, 1993; Cline and Byrd 1994; USFWS 1987, 2007; VFO-USFWS 2008; VFO-USFWS et al. 2001; Watts 2005; Watts et al. 1994).

The bald eagle first gained federal protection in 1940, under what was later named the Bald and Golden Eagle Protection Act (BGEPA, Eagle Act). That law curbed illegal hunting and shooting of eagles, but our national symbol soon was exposed to a new environmental threat. Widespread use of the pesticide DDT after World War II caused eagle populations to plummet toward extirpation, to a Virginia low of 33 breeding pairs in the 1970's (Watts 2005). In brief, when DDT washed into waterways, it was absorbed by aquatic plants and animals, transported up the food chain, and subsequently ingested by eagles when they ate contaminated fish. DDT interfered with accumulation of calcium in egg-producing females, and the resulting thinner eggshells cracked when adult birds incubated their own eggs. Widespread reproductive failure and a precipitous decline in eagle numbers followed: the USFWS first listed the bald eagle (south of 40 north latitude) as federally *endangered* under The Endangered Species Protection Act of 1966 on 11 March 1967 (32 FR 4001). In 1978 bald eagles were listed as *endangered* under The Endangered Species Act of 1973 (ESA) in 43 of the lower 48 states, and listed as *threatened* in Michigan, Minnesota, Wisconsin, Oregon, and Washington (43 FR 6230). Bald eagles in Alaska never were listed under the ESA, and the species does not occur in Hawaii. The Virginia Endangered Species Act (§29.1-563 - 570) was adopted in 1972, and bald eagles were listed as a state *endangered* species pursuant to that Act.

Since the 1972 banning of DDT use in the United States, and under comprehensive eagle protection and management programs implemented by state and federal agencies, bald eagle

populations have increased dramatically across much of the lower 48 states, including Virginia. In July 1995, bald eagles were downlisted to *threatened* under the ESA (60 FR 36000). Then, in anticipation of removal of bald eagles from the *Federal List of Threatened and Endangered Species*, the USFWS published the *National Bald Eagle Management Guidelines* (National Guidelines) on June 5, 2007 (USFWS 2007), to provide landowners and project proponents guidance on how to ensure that actions they take on their property are consistent with the Eagle Act and the Migratory Bird Treaty Act (MBTA). The National Guidelines may be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BaldEagle/NationalBaldEagleManagementGuidelines.pdf, and they are included in their entirety as *Section V* of this publication. The National Guidelines address sensitive zones around eagle nests, communal roosts, and concentration areas. They also provide guidance and recommended protective measures to facilitate land use and development activities without causing harm to eagles, their nests, or certain essential habitats.

On August 8, 2007, following decades of documented population recovery, bald eagles were delisted from protection under the federal Endangered Species Act (72 FR 37345), though the species remained listed as a *threatened* species under the Virginia Endangered Species Act. In August 2012, the Board of Game and Inland Fisheries delisted bald eagles from protection under the Virginia Endangered Species Act, effective January 1, 2013. As of that date, bald eagles are not protected under either federal or state endangered species laws. They remain, however, federally protected under the Eagle Act and the Migratory Bird Treaty Act, and also protected under Virginia law and VDGIF regulations regarding native wildlife species (see *Sections III* and *IV*).

While bald eagles were listed under the ESA, permits were available from USFWS to take bald eagles incidentally to otherwise lawful activities. There were, however, no such regulations or permit procedures to allow disturbance or incidental take of either bald eagles or golden eagles (*Aquila chrysaetos*) under the BGEPA. Thus, the USFWS developed two new regulations to address these issues (USFWS 2009). As discussed in the Q&A factsheet regarding the new regulations (USFWS 2010):

(1) "The regulation set forth in section 50 CFR §22.26 provides for issuance of permits to take bald eagles and golden eagles where the taking is associated with but not the purpose of the activity and cannot practicably be avoided. Most take authorized under this section will be in the form of disturbance; however, permits may authorize non-purposeful take that may result in mortality."

and,

(2) "The regulation at 50 CFR §22.27 establishes permits for removing eagle nests where: (1) necessary to alleviate a safety emergency to people or eagles; (2) necessary to ensure public health and safety; (3) the nest prevents the use of a human-engineered structure; or (4) the activity or mitigation for the activity will provide a net benefit to eagles. Only inactive nests may be taken except in the case of safety emergencies. Inactive nests are defined by the continuous absence of any adult, egg, or dependent young at the nest for at least 10 consecutive days leading up to the time of take."

Regional or state field offices of the USFWS currently do not deviate from the National Guidelines to accommodate regional or local differences in habitat use by eagles, nor in individual eagles' responses to human intrusion or disturbance, and USFWS Implementation Guidelines for issuance of permits under the BGEPA are still under development. Draft guidance for development of *Eagle Conservation Plans* to support issuance of programmatic eagle take permits related to wind energy development has been released, however (USFWS 2011), and the USFWS stated (p. 8) that "Many of the concepts and approaches outlined in this module can be readily exported to other situations, and we expect to release other modules in the near future specifically addressing other forms of eagle take." Pending such clarification of federal policy, and to address state-specific concerns, VDGIF has developed this guidance to promote conservation and protection of bald eagles in the Commonwealth. We sought consistency with the USFWS National Guidelines and BGEPA permitting regulations to the greatest extent possible, and deviated from them only when clearly warranted by our understanding of eagle behavior and demographics within the Commonwealth. Many definitions, schedules, categories of activities, buffer zone widths, and general recommendations have been revised from previous versions of our Virginia Guidelines, primarily to maximize consistency with the National Guidelines and to simplify interpretation of both documents by affected landowners and other interests. Similarly, most information regarding the biology and ecology of eagles, potential impacts of human activities on eagles, and specific recommendations for amelioration of those impacts has been deleted from the "Virginia-specific" narrative, as those topics are fully explored in the National Guidelines. Only issues where the Virginia Guidelines differ from the National Guidelines are explained in relative detail (*Section VI* of this document).

We encourage landowners and project proponents in Virginia to review their proposed actions using these guidelines. Generally, adherence to the National Guidelines is appropriate; but, in situations where there is some discrepancy between the Virginia Guidelines and the National Guidelines, *Section VI* provides guidance on how to ensure that a proposed project would be consistent with both. Proposed activities that may affect or result in take of a bald eagle in Virginia will be evaluated by the VDGIF and/or USFWS on a case-by-case basis, using site-specific information. The recommendations provided in these guidelines may be modified as appropriate to address project- and site-specific circumstances such as topography, existing forest canopy and habitat conditions, existing development or human activities proximal to the project site, and observed behavior of the particular eagles in question, including their reactions to specific disturbances or human activities.

**It is important to recognize that these Virginia Guidelines are not regulatory in themselves, and they are not intended to supplant onsite review or consultation.** VDGIF biologists are available to provide technical assistance or to consult with constituents who desire assistance in interpreting these guidelines, or in evaluation of the potential impacts of their proposed activities upon bald eagles.

## II. BALD EAGLES IN VIRGINIA

**History and Status -** Prior to European settlement, the Chesapeake Bay region likely had the densest breeding population of bald eagles outside of Alaska, perhaps totaling 1,500 to 3,000 nesting pairs (Frasier et al. 1996, Watts 2005). As discussed above, eagle numbers in the Bay area declined precipitously in the early- to mid-1900s to approximately 150 breeding pairs in 1962, and to 80 to 90 pairs by the 1970s, including only 33 pairs in Virginia (Watts 2005). The population has since dramatically recovered, with 726 occupied territories and 646 active nests documented in Virginia in 2011 (Watts and Byrd 2011). This recovery has been expressed through (1) an increase in the number of breeding territories, (2) an increase in reproductive rate, and (3) an expansion in geographic distribution (Watts 2005; Watts et al. 2007, 2008). Most of Virginia's bald eagles breed in the Coastal Plain, but we estimate that perhaps 20% of the population breeds in the Piedmont and mountains. Within the Coastal Plain, freshwater tidal sections of the Bay's tributaries support three to four times higher breeding densities, higher reproductive rates, and greater chick growth rates compared to more saline portions of the Bay (Markham and Watts 2008, Watts et al. 2006).

**Breeding -** In Virginia, nest building and repair may occur during any month of the year, but these activities typically begin as early as November and peak in mid-winter. **For management purposes, the breeding season in Virginia is generally considered to be from December 15 through July 15, though breeding activity may occur before or after these dates.** Courtship flights and related mating behavior are most frequently observed during January and February, and eggs are usually laid between mid-January and late March. Most eggs hatch between early March and early May, and eaglets stay in the nest for 11 to 12 weeks after hatching. Most young are capable of sustained flight by mid-July, but remain dependent on the parents and stay in the general vicinity of the nest for several more weeks. Adult bald eagle pairs in Virginia typically remain on or near their breeding territories throughout the year. Eagles are most sensitive to disturbance during the breeding season as defined above.

**Seasonal Concentration Areas and Communal Roosts -** During the winter and summer months, migrant bald eagles from the Northeast and Southeast, respectively, converge with the local eagle population in predictable locations within the Chesapeake Bay region. These areas are referred to as bald eagle "concentration areas" and are defined as locations along waterways where eagles congregate in numbers much greater than can be accounted for by local breeding pairs and their offspring (Watts 2005, Watts et al. 2007). **As applicable to these guidelines, the summer eagle concentration season in Virginia extends from May 15 through August 31, and the winter eagle concentration season in Virginia extends from December 15 through March 15.**

Concentration areas are used by juveniles, sub-adults, non-breeding adult eagles, and breeding pairs of eagles for roosting, perching, and foraging. Typical eagle concentration areas have minimal shoreline development, and heavily forested shorelines with large canopy trees that provide extensive views of potential feeding areas, although the site conditions may vary along shoreline segments within concentration areas.

Virginia has major eagle concentration areas on portions of three major tidal rivers: the James River (Clark 1992, Scott 1971, Watts and Factor 1994, Watts and Whalen 1997), the Rappahannock River (Portlock 1994, VDGIF unpubl. data, Watts 1998), and the Potomac River (Wallin and Byrd 1984, VDGIF unpubl. data, Witt unpubl. data). Additional sites on the York and Chickahominy rivers support sporadic high concentrations of bald eagles that currently are not stable or predictable enough to warrant designation as concentration areas. As the eagle population expands, however, eagle concentration areas may develop on these or other rivers. Maps and additional information regarding Virginia's eagle concentration areas can be accessed on the VDGIF and USFWS websites at: http://vafwis.org/fwis/BaldEagleSearchMap.html and http://www.fws.gov/northeast/virginiafield/endspecies/Project_Reviews_Step6b.html, respectively.

Eagle concentration areas often include one to several communal night roosts. Communal roosts typically are located in sheltered forested areas that minimize exposure to inclement weather. Eagles numbering from just a few to over 100 individuals may gather at such roosts in canopy trees clustered within a relatively small area. Eagle roosts in Virginia are less well known than are seasonal concentration areas; the documented communal roosts are depicted at: http://vafwis.org/fwis/BaldEagleSearchMap.html.

## III. FEDERAL LAWS, REGULATIONS, AND GUIDELINES

**Bald and Golden Eagle Protection Act** (BPEGA, Eagle Act) (16 U.S.C. 668-668c; 50 CFR Part 22) – This 1940 Act, as amended several times since, prohibits taking bald or golden eagles or their nests, eggs, or parts without a federal permit. The Act provides criminal and civil penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." Under the Act, *take* is defined as "to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" an eagle or their parts, nest, or eggs; and *disturb* means "to agitate or bother a bald or golden eagle to a degree that causes or is likely to cause, based on the best scientific information available: (1) injury to an eagle; (2) a decrease in 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." In addition to these immediate impacts, this definition of *disturb* also covers "impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that injures an eagle or substantially interferes with normal breeding, feeding, or sheltering habits and causes, or is likely to cause, a loss of productivity or nest abandonment." Clearly, the Eagle Act provides broad federal protection of eagles and their nests, eggs, and parts thereof.

**Migratory Bird Treaty Act** (MBTA) (16 U.S.C. 701 et seq.; 50 CFR Parts 10, 20, 21) – Enacted in 1918, the MBTA prohibits the taking of any migratory bird or any part, nest, or egg, except as permitted by regulation. Amendments of 1972 expanded the scope of this Act to include bald eagles and other raptors. The Act and its implementing regulations generally

prohibit actions or attempts to pursue, hunt, shoot, wound, kill, trap, capture, possess, or collect any migratory bird species, or their nests or eggs.

***National Bald Eagle Management Guidelines*** **-** While considering removal of the bald eagle from the Federal List of Endangered or Threatened Wildlife, the USFWS recognized the need for guidelines to inform landowners, land managers, and others who share public and private lands with bald eagles when and under what circumstances the protective provisions of the Eagle Act may apply to their activities. To address this need, the USFWS developed the *National Bald Eagle Management Guidelines* (USFWS 2007) to: "(1) publicize the provisions of the Eagle Act that continue to protect bald eagles, in order to reduce the possibility that people will violate the law; (2) advise landowners, land managers and the general public of the potential for various human activities to disturb bald eagles; and (3) encourage additional nonbinding land management practices that benefit bald eagles". The National Guidelines (*Section V*) explain the nationwide standards for protection of bald eagles and their nests, and further provide recommendations for protection and management of eagle communal roosts, foraging areas, and concentration areas.

***Regulations and Permitting Procedures for Incidental Take of Eagles, and for Intentional Take of Eagle Nests -*** In recognition of the need for standards and a mechanism to issue permits for "take" as envisioned in the Eagle Act and National Guidelines, the USFWS published on September 11, 2009 their final rule establishing regulations for "incidental take of bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) under the Bald and Golden Eagle Protection Act (Eagle Act), where the take to be authorized is associated with otherwise lawful activities, and for intentional take of eagle nests under particular, limited circumstances" (74 FR 46836). Those regulations became effective on November 20, 2009.

## IV. VIRGINIA LAWS, REGULATIONS, AND GUIDELINES

From initial passage of the Virginia Endangered Species Act (§29.1-563 - 570) in 1972 through December 31, 2012, bald eagles were protected under that Act. In recognition of their recovery over the last four decades, bald eagles were removed from the Virginia list of threatened and endangered species effective January 1, 2013, though they remain designated as a [non-regulatory] Tier 2 Species of Greatest Conservation Need under Virginia's Wildlife Action Plan (VDGIF 2005). In addition, the Code of Virginia (§29.1-521) and VDGIF regulations (4 VAC 15-30-10) generally provide legal protection to all native birds and to their nests, eggs, and young. Thus, though eagles no longer receive the extended protections afforded to threatened or endangered species, they remain under the VDGIF's protection and management. Further, VDGIF is authorized by USFWS to enforce federal wildlife laws, including the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

As discussed above, new USFWS regulations for permitting incidental take of eagles and intentional take of eagle nests have been implemented. The new protocols adopt federal definitions for "Active" and "Inactive" nests that are not consistent with the nonregulatory definitions of those terms used by VDGIF and CCB for the last several decades. To avoid

confusion regarding nest/territory activity and occupancy, and to clarify when these Virginia guidelines should be applied, we provide the following parameters.

(1) A "Recently Active" nest is one that was attended (built, maintained or used) by a pair of bald eagles, whether or not eggs were laid, within the last three breeding seasons. This is consistent with the current federal regulatory definition of an "active" nest, though it facilitates application of these Virginia Guidelines for three seasons of nest inactivity.

(2) These Virginia Guidelines apply to any nest considered "Recently Active."

(3) All nests/territories documented as "Active" and/or "Occupied" in the 2011 CCB surveys (as determined from the survey report [Watts and Byrd 2011], the CCB "Nest Locator" website, or the VDGIF website, are considered "Recently Active" nests though the 2014 nesting season. After July 15, 2014, written or photographic documentation of nest disrepair or abandonment, at VDGIF discretion, may warrant release of a given nest from coverage under the Guidelines.

(4) All other nests/territories documented as "Active" and/or "Occupied" in VDGIF/CCB databases, or upon field inspection, will be considered "Recently Active" for 3 years after the last documented activity and/or occupancy. Written or photographic documentation of nest disrepair or abandonment, at VDGIF discretion, may warrant release of a given nest from coverage under the Guidelines.

## V. NATIONAL BALD EAGLE MANAGEMENT GUIDELINES (begins on next page)

See http://www.fws.gov/midwest/eagle/protect/laws.html for additional USFWS regulations, permit information and applications, and guidance.

# NATIONAL BALD EAGLE MANAGEMENT GUIDELINES

**U.S. Fish and Wildlife Service**

**May 2007**

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## INTRODUCTION

The bald eagle (*Haliaeetus leucocephalus*) is protected by the Bald and Golden Eagle Protection Act (Eagle Act) and the Migratory Bird Treaty Act (MBTA). The MBTA and the Eagle Act protect bald eagles from a variety of harmful actions and impacts. The U.S. Fish and Wildlife Service (Service) developed these National Bald Eagle Management Guidelines to advise landowners, land managers, and others who share public and private lands with bald eagles when and under what circumstances the protective provisions of the Eagle Act may apply to their activities. A variety of human activities can potentially interfere with bald eagles, affecting their ability to forage, nest, roost, breed, or raise young. The Guidelines are intended to help people minimize such impacts to bald eagles, particularly where they may constitute "disturbance," which is prohibited by the Eagle Act.

The Guidelines are intended to:

(1) Publicize the provisions of the Eagle Act that continue to protect bald eagles, in order to reduce the possibility that people will violate the law,

(2) Advise landowners, land managers and the general public of the potential for various human activities to disturb bald eagles, and

(3) Encourage additional nonbinding land management practices that benefit bald eagles (see Additional Recommendations section).

While the Guidelines include general recommendations for land management practices that will benefit bald eagles, the document is intended primarily as a tool for landowners and planners who seek information and recommendations regarding how to avoid disturbing bald eagles. Many States and some tribal entities have developed state-specific management plans, regulations, and/or guidance for landowners and land managers to protect and enhance bald eagle habitat, and we encourage the continued development and use of these planning tools to benefit bald eagles.

Adherence to the Guidelines herein will benefit individuals, agencies, organizations, and companies by helping them avoid violations of the law. However, the Guidelines themselves are not law. Rather, they are recommendations based on several decades of behavioral observations, science, and conservation measures to avoid or minimize adverse impacts to bald eagles.

The U.S. Fish and Wildlife Service strongly encourages adherence to these guidelines to ensure that bald and golden eagle populations will continue to be sustained. The Service realizes there may be impacts to some birds even if all reasonable measures are taken to avoid such impacts. Although it is not possible to absolve individuals and entities from liability under the Eagle Act or the MBTA, the Service exercises enforcement discretion to focus on those individuals, companies, or agencies that take migratory birds without regard for the consequences of their actions and the law, especially when conservation measures, such as these Guidelines, are available, but have not been implemented. 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.

The Service intends to pursue the development of regulations that would authorize, under limited circumstances, the use of permits if "take" of an eagle is anticipated but unavoidable. Additionally, if the bald eagle is delisted, the Service intends to provide a regulatory mechanism to honor existing (take) authorizations under the Endangered Species Act (ESA).

During the interim period until the Service completes a rulemaking for permits under the Eagle Act, the Service does not intend to refer for prosecution the incidental "*take*" of any bald eagle under the MBTA or Eagle Act, if such take is in full compliance with the terms and conditions of an incidental take statement issued to the action agency or applicant under the authority of section 7(b)(4) of the ESA or a permit issued under the authority of section 10(a)(1)(B) of the ESA.

The Guidelines are applicable throughout the United States, including Alaska. The primary purpose of these Guidelines is to provide information that will minimize or prevent violations only of *Federal* laws governing bald eagles. In addition to Federal laws, many states and some smaller jurisdictions and tribes have additional laws and regulations protecting bald eagles. In some cases those laws and regulations may be more protective (restrictive) than these Federal guidelines. If you are planning activities that may affect bald eagles, we therefore recommend that you contact both your nearest U.S. Fish and Wildlife Service Field Office (see the contact information on p.16) and your state wildlife agency for assistance.

## LEGAL PROTECTIONS FOR THE BALD EAGLE

### The Bald and Golden Eagle Protection Act

The Eagle Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since then, prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal and civil penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." "Disturb'' means:

> "Disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best 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."

In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle=s return, such alterations agitate or bother an eagle to a degree that injures an eagle or substantially interferes with normal breeding, feeding, or sheltering habits and causes, or is likely to cause, a loss of productivity or nest abandonment.

A violation of the Act can result in a criminal fine of $100,000 ($200,000 for organizations), imprisonment for one year, or both, for a first offense. Penalties increase substantially for additional offenses, and a second violation of this Act is a felony.

**The Migratory Bird Treaty Act**
The MBTA (16 U.S.C. 703-712), prohibits the taking of any migratory bird or any part, nest, or egg, except as permitted by regulation. The MBTA was enacted in 1918; a 1972 agreement supplementing one of the bilateral treaties underlying the MBTA had the effect of expanding the scope of the Act to cover bald eagles and other raptors. Implementing regulations define "take" under the MBTA as "pursue, hunt, shoot, wound, kill, trap, capture, possess, or collect."

Copies of the Eagle Act and the MBTA are available at: http://permits.fws.gov/ltr/ltr.shtml.

**State laws and regulations**
Most states have their own regulations and/or guidelines for bald eagle management. Some states may continue to list the bald eagle as endangered, threatened, or of special concern. If you plan activities that may affect bald eagles, we urge you to familiarize yourself with the regulations and/or guidelines that apply to bald eagles in your state. Your adherence to the Guidelines herein does not ensure that you are in compliance with state laws and regulations because state regulations can be more specific and/or restrictive than these Guidelines.

## NATURAL HISTORY OF THE BALD EAGLE

Bald eagles are a North American species that historically occurred throughout the contiguous United States and Alaska. After severely declining in the lower 48 States between the 1870s and the 1970s, bald eagles have rebounded and re-established breeding territories in each of the lower 48 states. The largest North American breeding populations are in Alaska and Canada, but there are also significant bald eagle populations in Florida, the Pacific Northwest, the Greater Yellowstone area, the Great Lakes states, and the Chesapeake Bay region. Bald eagle distribution varies seasonally. Bald eagles that nest in southern latitudes frequently move northward in late spring and early summer, often summering as far north as Canada. Most eagles that breed at northern latitudes migrate southward during winter, or to coastal areas where waters remain unfrozen. Migrants frequently concentrate in large numbers at sites where food is abundant and they often roost together communally. In some cases, concentration areas are used year-round: in summer by southern eagles and in winter by northern eagles.

Juvenile bald eagles have mottled brown and white plumage, gradually acquiring their dark brown body and distinctive white head and tail as they mature. Bald eagles generally attain adult plumage by 5 years of age. Most are capable of breeding at 4 or 5 years of age, but in healthy populations they may not start breeding until much older. Bald eagles may live 15 to 25 years in the wild. Adults weigh 8 to 14 pounds (occasionally reaching 16 pounds in Alaska) and have wingspans of 5 to 8 feet. Those in the northern range are larger than those in the south, and females are larger than males.

**Where do bald eagles nest?**

Breeding bald eagles occupy "territories," areas they will typically defend against intrusion by other eagles. In addition to the active nest, a territory may include one or more alternate nests (nests built or maintained by the eagles but not used for nesting in a given year). The Eagle Act prohibits removal or destruction of both active and alternate bald eagle nests. Bald eagles exhibit high nest site fidelity and nesting territories are often used year after year. Some territories are known to have been used continually for over half a century.

Bald eagles generally nest near coastlines, rivers, large lakes or streams that support an adequate food supply. They often nest in mature or old-growth trees; snags (dead trees); cliffs; rock promontories; rarely on the ground; and with increasing frequency on human-made structures such as power poles and communication towers. In forested areas, bald eagles often select the tallest trees with limbs strong enough to support a nest that can weigh more than 1,000 pounds. Nest sites typically include at least one perch with a clear view of the water where the eagles usually forage. Shoreline trees or snags located in reservoirs provide the visibility and accessibility needed to locate aquatic prey. Eagle nests are constructed with large sticks, and may be lined with moss, grass, plant stalks, lichens, seaweed, or sod. Nests are usually about 4-6 feet in diameter and 3 feet deep, although larger nests exist.



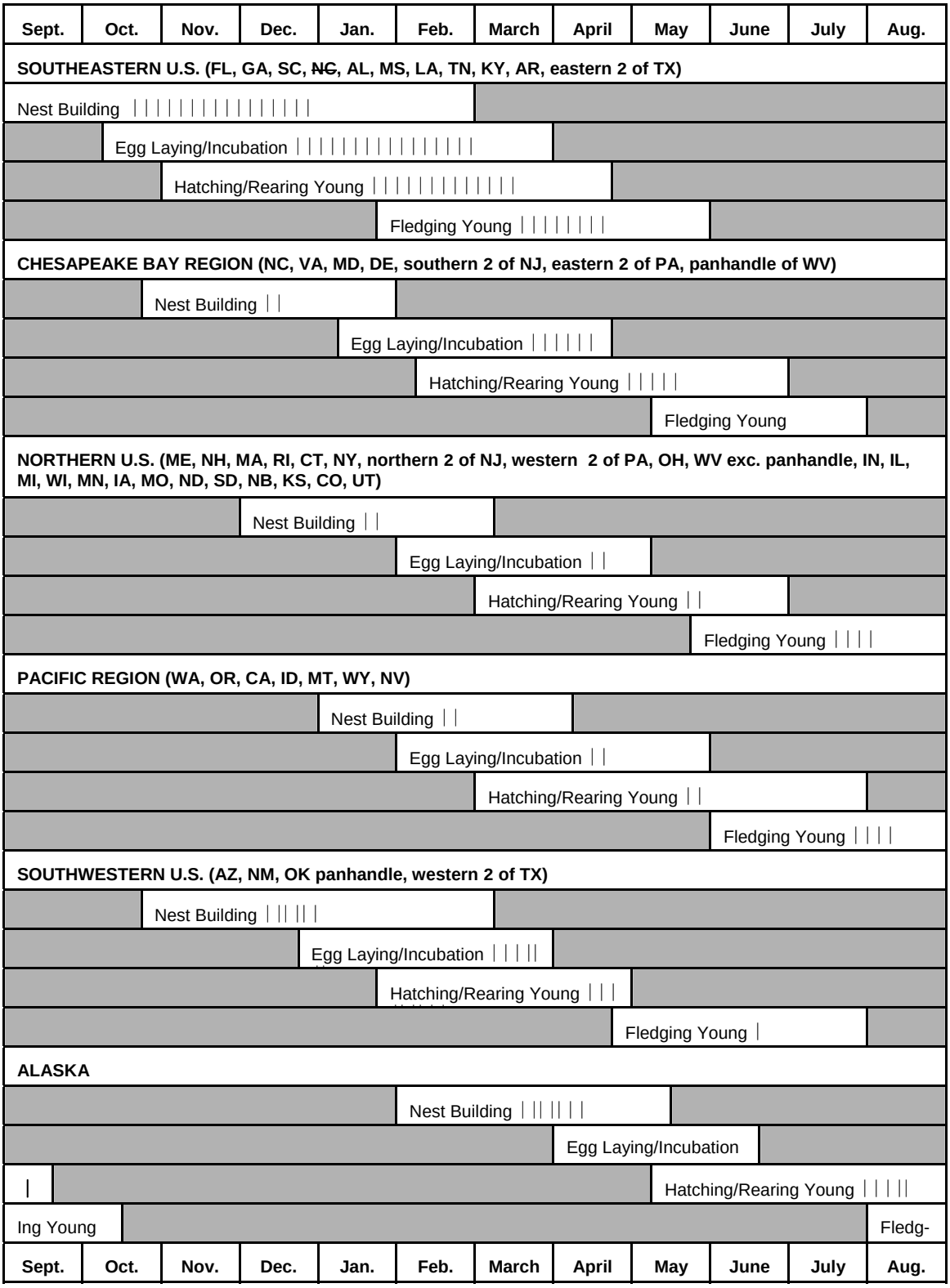

**The range of breeding bald eagles in 2000 (shaded areas). This map shows only the larger concentrations of nests; eagles have continued to expand into additional nesting territories in many states. The dotted line represents the bald eagle's wintering range.**

**When do bald eagles nest?**

Nesting activity begins several months before egg-laying. Egg-laying dates vary throughout the U.S., ranging from October in Florida, to late April or even early May in the northern United States. Incubation typically lasts 33-35 days, but can be as long as 40 days. Eaglets make their first unsteady flights about 10 to 12 weeks after hatching, and fledge (leave their nests) within a few days after that first flight. However, young birds usually remain in the vicinity of the nest for several weeks after fledging because they are almost completely dependent on their parents for food until they disperse from the nesting territory approximately 6 weeks later.

The bald eagle breeding season tends to be longer in the southern U.S., and re-nesting following an unsuccessful first nesting attempt is more common there as well. The following table shows the timing of bald eagle breeding seasons in different regions of the country. The table represents the range of time within which the majority of nesting activities occur in each region and does not apply to any specific nesting pair. Because the timing of nesting activities may vary within a given region, you should contact the nearest U.S. Fish and Wildlife Service Field Office (see page 16) and/or your state wildlife conservation agency for more specific information on nesting chronology in your area.

Chronology of typical reproductive activities of bald eagles in the United States.



**How many chicks do bald eagles raise?**
The number of eagle eggs laid will vary from 1-3, with 1-2 eggs being the most common. Only one eagle egg is laid per day, although not always on successive days. Hatching of young occurs on different days with the result that chicks in the same nest are sometimes of unequal size. The overall national fledging rate is approximately one chick per nest, annually, which results in a healthy expanding population.

**What do bald eagles eat?**
Bald eagles are opportunistic feeders. Fish comprise much of their diet, but they also eat waterfowl, shorebirds/colonial waterbirds, small mammals, turtles, and carrion. Because they are visual hunters, eagles typically locate their prey from a conspicuous perch, or soaring flight, then swoop down and strike. Wintering bald eagles often congregate in large numbers along streams to feed on spawning salmon or other fish species, and often gather in large numbers in areas below reservoirs, especially hydropower dams, where fish are abundant. Wintering eagles also take birds from rafts of ducks at reservoirs and rivers, and congregate on melting ice shelves to scavenge dead fish from the current or the soft melting ice. Bald eagles will also feed on carcasses along roads, in landfills, and at feedlots.

During the breeding season, adults carry prey to the nest to feed the young. Adults feed their chicks by tearing off pieces of food and holding them to the beaks of the eaglets. After fledging, immature eagles are slow to develop hunting skills, and must learn to locate reliable food sources and master feeding techniques. Young eagles will congregate together, often feeding upon easily acquired food such as carrion and fish found in abundance at the mouths of streams and shallow bays and at landfills.

**The impact of human activity on nesting bald eagles**
During the breeding season, bald eagles are sensitive to a variety of human activities. However, not all bald eagle pairs react to human activities in the same way. Some pairs nest successfully just dozens of yards from human activity, while others abandon nest sites in response to activities much farther away. This variability may be related to a number of factors, including visibility, duration, noise levels, extent of the area affected by the activity, prior experiences with humans, and tolerance of the individual nesting pair. The relative sensitivity of bald eagles during various stages of the breeding season is outlined in the following table.

**Nesting Bald Eagle Sensitivity to Human Activities**

| Phase | Activity | Sensitivity to Human Activity | Comments |
|---|---|---|---|
| **I** | Courtship and Nest Building | Most sensitive period; likely to respond negatively | Most critical time period. Disturbance is manifested in nest abandonment. Bald eagles in newly established territories are more prone to abandon nest sites. |
| **II** | Egg laying | Very sensitive period | Human activity of even limited duration may cause nest desertion and abandonment of territory for the breeding season. |
| **III** | Incubation and early nestling period (up to 4 weeks) | Very sensitive period | Adults are less likely to abandon the nest near and after hatching. However, flushed adults leave eggs and young unattended; eggs are susceptible to cooling, loss of moisture, overheating, and predation; young are vulnerable to elements. |
| **IV** | Nestling period, 4 to 8 weeks | Moderately sensitive period | Likelihood of nest abandonment and vulnerability of the nestlings to elements somewhat decreases. However, nestlings may miss feedings, affecting their survival. |
| **V** | Nestlings 8 weeks through fledging | Very sensitive period | Gaining flight capability, nestlings 8 weeks and older may flush from the nest prematurely due to disruption and die. |

If agitated by human activities, eagles may inadequately construct or repair their nest, may expend energy defending the nest rather than tending to their young, or may abandon the nest altogether. Activities that cause prolonged absences of adults from their nests can jeopardize eggs or young. Depending on weather conditions, eggs may overheat or cool too much and fail to hatch. Unattended eggs and nestlings are subject to predation. Young nestlings are particularly vulnerable because they rely on their parents to provide warmth or shade, without which they may die as a result of hypothermia or heat stress. If food delivery schedules are interrupted, the young may not develop healthy plumage, which can affect their survival. In addition, adults startled while incubating or brooding young may damage eggs or injure their young as they abruptly leave the nest. Older nestlings no longer require constant attention from the adults, but they may be startled by loud or intrusive human activities and prematurely jump from the nest before they are able to fly or care for themselves. Once fledged, juveniles range up to ¼ mile from the nest site, often to a site with minimal human activity. During this period, until about six weeks after departure from the nest, the juveniles still depend on the adults to feed them.

**The impact of human activity on foraging and roosting bald eagles**

Disruption, destruction, or obstruction of roosting and foraging areas can also negatively affect bald eagles. Disruptive activities in or near eagle foraging areas can interfere with feeding, reducing chances of survival. Interference with feeding can also result in reduced productivity (number of young successfully fledged). Migrating and wintering bald eagles often congregate at specific sites for purposes of feeding and sheltering. Bald eagles rely on established roost sites because of their proximity to sufficient food sources. Roost sites are usually in mature trees where the eagles are somewhat sheltered from the wind and weather. Human activities near or within communal roost sites may prevent eagles

from feeding or taking shelter, especially if there are not other undisturbed and productive feeding and roosting sites available. Activities that permanently alter communal roost sites and important foraging areas can altogether eliminate the elements that are essential for feeding and sheltering eagles.

Where a human activity agitates or bothers roosting or foraging bald eagles to the degree that causes injury or substantially interferes with breeding, feeding, or sheltering behavior and causes, or is likely to cause, a loss of productivity or nest abandonment, the conduct of the activity constitutes a violation of the Eagle Act's prohibition against disturbing eagles. The circumstances that might result in such an outcome are difficult to predict without detailed site-specific information. If your activities may disturb roosting or foraging bald eagles, you should contact your local Fish and Wildlife Service Field Office (see page 16) for advice and recommendations for how to avoid such disturbance.

## RECOMMENDATIONS FOR AVOIDING DISTURBANCE AT NEST SITES

In developing these Guidelines, we relied on existing state and regional bald eagle guidelines, scientific literature on bald eagle disturbance, and recommendations of state and Federal biologists who monitor the impacts of human activity on eagles. Despite these resources, uncertainties remain regarding the effects of many activities on eagles and how eagles in different situations may or may not respond to certain human activities. The Service recognizes this uncertainty and views the collection of better biological data on the response of eagles to disturbance as a high priority. To the extent that resources allow, the Service will continue to collect data on responses of bald eagles to human activities conducted according to the recommendations within these Guidelines to ensure that adequate protection from disturbance is being afforded, and to identify circumstances where the Guidelines might be modified. These data will be used to make future adjustments to the Guidelines.

To avoid disturbing nesting bald eagles, we recommend (1) keeping a distance between the activity and the nest (distance buffers), (2) maintaining preferably forested (or natural) areas between the activity and around nest trees (landscape buffers), and (3) avoiding certain activities during the breeding season. The buffer areas serve to minimize visual and auditory impacts associated with human activities near nest sites. Ideally, buffers would be large enough to protect existing nest trees and provide for alternative or replacement nest trees.

The size and shape of effective buffers vary depending on the topography and other ecological characteristics surrounding the nest site. In open areas where there are little or no forested or topographical buffers, such as in many western states, distance alone must serve as the buffer. Consequently, in open areas, the distance between the activity and the nest may need to be larger than the distances recommended under Categories A and B of these guidelines (pg. 12) if no landscape buffers are present. The height of the nest above the ground may also ameliorate effects of human activities; eagles at higher nests may be less prone to disturbance.

In addition to the physical features of the landscape and nest site, the appropriate size for the distance buffer may vary according to the historical tolerances of eagles to human activities in particular localities, and may also depend on the location of the nest in relation

to feeding and roosting areas used by the eagles. Increased competition for nest sites may lead bald eagles to nest closer to human activity (and other eagles).

Seasonal restrictions can prevent the potential impacts of many shorter-term, obtrusive activities that do not entail landscape alterations (e.g. fireworks, outdoor concerts). In proximity to the nest, these kinds of activities should be conducted only outside the breeding season. For activities that entail both short-term, obtrusive characteristics and more permanent impacts (e.g., building construction), we recommend a combination of both approaches: retaining a landscape buffer *and* observing seasonal restrictions.

For assistance in determining the appropriate size and configuration of buffers or the timing of activities in the vicinity of a bald eagle nest, we encourage you to contact the nearest U.S. Fish and Wildlife Service Field Office (see page 16).

**Existing Uses**

Eagles are unlikely to be disturbed by routine use of roads, homes, and other facilities where such use pre-dates the eagles' successful nesting activity in a given area. Therefore, in most cases *ongoing* existing uses may proceed with the same intensity with little risk of disturbing bald eagles. However, some *intermittent, occasional, or irregular* uses that pre-date eagle nesting in an area may disturb bald eagles. For example: a pair of eagles may begin nesting in an area and subsequently be disturbed by activities associated with an annual outdoor flea market, even though the flea market has been held annually at the same location. In such situations, human activity should be adjusted or relocated to minimize potential impacts on the nesting pair.

## ACTIVITY-SPECIFIC GUIDELINES

The following section provides the Service=s management recommendations for avoiding bald eagle disturbance as a result of new or intermittent activities proposed in the vicinity of bald eagle nests. Activities are separated into 8 categories (A – H) based on the nature and magnitude of impacts to bald eagles that usually result from the type of activity. Activities with similar or comparable impacts are grouped together.

In most cases, impacts will vary based on the visibility of the activity from the eagle nest and the degree to which similar activities are already occurring in proximity to the nest site. Visibility is a factor because, in general, eagles are more prone to disturbance when an activity occurs in full view. For this reason, we recommend that people locate activities farther from the nest structure in areas with open vistas, in contrast to areas where the view is shielded by rolling topography, trees, or other screening factors. The recommendations also take into account the existence of similar activities in the area because the continued presence of nesting bald eagles in the vicinity of the existing activities indicates that the eagles in that area can tolerate a greater degree of human activity than we can generally expect from eagles in areas that experience fewer human impacts. To illustrate how these factors affect the likelihood of disturbing eagles, we have incorporated the recommendations for some activities into a table (categories A and B).

First, determine which category your activity falls into (between categories A – H). If the activity you plan to undertake is not specifically addressed in these guidelines, follow the recommendations for the most similar activity represented.

If your activity is under A or B, our recommendations are in table form. The vertical axis shows the degree of visibility of the activity from the nest. The horizontal axis (header row) represents the degree to which similar activities are ongoing in the vicinity of the nest. Locate the row that best describes how visible your activity will be from the eagle nest. Then, choose the column that best describes the degree to which similar activities are ongoing in the vicinity of the eagle nest. The box where the column and row come together contains our management recommendations for how far you should locate your activity from the nest to avoid disturbing the eagles. The numerical distances shown in the tables are the closest the activity should be conducted relative to the nest. In some cases we have included additional recommendations (other than recommended *distance* from the nest) you should follow to help ensure that your activity will not disturb the eagles.

**Alternate nests**

For activities that entail permanent landscape alterations that may result in bald eagle disturbance, these recommendations apply to both active and alternate bald eagle nests. Disturbance becomes an issue with regard to alternate nests if eagles return for breeding purposes and react to land use changes that occurred while the nest was inactive. The likelihood that an alternate nest will again become active decreases the longer it goes unused. If you plan activities in the vicinity of an alternate bald eagle nest and have information to show that the nest has not been active during the preceding 5 breeding seasons, the recommendations provided in these guidelines for avoiding disturbance around the nest site may no longer be warranted. The nest itself remains protected by other provisions of the Eagle Act, however, and may not be destroyed.

If special circumstances exist that make it unlikely an inactive nest will be reused before 5 years of disuse have passed, and you believe that the probability of reuse is low enough to warrant disregarding the recommendations for avoiding disturbance, you should be prepared to provide all the reasons for your conclusion, including information regarding past use of the nest site. Without sufficient documentation, you should continue to follow these guidelines when conducting activities around the nest site. If we are able to determine that it is unlikely the nest will be reused, we may advise you that the recommendations provided in these guidelines for avoiding disturbance are no longer necessary around that nest site.

This guidance is intended to minimize disturbance, as defined by Federal regulation. In addition to Federal laws, most states and some tribes and smaller jurisdictions have additional laws and regulations protecting bald eagles. In some cases those laws and regulations may be more protective (restrictive) than these Federal guidelines.

**Temporary Impacts**

For activities that have temporary impacts, such as the use of loud machinery, fireworks displays, or summer boating activities, we recommend seasonal restrictions. These types of activities can generally be carried out outside of the breeding season without causing disturbance. The recommended restrictions for these types of activities can be lifted for alternate nests within a particular territory, including nests that were attended during the current breeding season but not used to raise young, after eggs laid in another nest within the territory have hatched (depending on the distance between the alternate nest and the active nest).

In general, activities should be kept as far away from nest trees as possible; loud and disruptive activities should be conducted when eagles are not nesting; and activity between the nest and the nearest foraging area should be minimized. If the activity you plan to undertake is not specifically addressed in these guidelines, follow the recommendations for the most similar activity addressed, or contact your local U.S. Fish and Wildlife Service Field Office for additional guidance.

If you believe that special circumstances apply to your situation that increase or diminish the likelihood of bald eagle disturbance, or if it is not possible to adhere to the guidelines, you should contact your local Service Field Office for further guidance.

**Category A:**
Building construction, 1 or 2 story, with project footprint of ½ acre or less.
Construction of roads, trails, canals, power lines, and other linear utilities.
Agriculture and aquaculture – new or expanded operations.
Alteration of shorelines or wetlands.
Installation of docks or moorings.
Water impoundment.

**Category B:**
Building construction, 3 or more stories.
Building construction, 1 or 2 story, with project footprint of more than ½ acre.
Installation or expansion of marinas with a capacity of 6 or more boats.
Mining and associated activities.
Oil and natural gas drilling and refining and associated activities.

| | ***If there is no similar activity within 1 mile of the nest*** | ***If there is similar activity closer than 1 mile from the nest*** |
|---|---|---|
| ***If the activity will be visible from the nest*** | 660 feet. Landscape buffers are recommended. | 660 feet, or as close as existing tolerated activity of similar scope. Landscape buffers are recommended. |
| ***If the activity will not be visible from the nest*** | Category A:<br>330 feet. Clearing, external construction, and landscaping between 330 feet and 660 feet should be done outside breeding season.<br><br>Category B:<br>660 feet. | 330 feet, or as close as existing tolerated activity of similar scope. Clearing, external construction and landscaping within 660 feet should be done outside breeding season. |

The numerical distances shown in the table are the closest the activity should be conducted relative to the nest.

**Category C. Timber Operations and Forestry Practices**

- Avoid clear cutting or removal of overstory trees within 330 feet of the nest at any time.

- Avoid timber harvesting operations, including road construction and chain saw and yarding operations, during the breeding season within 660 feet of the nest. The distance may be decreased to 330 feet around alternate nests within a particular territory, including nests that were attended during the current breeding season but not used to raise young, after eggs laid in another nest within the territory have hatched.

- Selective thinning and other silviculture management practices designed to conserve or enhance habitat, including prescribed burning close to the nest tree, should be undertaken outside the breeding season. Precautions such as raking leaves and woody debris from around the nest tree should be taken to prevent crown fire or fire climbing the nest tree. If it is determined that a burn during the breeding season would be beneficial, then, to ensure that no take or disturbance will occur, these activities should be conducted only when neither adult eagles nor young are present at the nest tree (i.e., at the beginning of, or end of, the breeding season, either before the particular nest is active or after the young have fledged from that nest). Appropriate Federal and state biologists should be consulted before any prescribed burning is conducted during the breeding season.

- Avoid construction of log transfer facilities and in-water log storage areas within 330 feet of the nest.

**Category D. Off-road vehicle use** (including snowmobiles). No buffer is necessary around nest sites outside the breeding season. During the breeding season, do not operate off-road vehicles within 330 feet of the nest. In open areas, where there is increased visibility and exposure to noise, this distance should be extended to 660 feet.

**Category E. Motorized Watercraft use** (including jet skis/personal watercraft). No buffer is necessary around nest sites outside the breeding season. During the breeding season, within 330 feet of the nest, (1) do not operate jet skis (personal watercraft), and (2) avoid concentrations of noisy vessels (e.g., commercial fishing boats and tour boats), except where eagles have demonstrated tolerance for such activity. Other motorized boat traffic passing within 330 feet of the nest should attempt to minimize trips and avoid stopping in the area where feasible, particularly where eagles are unaccustomed to boat traffic. Buffers for airboats should be larger than 330 feet due to the increased noise they generate, combined with their speed, maneuverability, and visibility.

**Category F. Non-motorized recreation and human entry** (e.g., hiking, camping, fishing, hunting, birdwatching, kayaking, canoeing). No buffer is necessary around nest sites outside the breeding season. If the activity will be visible or highly audible from the nest, maintain a 330-foot buffer during the breeding season, particularly where eagles are unaccustomed to such activity.

**Category G. Helicopters and fixed-wing aircraft**.
Except for authorized biologists trained in survey techniques, avoid operating aircraft within 1,000 feet of the nest during the breeding season, except where eagles have demonstrated tolerance for such activity.

**Category H. Blasting and other loud, intermittent noises**.
Avoid blasting and other activities that produce extremely loud noises within 1/2 mile of active nests, unless greater tolerance to the activity (or similar activity) has been demonstrated by the eagles in the nesting area. This recommendation applies to the use of fireworks classified by the Federal Department of Transportation as Class B explosives, which includes the larger fireworks that are intended for licensed public display.

## RECOMMENDATIONS FOR AVOIDING DISTURBANCE AT FORAGING AREAS AND COMMUNAL ROOST SITES

1. Minimize potentially disruptive activities and development in the eagles' direct flight path between their nest and roost sites and important foraging areas.

2. Locate long-term and permanent water-dependent facilities, such as boat ramps and marinas, away from important eagle foraging areas.

3. Avoid recreational and commercial boating and fishing near critical eagle foraging areas during peak feeding times (usually early to mid-morning and late afternoon), except where eagles have demonstrated tolerance to such activity.

4. Do not use explosives within ½ mile (or within 1 mile in open areas) of communal roosts when eagles are congregating, without prior coordination with the U.S. Fish and Wildlife Service and your state wildlife agency.

5. Locate aircraft corridors no closer than 1,000 feet vertical or horizontal distance from communal roost sites.

## ADDITIONAL RECOMMENDATIONS TO BENEFIT BALD EAGLES

The following are additional management practices that landowners and planners can exercise for added benefit to bald eagles.

1. Protect and preserve potential roost and nest sites by retaining mature trees and old growth stands, particularly within ½ mile from water.

2. Where nests are blown from trees during storms or are otherwise destroyed by the elements, continue to protect the site in the absence of the nest for up to three (3) complete breeding seasons. Many eagles will rebuild the nest and reoccupy the site.

3. To avoid collisions, site wind turbines, communication towers, and high voltage transmission power lines away from nests, foraging areas, and communal roost sites.

4. Employ industry-accepted best management practices to prevent birds from colliding with or being electrocuted by utility lines, towers, and poles. If possible, bury utility lines in important eagle areas.

5. Where bald eagles are likely to nest in human-made structures (e.g., cell phone towers) and such use could impede operation or maintenance of the structures or jeopardize the safety of the eagles, equip the structures with either (1) devices engineered to discourage bald eagles from building nests, or (2) nesting platforms that will safely accommodate bald eagle nests without interfering with structure performance.

6. Immediately cover carcasses of euthanized animals at landfills to protect eagles from being poisoned.

7. Do not intentionally feed bald eagles. Artificially feeding bald eagles can disrupt their essential behavioral patterns and put them at increased risk from power lines, collision with windows and cars, and other mortality factors.

8. Use pesticides, herbicides, fertilizers, and other chemicals only in accordance with Federal and state laws.

9. Monitor and minimize dispersal of contaminants associated with hazardous waste sites (legal or illegal), permitted releases, and runoff from agricultural areas, especially within watersheds where eagles have shown poor reproduction or where bioaccumulating contaminants have been documented. These factors present a risk of contamination to eagles and their food sources.

## CONTACTS

The following U.S. Fish and Wildlife Service Field Offices provide technical assistance on bald eagle management:

| | | |
|---|---|---|
| Alabama | Daphne | (251) 441-5181 |
| Alaska | Anchorage | (907) 271-2888 |
| | Fairbanks | (907) 456-0203 |
| | Juneau | (907) 780-1160 |
| Arizona | Phoenix | (602) 242-0210 |
| Arkansas | Conway | (501) 513-4470 |
| California | Arcata | (707) 822-7201 |
| | Barstow | (760) 255-8852 |
| | Carlsbad | (760) 431-9440 |
| | Red Bluff | (530) 527-3043 |
| | Sacramento | (916) 414-6000 |
| | Stockton | (209) 946-6400 |
| | Ventura | (805) 644-1766 |
| | Yreka | (530) 842-5763 |
| Colorado | Lakewood | (303) 275-2370 |
| | Grand Junction | (970) 243-2778 |
| Connecticut | (See New Hampshire) | |
| Delaware | (See Maryland) | |
| Florida | Panama City | (850) 769-0552 |
| | Vero Beach | (772) 562-3909 |
| | Jacksonville | (904) 232-2580 |
| Georgia | Athens | (706) 613-9493 |
| | Brunswick | (912) 265-9336 |
| | Columbus | (706) 544-6428 |
| Idaho | Boise | (208) 378-5243 |
| | Chubbuck | (208) 237-6975 |
| Illinois/Iowa | Rock Island | (309) 757-5800 |
| Indiana | Bloomington | (812) 334-4261 |
| Kansas | Manhattan | (785) 539-3474 |
| Kentucky | Frankfort | (502) 695-0468 |
| Louisiana | Lafayette | (337) 291-3100 |
| Maine | Old Town | (207) 827-5938 |
| Maryland | Annapolis | (410) 573-4573 |
| Massachusetts | (See New Hampshire) | |
| Michigan | East Lansing | (517) 351-2555 |
| Minnesota | Bloomington | (612) 725-3548 |
| Mississippi | Jackson | (601) 965-4900 |
| Missouri | Columbia | (573) 234-2132 |
| Montana | Helena | (405) 449-5225 |
| Nebraska | Grand Island | (308) 382-6468 |
| Nevada | Las Vegas | (702) 515-5230 |
| | Reno | (775) 861-6300 |
| New Hampshire | Concord | (603) 223-2541 |
| New Jersey | Pleasantville | (609) 646-9310 |
| New Mexico | Albuquerque | (505) 346-2525 |
| New York | Cortland | (607) 753-9334 |
| | Long Island | (631) 776-1401 |
| North Carolina | Raleigh | (919) 856-4520 |
| | Asheville | (828) 258-3939 |
| North Dakota | Bismarck | (701) 250-4481 |
| Ohio | Reynoldsburg | (614) 469-6923 |
| Oklahoma | Tulsa | (918) 581-7458 |
| Oregon | Bend | (541) 383-7146 |
| | Klamath Falls | (541) 885-8481 |
| | La Grande | (541) 962-8584 |
| | Newport | (541) 867-4558 |
| | Portland | (503) 231-6179 |
| | Roseburg | (541) 957-3474 |
| Pennsylvania | State College | (814) 234-4090 |
| Rhode Island | (See New Hampshire) | |
| South Carolina | Charleston | (843) 727-4707 |
| South Dakota | Pierre | (605) 224-8693 |
| Tennessee | Cookeville | (931) 528-6481 |
| Texas | Clear Lake | (281) 286-8282 |
| Utah | West Valley City | (801) 975-3330 |
| Vermont | (See New Hampshire) | |
| Virginia | Gloucester | (804) 693-6694 |
| Washington | Lacey | (306) 753-9440 |
| | Spokane | (509) 891-6839 |
| | Wenatchee | (509) 665-3508 |
| West Virginia | Elkins | (304) 636-6586 |
| Wisconsin | New Franken | (920) 866-1725 |
| Wyoming | Cheyenne | (307) 772-2374 |
| | Cody | (307) 578-5939 |

National Office
U.S. Fish and Wildlife Service
Division of Migratory Bird Management
4401 North Fairfax Drive, MBSP-4107
Arlington, VA 22203-1610
(703) 358-1714
http://www.fws.gov/migratorybirds

### State Agencies

To contact a state wildlife agency, visit the Association of Fish & Wildlife Agencies' website at http://www.fishwildlife.org/where_us.html

## GLOSSARY

The definitions below apply to these National Bald Eagle Management Guidelines:

**Communal roost sites** – Areas where bald eagles gather and perch overnight – and sometimes during the day in the event of inclement weather. Communal roost sites are usually in large trees (live or dead) that are relatively sheltered from wind and are generally in close proximity to foraging areas. These roosts may also serve a social purpose for pair bond formation and communication among eagles. Many roost sites are used year after year.

**Disturb** – To agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best 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.

In addition to immediate impacts, this definition also covers impacts that result from human-caused alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle=s return, such alterations agitate or bother an eagle to a degree that injures an eagle or substantially interferes with normal breeding, feeding, or sheltering habits and causes, or is likely to cause, a loss of productivity or nest abandonment.

**Fledge** – To leave the nest and begin flying. For bald eagles, this normally occurs at 10-12 weeks of age.

**Fledgling** – A juvenile bald eagle that has taken the first flight from the nest but is not yet independent.

**Foraging area** – An area where eagles feed, typically near open water such as rivers, lakes, reservoirs, and bays where fish and waterfowl are abundant, or in areas with little or no water (i.e., rangelands, barren land, tundra, suburban areas, etc.) where other prey species (e.g., rabbit, rodents) or carrion (such as at landfills) are abundant.

**Landscape buffer** – A natural or human-made landscape feature that screens eagles from human activity (e.g., strip of trees, hill, cliff, berm, sound wall).

**Nest** – A structure built, maintained, or used by bald eagles for the purpose of reproduction. An **active** nest is a nest that is attended (built, maintained or used) by a pair of bald eagles during a given breeding season, whether or not eggs are laid. An **alternate** nest is a nest that is not used for breeding by eagles during a given breeding season.

**Nest abandonment** – Nest abandonment occurs when adult eagles desert or stop attending a nest and do not subsequently return and successfully raise young in that nest for the duration of a breeding season. Nest abandonment can be caused by altering habitat near a nest, even if the alteration occurs prior to the breeding season. Whether the eagles migrate during the non-breeding season, or remain in the area throughout the non-breeding season, nest abandonment can occur at any point between the time the eagles return to the nesting site for the breeding season and the time when all progeny from the breeding season have

dispersed.

**Project footprint** – The area of land (and water) that will be permanently altered for a development project, including access roads.

**Similar scope** – In the vicinity of a bald eagle nest, an existing activity is of similar scope to a new activity where the types of impacts to bald eagles are similar in nature, and the impacts of the existing activity are of the same or greater magnitude than the impacts of the potential new activity. Examples: (1) An existing single-story home 200 feet from a nest is similar in scope to an additional single-story home 200 feet from the nest; (2) An existing multi-story, multi-family dwelling 150 feet from a nest has impacts of a greater magnitude than a potential new single-family home 200 feet from the nest; (3) One existing single-family home 200 feet from the nest has impacts of a lesser magnitude than three single-family homes 200 feet from the nest; (4) an existing single-family home 200 feet from a communal roost has impacts of a lesser magnitude than a single-family home 300 feet from the roost but 40 feet from the eagles' foraging area. The existing activities in examples (1) and (2) are of similar scope, while the existing activities in example (3) and (4) are not.

**Vegetative buffer** – An area surrounding a bald eagle nest that is wholly or largely covered by forest, vegetation, or other natural ecological characteristics, and separates the nest from human activities.

## RELATED LITERATURE

Andrew, J.M. and J.A. Mosher. 1981. Bald eagle nest site selection and nesting habitat in Maryland. Journal of Wildlife Management 46:382-390.

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## VI. VIRGINIA EXCEPTIONS TO THE NATIONAL BALD EAGLE MANAGEMENT GUIDELINES (NBEMG)

As explained in the *Preface*, effective January 1, 2013, applicable Virginia law and VDGIF regulations will no longer prohibit habitat alterations or activities that do not result in taking of an eagle or its nest, or parts thereof. Federal regulations pursuant to the Bald and Golden Eagle Protection Act, however, prohibit "disturbance" of eagles, which may include certain human activities or alteration of habitat surrounding a nest, roost, or concentration area. We urge project proponents, therefore, to confirm with USFWS that their proposed project or activities are consistent with applicable USFWS regulations and permit conditions.

**Chronology and seasonality of breeding and concentrated activity (p. 6 of NBEMG)** – As discussed in the National Guidelines, chronology of eagle breeding and concentration activity varies across the nation. For purposes of these guidelines, the Virginia bald eagle breeding season extends from December 15 – July 15, absent documented nesting activity at other times at a particular nest in a given year. Similarly, the summer eagle concentration season in Virginia extends from May 15 through August 31, and the winter eagle concentration season in Virginia extends from December 15 through March 15.

**Alternate nests guidelines regarding consecutive years of inactivity (p. 11 of NBEMG)** – As discussed in the National Guidelines, disturbance becomes an issue with regard to alternate nests if eagles return for breeding purposes and react to land use changes that occurred while the nest was inactive. Though the National Guidelines establish a 5-year period of nest inactivity as the generic standard for likely application of the guidelines, several decades of nest-activity records from Virginia reveal that the likelihood of an alternate nest being reactivated by eagles after three years of inactivity is very small (Watts 2012, submitted manuscript). Indeed, nearly 94% of such nest "reactivations" occur within the first two years, and a primary benefit of protecting alternate nests may be the resultant protection of nests that were not inactive in fact, but where nest monitoring simply did not detect occupancy during the breeding season(s) in question (Watts in prep.). In light of this, VDGIF considers three consecutive years of nest inactivity as an appropriate generic standard, subject to site and nest-specific considerations. Under either standard, however, the nest itself remains protected by other provisions of the Eagle Act and may not be destroyed. If special circumstances exist that make it unlikely an inactive nest will be reused before three years of inactivity have passed, and you believe that the probability of reuse is low enough to warrant disregarding the recommendations for avoiding disturbance, you should be prepared to provide all the reasons for your conclusion, including information regarding past use of the nest site. Without sufficient documentation, you should continue to follow these guidelines when conducting activities around the nest site. If we determine that it is unlikely the nest will be reused, we may advise you that the recommendations provided in these guidelines for avoiding disturbance are no longer necessary around that nest site.

**The "1-mile" guideline (pp. 12 of NBEMG)** – The USFWS, in recognition that eagles nesting in areas exhibiting significant human activity or development are likely to be more tolerant of human intrusion than eagles nesting in relatively remote and undeveloped areas, adopted a "1-mile" guideline regarding nest proximity to existing human activity. In essence, the "1-mile"

guideline provides for relaxation of the activity-specific guidelines "if there is similar activity closer than 1 mile from the nest".

We do not concur with this generic guideline: while it is clear that patterns of habitat use by eagles and tolerance of eagles to various human activities vary regionally and even locally, such assessments of the relative tolerance of a particular pair of eagles to specific land use activities must be made on a case-by-case basis. Therefore, we will apply the following table as an appropriate generic standard with regard to activity-specific guidance, in lieu of the table presented on page 12 of the National Guidelines.

| **Nest Visibility** | **Guidance for minimum distance for Category *A* and *B* activities near a nest** |
|---|---|
| If the activity or completed project will be visible from the nest | 660 feet, or potentially as close as existing tolerated activity of similar scope. Activities within 660 feet should not be undertaken without site-specific VDGIF consultation. Landscape buffers are recommended. Clearing, earthmoving, external construction, and landscaping closer than 660 feet should be conducted outside of the breeding season. |
| If the activity or completed project will not be visible from the nest | ***Category A:*** 330 feet, or as close as existing tolerated activity of similar scope. Activities within 330 feet should not be undertaken without site-specific VDGIF consultation. Clearing, earthmoving, external construction, and landscaping closer than 660 feet should be conducted outside of the breeding season. ***Category B:*** 660 feet, or potentially as close as existing tolerated activity of similar scope. Activities within 660 feet should not be undertaken without site-specific VDGIF consultation. Landscape buffers are recommended. Clearing, earthmoving, external construction, and landscaping closer than 660 feet should be conducted outside of the breeding season. |

**Timber operations and forestry practices; Category *C* (p. 13 of NBEMG)** – In addition to avoiding construction of log transfer facilities and in-water log storage areas within 330 feet of a nest at any time, construction of such facilities during the breeding season should be subject to the same generic standards as are other "timber harvesting operations, including road construction and chain saw and yarding operations" (660 feet around active nests during the breeding season; 330 feet around alternate nests within a particular territory, including nests that

were attended during the current breeding season but not used to raise young, after eggs laid in another nest within the territory have hatched).

**Guideline applicability to seasonal concentration areas and communal roosts (p. 14 of NBEMG)** – As explained in *Section III*, human activity that disturbs feeding or roosting eagles to the degree that causes injury, or that substantially interferes with breeding, feeding, or sheltering behavior, constitutes a violation of the Eagle Act. Any major habitat modification including extensive land clearing, tree harvest or removal, or development of marinas, boat ramps, roads, or residential/commercial facilities may be detrimental to eagle use of seasonal concentration areas or communal roosts. Similarly, significant or chronic disruption of roosting and foraging behavior may reduce eagle survival or productivity. Seasonal use of a particular area by eagles varies with the specific roost, shoreline area, or river system, and the number of bald eagles using particular shoreline reaches within a concentration area can vary seasonally. Thus, proposed disturbances normally must be evaluated on a case-by-case basis. While we concur with the generic recommendations contained in the National Guidelines, the activity-specific guidelines are not consistently applicable to activities proposed within or near seasonal concentration areas or communal roosts. Thus, we recommend project-specific consultation with VDGIF and USFWS as appropriate, after consideration of the proximity of the proposed activity to a seasonal concentration area or communal roost (see Appendix), and the nature of the proposed activity (i.e., Categories *A* through *H* in the National Guidelines).

**"Latent" nest site guidance (p. 15 of NBEMG)** – As presented in the National Guidelines (item *2* of the *Additional Recommendations to Benefit Bald Eagles*), nests sometimes are blown from trees during storms or otherwise destroyed by the elements. The National Guidelines recommend up to three years of site protection to facilitate construction of a replacement nest within the protected site. Several decades of nest-activity records from Virginia, however, reveal that the likelihood of nest reconstruction in the former nest tree is only about 3% in the first year following nest destruction, and declines each year thereafter (Watts 2012, submitted manuscript). Over a 10-year period, fewer than 10% of such "inactive" (i.e., latent) trees were reused for nesting, with over half of those reactivations occurring in the first two years (Watts 2012, submitted manuscript). The annual cost of site protection borne by the affected landowner, however, may be substantial, including both direct costs and reduced/forfeited opportunities to generate income throughout the period of site protection. Therefore, VDGIF considers two breeding seasons of documented nest tree latency (i.e., no nest activity documented) as an appropriate generic standard, subject to site and nest-specific considerations. If special circumstances exist that make it unlikely that a latent nest or site will be reused before two breeding seasons of inactivity have passed, and you believe that the probability of reuse is low enough to warrant disregarding the recommendations for avoiding disturbance, you should be prepared to provide all the reasons for your conclusion, including information regarding past use of the site. If we determine that it is unlikely the tree/site will be reused, we may advise you that the recommendations provided in these guidelines for avoiding disturbance to the site are no longer necessary.

## VII. APPLICATION AND EFFECT OF THESE GUIDELINES

As stated in the *Preface*, it is important to recognize that these Virginia Guidelines are not regulatory in themselves, and they are not intended to supplant onsite review or consultation. Both the USFWS and VDGIF are available to provide technical assistance or to consult with landowners who desire assistance in interpreting their respective guidelines, or in evaluation of the potential impacts of their proposed activities upon bald eagles.

From the federal perspective, compliance with the National Guidelines (as interpreted and applied by USFWS on a case-by-case basis) establishes a likely presumption by the USFWS that no unauthorized "take" of bald eagles will occur as a result of the proposed project or human activities. To quote the National Guidelines (p. 1):

> "Although it is not possible to absolve individuals and entities from liability under the Eagle Act or the MBTA, the Service exercises enforcement discretion to focus on those individuals, companies, or agencies that take migratory birds without regard for the consequences of their actions and the law, especially when conservation measures, such as these Guidelines, are available, but have not been implemented. 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."

If a proposed project would not be completed in accordance with the National Guidelines, the USFWS would determine what measures should be implemented to prevent or compensate for potential "take," and those measures could be required as conditions of an Incidental Take Permit issued pursuant to the Eagle Act. Authorization of Incidental Take under a federal Incidental Take Permit would not absolutely insulate the permittee from prosecution under Virginia Law or VDGIF regulations. VDGIF and USFWS staff, however, work cooperatively to ensure that the final conditions of a federal Incidental Take Permit would be acceptable to VDGIF as evidence of the permittee's intent and sufficient to deter state prosecution in the event of unauthorized and unintentional "take" during project construction or operation. Finally, if a project would be in accordance with the National Guidelines, but not in accordance with these Virginia Guidelines, the operator presumably would be insulated from federal prosecution for take under the Eagle Act and MBTA, but possibly subject to prosecution by VDGIF in the event of take of bald eagles, their nests, or young.

## VIII. IMPLEMENTATION OF THESE GUIDELINES

Following these procedures will help ensure that your proposed activity is in compliance with federal and Virginia law and regulations regarding protection of bald eagles:

1. First, determine whether there are any known eagle nests, concentration areas, or roosts in the vicinity of your project site. You can determine the presence of known nests by visiting the Center for Conservation Biology Virginia Eagle Nest Locator website at: http://ccb-wm.org/virginiaeagles/locator.php. Proximity of your project to known seasonal concentration areas can be determined by visiting the USFWS Virginia Field Office website at: http://www.fws.gov/northeast/virginiafield/endspecies/Project_Reviews_Step6b.html. Finally, the proximity of your project to known eagle nests, concentration areas, and roosts can be determined by visiting the VDGIF online Fish and Wildlife Information Service website at: http://vafwis.org/fwis/BaldEagleSearchMap.html. Please recognize that Virginia's bald eagle population is dynamic and there may be new nests near your site that are not documented in existing databases.

2. Review your project in the context of these guidelines, and determine whether your proposed activity is compliant with the guidance for protection of bald eagles. Contact the VDGIF at 540-899-4169 or USFWS at 804-693-6694 for technical assistance if you need help applying the [state or federal, respectively] guidelines to your project. You also may visit the USFWS Northeast Region *Bald Eagle Management Guidelines and Conservation Measures* website at: http://www.fws.gov/northeast/EcologicalServices/eagle.html to evaluate your project in context of the National Guidelines. If your project is being reviewed by the Corps of Engineers, the Virginia Marine Resources Commission, the Virginia Department of Environmental Quality, or another state or federal agency with regard to issuance of an environmental permit, you may wish to review the Department's Environmental Services Section webpage at: http://www.dgif.virginia.gov/environmental-programs/environmental-services-section.asp for further explanation of VDGIF's role in reviewing such permit applications. Compliance with these guidelines is one issue considered by the Department's Environmental Services Section during interagency permit review.

The most expedient way to ensure compliance with USFWS guidance regarding bald eagles is to utilize the USFWS Virginia Field Office's *Project Reviews in Virginia* web-application available at: http://www.fws.gov/northeast/virginiafield/endspecies/project_reviews.html. Through this step-by-step online review, you can evaluate your project's potential impacts on known populations of federally listed *threatened* and *endangered* species, federal candidate species, federally designated critical habitat, and bald eagles and then either: (1) "self-certify" your compliance with USFWS coordination requirements, or (2) expedite additional review by the Service.

3. If your proposed activity clearly is in compliance with these guidelines there is no further need to contact the VDGIF, though we cannot absolve an affected landowner of liability for take based on such review.

4. If your proposed activity potentially is not in compliance with the guidelines, if it is not possible to adhere to these guidelines, or if you believe that special circumstances apply to your situation that increase or diminish the likelihood of bald eagle disturbance, you should contact the VDGIF or USFWS for further technical assistance.

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