



IN REPLY REFER TO:
FWS/AFWE/TCFO

United States Department of the Interior

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MAR 16 2007

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Dear Sirs and Madam:

Please find enclosed U.S. Fish and Wildlife Service's (Service) biological opinion regarding the effects of the proposed issuance of a permit under the authority of the Bald and Golden Eagle Protection Act to authorize USDA – Wildlife Services (USDA – WS) to harass, capture, and relocate bald eagles (*Haliaeetus leucocephalus*) at the St. Paul Downtown Airport (STP). The biological opinion also addresses the related Service proposal to supplement and modify authority granted to USDA-WS in 2001 under 50 CFR 17.21 as well as the specific activities proposed at STP by USDA - WS.

In the enclosed biological opinion, the Service has concluded that the proposed action will not jeopardize the continued existence of the bald eagle. For further coordination, please contact Phil Delphey of this office at (612) 725-3548 ext. 206.

Sincerely,

Tony Sullins
Field Supervisor

BIOLOGICAL OPINION

**Division of Migratory Birds, Region 3, U.S. Fish and Wildlife Service
Division of Ecological Services, Region 3, U.S. Fish and Wildlife Service
Wildlife Services, Animal and Plant Health Inspection Service, USDA**

Hazing, Capture, and Relocation of Immature Bald Eagles at St. Paul Downtown Airport

**March 16, 2007
U.S. FISH AND WILDLIFE SERVICE
TWIN CITIES FIELD OFFICE
BLOOMINGTON, MINNESOTA**

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Introduction and Consultation History

On April 6, 2001, the Service designated certain employees of USDA Wildlife Services USDA-WS as agents of the Service for the purpose of harassing bald eagles (*Haliaeetus leucocephalus*) that constitute a demonstrable threat to aviation safety at the Minneapolis-St. Paul International Airport and its “reliever” airports, including St. Paul Downtown Airport (STP). Authority for this action was provided by 50 CFR 17.21. Intra-Service consultation under section 7(a)(2) of the Endangered Species Act had been completed for this designation on April 2, 2001.

USDA-WS now proposes to expand its activities to include the capture and release of up to five juvenile bald eagles per year at STP. The U.S. Fish and Wildlife Service, Division of Migratory Birds (USFWS-MB) proposes the issuance of a Bald and Golden Eagle Protection Act (BGEPA) permit to authorize these activities under that statute. In addition, USFWS, Division of Ecological Services proposes to supplement and modify the authority granted to USDA-WS in 2001. The authority granted in the 2001 letter (see above) would remain in effect and would be expanded to include the capture and relocation of up to five immature bald eagles from the St. Paul Downtown Airport and within one-half mile of that airport, as specified in the BGEPA permit.

This document transmits the U.S. Fish and Wildlife Service’s (Service) Biological Opinion (Opinion) based on our review of the proposed BGEPA permit, the supplementation and modification of the designated authority under 50 CFR 17.21, and activities proposed by USDA-WS. This Opinion is based on information provided in a proposal sent by USDA-WS to U.S. Fish and Wildlife Service, Division of Migratory Birds (USFWS-MB) on January 30, 2007 and in the Intra-Service Section 7 Biological Evaluation Form sent by USFWS-MB to USFWS Twin Cities Ecological Services Field Office (USFWS-TCFO) on March 7, 2007, and other sources of information (e.g., phone calls and email messages). A complete administrative record of this consultation is on file at this office.

BIOLOGICAL OPINION

I. Description of the Proposed Action

USFWS-MB proposes to issue a permit under the authority of the BGEPA to authorize USDA-WS to harass, capture, and relocate bald eagles at STP. In addition, USFWS, Division of Ecological Services proposes to supplement and modify the authority originally granted to USDA-WS in 2001 under 50 CFR 17.21 to include the hazing, capture, and release of bald eagles, as authorized by the BGEPA permit.

In its January 30, 2007 correspondence with USFWS-MB, USDA-WS summarized its proposal as follows:

WS proposes to capture, band and relocate no more than 5 immature bald eagles per year, from STP airport and the areas immediately adjacent to the airport, that present a persistent threat to aviation safety and which are not responding to pyrotechnics or other hazing techniques. All bald eagles captured, would be banded with a standard USGS silver band in addition to a colored auxiliary leg band to better identify individual eagles from a distance, should they return after relocation. Trapping and relocations would be conducted by authorized Wildlife Services personnel under USFWS and Minnesota DNR permits and according to U.S. Geological Survey Bird Banding Laboratory guidelines. All authorized Wildlife Services personnel will undergo raptor capture/handling training provided by the Minnesota Wildlife Services Master Station Banding permittee.

WS will capture immature eagles posing a threat to aviation at STP. Trapping efforts will be conducted primarily on STP property unless: 1) Trapping efforts are introducing additional eagles or other aviation hazards and/or 2) the trapping site is not conducive to the trapping method. If trapping is not successful on STP property, authorized WS personnel will identify new trapping locations, within ½ mile of STP property, and receive the landowners' permission before attempting to capture the target eagle(s). WS will not attempt to trap eagles at the following times or locations: 1) within 660' of an active eagle nest during the most critical period (February 10 – May 1) and 2) within 330' of an active eagle nest except during the non-critical period (September 15 – January 10). After capturing and processing an eagle, WS personnel will place the eagle in a temporary holding container that has been approved by the Director of the University of Minnesota (UM) Raptor Center and /or lead Veterinarian for transportation. Eagles will be relocated a minimum of 100 miles north from February 1- July 1 and 100 miles south from July 1 - January 31.

WS will utilize several effective capture methods reported in Bloom (1987)¹ "Capturing and Handling Raptors" which include but not limited to the following

¹ Bloom, Peter H. 1987. Capture and handling raptors. Pp. 99-122 in Giron Pendleton, B.A., B.A. Millsap, K.W. Cline, and D.M. Birds (eds.). Raptor Management Techniques Manual. Natl. Wildl. Fed., Washington, D.C.

tools: dho-gaza, bow-net, noose carpet, padded footholds, noosed fished, harnessed prey, rocket/cannon nets and pit traps. Experienced raptor trappers in Minnesota have caught incidental eagles in bow-nets, but would recommend a noose carpet for targeting eagles (D. Evans, Hawk Ridge Nature Reserve, pers. commun). WS personnel will remain on-site and will visually monitor all capture devices continuously when deployed. Attempts will be made to haze any adult bald eagle approaching the capture device. WS personnel will operate under “The Bander’s Code of Ethics” (Hull and Bloom 2001).²

WS personnel will identify immature eagles with an age and sex key from UM Raptor Center in conjunction with other eagle literature.

USDA-WS will release captured eagles near known winter roosts and away from known eagle nesting territories, in coordination with USFWS-TCFO. Release of captured eagles will be subject to the following USFWS-MB permit condition:

- You are not authorized to take any birds, nests, or eggs, or to release birds on federal or state lands or other public or private property without additional written authorization, permission, or permits from the applicable federal or state agency, landowner, or custodian.

II. Status of the Species

A. Species Description

The bald eagle is well known as our Nation's symbol. Its large and powerful appearance is distinguished by its white head and tail contrasting against its dark brown body. The fledgling bald eagle is generally dark brown except the underwing linings which are primarily white. Between fledging and adulthood, the bald eagle’s appearance changes with feather replacement each summer. The bald eagle’s distinctive white head and tail are not apparent until the bird fully matures, at 4 to 5 years of age. The female bald eagle usually weighs 10 to 14 pounds in the northern sections of the continent and is larger than the male, which weighs 8 to 10 pounds. The wings span 6 to 7 feet. The northern birds are larger and heavier than southern birds, with the largest birds in Alaska and Canada, and the smallest in Arizona or Florida.

B. Life History

The bald eagle is a bird of aquatic ecosystems, frequenting large lakes, rivers, estuaries, reservoirs and some coastal habitats. It feeds primarily on fish, but waterfowl, gulls, cormorants, and a variety of carrion may also be consumed. Adults use the same breeding territory, and often the same nest, year after year. They may also use one or more alternate nests within their breeding territory. The nesting season is approximately six months. Eggs are incubated for approximately 35 days and fledging takes place at 11 to 12 weeks old. Parental care may extend 4 to 11 weeks after fledging (Wood et al. 1998). The timing and distance of dispersal from the

² Hull, B. and P. Bloom 2001. The North American Banders’ Manual for Raptor Banding Techniques. The North American Banding Council. 22pp.

breeding territory varies. Some bald eagles stay in the general vicinity while some migrate up to hundreds of miles to their wintering grounds and remain there for several months. Young eagles may wander randomly for years before returning to nest in their natal areas.

Bald eagles select trees that are large in both diameter and height for nesting. In Minnesota, bald eagles use at least eleven species of trees for nesting (Grier and Guinn 2003). In northern Minnesota, white pines (*Pinus strobus*), red pines (*P. resinosa*), and quaking aspen (*Populus tremuloides*) are especially important (Mathisen 1983). Height and projection above the tree canopy has long been recognized as an important feature of bald eagle nest trees. In a recent study, however, Grier and Guinn (2003) found that tree diameter was more important than height in Minnesota. The 119 nest trees they measured were typically larger in diameter than other trees in the stands, but frequently not the tallest – mean diameters at breast height (DBH) were 46 centimeters (cm) and 44 cm for white pines (n = 35) and red pines (n = 10), respectively. This was smaller than the mean diameter of 77 cm reported by Mathisen (1983) based on measurements of 262 bald eagle nest trees on the Chippewa National Forest. The differences in mean diameter of nest trees between the two studies may suggest that eagles are nesting in smaller trees as nesting density increases.

Eagles seek wintering (non-nesting) areas offering an abundant and readily available food supply with suitable night roosts. Night roosts typically offer isolation and thermal protection from winds.

C. Population Dynamics

Bald eagles are long-lived and populations are more sensitive to changes in survival than to changes in reproduction (Grier 1980). The longest living bald eagle known in the wild was reported near Haines, Alaska as 28 years old (Schempf 1997). Bald eagles from Arizona are known to have exceeded 12 years of age (Hunt et al. 1992). Therefore, mature bald eagles that forego reproduction may reproduce in future years if they survive. Nevertheless, extreme declines in reproduction may still lead to population declines, but the rate of such declines may be highly influenced by survival rates (Grier 1980).

D. Status and Distribution

Though once endangered, the bald eagle population in the lower 48 States has increased considerably in recent years. Regional bald eagle populations in the Pacific Northwest, Great Lakes, Chesapeake Bay, and Florida have increased five-fold in the past 20 years. Bald eagles are now repopulating areas throughout much of the species' historic range that were unoccupied only a few years ago. As of 2000, there were approximately 6471 pairs of bald eagles in the lower 48 states.

In Minnesota, bald eagle populations have grown from 115 active nests in 1973 to an estimated 1312 in 2006 (Baker & Monstad 2006). Nesting bald eagles are now present throughout most of the state and are only largely absent from areas that lack large rivers or where lakes and suitable nest trees are relatively sparse (Fig. 1).

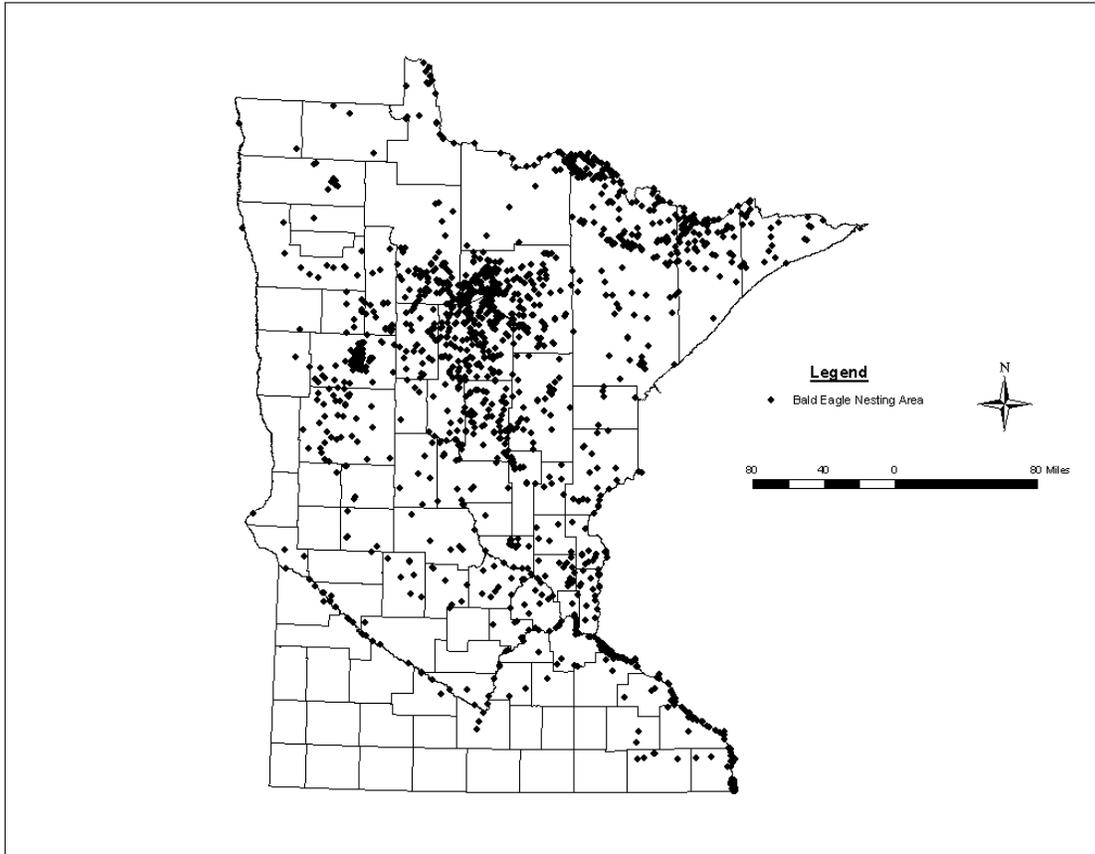


Figure 1. Approximate distribution of recorded bald eagle nesting territories in Minnesota. © (2005) (Minnesota Department of Natural Resources)³

III. Environmental Baseline

Regulations implementing the Endangered Species Act (Act) (50 CFR §402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed Federal projects in the action area which have already undergone section 7 consultation, and the impacts of state and private actions which are contemporaneous with the consultations in progress. Such actions include, but are not limited to, previous timber harvests and other land management activities.

In its proposal, USDA-WS stated that it would restrict trapping activities to within ½ mile of STP. This area contains a portion of a sewage treatment plant and is, in general, highly

³ Data included here were provided by the Natural Heritage and Nongame Research Program of the Division of Ecological Services, Minnesota Department of Natural Resources (DNR), and were current as of September 21, 2005. These data are not based on an exhaustive inventory of the state. The lack of data for any geographic area shall not be construed to mean that no significant features are present. In addition, there may be inaccuracies in the data, of which the DNR is not aware and for which the DNR shall not be held responsible. Permission to use these data does not imply endorsement or approval by the DNR of any interpretations or products derived from the data.

urbanized. It also includes a reach of the Mississippi River, which attracts bald eagles to the area. Frequent air, ground, and water traffic occurs in the action area. The most natural portions of the action area are the river itself and a small area of riparian forest along the river's left bank. Grass areas within the airport are regularly mowed.

A. Status of the Species in the Action Area

Bald eagles occur regularly in the action area throughout all or most of the year and there are two recorded nesting areas within one mile of the area in which trapping may occur (Natural Heritage and Nongame Research Program, Division of Ecological Services, Minnesota Department of Natural Resources, unpubl. data 2007).

B. Factors Affecting Species in the Action Area

The Mississippi River attracts feeding and nesting eagles to the action area. Mature trees along the river in a small portion of the action area provide perches, although eagles have also perched on the ground within the airport (USDA-WS, *in litt.* 2007). The high level of human activity and development in most of the action area restricts bald eagle activity to the open areas associated with the airport, the river, and the forested areas.

IV. Effects of the Proposed Action

Effects of the action are defined as “the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with the actions, that will be added to the environmental baseline” (50 CFR §402.02). Direct effects are defined as the direct or immediate effects of the action on the species or its habitat. Direct effects result from the agency action, including the effects of interrelated and interdependent actions. Indirect effects are caused by or result from the agency action, are later in time, and are reasonably certain to occur. Indirect effects may occur outside of the immediate footprint of the project area, but would occur within the action area as defined.

The proposed action will result in hazing and capture of eagles and will include several measures intended to avoid any incidental effects to the affected birds. USDA-WS will haze adult eagles that approach traps and will use hazing as the primary method for limiting numbers of eagles that pose hazards to aviation at STP. We would expect about 81 eagles (31 adults and 50 juveniles) to be hazed per year, which is the maximum number hazed by USDA-WS at STP in any year since 2003 (USDA-WS, *in litt.* 2007). Hazed birds typically alter their behavior temporarily, but may not leave the immediate area. Thus, it usually has minor and short-lived effects on their behavior. Therefore, USDA-WS may capture up to five juvenile eagles per year that are not sufficiently deterred from activities that may interfere with air traffic at STP. Any captured birds would be relocated at least 100 miles from STP. Capture and handling presents risks of injury and mortality, but USDA-WS committed itself to numerous safeguards against these risks in its January 30, 2007 proposal (Description of the Action, above). We assume that these measures will be fully implemented, as described. Therefore, we do not anticipate any significant adverse effects to eagles as a result of the hazing and we do not expect the capture and handling to result in the death or harm of any eagles.

Immature eagles may benefit from group foraging and roosting (Gerrard and Bortolotti 1988:117; Adams et al. 2000). Therefore, the ability of relocated immatures to associate with other immature eagles may affect their post-relocation survival, especially during winter. USDA-WS will release captured eagles near known winter roosts and away from known eagle nesting territories. The former would increase the likelihood that released immature eagles could quickly locate and associate with other eagles for foraging and roosting during the non-breeding season, whereas the latter may minimize the likelihood of aggressive interactions with territorial eagles during the breeding season.

B. Effects of Interrelated or Interdependent Actions

Interrelated actions are those that are a part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration.

All potential effects of the proposed action on bald eagles are considered in earlier sections.

V. Cumulative Effects

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this Opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

We are aware of no actions that are reasonably certain to occur in the action area that are substantially different from current activities. The Metropolitan Airports Commission has sought the construction of a floodwall between STP and the Mississippi River, but it is unclear whether or not this floodwall will be constructed and, if it were proposed, it would likely be the subject of section 7 consultation.

VI. Conclusion

After reviewing the current status of bald eagles, the environmental baseline for the action area, and the effects of the proposed hazing and relocation of bald eagles at the St. Paul Downtown Airport, it is the Service's Opinion that the action, as proposed, is not likely to jeopardize the continued existence of the bald eagle. No critical habitat has been designated for this species; therefore, none will be affected.

VII. Incidental Take Statement

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

We anticipate that the measures proposed to avoid or minimize any adverse effects during or after hazing or capture will prevent any incidental take. *Take* will occur when eagles are hazed and captured, but that take is the purpose of the proposed action.

VIII. Reinitiation – Closing Statement

This concludes formal consultation for the potential effects of proposed hazing and relocation of bald eagles at the St. Paul Downtown Airport. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this Opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this Opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

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