

Iowa Department of Natural Resources  
Natural Resource Commission

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ITEM

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DECISION

TOPIC

Chapter 77 – Endangered and Threatened Plant and Animal Species: Notice of Intended Action

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The Department requests Commission approval of this Notice of Intended Action to amend Chapter 77 “Endangered and Threatened Plant and Animal Species.” Chapter 77 is the list of plants and animals determined to be endangered, threatened or of special concern.

The proposed amendments upgrade the bald eagle and the peregrine falcon from endangered to special concern and correct a typographical error in the common name of Forster’s tern. The bald eagle population in Iowa has shown a steady increase from 1977 when the first nesting in over 70 years was confirmed until 2008 when 136 nesting territories were reported as having adult eagles present. Nesting reports are not the result of comprehensive surveys and the number of active territories is estimated to be about 200. The reason the bald eagle is proposed to be listed as special concern rather than being removed from the list is because of potential effects from lead poisoning.

Reintroduction efforts to reestablish the peregrine falcon in Iowa began in 1989 with the release of young birds in Cedar Rapids. Since then 169 peregrines have been released. There have been 167 young produced since the first nest in 1993. In 2008 there were 13 nesting territories with 8 being successful and fledging 20 young. Iowa’s recovery goal was 5 successful nesting pairs. Peregrines are proposed to be upgraded to special concern until additional monitoring is completed to ensure that the number of breeding pairs remain stable or increases.

Dr. Dale Garner, Wildlife Bureau Chief  
Conservation and Recreation Division  
May 14, 2009

Attachments: Endangered and Threatened Plant and Animal Species - Notice of Intended Action; Supplemental Information: A Summary of Bald Eagle Information for Iowa; Comparison of the Bald and Golden Eagle Protection Act and Iowa’s Endangered Plants and Wildlife Law; Iowa Bald Eagle Nest Monitoring; Bald Eagle Nest Summary April 14, 2009; Peregrine Falcon Status in Iowa; Peregrine Production Graph; A Five Year Management Plan for the Peregrine Falcon in Iowa

## NATURAL RESOURCE COMMISSION [571]

### Notice of Intended Action

Pursuant to the authority of Iowa Code section 481B.3, the Natural Resource Commission hereby gives Notice of Intended Action to amend Chapter 77, "Endangered and Threatened Plant and Animal Species," Iowa Administrative Code.

These rules list plant and animal species whose continued existence within Iowa have been found to be endangered, threatened, or of special concern. The proposed amendments upgrade the status of the bald eagle and peregrine falcon from endangered to special concern species and correct a typographical error in the common name of the Forster's tern. It is proposed that the bald eagle be listed as special concern rather than being removed from the list because there is still a threat from lead poisoning. Additional monitoring will be conducted to ensure that both species continue to increase or remain stable before they will be removed from the special concern list. Information documenting the current status of these species in Iowa may be found on the Department's website at <http://www.iowadnr.gov/other/threatened.html>.

Any interested person may make written suggestions or comments on the proposed amendments on or before July 16, 2009. Such written materials should be directed to the Endangered Species Program, Department of Natural Resources, Wallace State Office Building, 502 East Ninth Street, Des Moines, Iowa 50319-0034; fax (515)281-6794. Persons who wish to convey their views orally should contact the Endangered Species Program at (515)281-8524 or at the Endangered Species Program offices on the fourth floor of the Wallace State Office Building.

A public hearing will be held on July 16, 2009, at 10 a.m. in the Fourth Floor East Conference Room, Wallace State Office Building, at which time persons may present views either orally or in writing. At the hearing, persons will be asked to give their names and addresses for the record and to confine their remarks to the subject of the amendments.

Any persons who intend to attend a public hearing and have special requirements such as hearing or mobility impairments should contact the Department of Natural Resources and advise of specific needs.

These amendments are intended to implement Iowa Code chapter 481B.

The following amendments are proposed.

ITEM 1. Amend subrule 77.2(1), paragraph entitled "Birds," as follows:

Birds	
Red-shouldered Hawk	<i>Buteo lineatus</i>
Northern Harrier	<i>Circus cyaneus</i>
<del>Peregrine Falcon</del>	<del><i>Falco peregrinus</i></del>
Piping Plover	<i>Charadrius melodus</i>
Common Barn Owl	<i>Tyto alba</i>
Least Tern	<i>Sterna antillarum</i>
<del>Bald Eagle</del>	<del><i>Haliaeetus leucocephalus</i></del>
King Rail	<i>Rallus elegans</i>
Short-eared Owl	<i>Asio flammeus</i>

ITEM 2. Amend subrule 77.2(3), paragraph entitled "Birds," as follows:

Birds	
<del>Forester's</del> <u>Forster's</u> Tern	<i>Sterna forsteri</i>

Black Tern  
Peregrine Falcon  
Bald Eagle

Chlidonias niger  
Falco peregrinus  
Haliaeetus leucocephalus

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Date

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Richard A. Leopold, Director

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## **A Summary of Bald Eagle Information for Iowa.**

On August 8, 2007, the bald eagle was removed from the list of federal threatened species. Nationally, the number of nesting pairs has increased from 417 in 1963 to an estimated 9,789 in 2007. Because of this dramatic comeback the bald eagle no longer needs the protection of the Endangered Species Act.

The Bald Eagle gained federal protection under the 1940 Bald and Golden Eagle Protection Act. This law provided protection from shooting and destruction of nests, but a new threat emerged with the widespread use of DDT after World War II. DDT and similar persistent insecticides were found to accumulate in aquatic systems. When eagles fed on fish that had accumulated DDT, a metabolite of DDT interfered with the ability to deposit calcium in eggshells. Thinned eggshells cracked and broke easily and the number of fledged eagles dropped dramatically. The ban on use of DDT and similar pesticides in the 1970's allowed the bald eagle and other species to once again achieve normal reproduction. Protection under the Endangered Species Act and state regulations also helped with recovery by protecting habitat and educating the public about the needs of the bald eagle.

In Iowa the bald eagle was extirpated as a breeding species from about 1905 to 1977. At the time of European settlement the bald eagle was considered common and nested throughout the state. Records of nesting eagles continued until 1905 when the last reported nest was found in Jasper County. Loss of habitat and shooting of eagles caused the extirpation of the bald eagle as a breeding species in Iowa.

In 1977 an eagle nest was found in Allamakee County, the first known nesting attempt in over 70 years. Since 1977 there has been a steady increase in the number of nesting territories in the state. Between 1977 and 2009 394 nesting territories have been identified in 84 counties. The attached map presents the number of nesting territories reported by county since 1977. Not all territories have remained in use during that time but DNR staff with the help of other agency personnel and many dedicated volunteers has documented activity at 214 territories during the last two years. Because this is a sample rather than a total census of territories we estimate that there are over 200 nesting pairs of bald eagles in Iowa.

The 1983 Northern States Bald Eagle Recovery Plan listed Iowa's recovery goal as 10 nesting pairs by 2000. The recovery goal for the 24 states included in this plan was 1,200 nesting pairs. Currently, the estimated number of breeding pairs for the 24 states is over 4,400. In fact, Minnesota alone has exceeded the goal for all 24 states with 1,312 nests. The bald eagle population has greatly exceeded recovery goals established for delisting at the national level. Although no specific goal was set for state delisting, the bald eagle no longer meets the definition of a state endangered or threatened species. Because there is still a concern about exposure to lead by eagles, the bald eagle is proposed to be upgraded from endangered to special concern. Special concern status emphasizes the need for continued monitoring to ensure that the population remains stable or increases.

Bald eagles will still be protected under the Bald and Golden Eagle Protection Act. In fact, the federal act provides for civil and criminal penalties of up to \$5,000, while Iowa's penalty is \$1,000 for threatened or endangered animal species. In addition to protection from direct harm, the federal act also prohibits activities that disrupt eagles at nests, foraging areas, and important roosts because loss of these areas can disturb or kill eagles. These are the same protections that have been available under Iowa's threatened and endangered species law.

The goal of Iowa's threatened and endangered species law is to recover species to levels where protection under this section of the law is no longer necessary. The continuous improvement of the bald eagle population in Iowa during the last 30 years is proof the long-term survival of this species is secure. The recovery of our national symbol in Iowa has been the product of many individuals, organizations, and especially landowners who have provided habitat for breeding pairs of eagles. Upgrading from endangered to special concern is a reason to celebrate because the bald eagle no longer faces the threats that caused its extirpation from the state for over 70 years.

A FIVE-YEAR MANAGEMENT PLAN  
FOR THE PEREGRINE FALCON IN IOWA

2009 - 2014

Written for

The Iowa Department of Natural Resources  
Wildlife Diversity Program

## 1.0 INTRODUCTION

This management plan was written under the authorization of the Iowa Department of Natural Resources Wildlife Diversity Program. It presents a strategy to upgrade Peregrine Falcon recovery from an “endangered” species in Iowa to a status of “special concern.” It is intended to guide activities of government agencies, nongovernment organizations, and private individuals whose goal is the sustained presence of a viable population of Peregrine Falcons (*Falco peregrinus*) in the State of Iowa. It is intended that any management, research, permitting, or other activity affecting peregrines in this state refer to the guidelines in this plan.

The Peregrine Falcon was once a regularly occurring species throughout the upper Midwest. The original Peregrine Falcon population in Iowa probably numbered about ten pairs in any one year; about eight pairs along the Mississippi River and its tributaries, and pairs associated with interior rivers along the Cedar, Iowa, and Des Moines Rivers. These birds, part of a larger Midwestern population, disappeared by the mid-1960s due to poisoning by DDT and related chlorinated hydrocarbons.

Efforts to reestablish peregrines in Iowa began in 1989 at Cedar Rapids where 23 falcons were released in two years. In 1991 nineteen were released in Des Moines. In 1992, eight were released in Muscatine. From these 50 falcons, two pairs successfully nested in 1993 at Des Moines and Cedar Rapids. By 1995 it appeared Iowa’s goal of five nesting pairs would not be realized without further releases. Therefore, the Iowa Peregrine Falcon Recovery Team was formed, and an additional 117 falcons were released at Mason City, Bluffton, Effigy Mounds, Dubuque, Louisa Generating Station, and Palo Generating Facility. In Iowa 167 falcons were hacked between 1989 and 2003. The Iowa releases were part of a regional effort, which included Wisconsin, Michigan, Nebraska, Minnesota, Illinois, Indiana, Ohio and Missouri. Through 2003, a total of 875 peregrines were released by hacking in the Midwest. Independent releases were also conducted in Missouri, Kentucky and western Ontario.

## 2.0 CURRENT STATUS OF THE SPECIES

The first nesting attempts by peregrines in the Midwest in the post-DDT era occurred along the Mississippi River in 1986 and 1987. The first successful nesting occurred on the Multifoods building in Minneapolis in 1987, producing a single chick. In Iowa 1993 hailed the first successful nesting in nearly 40 years at Cedar Rapids and Des Moines. These two sites were exclusive to Iowa-nesting falcons until 1999 when falcons once again fledged near historic cliffs near Lansing, IA. Indeed Midwest Falcon Recovery coordinator Bud Tordoff exclaimed, "These were the first young peregrines known to fledge from a cliff nest in the Mississippi River valley since the extirpation of the original population by DDT in the 1950s and 1960s." Accelerated releases produced additional successful nesting in 2002 in the Quad Cities, 2003 at Louisa Generating Station, 2005 at Ottumwa Generating Station and wild site at Waukon Jct., in 2007 at Clinton Generating Station, I 280 Bridge in Quad Cities and Great River Bridge in Burlington, and in 2008 a second pair in Des Moines at the State Capitol. Notably the pair at Clinton would represent the southern extent of historic range of Peregrine Falcons along Mississippi River.

Further information on Iowa peregrines can be found in the Midwest Peregrine Falcon restoration project's annual reports which are available from The Raptor Center at the University of Minnesota.

Productivity of about 1.0 young per territorial pair is usually considered sufficient to sustain a stable peregrine population. In Iowa in 2008, productivity was 1.5 young per territorial pair, 2.5 per successful pair. From 2004 – 2008 productivity was 1.6 young per territorial pair, and 2.7 per successful pair. The new population may be larger than the original because of the new ecological niches provided by tall building in cities, smokestacks, and bridges. Of the 13 Iowa pairs in 2008, five were on buildings, three on smokestacks, three on bridges, one on cliffs, and one has alternated between cliff and smokestack.

Iowa's peregrine population is part of an upper Midwest population. Thus, the dynamics or status of Iowa's peregrine population must take into account the total Midwestern population. In the Midwest states in 2007 there were 223 territorial pairs and 443 young were produced. In the past three years brood size has remained stable at 2.09 young/territorial pair.

Previous management plans for the Peregrine Falcon called for reintroduction of falcons to achieve an annual population of between five - ten territorial pairs of birds in Iowa, and approximately 40 pairs in the Midwest. Those goals have been successfully reached. Release of peregrines in Iowa was discontinued in 2003 and the last releases in the Midwest have been completed.

Clearly, Peregrine Falcons are back and reproducing at a rate well above that required for continued population maintenance. The Peregrine Falcon population has reached or exceeded what was probably its historical level in Iowa and the upper Midwest.

However, while there is room for growth in the newly created urban niche, there are also new management challenges in maintaining a friendly and welcoming public at these sites. Furthermore, peregrines are nesting successfully on cliffs along the Mississippi River and its tributaries, an original goal of the reintroduction program. Hopefully, other cliff site nesting will occur in historic range of falcons' historic nesting range. Efforts to minimize predation by mammals, i.e. raccoons and protection from bluff land development need to address these challenges where feasible. The Peregrine Falcon population in Iowa, as well as the upper Midwest, has become large enough and is reproducing at a rate where it will eventually reach its carrying capacity without further supplementation by hacking of captive-produced birds. Currently, the Peregrine Falcon is not listed as a Federally Endangered Species but is listed in Iowa as a State Endangered Species.

### 3.0 GOALS FOR THE NEXT 5 YEARS

The ultimate goal of this management plan is to develop and sustain a peregrine population vigorous enough to ensure its survival and ultimately reoccupy its historical breeding range, where that is feasible. This will require maintaining population levels which are large enough to be secure from stochastic events, and with enough genetic variation to allow for adaptive response to ongoing natural selection. The following goals will apply for the duration of this management plan regardless of state or federal listing status.

3.1 Establish minimum population levels – In Iowa, a minimum of 10 territorial pairs with an annual productivity of no less than 1.0 young per territorial pair per year, averaged over any three-year period, needs to be established and maintained.

### 4.0 OBJECTIVES AND METHODS TO MEET GOALS

It is implicit in our goal that a self-sustaining Peregrine Falcon population will require minimal levels of human management or interference. For this reason, it is desirable to reduce the level of human manipulation as soon as possible. To maintain the current population, and allow it to reach its carrying capability, the following management recommendations are made.

4.1 Maintaining minimum population levels – These guidelines assume that Iowa's peregrine population maintains the desired minimum, or floor, of ten territorial pairs producing 1.0 young per territorial pair. If the population falls below these levels other management strategies will need to be considered.

4.1.1 Nest Box Placement and Replacement – Currently, Peregrine Falcons nest in Iowa along the Mississippi River and larger urban areas. It is this “core population” around which management activities need to be based. Nest boxes, which are used by many of the successful pairs, should be maintained and replaced as necessary within current urban territories.

- a. Occupied nest boxes should be refurbished by February 28 of each year.
- b. Maintaining good working relationship with building owners, operators, workers, and tenants is crucial to the continued success of urban pairs. Every effort should be made to keep these interests informed and involved in decisions and management.
- c. All interested parties must be willing to provide advice and help where falcon activities interfere with building operation or maintenance.
- d. Develop guidelines for continued installation of next boxes.

4.1.2 Augmentation – Augmentation, the placing of wild or captive produced young in wild nests, can be used to maintain continued occupancy of sites of special interest. Augmentation should be used only when pairs are present, no more than two young should be placed in any nest, and no augmentation should occur into broods of two or more chicks, or into nests of first-time breeders.

4.2 Monitoring – Every attempt should be made to locate and identify all territorial pairs within the state and to monitor their productivity. To aid in identifying and monitoring pairs, all nesting birds and their offspring should be banded following the format set forth by the Eastern Peregrine Falcon Recovery Team.

Each spring, all territories occupied anytime within the previous five years should be checked for activity. Additionally, historic nesting sites along the Mississippi River should be checked on an annual basis regardless of recent occupancy.

When being banded, birds should be examined and treated if necessary, for trichomoniasis and external parasites.

4.3 Education and Public relations – The interest and goodwill shown by the public toward these birds, and the specie's dependence on this goodwill, make it very important that education and public relations efforts be considered as part of any Peregrine Falcon management plan.

4.3.1 Informing the media of banding or other appropriate activities is encouraged.

4.3.2 Production and distribution of educational materials about peregrines should be undertaken by the IADNR, the Raptor Resource Project, Alliant Energy, MidAmerican Energy and other parties.

4.3.3 Establish which eyries provide public viewing without disturbance to the peregrines.

4.4 Whenever possible all nesting birds and their offspring should be bled for DNA analysis following procedures currently in use; tissue samples, study specimens, and skeletons should be archived at the University of Minnesota, Bell Museum of Natural History.

4.5 Unhatched/infertile eggs found at nests should be collected, contents prepared and stored for contaminant analysis and the shells archived. Eggs should be sent to the USFWS, as stipulated by permit, and archived with the Bell Museum of Natural History, or the Milwaukee Public Museum.

4.5.1 Additional research is needed to continue wise management of the species and we recommend that the following be undertaken:

- a. Determine dispersal patterns of Iowa fledged young, particularly from urban pairs.
- b. Assess the impact of contaminants on Iowa's peregrine population.
- c. Determine migration patterns of adults and juveniles.
- d. Determine the effect of natal site on nest site selection.
- e. Determine the degree of interference which causes permanent nest site desertion.

## 5.0 COORDINATION AND RESPONSIBILITIES OF ORGANIZATIONS

Since reintroductions began in 1976, Peregrine Falcon management in Iowa has been coordinated with other states in the region. There has also been a great deal of cooperation between government agencies, Raptor Resource Project, Alliant Energy, MidAmerican Energy, the University of Minnesota, and a wide variety of private organizations, corporations, and individuals.

5.1 Coordination of Iowa's Peregrine Falcon management with other states should be continued.

5.2 A management team to serve in an advisory capacity to the IADNR and appointed by the IADNR Wildlife Diversity Program coordinator should be established.

5.2.1 This team should include representatives from the IADNR, USFWS, Raptor Resource Project, Iowa Falconers Association, Alliant Energy and MidAmerican Energy, The Raptor Center at the University of Minnesota. The total number of members and the appointment of additional members are left to the discretion of the Wildlife Diversity Program Coordinator.

5.3 Involvement of interested parties in peregrine management and recovery should be encouraged. The role of some of these organizations is outlined below.

Iowa Department of Natural Resources – Has overall responsibility for Peregrine Falcon management in Iowa. Facilitate issuance of appropriate permits associated with peregrine management and liaison with the USFWS and The Raptor Center on appropriate activities. The Raptor Center at the University of Minnesota has overall coordination of management activities. TRC are permit holders and coordinators of banding, augmentation, and research. Receive input from all interested parties regarding state listing of the peregrine. Regional Nongame wildlife specialists should be kept

advised of ongoing peregrine management activities in their region so that they can participate as needed and/or inform other IADNR personnel.

U.S. Fish and Wildlife Service – Provide financial support for important peregrine work. Issue endangered species and migratory bird permits for peregrine propagation, release, and research, and enforce federal laws preventing killing and harassing of birds and nests. Coordinate the Federal Eastern peregrine Falcon Recovery Team and produce the Eastern Peregrine Falcon Recovery Plan. Review the current federal status of the peregrine, direct and support the ESA-mandated five-year monitoring phase of the species.

The James Ford Bell Museum of Natural History – Storage and analysis of tissue and blood samples. Collection of voucher specimens. Involvement in monitoring, banding, and bleeding. Maintenance of Midwest database.

Raptor Resource Project – continued nest box placement, maintenance, and monitoring. Also hacking, augmentation and research. Involvement in banding and bleeding under the permits of TRC.

Iowa Falconer's Association – continued involvement in survey efforts particularly for nests along the Mississippi River.

## PEREGRINE FALCON STATUS IN IOWA

The Peregrine Falcon was once a regularly occurring species throughout the upper Midwest. Original population has been estimated at fifty nesting pairs throughout the Midwest.

The original Peregrine Falcon population in Iowa probably numbered about **ten pairs in any one year**; about eight pairs along the Mississippi River and its tributaries, and two or three pairs along several interior rivers.

From 1982 through 2003, a total of 875 peregrines were released by hacking in the Midwest. Independent releases were also conducted in Missouri, Kentucky and western Ontario.

Efforts to reestablish peregrines in Iowa began in 1989 at Cedar Rapids where 23 falcons were released in two years. In 1991 nineteen were released in Des Moines. In 1992, eight were released in Muscatine. From these 50 falcons, two pairs successfully nested in 1993 at Des Moines and Cedar Rapids.

By 1995 it appeared Iowa's goal of five nesting pairs would not be realized without further releases. Therefore, the Iowa Peregrine Falcon Recovery Team was formed, and an additional 117 falcons were released at Mason City, Bluffton, Effigy Mounds, Dubuque, Louisa Generating Station, and Palo Generating Facility.

From 1982 through 2003, a total of 875 peregrines were released by hacking in the Midwest. Independent releases were also conducted in Missouri, Kentucky and western Ontario.

In Iowa 169 falcons were hacked between 1989 and 2003. Since the first nest in 1993, 167 young have been produced in Iowa.

In 2007 there were 226 territorial pairs, while 163 successful pairs produced 443 young in the Midwest that included Ontario, Manitoba, North and South Dakota, Minnesota, Wisconsin, Michigan, Nebraska, Illinois, Indiana, Ohio, Kansas, Missouri, Kentucky, and Iowa.

The new population may be larger than the original because of the new ecological niches provided by tall building in cities, smokestacks, and bridges.

Of the 13 Iowa nesting territories in 2008, five were on buildings, three on smokestacks, three on bridges, one on cliffs, and one has alternated between cliff and smokestack.

The ultimate goal is to sustain a peregrine population vigorous enough to ensure its survival and ultimately reoccupy its historical breeding range, wherever that is feasible.

This will require maintaining population levels which are large enough to be secure from stochastic events, and with enough genetic variation to allow for adaptive response to ongoing natural selection.

Productivity of about 1.0 young per territorial pair is considered sufficient to sustain a stable peregrine population.

In 2008 Iowa had 13 territories with 8 successful pairs producing 20 young (1.5 young per territorial pair, 2.5 per successful pair). From 2004 – 2008 (2004 was first year of 10 nesting pairs) productivity was 1.6 young per territorial pair, and 2.7 per successful pair.

In 2007 Minnesota had 51 territories with 35 successful pairs fledging 94 young. In Wisconsin there were 32 territories, 28 successful pairs produced 82 young.

The Peregrine Falcon population in Iowa, as well as the upper Midwest, has become large enough and is reproducing at a rate where it will eventually reach its carrying capacity without further supplementation by hacking of captive-produced birds.

On August 25, 1999, the peregrine falcon, one of the first species to be protected under the Endangered Species Act was officially declared recovered and removed from the federal endangered species list. This was based on the status of the species throughout its range in the United States. The continued population increase in Iowa since 1999 now allows for the upgrading of the peregrine from endangered to special concern at the state level.

**Iowa Bald Eagle Nest Summary**  
**April 14, 2009**

Overall

Total Territories: 394

STATUS

Active Territories\*: 214

Inactive Territories: 118

Unknown Territories: 62

\* The term Active Territory is defined as having some bald eagle activity in the territory within the last 2 years. It does not imply success.

Yearly Summary

Year	Total # of Territories Reported	# of New Territories Reported	# of Territories Reported Active	# of Territories Reported Inactive	# of Territories with production known	Total # of young produced	Average young produced per Territory
1977	1	1	1	0	NA	NA	NA
1985	1	1	1	0	NA	NA	NA
1988	3	2	0	0	NA	NA	NA
1989	1	0	0	0	NA	NA	NA
1990	7	0	5	1	4	10	2.50
1991	8	3	6	2	5	9	1.80
1992	13	2	8	4	7	9	1.29
1993	15	2	11	3	11	11	1.00
1994	17	3	12	4	11	16	1.45
1995	19	0	15	4	13	24	1.85
1996	27	7	23	3	18	32	1.78
1997	31	2	27	2	24	28	1.17
1998	94	78	76	13	62	73	1.18
1999	88	31	66	19	47	66	1.40
2000	76	22	56	10	36	48	1.33
2001	67	9	48	14	27	34	1.26
2002	92	17	70	12	29	47	1.62
2003	106	27	85	8	41	61	1.49
2004	114	22	85	19	29	39	1.34
2005	121	14	88	24	42	70	1.67
2006	139	12	112	23	43	60	1.40
2007	170	17	135	29	59	92	1.56
2008	198	88	136	57	48	70	1.46
<b>TOTAL</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>556</b>	<b>799</b>	
<b>AVG</b>	<b>61.22</b>	<b>15.65</b>	<b>46.35</b>	<b>10.91</b>	<b>29.26</b>	<b>42.05</b>	<b>1.50</b>



# Iowa Bald Eagle Nest Monitoring

## Introduction

For a little over 70 years (1905-1977) the Bald Eagle (*Haliaeetus leucocephalus*) did not nest in Iowa. The enactment of a series of federal laws (Endangered Species Act, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act) which protected the eagle went a long way to ensure the recovery of this species. This recovery has been especially visible in Iowa as eagle nesting has grown from one nesting territory in one county in 1977 to a total of 401 nesting territories in 84 counties since 1977.

The Iowa Department of Natural Resources (IDNR) has worked, with limited resources, to document the recovery of the eagle primarily through opportunistic nest-checking by personnel as well as gathering reports from other natural resource agencies and volunteer reporting by Iowa's citizens. Nest report details range from nest location with no indication of activity, to yearly activity, to nest success and productivity. All of these reports over the years have been gathered together and organized into a Microsoft Access database. In addition the DNR has collected information on wintering eagles by participating in the yearly Midwinter Count and has helped foster awareness and appreciation of eagles through supporting and actively sponsoring Bald Eagle Day events in many locations throughout the state.

An effort is underway to take a more systematic and comprehensive approach to monitoring Bald Eagle nesting in Iowa. As some protection is lifted and threats both old and new continue to affect this species, it is important for the IDNR to have a firm understanding of the bald eagle's status in the state. However, the time and resources available to devote to these efforts is still very limited so a plan is needed that will provide professionals with the required information but will be efficient and when possible utilize volunteers. The monitoring plan is divided into two phases, which are described in detail in this document.

## Phase 1: Procedures for the 2009 Nesting Season

The IDNR currently has a bald eagle nest database, which holds all the information collected on eagle nests since the 1970's. However the data has been collected mostly opportunistically and has resulted in some of the nest information being uncertain. The first task, therefore in starting a monitoring program is to clean this dataset as much as possible so that we have a clean and certain list of nests to work with.

There are currently 89 bald eagle territories (pair of eagles) with status unknown, excluding territories tracked by the U.S. Fish and Wildlife Service. Unknown status usually means that we have had no reports on the territory in 3 or more years. There are a few reasons why we may not have received a report in recent years: 1) the original reporter may not have realized we wished for yearly data and has not contacted with follow-up data, 2) the report was from a citizen at an event or some other venue where

contact information was not exchanged 3) the nest observed was inactive and the reporter assumed that this was a permanent state but there is ample evidence to suggest eagles do return to a nesting site after leaving it inactive for a year or two (they may have another nest in the area that is not visible). In all of these scenarios some follow-up contact or visit to the nesting area is needed.

### Main Objective

The main task for the 2009 nesting season is to clean the bald eagle nest dataset which primarily involves getting updates on as many of the targeted 121 territories as possible. This will be done using a two-step approach. We are currently engaged on the first step which is to contact as many of the people who reported on the territories in question and see if follow up activity information can be collected. If this information cannot be ascertained in this way either because the reporter has no information or there is no reliable reporter to contact, a visit to survey the territories must be made.

### Surveys

Surveys of territories were initiated at the beginning in March and will continue until leaf-out makes it difficult to find and observe nests (~ mid-April). The purpose of the visits is to discover if the nest can be re-located and if so whether it is currently being used by an eagle pair. Observers will be provided with binoculars and a spotting scope, a detailed map and location description (if available) and the observation history for each territory. The observers will primarily be Wildlife Diversity Program staff. The main obstacle to these surveys will be the inability in some cases to locate the nest which could be attributed to a number of causes: 1) the nest can only be viewed from private land or from the river on which it is located, 2) the location stored in the database is incorrect, 3) the nest is gone. Determining which of these three reasons it might be will very difficult if not impossible and a decision will have to be made on how to designate a territory's status based on the slim evidence gathered.

### Survey Procedures:

- 1) Using the aerial photo provided as well as the Sportsmans Atlas the observer will drive to the location that appears to provide the best view of the nesting site. The nest site will be scanned using binoculars and spotting scope.
- 2) If nest is found:
  - a) Observe the nest for at least 15 minutes if eagle activity is not immediately detected. Surveys will be conducted during the incubation period, so if the territory is occupied, eagles will be on or around the nest. It can sometimes be difficult to observe a bird sitting in the nest and the 15 minute observation should give enough time for the second bird to appear or for movement on the nest to be detected. If activity is immediately detected, take notes of the activity and then move one to the next nest –15 minutes observation will not be needed.
  - b) The observer may also want to try another vantage point if no activity is detected.

- c) If after 15 minutes observation and viewing the nest from a different vantage point produces no activity the territory will be marked as inactive.
- 3) If the nest is not found in the location indicated on the map:
  - a) The surrounding section should be searched with a focus on appropriate eagle habitat (i.e. concentrate on the timbered waterways). All roads around and within the section should be driven. Occasionally an examination of the aerial photo map will clearly show that the nest is likely mapped in the wrong location (the nest falls in the middle of a crop field) – use this to determine if there is a more likely location nearby.
  - b) If a local landowner is available (working outside etc...) or there are any other local folks that might have heard something of the nest, they should be interviewed.
  - c) If it still cannot be found mark as “Not Found” and detail efforts made to find it. The territory will be marked for exclusion from the dataset.

### Other Objectives

There are some secondary objectives for the 2009 nesting season. Opportunistic reports on nests will continue to be collected with as much detail as possible. This will likely add several new nests to the dataset as well as provide activity updates on existing nests. A larger effort will also be made to solicit these reports. Outreach to the County Conservation Boards has already been made and has resulted in several reports. Throughout this, an effort will be made to start identifying reliable volunteers who can be recruited as yearly nest monitors once the official nest monitoring program is put into place.

### **Phase 2 – Procedures for the 2010 Nesting Season and Beyond**

The purpose of the official nest monitoring program will be to collect the following data on Bald Eagle nests: 1) Territory number and distribution; 2) Nest Activity (active or not); 3) Success – whether a nest produces fledglings or not; 3) Productivity or number of young fledged. From these data we hope to be able to attain an estimate of the number of territories in the state as well as the turnover rate of territories and an estimate of productivity. Our aim is to complement what the U.S. Fish and Wildlife Service is doing with their nationwide monitoring plan and our focus will be on nests away from the Upper Mississippi Wildlife Refuge hereafter referred to as inland nests.

### Flight Surveys

Selected 10 or 15 mile sections of rivers will be flown each year and each section will be revisited every 5 years. Problems with detectability have proven to be a source of error as it is assumed all territories within each sampled subarea are detected. To overcome this there will be two observers in addition to the pilot. Flights will take place after March 10 and continue until early April or until leaf out.

As the pilot flies a systematic path making sure to cover all the area, observers will record each eagle nest seen. Data to be recorded will be the exact location of the nest using a map of the area provided, and whether the nest is occupied or not. An occupied nest is one that has at least 1 eagle on the nest or a pair of eagles within 50 yards of a nest that looks to be in repair.

The data collected using the flights will be used in conjunction with the data collected by the U.S. Fish and Wildlife Service to get an estimate of the number of territories and also get a better idea of distribution. It will also give us an estimate of the amount of turnover of nests, calculating the probability of nest that is active this year will become inactive next year as well as determine the rate of additions.

### Repeated Nest Monitoring

For a percentage of nests we would like to get more detailed information about the success of the pair and its productivity yearly and over time. In order to do this a random sample of nests will be chosen from the clean dataset of known nests produced in 2009 (excluding Upper Mississippi River Refuge nests). This will require mobilizing IDNR staff as well as select reliable volunteers to make multiple yearly visits to a nest every year.

Initially 25% from the known active nests away from the Mississippi River will be selected to monitor for productivity. The exact selection method has not yet been determined but will probably be a stratified random sample. The percentage of nests will be adjusted if analysis of this initial data indicates too much variability. An observer will be chosen to visit one or more assigned nest 3 times during the nesting season. Each visit will be 20 minutes long and the nest will be examined using binoculars and a spotting scope.

The initial visit will be done in March and will be used to determine occupancy of the nest. Occupancy means that there is at least one eagle on a nest or a pair within 50 yards of a repaired nest. Since incubation begins in March these criteria should definitely be met by this time. Should a nest prove to be inactive one year the observer must still continue to visit the nest site for two more years, as eagles have been known to re-occupy a nest. If a nest is knocked down a systematic and thorough search of the surrounding area, particularly along the same waterbody, within a mile of the original nest site to try and determine if they have built a replacement nest. Once a territory has been designated inactive for 3 years another nest will be randomly chosen to replace it for monitoring.

The second visit will take place in May and will have the objective of counting the number of young in the nest. This will be the most difficult task because if the young are hunkered down and/or the vantage point is not right they are very difficult to view. Careful and constant viewing through the spotting scope is required. If it is determined that 3 visits is too arduous and/or we are not getting reliable information on young, this survey period may be dropped.

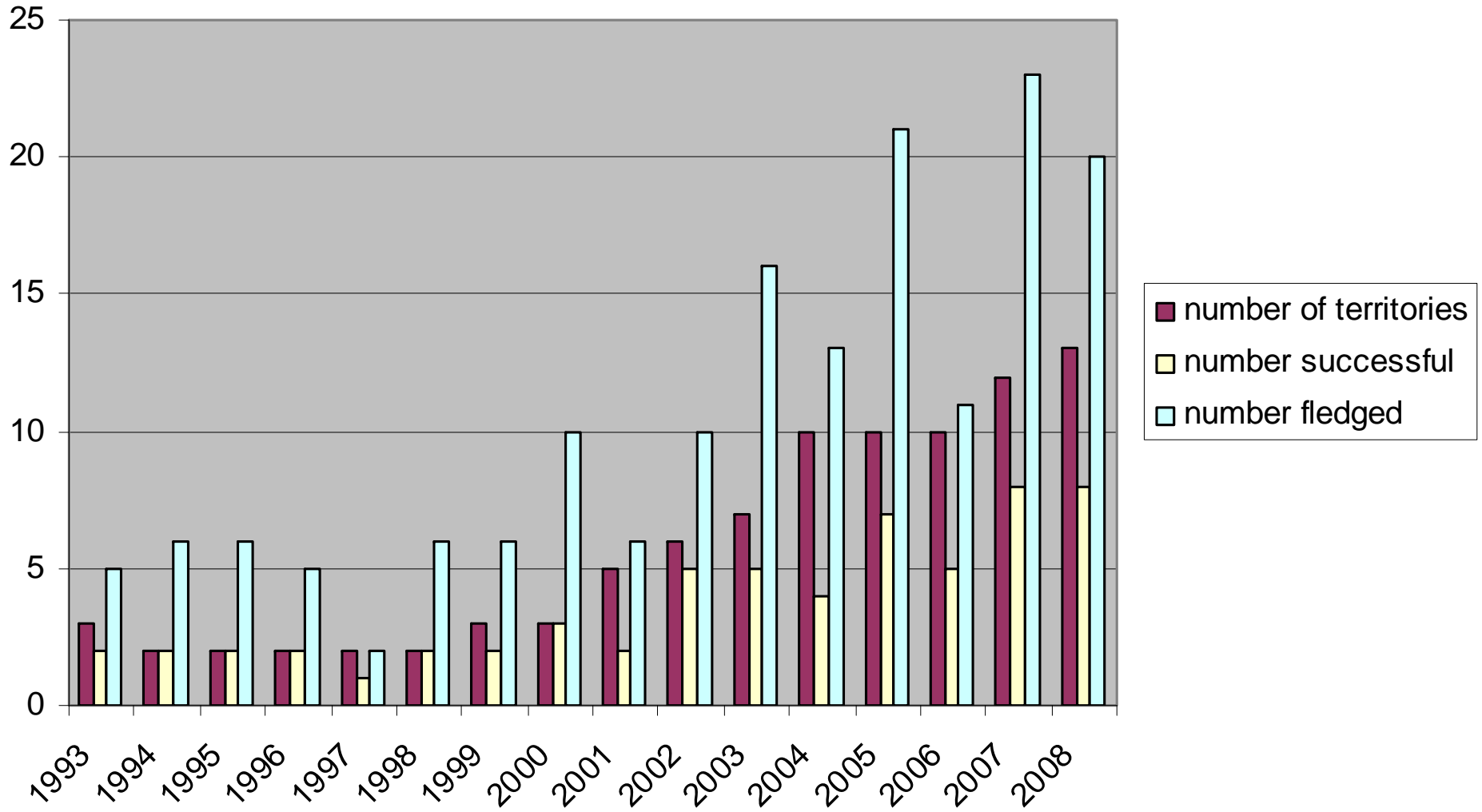
The third visit will be in June with the purpose of determining whether the nest was successful or not and how many young were fledged. A successful territory is one that produces at least one young. Determining fledging can be difficult and for our purposes if there are adult or almost adult-sized young in or within 50 yards of the nest during the survey period they should be counted as fledglings. At the end of this third survey period, data sheets should be returned to the wildlife diversity program.

The data collected in with the individual nest monitoring should provide data to help determine the yearly rate of success as well as an estimate of the number of young fledged in the state especially when combined with data collected on the Upper Mississippi River Refuge. It will also provide us with trend data of the estimated success and productivity rate of bald eagle nests in Iowa.

Comparison of the Bald and Golden Eagle Protection Act and Iowa’s Endangered Plants and Wildlife law.

<p>Bald and Golden Eagle Protection Act (Eagle Act) (16U.S.C.668-668d)</p>	<p>Endangered Plants and Wildlife (Iowa Code 481B)</p>
<p><b>Definitions:</b> <u>Take</u> includes also pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. <u>Disturb</u> means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to caused, 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.</p>	<p><b>Definitions:</b> <u>Take</u> in reference to fish and wildlife , means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect and it includes an attempt in any such conduct.</p>
<p><b>Penalties:</b>  <u>Criminal Penalties:</u>  A person who does “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import,” any bird, nest, or egg may be fined up to \$5,000 and or imprisoned for up to one year. The penalty increases for subsequent offenses. The definition of take is expansive and included “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.  <u>Civil Penalties:</u>  A person who does “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import” any bird, nest, or egg may be assessed a civil penalty up to \$5,000 for each violation.</p>	<p><b>Penalties:</b>  <u>Misdemeanor Scheduled Violation: 805B.8</u>  <i>e.</i> For violations of 481B.5 the scheduled fine is \$100. <b>Listed as threatened or endangered.</b>  <i>f.</i> (2) Taking, pursuing, killing, trapping or ensnaring, buying, selling, possessing, or transporting any protected nongame animals the scheduled fine is \$100. <b>Not listed as threatened or endangered.</b>  <i>g.</i> (2) Attempting to take, pursue, kill, trap or ensnare, buy, sell, possess, or transport any protected nongame animals the scheduled fine is \$50. <b>Not listed as threatened or endangered.</b>  <u>Civil Penalties: 481A.130</u>  A person convicted of unlawfully selling, taking, catching, killing, injuring, destroying, or having in possession any animal, shall reimburse the state for the value of such as follows:  <i>f.</i> For each animal classified by the commission as an endangered or threatened species \$1,000.  <i>c.</i> For each bird or plumage of such bird \$50. <b>Not listed.</b></p>

## Peregrine Falcons in Iowa



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