

WISCONSIN ENDANGERED RESOURCES REPORT 18

WISCONSIN BALD EAGLE BREEDING SURVEY, 1985

by Charles Sindelar, Randle Jurewicz, and Charlene Gieck

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SUMMARY

Based on aerial surveys during March through May, and ground checks of all known active nests in June, Wisconsin supported 214 active bald eagle (*Haliaeetus leucocephalus*) territories in 1985. Of these, 171 (80%) were successful, producing a total of 282 young ( $\bar{x}$  = 1.3 young per active nest), similar to last year's number of young produced. We banded 259 young, 8 of which were removed and furnished to reintroduction projects in other states. Although eagles along Lake Superior continued to experience poor production, overall the state population is reproducing well and is increasing slowly.

Management recommendations were developed and updated for individual territories. Of 9 reported bald eagle injuries, 5 were from traps. Of 24 reported deaths, the majority were from unknown causes, 5 were from trauma, and 6 were from other known causes such as emaciation, disease, and toxicity. During the annual midwinter count, 138 participants recorded a total of 211 bald eagles.

We recommend continued aerial surveys.

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PERFORMANCE REPORT

State: Wisconsin Project Title: Wisconsin Endangered and  
Cooperators: States of Michigan, Illinois Threatened Species Investigation  
Project No.: E-1 Study Title: Status and Management of Bald Eagle  
Study No.: 211  
Period Covered: October 1, 1984 to September 30, 1985

Contents

- Job 211.1 Conduct Survey
- Job 211.2 Search for Active Nests
- Job 211.3 Development and Implementation of Management Plans
- Job 211.4 Erection of Artificial Nesting Platforms
- Job 211.5 Nest Visits and Banding of Young
- Job 211.6 Salvage of Individuals or Addled Eggs
- Job 211.7 Winter Inventory

Abstract

The Wisconsin Department of Natural Resources continued its bald eagle (*Haliaeetus leucocephalus*) management program. It is designed to monitor population trends and increase productivity by describing, protecting, supplementing and enhancing nest sites. Territory management plans which identify both immediate and long-range management needs are being developed for all territories in the state. A statewide nest activity survey in March and May located 214 active nest sites. Leg bands were placed on 259 nestlings. Eight eaglets were furnished to reintroduction projects in other states.

Job 211.1 Conduct Survey

Objective

Monitor known bald eagle territories through annual aerial surveys to determine population trends and nesting success.

Procedures

See the Methods section of the attached report by Charles Sindelar, "Wisconsin Bald Eagle Breeding Survey - 1985".

Findings

North Central District

New nests occurred in Lincoln, Forest, Langlade, Marathon, Oneida and Vilas counties.

	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85
Active territory	43	58	59	75	77	74	72	82	83	85	86	86	87
Successful territory			40	44	59	53	49	62	61	61	71	65	70
% success			67%	58.6%	73%	72%	68%	77%	73%	72%	83%	74%	80%
Total young	53		70	69	98	93	76	115	101	106	114	106.6	119.7
Young/active territory	1.2		1.2	.92	1.3	1.3	1.05	1.4	1.2	1.2	1.3	1.2	1.4
Young/successful territory			1.2	1.6	1.7	1.7	1.55	1.85	1.7	1.7	1.6	1.6	1.7

Northwest District

New nests were found in each county of this district. Those nesting on Wisconsin's mainland shore of Lake Superior were not as successful as 1984. Fewer eagles showed up at nests and fewer pairs nested. Fewer young were raised and again young died mysteriously in nests prior to fledging.

	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85
Active territory	40	25	47	64	67	58	70	84	93	106	95	120	109
Successful territory			25	42	46	39	52	62	68	73	53	90	87
% success			53%	65.6%	67%	67%	74%	73%	73%	69%	56%	75%	80%
Total young	34		35	45	78	67	94	103	113	125	118	147.2	141.6
Young/active territory	.85		.74	.70	1.2	1.1	1.34	1.2	1.2	1.2	1.2	1.2	1.3
Young/successful territory			1.4	1.07	1.6	1.7	1.8	1.7	1.7	1.7	2.2	1.6	1.6

Lake Michigan District

New nests were found in Marinette and Menominee counties.

	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85
Active territory	6	6	5	6	6	6	5	6	7	10	10	10	9
Successful territory			4	1	2	4	4	5	6	7	6	7	6
% success			80%	2%	33%	67%	80%	83%	88%	70%	60%	70%	67%
Total young	0		7	2	4	6	8	9	10	14	12	13	8
Young/active territory			1.4	.3	.67	1.0	1.6	1.5	1.4	1.4	1.2	1.3	0.9
Young/successful territory			1.75	2.0	2.0	1.5	2.0	1.8	1.7	2.0	2.0	1.85	1.3

West Central District

New nests were found in Buffalo and Dunn counties.

	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85
Active territory						1	2	2	4	5	5	7	8
Successful territory						0	1	1	1	3	2	6	6
% success							50%	50%	25%	60%	40%	86%	75%
Total young						0	1	2	1	3	3	10	9.6
Young/active territory							.5	1.0	.25	.6	.6	1.4	1.2
Young/successful territory							1.0	2.0	1.0	1.0	1.5	1.7	1.6

Southern District

The Southern District's only nest continued to be active in 1985.

	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85
Active territory				1	1	1	1	1	1	1	1	1	1
Successful territory				1	1	1	1	1	1	1	1	1	1
% success				100%	100%	100%	0	100%	100%	100%	100%	100%	100%
Total young				2	1	2	0	2	2	3	2	2	2
Young/active territory				2	1	2	-	2	2	3	2	2	2
Young/successful territory				2	1	2	-	2	2	3	2	2	2

### Statewide

See the summary section of the attached report by Charles Sindelar, "Wisconsin Bald Eagle Breeding Survey - 1985".

#### Job 211.2 Search for Active Nests

##### Objective

Search for new and previously undiscovered nests in areas of the northern lakes breeding range that may contain active territories.

##### Procedures and Findings

Sindelar, Daniel Doberstein and Raymond Marvin conducted two aerial nest checks, one in April and one in May. Anthony Rinaldi and Howard Sheldon checked the Chequamegon and Nicolet National Forests in April.

Twenty new territories were numbered and 25 new nests were located within previously known territories.

Sindelar also searched the Apostle Islands, discovering no new nests, but existing sites were successful in 1985. Three pairs nested, producing 2 young. A fourth pair was discovered and showed some activity.

#### Job 211.3 Development and Implementation of Management Plans

##### Objective

Develop and implement management plans for all active territories.

##### Procedures and Findings

Concise information sheets have been developed by Area Wildlife managers for territories using a standardized format. These information sheets facilitate identification of future Management needs on an individual territory basis. Ground checks of each territory were required and the following information recorded:

1. Nest tree and habitat characteristics.
2. A green-line map, or a copy of an aerial photo showing the exact location of the nest and all alternate nests.
3. Identification of all roads, trails and dwellings.
4. Recommendations to reduce disturbance factor such as closing or rerouting of trails, limiting timber harvest or limiting recreational development on public lands.
5. Reproductive histories.

Information sheets and management recommendations were compiled for 20 new territories and known territories were reviewed and updated with 1985 data.

#### Job 211.4 Erection of Artificial Nesting Platforms

##### Objective

Increase bald eagle productivity by constructing artificial nesting platforms to replace defective nest trees, blown-down nests and other deteriorated nesting habitat.

##### Procedures

Bald eagle productivity can be increased by improving existing nests, providing nesting structures and by protecting alternate nest sites. The platform design used was developed by the WDNR, and has proven to be very durable and successful.

During the last several years, the WDNR have erected nest bases. These structures are intended to simulate an eagle nest and to keep eagles nesting in protected locations. The nest bases are used to replace eagle nests which have blown out. Once a nest blows out, the eagles may not build a new nest for several years, or may move to a new location.

The nest base consists of a cone-shaped, heavy-duty wire mesh which is securely attached to one side of a white pine. The cone is approximately two feet high and filled with sticks like a nest. The cone is placed just below the location of the old nest. Eagles then build on this base and tie their nest into the support branches.

#### Findings:

In 1978-1979 we put a nest base in La-3b, Rolling Stone Lake. The property had just been purchased by Fish Management when the nest blew out and we wanted to keep the eagles at this protected location. The nest base worked and two young were raised in 1979 and again in 1980. The territory had "some degree of activity" in 1981, it was not used in 1982, active but unsuccessful in 1983, inactive in 1984. The platform at BU-14a, Grettum Flowage, maintained a new nest in 1984 which produced one young in 1984 and 1985. The platform at IR-25a, Flambeau Flowage, was inactive in 1984 and failed in 1985; ON-34 produced 2 young in 1984 and 1985; VI-7 was inactive in 1984 and 1985.

#### Job 211.5 Nest Visits and Banding of Young

##### Objective

Monitor migratory movements, population dynamics and other ecological parameters of bald eagles through nest visits and banding of nestlings.

##### Procedures and Findings

See attached report by Charles Sindelar, "Wisconsin Bald Eagle Breeding Survey - 1985".

#### Job 211.6 Salvage of Specimens

##### Objective

Salvage sick, injured or dead birds and addled eggs encountered during banding and other activities.

##### Procedures and Findings

See attached report by Charles Sindelar, "Wisconsin Bald Eagle Breeding Survey - 1985".

The following table illustrates the cause of bald eagle injuries and mortality in Wisconsin, October 1, 1984 to September 30, 1985:

<u>Cause</u>	<u>Injured</u>	<u>Dead</u>
traps	5	0
projectile	1	0
trauma	1	5 (2 nestlings)
disease	1	1
toxicity	0	2
drowned	0	1
emaciation	0	2 (2 nestlings)
unknown	1	13 (8 nestlings)
Total (33)	9	24

#### Job 211.7 Winter Inventory

In 1985, approximately 138 people from around the state counted 211 bald eagles. More input from the general public was received than in previous years. This resulted in a larger number and wider distribution of eagle observations.

The following table breaks down the eagle count:

1985 Midwinter Bald Eagle Survey Reporting Form

Number Adult Bald Eagles	163
Number Immature Bald Eagles	43
Number Unknown Bald Eagles	5
Total Bald Eagles Counted	211
Number Adult Golden Eagles	1
Number Immature Golden Eagles	1
Number Unknown Golden Eagles	0
Total Golden Eagles Counted	2
No. counties Surveyed	55
No. Survey Participants	138

Final 1985 Midwinter Bald Eagle Survey Results  
(From the National Wildlife Federation)

Region	<u>1985</u> <u>Total</u>	<u>1984</u> <u>Total</u>	<u>1983</u> <u>Total</u>	<u>1982</u> <u>Total</u>	<u>1981</u> <u>Total</u>	<u>1980</u> <u>Total</u>	<u>1979</u> <u>Total</u>
Wisconsin	211	166	109	43	88	70	53

Summary

Reproduction was again very good. Occupied territories decreased slightly but because nesting success was better, production of young was roughly equal to last year.

Wisconsin's eagle population is likely still slowly increasing but Lake Superior eagles continue to experience problems.

Recommendations

Aerial surveys are necessary to assess management efforts, monitor population trends and identify active territories. If possible, the same individual should fly the surveys next year, which would facilitate the location of active nests, alternative nest and old nest sites.

Prepared by C. Sindelar and R. Jurewicz, edited by C. Gieck.

## BALD EAGLE PRODUCTIVITY IN WISCONSIN

Year	Number Active Territories	Number Successful Nests	Percent Successful Nests	Total Number Young	Av. No. Young Fledged/Successful Nest	Av. No. Young Fledged/Active Nest
1962 <sup>1</sup>	25	17	68	28	1.65	1.12
1963	38	24	63	40	1.69	1.05
1964	27	17	63	24	1.14	0.89
1965	35	21	60	26	1.24	0.74
1966	63	43	68	70	1.63	1.11
1967	72	49	68	70	1.43	0.97
1968	67	46	69	73	1.59	1.09
1969	83	60	72	93	1.55	1.12
1970	82	47	57	78	1.66	0.95
Sub-Totals	492	324	66	502	1.55	1.02
1973 <sup>2</sup>	108	66	61	107	1.62	0.99
1974	109	59	54	103	1.75	0.94
1975	111	69	62	112	1.62	1.01
1976	146	89	61	139	1.56	0.95
1977	151	108	72	181	1.68	1.20
1978 <sup>3</sup>	140	97	70	168	1.73	1.20
1979	151	106	70	179	1.69	1.18
1980	175	131	75	231	1.8	1.3
1981	188	137	73	227	1.7	1.2
1982	207	145	70	251	1.7	1.2
1983	198	149	76	252	1.7	1.3
1984	224	169	70	279	1.6	1.2
1985	214	171	80	282	1.6	1.3

1. 1962-1970 data from: Sprunt, et al. 1973. Comparative productivity of six bald eagle populations. Trans. N. Am. Wildl. and Nat. Resour. Conf. 38: 96-106.

2. 1973-1977 data from: Madsen, C. R. (ed.) 1978. Bald Eagle production in the great lakes states: 1973-1977. U.S. Fish and Wildlife Service, Region 3, Fed. Bldg. Twin Cities, MN 55111.

3. 1978-1985 data from: Sindelar, C. Wisconsin Bald Eagle Breeding Survey. Annual reports by WI DNR, Bureau of Endangered Resources, P. O. Box 7921, Madison, WI 53707.

WISCONSIN BALD EAGLE BREEDING SURVEY - 1985

GENERAL REPORT

Done while temporarily employed by the State of Wisconsin  
WI DNR Bureau of Endangered Resources

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Mid-State Airlines is to be thanked and congratulated for their policy regarding shipping eagles air freight -- "Eagles Fly Free on Mid-State!"

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