

# Wisconsin Bald Eagle and Osprey Nest Surveys 2015

## Project Staff:

Jim Woodford – Rhinelander	Bruce Bacon – Mercer
Steve Easterly – Oshkosh	Ron Eckstein – Rhinelander
Dean Edlin – Alma	Mandy Kamps – Wausau
Ryan Magana – Spooner	Dan Goltz – Boscobel
Carly Lapin - Rhinelander	Jeff Pechacek – La Crosse
Laura Jaskiewicz – Rhinelander	

## **Summary**

Wisconsin Department of Natural Resources (WDNR) staff from the Natural Heritage Conservation and Wildlife Management bureaus completed statewide aerial nesting surveys for bald eagles and a limited area of aerial nesting surveys for ospreys in cooperation with WDNR pilots in spring and early summer 2015. This marked the 43rd consecutive year that these important wildlife surveys have been completed in Wisconsin, which makes it one of the longest running surveys of its kind in North America. The surveys this year found 1,465 occupied eagle nests, which is the highest number ever recorded. Observers reported 1,248 bald eagle nestlings and a statewide nest success rate of 66% during productivity surveys that occurred in May and June. Nest success by survey area for eagles ranged from 56-95%. Occupied eagle nests were observed in 69 of 72 (96%) counties surveyed. Additional project work included nest management guidance, construction project reviews, forest management guidance and winter eagle roost counts along the lower Wisconsin River.

## **Acknowledgments**

Local eagle and osprey nest information was provided by Rebecca Key and Bill Route (Apostle Island National Lakeshore and St. Croix National Scenic Riverway) and numerous WDNR field staff. Aircraft pilots flying these surveys included: Mike Weinfurter (Rhinelander), David Lemke (Rhinelander), Leo Bunderson (Eau Claire), Bev Paulan (Eau Claire), Phil Miller (Siren), Joe Sprenger (Siren), Mike Callahan (Oshkosh), Luke Wuest (Oshkosh) and Jeff Oimoen (Madison).

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## **Bald Eagles**

All nest surveys were completed using a WDNR aircraft and pilot and at least one other trained observer. The first bald eagle survey was flown in late March and April to locate occupied nests and the second survey was flown in late May and June to count young and determine nest success. Additional ground observations were provided by landowners, birders, volunteers and raptor banders; this information is used to supplement and check aerial data. Regional reports were developed by area observers (Appendix 1) that detail bald eagle and osprey nest locations and provide summarized information on productivity rates by county (Figure 1).

We found 1,465 bald eagle nests occupied by breeding adults in 2015 (Figure 1). This was an increase of 121 nests from the 2013 surveys, which was the last year we completed a statewide survey (Figure 2). This increase reflects the actual abundance of occupied eagle nests in Wisconsin. An occupied nest was defined as a nest where one or more of the following was observed: incubation, eggs, young or a repaired nest. As in past years, Vilas (n = 162) and Oneida (n = 143) counties had the highest number of occupied eagle nests. These two counties represent most of the Northern Highland Ecological Landscape, which has one of the highest concentrations of lakes in the world. Bald eagles occupied nests in 69 of the state's counties in 2015 (96%; Figure 1), and the number of occupied nests continued to increase in the southwest and northwest portions of the state (survey areas 1 and 6; Appendix 1).

Observers were able to determine nest productivity at 1,245 of the occupied eagle nests in Wisconsin (Table 1) during the second survey. The other 220 nests reported as occupied during the first survey either were not checked or were obscured from view during the second flight. Nests in deciduous trees can be obscured from view after the tree is fully leafed-out. We observed 1,158 young at 821 successful nests, which equates to 0.85 young per occupied nest for those nests with known outcomes and 1.45 young per successful nest. Nest success statewide for those nests with known outcomes was 63%. For successful nests, 52% produced one young, 45% two young and 4% three young.

As in 2014, there were some large differences in nest success rates between survey areas. In 2015 area 1 and 2 had the lowest nest success rates of 56% and 57%, respectively (Table 1). The lower nest success rates in these areas may be due to eagles reaching their carrying capacity in the northern part of the state. Above average nest success was observed in survey area 5 (69%) in 2015 which was a large increase over 2014 (52%). The reason for the variability in nest success observed in area 5 is unclear. Survey area 2 (i.e., north central Wisconsin) appears to have one of the highest densities of nesting bald eagles anywhere. The number of occupied territories within this area of the state continues to rise with 489 reported in 2014 and 497 in 2015.

The Federal Bald and Golden Eagle Protection Act provides protection for all eagle nests, nest trees and adjacent habitat. Throughout the state project staff were commonly contacted by private landowners and public land managers for recommendations to protect bald eagle and osprey nests from disturbance. On public properties, habitat is managed to promote tall snags and large, super-canopy white pines for nest trees. Project staff annually makes recommendations at over 100 sites to protect nests where disturbances such as timber sales, utility and telecommunication projects, housing development and road construction are being planned. In the past 25 years, WDNR staff made management recommendations that protected over 80% of all known eagle and osprey nests. Accurate nest locations, nesting activity and management guidance continue to be important factors in the long term conservation of Wisconsin's bald eagle and osprey populations.

### **Wintering Eagles**

Wintering bald eagle numbers are recorded throughout Wisconsin during the annual Midwinter Bald Eagle Survey that is conducted in conjunction with annual winter waterfowl surveys in the state by DNR field staff, landowners and volunteers. In 2015, the count was conducted between January 1 and January 15. Observers counted the number of bald eagles observed on specific routes that are repeated every year. Surveys are conducted by plane, vehicle, boat, and on foot. In 2015, 41 midwinter bald eagle survey routes were completed; observers counted 357 bald eagles (210 adult, 114 immature and 33 unknown), which was a decrease of 44% from surveys in 2014.

**Table 1.** Summary of 2015 bald eagle productivity surveys in Wisconsin.

Survey Area <sup>1</sup>	Occupied Territories	Territories with Known Outcomes <sup>2</sup>	Successful Territories <sup>3</sup>	Total Young	Young Per Occupied Territory	Young Per Successful Territory	Nest Success <sup>4</sup> (%)
Area 1	338	331	186	256	0.76	1.38	56%
Area 2	497	485	278	376	0.76	1.35	57%
Area 3	165	154	135	241	1.46	1.79	88%
Area 4	50	47	39	61	1.22	1.56	83%
Area 5	251	122	84	132	0.53	1.57	69%
Area 6	140	84	80	145	1.04	1.81	95%
Area 7	24	22	19	37	1.54	1.95	86%
<b>Total Territories</b>	1,465						
<b>Territories with Known Outcome</b>		1,245	821	1,248	0.85	1.52	66%

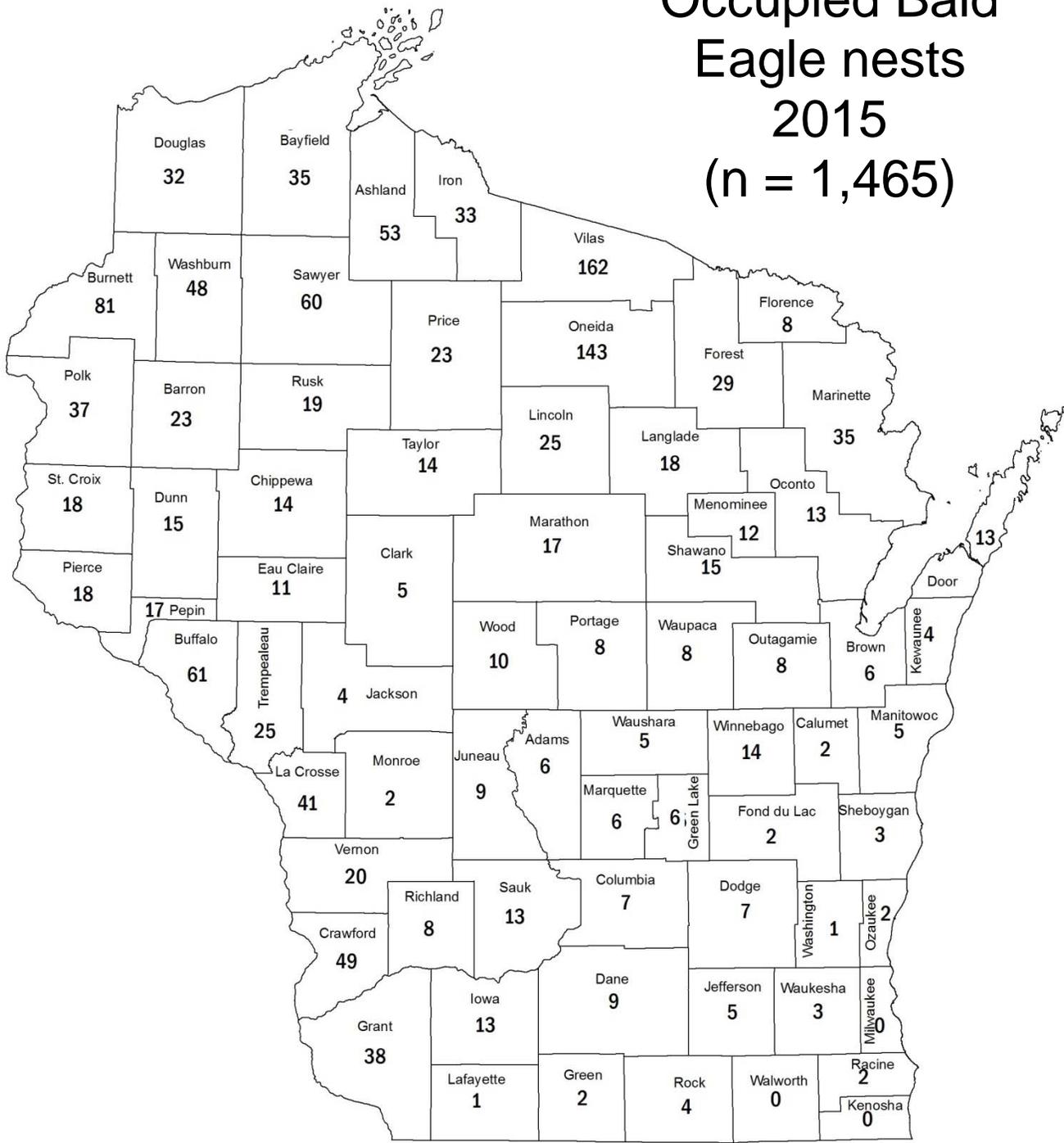
<sup>1</sup> Survey areas are shown in Appendix 1.

<sup>2</sup> Known outcome territories are those found occupied during the first flight that were visible and checked during the second flight.

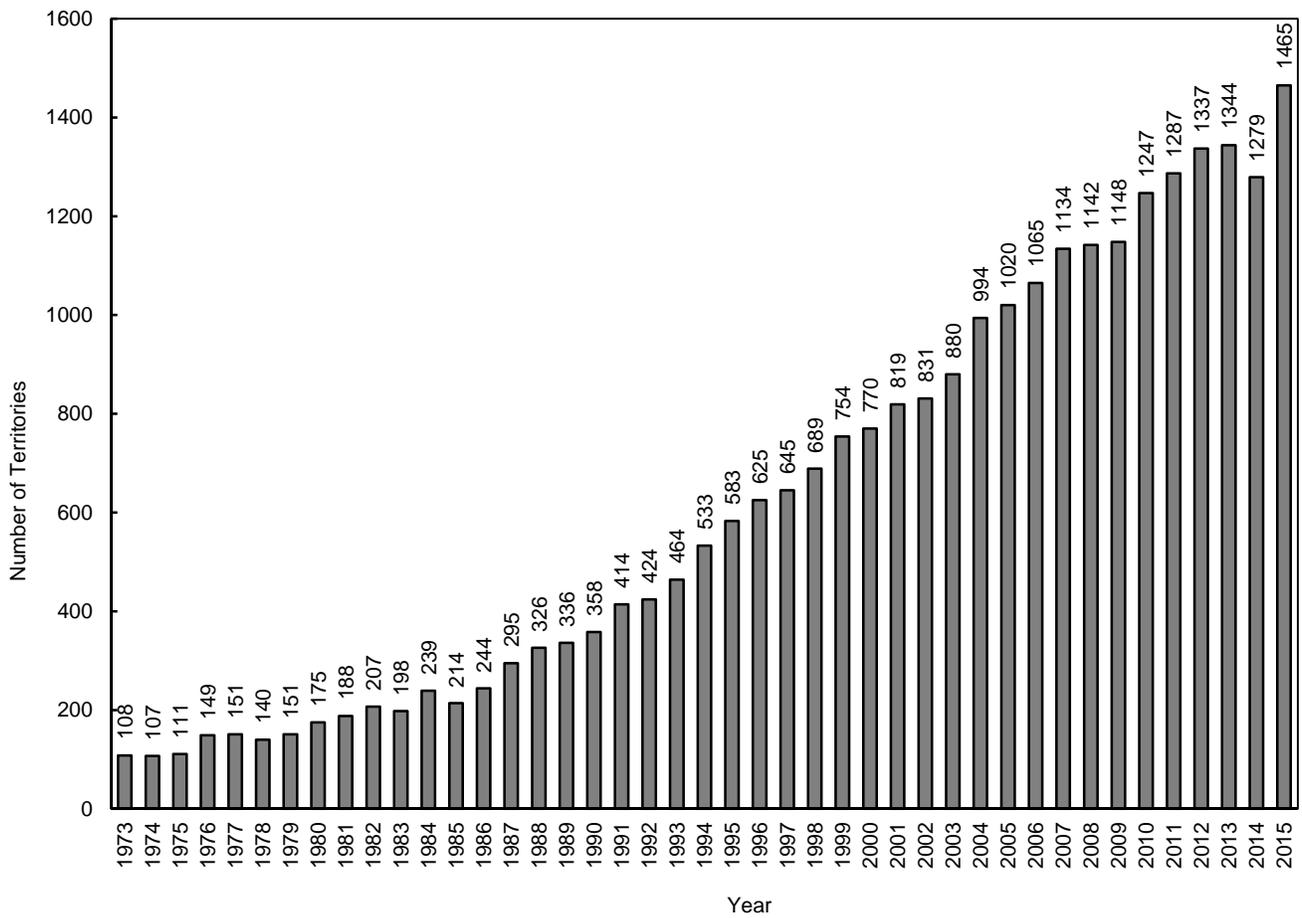
<sup>3</sup> Successful territories included those where one or more young were present at the time of the productivity flight.

<sup>4</sup> Percent nest success calculated only for those territories with known outcomes.

# Occupied Bald Eagle nests 2015 (n = 1,465)



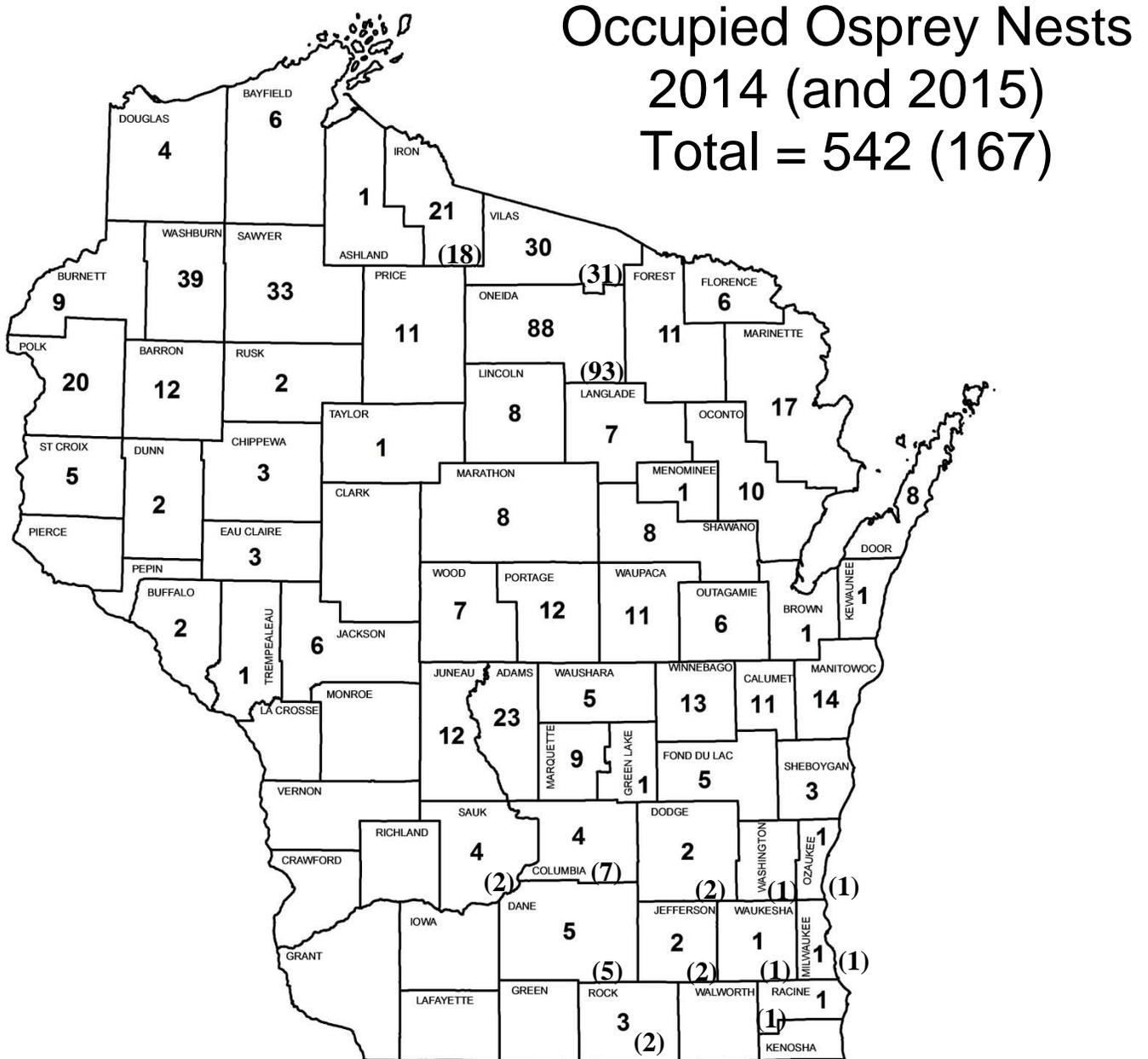
**Figure 1.** Occupied eagle nests where the observer recorded at least one of the following: a repaired nest, an incubating adult, eggs or young in the nest.



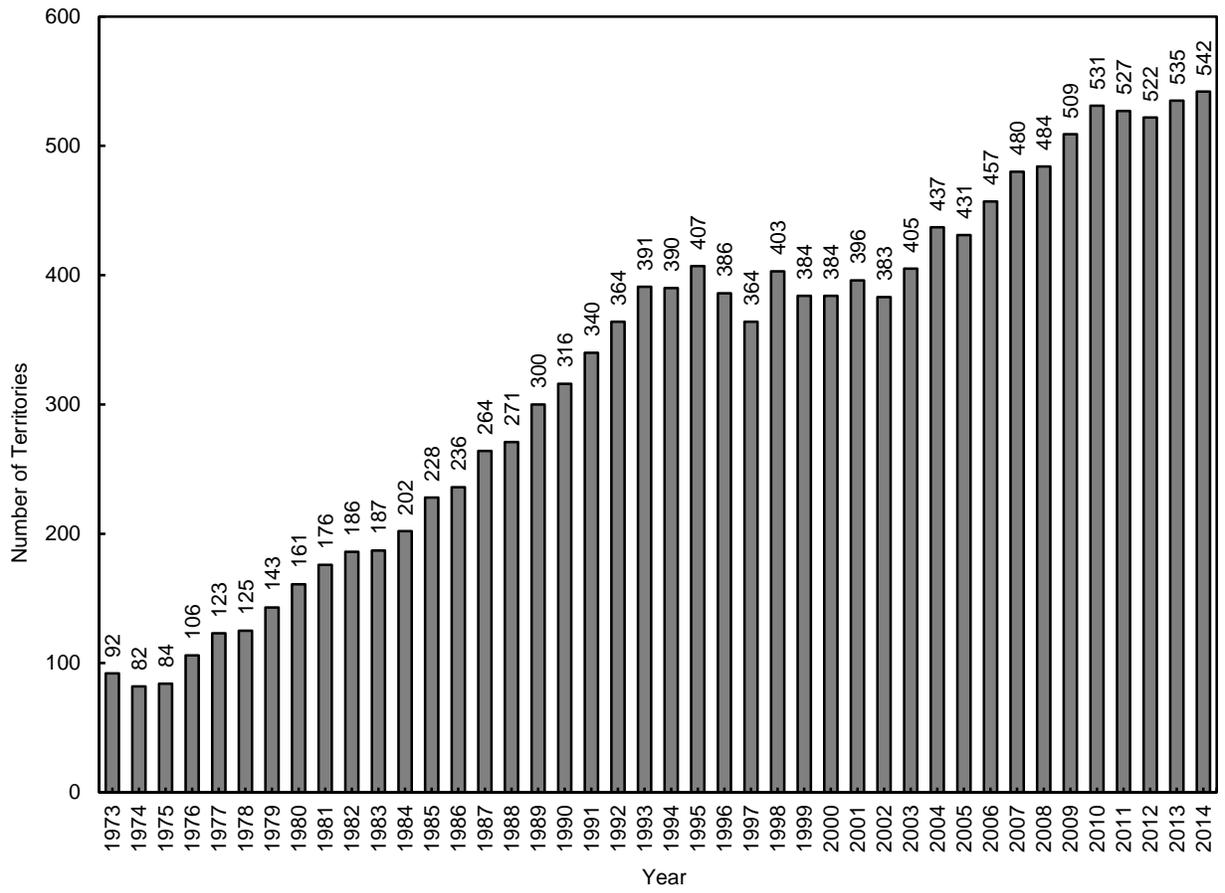
**Figure 2.** Occupied bald eagle nests in Wisconsin, 1973-2015. Bald eagle information for the years 1973 to 1989 was summarized from annual surveys completed by Charles Sindelar, Waukesha, WI.

**Ospreys**

A limited osprey survey was completed in May to locate occupied nests in 14 counties. Surveys found 167 occupied osprey nests within the area covered in the counties of Columbia, Dane, Dodge, Jefferson, Iron, Langlade, Milwaukee, Oneida, Ozaukee, Racine, Rock, Sauk, Vilas, Waukesha, and Washington in 2015 (Figure 3).



**Figure 3.** Occupied osprey nests where the observer recorded at least one of the following: one or more adults at a repaired nest, an incubating adult, eggs or young in the nest. Numbers in parentheses are the occupied nests counted in the limited 2015 osprey survey.



**Figure 4.** Occupied osprey nests in Wisconsin, 1973-2014 (note: data are not provided for 2015 as the areas surveyed was limited).

**Appendix 1. Wisconsin Natural Heritage Inventory (NHI) eagle and osprey contact list.**

## **DNR Area Eagle/Osprey Survey Contacts**

For the latest and most complete information on the location of eagle and osprey nests (rev. 11/2015) contact:

### **Area 1**

Ryan Magana, 715-635-4153  
DNR, 810 W Maple St.  
Spooner, WI 54801  
[Ryan.Magana@wisconsin.gov](mailto:Ryan.Magana@wisconsin.gov)

### **If unable to reach area representative, contact:**

Laura Jaskiewicz, 715-365-8922  
DNR, 107 Sutliff Ave,  
Rhineland, WI 54501  
[Laura.Jaskiewicz@wisconsin.gov](mailto:Laura.Jaskiewicz@wisconsin.gov)

### **Area 2**

Carly Lapin, 715-365-8954  
DNR, 107 Sutliff Ave.  
Rhineland, WI 54501  
[Carly.Lapin@wisconsin.gov](mailto:Carly.Lapin@wisconsin.gov)

### **Eagle Carcass Submissions Required for:**

- \*Banded Eagles*
- \*Potential Law Enforcement cases*

### **Area 3**

Steve Easterly, 920-303-5427  
625 E County Road Y, Suite 700  
Oshkosh, WI 54901  
[Stephen.Easterly@wisconsin.gov](mailto:Stephen.Easterly@wisconsin.gov)

### **Area 4**

Jim Woodford, 715-365-8856  
DNR, 107 Sutliff Ave.  
Rhineland, WI 54501  
[James.Woodford@wisconsin.gov](mailto:James.Woodford@wisconsin.gov)

### **Area 5a**

Jeff Pechacek, 608-785-9000  
DNR, 3550 Mormon Coulee Rd.  
La Crosse, WI 54601  
[Jeffrey.Pechacek@wisconsin.gov](mailto:Jeffrey.Pechacek@wisconsin.gov)

### **Area 5b**

Dean Edlin, 608-685-3252  
DNR, PO Box 88  
Alma, WI 54610  
[Dean.Edlin@wisconsin.gov](mailto:Dean.Edlin@wisconsin.gov)

### **Area 6**

Dan Goltz, 608-375-4231  
DNR, 5350 Hwy 133E  
Boscobel, WI 53805  
[Daniel.Goltz@wisconsin.gov](mailto:Daniel.Goltz@wisconsin.gov)

### **Area 7**

Sharon Fandel, 608-275-3207  
DNR, 3911 Fish Hatchery Rd.  
Fitchburg, WI 53711  
[Sharon.Fandel@wisconsin.gov](mailto:Sharon.Fandel@wisconsin.gov)

