

Wisconsin Bald Eagle and Osprey Nest Surveys 2019

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Summary

Wisconsin Department of Natural Resources (WDNR) staff from the Bureau of Natural Heritage Conservation completed statewide aerial nesting surveys for bald eagles and ospreys in cooperation with WDNR pilots in spring 2019. Detailed records of eagle nest occupancy have been collected in Wisconsin since 1973, making this one of the longest running surveys of its kind in America. The surveys this year found 1,684 occupied eagle nests and 530 occupied osprey nests. Occupied eagle nests were observed in 71 of 72 (98.6%) counties and occupied osprey nests were observed in 60 of 72 (83.3%) counties. Additional project work included nest identification and avoidance guidance, construction project reviews, forest management guidance, and overwintering eagle counts throughout the state.

Acknowledgments

Local eagle and osprey nest information was provided by numerous WDNR field staff, Madison Audubon's Bald Eagle Nest Watch volunteers, and reports from the public. Aircraft pilots flying these surveys included: Mike Weinfurter (Rhinelander), Leo Bunderson (Eau Claire), Matthew Brandt (Eau Claire), Joe Sprenger (Siren), Paul Christensen (Siren), Mike Callahan (Oshkosh), and Greg Marchel (Oshkosh).

Funding for this project was provided through the WDNR's Federal Wildlife Restoration Grant (W-160-P) and through donations made to the Adopt an Eagle Nest program and the Forest Raptor gift account within the Bureau of Natural Heritage Conservation.

Bald Eagles

All nest surveys were completed using a WDNR aircraft and pilot and at least one other trained observer. The bald eagle nest occupancy survey was flown in March and April to locate occupied nests. 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 nest locations by county (Figure 1).

In 2019, a total of 1,684 bald eagle nests were found to be occupied by breeding adults (Table 1; Figure 1). This was a decrease of 11 nests from the 2018 surveys (Figure 2). An occupied nest was defined as a nest where one or more of the following was observed: an incubating adult, eggs, young, or a repaired nest. As in past years, Vilas and Oneida counties had the highest number of occupied eagle nests ($n = 175$ and 150 , respectively). These two counties represent most of the Northern Highland Ecological Landscape, which has one of the highest concentrations of freshwater lakes in the world. Bald eagles occupied nests in 71 of the state's 72 counties in 2019 (98.6%; Figure 1), and the number of occupied nests continued to increase in all portions of the state except for northwestern, west-central, and southwestern Wisconsin (Survey Areas 1, 5, and 6 respectively; Appendix 1).

Survey Area 2 (north central Wisconsin) appears to have one of the highest densities of nesting bald eagles anywhere in North America. The number of occupied territories within this area of the state continues to rise, with 537 reported in 2018 and 550 in 2019 (Table 1). Survey Area 7, in southeastern Wisconsin, had the greatest observed increase in occupied nests from 2018 to 2019 (+27.7%).

There was a very small decrease in occupied nests statewide from 2018 to 2019 (Table 1). This decrease was reflected in Survey Areas 1, 5, and 6 (Table 1). It's possible that Survey Area 1, with the second-highest number of eagle nests in the state, is nearing carrying capacity, which could explain the slight decrease in this area. Surveyors from Area 5 reported that the weather late in winter was especially harsh with very snowy and cold conditions, which may have caused the greater decrease in occupied nests in this area in 2019 (-17.4%).

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 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 provide recommendations to protect nests where disturbances such as timber sales, utility and telecommunication projects, housing development, and road construction are being planned. 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 were recorded throughout Wisconsin during the annual Midwinter Bald Eagle Survey conducted by WDNR field staff, landowners, and volunteers. In 2019, the count was conducted between January 2, 2019 and January 16, 2019. Observers counted the number of bald eagles observed on specific routes that are repeated every year. Surveys were conducted by plane, vehicle, and on foot. In 2019, 47 midwinter bald eagle survey routes were completed in 157.5 hours with observers reporting 534 bald eagles (372 adult, 146 immature, and 16 of unknown age). This count represented a 14.4% increase in the number of eagles observed over the previous winter's count of 467 eagles.

Citizen Science

This year marked the second year of Bald Eagle Nest Watch, a citizen-based bald eagle nest monitoring project in Dane County, Wisconsin. The project was coordinated by Drew Cashman and The Madison Audubon Society and utilized volunteers to monitor the outcome of 25 eagle nests weekly throughout the nesting season. Of these, three nests were inactive or had no sign of activity and seven nests failed, largely due to severe spring storms in southern Wisconsin during the nesting period. Of the remaining 15 active nests, at least 27 eaglets successfully fledged. This project provides information on bald eagle nest productivity within an urbanized portion of southern Wisconsin.

Table 1. Summary of 2019 bald eagle occupancy surveys in Wisconsin.

Survey Area¹	Occupied Nests 2018	Occupied Nests 2019	Percent Increase or Decrease from 2018-2019
Area 1	360	356	-1.1%
Area 2	537	550	+ 2.4%
Area 3	178	191	+ 7.3%
Area 4	62	67	+ 8.1%
Area 5	236	195	- 17.4%
Area 6	275	265	- 3.6%
Area 7	47	60	+ 27.7%
Total Territories	1,695	1,684	-0.7%

¹ Survey Areas are shown in Appendix 1.

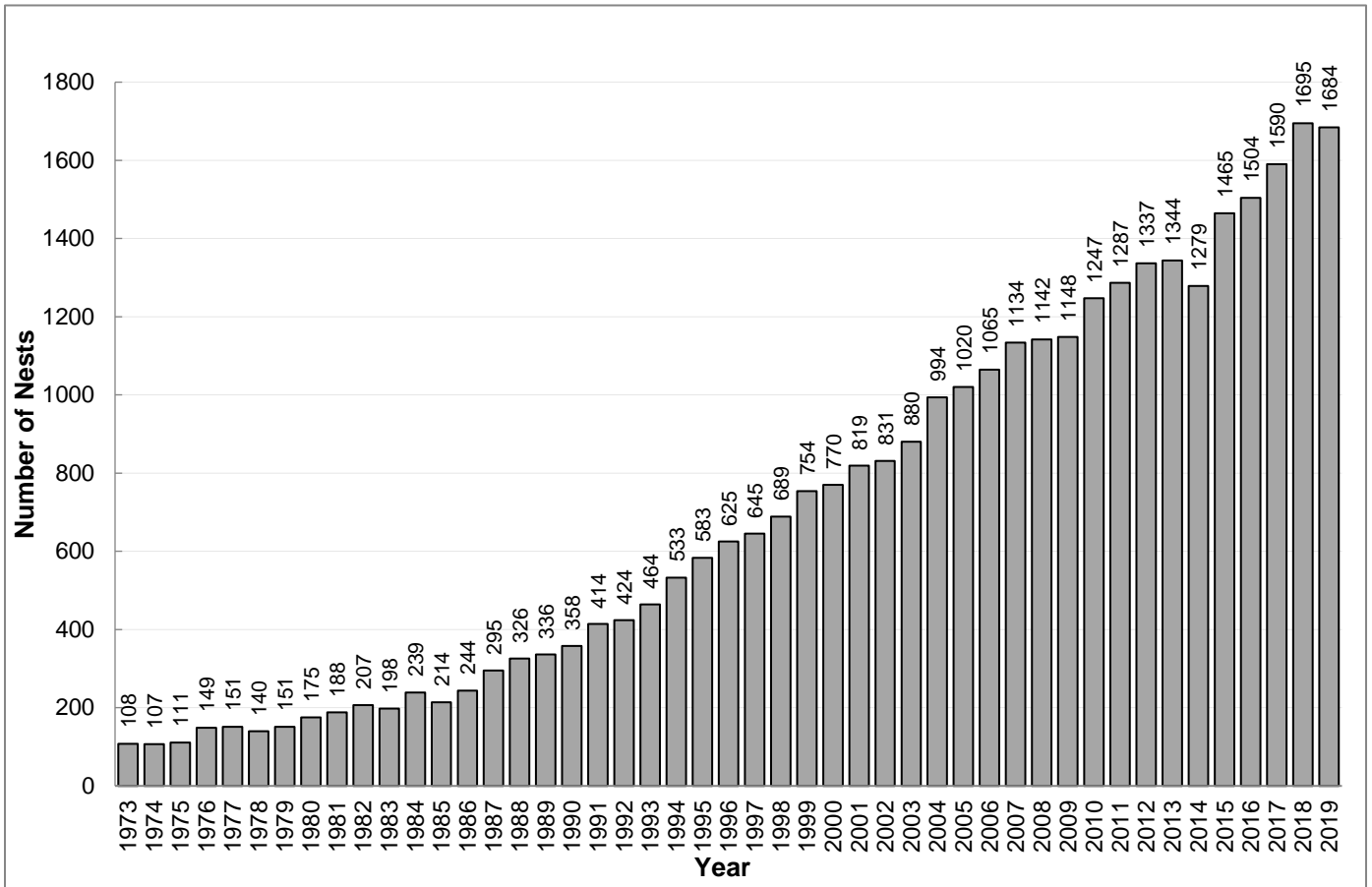


Figure 2. Occupied bald eagle nests in Wisconsin, 1973-2019. Bald eagle information for the years 1973 to 1989 was summarized from annual surveys completed by Charles Sindelar, Waukesha, WI.

Ospreys

Osprey nest occupancy surveys were completed in May 2019. Additional ground observations were provided by landowners, birders, volunteers, and raptor banders; this information is used to supplement and check aerial data. There were 535 occupied osprey nests found statewide in 2019 (Table 2; Figure 3). This was a decrease of 23 occupied nests from surveys completed in 2016 (Table 2; Figure 4). Oneida county had the most occupied nests ($n = 77$), and ospreys nested in 60 of the state's 72 counties (83%; Figure 3). The number of occupied osprey nests increased in all Survey Areas except for areas 2 and 3, which decreased by 14.5% and 25.2%, respectively (Table 2). Areas 5 and 7 showed the greatest percent increase at 50.0% and 47.1%, respectively (Table 2).

Table 2. Summary of 2019 osprey occupancy surveys in Wisconsin.

Survey Area¹	Occupied Nests 2016	Occupied Nests 2019	Percent Increase or Decrease from 2016 -2019
Area 1	130	139	+ 6.9%
Area 2	186	159	-14.5%
Area 3	135	101	-25.2%
Area 4	59	69	+17.0%
Area 5	16	24	+50.0%
Area 6	15	18	+ 20.0%
Area 7	17	25	+ 47.1%
Total Territories	558	535	-4.1% *

¹ Survey Areas are shown in Appendix 1.

* The statewide decrease in occupied osprey nests observed in 2019 may be due in part to the two-year gap during which these surveys were not completed. Osprey nests may have relocated to unknown sites during this time.

Occupied Osprey Nests 2019 (*n* = 535)

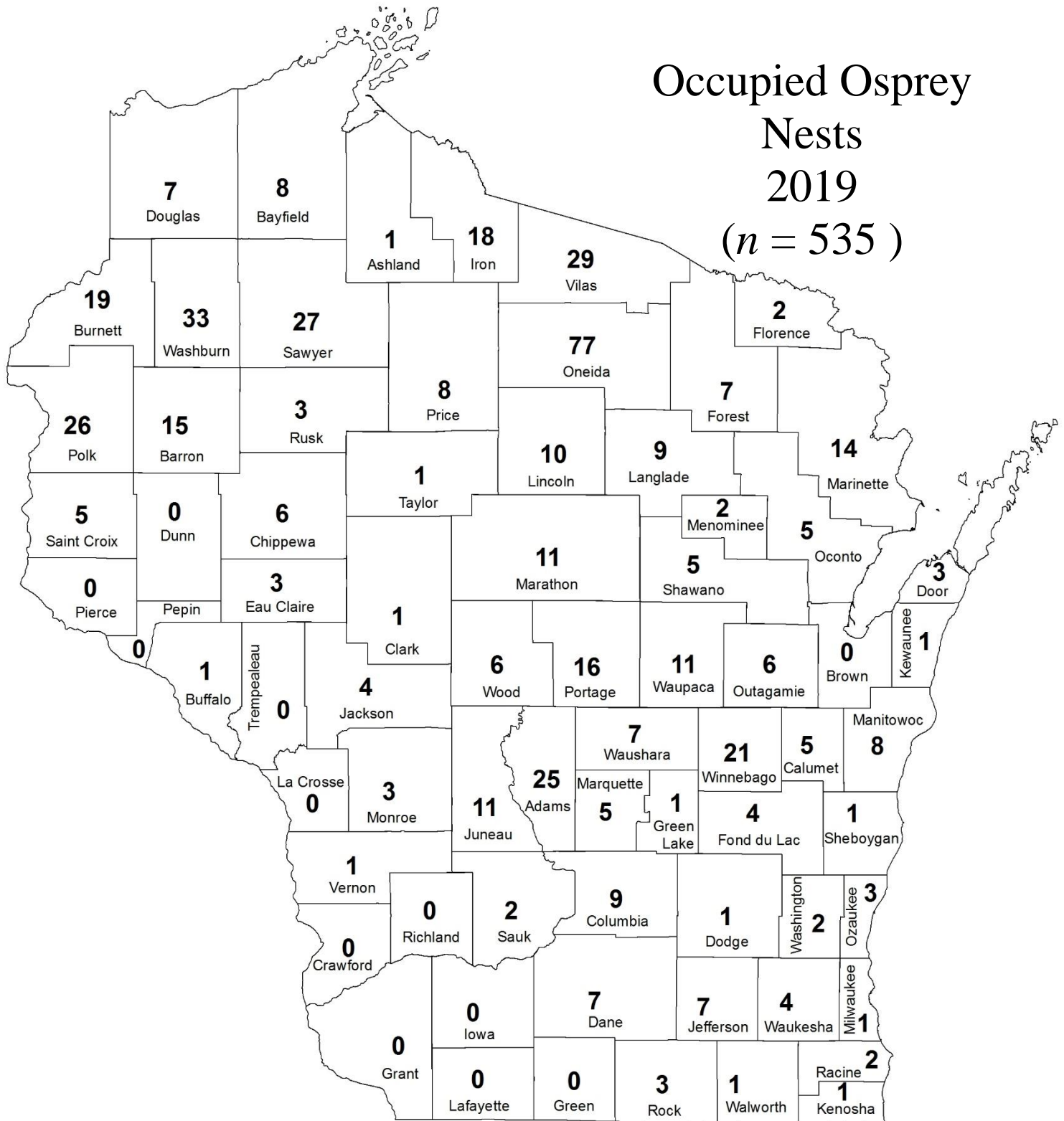


Figure 3. Occupied osprey nests where the observer recorded at least one of the following: a repaired nest, an incubating adult, eggs, or young in the nest.

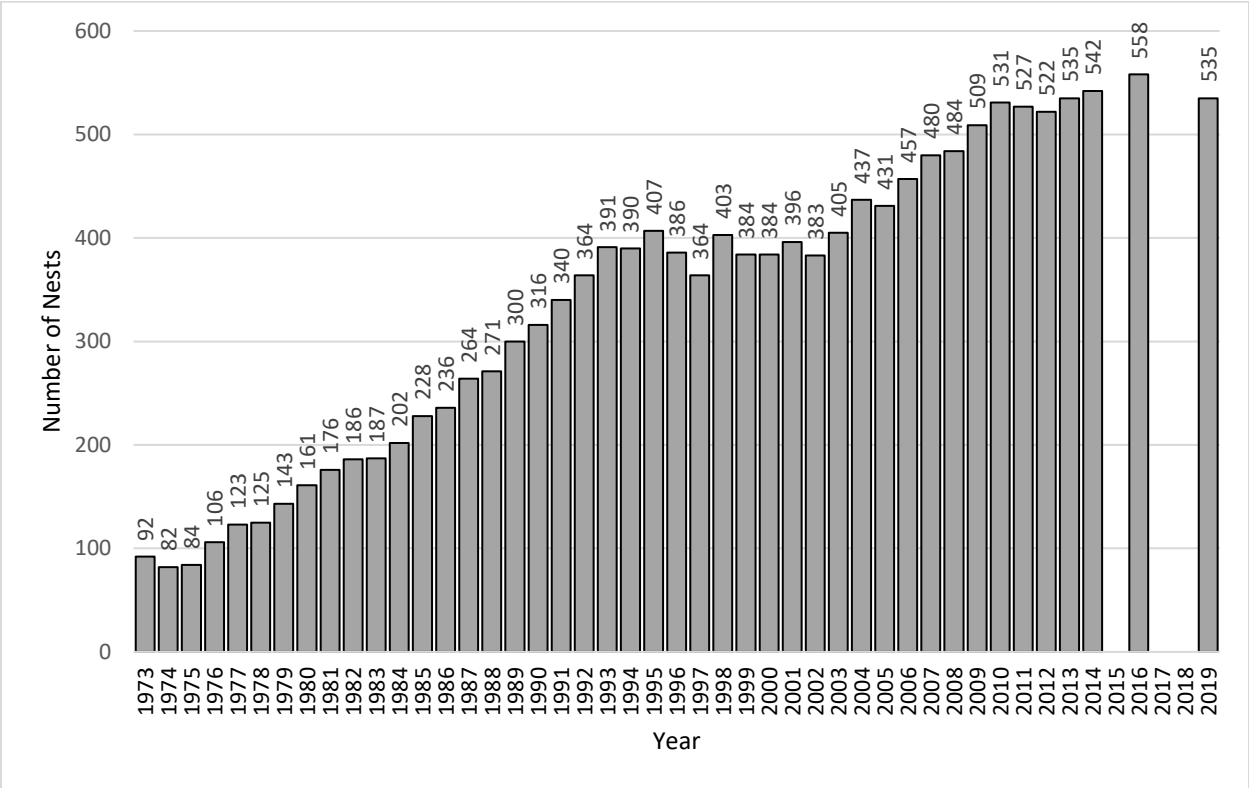


Figure 4. Occupied osprey nests in Wisconsin, 1973-2019. No statewide osprey surveys were completed in 2015, 2017, or 2018.

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. 11/2019) contact:

Area 1

Ryan Magana, 715-635-4153
DNR, 810 W Maple St.
Spooner, WI 54801
Ryan.Magana@wisconsin.gov

Area 2

Skyler Vold, 715-493-0484
DNR, 107 Sutliff Ave.
Rhineland, WI 54501
Skyler.Vold@wisconsin.gov

Area 3

Joseph Henry, 920-662-5194
DNR, 2984 Shawano Ave
Green Bay, WI 54313
Joseph.Henry@wisconsin.gov

Area 4

Jim Woodford, 715-365-8856
DNR, 107 Sutliff Ave.
Rhineland, WI 54501
James.Woodford@wisconsin.gov

Area 5a

Tyler Boudry
DNR, 3550 Mormon Coulee Rd.
La Crosse, WI 54601
Tyler.Boudry@wisconsin.gov

Area 5b

Dean Edlin, 608-685-3252
DNR, PO Box 88
Alma, WI 54610
Dean.Edlin@wisconsin.gov

Area 6

Rich Staffen, 608-266-4340
DNR, PO Box 7921
Madison, WI 53707
Richard.Staffen@wisconsin.gov

Area 7

Sharon Fandel, 608-275-3207
DNR, 3911 Fish Hatchery Rd.
Fitchburg, WI 53711
Sharon.Fandel@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

Eagle Carcass Submissions Required for:

**Banded Eagles*

**Potential Law Enforcement cases*

**Eagles found dead within 5 miles of the lower Wisconsin River or the Fox River from Dec.1st – March 31st*

