

2013 Nebraska Bald Eagle Nesting Report



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The Bald Eagle (*Haliaeetus leucocephalus*), a species once threatened with extinction, has increased throughout North America since the mid- to late 20th Century. In Nebraska, the Bald Eagle bred historically, but was absent as a breeder for most of the 20th Century. The first active modern Bald Eagle nest in Nebraska was near Valley, Douglas County in 1991 (Farrar 1991). Since 1991, the number of Bald Eagle pairs nesting in Nebraska has increased (Jorgensen et al. 2010, 2011). In 2007, the Bald Eagle was removed from the federal list of threatened and endangered species. The following year it was removed from the Nebraska list of threatened and endangered species. Even though Bald Eagle numbers have surpassed recovery goals, annual statewide nest monitoring has continued and is coordinated by the Nebraska Game and Parks Commission's (NGPC) Nongame Bird Program. In this report we present results from the 2013 Bald Eagle nest monitoring in Nebraska.

METHODS

In 2013, we collected and compiled Bald Eagle nesting data following the same methods used in 2012 (Jorgensen and Dinan 2012). Nesting data was collected in two ways: 1) we conducted targeted surveys of known nests and along river corridors and 2) we compiled information provided by others. The principal objective of nest monitoring in 2013 was to determine nest locations and whether Bald Eagle nests were active. We defined an active nest as a nest where a pair of adult Bald Eagles is engaged in breeding activity such as incubating eggs or tending to young. We did not monitor active nests throughout the nesting season to determine nest productivity, but chick and fledgling numbers were recorded opportunistically if and when observed.

Targeted surveys consisted primarily of driving public roads, locating known nests and searching for new nests. A small proportion of targeted surveys were conducted by kayak. We defined a known nest as one present and observed prior to 2013. We defined a new nest as a nest that was documented for the first time in 2013. Vehicle surveys were conducted in March and April before visibility of nests within the interior of trees was reduced by leaves. We conducted targeted surveys by vehicle along the Loup, Elkhorn, Nemaha, Republican, and a small portion of the Platte and Missouri rivers. We used ArcGIS (version 10.1) to develop maps of river corridors with locations of nests active in 2012. We also uploaded known nest locations to a handheld Global Positioning System (GPS). We used the known nest locations and maps, and systematically drove county roads along rivers. We navigated to known nests and also actively searched for Bald Eagles and new nests. Bald Eagle nests are large and distinctive, and are often visible from a distance (e.g., > 1 km). If a Bald Eagle was observed we scanned the area for a nest using binoculars and/or a spotting scope. If a nest was observed we used a spotting scope to search for Bald Eagles in the immediate vicinity of or on the nest. Bald Eagles sitting on nests were suspected of incubating eggs and the nest/breeding pair was considered active. If we observed adult Bald Eagles near the nest but an eagle was not on the nest or tending to young, we recorded the nest as occupied with unknown activity. An occupied nest is defined as a nest with one or more adult Bald Eagles present during breeding season (USFWS 1983); this includes pairs constructing practice nests. We returned to nests with unknown nest activity at a later date to determine whether it was active.

Kayak surveys were conducted along the Lower Platte River in June. We conducted kayak surveys using a similar protocol as vehicle surveys. We kayaked downstream and navigated to known Bald Eagle nests. We also searched for new nests. We observed all nest locations using binoculars.

Additional nests were monitored by personnel from the National Park Service–Missouri National Recreational River (NPS–MNRR), Platte River Recovery Implementation Program (PRRIP), NGPC, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Nebraska Public Power District, Nebraska Department of Roads and trained volunteers. Biology students from Concordia University, under the

direction of Dr. Joseph Gubanyi, also surveyed nests in southeast Nebraska. Surveys methods used by others were similar to our methods, but the type of data provided varied. We evaluated the data to determine whether a nest was active. All data were recorded in a database housed at the NGPC in Lincoln.

We used ArcGIS (version 10.1) to show the spatial distribution of active Bald Eagle nests in Nebraska in 2013. We compared the number of surveyed and active nests in 2013 to previous years. We determined the number of active and new nests along each river system. We also determined the number of nests that were surveyed by each entity and the number of active nests in each county.

RESULTS

A total of 153 nests were surveyed and 102 of these nests were determined to be active in 2013 (Figure 1). Active nests were distributed across the state with highest numbers observed in eastern Nebraska. A large proportion of nests were located along river corridors (Figure 2, Table 1). Thirty-three new nests were documented for the first time in 2013; 26 of these nests were active and 7 were inactive (Table 1). We surveyed 93 nests during our targeted surveys, NPS–MNRR surveyed 30 nests, PRRIP surveyed 11 nests, and 19 nests were surveyed by others (Table 2).

During targeted surveys we recorded 63 active nests. Targeted surveys yielded 29 active nests along the Loup, North Loup, Middle Loup, and South Loup rivers, six active nests along the Elkhorn River, four active nests along the Nemaha and Blue rivers, two active nests along the Republican River, seven active nests along the Lower Platte River, one active nests along the Central Platte River, five active nests along the North Platte River, and three active nests along the Missouri River. We also recorded six additional active nests that were found outside of river corridors near lakes and streams.

The NPS–MNRR recorded 12 active nests; seven along the Missouri River in northeast Nebraska and five along the Niobrara River. PRRIP recorded eight active nests along the Central Platte River (Platte River Recovery Implementation Program 2013). Nineteen additional nests were reported as active.

Since 1989, Bald Eagles have constructed nests in 65 of the 93 counties in Nebraska. Active nests have been recorded in 59 of the 93 Nebraska counties (Table 3). In 2013, active nests were recorded in two counties, Kearney and Franklin, where active Bald Eagle nests were not documented previously. PRRIP recorded the first documented record of an Eagle nest in Kearney County; this nest was active and produced 2 fledglings. The first Bald Eagle nest in Franklin County was recorded in 2003, but the nest discovered this year was the first nest that was active.

Nests have not been monitored for reproductive success for several years, but chick and fledgling numbers were recorded opportunistically if and when they were observed. We recorded 51 fledgling Bald Eagles in 2013. From 1991 to 2013, at least 809 fledgling Bald Eagles have been known to be produced in Nebraska.

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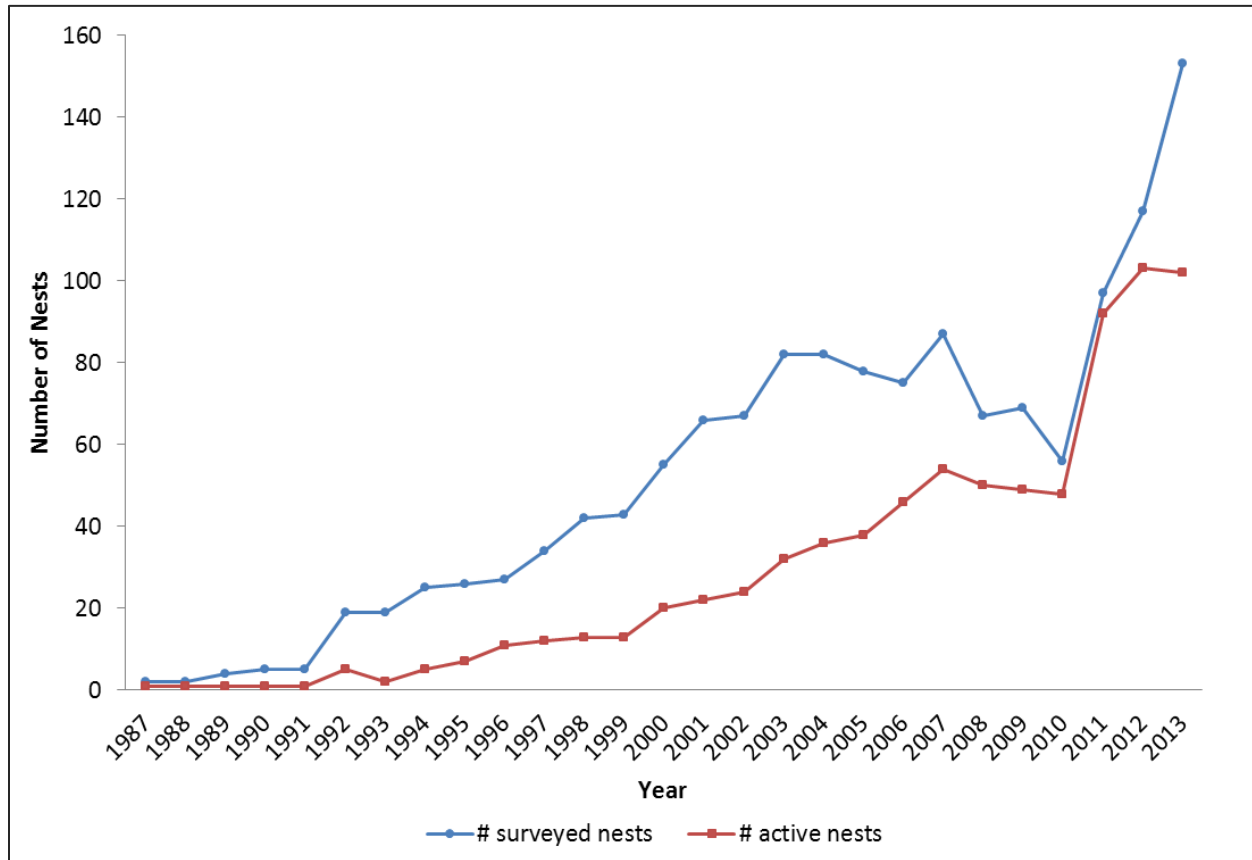


Figure 1. Number of Bald Eagle nests surveyed (blue line) and number of active nests (red line) in Nebraska from 1987 - 2013.

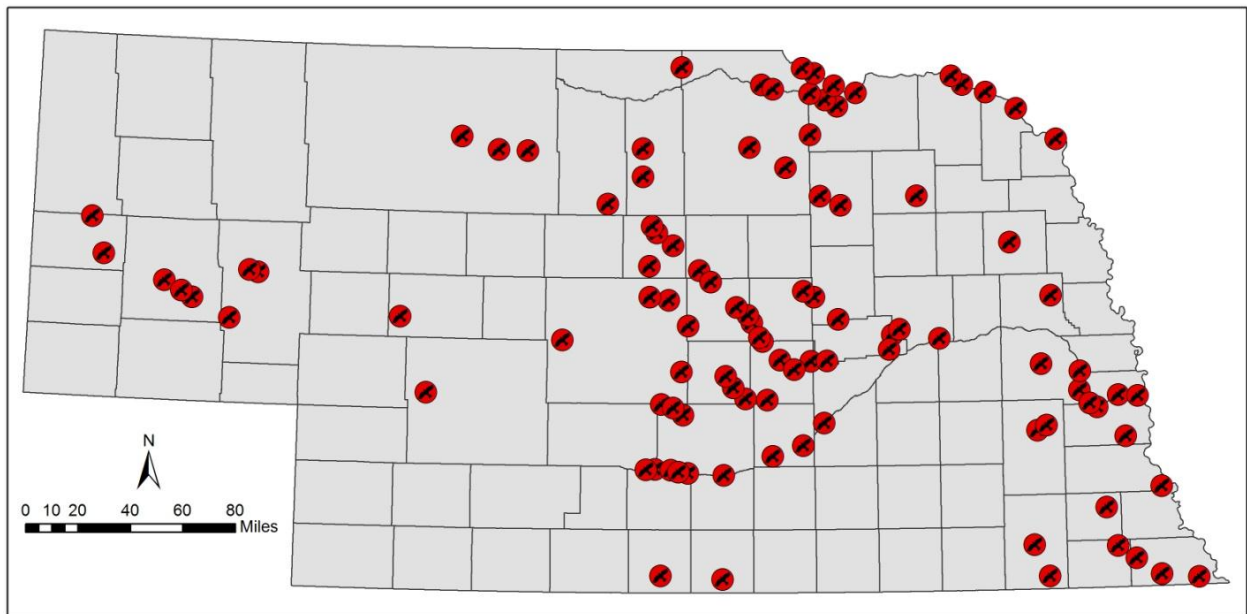


Figure 2. Spatial distribution of active Bald Eagle nests in Nebraska in 2013. Red icons are 2013 active nest locations.

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Table 1. Number of active and new Bald Eagle nests in each river system and other locations in 2013. The first number is the number of active nests and the second number is the number of new nests.

Nest Locations		
Missouri River (10,1)	Loup River (10,1)	Nemaha and Blue Rivers (8,4)
Niobrara River (6,1)	North Loup River (12,4)	Republican River (2,1)
Lower Platte River (7,2)	Middle Loup River (7,0)	Other Location (15,3)
Central Platte River (9,5)	South Loup River (4,0)	
North Platte River (5,2)	Elkhorn River (7,2)	

Table 2. Number of Bald Eagle nests surveyed and active in 2013.

Surveyor	Nests Surveyed	Nests Active
Nongame Bird Program	93	63
National Park Service	30	12
Platte River Recovery Implementation Program	11	8
Others	19	19
TOTAL	153	102

Table 3. Bald Eagle active nest totals by county in Nebraska in 2013. Counties in bold type are those with active Bald Eagle nests in 2013. The number in parentheses is the number of active nests in that county in 2013. Counties in red are those that did not have active nests in 2013 but have had an active nest in a previous year. Counties in blue are those that have not had an active nest before this year.

PANHANDLE	SANDHILLS	SOUTHWEST	SOUTH CENTRAL	NORTHEAST	SOUTHEAST
Banner	Blaine	Arthur	Adams	Antelope (2)	Butler
Box Butte	Boyd (4)	Chase	Buffalo (6)	Boone (2)	Cass (3)
Cheyenne	Brown (1)	Custer (5)	Clay	Burt	Douglas (1)
Dawes	Cherry (3)	Dundy	Dawson (2)	Cedar (2)	Fillmore
Deuel	Garfield (1)	Frontier	Franklin (1)	Colfax	Gage (2)
Garden (3)	Grant	Hayes	Furnas	Cuming (1)	Jefferson
Kimball	Holt (2)	Hitchcock	Gosper	Dakota (1)	Johnson (1)
Morril (3)	Hooker	Keith	Greeley (4)	Dixon (2)	Lancaster (2)
Scottsbluff (2)	Keya Paha	Lincoln (1)	Hall (2)	Dodge (1)	Nemaha
Sheridan	Logan	Perkins	Hamilton	Knox (7)	Otoe (1)
Sioux	Loup (4)	Red Willow	Harlan (1)	Madison	Pawnee (1)
	McPherson (1)		Howard (5)	Nance (2)	Polk
	Rock (2)		Kearney (1)	Pierce (1)	Richardson (3)
	Thomas		Merick (1)	Platte (3)	Saline
	Wheeler		Nuckolls (1)	Stanton	Sarpy (2)
			Phelps	Thurston	Saunders (2)
			Sherman (3)	Wayne	Seward
			Thayer		Washington
			Valley (2)		York
			Webster		

DISCUSSION

The number of Bald Eagle breeding pairs in Nebraska has increased substantially since 1991, when the first active, modern Bald Eagle nest was recorded. There has been an average annual increase of 4.6 active nests per year since 1991. The original recovery goal for Nebraska was 10 active breeding pairs (USFWS 1983). This goal was met in 1996 and has been surpassed every year since (Jorgensen et al. 2010). In 2001 the Bald Eagle was described as a “locally rare regular breeder (resident?) statewide” and “rare casual summer visitor statewide” (Sharpe et al. 2001). Bald Eagles are currently considered an uncommon breeder and summer visitor statewide (Jorgensen et al. 2010). Prior to 2011, the record number of active Bald Eagle nests recorded in Nebraska was 54 in 2007. This record of 54 active nests was easily surpassed in 2011 with 90 active nests recorded. This substantial increase in 2011 was believed to be due, in part, to increased survey effort (Jorgensen et al. 2011). Nest numbers continued to increase in 2012.

Even though 2013 was the second consecutive year in which more than 100 active Bald Eagle nests were recorded in Nebraska (Jorgensen and Dinan 2012), the total number of active nests decreased in 2013 from the previous year. While the decrease was minimal (1 nest) it is notable because it represents a departure from the general pattern of increasing nest numbers observed in past years when overall survey effort increased. In 2013, the number of nests surveyed increased markedly, 117 to 153, from 2012. Although survey methods limit our ability to make inferences, result from the 2013 survey is perhaps the first indication that the rate of increase in the number of active Bald Eagle pairs/nests may be leveling off. Future iterations of this survey and report will determine whether this is indeed the case or whether 2013 was a temporary pause in the general long-term pattern of increasing Bald Eagle nest numbers in the state.

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