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2007 Nebraska Midwinter Bald Eagle Survey

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Bald and Golden Eagles are species of conservation concern that regularly winter in Nebraska (Sharpe et al. 2001). The Nebraska Game and Parks Commission (NGPC) has conducted an annual statewide Midwinter Eagle Survey (MWS) since 1980. The Nebraska MWS is done in conjunction with a national survey coordinated by the U.S. Geological Survey. The purpose of the MWS is to determine the number and distribution of eagles wintering in Nebraska. Here we present results from the 2007 Nebraska MWS.

Methods

NGPC personnel conducted aerial surveys 3-5 January 2007 along all or portions of major river systems, including the North Platte, South Platte, Middle Loup, North Loup, and Republican systems, where wintering has been previously observed (see Figure 1). Ground personnel surveyed areas not covered by aerial surveys 3-10 January. During all surveys, observers recorded the number and ages (adult or immature [<4 years old] only) of eagles, as well as weather and climate data.

Results and Discussion

Maximum daily temperatures reported during the 2007 survey period were seasonably normal to warm, ranging between 30° and 50° F. Maximum daily temperatures ranged from 30° to 40° F during the aerial survey period and skies were generally clear. Minimum daily temperatures were as low as 7° on 3 January. The 2007 survey took place days after a severe ice storm in south-central Nebraska left many areas with > 0.5 inches ice cover. Snow covered points west (e.g. snow depth at Scottsbluff was 5 inches and North Platte was 9 inches). Eastern and northern Nebraska had little or no snow cover (e.g. Lincoln and Omaha had no snow cover). As in recent years, low water levels were noted at western storage reservoirs,

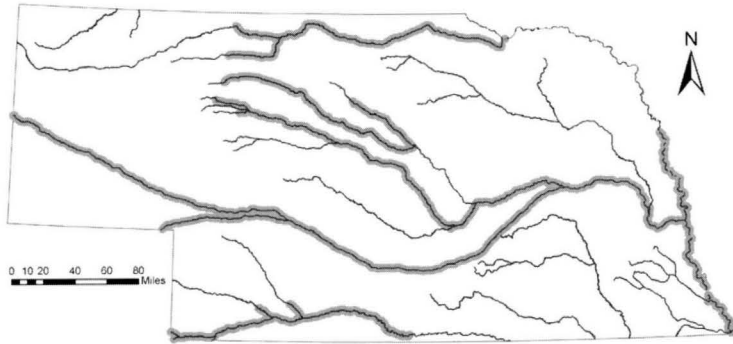


Figure 1. Major Nebraska rivers and portions (shaded gray) that were surveyed by aircraft during the 2008 mid-winter survey.

including Harlan County Reservoir and Lake McConaughy. Lake McConaughy was at approximately 30% of maximum storage capacity (elevation approximately 3210 feet above mean sea level). Lakes across southeast Nebraska were 25-75% ice covered. The Republican River and associated reservoirs were completely frozen. Sandhills lakes were completely frozen, while creeks in the Sandhills were open. The North Platte River had 30% ice cover. Medicine Creek Reservoir, Lake McConaughy, Lake Ogallala, Swanson Reservoir, and Branched Oak Lake were 75-100% frozen. The Niobrara and Loup Rivers were 50-75% frozen with channels of running water. The Platte River in eastern Nebraska, the Missouri, and the Elkhorn Rivers were 0-10% frozen.

During the 2007 Nebraska survey, a total of 808 Bald Eagles was counted (Figure 2). The highest concentrations were found at reservoirs, including 73 at Harlan County Reservoir, 56 at Sutherland Reservoir, and 53 at Lake North/Babcock. A total of 165 birds was tallied along the Missouri River. Overall totals represent a 6% decrease from the 2006 survey total of 858 Bald Eagles, a 9% decrease from the 1980-2006 statewide average of 888, and a 32% decrease from the previous 5-year average of 1186 Bald Eagles. Immature birds represented 28% ($n=224$) of all Bald Eagles identified to age ($n=800$) in 2007, representing a 4% decrease from the previous 5 year average of 233 immature birds. The total of 808 Bald Eagles is the 14th highest number recorded in Nebraska since surveys began in 1980. The 165 Bald Eagles counted along the Missouri river constitutes 20% of the 2007 statewide wintering numbers. The 2007 total represents a 59% decrease over the previous 5-year average of 404 birds along the Missouri River.

In addition to the Bald Eagles, 10 Golden Eagles were reported. This total included 8 adult Golden Eagles, 1 immature, and one of unknown age. Golden Eagles were recorded in Platte, Buffalo, Seward, Clay and Dawes Counties. Three Golden Eagles were recorded in Clay and three in Dawes.

Bald Eagle numbers have fluctuated widely from year to year likely in response to weather conditions, but numbers have generally increased. This is similar to trends noted throughout the contiguous 48 states, where numbers have increased 1.9% per year 1986-2000 (Steenhof et al. 2002).

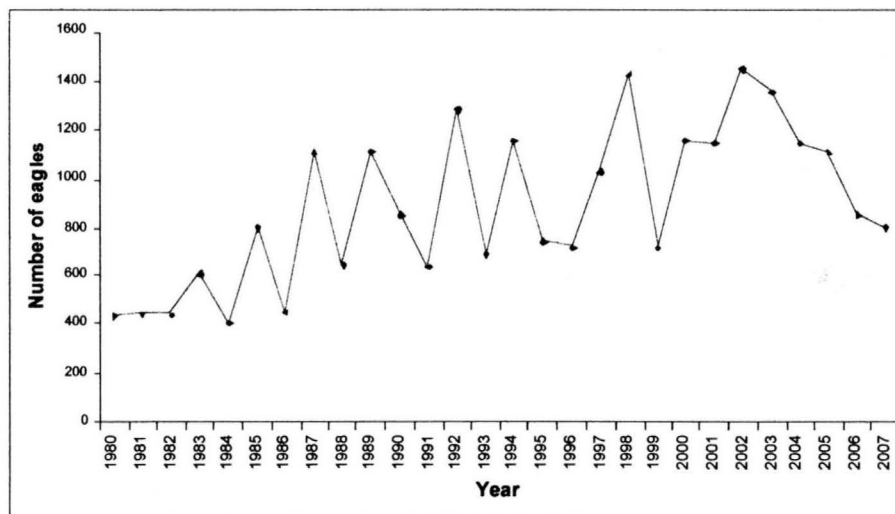


Figure 2. Number of Bald Eagles recorded on the Nebraska Mid-winter Eagle Survey 1980-2007.

Acknowledgment

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