

## **What do we really know about our eagles?**

### **Will eagles leave Sauk Prairie?**

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Assessing the impact of any development on eagles using Sauk Prairie during winter presumes that eagles choose the habitats they use. If habitat conditions for eagles change here, the logic goes, they will either shift to other habitats within our area (but away from the disturbance) or they will leave the area altogether. Though a sensible thought, is there any tangible evidence of these kinds of habitat shifts?

In the third article of this series eagles altered their distribution along the Lower Wisconsin River as ice cover changed. When lower stretches of river froze, eagles abandoned the lower reaches (such as Lone Rock) and concentrated near the dam at Prairie du Sac. Evidence, therefore, supports the idea that eagles are sensitive to changes in their winter habitat and will shift when habitat conditions change.

How many eagles that habitats near Sauk Prairie will support is less clear. Roost counts have tallied as many as 150 eagles using night roosts near Sauk Prairie. The impact of losing Eagle Island as day perching habitat, if that occurs as a result of disturbance from the Nonn development, is hard to measure. No direct data exists to determine the maximum number of eagles that can use the Sauk Prairie area at any one time nor do any data suggest what kind of incremental impact may occur if use of eagle island declines.

This information refers to movements of eagles within the Sauk Prairie region. What data exist that describe movements of eagles between Sauk Prairie and other regions? These data were presented in Ferry Bluff Eagle Council's biological assessment regarding the Nonn Development.

### **Habitat Use of Sauk Prairie versus the Upper Midwest**

Eagle numbers in the Sauk Prairie area vary dramatically among years (Figure 1). This variation in eagle numbers, however, does not match the consistent, annual increase in Wisconsin's breeding eagle population (Figure 2). Similar increases in the breeding eagle populations of other Midwestern states have occurred as well. Eagles captured in winter in Sauk Prairie have also been found summering in the Upper Midwest, so the eagle population trends of the Upper Midwest should relate to eagle numbers in Sauk Prairie during winter if population alone determined habitat use. Clearly, the number of eagles that winter in Sauk Prairie is influenced by something other than the size of the eagle population in the Upper Midwest. Presumably, habitat conditions in the Sauk Prairie area attract more birds in some years than others, or habitat conditions outside of Sauk Prairie do the inverse. Direct evidence of eagles moving between winter areas in the Sauk Prairie and other winter areas in the Upper Midwest come from data on 17 radio-tracked eagles captured in the Sauk Prairie area. In this study eagles captured in the Sauk Prairie area readily moved as far north as Stevens Point and the Chippewa River and as far south as Des Moines, Iowa (Figure 3).

Though eagles would often move out of the Sauk Prairie area in winter, they would also return often during the same winter period. Of 17 eagles captured in Sauk Prairie, 15 eagles (88%) returned to Sauk Prairie the following winter. Ten of the 17 captured eagles (59%) returned to Sauk Prairie in more than one winter following the winter they were captured. Conversely five additional eagles that were injured, rehabilitated, and released in Sauk Prairie during winter were also tracked at the same time that the wild-caught eagles were monitored. None of these 5 rehabilitated eagles returned to Sauk Prairie during subsequent winters. A high fidelity of eagles to the Sauk Prairie area in winter, coupled with the birds demonstrated ability to wander widely outside of the Sauk Prairie area during any one winter suggests that habitat conditions, with respect to eagles within Sauk Prairie do change and that eagles respond to those changes. Eagles that were rehabilitated and released in Sauk Prairie (i.e. they did not choose to be in Sauk Prairie) had no fidelity to this winter area.

Collectively, these data suggest that eagles are very sensitive to changes in their winter habitats and that they will move if habitat loss becomes permanent.

Figure 1. Maximum number of eagles counted in the Sauk Prairie area: 1988 - 2006. Data from Ferry Bluff Eagle Council.

Figure 2. Number of occupied eagle territories in Wisconsin: 1973 - 2004. Data from the Bureau of Endangered Resources, Wisconsin DNR.

Figure 3. Locations of 17 radio-tracked eagles found outside Sauk Prairie after being captured near Sauk City.