

# A tribute to wetland management

A muskrat makes its way through a marsh at Sandhill Wildlife Area, home to dozens of wildlife, bird and plant species.

SHANE RUCKER

## SANDHILL'S BOUNDLESS WILDLIFE IS NO ACCIDENT.

*Julie A.M. Hess and Anna N. Hess*

The ethereal call of the sandhill crane resonates across the central Wisconsin wetlands, just as it has for thousands of years. It is easy to take this beautiful sight and sound for granted, but over the last century the changing marsh landscape has not always been suitable for the marsh wildlife that many Wisconsinites have come to expect.

Central Wisconsin has the highest concentration of wetlands in the state. The Sandhill Wildlife Area, located near Babcock in Wood County, has been famous for these features since the property became a wildlife area in 1962.

Although on the surface it appears that these magnificent areas are self-sustaining, these marsh communities require ongoing wetland management to provide nesting and migratory habitat for various wetland-dependent birds. Flowage management of these emergent

marsh/wetland communities not only helps birds but also helps support a wide range of other wildlife such as furbearers, turtles and frogs.

### **Sandhill through time**

The Sandhill Wildlife Area was once part of the bed of the former Glacial Lake Wisconsin. This ancient lake once covered approximately 1,800 miles and ranged from 70 to 150 feet deep.

Geologists believe that around 14,000 years ago an ice dam at the lower end of

the lake failed, leading to a catastrophic draining in the span of seven to 10 days. The lake left behind enormous deposits of sand, silt and clay that eventually became the extensive marshes and sandy upland forests of the wildlife area.

Early settlers logged the white pine, red pine and oak of the area from 1850 to 1880. Once the timber was removed farmers attempted to crop the marshes, thinking the dark organic marsh soils would support useful farming endeavors. These industries led to the full-scale draining of the swamps in the early 1890s. Steam-powered dredgers dug hundreds of drainage ditches, some still visible today.

Unfortunately for the farmers, these dark soils were highly acidic and drained poorly. These conditions along with very short growing seasons, killing frosts, uncontrolled fires and eventually the Great Depression forced many farmers to vacate their properties. The scars from these endeavors can still be seen today, as straight-lined canals and dikes, stretching for many miles.

During the 1930s and 1940s, Wallace and Hazel Grange purchased a total



Canals, ditches and dikes at Sandhill Wildlife Area are remnants of the futile farming endeavors attempted on the lands in the early 1900s.

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of 9,150 acres of the abandoned marsh properties. The Granges, part of the early Wisconsin conservation group that included Aldo Leopold, enclosed the land with deer-proof fencing and established the Sandhill Game Farm.

Over the course of their ownership, the Granges did extensive work on the ditches and dikes to return water to the marshes. The couple managed the property for 24 years, raising deer, grouse and waterfowl for commercial purposes as well as studying and writing important game management guidelines.

In 1962, the property was sold to the state with the stipulation that it would be used as a wildlife demonstration area and a living laboratory. Sandhill's research profile has been vast, with extensive investigations of deer, ruffed grouse, beaver, fisher, porcupine, snowshoe hare, northern long-eared bat, golden-winged warbler and turtles.

**Key habitat area**

Among some of the many notable features of Sandhill is the expansive Gallagher Flowage. This flowage is 2,000 acres

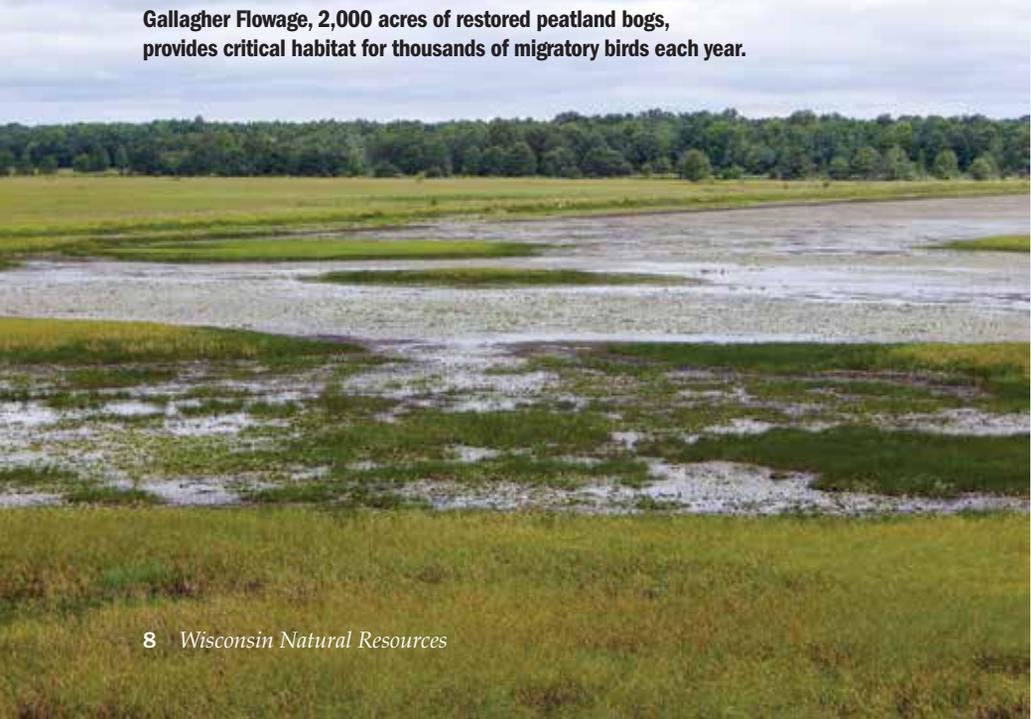
of restored ditched and diked peatland bogs that serves as a critical nesting and staging area for thousands of migratory birds. These birds include the sandhill crane, Canada goose, whooping crane, American bittern, sora, green heron, wood duck, mallard, blue-winged teal, ring-necked duck and the American coot. The flowage also supports populations of muskrat, mink, otter and beaver.

In accordance with the original property deed with the Granges, this specific area is set aside as a refuge area to wildlife and no hunting or trapping is allowed. Thus, the area serves as important habitat for species, allowing populations to propagate and spread into surrounding areas.

Open water areas of this marsh include emerged, submerged and floating aquatic plants. Common species include wild rice, cattail, bulrush, bur-reed, water lilies, water shield and pondweeds. The Gallagher Marsh also hosts the endangered spotted pondweed and the threatened algae-leaved pondweed.

Over time, several of these plant species, specifically the water lilies and water shield, have become too thick on the surface and negatively impact the quality of the marsh habitat for animals and other plant life. Water lilies and water shield are both native plants to Wisconsin. The yellow water lily is identified by the split in the leaf at the edge where the underwater stem attaches to the floating pad.

**Gallagher Flowage, 2,000 acres of restored peatland bogs, provides critical habitat for thousands of migratory birds each year.**



JULIE HESS



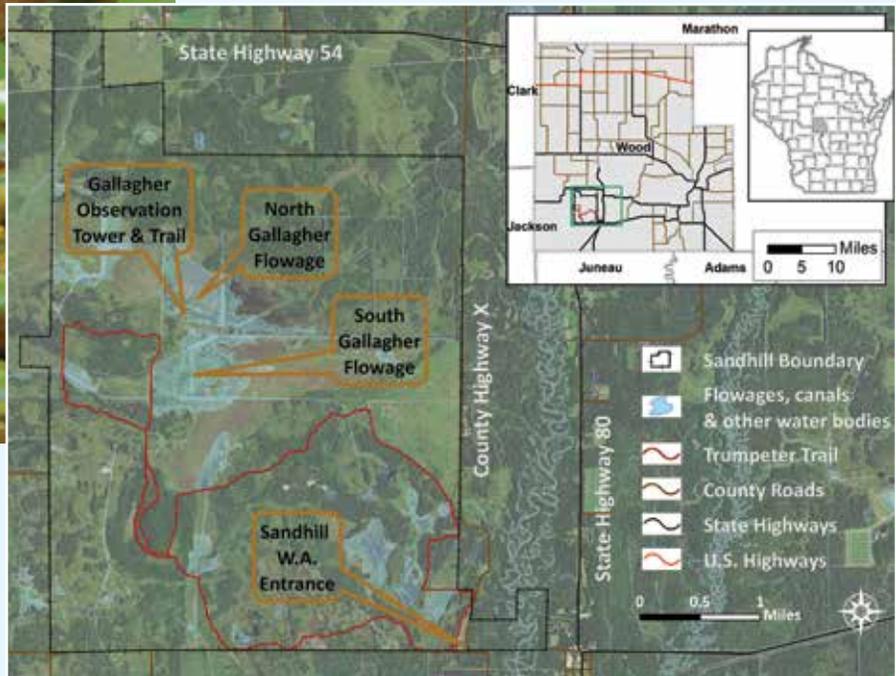
Water lilies grow thick in Gallagher Marsh.

JULIE HESS

Water shield can easily be mistaken for water lily, but the leaves of its pad are oval. Water shield, also known as dollar pad or water target, also has a unique thick coating of gelatinous slime that covers the young stems and the undersides of the leaves.

Due to its importance with wildlife, the Gallagher Marsh is subject to special flowage management techniques in order to maintain the diversity of these peatlands. Both water shield and water lilies propagate through rhizomes in the marsh bottom sediments. By drawing down the water levels for extended periods and drying out the soil, these rhizomes die out.

In April 2017, the Sandhill staff began the first water drawdown of the Gallagher Marsh in 15 years. Water levels on the marsh can be increased or decreased through several structures located along



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Sandhill Wildlife Area comprises more than 9,000 acres in central Wisconsin's Wood County.

the internal dike system. These gates are slowly opened to release water in a controlled manner. The gates remained open throughout the summer growing season, creating mud flats by mid- to late summer. The marsh levels will be held down over winter.

To minimize the impact of low water levels on this important sandhill crane staging area, the water levels will be maintained in the adjacent flowages surrounding the Gallagher Marsh basin. Also, water is being maintained in the

ditches surrounding the marsh to mitigate impacts on the numerous turtles, frogs and other reptiles that make the marsh home.

Gallagher Marsh is at the head of the Sandhill watershed, so filling the basin is dependent on rainfall and winter snowpack. In spring 2018, the gates to the marsh will be closed, allowing the marsh to refill with water. During an average Wisconsin year, the basin should be filled back to normal levels by next summer, with more open water for the wildlife that use this important wetland. 🦢

*Julie Hess belongs to the Friends of Sandhill and is a senior paper process engineer, moonlighting as a naturalist during her spare time. Anna Hess is a natural resource manager for the Minnesota DNR. Sandhill Wildlife Area staff contributed information on the workings of the site's flowages.*

During the planned Gallagher Marsh drawdown, water levels sufficient to support the sandhill crane and other species will remain in adjacent areas.



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### >>> MORE INFORMATION

Sandhill Wildlife Area is in Wood County in central Wisconsin, about 17 miles west of Wisconsin Rapids, with headquarters and visitor's entrance at 1715 County Highway X, Babcock. For details, including more about its history and wetlands management, visit [dnr.wi.gov](http://dnr.wi.gov) and search "Sandhill."