

# Wisconsin Sharp-tailed Grouse Survey 2016

By Scott Hull and Krista Pham

## **Abstract**

Surveys for sharp-tailed grouse (*Tympanuchus phasianellus*) were conducted during March and April of 2016. The total number of dancing males on managed properties in Wisconsin decreased from 2015 (184) to 169 males recorded in 2016. The number of grouse on managed properties remains below historic levels, but is 23.2% higher than the average number of dancing males found on these areas between 2011 and 2015 (137.2). Populations on these managed lands have been declining overall since 1998.

Surveys on non-managed lands throughout the sharp-tailed grouse range in Wisconsin showed that the number of birds observed in 2016 (38) decreased from 2015 (55). The increase of 25 birds observed from 2013 (29) to 2014 (54) is likely due to a combination of a higher bird population and an increase in survey effort in 2014. Additional surveys on private lands in Rusk County, including portions of old DMUs 19, 24, and 25, showed a slight increase in the number of males observed (10) compared to 2015 when 9 birds were recorded, well below the 64 individuals counted in 2008.

## **Methods**

Dancing grounds included in annual surveys are selected based upon known presence, rather than on a spatial sampling design. The survey data collected is not a complete census of the entire sharp-tailed grouse population in the state. Additionally, it is not necessarily representative of the broader landscape that sharp-tails are known to occupy. However, it is believed that the majority of dancing grounds within each focus area are included, and ultimately dancing ground surveys help to provide an index to population abundance and allow wildlife managers to make informed management decisions for sharp-tailed grouse.

*Managed Properties* - Sharp-tailed grouse populations on managed properties are monitored by counting displaying males on dancing grounds. Known dancing ground locations are scouted for activity early in the season and any new dancing grounds located are added to the survey effort. Dancing grounds are approached on foot or by vehicle and observations are made from blinds placed on dancing grounds. Surveys are conducted during clear, calm mornings with winds <10 mph. Dancing ground counts are replicated, ideally a minimum of 3 times, to account for variation in the attendance of male sharp-tailed grouse. Surveys are completed during the peak of the breeding season, typically in late April, and during the time of highest activity, from 45 minutes before sunrise to 1-2 hours after sunrise. Male birds are identified with the aid of field glasses and the total (maximum) count of male birds observed is recorded. Although the Barnes Barrens Management Area in Bayfield County has been surveyed regularly for decades it was specifically added to the formal list of managed properties surveyed in 2014 (Table 1).

*Non-Managed Properties* - Sharp-tailed grouse surveys on unmanaged lands are concentrated within a portion of northwestern Wisconsin, primarily in game management units 2 and 9 (Figure 1). Surveys on private lands generally involve selecting one or more blocks of the best available habitat and then conducting listening (or scouting) routes along roads transecting those blocks. Dancing grounds located within habitat blocks are approached and birds are flushed. The total number of birds flushed from each site is counted. Because estimating the exact number of

males observed during a flush count may be unreliable, males are assumed to represent 75% of the total birds observed during these flush counts.

*Private Lands* - In 2008 additional survey efforts were started on non-managed lands within the North Central Forest, Northwest Sands, and Superior Coastal Plains Ecological Landscapes as well as private lands in portions of Rusk County. This effort was intended to update the current distribution of sharp-tailed grouse dancing grounds and in some cases estimate the total number of males on newly identified dancing grounds. Occupancy based surveys were piloted in the Northwest Sands blowdown area in 2011 and were formalized in 2014 through a collaboration with UW-Madison. Those results will be reported elsewhere.

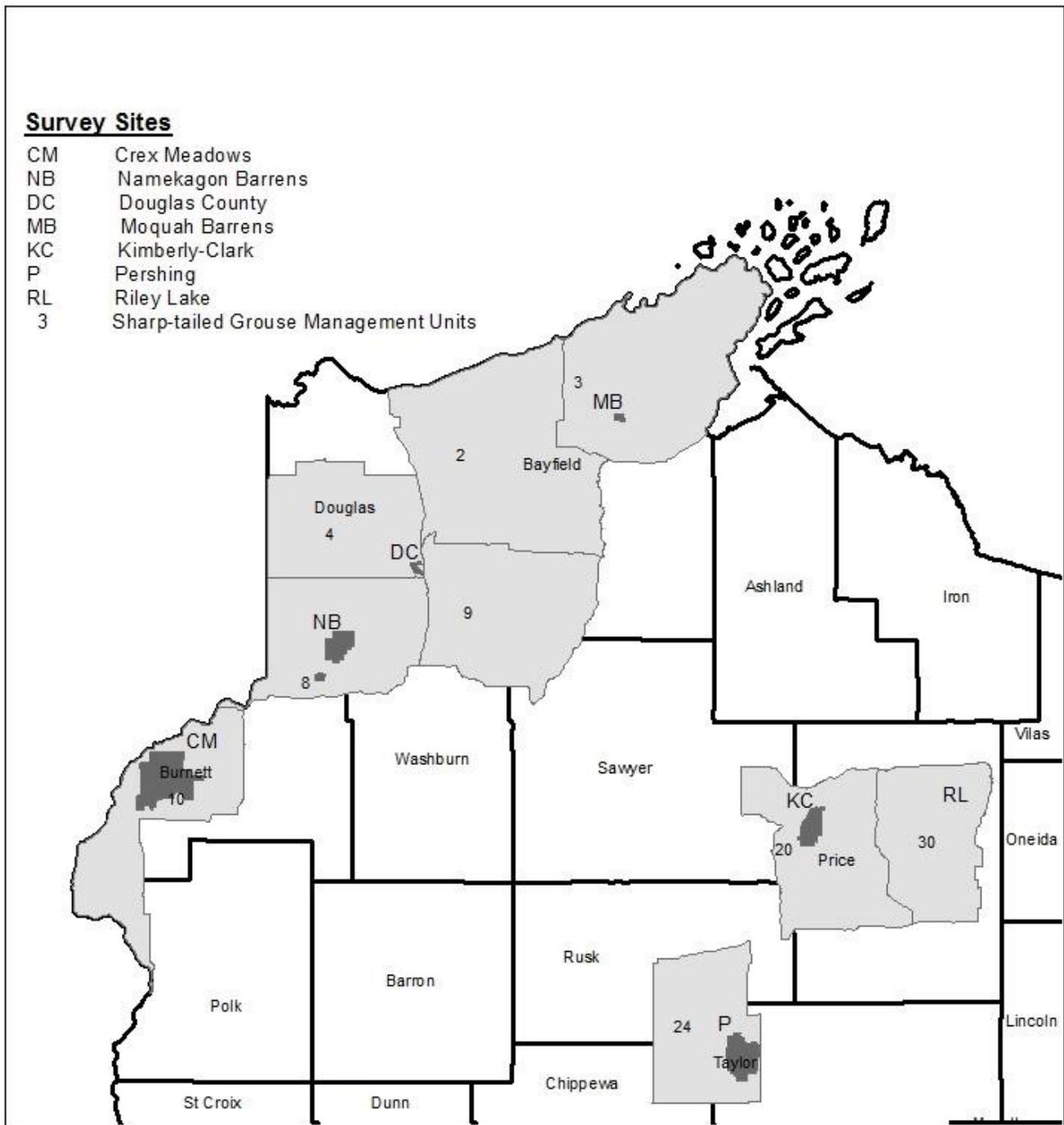
Surveys are a cooperative effort between DNR, USFS, GLIFWC, Northland College, members of the Wisconsin Sharp-tailed Grouse Society, and volunteers.

### **Results and Discussion**

The 2016 dancing ground surveys showed an 8% decrease in sharp-tail numbers on managed properties compared to 2015 (Figure 2, Table 1). Wood County and Dike Seventeen Wildlife Areas were not surveyed in 2015 and were removed from annual reporting because of extremely low numbers and low survey effort over the last decade. Information on those two properties can be found in previous annual survey reports.

Survey efforts on unmanaged lands resulted in a count of 38 sharp-tails in game management units 2 and 9. This count marks a decrease from 2015; the increase between 2013 (29) and 2014 (54) is likely a result of both a modest increase in actual sharp-tailed grouse and an increased survey effort in 2014.

Eight new dancing grounds with a total of 64 males were located on Rusk County private lands in 2008. Dancing males on those grounds declined 12.5% in 2009 when 56 males were observed, declined further in 2010 with only 39 males observed and again in 2011 when 26 sharp-tails were observed. The number of males observed on these grounds stabilized somewhat in 2012 at 25 males while 22 birds were observed in 2013. Additional survey efforts focused on the Spread Eagle Barrens Natural Area in 2010 yielded no sharp-tailed grouse observations.



**Figure 1.** Annual sharp-tailed grouse survey sites and defined management unit boundaries.

