

Wisconsin Sharp-tailed Grouse Survey

2023

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Abstract

Sharp-tailed grouse (*Tympanuchus phasianellus*) surveys are conducted each year in April and May. Surveyors locate sharp-tailed grouse dancing grounds, known as leks, and count the number of dancing males. Surveys are conducted on 3 different property types: DNR managed properties, non-managed properties, and on private lands.

In 2023 statewide, there was a 13% increase in the number of males observed compared to 2022. On DNR managed lands the survey documented a 19% increase, while non-managed property there was a 50% decline in the number of male sharp-tailed grouse observed compared to 2022. On private lands surveyed, for the second year in a row no grouse were detected compared to 1 male observed in 2021. It should be noted that this second-year increase in total survey numbers is coming off a long-term decline that might of stabilized within the last decade.

Methods

Sharp-tailed grouse surveys are conducted on dancing grounds, also known as leks. Dancing grounds included in annual surveys are selected based upon known presence, rather than on a spatial sampling design. The survey data is not a complete census of the entire sharp-tailed grouse population in the state. However, it is believed that most of the dancing grounds within each focus area are included. Ultimately, dancing ground surveys help to provide an index to population abundance, allowing wildlife managers to make informed management decisions for sharp-tailed grouse and help to target specific habitat management activities.

Sharp-tailed grouse populations are monitored by counting displaying males on dancing grounds. Dancing grounds are approached on foot or by vehicle and observations are made from blinds placed adjacent to 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 during the time of highest activity, from 45 minutes before sunrise to 1-3 hours after sunrise. Peak lekking period can vary annually but typically occurs from mid-April through mid-May. Birds are identified with the aid of binoculars or spotting scopes and the total (maximum) count of male birds observed is recorded (Table 1).

Sharp-tailed grouse surveys on new habitat 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 - Additional survey efforts were continued 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 (GMU 19, 24, and 25). This effort was intended to update the current distribution of sharp-tailed grouse dancing grounds.

Surveys are a cooperative effort between DNR, USFS, County Forests, Northland College, members of the Wisconsin Sharp-tailed Grouse Society, wildlife area associated Friends groups, and volunteers.

Results

On DNR managed properties, there was a 19% increase in the number of males observed in 2023 compared to 2022 (Figure 2, Table 1). Crex Meadows, Douglas County Wildlife Area, and Barnes Barrens all added new leks. Counts on Namekagon Barrens were nearly the same as in 2022; birds were again found on the South Unit (Namekagon Barrens) and for the first time on the developing Brule River LLC Five Mile Barrens, a rolling barrens managed property adjacent to Namekagon Barrens. These areas have undergone numerous habitat improvements and expansions in the past few years, and it is believed that birds may be responding positively to these management actions (Table 1).

Non-managed properties in GMU 2 and 9 showed a 50% decline in 2023 from the number observed in 2022. With a decline in 2023, the grouse numbers in GMU 2 and 9 are even further below the long-term trend. Loss of early successional habitat maturing into forest is believed to be the root cause. The 2013 Germann Road Fire, for example, had four leks in 2019, two in 2022, and one lek in 2023.

On private lands surveyed in Rusk County, zero dancing male birds were observed during the 2023 spring sharp-tailed grouse survey. Since surveys on private lands started in 2008, the number of grouse observed has decreased precipitously, from 64 birds detected in 2008, to one bird in 2021, and zero in 2022 and 2023.

Across all property types, surveys showed a 13% increase in the total number of sharp-tailed grouse observed in 2023 compared to 2022. Since 2008, the total number of dancing males observed has decreased 62% from 531 birds in 2008 to 202 birds in 2023.

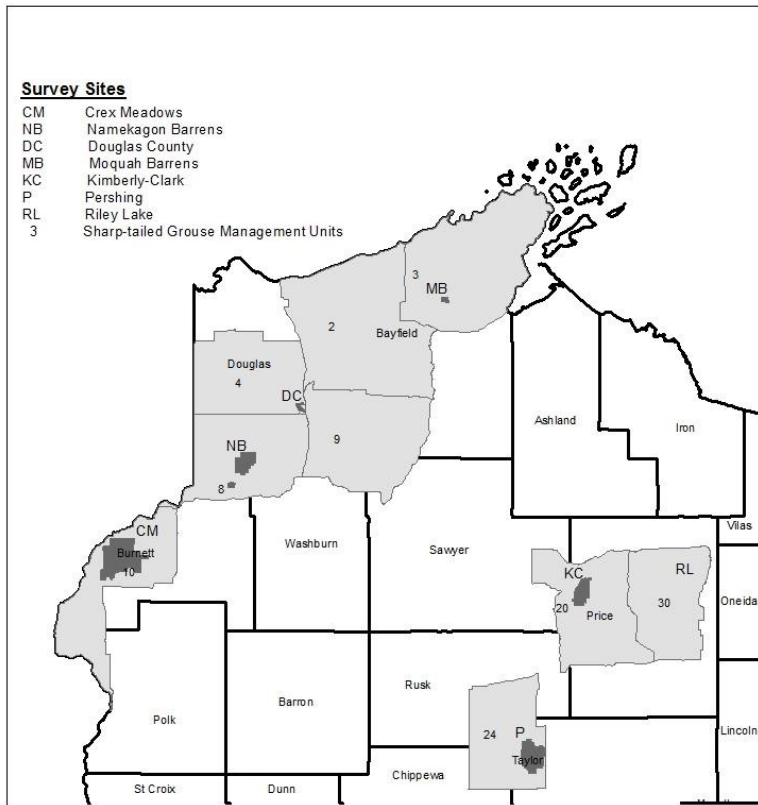


Figure 1. Sharp-tailed Grouse Management Areas and Game Management Unit boundaries.

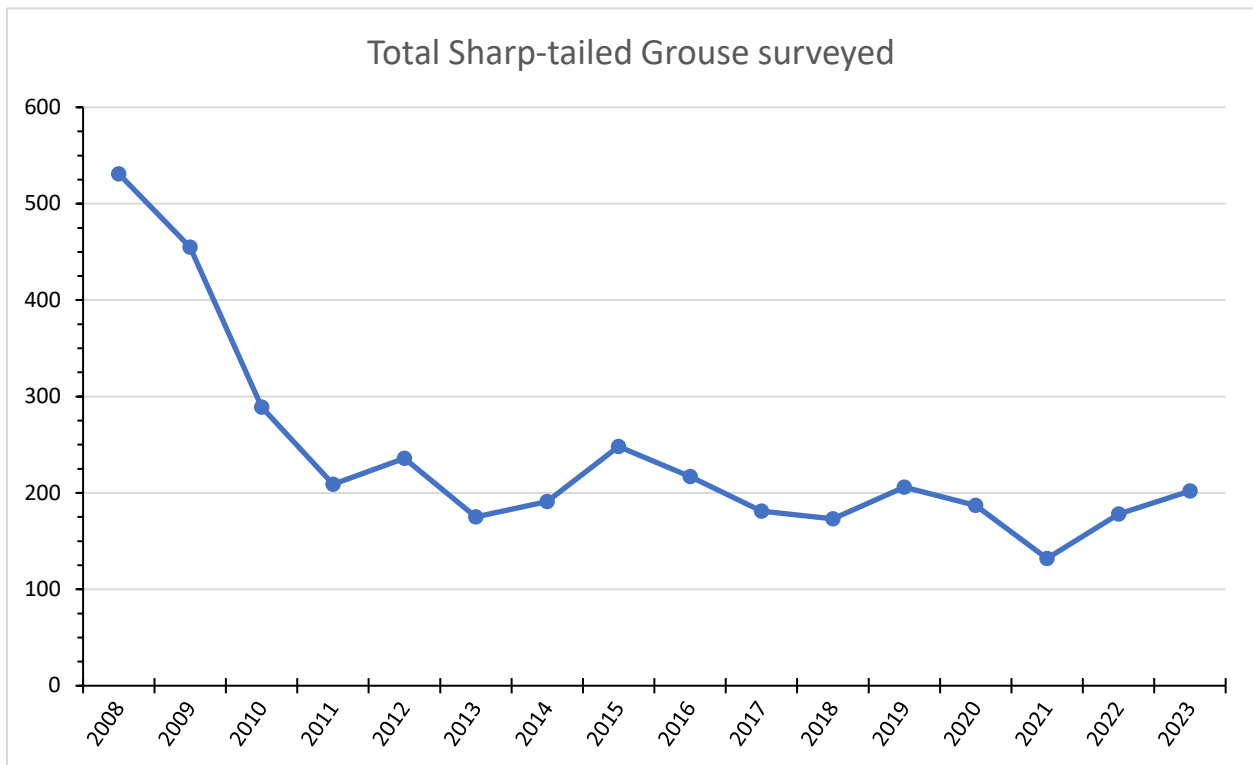


Figure 2. The number of male sharp-tailed grouse observed on all properties.

Table 1. *The number of dancing males observed on Sharp-tailed Grouse Management Areas.*

Managed Property	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Crex Meadows W.A.	45	40	24	20	16	24	14	5	16	25	22	17	25	25	19	68	76
Douglas County W.A.	28	28	41	36	42	25	25	23	31	24	14	23	25	13	8	6	18
Kimberly Clark W.A.	9	10	10	11	n/a	8	na	3	4	6	0	0	0		0	0	0
Moquah Barrens W.M.A.	6	3	6	7	5	6	3	4	3	2	10	15	23	22	7	3	3
Namekagon Barrens W.A.	51	47	36	43	21	40	42	56	81	62	47	44	53	56	57	66	65
Five Mile Barrens, Brule River LLC																	2
Pershing W.A.	28	27	20	14	9	3	7	5	3	3	1	0	0		1	0	0
Riley Lake W.M.A.	25	27	37	31	15	33	25	19	27	16	21	6	24	12	7	6	12
Dike Seventeen	2	1	1	0	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		n/a	n/a	n/a
Barnes Barrens	15	16	27	n/a	n/a	6	8	10	19	31	23	12	11		4	15	19
Total	209	199	202	162	108	145	124	125	184	169	138	117	161	128	103	164	195
% Change	42%	-5%	2%	-20%	-33%	34%	-14%	1%	47%	-8%	-18%	-15%	38%	-20%	-20%	59%	19%