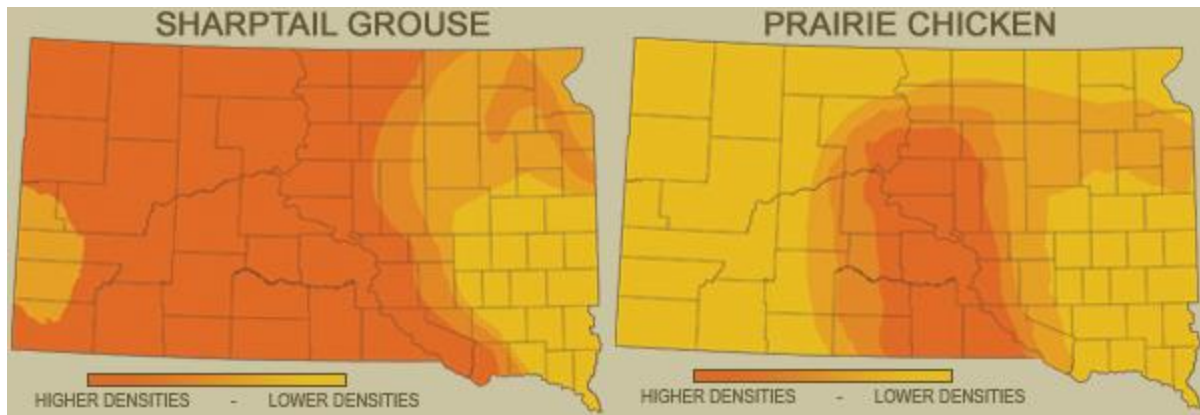


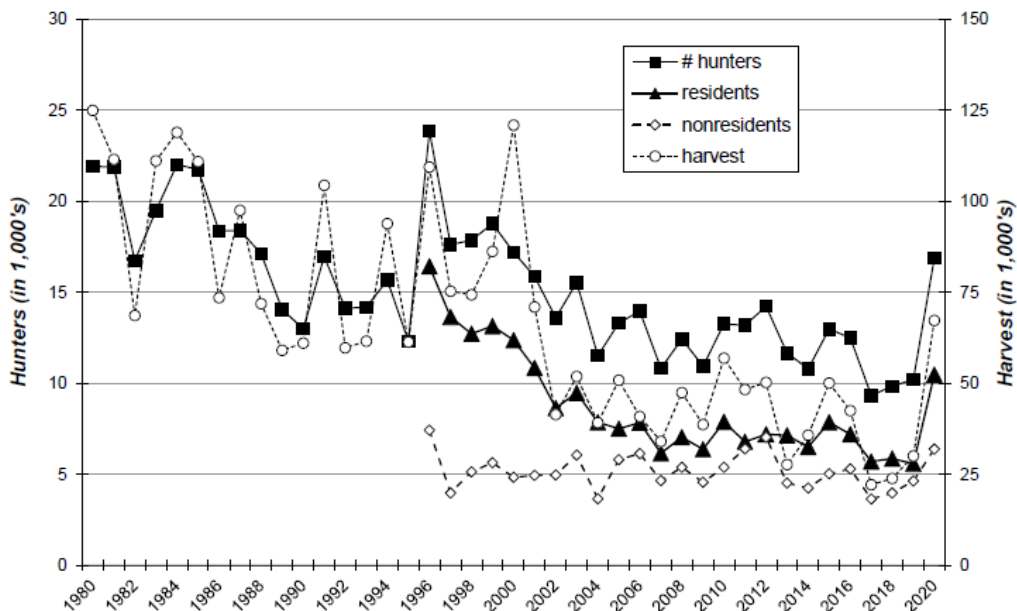
2021 Prairie Grouse Hunting Forecast

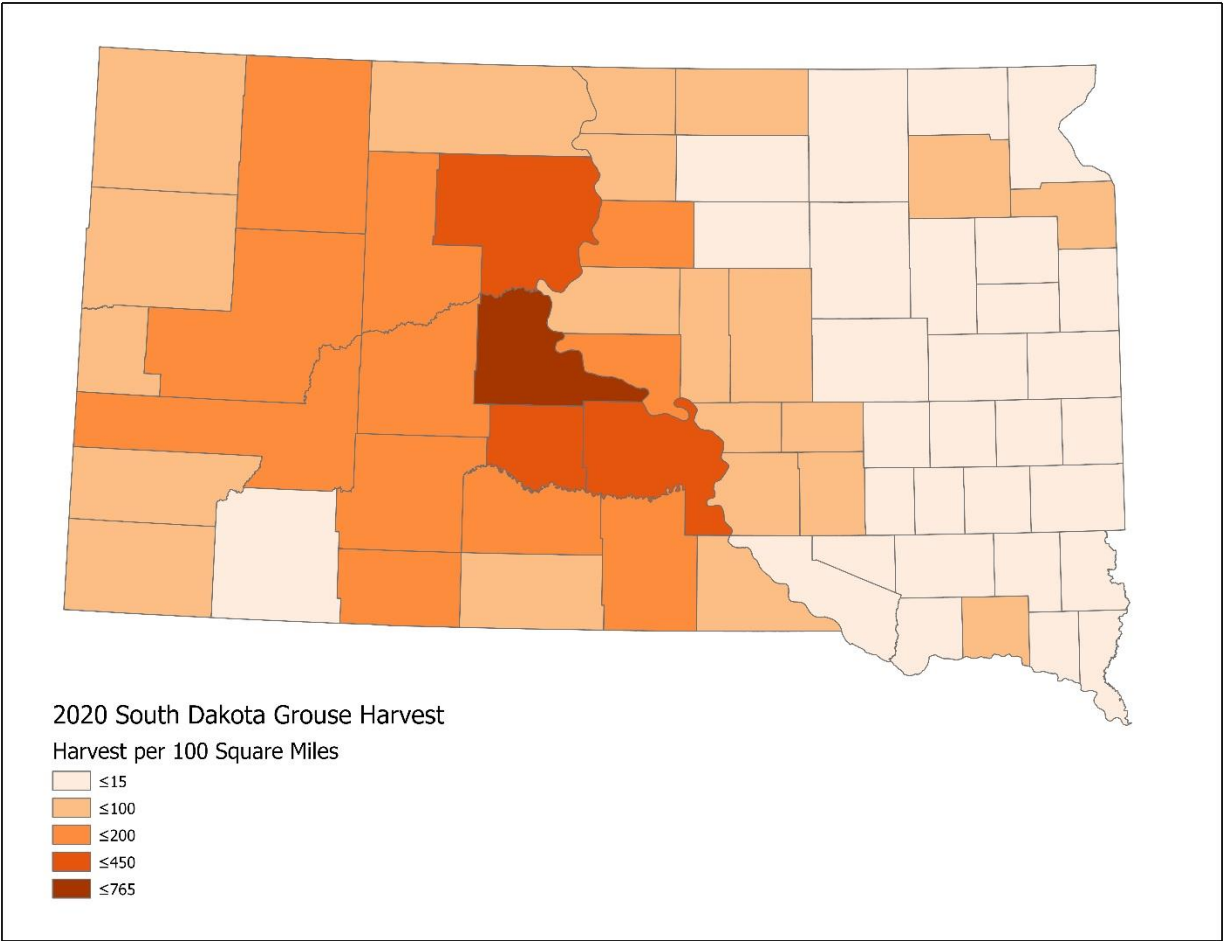
Greater prairie-chicken and sharp-tailed grouse, commonly referred to as prairie grouse, offer a unique and popular hunting opportunity in South Dakota (SD). Prairie grouse are most abundant in central and western SD where ample grassland habitat exists. Hunters often harvest mixed bags of sharp-tailed grouse and greater prairie-chickens in the central portion of the state.



As predicted, prairie grouse hunting was phenomenal last fall with 16,876 hunters harvesting an estimated 67,261 prairie grouse. Most of the prairie grouse harvest occurred in central and western portions of the state. Prairie grouse utilize a variety of habitats during fall and winter including grassland, cropland, and shrubs, although most hunting occurs within large blocks of grassland habitat.

PRAIRIE GROUSE HUNTERS & HARVEST 1980-2020

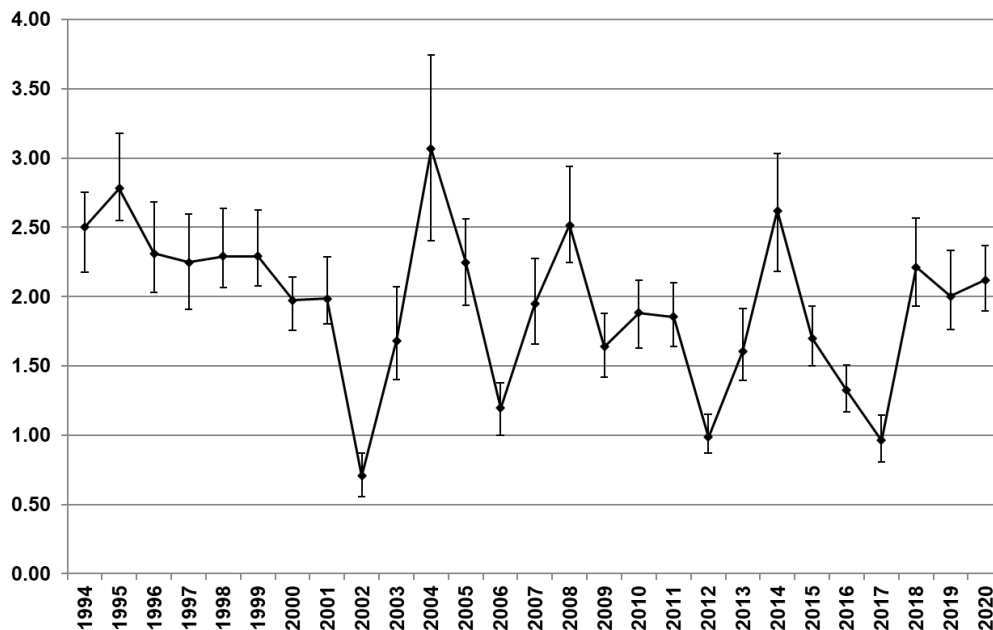




Spring prairie grouse populations are monitored annually by counting males on leks, often referred to as dancing or booming grounds. Surveys occur in portions of central SD that overlap areas of high hunter effort. Counts of males on these traditional breeding season display areas provide a local population index of the adult population. Like other upland game birds such as pheasants, prairie grouse are generally short lived (50% annual survival) with high reproductive potential. Young of year birds typically outnumber adult birds in the fall population. For this reason, spring lek counts are not necessarily a good predictor of fall population levels or hunter success. Spring lek counts are a good indicator of long-term trend in adult population. Lek surveys conducted in central SD by department staff and U.S. Forest Service indicated record high counts in 2021.

Prairie grouse reproductive success is not easily determined before the hunting season. However, wings from hunter harvested prairie grouse are collected each year to determine what proportion of the harvest consisted of young of year birds. On average, two-thirds of harvested prairie grouse are young of year birds, but the ratio of young to adult birds has been as high as 3.05 in 2004 and as low as 0.61 in 2002. This data provides biologists with valuable information about reproductive success each year. It is well known that environmental variables can impact reproductive success in upland game birds. Last year, the ratio of young to adult birds was 2.1, similar to 2019 and 2018.

Statewide Prairie Grouse Age Ratio

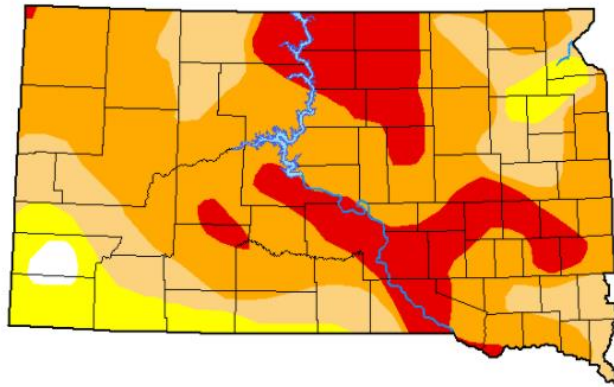


When a multitude of weather variables thought to have potential impact on prairie grouse production were evaluated in central SD, the average temperature in June was found to be negatively correlated with prairie grouse production. Our analysis of data dating back to 1994 suggests that abnormally warm June weather could be a detriment to grouse production, potentially caused by reduced insect production, deteriorating habitat conditions related to drought or chick loss from heat stress. The average June temperature in central SD for 2021 was about 6.3° F above normal and the warmest in the last 30 years, or the 7th warmest since 1895. It was also the driest June on record which resulted in drought conditions.

Poor prairie grouse production has also been observed during drought years such as 2017, 2016, 2012, 2006 and 2002. Drought can deteriorate habitat conditions and reduce insect abundance, both of which can reduce chick survival. Last year, portions of the primary prairie grouse range were abnormally dry with portions of central South Dakota being drought free through much of the prairie grouse nesting and brood-rearing season. This offered favorable conditions for prairie grouse production which was observed in the high young to adult age ratio in 2020 and record 2021 spring lek counts. This year, a vast majority of the primary grouse range in central and western SD experienced a severe to extreme drought with portions of southwest SD experiencing abnormally dry conditions.

U.S. Drought Monitor South Dakota

July 13, 2021
(Released Thursday, Jul. 15, 2021)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.96	99.04	90.13	69.07	19.58	0.00
Last Week 07-06-2021	0.96	99.04	90.07	72.33	17.82	0.00
3 Months Ago 04-13-2021	5.07	94.93	72.67	39.64	19.42	0.00
Start of Calendar Year 12-29-2020	0.00	100.00	58.83	10.65	1.94	0.00
Start of Water Year 09-29-2020	0.82	99.18	30.61	6.76	0.00	0.00
One Year Ago 07-14-2020	42.28	57.72	10.47	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Adam Hartman
NOAA/NWS/NCEP/CPC



droughtmonitor.unl.edu

The 2021 prairie grouse hunting outlook is mixed. On the bright side, favorable habitat and weather conditions during the previous 3 years has resulted in record lek counts this spring. However, due to much above average spring temperatures and below normal precipitation in 2021, grassland habitat conditions quickly deteriorated through much of the prairie grouse range. The hot and dry spring and summer has resulted in widespread drought conditions. We expect prairie grouse production to be hampered by these conditions. Although production may be below average, hunters may still encounter good numbers of adult prairie grouse due to historic lek counts this spring. Current range conditions and wariness of adult birds might make hunting more challenging than the past few seasons. The latest U.S. drought monitor map can be viewed at: <https://droughtmonitor.unl.edu/>

Hunters are encouraged to visit with those in their traditional hunting areas as local population levels and habitat conditions can vary. Hunters are again asked to hunt safely and ethically; respect private landowners and those public hunting areas scattered across the state and enjoy the South Dakota tradition of hunting all upland game with family and friends this fall. Hunters who harvest grouse are encouraged to provide a wing from each bird which will be used to estimate reproductive success and refine future prairie grouse outlooks (<https://gfp.sd.gov/prairie-grouse/>).