

# Utah 2023 Chukar Partridge Update

## Utah Division of Wildlife Resources



Beginning in 2019, the Utah Division of Wildlife Resources (UDWR) has implemented a chukar survey methodology to evaluate chukar numbers and production using game cameras set on water sources throughout the state. The camera survey allows data to be captured in a wide geographic area and provide data on the year's production and a year-to-year index of abundance. Helicopter surveys were discontinued due to increasing cost and safety concerns related to low-level helicopter flight.

During the initial year, cameras were placed at 20 trend sites throughout the state. The project has added cameras each year and now has 45 active camera sites, although only 22 provided data this year due to changing the process to reviewing photos. Utilizing different technology to process these images was supposed to result in automated summarized data; however, this technology proved difficult to navigate. Volunteers from the Utah Chukar and Wildlife Foundation and the UDWR Dedicated Hunter program were imperative to completing the data we did obtain via processing photos and summarizing chukar visits to water sources.

Habitat conditions throughout the state have suffered due to ongoing drought. However, Utah experienced heavy snowfall during the 2022-2023 winter. Therefore, more favorable conditions likely resulted in improved nutrition for breeding adults, growth of grasses and forbs, and high protein sources from insects, which are critical to chick growth and survival. Although precipitation in the West Desert is spotty and conditions can differ significantly from one range to another, or even between areas on the same mountain range, the amount of snowfall from last year contributed to an increase in overall quantity and quality of brood-rearing conditions. Production was good this year, with many brood coveys visible at water sources. Chukar hunters can expect to see an average year in many areas, with better production in the Central and Northern regions. Although production was decent, limited populations going into the breeding season may limit overall production.

**Table 1. Chicks per Adult by Region**

The average number of juvenile birds per adult birds in the four sampled DWR regions. The number of chicks per hen is an index of this year's production. This year's production data is skewed by the amount of photos that were processed inaccurately. However, most volunteers and/or UDWR personnel who did process photos reported high juvenile presence.

	2019	2020	2021	2022	2023
Northern	2.5	1.3	0.1	2.4	0.72
Central	4.8	1.0	0.1	3.5	2.23
Southern	1.9	0.6	0.0	1.5	1.85
Southeastern	3.0	1.5	0.0	0.7	6.61*

\*due to a substantial amount of data being unavailable, this is an unusually small sample size.



Chukar production is highly variable year to year. Here is an example from the 2023 camera survey showing a high proportion of juvenile birds to adults. This area had good production which should result in larger and more abundant coveys available this year relative to last.

### Northern Region:

There were seven cameras deployed in the Northern Region on the Grouse Creek Mts., Pilot Mts., Hogup Mts., Hogup Mts. South, and Wildcat Hills. Three of the five cameras contributed to the dataset, with a decrease in production from 1.44 in 2022 to 0.72 in 2023. It's possible that deep snow in the Northern Region impacted winter survival of adults, resulting in a decreased breeding population, but areas outside of the survey locations may have experienced increased production in the Northern Region.

### Central Region:

Much of Utah's chukar habitat is within the Central Region, and the area also receives the majority of the camera monitoring effort with 23 active cameras in 2023 deployed on the Cedar, Deep Creek, Desert, Dugway, Gilson, Grassy, Lake, Lakeside, Long Ridge, Oquirrh, Silver, Stansbury, and Thomas Mountains. Ten of those 23 cameras contributed to the dataset. Of the data reviewed, the juvenile per adult ratio decreased from 3.5 to 2.32 juveniles per adult, but this is still a significant increase compared to 2021, and it is realized that this ratio is based on only partial data. Overall hunting conditions likely will be good, with more birds available relative to last year, due to excellent brood-rearing conditions in this region compared to recent years.

### Southern Region:

The Southern Region contains much of the West Desert ranges south of the Millard-Juab county line. Twelve cameras were placed on the Beaver, Crickets, Drum, Gray Hills, House, Mineral, and Oak Creek Mountains. Of those 12, eight contributed to the dataset. Overall production increased slightly this year from 1.5 chicks per adult to 1.85 chicks per adult. As this average juvenile per adult ratio has increased, there could be an upward population trajectory in these areas if Utah received decent moisture this winter. Overall hunting conditions were likely better than last year, and populations may increase next year, relative to 2019.

### Southeastern Region:

The Southeastern Region cameras are located along the Book Cliffs, Nine Mile, and Manti East Slope Mountains. Of the five active cameras, only one camera contributed to the dataset this year. Last year, only 0.7 juveniles per adult were present, indicating poor production. The astronomical increase to 6.61 juveniles per adult in this year's data is likely skewed from only one source of data this year (rather than five different sources). However, there were 57 adults and 377 juveniles captured on the camera on the Manti site, which is an impressive amount of production.

### Summary:

Production is generally good throughout the state, and hunters will likely see larger coveys with more young birds this year. Chukar populations can be spotty throughout the state, with some areas receiving more water or getting water at more opportune times. What is presented here are averages, so there are always areas doing considerably better, but also worse. There are plenty of birds it is just a matter of finding them. Keep food in mind and search those areas. Chukar are resilient, and tolerant of poor desert conditions and persisting despite the drought, with rebounds in areas.

**Figure 1. Regional Boundaries and Monitored Locations**

Regional boundaries referenced in this document with approximate locations of monitored water sources.

