

2021-22 Sandhill Crane Hunter Participation and Harvest Report

Prepared by Seth Maddox, Migratory Game Bird Coordinator
Alabama Department of Conservation and Natural Resources
Division of Wildlife and Freshwater Fisheries
Wildlife Section
Migratory Game Bird Program



Photo: Billy Pope, ADCNR



Introduction

The 2021-22 season marked the third experimental hunting season for sandhill cranes in Alabama. The Alabama Division of Wildlife and Freshwater Fisheries (WFF) requested 400 permits and 1,200 tags, same as the first two seasons, based on guidelines from the Management Plan for the Eastern Population of Sandhill Cranes (Van Horn et al. 2010). Due to the limited number of permits and tags, an online registration process and computer automated drawing was instituted to randomly select 400 hunters to receive one sandhill crane permit with three (3) tags per permit. The open application period for permits occurred September 8-29, 2021, and a total of 703 people applied. The computer automated draw was conducted on September 29, 2021, to randomly select the 400 hunters to receive permits. Those selected were required to pass an online regulations and identification test. A timeline of one week was provided to complete and pass the online test and confirm their permit acceptance, or they were disqualified from receiving a permit. If a disqualification occurred, an alternate was subsequently promoted to receive the permit and subjected to the same test and qualification process. All permitted hunters were mailed a physical permit, three tags (metal leg bands), and a hunter log.

The 2021-22 Alabama experimental sandhill crane season dates spanned from December 2, 2021 – January 9, 2022, and January 17 -31, 2022, a 52-day season with a 8-day closure during the “Festival of the Cranes” at Wheeler National Wildlife Refuge. The daily bag limit, season bag limit and possession limit remained at three cranes per hunter for a total maximum allowed harvest of 1,200 cranes. Shooting hours were from sunrise to sunset. The sandhill crane hunting zone was defined as the area north of Interstate 20 from the Georgia state line to the interchange with Interstate 65, then east of Interstate 65 to the interchange with Interstate 22, then north of Interstate 22 to the Mississippi state line, excluding the remainder of the state (Figure 1).

Limited Quota Sandhill Crane Hunting Zones

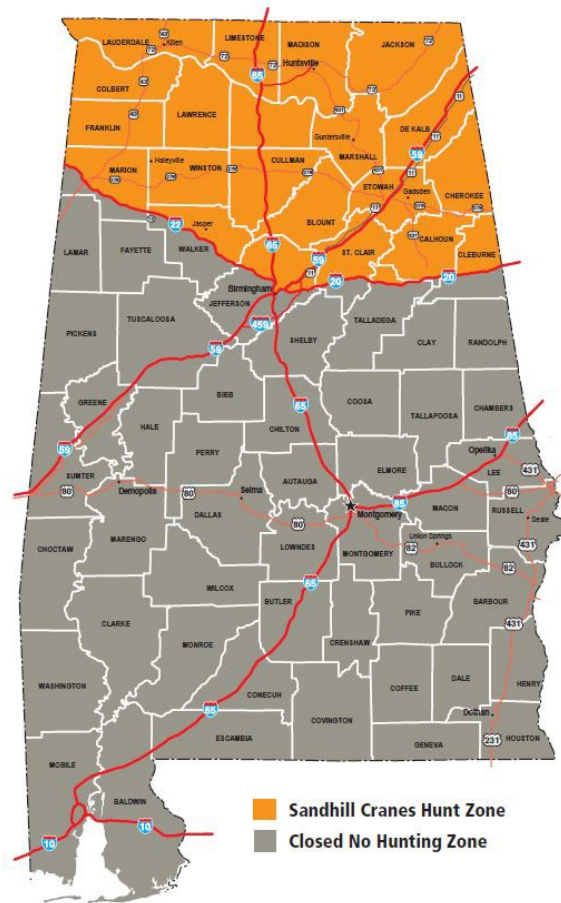


Figure 1. Alabama Division of Wildlife and Freshwater Sandhill Crane Hunt Zones.

Experimental Season Results

Of the 400 permitted hunters, 378 (95%) fully completed the mandatory post-season hunter survey. Two hundred ninety-six (296) or 78% of hunters participated in at least one hunt, while 82 (22%) did not attempt to hunt (Table 1). A total of 234 (20%) birds were harvested, 199 (85%) adults and 35 (15%) juveniles. A total of 18 cranes were wounded and unable to be retrieved. One hundred nineteen (119) or 40% of hunters were successful in harvesting at least one crane. The average harvest was 2.0 birds per successful hunter.

Table 1. Number of birds harvested by harvest number and hunter effort for hunters that hunted at least one day.

Number of Birds Harvested	Number of Hunters	% of Total Hunters	% of Successful Hunters	Frequency of Number of Birds Harvested	Number of Days Hunted	% of Total Hunt Days	Average Number of Days Hunted
0 Birds	177	60%	0%	0	633	65%	3.6
1 Bird	43	15%	36%	43	134	14%	3.1
2 Birds	37	13%	31%	74	103	11%	2.8
3 Birds	39	13%	33%	117	104	11%	2.7
Total	296			234	974		3.3

A total of 230 (98%) cranes were harvested when hunters were primarily hunting for sandhill cranes. Four (2%) birds were harvested when hunters incidentally harvested a crane while hunting other game species. Of the 974 total hunts, 146 (15%) were successful (hunts in which hunters harvested at least one crane). A total of 3,658 hours were spent hunting sandhill cranes, with the average length of a sandhill crane hunt being 3.8 hours.

Cranes were harvested in 5 of the 22 counties within the crane hunting zone (Figure 2) and four of those 5 counties also had the highest number of hours spent hunting for sandhill cranes (Figure 3). Hunter effort (i.e., hours hunted) and harvest of sandhill cranes was highly correlated in counties that encompass the three main sandhill crane wintering areas in North Alabama; Wheeler National Wildlife Refuge in Morgan County (n=768; n=102), the Jackson County Waterfowl Management Areas and Refuges in Jackson County (n=1380; n=49), and Weiss Lake in Cherokee County (n=701; n=64).

Of the 234 cranes harvested, 191 (82%) birds were harvested on private land and 43 (18%) were harvested on public land. Hunter effort and harvest data was further quantified by public land boundary (Figure 4). All the sandhill crane harvest from public land occurred across six of the nine public land areas that were hunted in the sandhill crane hunting zone. The data indicates there is no clear trend or correlation between the number of hours hunted on public lands and harvest number.

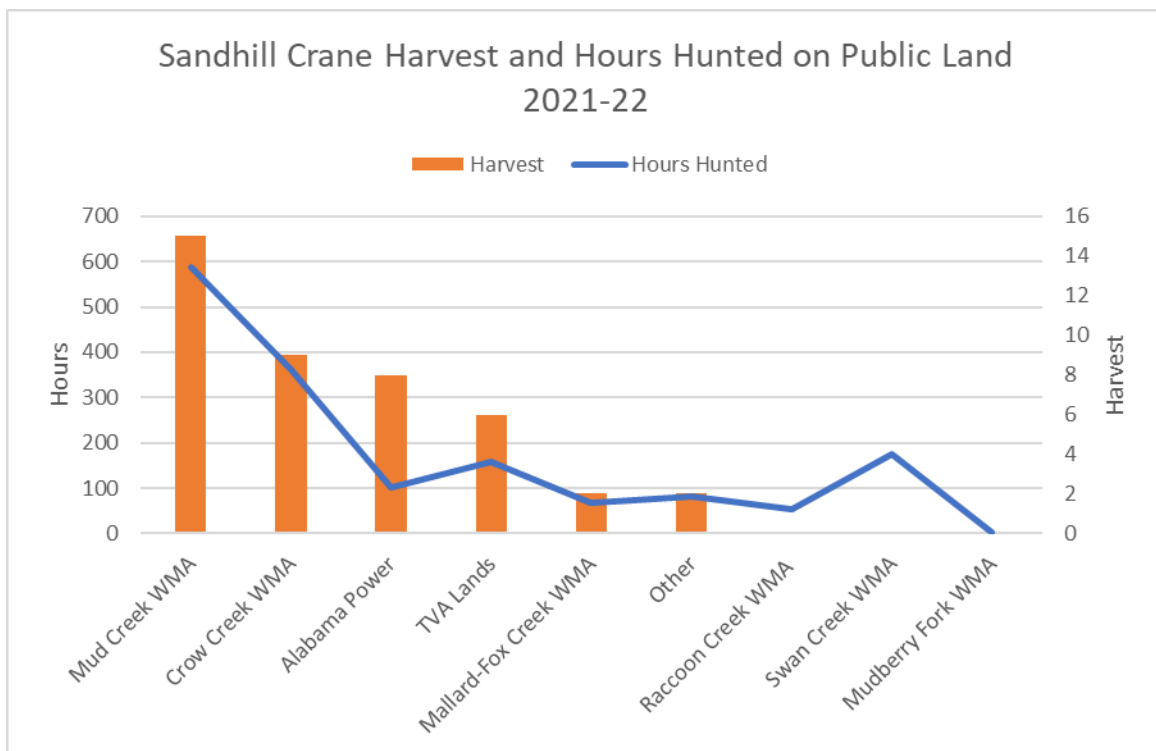


Figure 4. Number of hours hunted and harvest of sandhill cranes on public lands.

The 2021-22 Alabama sandhill crane season included 52 days of open hunting split over two segments. Trends in hunter effort, in terms of hours hunted per day, was similar to daily harvest trends throughout the season (Figure 5). Over the 52-day season, the average hours hunted per day was 60.9 hours (range: 14 to 157 hours per day), while the average daily harvest was 3.9 cranes per day (range: 0 to 23 cranes harvested per day).

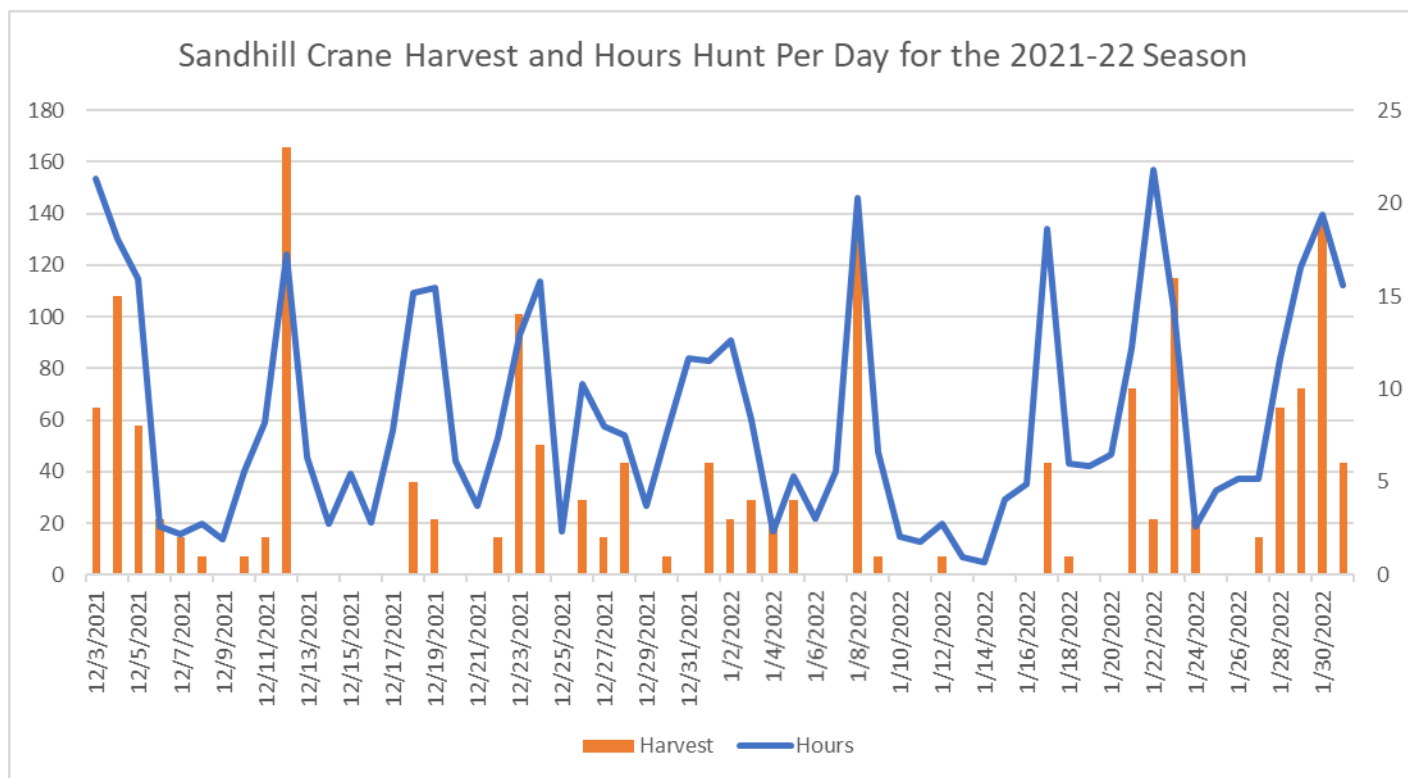


Figure 5. Total number of hours hunted and harvest of sandhill cranes for each day of the 2021-22 sandhill crane season.

Discussion

The 2021-22 Alabama sandhill crane season was considered a success based on the harvest percentage of 20% (234 of 1200 tags). This harvest percentage is above the 15% (87 of 570 tags) harvest rate in Kentucky during their third sandhill crane hunting season in 2013-14 and above the 13% (161 of 1200 tags) harvest rate experienced by Tennessee during their third sandhill crane season conducted in 2015-16.

There were no reports of any illegal sandhill crane harvest or any whooping crane incidents during the 2021-22 Alabama sandhill crane hunting season.

Temperatures were above average during late fall and early winter 2021-22 in Alabama, coupled with a dry fall, migration was delayed and decrease as compared to the previous season. Significant rain in January flooded out many traditional crane roosting locations in Alabama resulting in birds being dispersed in smaller groups across the landscape. The annual Mid-Winter Waterfowl Survey (Jan. 5-6, 2022) totaled 12,359 sandhill cranes, a 47% decrease from the previous year’s record survey of 23,354 (Figure 6). The 2022 survey total was 25% below the 5-year average of 15,537 (Figure 7).

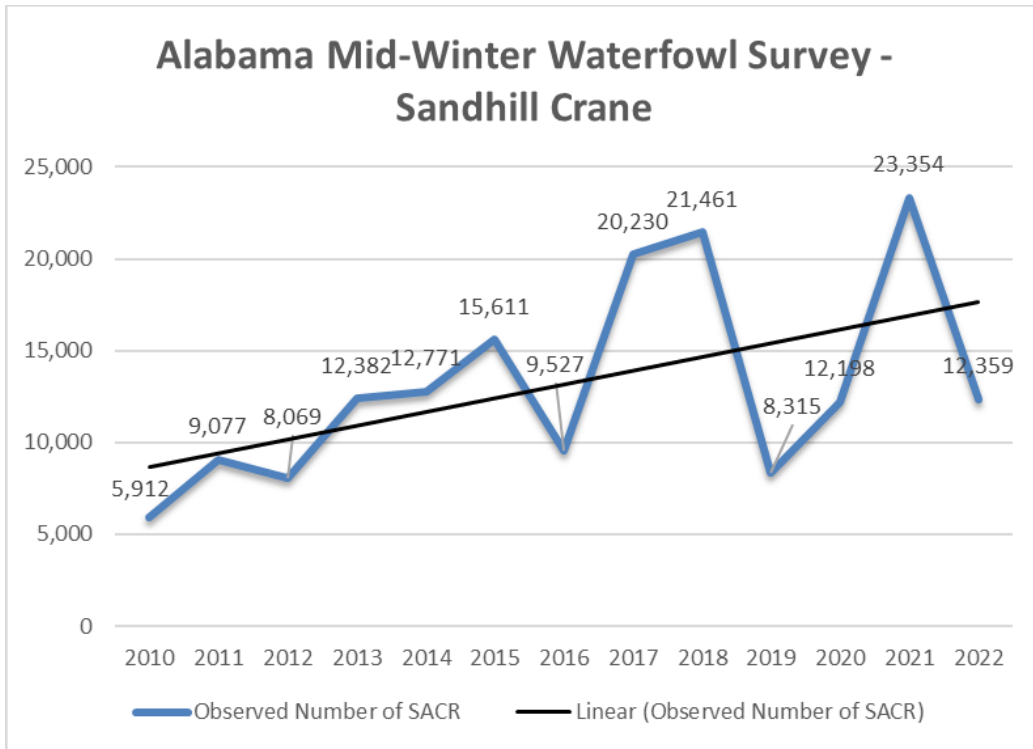


Figure 6. Observed number of sandhill cranes on the Alabama Mid-Winter Waterfowl Survey (2010-22).

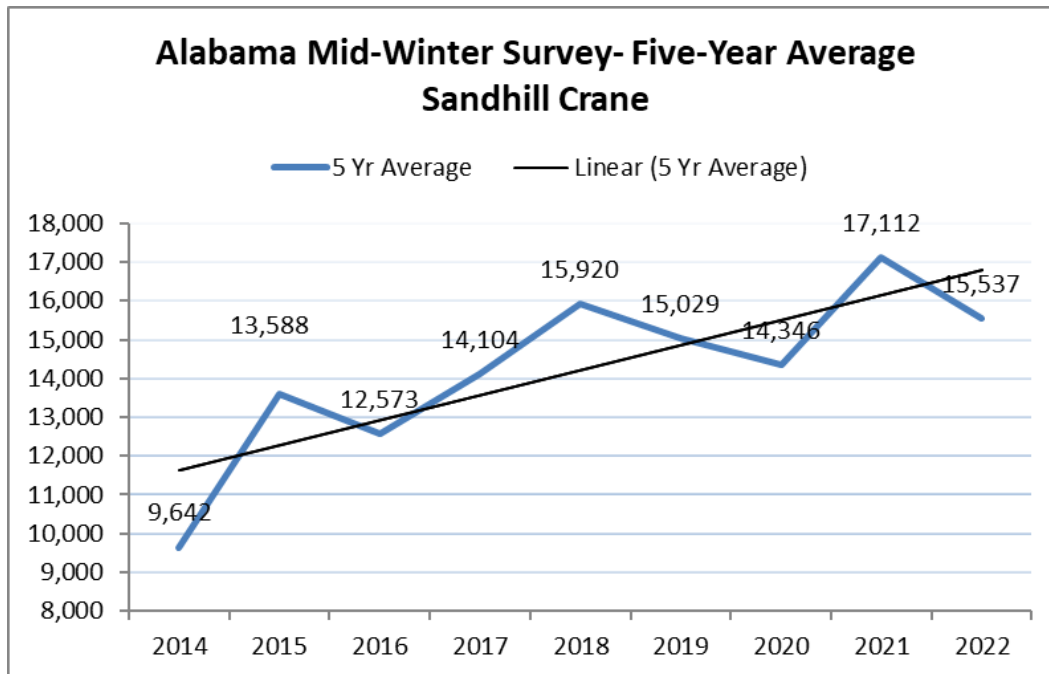


Figure 7. Five-year average of sandhill cranes observed on the Alabama Mid-Winter Waterfowl Survey (2014-22).

Although there are now three states with open hunting seasons for the Eastern Population of sandhill cranes, harvest on this population remains minimal, averaging approximately 1% per year of the population index (Seamans 2021). The 2021 Sandhill Crane Fall Index Count totaled 86,932 birds, which is 103% above the long-term average of 42,876 cranes (Seamans 2022) (Figure 8).

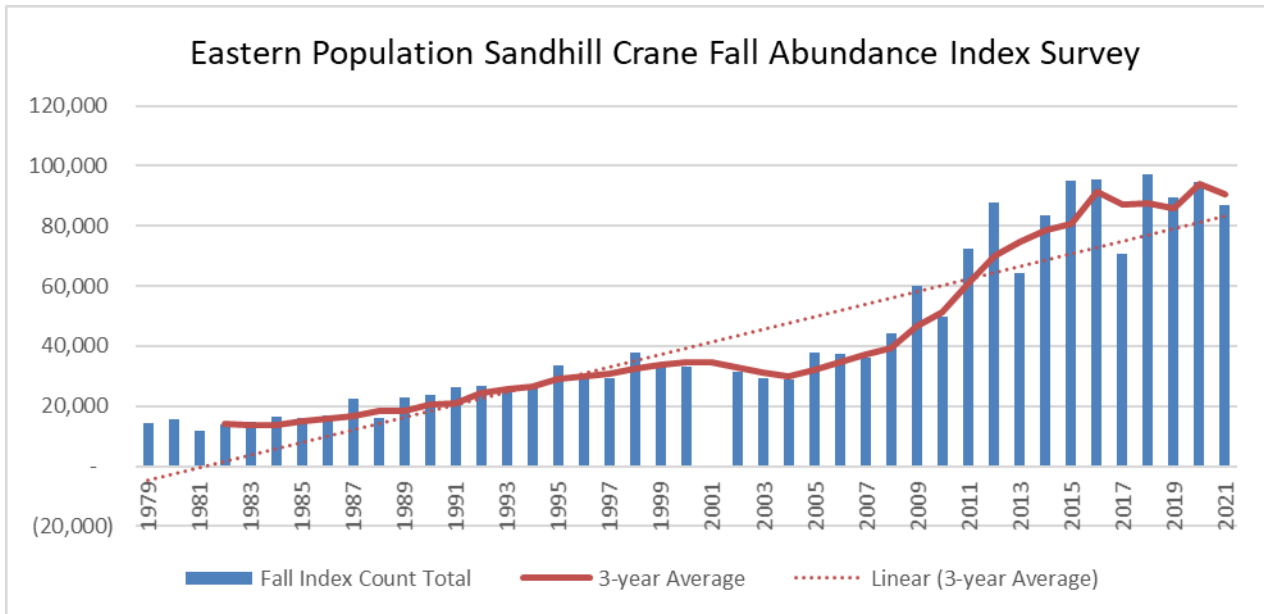


Figure 8. Eastern Population of sandhill crane Fall Abundance Index Survey (1989-2021) (Seamans 2022).

Comparison of Hunting Seasons

The number of permits and tags allocated to hunters remained the same from the 2019-20 and 2020-21 season to the 2021-22 season (Table 2). The number of permitted hunters who spent at least one day hunting decreased by 18 hunters (-6%). The number of successful hunters decrease by 59 (-33%) and the total harvest decreased by 157 birds (-40%).

Table 2. Comparison of Sandhill Crane Hunting Seasons in Alabama

Season	Number of Permits	Number of Tags	Number Who Hunted	Participation Percentage	Number of Successful Hunters	Success Rate	Total Harvest
2019-20	400	1200	297	77%	138	46%	291
2020-21	400	1200	314	83%	178	57%	391
2021-22	400	1200	296	78%	119	40%	234
Total	1200	3600	907		435		916
Average	400	1200	302	79%	145	48%	305

References

- Seamans, M.E. 2021. Status and harvest of sandhill cranes: Mid-Continent, Rocky Mountain, Lower Colorado River Valley and Eastern Populations. Administrative Report, U.S. Fish and Wildlife Service, Lakewood, Colorado.
- Seamans, M.E. 2022. Status and harvest of sandhill cranes: Mid-Continent, Rocky Mountain, Lower Colorado River Valley and Eastern Populations. Unpublished Report, U.S. Fish and Wildlife Service, Lakewood, Colorado.
- Van Horn, K., T. White, W. Atkins, T. Cooper, R. Urbanek, D. Holm, D. Sherman, D. Aborn, J. Suckow, K. Cleveland, and R. Brook. 2010. Management plan for the Eastern Population of Sandhill Cranes. Mississippi and Atlantic Flyway Councils, Madison, Wisconsin, USA.