

**Federal Aid in Wildlife Restoration Project №: W-15-R**

**Title of Job: 2022 April Rural Mail Carrier Survey**



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 13 May 2022

The 2022 April Rural Mail Carrier Survey was conducted 4-7 April 2022. We received 380 cards by 31 April 2022, of which 356 cards contained complete information necessary for processing. The results below (Tables 1 & 2) are based on the complete cards. Rural Carriers made observations while traveling 149,125 miles or rural roads in 85 of Nebraska’s 93 counties.

**Caveats.** The April survey provides a snapshot of wildlife populations entering the breeding season and might not reflect conditions experienced by hunters the subsequent fall. Interpretations of percent change from previous year’s indices and longer-term means are only meaningful in relation to the indices themselves. That is, when an index value is low, insignificant changes in the index from one year to the next translates into large percent changes, but result in no observable difference in abundance within a region. For example, an increase in a species index from 0.01 to 0.02 animals observed per 100 miles is a 100% increase, but would not likely be noticeable to hunters afield. Further, survey methodology does not allow for the estimation of population size or density, but only trends in relative abundance through time. At a statewide scale, these indices are correlated with harvest and are, therefore, useful for forecasting.

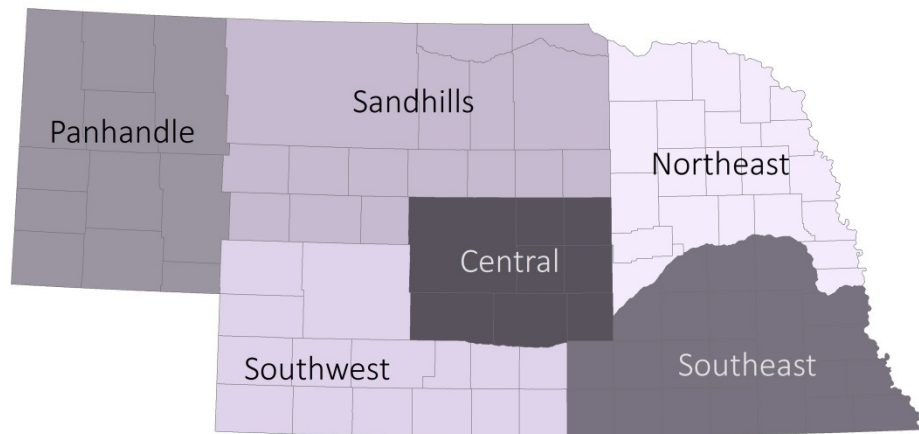
**Interpretations.** Statewide indices for all species except bobwhites were lower compared to the 2021 survey. Regionally, indices were generally lower everywhere for all species compared to 2021. Exceptions included the North Central and West Platte zones for bobwhites, the Sandhills region for cottontails, and the Central and Southwest regions for wild turkey. Indices in 2022 were also generally lower than long-term means. However, many rural carriers reported extreme wind conditions during the survey period, which likely drove down observations. This interpretation is supported by the high percentage of cards returned with no observations of any wildlife (23.3%) and the reduction in cards returned (356 vs. 402).

**Take Home Message.** The results of this survey seem to indicate that pheasant and other game abundance were lower this year going into the breeding season. However, winter conditions were generally mild across the state and weather during the survey period was not optimal, potentially skewing abundance lower. Results from summer surveys, such as the bobwhite whistle counts and July RMCS will clarify interpretations of these results.

**TABLE 1.** Raw counts of pheasants, prairie grouse, wild turkey, cottontails, and jackrabbits from the 2022 April Rural Mail Carrier Survey by pheasant management region (Figure 1).

Region	Carriers	Miles	Pheasants	Grouse	Turkey	Cottontail	Jackrabbit
Central	46	19,727	27	105	560	51	1
Northeast	83	37,395	131	29	808	134	7
Panhandle	39	13,406	141	18	195	18	3
Sandhills	35	14,170	69	120	684	9	0
Southeast	103	43,830	51	42	688	155	3
Southwest	50	20,596	186	107	1,222	97	2
Statewide	356	149,125	605	421	4,157	464	16

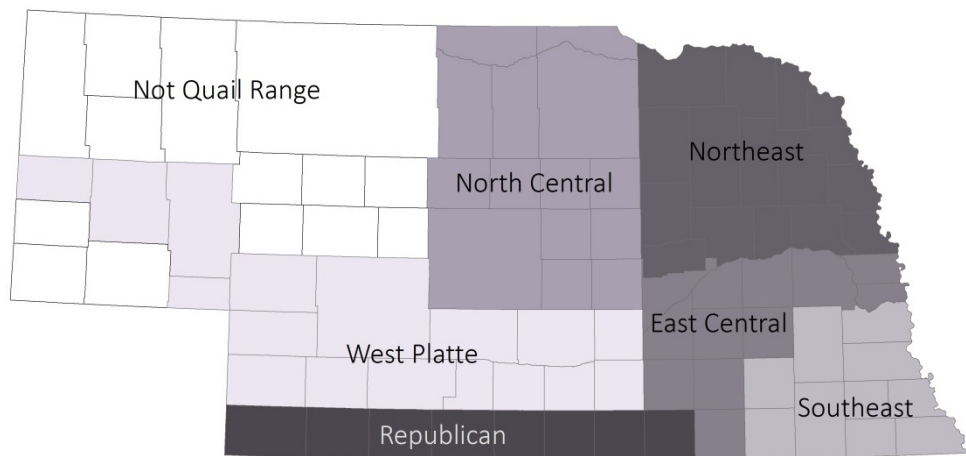
**FIGURE 1.** Pheasant Management Regions.



**TABLE 2.** Raw bobwhite counts from the 2022 April Rural Mail Carrier Survey by bobwhite management zones (Figure 2).

Zone	Carriers	Miles	Bobwhites
East Central	61	24,471	38
North Central	42	19,215	81
Northeast	74	35,161	10
Republican	28	12,640	14
Southeast	40	16,744	5
West Platte	77	29,042	2
Not Quail Range	34	11,852	0
Statewide	356	149,125	150

**FIGURE 2.** Bobwhite Management Zones.

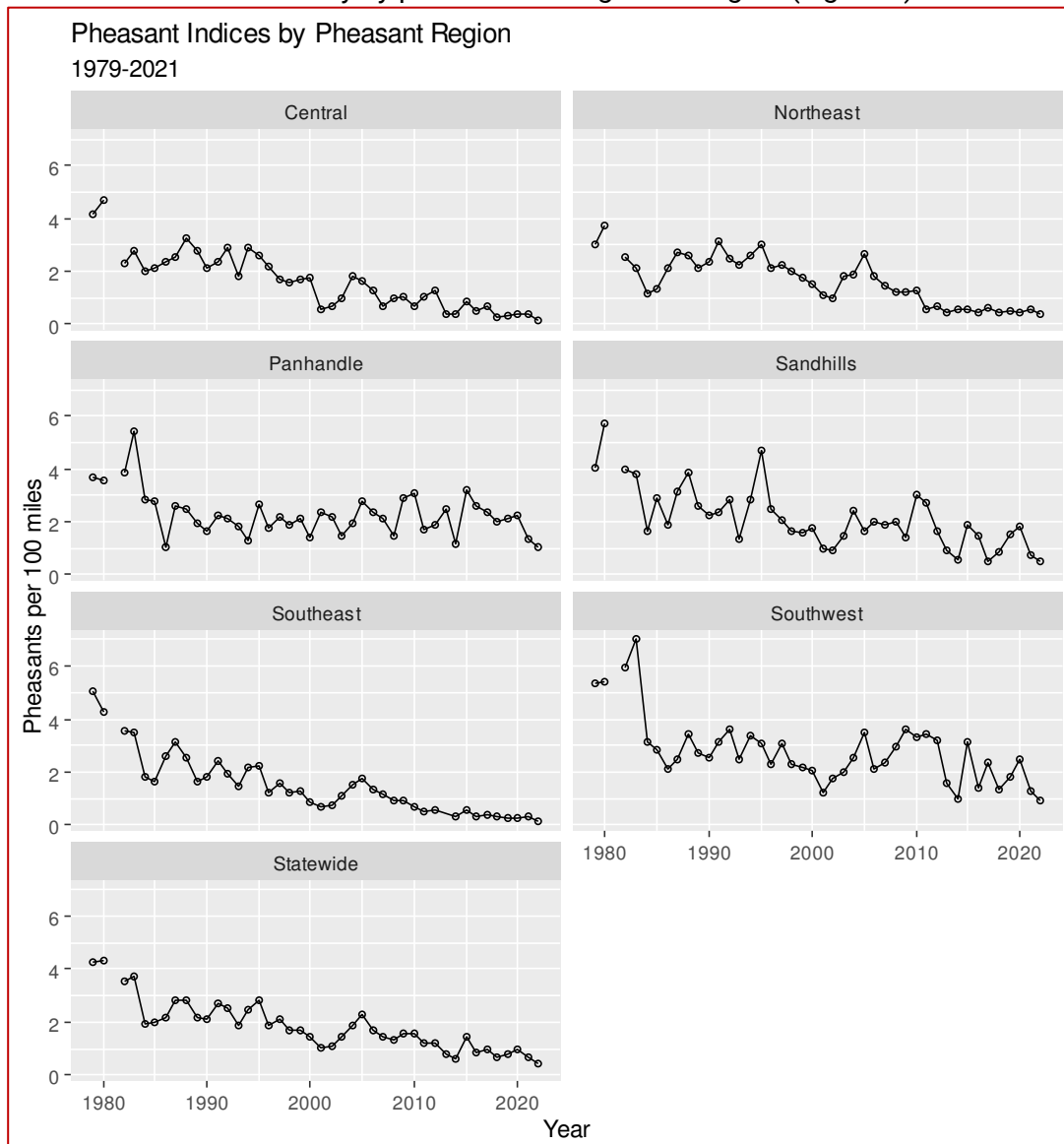


**Results.** Statewide indices were lower for all species (Tables 3-6, Figures 3-6). Regional indices were generally mixed for all species compared to 2021. A total of 83 rural carrier cards were returned with no observations on them (23.3%) which is higher than in 2021. Table 7 shows how many cards contained zero observations by species.

**TABLE 3.** Pheasant indices from the 2022 April Rural Mail Carrier Survey by pheasant management region (Figure 1). Carrier means are weighted by miles traveled per carrier.

Region	Mean Pheasants per 100 miles & 90% Confidence Limits	Percent Difference from:			
		2021	Mean 2017-2021	Mean 2012-2021	Mean 2002-2021
Central	0.14 (0.08-0.20)	-62	-65	-74	-83
Northeast	0.35 (0.26-0.44)	-35	-31	-33	-65
Panhandle	1.05 (0.40-1.70)	-20	-48	-51	-51
Sandhills	0.49 (0.23-0.74)	-33	-54	-58	-68
Southeast	0.12 (0.08-0.15)	-61	-58	-66	-83
Southwest	0.90 (0.35-1.45)	-30	-51	-54	-62
Statewide	0.41 (0.30-0.52)	-38	-49	-54	-67

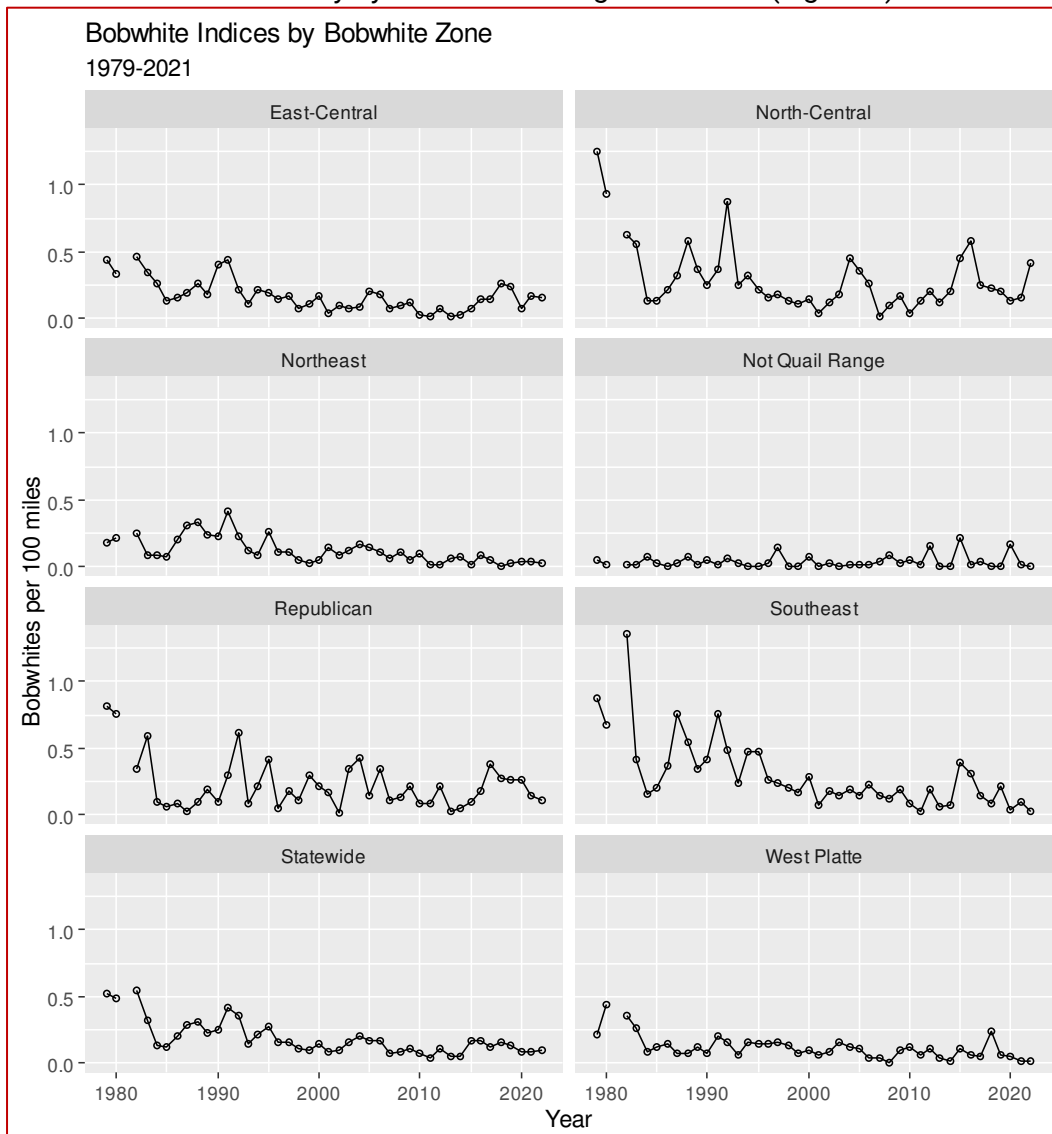
**FIGURE 3.** Regional and statewide time series (1979-2022) of pheasant population indices from the April Rural Mail Carrier Survey by pheasant management region (Figure 1).



**TABLE 4.** Northern bobwhite indices from the 2022 April Rural Mail Carrier Survey by bobwhite management zone (Figure 2). Carrier means are weighted by miles traveled per carrier.

Zone	Mean Bobwhites per 100 miles & 90% Confidence Limits	Percent Difference from:			
		2021	Mean 2017-2021	Mean 2012-2021	Mean 2002-2021
East Central	0.16 (0.00-0.31)	-6	-11	29	45
North Central	0.42 (0.00-0.84)	162	116	67	93
Northeast	0.03 (0.00-0.06)	-25	-6	-25	-56
Republican	0.11 (0.02-0.20)	-27	-58	-42	-42
Southeast	0.03 (0.00-0.06)	-70	-75	-81	-80
West Platte	0.01 (0.00-0.03)	0	-88	-86	-87
Not in Range	0.00 (NA)	NA	NA	NA	NA
Statewide	0.10 (0.04-0.16)	25	-12	-11	-13

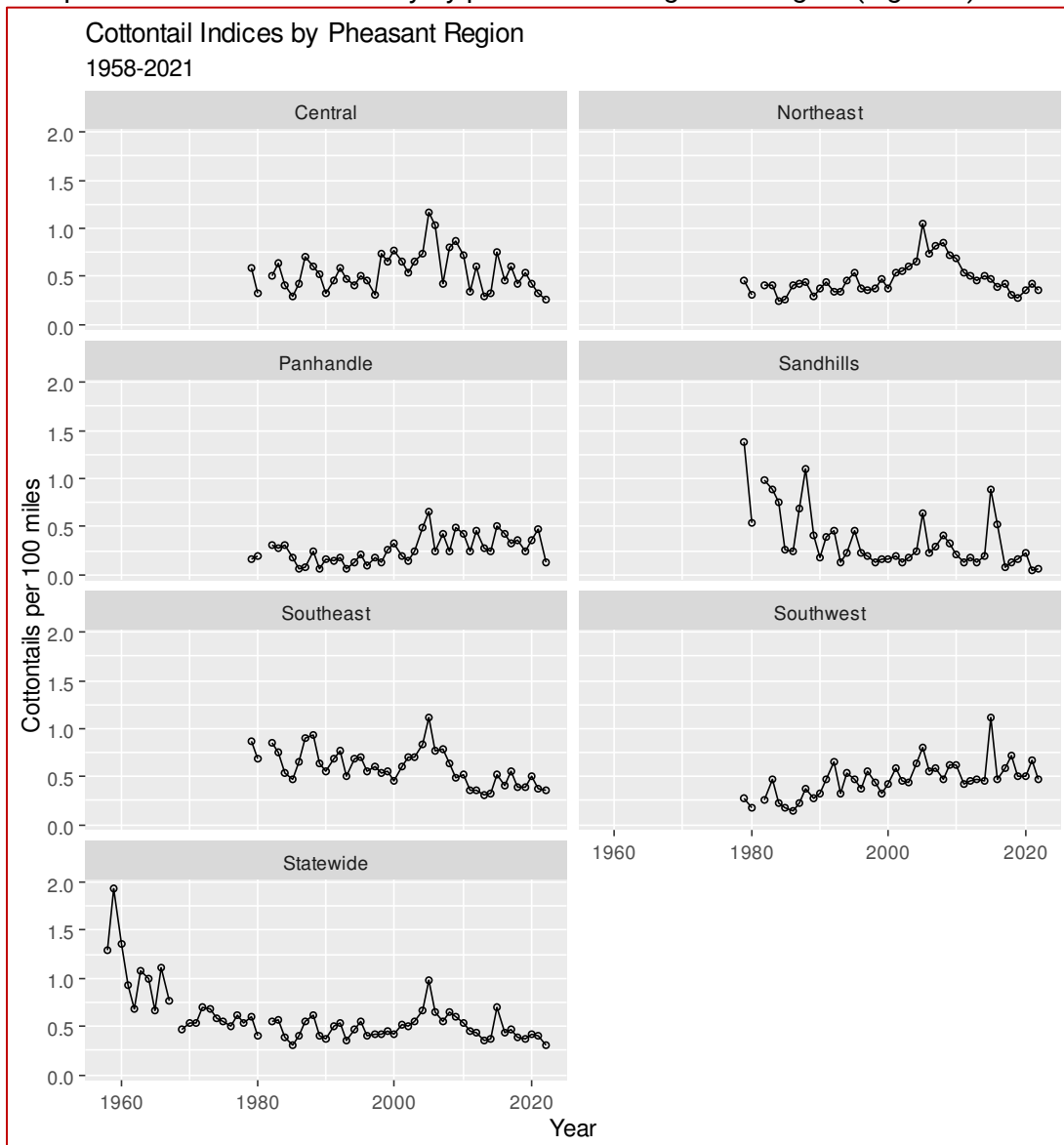
**FIGURE 4.** Regional and statewide time series (1979-2022) of bobwhite population indices from the April Rural Mail Carrier Survey by bobwhite management zone (Figure 2).



**TABLE 5.** Cottontail indices from the 2022 April Rural Mail Carrier Survey by pheasant management region (Figure 1). Carrier means are weighted by miles traveled per carrier.

Region	Mean Cottontails per 100 miles & 90% Confidence Limits	Percent Difference from:			
		Mean 2021	Mean 2017-2021	Mean 2012-2021	Mean 2002-2021
Central	0.26 (0.11-0.41)	-21	-44	-45	-57
Northeast	0.36 (0.17-0.54)	-14	0	-13	-37
Panhandle	0.13 (0.05-0.21)	-73	-63	-64	-64
Sandhills	0.06 (0.01-0.12)	50	-52	-76	-77
Southeast	0.35 (0.20-0.51)	-5	-21	-15	-36
Southwest	0.47 (0.25-0.69)	-30	-21	-21	-19
Statewide	0.31 (0.24-0.38)	-23	-24	-29	-41

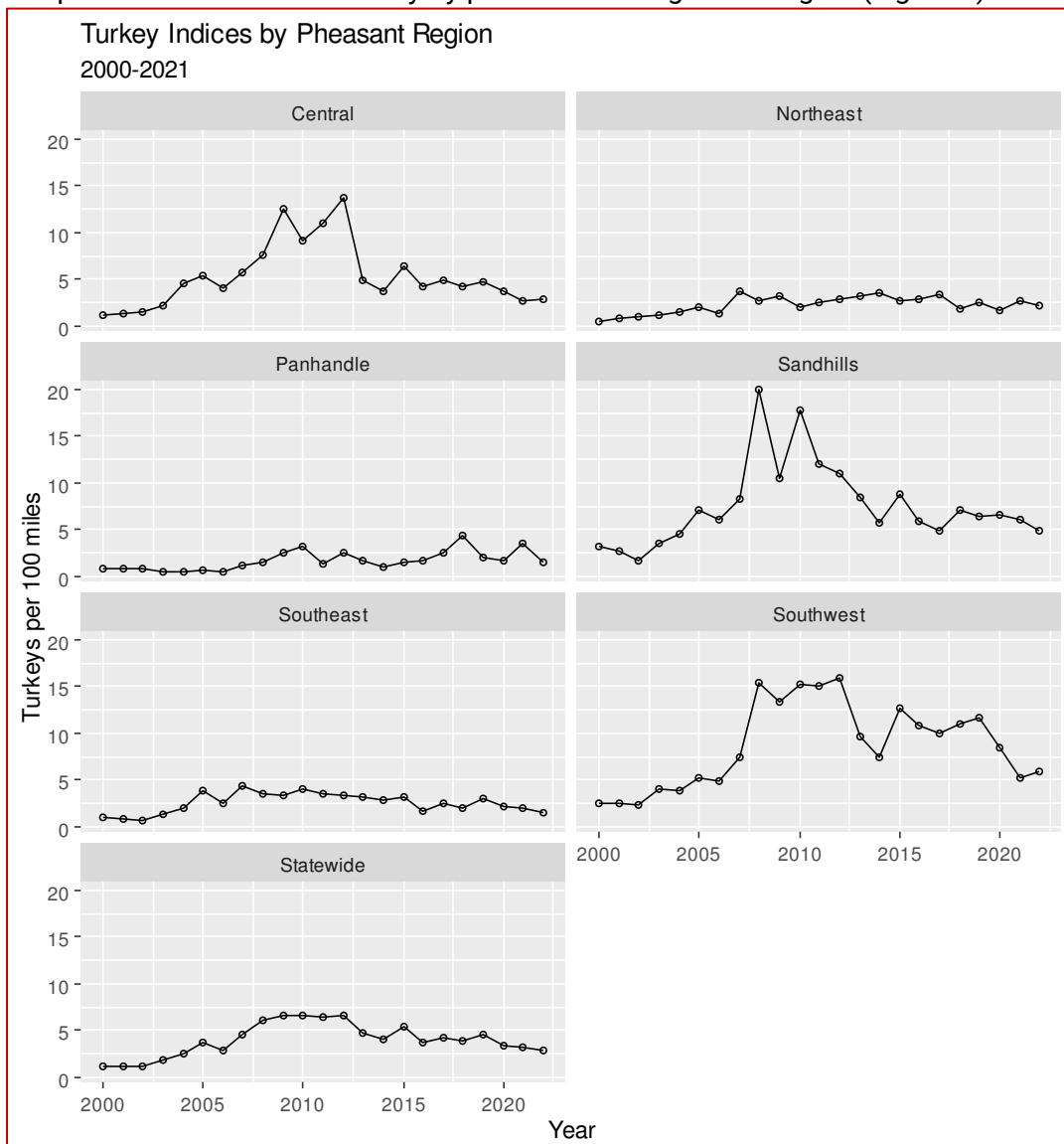
**FIGURE 5.** Regional and statewide time series (1958-2022) of cottontail population indices from the April Rural Mail Carrier Survey by pheasant management region (Figure 1).



**TABLE 6.** Wild turkey indices from the 2022 April Rural Mail Carrier Survey by pheasant management region (Figure 1). Carrier means are weighted by miles traveled per carrier.

Region	Mean Wild Turkeys per 100 miles & 90% Confidence Limits	Percent Difference from:			
		2021	Mean 2017-2021	Mean 2012-2021	Mean 2002-2021
Central	2.84 (1.72-3.95)	4	-31	-47	-51
Northeast	2.16 (1.63-2.69)	-18	-14	-21	-11
Panhandle	1.45 (0.46-2.45)	-59	-36	-29	-13
Sandhills	4.83 (2.40-7.25)	-21	-22	-32	-41
Southeast	1.57 (0.70-2.44)	-23	-30	-40	-43
Southwest	5.93 (3.92-7.95)	15	-38	-42	-38
Statewide	2.79 (2.29-3.29)	-14	-28	-37	-35

**FIGURE 6.** Regional and statewide time series (2000-2022) of wild turkey population indices from the April Rural Mail Carrier Survey by pheasant management region (Figure 1).



**TABLE 7.** Number of cards and percent of total cards ( $n = 356$ ) that contained zero observations by species. Overall, 23.3% (cf. 15.9% in 2021,  $n = 402$ ) of cards contained zero counts for all species (83 cards). Percentages by species from the 2021 survey are reported for comparison.

	Pheasant	Quail	Grouse	Wild Turkey	Cottontail	Jackrabbit
Nº of Cards	206	334	307	155	231	347
Percent (2022)	58	94	86	44	65	97
Percent (2021)	50	91	85	34	63	96

For further information regarding these results, please contact John Laux at [john.laux@nebraska.gov](mailto:john.laux@nebraska.gov)