

Federal Aid in Wildlife Restoration Project №: W-15-R-79
Title of Job: 2022 Northern Bobwhite Whistle Count Survey

Job: H1



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Northern bobwhite whistle counts were conducted between 15 June and 10 July 2022, inclusive, within each of the 6 bobwhite management zones (Figure 1). A total of 56 routes were surveyed in 2022 by Nebraska Game & Parks Commission and Pheasants/Quail Forever partnership staff. Along each 20-mile route, observers made stops one mile apart and conducted an auditory survey to quantify the number of unique male bobwhites calling.

Caveats. The Bobwhite Whistle Count Survey does not provide information on bobwhite population size, but is an index of breeding male abundance. At a statewide scale, these indices are correlated with harvest, and are useful for forecasting conditions hunters might encounter during the fall hunting season, particularly when combined with the results from other surveys. New survey routes were added in recent years, so comparisons with the 5-year regional means include only those routes for which ≥ 5 years of data had been collected.

Interpretations. This year's statewide bobwhite index was 30% higher compared to 2021 and 4% below the 5-year mean. Relative abundance increased in all management zones except the West Platte indicating populations should be higher than in 2021. Confidence intervals overlapped for all regional indices, indicating differences were not generally statistically significant. Regional indices were 21% to 142% higher than in 2021 (except for West Platte which was 28% lower), and 7% to 43% higher than the 5-year averages (except for the Republican [2% lower] and West Platte [40% lower] regions). The relative abundance of bobwhites observed in 2022 was highest in the East Central, Southeast, and Republican management zones.

Take-home Message. Although severe winter weather events limited Nebraska's bobwhite populations in recent years, populations appear to have rebounded somewhat in 2022. Nebraska experienced a relatively mild winter in 2021/22 and high overwinter survival was expected. Survey results also suggest a good carryover of adult birds into the 2022 breeding season. This year's statewide index was 30% higher than last year and the breeding population appears to be higher in nearly all regions of the state. Bobwhite numbers remain highest across portions of southern Nebraska (core range), which offers more suitable habitat than other regions of the state. This year's fall population will largely depend on production during the nesting season that is currently underway. Bobwhites are prolific breeders and have the ability to rapidly repopulate when good habitat and weather conditions persist. Although drier than normal conditions have prevailed in many areas of the state as we approach the fall, nesting and brood-rearing conditions have been relatively favorable throughout much of the core bobwhite range this summer.

Table 1. Mean number of calling male bobwhites heard per stop along roadsides during the 2022 bobwhite whistle count survey, by bobwhite management zone (Figure 1).

Zone	Number of Routes	Calling Males per Stop:		
		2022 x̄ & 90% CI	2021 x̄ & 90% CI	2017-2021 x̄ & 90% CI
East Central	4	1.56 (0.18-2.93)	0.94 (0.62-1.41)	1.09 (0.20-1.98)
North Central	8	0.46 (0.17-0.74)	0.19 (0.00-0.40)	0.43 (0.04-0.82)
Northeast	7	0.68 (0.22-1.14)	0.37 (0.09-0.65)	0.53 (0.22-0.84)
Republican	10	1.26 (0.60-1.92)	1.04 (0.60-1.48)	1.29 (0.97-1.61)
Southeast	14	1.55 (1.12-1.98)	1.02 (0.62-1.41)	1.42 (1.06-1.77)
West Platte	13	0.66 (0.31-1.01)	0.92 (0.27-1.58)	1.10 (0.56-1.64)
Statewide	56	1.03 (0.82-1.24)	0.79 (0.60-0.99)	1.07 (0.88-1.25)

Table 2. Percent change in the mean number of calling males heard during the 2022 bobwhite whistle count survey from 2021 and the 5-year mean, by bobwhite management zone (Figure 1).

Zone	Percent Difference from:	
	2021 Mean	2017-2021 Mean ^a
East Central	66	43
North Central	142	7
Northeast	84	28
Republican	21	-2
Southeast	52	9
West Platte	-28	-40
Statewide	30	-4

^a Comparisons to the 5-year mean were limited to the routes for which sufficient data had amassed.

Figure 1. Bobwhite management zones.

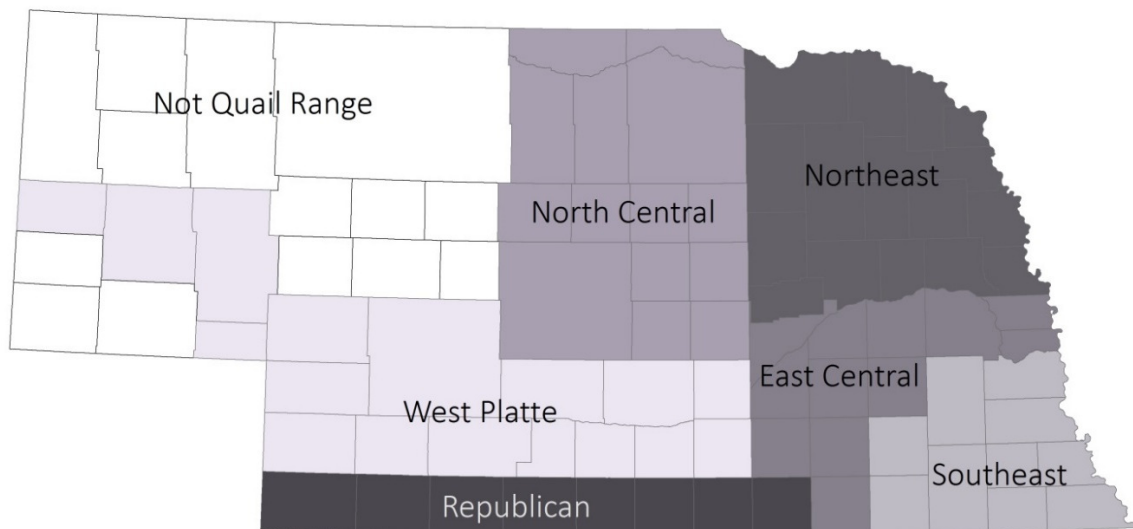
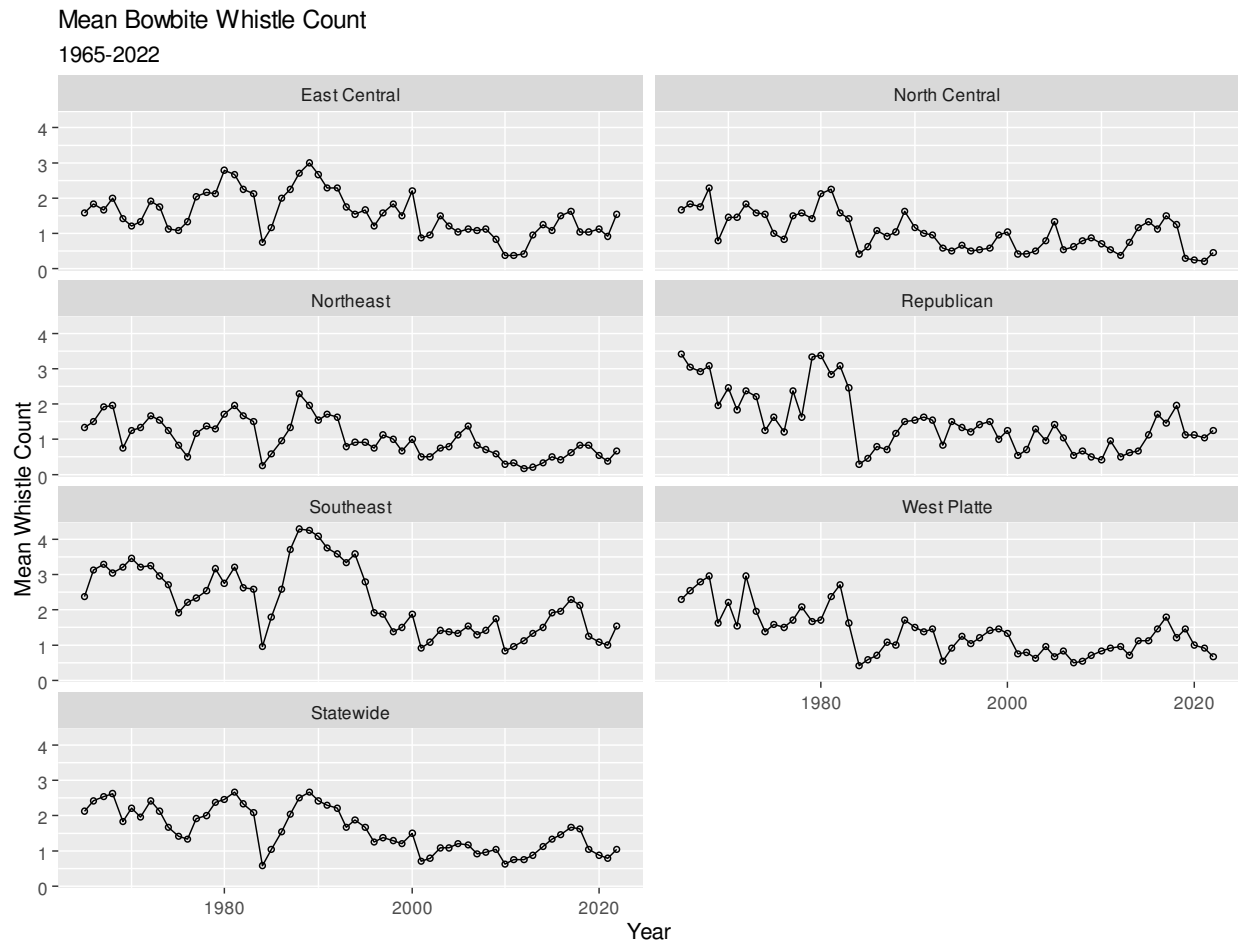


Figure 2. Time series (1965-2022) of the mean number of calling bobwhites heard per stop during the whistle count survey, by bobwhite management zone (Figure 1).



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