Federal Aid in Wildlife Restoration Project №: W-15-R-81 Title of Job: 2024 Northern Bobwhite Whistle Count Survey

Job: H1



Bryan O'Connor, Upland Game Dr. Jeffrey J. Lusk, Data & Biometry 13 August 2024

Northern bobwhite whistle counts were conducted between 15 June and 10 July 2024, inclusive, within each of the 6 bobwhite management zones (Figure 1). A total of 53 routes were surveyed in 2024 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.

Interpretations. This year's statewide bobwhite index was similar to 2023 and 16% above the 5-year mean. Relative abundance was mixed, with increases in North Central, Republican, and West Platte regions, and declines elsewhere. Confidence intervals overlapped for all regional indices, indicating differences were not statistically significant. Regional indices were higher or similar to the five-year mean in all regions except the East Central and Republican regions. The relative abundance of bobwhites observed in 2024 was highest in the Southeast, Republican, and East Central management zones.

Take-home Message. Nebraska's bobwhites are at the northernmost extent of their range in the U.S. and their abundance here may experience greater fluctuations in response to environmental conditions than in the core areas of the species' range. Bobwhite abundance remains highest across southern Nebraska (core range in Nebraska). This year's fall population will largely depend on nest success, since breeding populations are still recovering from the effects of long-term drought. Late season rain in 2023 and average to above average rainfall this year have provided quality nesting and brooding habitat for this year's production. Bobwhites are prolific breeders and have the ability to rapidly repopulate when good habitat and weather conditions persist.



Table 1. Mean number of calling male bobwhites heard per stop along roadsides during the 2024 bobwhite whistle count survey, by bobwhite management zone (Figure 1).

		Calling Males per Stop:		
	Number of	2024	2023	2019-2023
Zone	Routes	x & 90% CI	x & 90% CI	x & 90% CI
East Central	3	1.03 (0.00-2.09)	1.49 (0.16-2.82)	1.14 (0.47-1.80)
North Central	8	0.33 (0.13-0.53)	0.25 (0.08-0.41)	0.23 (0.07-0.38)
Northeast	7	0.59 (0.09-1.08)	0.62 (0.24-0.98)	0.56 (0.26-0.85)
Republican	9	1.09 (0.40-0.53)	1.04 (0.32-1.76)	1.14 (0.79-1.49)
Southeast	14	1.77 (1.47-2.06)	1.94 (1.50-2.38)	1.16 (0.85-1.46)
West Platte	12	0.91 (0.30-1.52)	0.56 (0.24-0.87)	0.89 (0.43-1.35)
Statewide	53	1.04 (0.82-1.27)	1.03 (0.78-1.27)	0.90 (0.74-1.06)

Table 2. Percent change in the mean number of calling males heard during the 2024 bobwhite whistle count survey from 2023 and the 5-year mean, by bobwhite management zone (Figure 1).

	Percent Difference from:		
	2023	2019-2023	
Zone	Mean	Mean	
East Central	-31	-10	
North Central	32	43	
Northeast	-6	4	
Republican	5	-4	
Southeast	-9	53	
West Platte	62	2	
Statewide	1	16	

Figure 1. Bobwhite management zones.

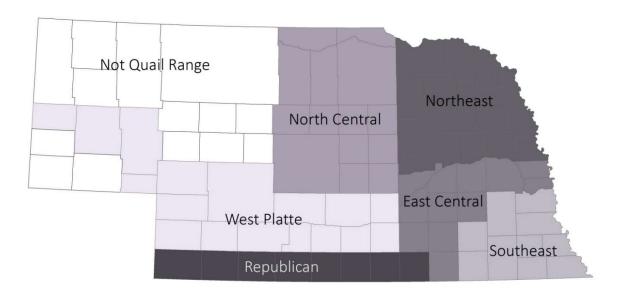
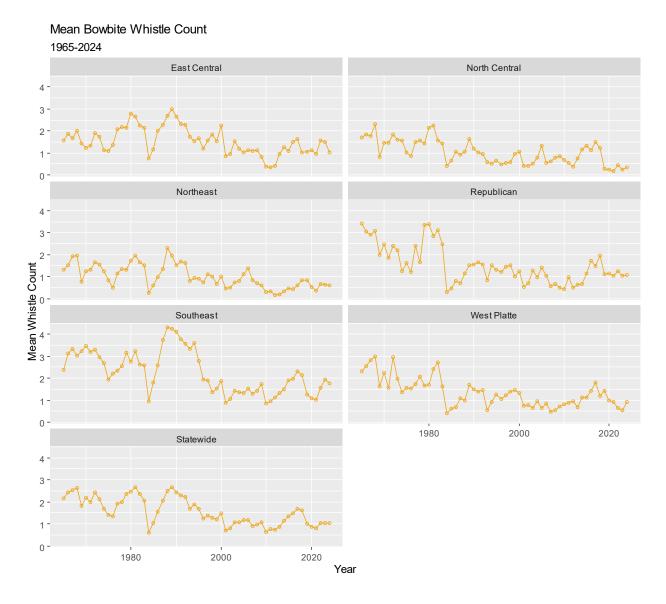


Figure 2. Time series (1965-2024) of the mean number of calling bobwhites heard per stop during the whistle count survey, by bobwhite management zone (Figure 1).



For more information, contact: Bryan O'Connor, Upland Game Program Manager, bryan.oconnor@nebraska.gov