DEPARTMENT OF NATURAL RESOURCES

2026 Minnesota August Roadside Survey

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Highlights

- Survey-wide pheasant indices are up nearly 20% from 2025, thanks to a mild winter and favorable spring conditions.
- Pheasant indices were highest in the West Central, Southwest, South Central, and Central regions. Hunters will have good opportunities in these regions.
- Eastern cottontail rabbit numbers remained similar to 2025, more than twice the 10-year average and above the long-term average.
- Mourning dove numbers were greater compared to 2025 and the 10-year average, with the highest indices and greatest harvest opportunities in the West Central and Southwest regions.

Summary

The 2026 survey-wide total pheasant index (89.9 birds/100 mi) was nearly 20% greater than in 2025 (75.2 birds/100 mi). A mild winter with little snow likely helped the overwinter survival of hens. Additionally, spring and summer conditions were drier and warmer across most regions, creating better conditions for nesting and brood-rearing. Pheasant indices increased from 2025 in the West Central, Central, and South Central regions by 74%, 25%, and 17%, respectively. In contrast, pheasant indices decreased in the Southeast, East Central, and Southwest regions by 51%, 29%, and 15%, respectively. Indices for other species showed variability among regions. The survey-wide gray partridge index (1.3 birds/100 mi) was lower than both the 2025 index (2.2 birds/100 mi) and the 10-year average (2.8 birds/100 mi). The survey-wide mourning dove index (170.0 doves/100 mi) increased 24% from the 2025 index (136.7 doves/100 mi) and was 25% above the 10-year average (137.0 doves/100 mi). Survey-wide, the eastern cottontail rabbit index (14.0 rabbits/100 mi) was similar to 2025 (14.5 rabbits/100 mi) and was above the 10-year average (6.9 rabbits/100 mi). The 2026 white-tailed deer survey-wide index was 39.5 deer/100 mi, a 7% increase from 2025 (36.9 deer/100 mi) and 26% above the 10-year average.

Introduction

This report summarizes the 2026 Minnesota August Roadside Survey (ARS). Since 1955, Minnesota Department of Natural Resources (MN DNR) wildlife and enforcement personnel have conducted the annual ARS during the first two weeks of August throughout Minnesota's farmland regions (Figure 1). There are 170 established routes, with 149 located within the pheasant range. The 2026 ARS consisted of 167 25-mile routes (1-4 routes/county), of which 148 were located in the ring-necked pheasant range. Routes were surveyed from 30 July to 16 August 2026. Observers drove each route during the early morning (starting at or near sunrise) at 15-20 mi/hr and recorded the number of pheasants, gray (Hungarian) partridge, eastern cottontail rabbits, white-tailed jackrabbits, white-tailed deer, mourning doves, sandhill cranes, and other wildlife they observed, including information on sex and age of these species. Counts conducted on cool, clear, calm mornings with heavy dew yield the most consistent results because wildlife (especially pheasants, gray partridge, and rabbits) move to warm, dry areas (e.g., gravel roads) during early-morning hours. These data provide an ***index of relative abundance*** to monitor long-term trends in regional and range-wide populations. Results are reported by agricultural region and survey-wide; however, population indices for species with low detection rates (e.g., white-tailed jackrabbits, gray partridge) are imprecise and unreliable.

Habitat Conditions

Undisturbed grassland habitat on public and private lands within the primary pheasant range decreased by 22,572 acres in 2026 compared to 2025. There was a roughly 42,000-acre loss in lands enrolled in the Conservation Reserve Program and a 170-acre decrease in federally managed U. S. Fish and Wildlife Service Waterfowl Production Areas, wildlife refuges, and conservation easements compared to 2025. There were no changes in the private lands enrolled in Reinvest in Minnesota from 2025; however, public Wildlife Management Areas managed by MN DNR increased by approximately 13,260 acres. Private lands enrolled in the Conservation Reserve Enhancement Program also increased by approximately 2,000 acres compared to 2025. Total protected lands account for 6% of lands within the pheasant range (Table 1), a decrease compared to 2025 (7.1%). The West Central and Southwest regions have the highest proportion of protected lands, 10.4% and 7.8%, respectively, and together account for 52% of all protected land in the pheasant range (Table 1).

Weather Summary

Following National Oceanic and Atmospheric Administration conventions, the 30-year period used to calculate normal temperatures now includes 1991-2020. Survey-wide weather conditions for pheasants were warmer in 2025-2026, with a drier spring and summer. The winter was characterized by mild temperatures and meager snow accumulation across the survey area (Personal Communications with MN DNR Climatologist 2026). Snow-depth data were not included in Table 2 because the available observations did not support the calculation of reliable regional averages for the reporting period. All regions except the Northwest experienced above-average temperatures during winter (Table 2). Spring temperatures were also above average survey-wide and across all regions except the Northwest, West

Central, and East Central Regions (Table 2). Spring was drier than average across all agricultural regions. Summer temperatures were above average across all regions, while precipitation was below average across all regions except the Southeast, which was slightly wetter than average (Table 2).

Survey Conditions

Weather conditions during surveys in 2026 were generally favorable, with temperature, dew, wind, and sky cover all similar to their respective 10-year averages. Therefore, weather conditions were unlikely to have substantially influenced survey results.

Species Reports

Ring-necked Pheasant

The 2026 survey-wide pheasant index (89.9 pheasants/100 mi) was nearly 20% greater than in 2025 (75.2 pheasants/100 mi; Table 3, Figure 2A). Although the survey-wide indices of roosters and hens decreased by 6% and 14%, respectively, the brood index increased by 39% (Table 3). The number of chicks per brood (4.1) was similar to 2025 (3.9), while the number of broods per 100 hens increased from 82.0 in 2025 to 93.2 in 2026 (Table 3). The 2026 indices for total pheasants, roosters, hens, and broods per 100 miles all exceeded their respective 10-year averages (Table 3). The index of broods per 100 hens was similar to the 10-year average, whereas the number of chicks per brood declined by 8% (Table 3) and was 25% below the long-term average of 5.5 chicks per brood. Overall, the 2026 indices for roosters, hens, and broods were above their long-term averages, but the smaller number of chicks per brood suggests that individual chick survival was lower.

Pheasant indices increased from 2025 in the West Central, Central, and South Central regions by 74%, 25%, and 17%, respectively (Table 4). In contrast, pheasant indices decreased in the Southeast, East Central, and Southwest regions by 51%, 29%, and 15%, respectively (Table 4). Pheasant indices exceeded their 10-year averages in the West Central, Central, Southwest, and South Central regions (Table 4). The West Central (132.9 birds/100 mi), Southwest (130.1 birds/100 mi), South Central (95.8 birds/100 mi), and Central (73.9 birds/100 mi) regions had the highest 2026 indices and should provide the best pheasant hunting opportunities in the state.

Gray Partridge

The 2026 survey-wide gray partridge index (1.3 birds/100 mi) was lower than both the 2025 index (2.2 birds/100 mi) and the 10-year average (2.8 birds/100 mi). The 2026 index remained 89% below the long-term average of 11.8 birds/100 mi (Table 3, Figure 2B). Gray partridge are generally rare throughout the state, although they can be locally abundant. In 2026, the South Central (3.2 birds/100 mi), Central (1.7

birds/100 mi), and Southwest (1.5 birds/100 mi) regions had the highest indices and are likely to provide the best opportunities for harvesting gray partridge (Table 4).

Cottontail Rabbit and White-tailed Jackrabbit

Survey-wide, the 2026 eastern cottontail rabbit index (14.0 rabbits/100 mi) was similar to 2025 (14.5 rabbits/100 mi) and above the 10-year average (6.9 rabbits/100 mi) and the long-term average (6.2 rabbits/100 mi; Table 3, Figure 3A). The Southwest region had the highest cottontail index (24.4 rabbits/100 mi), followed by the East Central (22.4 rabbits/100 mi), Central (20.6 rabbits/100 mi), and South Central (14.6 rabbits/100 mi) regions. Each of these regions should provide good rabbit hunting opportunities in 2026.

White-tailed jackrabbits were observed on five routes in 2026: Southwest (2 routes), Northwest (1 route), West Central (1 route), and South Central (1 route). Four routes reported a single jackrabbit, while two jackrabbits were observed along one route. Jackrabbits are rarely detected, making annual or short-term trend comparisons difficult. Still, the jackrabbit index remains below the long-term average (Table 3, Figure 3B). Minnesota's jackrabbit population peaked in the late 1950s before declining to low levels in the 1980s, where it has remained. This long-term decline is primarily attributed to the loss of preferred habitats, including pasture, hayfields, and small-grain fields.

White-tailed Deer

The 2026 white-tailed deer survey-wide index was 39.5 deer/100 mi, a 7% increase from 2025 (36.9 deer/100 mi) and 26% above the 10-year average (Table 3, Figure 4A). Compared to the long-term average of 12.3 deer/100 mi, the 2026 index was 215% higher (Table 3, Figure 4A). Regional deer indices increased by approximately 14-51% in all regions except the West Central and East Central regions, where the index declined by 22% and 14%, respectively (Table 4).

Mourning Dove

The 2026 survey-wide mourning dove index (170.0 doves/100 mi) increased 24% from the 2025 index (136.7 doves/100 mi) and was 25% above the 10-year average (137.0 doves/100 mi; Table 3, Figure 4B). However, the 2026 index remained 33% below the long-term average (233.7 doves/100 mi; Table 3, Figure 4B).

Mourning dove indices increased by 8-58% across all regions except the Southwest, where the index declined by 11% (Table 4). Indices were highest in the West Central (266.2 doves/100 mi) and Southwest (173.7 doves/100 mi) regions, suggesting the greatest opportunities for dove harvest in these areas (Table 4).

Sandhill Crane

The 2026 survey-wide index of sandhill cranes (16.5 cranes/100 mi) was 11% greater than the 2025 index (14.9 cranes/100 mi; Table 3) and the 10-year average (14.7 cranes/100 mi; Table 3). Annual changes varied among regions. The East Central region had a 31% increase in the total crane index,

while the indices in the Central and South Central regions each increased by 10% (Table 4). The Northwest region had an index 63% below its 10-year average. In contrast, indices in the West Central, Central, East Central, and South Central regions were above their respective 10-year averages (Table 4). Crane observations during the ARS are less frequent in the South Central and Southeast regions, and no observations have yet been reported from the Southwest region.

Other Species

Notable incidental sightings included an American badger in Cottonwood County; a black bear and two sharp-tailed grouse in Red Lake County; three Greater prairie-chickens in Clay County; and five northern shovelers in Steele County.

Acknowledgments

We thank our many cooperators for completing the routes required for this survey; without their efforts, this survey would not be possible. Dusty VanThuyne (Minnesota Board of Water and Soil Resources) provided enrollment data on cropland retirement programs in Minnesota, and Lisa Rairdin (USFWS) provided federal land acquisition data. Kate Carlson (MNITServices Regional GIS Support) assisted with updating spatial layers. Bram Verheijen (MN DNR Wildlife Research) was invaluable in assisting with the statistical analyses and reviewing an earlier draft of this report. Nicole Davros and Seth Goreham (MN DNR Wildlife Research) also reviewed an earlier draft of this report. This work was funded in part through the Federal Aid in Wildlife Restoration Act.

Literature Cited

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Table 1. Abundance (total acres) and density (acres/mi^2) of undisturbed grassland habitat within Minnesota's pheasant range, 2026, by agricultural region (AGREG).

	Cropland Retirement (private lands)[a]					Public Lands				
AGREG	CRP	CREP	RIM	RIM-WRP	WRP	USFWS[b]	MN DNR[c]	Total	% of landscape	Density ac/mi^2
WC	251,803	43,176	24,571	14,275	20,305	230,813	119,172	704,115	10.4%	66.3
SW	127,415	38,418	23,132	2,553	766	31,000	72,136	295,420	7.8%	50.0
C	130,478	21,864	55,053	7,026	3,158	99,754	57,795	375,128	6.2%	39.7
SC	109,058	37,975	15,552	10,780	9,107	14,552	42,601	239,625	5.9%	37.9
SE	80,698	4,496	7,619	1,070	1,577	37,283	59,769	192,512	5.2%	33.2
EC	2,772	134	2,485	0	4	4,695	100,005	110,095	3.4%	22.0
Total	702,224	146,063	128,412	35,704	34,917	418,267	459,356	1,924,943	6.0%	38.6

[a] Unpublished data, Minnesota Board of Water and Soil Resources, 21 August 2026.
[b] Includes USFWS-managed Waterfowl Production Areas, wildlife refuges, & conservation easements.
[c] MN DNR-managed Wildlife Management Areas. Comparisons to 2020 and earlier years are invalid due to data source changes.

Table 2. Average temperature, snow depth, and precipitation by season and agricultural region in Minnesota, December 2025 – July 2026.

	Agricultural Region							
	NW	WC	C	EC	SW	SC	SE	SURVEY-WIDE
Winter (December 1 - March 31)								
Temperature (average °F)	13.9	20.9	21.5	19.3	25.1	24.3	23.7	21.2
Departure from normal (°F)[a]	0.0	2.8	2.3	0.9	4.0	2.8	1.9	2.1
Snow Depth (average inches)[b]	NR	NR	NR	NR	NR	NR	NR	NR
Spring (April 1 - May 31)								
Temperature (average °F)	45.6	49.8	50.5	48.1	52.2	53.2	52.8	50.3
Departure from normal (°F)[a]	-1.8	0.0	0.4	-0.5	1.2	1.5	1.5	0.4
Precipitation (total inches)	1.4	1.7	2.2	2.2	2.6	3.0	3.0	2.3
Departure from normal (inches)[a]	-0.8	-1.0	-0.9	-0.9	-0.8	-0.8	-1.0	-0.9
Summer (June 1 - July 31)								
Temperature (average °F)	69.5	71.0	71.3	69.3	71.9	72.2	71.0	70.9
Departure from normal (°F)	3.3	2.4	2.5	2.5	2.2	2.2	1.9	2.5
Precipitation (total inches)	2.9	4.3	4.1	3.5	3.4	4.3	5.0	3.9
Departure from normal (inches)[a]	-1.0	0.2	-0.2	-0.9	-0.8	-0.4	0.1	-0.4

[a] Departures calculated using the 30-year NOAA average (1991-2020) over the respective time period.
[b] NR = not reported. Snow-depth data were not included because observations were insufficient to calculate reliable regional averages for the reporting period.

Table 3. Survey-wide trends (% change) in wildlife observed per 100 miles driven, Minnesota August roadside survey, 1955-2026.

Species	Change from 2025[a]					Change from 10-year average[b]				Change from long-term average (LTA)[c]			
Subgroup	*n*	2025	2026	%	95% CI	*n*	2016-2025	%	95% CI	*n*	LTA	%	95% CI
Ring-necked pheasant													
Total pheasants	148	75.2	89.9	19	±18	147	49.3	82	±26	147	88.2	-3	±16
Roosters	148	13.4	12.5	-6	±17	147	7.5	69	±21	147	10.4	18	±17
Hens	148	5.6	4.8	-14	±20	147	8.0	98	±31	147	13.0	17	±21
Broods	148	2.7	3.8	39	±43	147	7.5	98	±33	147	11.8	21	±23
Broods per 100 hens[d]	549	82.0	93.2				93.3	0			90.0	3	
Chicks per brood[d]	549	3.9	4.1				4.5	-8			5.5	-25	
Median hatch date[d]	549	17-Jun	11-Jun				17-Jun				9-Jun		
Gray partridge	167	2.2	1.3	-41	±91	166	2.8	-53	±72	166	11.8	-89	±17
Eastern cottontail	167	14.5	14.0	-3	±17	166	6.9	99	±29	166	6.2	114	±32
White-tailed jackrabbit[e]	167	0.2	0.2			166	0.1			166	1.3		
White-tailed deer	167	36.9	39.5	7	±5	166	30.2	26	±7	166	12.3	215	±16
Mourning dove	167	136.7	170.0	24	±1.4	166	137.0	25	±1	166	233.7	-33	±1
Sandhill crane[f]													
Total cranes	167	14.9	16.5	11	±13	166	14.7	11	±13				
Juveniles	167	1.5	2.8	87	±133	166	1.7	63	±116				

[a] Includes Northwest region, except for pheasants. Estimates based on routes (*n*) surveyed in both years.

[b] Includes Northwest region, except for pheasants. Estimates based on routes (*n*) surveyed for at least 9 of the 10 years.

[c] LTA = long-term average during years 1955-2025, except for deer (1974-2025). Estimates for all species except deer are based on routes (n) surveyed >40 years; estimates for deer are based on routes surveyed ≥25 years. Thus, the Northwest region (8 counties in the Northwest were added to the survey in 1982) is included only for deer.

[d] Sample size is the total number of broods observed across all surveys rather than the number of routes run in 2026.

[e] White-tailed jackrabbits are too rare to make annual or 10-year comparisons.

[f] Sandhill cranes were added to the survey in 2009; thus, long-term averages are not calculated.

Table 4. Regional trends (% change) in number of wildlife observed per 100 miles driven, Minnesota August roadside survey, 1955-2026.

Region	Change from 2025[a]				Change from 10-year average[b]				Change from long-term average (LTA)[c]			
Species	*n*	2025	2026	%	95% CI	*n*	2016-2025	%	95% CI	*n*	LTA	%	95% CI
Northwest[d]													
Gray partridge[e]	19	0.0	0.0	0	0	19	2.9			19	3.0	-100	±69
Eastern cottontail[e]	19	1.9	1.3			19	1.3			19	0.9		
White-tailed jackrabbit[e]	19	0.6	0.2			19	0.3			19	0.5		
White-tailed deer	19	54.3	82.1	51	±4	19	59.5	38	±4	19	38.6	113	±5
Mourning dove	19	124.8	134.9	8	±2	19	105.1	28	±2	19	115.6	17	±2
Sandhill crane[f]	19	16.0	16.1	1	±13	19	43.7	-63	±5				
West Central[g]													
Ring-necked pheasant	38	76.3	132.9	74	±2	38	56.8	134	±4	36	91.2	34	±2
Gray partridge[e]	38	0.5	0.5	0	±236	38	0.5	6	±410	36	8.1	-93.0	±25
Eastern cottontail	38	7.6	8.9	18	±27	38	3.9	130	±52	36	3.9	48	±52
White-tailed jackrabbit[e]	38	0.2	0.1			38	0.2			36	1.9	-94	±107
White-tailed deer	38	45.6	35.7	-22	±4	38	35.0	2	±6	36	11.3	197	±18
Mourning dove	38	197.6	266.2	35	±1	38	177.0	50	±1	36	339.5	-39	±1
Sandhill crane[f]	38	12.3	11.5	-7	±17	38	4.9	137	±42				
Central													
Ring-necked pheasant	29	59.2	73.9	25	±3	30	43.0	66	±5	30	66.2	8	±3
Gray partridge[e]	29	0.6	1.7	200	±371	30	1.7			30	7.7	-79	±27
Eastern cottontail	29	15.4	20.6	33	±13	30	7.7	160	±27	30	6.5	207	±31
White-tailed jackrabbit[e]	29	0.0	0.0			30	0.1			30	1.0		
White-tailed deer	29	30.1	34.2	14	±7	30	29.7	14	±7	30	8.4	303	±24
Mourning dove	29	98.9	156.4	58	±2	30	117.0	33	±2	30	208.8	-26	±1
Sandhill crane[f]	29	29.5	32.4	10	±7	30	26.0	26	±8				
East Central													
Ring-necked pheasant	10	37.2	26.4	-29	±9	8	26.2	-31	±9	10	76.3	-65	±3
Gray partridge[e]	10	0.0	0.0			8	0.3			10	0.2		
Eastern cottontail	10	42.0	22.4	-47	±5	8	14.0	43	±17	10	10.4	115	±22
White-tailed jackrabbit[e]	10	0.0	0.0			8	0.0			10	0.2		
White-tailed deer	10	110.4	95.2	-14	±2	8	47.9	76	±5	10	14.0	582	±16
Mourning dove	10	66.8	82.4	23	±3	8	60.7	36	±4	10	106.1	-22	±2
Sandhill crane[f]	10	70.8	92.8	31	±3	8	63.8	66	±4				

Table 4. Continued.

Region	Change from 2025[a]					Change from 10-year average[b]				Change from long-term average (LTA)[c]			
Species	*n*	2025	2026	%	95% CI	*n*	2016-2025	%	95% CI	*n*	LTA	%	95% CI
Southwest													
Ring-necked pheasant	19	152.4	130.1	-15	±2	19	79.9	63	±3	19	109.2	19	±2
Gray partridge	19	6.3	1.5	-77	±33	19	6.2	-76	±34	19	33.9	-96	±6
Eastern cottontail	19	17.7	24.4	38	±12	19	7.2	273	±29	19	8.1	200	±26
White-tailed jackrabbit[e]	19	0.2	0.8			19	0.3			19	3.1	-73	±68
White-tailed deer	19	18.1	20.6	14	±12	19	20.7	0	±10	19	8.9	131	±24
Mourning dove	19	194.3	173.7	-11	±1	19	179.4	-3	±1	19	289.1	-40	±1
Sandhill crane[e,f]	19	0.0	0.0			19	0.0						
South Central													
Ring-necked pheasant	32	82.1	95.8	17	±2	32	54.3	76	±4	32	113.7	-16	±2
Gray partridge	32	2.6	3.2	24	±78	32	4.1	-21	±50	32	15.8	-79	±13
Eastern cottontail	32	17.2	14.6	-15	±12	32	8.2	79	±25	32	7.8	87	±26
White-tailed jackrabbit[e]	32	0.1	0.1			32	0.0			32	1.4		
White-tailed deer	32	13.9	19.0	37	±15	32	11.5	65	±18	32	4.2	355	±49
Mourning dove	32	115.1	139.9	22	±2	32	151.8	-8	±1	32	239.4	-42	±1
Sandhill crane[f]	32	3.6	4.0	10	±56	32	3.4	17	±60				
Southeast													
Ring-necked pheasant	20	31.2	15.4	-51	±14	20	17.0	-10	±12	20	60.8	-75	±3
Gray partridge	20	6.2	0.8	-87	±34	20	4.0	-80	±52	20	11.7	-93	±18
Eastern cottontail	20	17.0	11.2	-34	±12	20	11.6	-3	±18	20	8.4	33	±25
White-tailed jackrabbit[e]	20	0.4	0.0			20	0.0			20	0.5		
White-tailed deer	20	31.8	36.6	15	±7	20	25.6	43	±8	20	10.8	239	±20
Mourning dove	20	102.0	128.4	26	±2	20	88.3	45	±2	20	194.9	-34	±1
Sandhill crane[e,f]	20	1.4	0.8			20	1.4						

[a] Based on routes (*n*) surveyed in both years.
[b] Based on routes (*n*) surveyed at least 9 of 10 years.
[c] LTA = long-term average during years 1955-2025, except for Northwest region (1982-2025) and white-tailed deer (1974-2025). Estimates based on routes (*n*) surveyed ≥40 years (1955-2025), except for Northwest (≥20 years) and white-tailed deer (≥25 years).
[d] Eight Northwestern counties (19 routes) were added to the August roadside survey in 1982.
[e] Species may be too infrequently observed to calculate some trends.
[f] Sandhill cranes were added to the survey in 2009; thus, long-term averages are not calculated.

[g] Two routes were added to the West Central region in 2014.

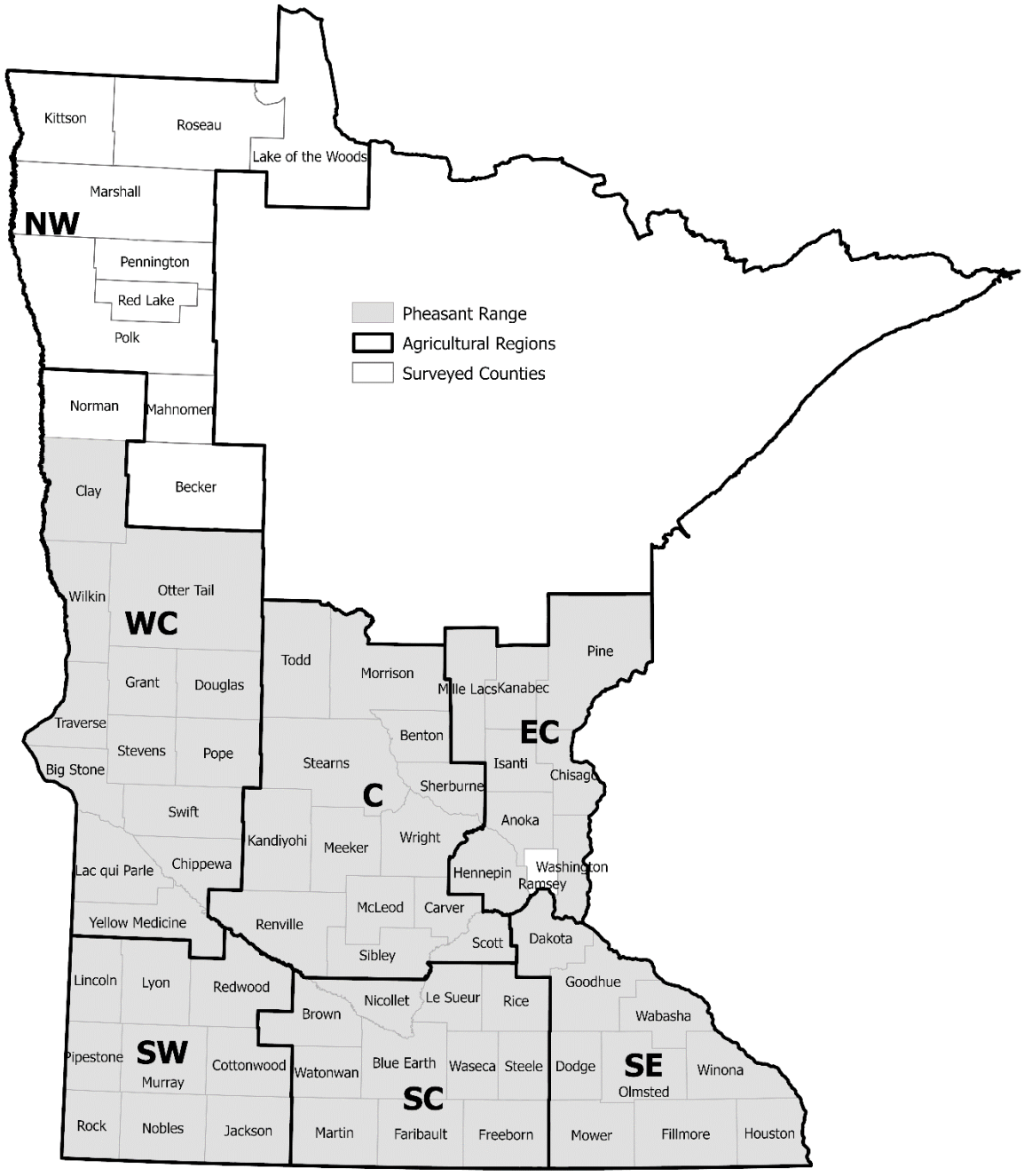

Figure 1. Survey regions and ring-necked pheasant range delineation for Minnesota's August roadside survey, 2026

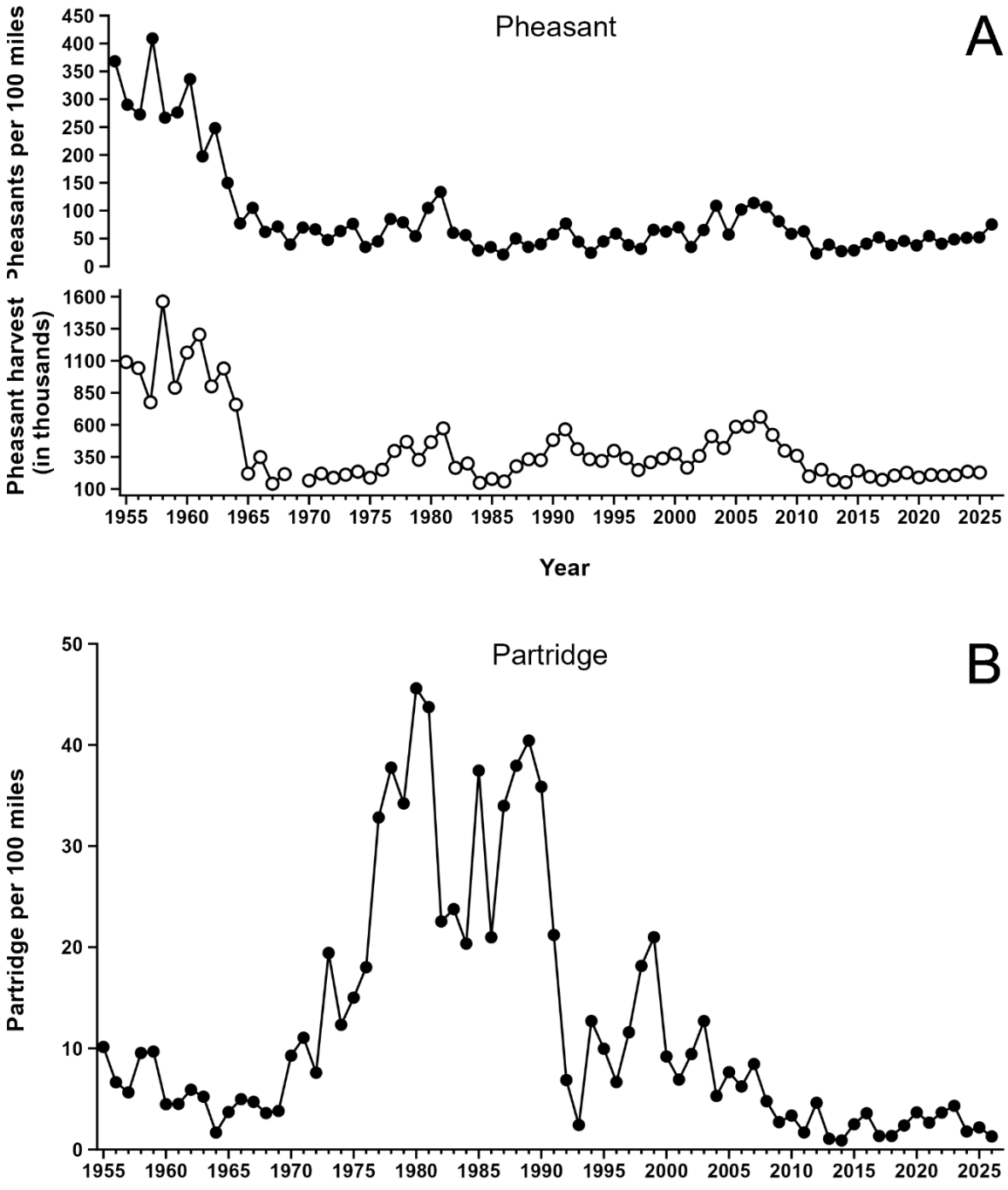

Figure 2. Survey-wide index of ring-necked pheasants (A) and gray partridge (B) seen per 100 miles driven in Minnesota, 1955-2026. Based on all survey routes completed.

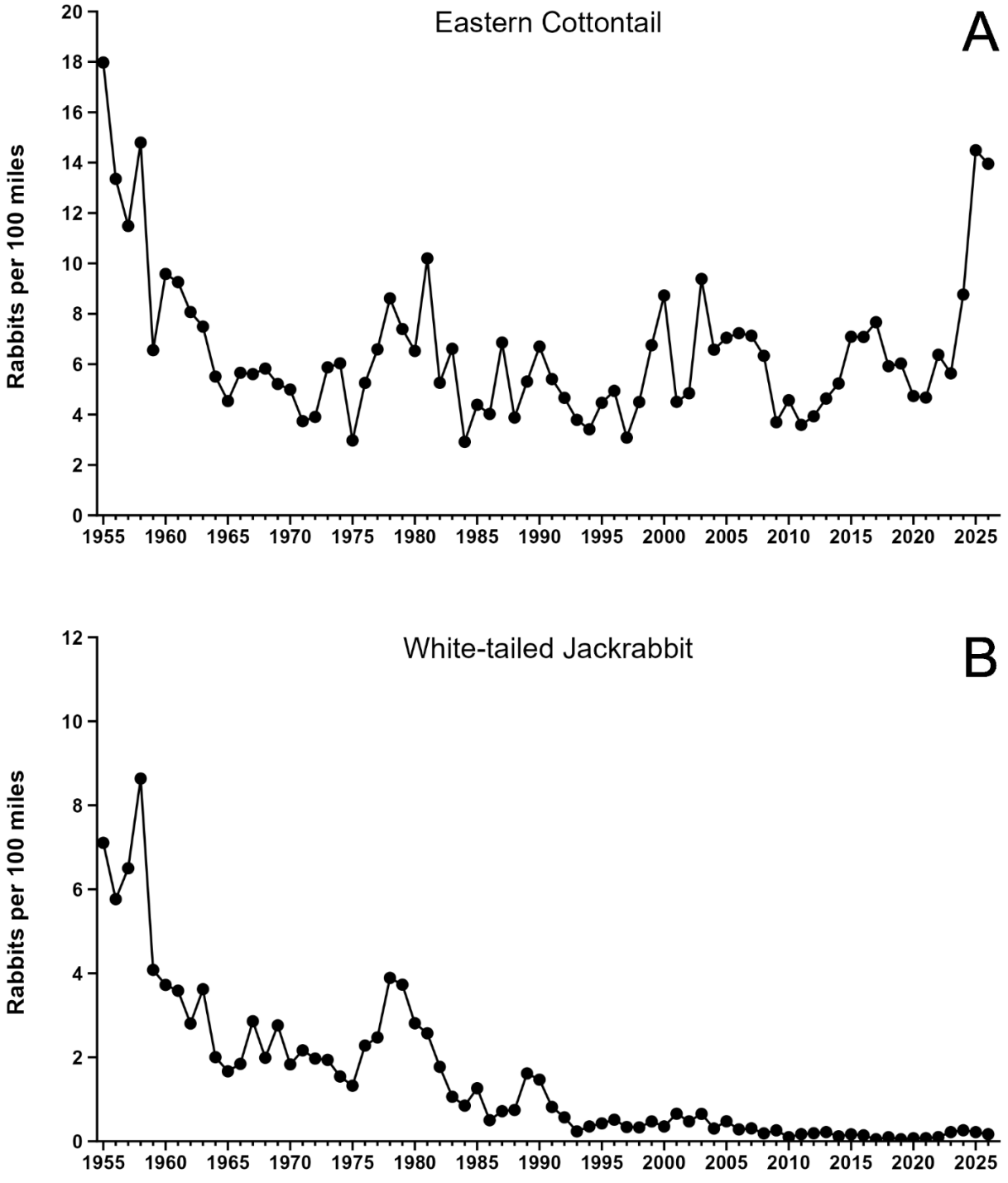

Figure 3. Survey-wide index of eastern cottontail (A) and white-tailed jackrabbits (B) seen per 100 miles driven in Minnesota, 1955-2026. Based on all survey routes completed.

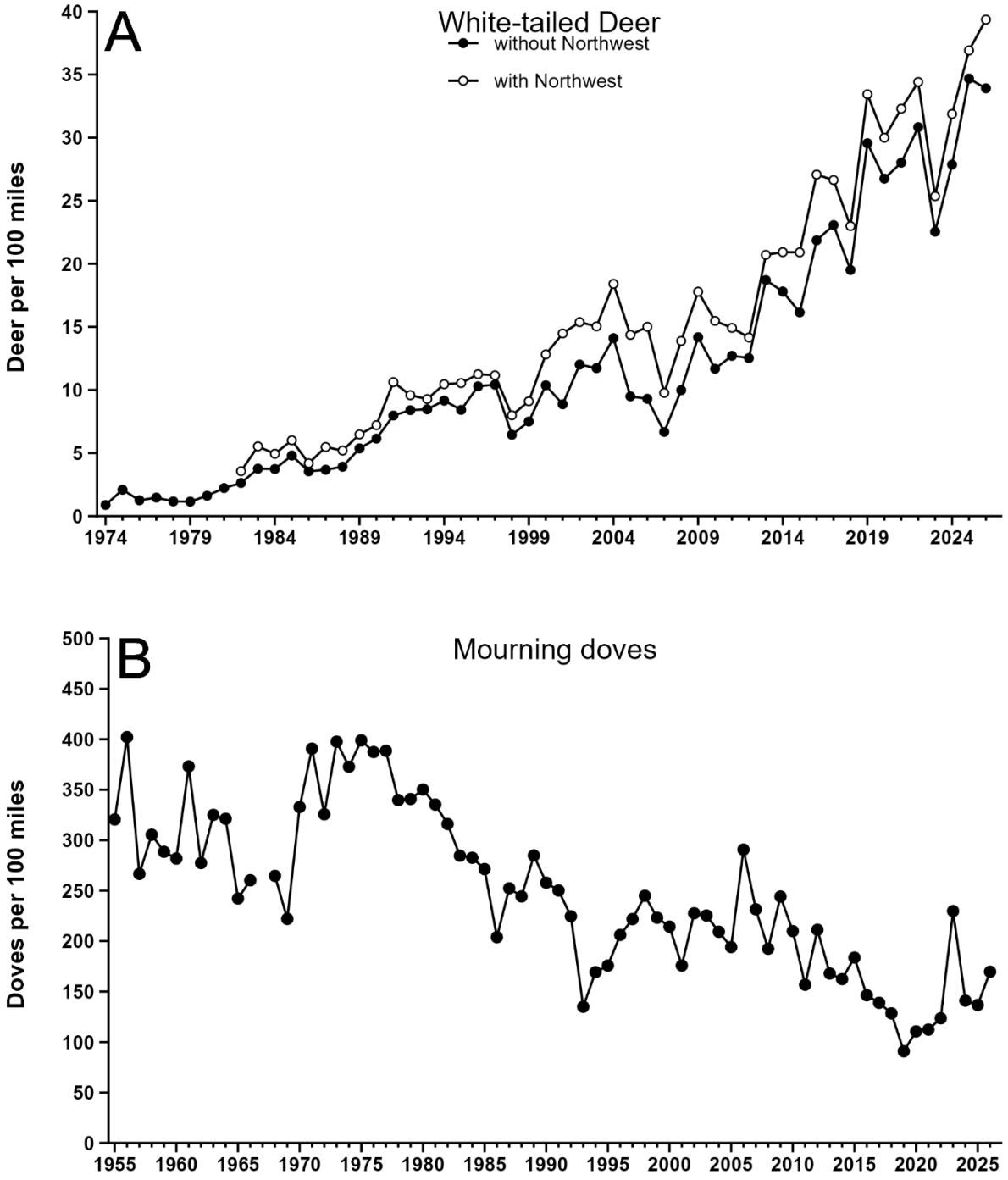

Figure 4. Survey-wide index of (A) white-tailed deer seen per 100 miles driven in Minnesota, 1974-2026, with and without the Northwest region included; and (B) mourning doves seen per 100 miles driven in Minnesota, 1955-2026. Doves were not counted in 1967. Based on all survey routes completed.