PHEASANT CROWING SURVEY - 2025

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KANSAS PHEASANT CROWING SURVEY – 2025
Federal Aid in Wildlife Restoration Grant W-39-R-31

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INTRODUCTION

The Kansas Department of Wildlife and Parks (KDWP) collects breeding population data for pheasant (*Phasianus colchicus*) by conducting crow counts throughout the pheasant range in the state. Measurable wild pheasant populations do not occur in south-east Kansas (Osage Cuestas Region). Pheasants are an extremely important wildlife resource for Kansas, and these indices help monitor population change through time.

METHODS

The survey period was from April 25 through May 15, 2025. Pheasant routes are ~20 mile transects, with at least 2 miles between each of the 11 stops. At stops, observers listen for 2 minutes and count all the audible 2-note (syllable) crows heard from male pheasants. The Pheasant Crow Survey Index (PCSI) is the mean number of crows per 2-minute stop for each route. The first stop begins 45 minutes before sunrise and continues through the last stop. Noise interference is taken into consideration, and data are censored if the observer feels noise is severely inhibiting their ability to count crows.

The results of the 2025 survey and comparisons to the 2023 data are presented in Table 1. All 65 established routes were assigned for 2025 and 64 of the 65 were successfully completed. Range wide and regional trends since the survey's 1997 initiation are shown in Figure 1. Location of routes within the state are shown in Figure 2.

Data Analysis
Given that samples are taken on permanently established routes, samples are not independent and thus a paired-sample t-test is used to draw inter-annual comparisons. A two-tailed test with an alpha level 0.10 was used to identify statistically significant differences between years at regional and statewide scales. Routes that do not have consistent observers are removed from analysis of inter-annual comparisons to remove observer bias in analysis.

Inverse Distance Weighting is a mapping technique that can be used to interpolate data between survey points, providing estimates to areas not surveyed. This technique has limitations at smaller scales (e.g., within counties and townships) because no habitat variables are included (only count data) but is useful for large-scale interpretation of statewide data for regional comparisons. Inverse Distance Weighting was used by assigning the route-specific PCSI to the centroid of each route. All sampled routes were used to extrapolate data throughout Kansas' pheasant range (Figure 3). For comparison, the interpolated percent change of the PCSI the previous year's survey is also included where observers are consistent (Figure 4).

RESULTS

Range-wide
The 2024 PCSI was 10.61 crows per stop across all 64 surveyed routes. Among the 57 comparable routes (sampled both years by same observer), there was a significant increase ($P < 0.001$) in the statewide mean from 2024 (49%). The PCSI decreased on 15 of the comparable routes and increased or remained the same on the remaining 42 comparable routes relative to 2024 (Table 1).

Flint Hills: All 7 of the established routes were completed. The regional PCSI was 3.95, indicating no significant change from 2024 ($P = 0.328$). **Glaciated Plains:** All 6 of the established routes were completed. The regional PCSI was 1.45, indicating no significant change from 2024 ($P = 0.220$). **Northern High Plains:** All 12 established routes were completed. The regional PCSI was 18.62, indicating a significant increase from 2024 ($P = 0.079$). **Smoky Hills:** All 21 of the established routes

were completed, the regional PCSI was 9.93, indicating a significant increase from 2024 ($P = 0.005$). **Southern High Plains:** All 7 of the established survey routes were completed in this region. The regional PCSI was 19.65, indicating a significant increase from 2024 ($P = 0.0$). **South-Central Prairies:** Of the 12 established routes 11 were completed this year. The regional PCSI was 8.52, indicating no significant change from 2024 ($P = 0.201$).

DISCUSSION

The spring pheasant survey results can represent two important life stages for pheasant populations. Spring surveys can indicate over-winter survival for a population. During extended harsh conditions, winter can be a bottleneck for some upland game populations. However, unlike states in the northern portion of the pheasant range, Kansas rarely has winter weather that is extreme enough to have significant impacts on survival. When overwinter survival is high, spring surveys also reflect the previous breeding season success (i.e., production) for the population. Spring crow counts usually do not predict fall populations well, but rather indicate breeding population potential and habitat suitability over time.

Kansas received significantly more precipitation in the spring and summer months of 2024 than in the past several years effectively breaking the drought. While there was improved rainfall across the pheasant range, precipitation came earlier and in greater quantities in the southwest and southcentral regions of the state and these regions recovered from the drought better. These improved conditions resulted in increased production across the pheasant range as indicated by the 2024 brood survey. While most counties in the state still qualified for emergency haying and grazing of CRP based on conditions in early spring, the better conditions from the precipitation resulted in less overall emergency use of these acres in 2024. There were a few significant winter storm events however winter habitat conditions were better as a result of summer moisture and no significant winter losses were observed. Well above average rainfall in November combined with snowmelt from significant snowfall in January combined to create good soil moisture conditions coming into the spring and ideal winter wheat growth. This combined with maintaining more residual cover in CRP fields have created some of the best nesting cover we have seen in several years. As agriculture has continued to intensify, CRP habitat has become more important to maintaining pheasant populations in Kansas. While we have maintained more CRP cover this year, CRP enrollments continue to decline. CRP enrollment in the state is now less than half of what it was at its peak and many of the enrolled acres are shifting to less pheasant friendly practices (i.e. grassland CRP). There are a few practices, such as cover crops, that have a positive impact on populations, but loss of existing habitat is largely outpacing any minimal gains. Negotiations for the new Farm Bill are ongoing and conservation agencies and organizations are making a push for improved policies to make CRP and other conservation programs more effective again, although early indications are there will not be major changes. While Kansas pheasant populations remain viable across the primary range and are likely to persist into the foreseeable future, populations density and stability in the near term are likely to be greatly impacted by this legislation. Pheasant populations can have major impacts on rural economics and conservation funding and thus remains a priority of KDWP.

Fall pheasant populations are highly dependent on production and survival of young of the year. While habitat conditions are much better coming into this breeding season, Conditions over the next 2 months will impact nesting and brood survival and can still have large impacts on the realized fall population. Brood survey data will be collected in late July and August and summarized in early September. Fall population estimates will be much more accurate once this data is available.

Table 1. Pheasant crow survey routes and observers in Kansas, 2025.

Route	Observer	Route	Observer
Barton	Jeff Prendergast~	Norton	Luke Winge~
Brown-Nemaha	Tyler Warner	Osborne	Chris Lecuyer
Butler-Marion	Charles Cope	Ottawa	Pat Riese
Cheyenne	Abigal McGuire	Pawnee	Jacob Christiansen~
Clark	Jeff Sutton	Pawnee (Irrig)	Tom Bidrowski
Cloud	Brandon Tritsch	Perry WA	Andrew Page
Comanche	Matt Hanvey	Phillips	Mark Shaw
Cowley-Sumner	Vickie Cikanek	Pratt	Jacob Christiansen~
Decatur	Daniel Howard	Rawlins-Thomas	Kevin Klag
Dickinson-Clay	Clint Thornton	Reno	Keith Murrow
Edwards	Jacob Christiansen~	Republic	Rob Unruh
Ellis	Megan Rohweder	Rice	Steve Adams
Ellsworth	James Svaty	Riley	Ben Couchman~
Finney	Kurtis Meier	Rooks	Cale Hedges
Ford	Aaron Baugh	Rush	Jason Wagner
Gove SW	Matt Schmidt	Russell	James Svaty
Graham	Eric Wiens	Scott	Abe Lollar
Gray	Jared King	Sedgwick-Harvey	Charles Cope
Harper	Jon Beckman	Seward-Haskell	Lazar Kelly
Hodgeman	Aaron Baugh	Shawnee	Kyle Abrahamson~
Jackson-Jefferson	Tyler Warner	Sheridan	Abigal McGuire
Kearny-Hamilton	Kurtis Meier	Sherman	Abigal McGuire
Kingman-Reno	Keith Murrow	Smith	Brandon Tritsch
Kiowa	Zac Eddy	Stafford-Barton	Brian Hanzlick
Lincoln	James Svaty	Stevens	Kraig Schultz
Logan SE	Kevin Luhman~	Thomas	Kevin Klag
Marshall	Megan Smith	Trego	Luke Kramer
McPherson	Jeff Rue	Tuttle Creek WA	Justing Wren
McPherson-Marion	Jeff Rue	Wabaunsee	Kyle Abrahamson~
Mitchell	Conner Rolen	Washington	Megan Smith
Morris	Brent Konen	Wichita-Greeley	Jared King
Morton-Stanton	Kraig Schultz	Wilson WA	Scott Thomason
Ness-Lane	Andy Nelson		

Note: ~ new observer for route;

Table 2. Regional changes in pheasant crow counts in Kansas from 2024 to 2025.

Flint Hills

Route	2024 C/S	2025 C/S	% Δ
Butler-Marion	0.18	0.09	-50
Cowley-Sumner	6.55	12.00	83
Dickinson-Clay	5.82	4.64	-20
McPherson-Marion	0.73	2.64	263
Morris	0.00	0.36	NE
Riley**	0.58	0.36	-38
Wabaunsee**	0.00	0.09	0
Region Mean	**2.31**	**3.95**	**71**

Glaciated Plains

Route	2024 C/S	2025 C/S	% Δ
Brown-Nemaha	0.40	0.64	59
Jackson-Jefferson	0.40	0.27	-32
Marshall	0.27	0.36	33
Perry WA	1.09	1.55	42
Shawnee**	0.00	0.18	0
Tuttle Creek WA	2.70	4.45	65
Region Mean	**0.97**	**1.45**	**50**

Northern High Plains

Route	2024 C/S	2025 C/S	% Δ
Cheyenne	10.09	20.00	98
Decatur	20.64	40.44	96
Gove SW**	5.90	4.90	-17
Graham	15.55	21.55	39
Logan SE**	2.00	4.91	145
Norton**	41.36	35.55	-14
Rawlins-Thomas	13.09	8.82	-33
Scott	13.73	24.44	78
Sheridan	9.36	9.27	-1
Sherman	6.18	10.82	75
Thomas	10.36	13.64	32
Wichita-Greeley	10.91	15.36	41
Region Mean	**14.29**	**18.62**	**30**

Southern High Plains

Route	2024 C/S	2025 C/S	% Δ
Finney	9.67	20.82	115
Ford	16.25	33.30	105
Gray	15.44	7.80	-49
Kearny-Hamilton	19.00	16.45	-13
Morton-Stanton	4.73	8.73	85
Seward-Haskell	2.77	24.55	785
Stevens	9.30	25.91	179
Region Mean	**11.02**	**19.65**	**78**

Smoky Hills

Route	2024 C/S	2025 C/S	% Δ
Barton**	5.73	4.36	-24
Cloud	0.27	0.18	-33
Ellis	12.00	13.18	10
Ellsworth	2.40	2.60	8
Hodgeman	8.10	13.18	63
Lincoln	3.82	9.45	148
McPherson	2.64	4.10	56
Mitchell**	6.82	10.82	59
Ness-Lane	5.91	10.55	78
Osborne	7.36	11.91	62
Ottawa	4.36	6.00	38
Phillips	6.73	9.36	39
Republic	9.55	16.44	72
Rice	10.73	12.82	19
Rooks**	12.22	2.36	-81
Rush	16.82	24.45	45
Russell	4.82	6.09	26
Smith	4.82	14.91	209
Trego	6.27	21.45	242
Washington	10.09	2.27	-77
Wilson WA	1.18	12.00	915
Region Mean	**6.93**	**9.93**	**43**

South-Central Prairies

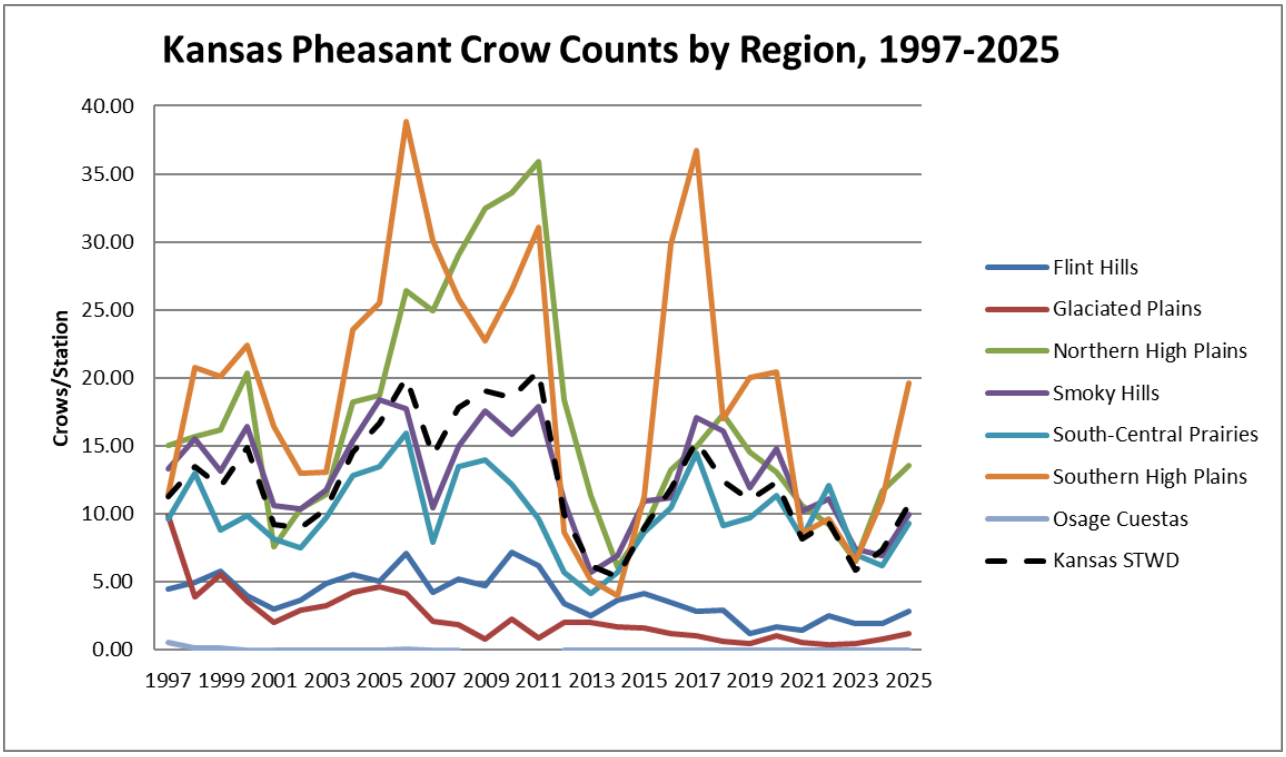
Route	2024 C/S	2025 C/S	% Δ
Clark	0.27	2.00	633
Comanche	0.55	1.09	100
Edwards**	14.55	14.18	-3
Harper	3.45	1.64	-53
Kingman-Reno	1.91	3.40	78
Kiowa	13.82	20.70	50
Pawnee**	13.55	13.73	1
Pawnee (Irrig.)	8.82	31.20	254
Pratt**	3.00	6.00	100
Reno	7.67	7.70	0
Sedgwick-Harvey	0.27	0.44	63
Stafford-Barton**	NA	NA	NA
Region Mean	**4.59**	**8.52**	**85**

Statewide	**7.63**	**11.33**	**49**

*Note: C/S = Mean Crows per Station; % Δ = percent change; * = significant change (P ≤ 0.10), NA = Not available, NE = Not estimable*

**Route not included in regional or state means, info. is presented for descriptive purposes only

Figure 1. Regional trends for pheasant crow survey index in Kansas, 1997-2025.



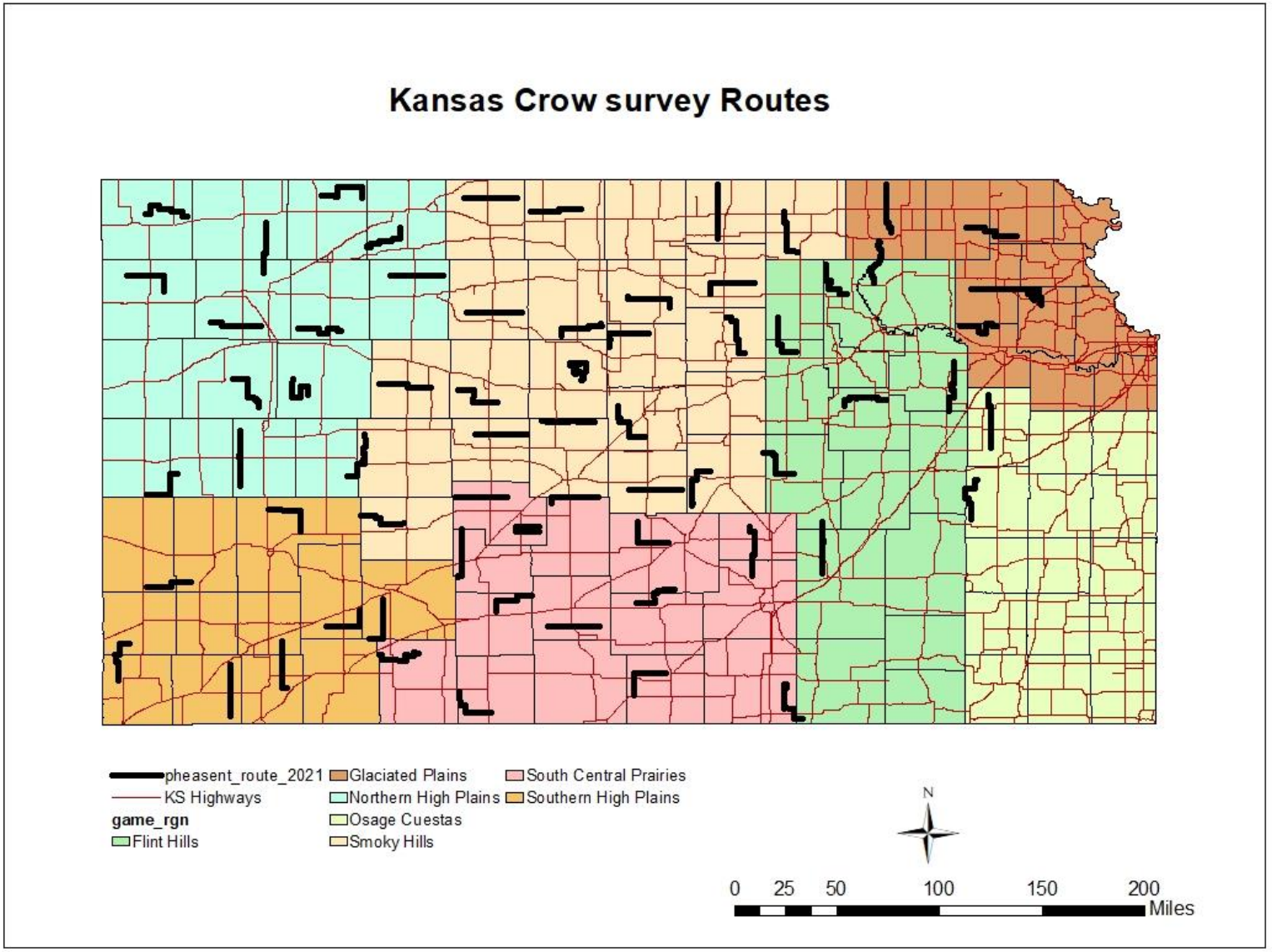


Figure 2. Current pheasant crow survey routes and management region boundaries.

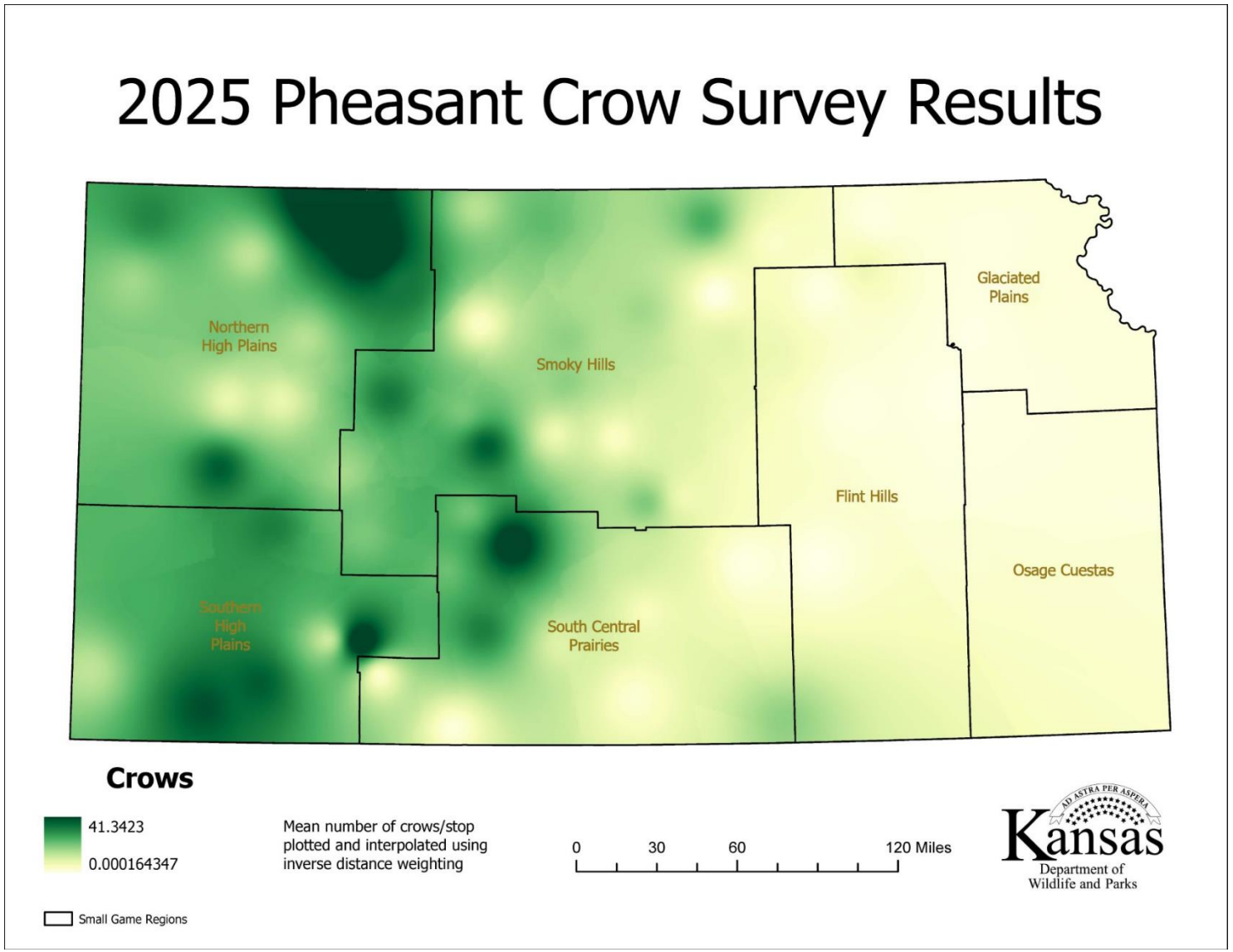


Figure 3. Pheasant breeding population index (crows per station) interpolated from route-specific indices across pheasant range in Kansas, using Inverse Distance Weighting technique, 2025.

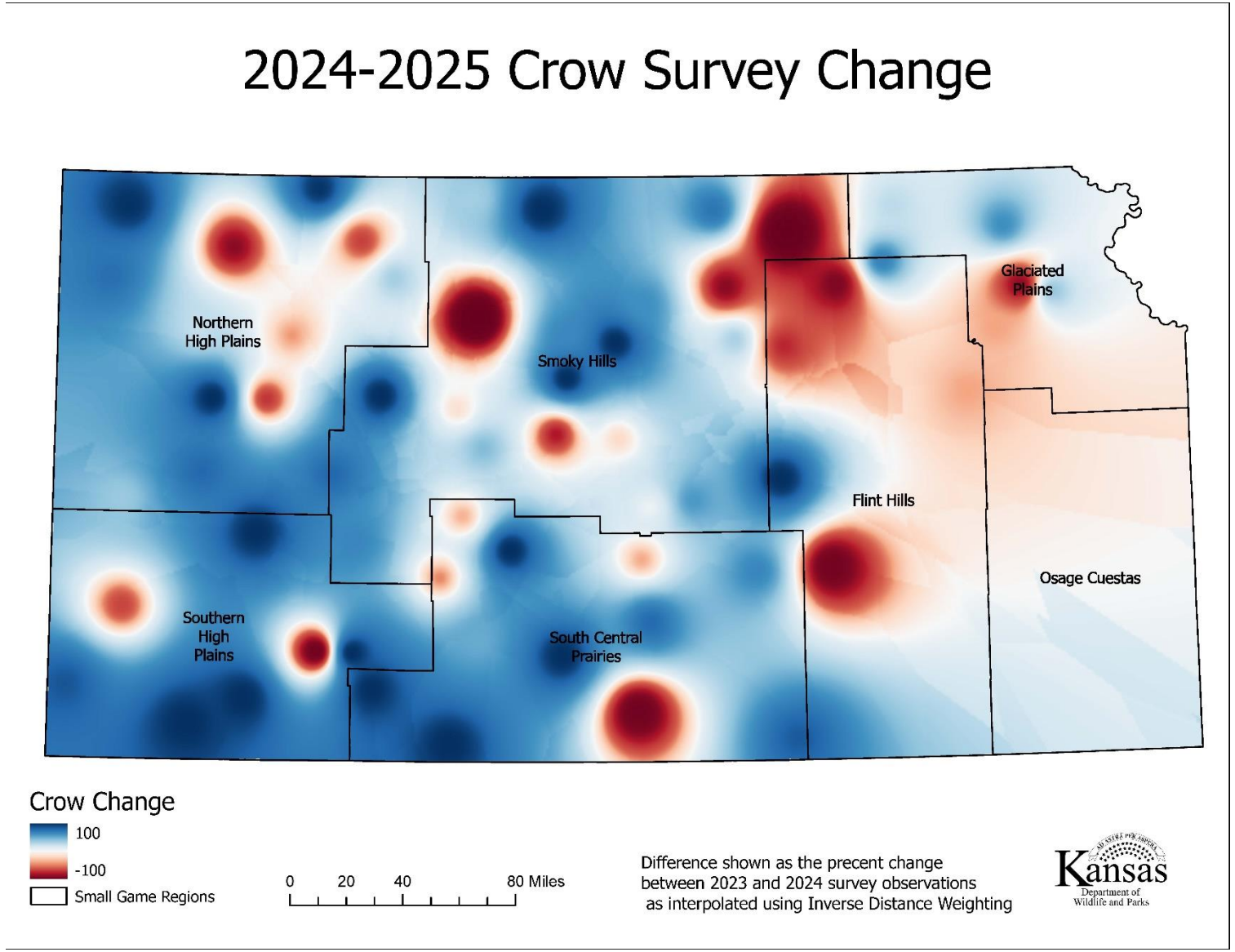


Figure 4. Percent change (2024 to 2025) in pheasant breeding index (crows per station) interpolated across pheasant range in Kansas.