



July 31, 2024

YO Ranchlands Landowner Association
15104 Joseph Dr.
Lakeway, TX 78734

To the Wildlife Committee:

Enclosed please find the 2024 Spotlight Deer Survey Report and Recommendations that we have prepared for your review and records.

Overall, the numbers of native and exotic deer on the YO Ranchlands show a slight decrease from 2023, especially in Axis, Sika, and Fallow populations: the 3–4-year trend is stable; and 5–10-year trends are stable to slightly decreasing. The slight decrease is primarily due to the decrease in Axis estimates, which is likely an anomaly as last observed in 2021.

Blackbuck estimates have increased this year and appear to remain stable; sika estimates remain low. While Fallow estimates are down slightly but are stable, and White-tailed deer are higher than last years and starting an upward trend and are stable overall. Axis estimate have decreased substantially and while they have shown variability from year to year, this year's estimate is below the long-term average, particularly in the West Section.

The distribution of animals looks to be similar on both sections of the survey. The current estimate is near the projected 2024 population. Harvest recommendations are similar to last year's to permit an increase in Axis numbers if conditions allow. Lower than expected fawn observations may be attributable to slightly better range condition than last year, which resulted in reduced visibility.

Thank you to all who collaborated with us during the 2024 surveys. A special thank you goes to Tamara and Mark Bonning, for providing sleeping accommodations, and Chris Conrad for coordinating volunteers.

Please feel free to contact me with any questions or concerns. We appreciate your continued trust and confidence in Plateau Land & Wildlife Management. Please let us know whenever we can be of service.

Sincerely,

Sarah Kahlich, CWB®
Senior Wildlife Biologist
Plateau Land and Wildlife Management

Enclosures

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SPOTLIGHT DEER SURVEY
YO RANGLANDS LANDOWNERS ASSOCIATION

±10,400 ACRES

KERR COUNTY

WRITTEN BY: SARAH KAHLICH, CWB®

SHANE KIEFER, CWB®

PLATEAU LAND & WILDLIFE MANAGEMENT

JULY 29, 2024



EXECUTIVE SUMMARY

Survey Goal

Determine the total number of native and exotic deer on the YO Ranchlands. Even year surveys (2020/2022/2024) are meant to adjust Ranchlands-wide estimates from more extensive surveys in odd years (2021/2023). Two-night surveys typically do not generate enough observations to permit estimates by phase or region.

Management Goal

Optimize the numbers and diversity of the hunting opportunities for the landowners of all exotics and native game animals with average to good quality or better, with an emphasis in diversity of exotic ungulates.

Results

A spotlight survey covering two nights was conducted in early late June and early July 2024. The same methodology was used as in prior years.

Deer Population

	Axis	White-tailed	Sika	Fallow	Blackbuck	Total
Total	260	701	29	88	179	1,257

Species Composition (%)

	Axis	White-tailed	Sika	Fallow	Blackbuck	Total
Total	21%	56%	2%	7%	14%	100%

The survey indicates a slight decrease in exotic populations, especially Axis, Sika, and Fallow populations. The overall population estimates are slightly higher than the projected 2023 population (1,229). White-tailed deer estimates are higher than last year and are starting an upward trend. Axis estimates have decreased, and while they have shown high variability from year to year, this year's estimate is below the long-term average. Axis sightings were unusually low this year, particularly in the West Section so the estimates may be a result in them shifting their use of the property away from the survey lines. Fallow estimates are down slightly but are stable. Sika estimates remain low. Blackbuck estimates have increased since last year. Fawn observations remained low, possibly due to the dense vegetation coverage. Careful attention to fawn production by the landowners is recommended to help determine if predation or other factors may be limiting growth. Harvest recommendations are similar to last year with an emphasis on white-tailed deer harvest. This year there has been more days with rain and the vegetation was denser and temperatures were not as high as they were last year. Removal of animals to reduce pressure on vegetation is important. These harvest recommendations are conservative for the exotic species based on the stated goal of increasing their populations.

YOLA Harvest Recommendation 2024/2025

	Axis	White-tailed	Sika	Fallow	Blackbuck	Total	Grand Total
Buck	10	35	0	5	8	58	151
Doe	10	75	0	0	8	93	

Deer Survey Analysis & Harvest Recommendations *YO Ranchlands - General*

Survey Goal

Determine the total number of native and exotic deer on the YO Ranchlands. Even year surveys (2020/2022/2024) are meant to adjust Ranchlands-wide estimates from more extensive surveys in odd years (2021/2023).

Survey Methods

We surveyed the YO Ranchlands using Distance Sampling methodology. Two teams of Plateau staff and YOLA volunteers surveyed opposite ends of the property on June 25th and July 9th, covering an average of 25.8 miles/night. The surveys are conducted utilizing a technique called Distance Sampling. In this method, a perpendicular distance from the animal to the driveline is calculated through simple trigonometry using the distance, bearing, and GPS position recorded for each animal. The data is analyzed in Distance 7.5 to determine the actual area surveyed and the density and total number of deer. This is achieved by fitting a detection model to the observations, which permits an estimate of the animals missed during the survey. The Distance Sampling method is more appropriate for mixed exotic herds than the traditional Strip Transect method of deer surveys. The more traditional method overestimates the number of deer by underestimating the average sightable distance and incorrectly assumes that all deer within that area are observed. Simple arithmetic is used to calculate the number of deer. Even small errors in estimating the average sightable distance can produce large errors in calculating the total number of deer. If you would like a more detailed explanation of the Distance Sampling method, please contact us.

Survey Results

Estimates of Axis, Sika, Fallow, Blackbuck, and White-tailed Deer were made and compared to historical estimates and harvest data provided by YOLA. Population estimates are stable to slightly decreasing on both 5- and 10-year periods. Overall estimates are higher for White-tailed deer, after a slight decline last year but are stable over the long term. Estimates for Axis and Fallow are lower than last year, and Blackbuck estimates are slightly higher this year. Current population levels are balanced with the habitat and leave room for growth, if desired.

Fallow and Sika estimates have decreased slightly, and Axis estimates have decreased substantially, which is likely an anomaly as last observed in 2021. Blackbuck estimates have increased this year but not to the numbers they were in 2022. The sex ratio of the observed Blackbuck population has increased this year at 3 females per male, which is closer to the ideal sex ratio of 1:4.

SURVEY RESULTS & OVERALL SPECIES COMPOSITION

All Deer

	# of Deer	Ac / Deer
TOTAL	1,257	8.3

Deer Population

	Axis	White-tailed	Sika	Fallow	Blackbuck	TOTAL
TOTAL	260	701	29	88	179	1,257

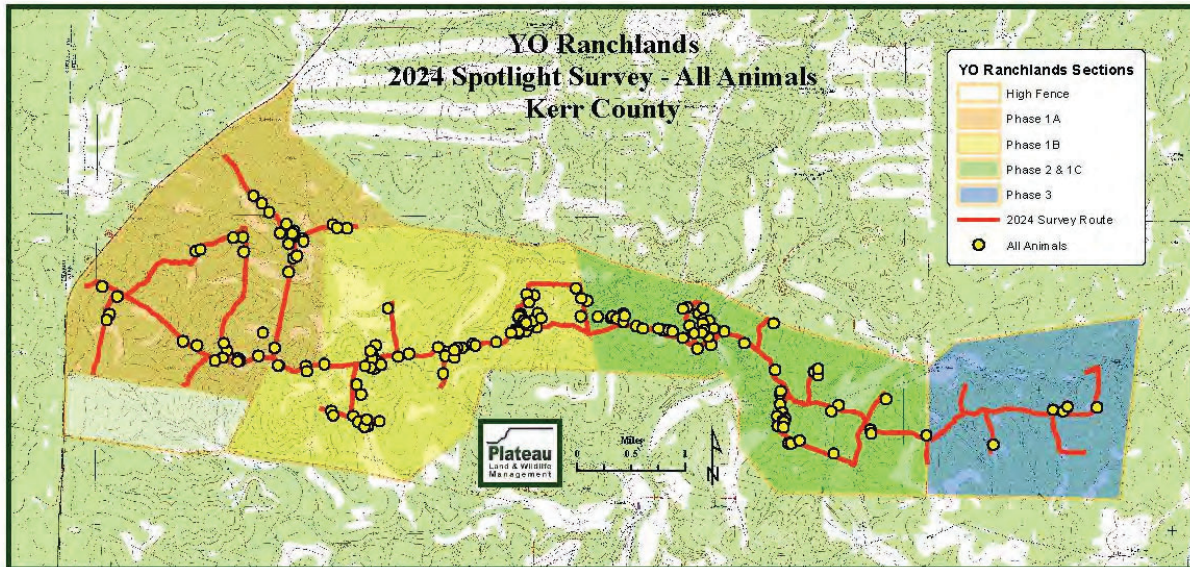
Species Composition (%)

	Axis	White-tailed	Sika	Fallow	Blackbuck	TOTAL
TOTAL	21%	56%	2%	7%	14%	100%

Sex Ratios	Buck:Doe	
	Current	Ideal
White-tailed	1:3	1:1.5
Axis	1:2	1:2
Sika	1:5	1:2
Fallow	1:2	1:2
Blackbuck	1:2	1:4

Survey Lengths and Acreages

Survey Date	Total Line Length (miles)
6/25/2	26.3
7/9/24	25.2
Total	51.5



ANALYSIS

Management Goal

Optimize the numbers and diversity of the hunting opportunities for the landowners of all exotics and native game animals with average to good quality or better, with an emphasis in diversity of exotic ungulates.

Harvest Recommendations

Overall Deer Density

The current year's estimates are near the projected 2024 population of approximately 1,229 animals. This expected population was calculated from the 2023 survey estimates and harvest recommendations in last year's report. Based on the reported harvest, the expected population (1,251 animals) is almost identical to the estimated population from the survey (1,257). The species distribution varies from last year's projections due to the decrease in Axis and increase in white-tailed deer estimates.

This year 16 tagged Axis does were bought and released on the ranch to try and increase the Axis population. Maintaining lower ungulate densities is better for the habitat overall and current conditions provide room for increasing populations if desired.

Overall harvest was 79% of recommended levels (as of 7/2/2024). The recommended goal since 2012 has been to level the population trend line and maintain overall numbers while adjusting species composition. The total animal population has averaged around 1,400 since 2012 though the last 2 years have been below average.

Axis, Sika, and Fallow estimates have decreased this year, and Blackbuck estimates are stable. Axis deer are approximately 21% of the total deer on the YO Ranchlands (36% in 2023) with White-tailed deer at 56% (40%). Blackbuck account for 14% (12%). Overall population levels are what was projected in last year's report but the unexplained increase in White-tailed deer and decrease in Axis resulted in very different species composition. Fawn production/survival might be low going into 2025. Dense grass coverage and juniper and oak shinneries have increased in many areas making fawn observations on a spotlight survey difficult.

The overall combined deer density on the YO Ranchlands is 8.3 acres / deer, up from the 2023 estimate of 8.5 acres / deer. The property is currently well positioned to produce high quality deer while providing strong habitat conditions for other wildlife. The most pronounced changes were the decrease in Axis estimates. There is capacity for an increase in deer numbers if greater harvest opportunities are desired. The target density for summer of 2025 is 8.3 acres / deer and assumes low fawn production. This will leave room for population growth with improving fawn production. Unless community-wide goals change, the long-term target should be to maintain current overall densities between 6-8 acres per deer while encouraging growth in the less common species. This year's harvest recommendations should result in rising populations if weather conditions result in improved fawn production and recruitment. The projected 2025 population is 1,250 animals.

Species Composition

Axis deer, which currently comprise 21% of the population, are on the low end of the range of the previously desired 30-40% of the total deer population. Axis are the most aggressive of the YO Ranchlands species and can quickly rebound and the low estimate is likely a result of shifts in distribution this year. Harvest recommendations are similar this last year to permit an increase in Axis numbers if conditions allow.

The White-tailed deer population estimate is higher than last year. White-tailed deer populations can rebound quickly, and the population is more stable long term, so there is little cause for concern. Harvest recommendations are similar to last year. Fallow estimates are down slightly but appear stable. Blackbuck estimates are up and doe:buck ratios are improving which will hopefully result in continued growth.

This year, Red Deer and Elk have been reported on the Ranchlands, both species came from a neighbor's property through a downed high fence. During the spotlight survey, neither species were observed so their estimated population is not included in the report. Observations of both species varies per landowners who have seen them in the Ranchlands. It is possible that the decrease in Axis observed on the survey is a result of a shift in distribution due to these larger species competing for space. This year, sixteen Axis does were released and in 2023 nine were released to increase their population though the survey estimates are not showing it yet.

Sex Ratios

Sex ratios appear to be near ideal for all species, except for Sika, which is skewed towards females. No Sika males were observed during the survey this year. Sex ratios are poorly estimated from spotlight surveys. Stand counts and incidental observations conducted by volunteer landowners would be most helpful in estimating sex ratios and fawn production, providing greater confidence in population growth and harvest recommendations.

HARVEST RECOMMENDATIONS & PROJECTED 2024 POPULATION

YOLA Harvest Recommendations 2024/2025		Total
Axis	Buck	10
	Doe	10
White-tailed	Buck	35
	Doe	75
Sika	Buck	0
	Doe	0
Fallow	Buck	5
	Doe	0
Blackbuck	Buck	8
	Doe	8
Grand Total	Buck	58
	Doe	93
	Total	151

YOLA Projected 2025 Population		Total	% of All Deer
Axis	Buck	85	21%
	Doe	172	
White-Tailed	Buck	193	56%
	Doe	503	
Sika	Buck	6	3%
	Doe	25	
Fallow	Buck	27	7%
	Doe	62	
Blackbuck	Buck	43	14%
	Doe	133	
Grand Total	Buck	355	100%
	Doe	895	
	TOTAL	1250	

2024/2025 Harvest Summary Compared to Recommendations
(As of July 2, 2024)

YOLA Actual Harvest 2023/2024		Total Actual	2023/2024 Recommendation	Difference
Axis	Buck	9	10	-1
	Doe	0	15	-15
White-tailed	Buck	45	25	20
	Doe	26	75	-29
Sika	Buck	0	1	-1
	Doe	0	0	0
Fallow	Buck	8	3	5
	Doe	0	5	-5
Blackbuck	Buck	8	5	3
	Doe	1	10	-9
Grand Total	Buck	70	44	26
	Doe	47	105	-58
	Total	117	149	-32

Deer Survey Analysis & Harvest Recommendations

YO Ranchlands – Additional Information

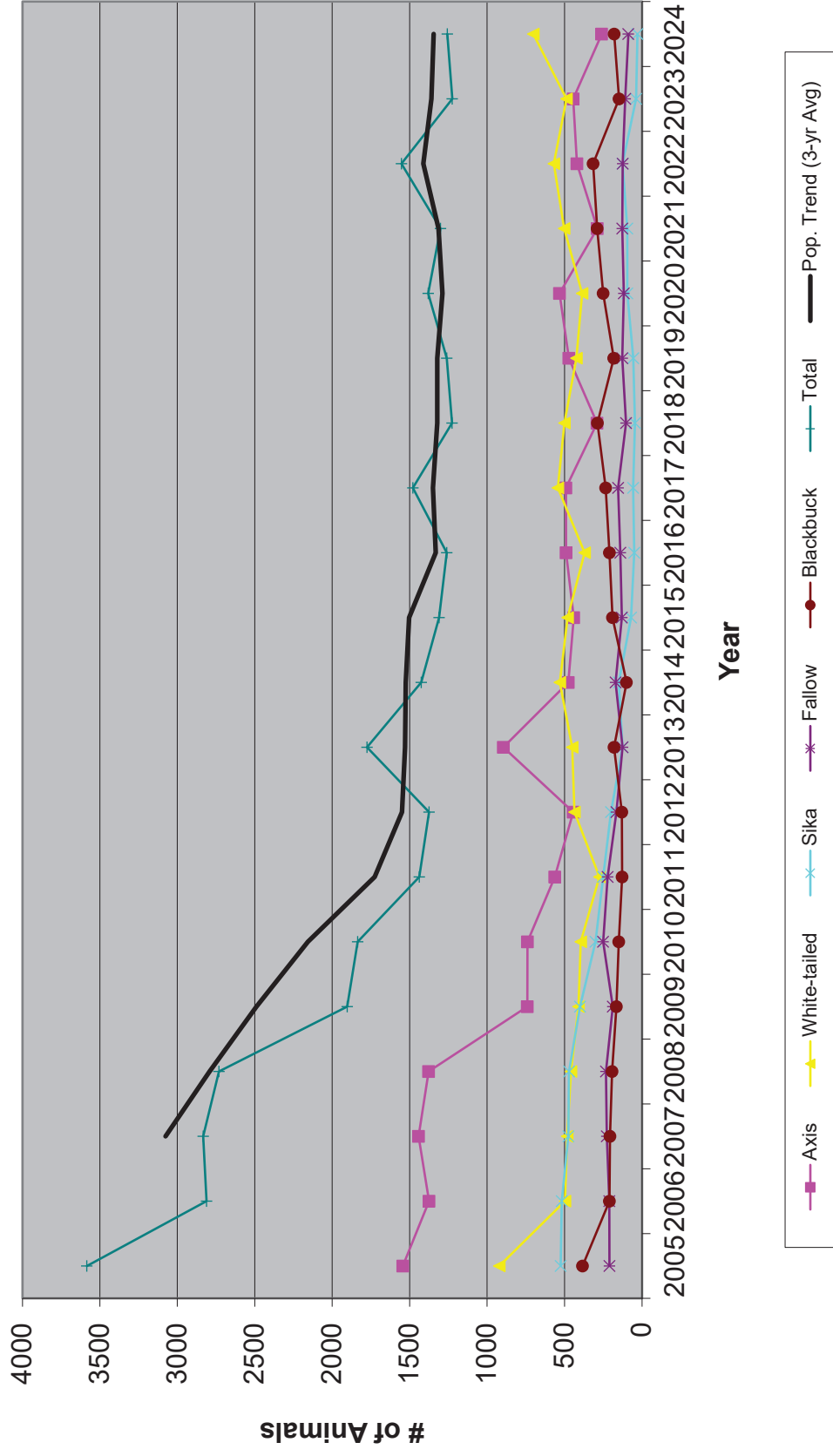
Other Species of Interest

Other Species Identified During 2024 Survey:

Feral Hogs
Cottontail
Skunk
Black-tailed Jackrabbit
Eastern Cottontail
Aoudad
Red sheep
Raccoon
Fox

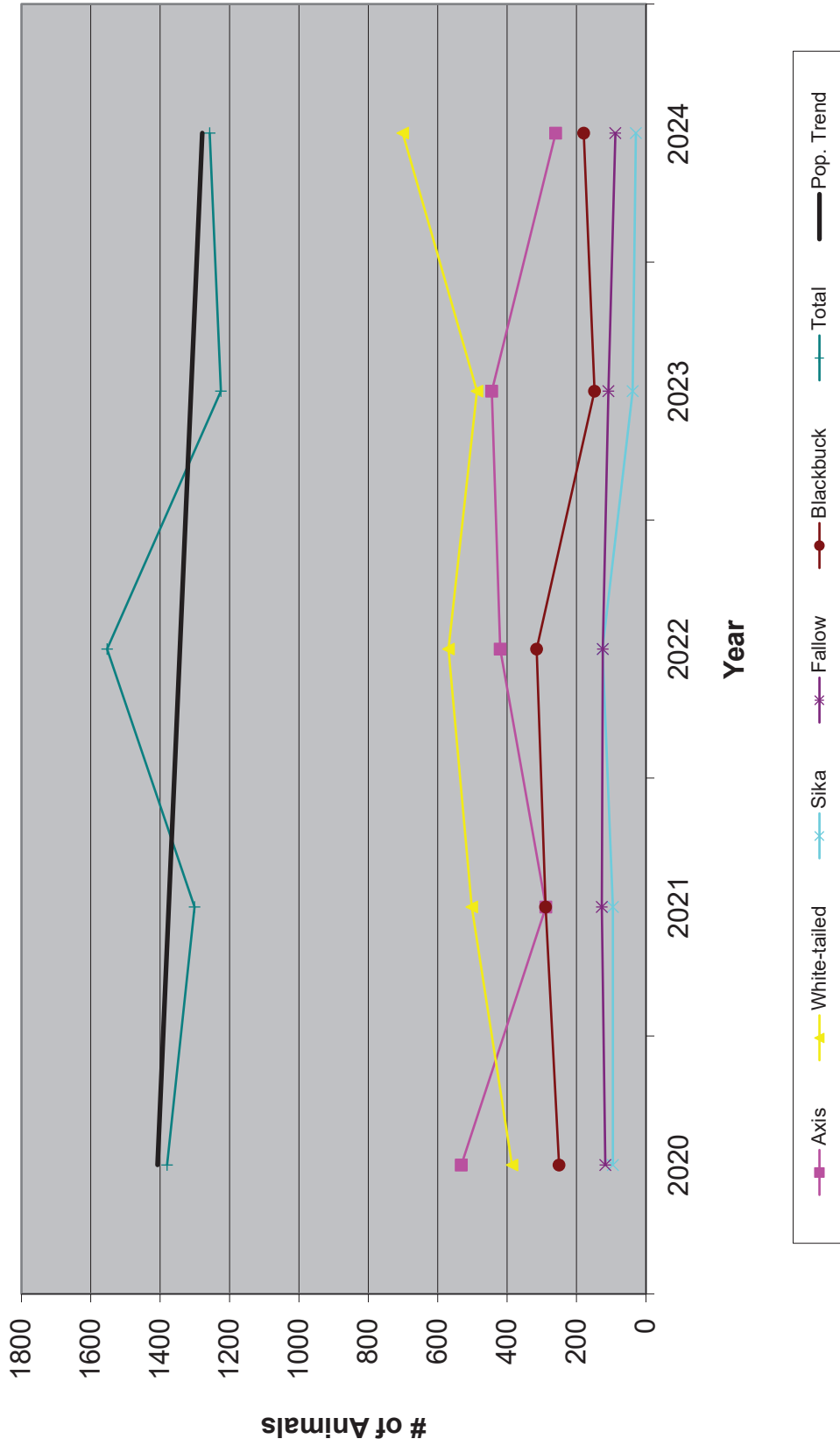
FIGURES

**YO Ranchlands Population Trends
2005-2024**



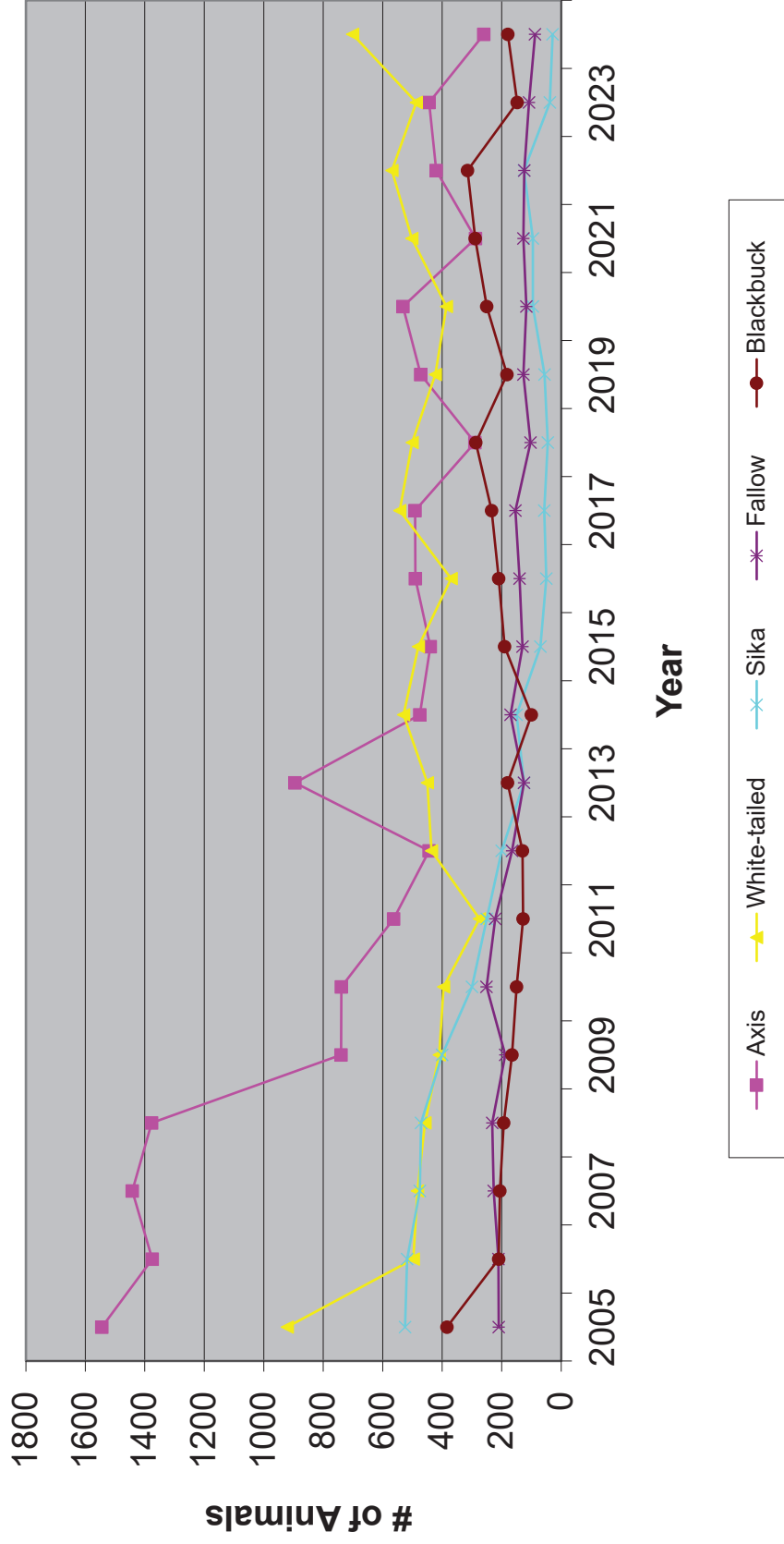
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YO Ranchlands Population Trends 2020-2024



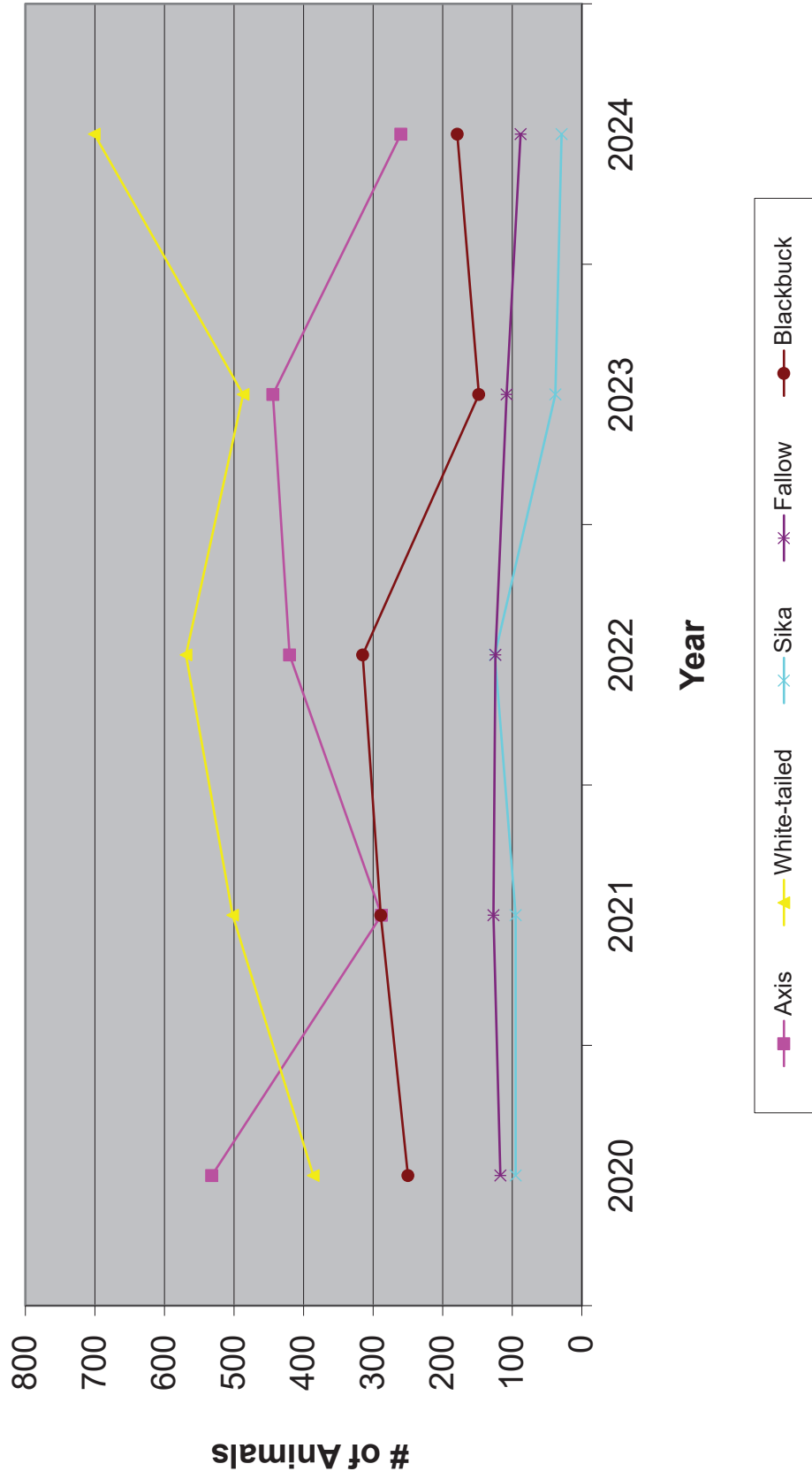
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YO Ranchlands Population Trends by Species 2005-2024



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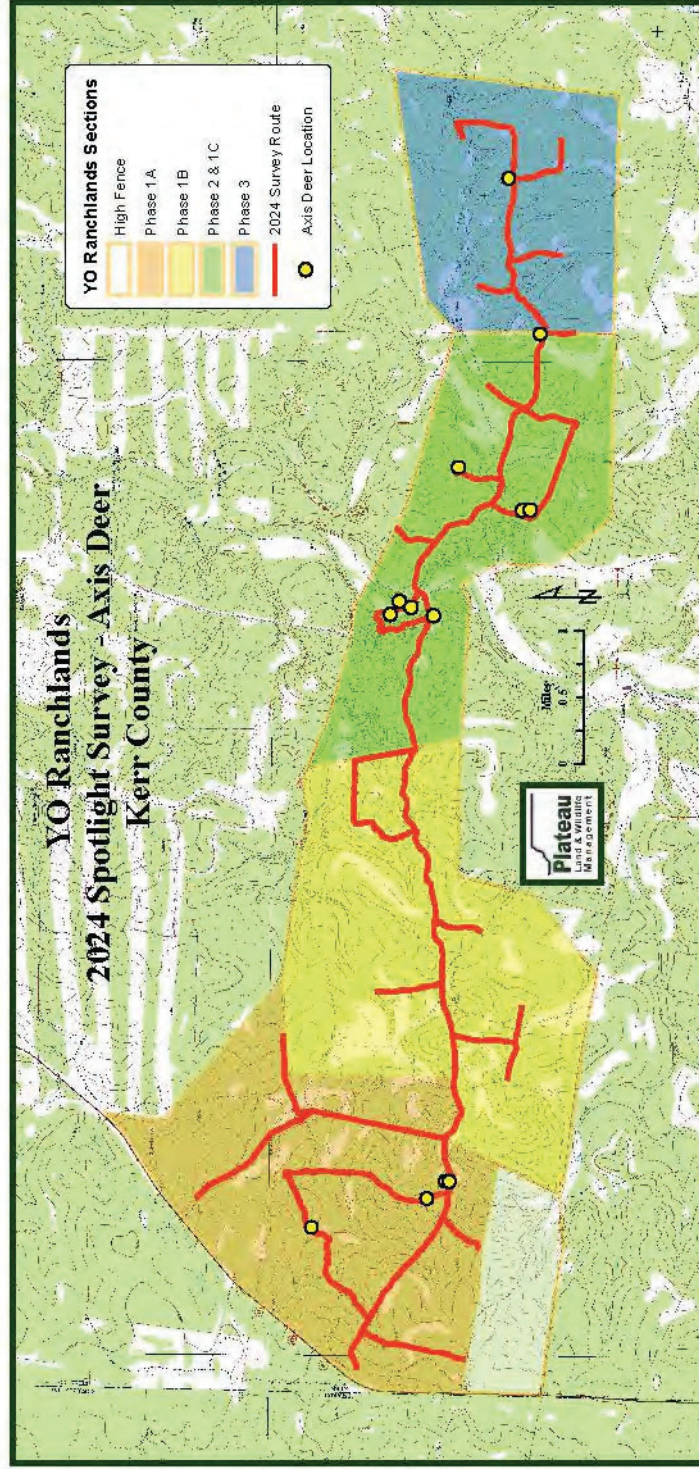
YO Ranchlands Population Trends by Species 2020-2024



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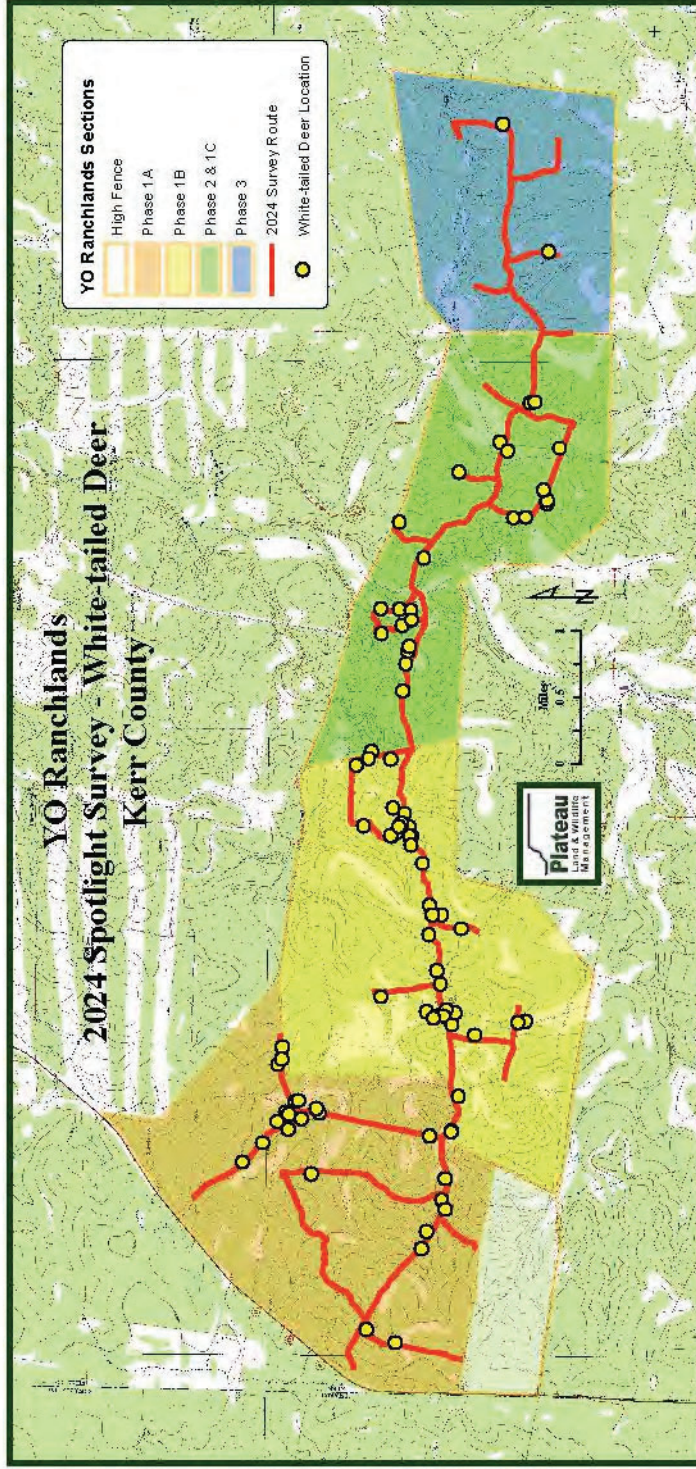
Observed Deer Locations by Species

Axis



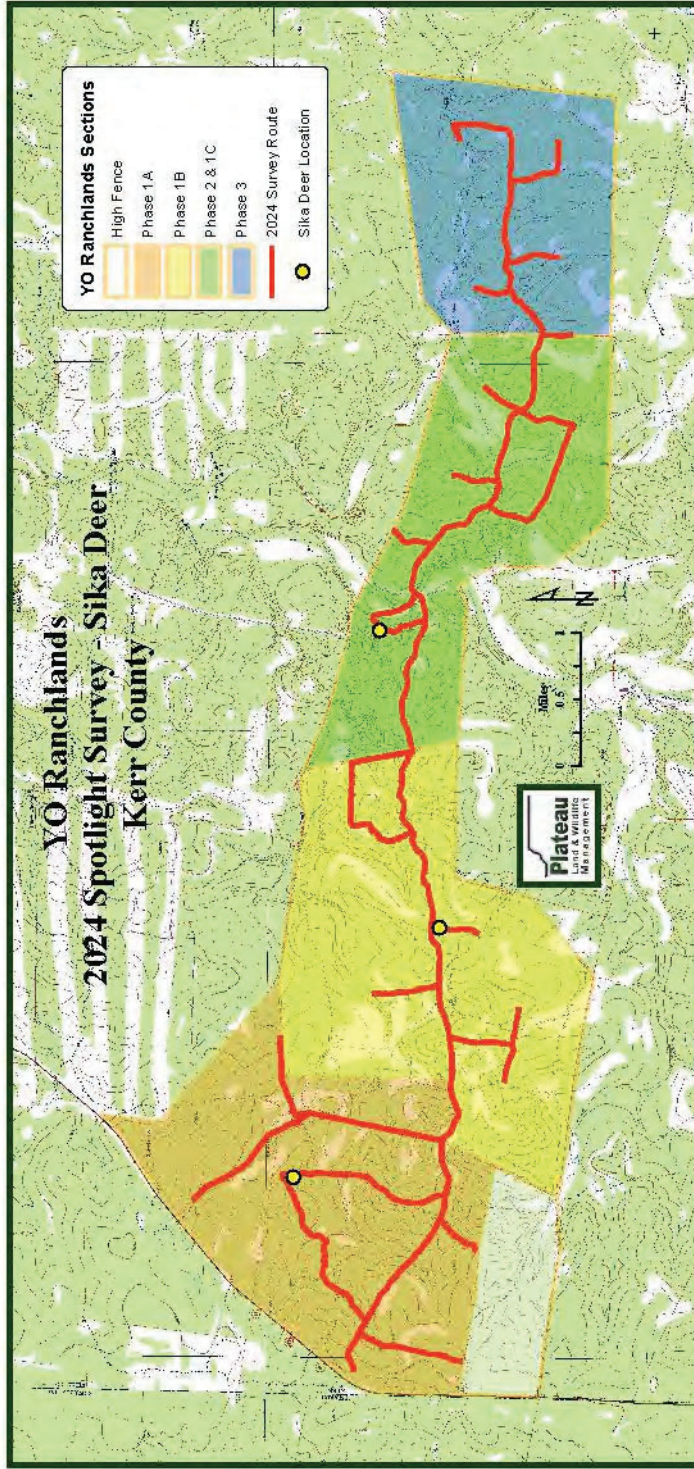
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White-tailed Deer



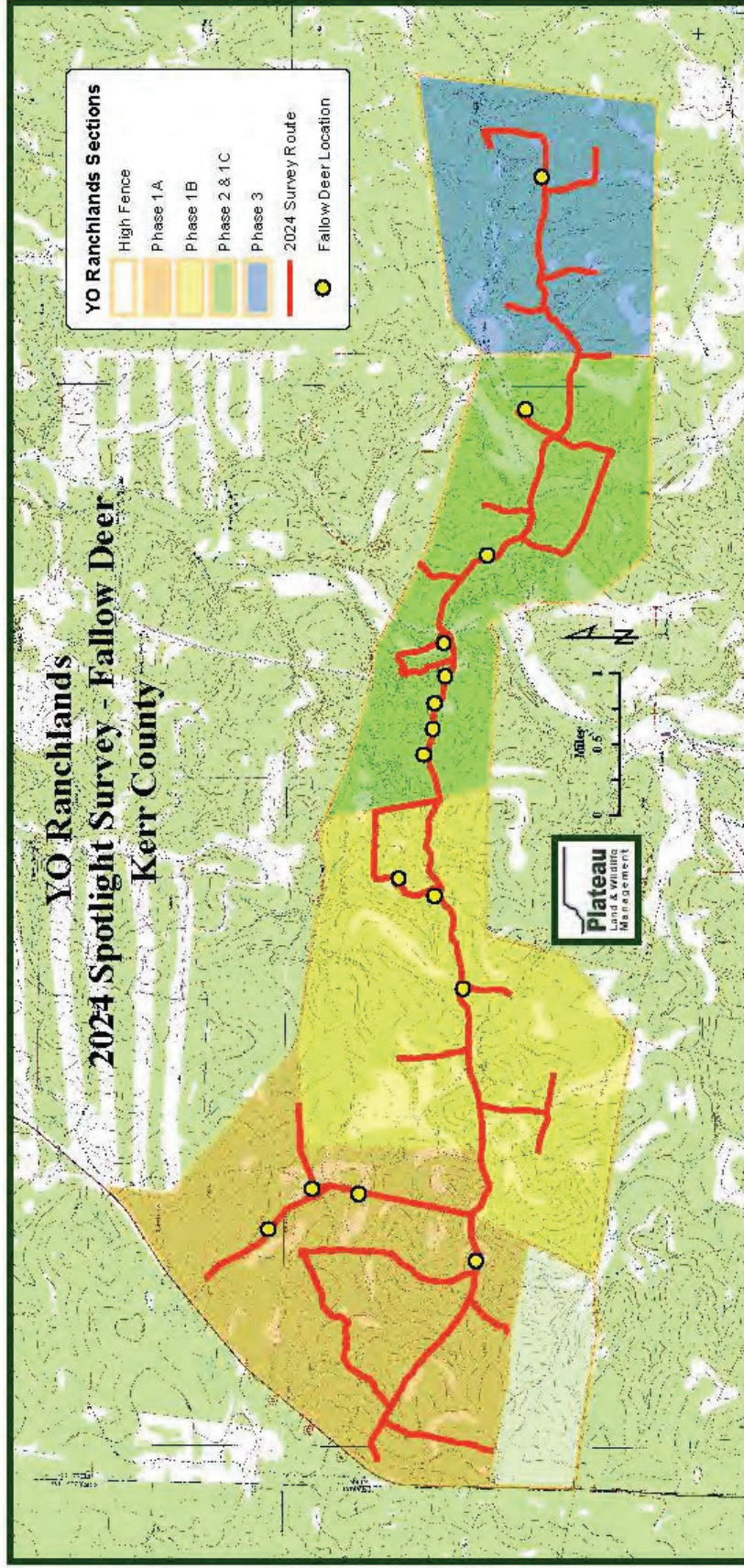
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Sika



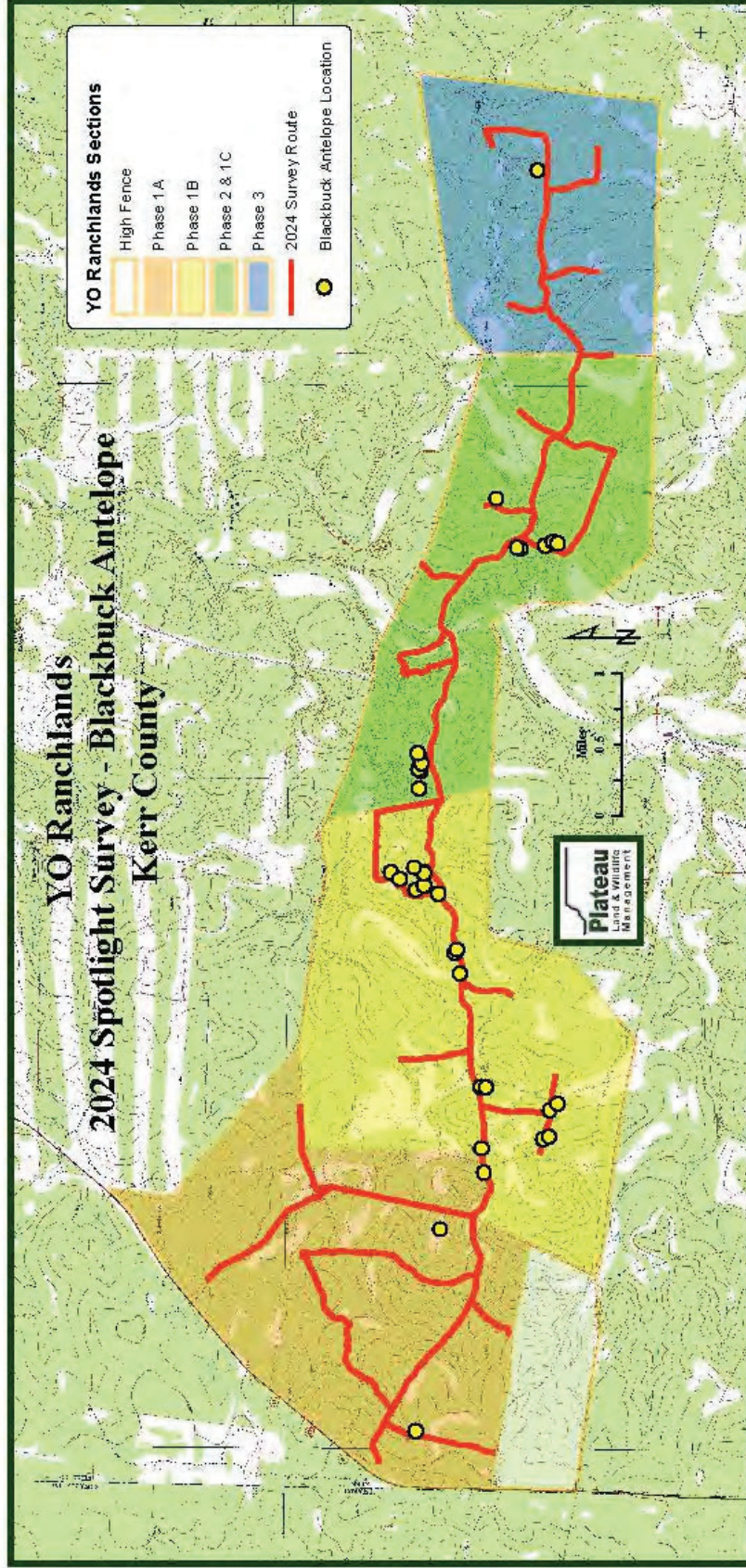
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Fallow



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Blackbuck



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