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2024 - JCR Evaluation Form

SPECIES: Pronghorn

PERIOD: 6/1/2024 - 5/31/2025

HERD: PR745 - RATTLESNAKE

HUNT AREAS: 70-72

PREPARED BY: BRANDON WERNER

	2019 - 2023 Average	2024	2025 Proposed
Population:	11,555	11,811	11,221
Harvest:	1,014	988	1,086
Hunters:	1,112	999	1,000
Hunter Success:	91%	99%	109%
Active Licenses:	1,215	1,187	1,200
Active License Success:	83%	83%	90%
Recreation Days:	3,455	3,893	3,750
Days Per Animal:	3.4	3.9	3.5
Males per 100 Females	62	50	
Juveniles per 100 Females	56	86	

Population Objective (± 20%) : 12000 (9600 - 14400)

Management Strategy: Recreational

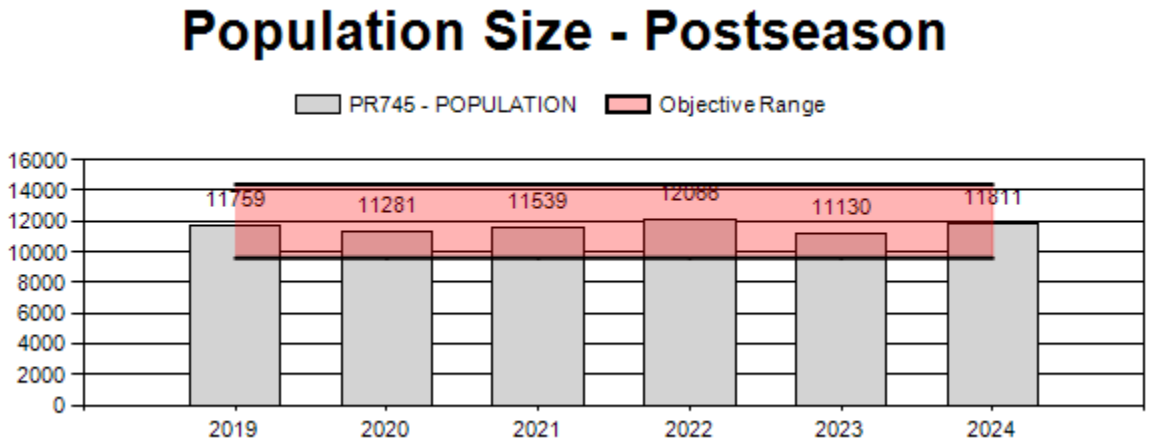
Percent population is above (+) or below (-) objective: -1.6%

Number of years population has been + or - objective in recent trend: 2

Model Date: 02/11/2025

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	.09%	.07%
Males ≥ 1 year old:	19%	18%
Proposed change in post-season population:	1.09%	.95%



2025 HUNTING SEASONS
RATTLESNAKE PRONGHORN HERD (PR745)

Hunt Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
70	1	Aug. 15	Sep. 14	Sep. 15	Oct. 31	100	Any antelope
	6	Aug. 15	Sep. 14	Sep. 15	Oct. 31	50	Doe or fawn
71	1	Aug. 15	Sep. 14	Sep. 15	Oct. 31	75	Any antelope
72	1	Aug. 15	Sep. 14	Sep. 15	Oct. 31	800	Any antelope
	6	Aug. 15	Sep. 14	Sep. 15	Oct. 31	300	Doe or fawn

2024 Hunter Satisfaction: 83% Satisfied, 11% Neutral, 6% Dissatisfied

2025 Management Summary

Hunting Season Evaluation: The severe winter of 2011 caused a drastic decline in this herd, which has since grown back to objective. Despite difficult conditions from 2018-2022, including drought and harsh winters, the Rattlesnake Herd continues to maintain itself around objective. The winter of 2022-2023 was extremely harsh, but pronghorn went into this winter in good body condition and winter mortality was near normal as indicated by managers' observations, good yearling buck ratios, and high harvest success in 2023. However, there was some impact on fawn production in 2023, suggesting these pronghorn were stressed during the harsh winter and produced fewer fawns or fawns born in poor body condition leading to lower survival. The growing season in 2023 was exceptional with great spring and summer precipitation with mild temperatures. The winter of 2023-2024 was mild followed by a drought in the summer of 2024. Even with the drought, fawn production was excellent at 86 fawn to 100 does, the highest since 2003 (Table 1). This was due to the high precipitation in 2023 followed by a mild winter which lead does to be in optimal condition to produce healthy fawns.

A three-year (2022-2024) analysis indicated the mean percentage of harvested males ≥ 1 year old was 19% of the preseason buck population. While this is below the management goal of 25% male harvest for recreational herds, buck ratios are still only 50 bucks per 100 does. The projected preseason harvest of males should be around 18% in the 2025 season. Due to lower fawn production from the harsh winter of 2022-2023 managers are hesitant to drastically increase buck harvest to the 25% goal.

With high success and short days per harvest, managers increased license issuance in Areas 72 in 2024. Type 6 licenses were also added in all hunt areas after being removed in 2023 to be cautious about the server winter of 2022-2023. After having a year to assess winter mortality from the 2022-2023 harsh winter, it is apparent these pronghorn had minimal losses. The Type 1 quota was not changed in 2025 due to acceptable success and days per harvest. In Area 71, the Type 6 license was removed to do extremely low harvest success and those 25 licenses were added to Area 70 to pressure pronghorn on agricultural fields. The doe/fawn quota was maintained to manage this herd around objective and provide hunter opportunity. Management goals are to continue to provide good buck harvest opportunity based on the recreational management strategy while maintaining this herd near the population objective. There will be no changes in the overall herd unit quotas in 2025.

Objective Review

The objective and management strategy for the Rattlesnake Pronghorn herd was last evaluated and approved in 2020. For the 2025 (5-year) objective review, the current objective and recreational management strategy will be maintained for the next five years following an internal evaluation.

Population Modeling

The model for this herd represents a fair depiction of recent population trends. There have been four independent line-transect surveys completed in this herd. The most recent line-transect survey for the herd was conducted in 2022, resulting in an end-of-bioyear abundance estimate of 17,449 (CI=14,142-20,756) pronghorn. The 2024 postseason population estimate for this herd unit from the Integrated Population Model (IPM) was approximately 11,221 (CI=8,288-14,105) pronghorn. There is a sharp divergence between the most recent line-transect estimate and the IPM model. Managers believe the 2022 line-transect estimate may be over estimating abundance, which is likely why the IPM is unable to simulate through the 2022 line transect estimate. Finally, the model shows a modest population increase beginning in 2022, then slightly dropping in 2025. However, the pace of growth simulated by the model may be slightly higher than what is actually occurring. This herd is slated for a line-transect survey in 2025.

2019 - 2024 Preseason Classification Summary

for Pronghorn Herd PR745 - RATTLESNAKE

		MALES				FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Pre Pop	Ylg	Adult	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Ylng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2019	0	172	490	662	31%	988	46%	511	24%	2,161	2,263	17	50	67	± 5	52	± 4	31
2020	0	103	325	428	31%	622	45%	336	24%	1,386	1,995	17	52	69	± 7	54	± 6	32
2021	0	99	284	383	28%	561	42%	407	30%	1,351	2,355	18	51	68	± 7	73	± 7	43
2022	13,919	98	244	342	25%	614	45%	396	29%	1,352	2,398	16	40	56	± 6	64	± 6	41
2023	12,244	119	267	386	27%	740	51%	316	22%	1,442	0	16	36	52	± 5	43	± 4	28
2024	13,454	45	127	172	21%	345	42%	296	36%	813	0	13	37	50	± 7	86	± 11	57

Table 1. Postseason classification summary for PR745.

2024 - JCR Evaluation Form

SPECIES: Pronghorn

PERIOD: 6/1/2024 - 5/31/2025

HERD: PR746 - NORTH NATRONA

HUNT AREAS: 73

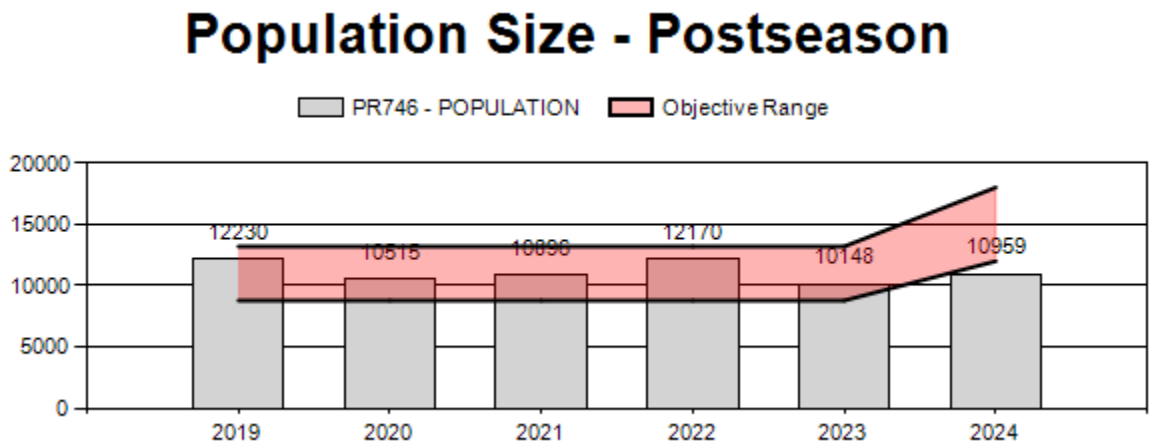
PREPARED BY: BRANDON WERNER

	2019 - 2023 Average	2024	2025 Proposed
Population:	11,192	10,959	11,908
Harvest:	1,201	327	327
Hunters:	1,387	382	380
Hunter Success:	87%	86%	86 %
Active Licenses:	1,445	382	380
Active License Success:	83%	86%	86 %
Recreation Days:	4,811	1,004	1,000
Days Per Animal:	4.0	3.1	3.1
Males per 100 Females	61	50	
Juveniles per 100 Females	62	94	

Population Objective (± 20%) :	15000 (12000 - 18000)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	-26.9%
Number of years population has been + or - objective in recent trend:	2
Model Date:	02/05/2025

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	.01%	.01%
Males ≥ 1 year old:	12%	10%
Proposed change in post-season population:	1.08%	1.09%



2025 HUNTING SEASONS
NORTH NATRONA PRONGHORN HERD (PR746)

Hunt Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
73	1	Aug. 15	Sep. 14	Sep. 15	Oct. 31	400	Any antelope
	7			Aug. 15	Oct. 31	25	Doe or fawn valid east of the Bucknum Road (Natrona County Road 125) and south of the Burlington Northern Santa Fe railroad right-of-way

2024 Hunter Satisfaction: 89% Satisfied, 8% Neutral, 3% Dissatisfied

2025 Management Summary:

Hunting Season Evaluation

The model for this herd depicts substantial growth from 2013-2015, when harvest pressure was low and fawn production/survival were exceptional. Harvest pressure had since increased significantly, reducing this population incrementally each year. Both trends and population estimates seem to be well represented by the model for this herd. Severe winters in both 2018-2019 and 2019-2020 resulted in higher mortality rates. In addition, drought was present in this herd during 2020, 2021 and 2024 resulting in poor habitat conditions. Classification survey totals have subsequently yielded lower numbers of pronghorn, with significantly lower observed fawn ratios. Low rates of production combined with higher rates of harvest have caused population decline in the last six years. In response, license issuance has been reduced dramatically. The winter of 2022-2023 was very harsh, which led managers to be even more conservative for the 2023 season by eliminating all Type 6 licenses. This herd dipped below the population objective in 2023 while buck ratios dropped to the bottom end of the recreational management threshold at 38 bucks per 100 does. As a result, buck harvest opportunity was reduced to increase buck ratios. However, climatic conditions throughout 2023 were optimal for pronghorn survival with excellent precipitation coupled with mild temperatures. Following a mild winter in 2024, fawn production increased substantially despite a drought to a record 94 fawns per 100 does (Table 1). The consecutive years of reduced quotas and mild winters have led to increased buck ratios at 50 bucks per 100 does.

A three-year (2022-2024) analysis indicated the mean percentage for harvested males ≥ 1 year old was 12% of the preseason buck population. While this is below the management goal of 25%, hunter success has been steadily dropping. From 2014 – 2020, Type 1 license success averaged 90%. From 2021 – 2023 average success was 73% with success being 69% in 2023, an all-time low. Harvest success increased to 89% in 2024, which is average. This is a public land dominated herd unit and success should be high. Thus, low harvest success indicates a reduced population.

The 2025 hunting season conservatively manages the North Natrona Pronghorn Herd to allow growth toward objective. This herd remains under objective due to the population objective being raised in 2024 from 11,000 to 15,000. The current license framework allows for population growth. The Type 1 license quota will remain the same in 2025 at 400. The Type 7 license quota also stayed the same at 25 to control pronghorn densities on agricultural properties in the southeast portion of the herd unit. A total of 425 licenses will be offered in 2025.

Management Objective Review

This herd is not up for an objective review in 2025. In 2024, managers raised the population objective from 11,000 to 15,000 (Appendix A). After consulting with sportsmen, landowners, and government agencies it was deemed there was adequate support and habitat to increase the objective. When the population was at the previous objective of 11,000 pronghorn, hunter satisfaction and success were still low.

Population Modeling

Six line-transect surveys provide independent abundance estimates which help align trends and improve population estimates in the model. A line-transect was conducted in 2021, resulting in an end-of-bioyear abundance estimate of 9,543 pronghorn with a standard error of 1,284. Another line-transect was flown in 2023 with an end-of-bioyear population estimate of 13,368 (CI=11,135-16,161). Managers believe this number is either an overestimate, or some pronghorn being counted in May/June migrate into other hunt areas in the southern Bighorn Mountains to summer range and are thus unavailable during fall hunting seasons. The bio-year 2024 postseason population estimate for this herd unit was 10,949 (CI=9,759-12,203) pronghorn using the PopR Integrated Population Model. The model shows a population decline from 2015-2023, then stabilizing in 2024. Managers believe this to be accurate based on low fawn production/survival, harvest success, and an obvious continued decline in pronghorn densities. The model did well with incorporating the harsh winter of 2022-2023. While managers predict this population will begin to grow as simulated by the model, actual growth may not be realized for a year or more.

Additional Surveys

In 2019, this herd became part of a harvest study conducted by WGFD and the University of Wyoming Cooperative Fish and Wildlife Research Unit. Goals of the project were to quantify average pronghorn horn size relative to changes in buck ratios, buck age structure, population size, and environmental variables. In total 1,789 male pronghorn were studied in this project (Tafelmeyer et. al 2024). It was found that at 3.5 years old pronghorn reach 95% of their horn growth potential. The study also found that snow depth on the year of birth positively influenced horns size and that changes in buck ratios had little to no effect on horn growth.

Reference

Tafelmeyer, L. E., T. N. LaSharr, J. Binfet, M. Bredehoft, G. Hiatt, D. Lutz, C. D. Mitchell, and K. L. Monteith. 2024. Cannot outrun the past: age, nutrition, and cohort influence horn size in pronghorn. Journal of Wildlife Management 88:e22653.

2019 - 2024 Preseason Classification Summary

for Pronghorn Herd PR746 - NORTH NATRONA

		MALES				FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Pre Pop	Ylg	Adult	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Yling	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2019	0	118	418	536	27%	887	45%	553	28%	1,976	3,068	13	47	60	± 5	62	± 5	39
2020	0	120	341	461	33%	590	43%	335	24%	1,386	2,017	20	58	78	± 8	57	± 6	32
2021	0	55	178	233	25%	429	47%	256	28%	918	1,961	13	41	54	± 7	60	± 7	39
2022	13,341	47	120	167	25%	266	40%	224	34%	657	2,640	18	45	63	± 10	84	± 12	52
2023	10,911	38	96	134	19%	355	51%	201	29%	690	0	11	27	38	± 6	57	± 8	41
2024	11,761	80	135	215	21%	428	41%	404	39%	1,047	0	19	32	50	± 7	94	± 10	63

Table 1. Postseason classification summary for PR746.

Appendix A

NORTH NATRONA PRONGHORN HERD UNIT POPULATION OBJECTIVE REVIEW

Prepared by: Brandon Werner, Casper Wildlife Biologist

INTRODUCTION

The North Natrona Pronghorn Herd Unit (PR 746) contains hunt area 73 and is located in central Wyoming (Figure 1). The herd unit encompasses an area of approximately 1,360 square miles from the city of Casper west along Highway 20/26 to Waltman, north through the small towns of Arminto and Badwater, across the Buffalo Creek divide to the Bighorn Mountain Road, east along the 33-Mile Road toward the town of Midwest, and south along Interstate 25 back to Casper. Land status within the herd unit is a mosaic of public (Bureau of Land Management and State of Wyoming Lands) and private lands, with about 61% of public lands accessible to the hunting public. The main land use is traditional ranching and grazing of livestock, with isolated areas of oil and gas development. The bulk of the occupied yearlong habitat consists of relatively flat stands of Wyoming big sagebrush (*Artemesia tridentata wyomingensis*) in the southern, central, and eastern portion of the herd unit. High elevation mixed-grass rolling hills on portions of the southern slope of the Bighorn Mountains provide good spring/summer/fall range for a somewhat migratory segment of this herd. Crucial winter range has been delineated in the south central portion of the herd unit and is characterized by rolling sand dunes dominated by silver sagebrush (*Artemesia cana*) and Wyoming big sagebrush. The southeastern corner of the herd unit, which consists of lands converted to agriculture via irrigation, is the only portion of the area dominated by private lands.

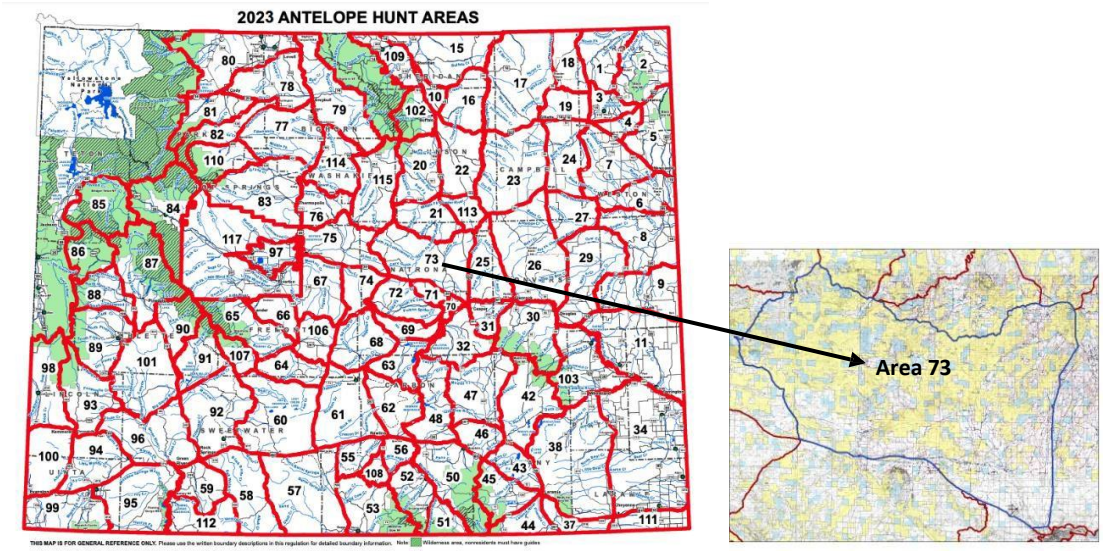


Figure 1. Map of pronghorn (antelope) hunt areas in Wyoming 2023, with the North Natrona Herd Unit highlighted.

POPULATION OBJECTIVE REVIEW

Postseason population objectives are developed based on both biological and social factors including but not limited to: winter range carrying capacity, hunter desires, landowner desires and tolerances, land status, and competition for resources with other wildlife and livestock. The North Natrona Pronghorn Herd Unit population objective and management strategy were last reviewed and updated in 2014. At that time, landowners and members of the public expressed a desire to increase pronghorn numbers, and the objective for the herd was raised from 9,000 to 11,000. Recreational management for buck ratios of 30 to 59 per 100 does has been the historic strategy for this herd, with the goal of providing ample recreational opportunity for buck hunting on both public and private lands.

The North Natrona Pronghorn Herd was above the ±20% objective from 2014-2016 but was maintained within ±20% of the objective from 2017-2023 (Figure 2). From 2014 to 2016, license issuance remained liberal, with relatively high issuance of doe/fawn licenses. The resulting high harvest combined with dry weather and high overwinter mortality caused the herd to decline swiftly from 2016-2017 and slowly decline from 2017-2021. Due to high hunter success, a herd around objective, and a University of Wyoming research project, the license issuance remained high until 2021.The University of Wyoming Research project studied the effects of horn growth with reduced buck ratios. In 2022, conservative license issuance combined with mild weather conditions allowed the herd to rebound slightly above objective. The current post-season population estimate for the North Natrona Pronghorn Herd is approximately 10,148, which is 9% below the current objective of 11,000.

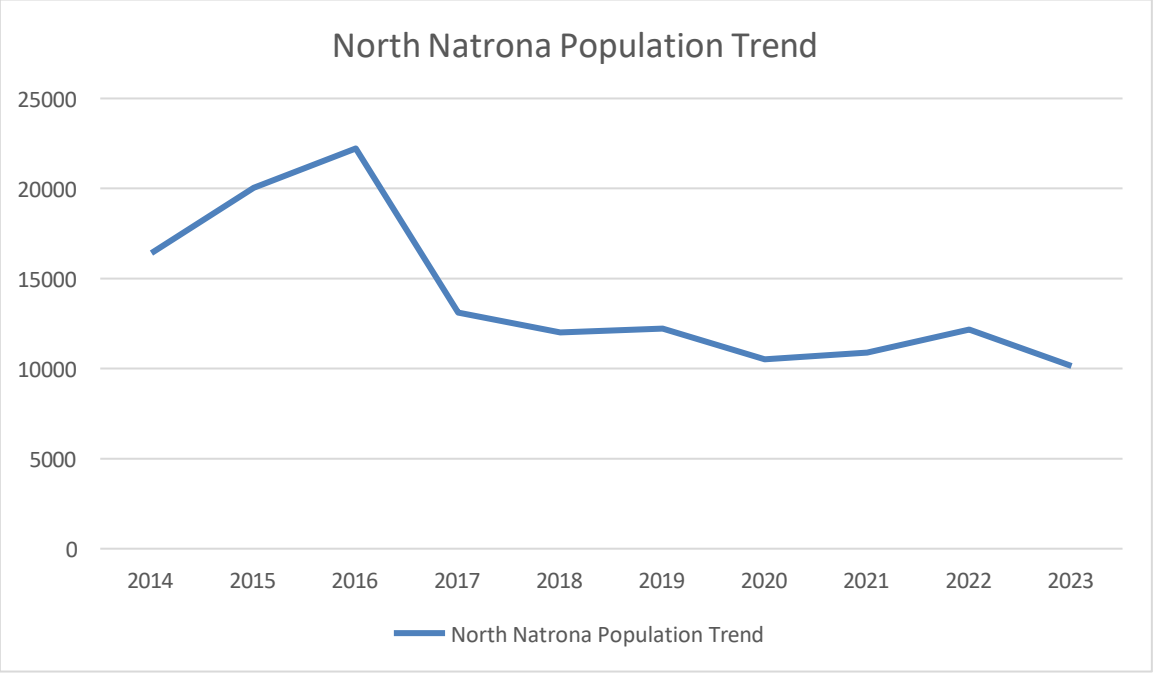


Figure 2. Annual postseason population estimates for the North Natrona Pronghorn Herd, 2014-2023.

Habitat quality in the herd unit has historically been gauged indirectly via production and utilization data collected either in adjacent herd units (Rattlesnake Pronghorn), or on shrub species utilized by mule deer rather than pronghorn within the herd unit (curl-leaf mountain mahogany, *Cercocarpus ledifolius*). Comparisons to either of these data sets likely misrepresented actual habitat conditions in the North Natrona Herd Unit. There is great potential for variation across the herd unit with regards to annual moisture, level of utilization by livestock, and other factors that contribute to overall habitat quality. In 2022, utilization estimates were conducted in winter ranges throughout the month of April using standard Wyoming Game and Fish Department protocol. Transects were stratified by ecological site and the acreage of each major ecological site was used to assist with determining distribution of transects throughout the herd unit. Due to access constraints, and the fact that this was not designed to be a statistically valid assessment, sampling distribution across ecological site descriptions was not completely representative, but was used as a guideline to assist with making in-field decisions on where to place transects. Twenty eight transects were temporarily established in representative areas within representative ecological sites of winter habitats and with respect to access constraints. Browse level averaged 22% within the herd unit, which is within an acceptable range. The central northern portion of the herd unit had the highest amount of browse, and is obviously used by domestic sheep. Hedging in the herd unit is of more concern, and demonstrates that previously high pronghorn numbers, coupled with growing season drought, have had lasting negative implications for sagebrush growth and health. As a result, sagebrush communities in this herd unit may have a compromised ability to support higher pronghorn numbers in the future given that 24% of plants were severely hedged and 41% were moderately hedged, with only 24% being lightly hedged. While sagebrush may be able to tolerate some level of moderate hedging, growing season drought compounds this factor. Drought has obviously had a negative impact on these sagebrush communities, because 32% of the plants were in poor condition, likely due to drought. In 2023, excellent growing conditions occurred. There was above average moisture though out the winter, spring, and summer. In April of 2024 utilization estimates were again conducted on winter ranges. This time eight transects were surveyed. Browse level decreased from 2022 and averaged 19%, which is an acceptable range. Again the central and northern portions of the herd unit were the most heavily browsed. Hedging severity improved as well, with only 19% severely hedged and 47% moderately hedged, with the remaining 19% lightly hedged. Habitat health improved as well, only 26% of the plants were in poor condition. Even with the improved habitat conditions it may take many seasons of higher precipitation and light to moderate herbivory for these plants to recover sufficiently. In the historic past, winter severity has regulated this herd. In years of abundant snowfall, pronghorn can winter well when snow melts and allows for foraging. But high winter precipitation coupled with cold temperatures can be detrimental if forage isn't exposed and movements are impeded by snow. In recent years, winter temperature has been below the 30 year average, and winter precipitation has been above the 30 year average. Even with the cold and snowy conditions, pronghorn have likely wintered fairly well in recent years. The winter of 2023-2024 was extremely mild and dryer than normal which should lead to high pronghorn winter survival.

Fawn ratios have fluctuated considerably over the past twenty years in the North Natrona Pronghorn Herd Unit, with buck ratios remaining more uniform (Figure 4). Fawn ratios were much higher from 2014-2017, and then dropped drastically in 2018 and have remained relatively low since then with an exception of 2022. This drop in fawn production/survival may be the result of

extended drought years, changes in habitat conditions, and/or changes in winter conditions. The twenty-year average preseason fawn ratio is 70 per 100 does, with the 2023 fawn ratio falling below average at 57 per 100 does. Buck ratios are controlled in part with changes to hunting seasons, such that the ratio of bucks remains within "recreation management" range of 30 to 59 bucks per 100 does. Years with low fawn ratios are typically followed by a reduction of "Any Antelope" licenses, as recruitment of male fawns into the yearling age class is expected to be low. Buck ratios have been maintained within or above recreational management range for the past twenty years, with an average of 57 bucks per 100 does. The 2023 preseason buck ratio was below that average but was still well within recreational management, with a record low 38 bucks per 100 does.

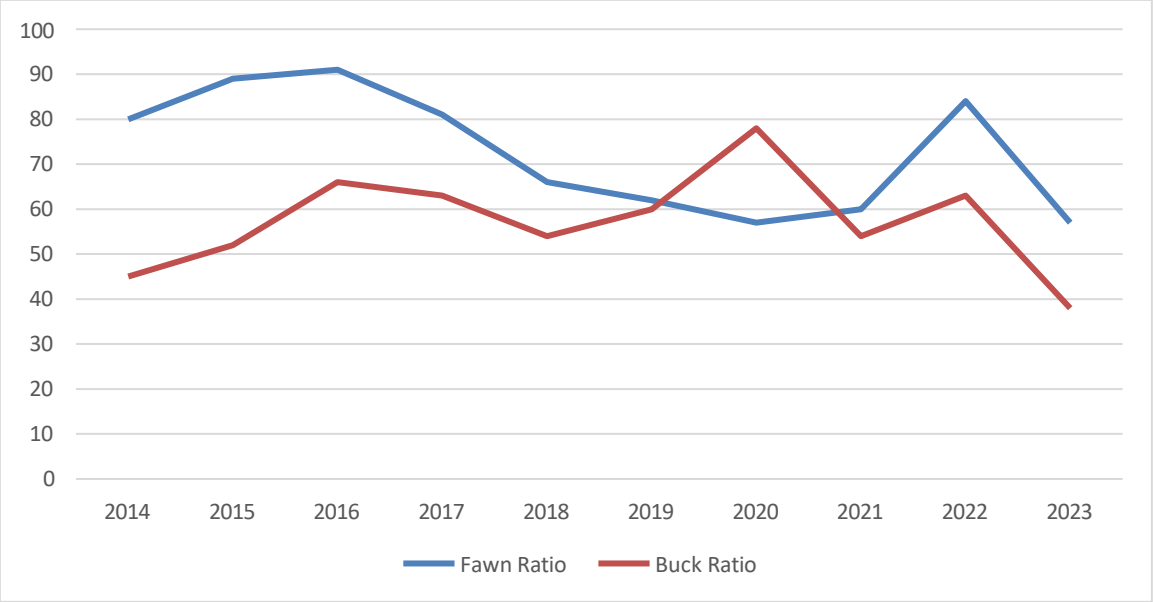


Figure 4. Annual buck and fawn ratios for the North Natrona Pronghorn Herd Unit, 2014-2023.

CURRENT MANAGEMENT STRATEGIES

The current postseason population objective estimate for the North Natrona Pronghorn Herd is 10,148 pronghorn, or 9% below the current objective of 11,000. This herd was substantially over objective from 2014-2016. License issuance was liberal to bring this population to objective. The use of a new Integrated Population Model (IPM), combined with a line-transect survey conducted in June 2023, helped to re-align the population model and predicted an increase in the population for post hunting season 2023.

Hunting seasons and limitations have been adjusted annually to address varying pronghorn numbers and management desires (Figure 5). With ample public access to large tracts of pronghorn habitat, this herd can be manipulated readily with harvest. However, managers must also be cognizant of habitat, weather, and disease conditions and how these factors affect herd dynamics. Additional doe/fawn licenses have been issued in those years when agricultural damage has

become a concern on private lands. License limitations are used to target damage areas in the southeastern portion of the herd unit, with separate licenses valid for the entire hunt area in years when further population reduction is necessary. Total license issuance fluctuates according to estimated population size as well as fawn production/survival and predicted population growth rates. As a result, total hunter numbers in the North Natrona Pronghorn Herd fluctuates from year to year (Figure 6).

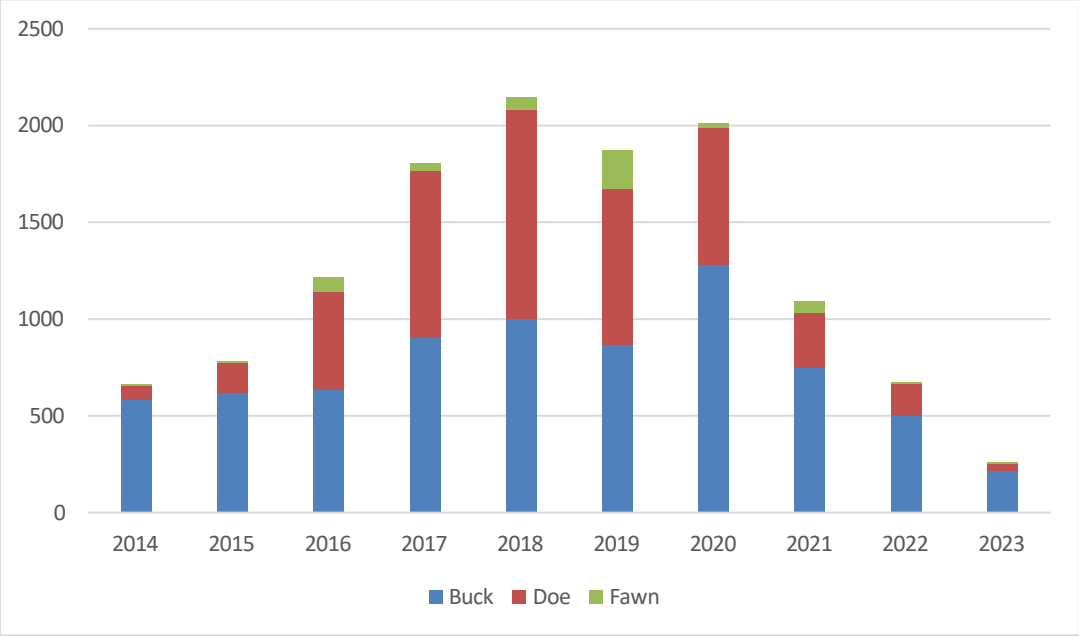


Figure 5. Harvest composition for the North Natrona Pronghorn Herd Unit, 2014-2023.

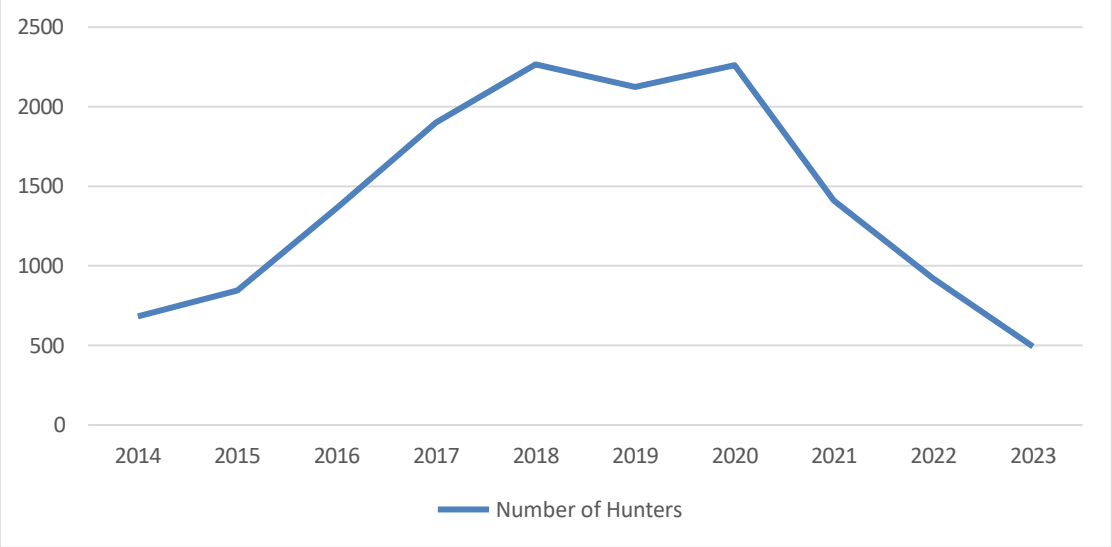


Figure 6. Total hunters for the North Natrona Pronghorn Herd Unit, 2014-2023.

While total pronghorn numbers in this herd vary across years, changes in license issuance have allowed managers to maintain buck ratios within or above recreational management parameters. While it would be possible to maintain buck ratios at special management levels, managers do not wish to switch to special management in this herd unit. With a high density of resident hunters in nearby Casper, managers prefer to offer recreational management opportunities. Both trophy and recreational hunters are thus provided equal opportunity within close proximity to the City of Casper.

RECOMMENDED HERD UNIT OBJECTIVE & MANAGEMENT STRATEGY

Casper Region personnel propose to increase the current postseason population objective from 11,000 to 15,000 for the North Natrona Pronghorn Herd Unit. This population remained above the objective of 11,000 from 2014-2019 despite persistent drought conditions, and declined to under 11,000 in 2020 during the severe winter of 2019 and increased license issuance. The herd then rebounded in 2022 to 12,000 animals but has since declined after the winter of 2022-2023 to the current estimate of 10,148. Managers feel the habitat can readily support 15,000 antelope along with pressures from livestock and other wildlife species. Habitat transect data illustrate utilization pressure is at levels that are sustainable on sagebrush stands with the current population of pronghorn in the herd unit, even in areas designated as crucial winter range. Data from 2014-2023 show this herd at its peak of 22,000 animals down to a low of 10,148 and historic Job Completion Reports contain recommendations from previous managers to raise the objective.

Regional personnel also propose to maintain the recreational management strategy for buck ratios within the North Natrona Pronghorn Herd Unit. Buck ratios have averaged 57 per 100 does over the past 20 years, and managers have been able to maintain buck ratios via changes in license issuance. Hunters enjoy ample hunting opportunity with the North Natrona Pronghorn herd unit and residents typically enjoy high license draw odds. Maintaining recreational management of bucks would preserve these opportunities, while a change to special management would reduce drawing odds for hunters.

The consensus of field personnel for the herd unit is to maintain a traditional population objective with this herd unit for the following reasons:

- Substantial sex and age composition data is collected annually, with considerable time taken by field personnel to conduct preseason ground classifications. Access to conduct ground classifications is very good, with plentiful public lands covering vast expanses of pronghorn habitats.
- Modeling efforts have produced reasonable predictions of population size that track with personnel and public perceptions. The IPM combined with periodic line-transect surveys is considered to be of fair quality. This is a population that receives high levels of attention from the hunting public, with very good public land access. Population estimates should

continue to be derived via modeling given the amount of data collected and expectations from the public.

LANDOWNER, AGENCY, & PUBLIC INVOLVEMENT

Department personnel initially met in January 2023 to discuss possible changes to the herd objective. The Casper Wildlife Management Coordinator, Casper Wildlife Biologist, and West Casper Game Warden discussed historic objective changes and population trends within the herd and constructed an initial proposal. The initial proposal was sent to Department Administration and was approved in March of 2024. A total of 41 landowners and 1 outfitter in the herd unit were identified for soliciting comments. Seven of those landowners were recognized as "major" landowners, in that they had large private holdings and public grazing leases. These seven landowners were contacted in person by the Casper Wildlife Biologist and the West Casper Game Warden during April and May 2023. All remaining landowners were mailed a letter and survey asking them to provide their opinions on the proposed objective change (Appendix A&B). In addition, a letter and survey were sent to Bureau of Land Management Wildlife Biologist Sara Bassett, and Interim Assistant Field Manager Ben Bigalike. Letters were mailed on April 18 with a requested return date of May 13.

Department personnel also prepared a power point presentation with historic herd information and the draft objective proposal. Information was presented during a public meeting at the Casper Regional Office on May 13 which was announced via Department news releases to local media as well as being advertised during the Casper Region Public Information Season Setting Meeting. The meeting was also advertised in the landowner letter and survey. The public meeting in Casper had zero attendees.

There were a total of 19 surveys returned between landowners, outfitters, and hunters. The Bureau of Land Management also provided comment on the proposed objective change (Appendix C). Results from all surveys were compiled to illustrate overall trends in landowner and public opinion regarding current pronghorn numbers level of satisfaction with the pronghorn herd, and perceptions regarding the objective proposal (Figures 7 and 8). The majority of respondents (61%) believe the current size of the North Natrona Pronghorn Herd is too low, while 28% believe the herd is about right, while the remaining 11% believe the herd is too large. Respondents were largely in favor regarding their agreeance on raising the objective with the herd currently: 76% reported somewhat or strongly agree, 18% neither supported nor didn't agree and another 6% reported somewhat or strongly disagree.

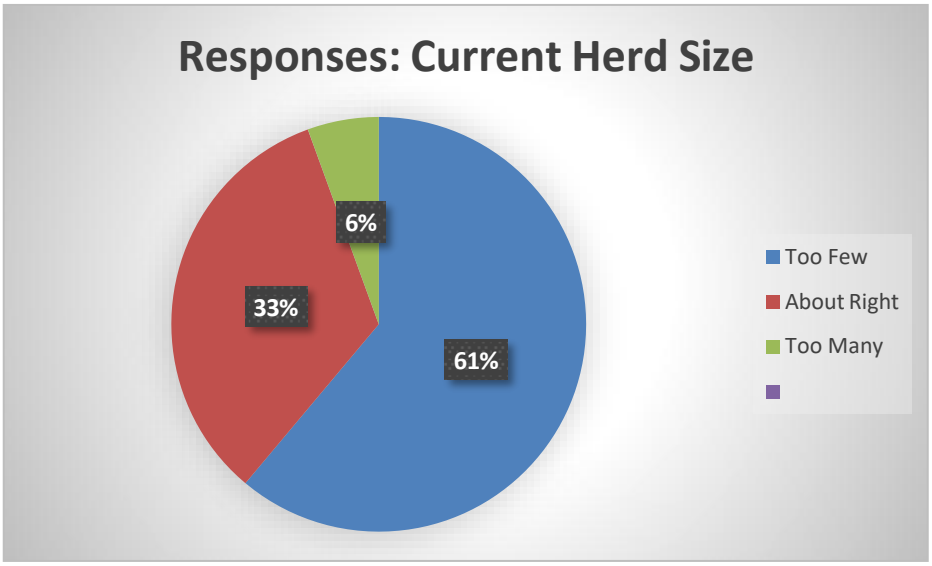


Figure 7: Survey responses regarding current herd size for the North Natrona Pronghorn Herd, May 2024 (N=19).

Representatives from the Bureau of Land Management (BLM) also supported the increase to the proposed pronghorn objective change, citing low impacts to pronghorn habitats and long-term carrying capacity. Wildlife Biologist Brandon Werner met with BLM staff on April 25 to clarify the Department's objective proposal and reasoning. Updated habitat transect data were presented to illustrate light to moderate browse pressure currently detected on sagebrush. Recent changes to modeling technique and additional line-transect data were also discussed, as these methods have provided the Department with more accurate postseason population estimates.

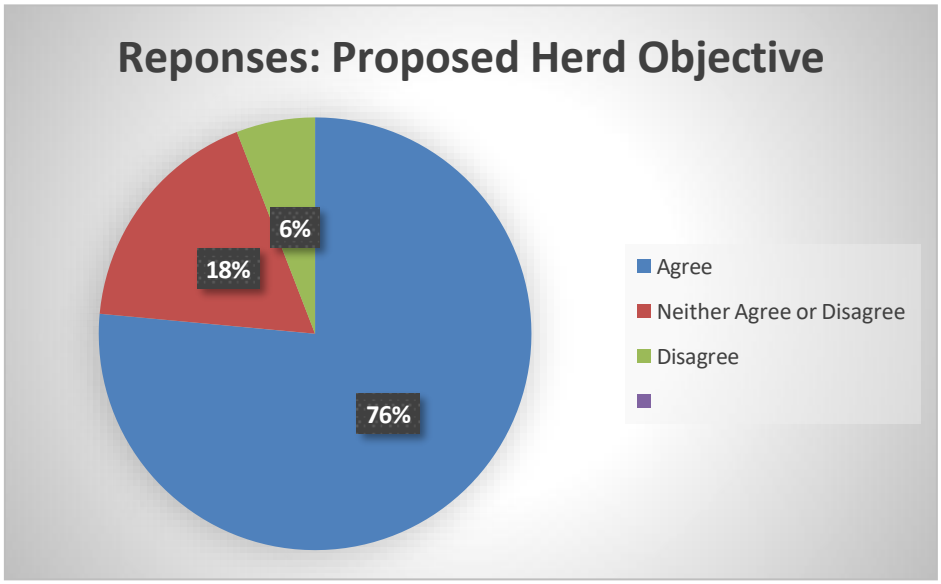


Figure 8. Survey responses regarding the proposed population objective change for the North Natrona Pronghorn Herd Unit, May 2024 (N=19).

Responded Landowners

Of the 42 major stakeholders within the North Natrona Pronghorn Herd Unit, 19 responded to the proposed change of the pronghorn objective. Landowner lists were compiled by the Casper Wildlife Biologist, Casper Wildlife Management Coordinator, and West Casper Game Warden. Those landowners whose names are highlighted were identified as "major" landowners and were visited in person by the Casper Wildlife Biologist and West Casper Game Warden.

Last	First
Cooper	Kim
Corkill	Duane
Crimm	Tyler
Christopherson	Kevin
Ehrlich	Robert
Garnhart	Lisa
Harlan	Charles
Hendry	Leslie
Hanreman	Terry
Kiltz	Russel
Limmer	Chris
Nelson	Zachariah
Miller	DC
Pike	James
Robinett	Daniel

Last	First
Shepperson	Les
Simon	Tim
Stafford	Robert
Whitman	Gail

2024 - JCR Evaluation Form

SPECIES: Pronghorn
PERIOD: 6/1/2024 - 5/31/2025

HERD: PR748 - NORTH CONVERSE

HUNT AREAS: 25-26
PREPARED BY: KYE HICKS

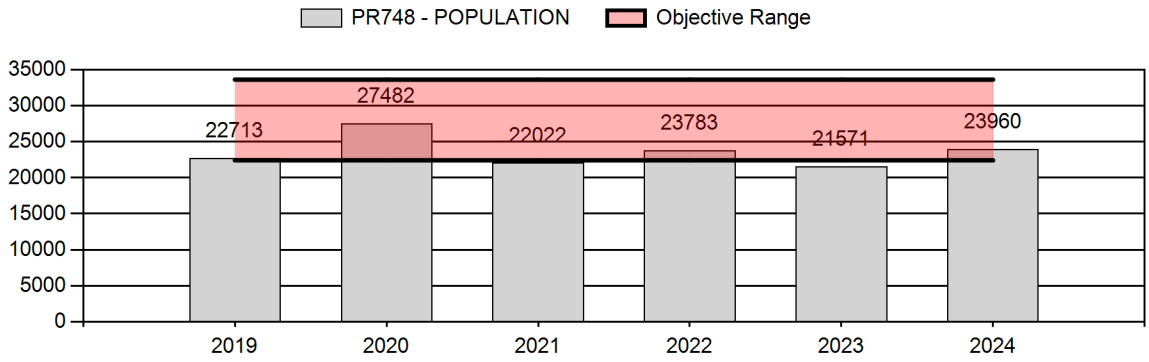
	2019 - 2023 Average	2024	2025 Proposed
Population:	23,514	23,960	25,866
Harvest:	1,909	1,264	1,293
Hunters:	2,115	1,403	1,450
Hunter Success:	90%	90%	89%
Active Licenses:	2,207	1,454	1,500
Active License Success:	86%	87%	86%
Recreation Days:	6,027	4,653	4,500
Days Per Animal:	3.2	3.7	3.5
Males per 100 Females	63	53	
Juveniles per 100 Females	69	87	

Population Objective (± 20%) :	28000 (22400 - 33600)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	-14.4%
Number of years population has been + or - objective in recent trend:	14
Model Date:	02/11/2024

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	3.0%	3%
Males ≥ 1 year old:	19.0%	19%
Proposed change in post-season population:	2.0%	1.8%

Population Size - Postseason



2025 Hunting Seasons
North Converse Pronghorn Herd Unit (PR748)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
25	1	Aug. 15	Sep. 30	Oct. 1	Oct. 14	550	Any antelope
26	1	Aug. 15	Sep. 23	Sep. 24	Oct. 14	1000	Any antelope
26	7	Aug. 15	Sep. 23	Sep. 24	Oct. 31	50	Doe or fawn valid on or within (1) mile of irrigated land

2024 Hunter Satisfaction: 77% Satisfied, 13% Neutral, 10% Dissatisfied

2025 Management Summary

Hunting Season Evaluation
Pronghorn numbers have fluctuated over the past few years but remain below objective. Extreme amounts of moisture in 2022-2023 alleviated the previous year's drought conditions. However, 2022-2023 winter mortality was higher than normal. This herd experienced another drought in the winter and summer of 2023-2024 but it did not have a significant effect on fawn survival due to healthy body condition from forage produced in 2023. Due to drought conditions, low fawn ratios, a widespread Epizootic Hemorrhagic Disease (EHD) outbreak in 2021 and above normal winter mortality in 2022 and 2023 caused this population to decrease over the last few years. In addition, there has been an increase in energy development and disturbance, resulting in declining habitat quality throughout the herd unit, which may decrease the overall carrying capacity of this population, long term. However, preseason classification surveys showed increased fawn and yearling survival for 2024. With this, Area 25 and 26 Type 1 license quotas were not changed in 2025. While hunter success, satisfaction, and preseason buck ratios were high, managers felt the lower antelope population numbers relative to the limited public access would cause a significant decrease in success and satisfaction if license issuance was increased. The Area 26 Type 6 license was changed to a Type 7 and now extends to October 31st. This license is only valid on or within one mile of irrigated land and will concentrate harvest where damage is occurring.

Objective Review
The objective and management strategy for the North Converse Pronghorn Herd was last evaluated and approved in 2020. For the 2025 objective review, the current objective and recreational management strategy will be maintained for the next five years following an internal evaluation.

Population Modeling
The Integrated Population Model (IPM) was used to model this herd. The default structure for pronghorn, i.e. Constant Adult Survival, Time-Varying Reproduction and Juvenile Survival was used. The Active Licenses variable was selected by managers to best represent the most predictable annual harvest. With these settings in place, the observed data for the IPM included twenty-four years of harvest and ratio data along with abundance estimates from surveys conducted in 2000, 2002, 2004, 2012 and 2021. IPM convergence was acceptable, with the max Rhat value being 2.05.

A Line Transect (LT) survey was flown for this herd unit in June 2022. This provided an abundance estimate of approximately 30,000 pronghorn (CI=22,983 - 37,131). As with past LT's flown in this herd unit, the estimated abundance exceeded modeled population estimates. Managers feel the modeled population estimate is more in line with reality and that the LT is likely over-estimating this population. This herd is selected for another LT in 2025.

The total post-season population estimate for 2024 is 23,960 pronghorn (CI=21,726 - 25,923), which represents an increase of about 10% (or + 2,000 pronghorn) from the previous year. This coincides with the perceptions of managers and landowners that this herd is indeed beginning to trend up.

Additional Information

In 2023, horn length measurements (N=119) were collected from harvested adult male pronghorn, with average horn length being 10.7 inches. A total of 8.4% of bucks were $\geq$ 13 inches. Managers can use these measurements to evaluate horn growth trends over time as this dataset grows.

Table 1. 2020 - 2024 Preseason Classification Summary

for Pronghorn Herd PR748 - NORTH CONVERSE

		MALES				FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Pre Pop	Ylg	Adult	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Yling	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2020	30,086	144	348	492	29%	725	43%	477	28%	1,694	2,954	20	48	68	± 6	66	± 6	39
2021	20,247	140	300	440	27%	726	44%	475	29%	1,641	2,406	19	41	61	± 6	65	± 6	41
2022	27,079	182	318	500	26%	785	41%	612	32%	1,897	2,344	23	41	64	± 6	78	± 7	48
2023	25,480	155	236	391	27%	616	42%	462	31%	1,469	2,716	25	38	63	± 7	75	± 7	46
2024	26,475	120	200	320	22%	603	42%	523	36%	1,446	2,656	20	33	53	± 6	87	± 8	57

2024 - JCR Evaluation Form

SPECIES: Pronghorn | PERIOD: 6/1/2024 - 5/31/2025

HERD: PR750 - BLACK THUNDER

HUNT AREAS: 4-9, 24, 27, 29 | PREPARED BY: MATT HUIZENGA

	2019 - 2023 Average	2024	2025 Proposed
Population:	33,681	30,509	30,463
Harvest:	2,840	1,935	2,044
Hunters:	3,146	2,105	2,225
Hunter Success:	90%	92%	92 %
Active Licenses:	3,404	2,167	2,300
Active License Success:	83%	89%	89 %
Recreation Days:	9,986	6,180	6,250
Days Per Animal:	3.5	3.2	3.1
Males per 100 Females	43	44	
Juveniles per 100 Females	65	76	

Population Objective (± 20%) : 49000 (39200 - 58800)

Management Strategy: Recreational

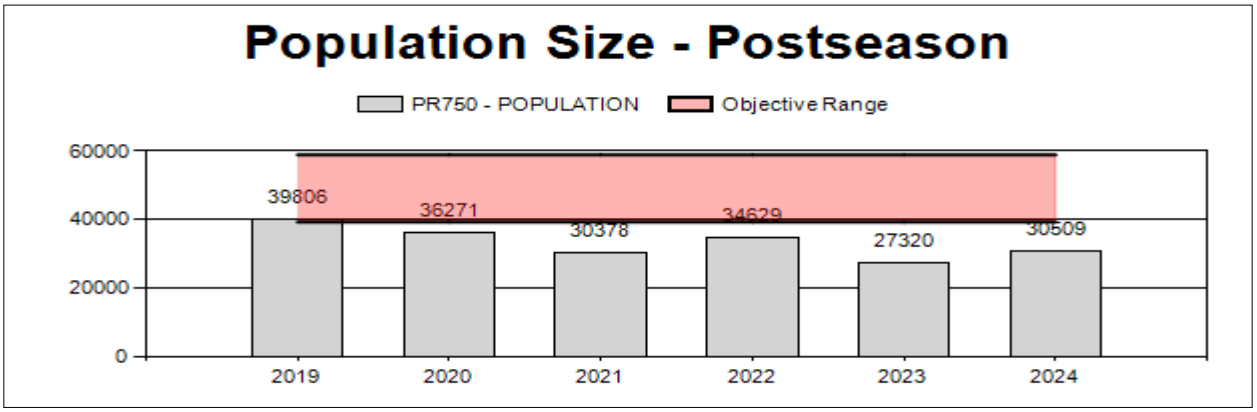
Percent population is above (+) or below (-) objective: -37.7%

Number of years population has been + or - objective in recent trend: 5

Model Date: 03/04/2025

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	3.0%	2.0%
Males ≥ 1 year old:	23%	23%
Proposed change in post-season population:	-0.04%	0%



1. Population estimates are historic through 2022 and do not reflect currently modeled population estimates for those years. Modeling technique was changed in 2021.

2025 Hunting Seasons
Black Thunder Pronghorn (PR750)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
4	1	Aug. 15	Sep. 30	Oct. 1	Nov. 20	100	Any antelope
5	1	Aug. 15	Sep. 30	Oct. 1	Nov. 20	125	Any antelope
6	1	Aug. 15	Sep. 30	Oct. 1	Oct. 15	150	Any antelope; also valid on private land in that portion of Area 8 in Weston County
7	1	Aug. 15	Sep. 30	Oct. 1	Oct. 15	350	Any antelope
8	1	Aug. 15	Sep. 30	Oct. 1	Oct. 15	225	Any antelope
9	1	Aug. 15	Sep. 30	Oct. 1	Oct. 31	300	Any antelope; also valid in that portion of Area 11 in Converse or Niobrara counties
9	7			Nov. 1	Nov. 30	25	Doe or fawn valid on private land
24	1	Aug. 15	Sep. 30	Oct. 1	Oct. 20	250	Any antelope
24	2	Aug. 15	Sep. 30	Oct. 1	Oct. 20	425	Any antelope valid on private land
24	6	Aug. 15	Sep. 30	Oct. 1	Oct. 20	25	Doe or fawn
24	7	Aug. 15	Sep. 30	Oct. 1	Oct. 20	25	Doe or fawn valid on private land
27	1	Aug. 15	Sep. 30	Oct. 1	Oct. 15	125	Any antelope
29	1	Aug. 15	Sep. 30	Oct. 1	Oct. 15	75	Any antelope
29	2	Aug. 15	Sep. 30	Oct. 1	Oct. 31	300	Any antelope valid on private land
29	7	Aug. 15	Sep. 30	Oct. 1	Oct. 31	50	Doe or fawn valid on private land

2024 Hunter Satisfaction: 88% Satisfied 10% Neutral 2% Dissatisfied

2025 Management Summary

Hunting Season Evaluation

After a low point in 2012, this herd grew steadily through 2018, and then declined substantially into 2022, before beginning to recover in 2023. The recent decline was due to persistent low recruitment (preseason fawn:doe ratios 2018-2022 averaged 63 fawns per 100 does), increased mortality of all age classes during the 2018-19 winter, increased spring mortality in 2019 and 2020, continued drought since the spring of 2020, and losses to both Blue Tongue Virus (BTV) and Epizootic Hemorrhagic Disease Virus (EHDV) in 2021 and 2022. To address the decline, harvest was reduced 20% in 2020, another 33% in 2021, and 20% more in both 2022 and 2023. Harvest

reductions resulted in active license success and effort remaining stable during the population decline, with success averaging 83% and effort at 3.5 days per harvest. Harvest improved in 2023, with average success increasing to 93.9% and effort decreasing to 3.0 days per harvest. Consequently, hunter satisfaction increased and dissatisfaction dropped significantly in 2023. With slowing declines, licenses were increased in multiple hunt areas in 2024. This resulted in hunter success dropping slightly to 92% and days per harvest increasing to 3.2 days per harvest.

To encourage continued population growth towards objective and provide hunter opportunity without compromising buck:doe ratios, 125 more any-antelope licenses have been issued for 2025. Twenty-five Type 1 licenses were added in HA 7, and 50 Type 1 and 50 Type 2 licenses were added in HA 24. To address late-season damage concerns, a Type 7 license was added to HA 9 with 25 licenses valid on private land for the month of November. However, with or without these changes, the population model projects the post-season population will stay stable or slightly increase.

Management Objective Review
The objective and management strategy for the Black Thunder Pronghorn Herd was last evaluated in 2024, and will not be reviewed again until 2028.

Population Modeling
The best performing model this year using Time-Varying Reproduction, Constant Adult Survival, and Time-Varying Juvenile Survival yielded a 2024 post-season estimate of about 31,000 (CL ~ 28,800 – 33,400). There are several data points that make modeling this population difficult. First, reconciling the relatively high 2014 and 2016 Line Transect (LT) estimates given the low 2019 and 2021 LT results is problematic. In addition, the model does not align well with the fluctuations in observed buck:doe ratios since 2020 given reported harvest. Despite these concerns, the population trend produced by the current model comports well with herd performance and harvest statistics since 2016. Although, local managers feel the population peak the model indicates in 2017 was probably neither that high, nor the 2022 nadir that low. The projected abundance estimates beyond 2024 do not seem to capture the lower harvest and increasing fawn ratios of the past few years (Appendix 1) and managers believe we will see higher population growth than projected. Fawn ratios in 2024 were the highest observed since 2017. This herd is slated for a new LT survey in 2025.

Concerns with this population
There has been a general decline in observed fawn:doe ratios over the past 30+ years in this herd, which will likely continue with reductions in habitat quality and quantity due to aging sagebrush stands, increased invasive grass cover, and unrelenting industrialization of pronghorn habitat by energy development. We also suspect recruitment and survival of adults may continue to decline due to increased losses to disease if drier and warmer weather patterns persist.

Appendix 1

2019 - 2024 Preseason Classification Summary

for Pronghorn Herd PR750 - BLACK THUNDER

		MALES				FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Pre Pop	Ylg	Adult	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Yling	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2019	44,809	262	817	1,079	23%	2,191	47%	1,374	30%	4,644	2,238	12	37	49	± 3	63	± 3	42
2020	40,266	204	657	861	21%	2,025	49%	1,235	30%	4,121	2,781	10	32	43	± 3	61	± 3	43
2021	34,181	239	633	872	22%	1,944	48%	1,233	30%	4,049	2,165	12	33	45	± 3	63	± 4	44
2022	42,177	174	490	664	17%	1,936	49%	1,325	34%	3,925	2,358	9	25	34	± 2	68	± 4	51
2023	30,590	312	755	1,067	20%	2,459	47%	1,703	33%	5,229	2,087	13	31	43	± 2	69	± 3	48
2024	33,525	306	673	979	20%	2,246	46%	1,698	34%	4,923	2,223	14	30	44	± 3	76	± 4	53

2024 - JCR Evaluation Form

SPECIES: Mule Deer | PERIOD: 6/1/2024 - 5/31/2025

HERD: MD740 - CHEYENNE RIVER

HUNT AREAS: 7-14, 21 | PREPARED BY: MATT HUIZENGA

	2019 - 2023 Average	2024	2025 Proposed
Population:	16,366	10,371	10,661
Harvest:	1,053	880	880
Hunters:	2,025	1,710	1,700
Hunter Success:	52%	51%	53 %
Active Licenses:	2,055	1,710	1,700
Active License Success:	51%	51%	53 %
Recreation Days:	8,619	8,231	7,500
Days Per Animal:	8.2	9.4	8.3
Males per 100 Females	32	37	
Juveniles per 100 Females	59	61	

Population Objective (± 20%) : 27000 (21600 - 32400)

Management Strategy: Private Land

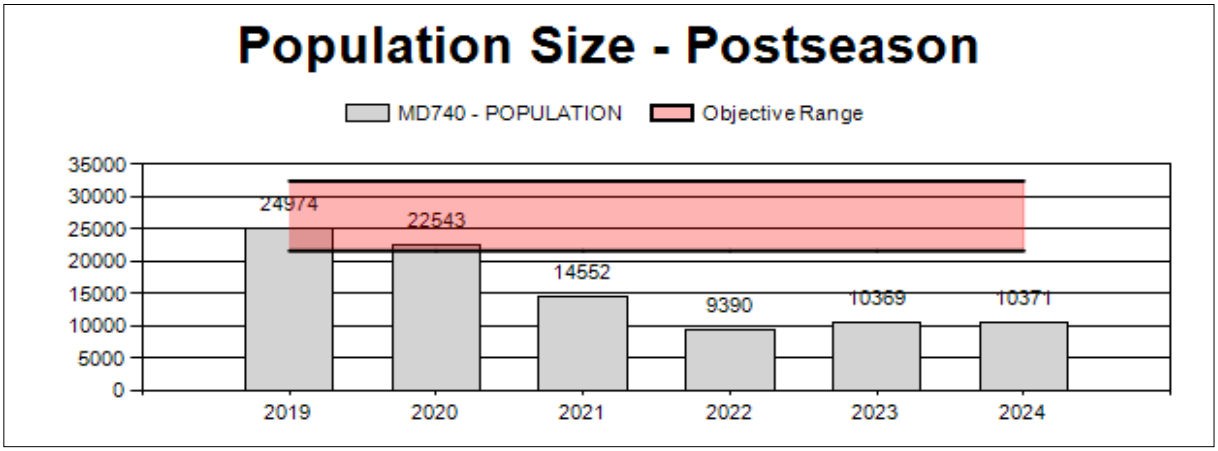
Percent population is above (+) or below (-) objective: -61.6%

Number of years population has been + or - objective in recent trend: 4

Model Date: 02/26/2025

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	1.0%	0.0%
Males ≥ 1 year old:	32%	32%
Proposed change in post-season population:	+3.7%	3.0%



1. Population estimates are historic through 2022 and do not reflect currently modeled population estimates for those years. Modeling technique was changed in 2021.

2025 Hunting Seasons
Cheyenne River Mule Deer (MD740)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
7	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 15		Antlered mule deer or any white-tailed deer
8	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 15		Antlered mule deer or any white-tailed deer
9	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 15		Antlered mule deer or any white-tailed deer
10	1	Sep. 1	Sep. 30	Oct. 1	Oct. 21	75	Antlered mule deer or any white-tailed deer
11	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 15		Antlered mule deer or any white-tailed deer
12	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 15		Antlered mule deer or any white-tailed deer
13	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 15		Antlered mule deer or any white-tailed deer
14	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 15		Antlered mule deer or any white-tailed deer
21	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 15		Antlered mule deer or any white-tailed deer

2025 Region B Nonresident Quota: 800

2024 Hunter Satisfaction: 64% Satisfied 22% Neutral 14% Dissatisfied

2025 Management Summary

Hunting Season Evaluation
With excellent productivity and survival in 2014 and 2015, this herd experienced noteworthy growth following a low point in 2012. However, between 2016 and 2022 productivity and survival generally declined, and Epizootic Hemorrhagic Disease (EHD) and Blue Tongue Virus (BTV) outbreaks increased adult mortality in 2021 and 2022. The 2022-23 winter was fairly severe in the southern half of the herd unit as well. Consequently, this mule deer population has dropped since 2019. Buck:doe ratios also waned during the first years of the current population decline as harvest remained fairly consistent. Hunting seasons then became more conservative each year beginning in 2021. With reductions in harvest, the buck:doe ratio has begun to increase, and it was anticipated the herd would grow slightly in 2023, however the post-season population actually dropped 2% in 2023. Due to the relatively severe 2022-23 winter in the southern half of the herd unit and a 2023 post season fawn:doe ratio of 65 per 100 does, the Region B and the HA 10, Type 1 license quotas were cut 20 and 25%, respectively. With this season structure in place, the

Integrated Population Model (IPM) indicated 32% of the adult bucks would be harvested, which was identical to the estimated figure for the past 3-years.

Managers kept the current frameworks and quotas for 2025 to continue to foster herd growth and maintain post-season buck:doe ratios.

Management Objective Review
The objective and management strategy for the Cheyenne River Herd was last evaluated in 2024, and will not be reviewed again until 2029.

Chronic Wasting Disease (CWD) Management
The Cheyenne River Herd was prioritized for CWD sampling in 2020. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). Sample sizes in 2020 were sufficient for reduced confidence intervals and a higher certainty of accurate prevalence in this herd. The following years with small sample sizes equate to extremely wide confidence intervals and don't accurately represent actual prevalence. This herd will be prioritized for sampling in 2025.

Table 1. CWD prevalence for hunter-harvested mule deer in the Cheyenne River Mule Deer Herd, 2020-2024.

Year(s)	Percent CWD-Positive and (n) - *Hunter Harvest Only*			Percent of Harvested Adult Males Sampled
	Adult Males (CI = 95%)	Yearling Males	Adult Females	
2020	**14% (n=158)**	20% (10)	0% (6)	13.2
2021	**8% (n=26)**	0% (1)	0% (2)	2.6
2022	**8% (n=12)**	0% (0)	0% (0)	1.4
2023	**8% (n=12)**	0% (0)	0% (0)	1.7
2024	**36% (n=14)**	0% (0)	0% (1)	1.6
2020-2024	**14% (n=222)**	18% (11)	0% (9)	4.8

Population Modeling
In 2022, the Time-Varying Reproduction, Constant Adult Survival, and Time-Varying Juvenile Survival IPM relied on license numbers as the effort variable, and produced a postseason population estimate of about 9,400 mule deer (CL ~ 8,300 – 10,400). The same IPM structure was used again in 2023 yielding a post-season population estimate of ~10,400 mule deer (CL ~ 8,900 – 11,850). This comported well with field personnel's perceptions that mule deer numbers dropped in the southern half of the herd unit, but remained steady or improved some in the northern half over the past year. The 2024 model provided a postseason population estimate of ~10,400 mule deer (CL ~ 8900-11,900) showing a stable population with a small upward trend projected. Given increased fawn survival, harvest statistics and input from landowners, the 2024 IPM's post-season population estimate and trend are deemed reasonable.

Appendix 1

2019 - 2024 Postseason Classification Summary

for Mule Deer Herd MD740 - CHEYENNE RIVER

		MALES							FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Post Pop	Ylg	2+ Cls 1	2+ Cls 2	2+ Cls 3	2+ UnCls	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Yling	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2019	24,974	110	172	75	6	5	368	18%	991	47%	731	35%	2,090	1,400	11	26	37	± 3	74	± 4	54
2020	22,543	121	219	92	9	0	441	22%	1,127	55%	465	23%	2,033	1,416	11	28	39	± 3	41	± 3	30
2021	14,552	80	114	31	1	0	226	15%	838	55%	453	30%	1,517	926	10	17	27	± 2	54	± 4	43
2022	9,390	120	182	73	4	0	379	15%	1,359	53%	807	32%	2,545	1,046	9	19	28	± 2	59	± 3	46
2023	10,369	136	143	52	12	0	343	16%	1,122	51%	730	33%	2,195	1,219	12	18	31	± 2	65	± 4	50
2024	10,371	90	82	37	2	42	253	19%	684	51%	417	31%	1,354	1,076	13	24	37	± 3	61	± 5	45

Appendix 2

Mule Deer Hunt Area 10

Post-Season Buck:Doe Ratios and Antler Classification Data
&
Tooth Age and Antler Data from Harvested Mule Deer

Year	Post Season Buck : Doe Ratio	Post-Season Buck Classification Percentages				Harvested Bucks			
		Ylg.	CLS 1	CLS 2	CLS 3	Median Age	Mean Antler Spread	Median Pts. Left	Median Pts. Right
2017	41 : 100	32%	54%	13%	1%	4.5	20.0	4	4
2018	134 : 100	7%	69%	22%	2%	4.5	19.9	4	4
2019	44 : 100	9%	43%	47%	0%	4.5	19.8	4	4
2020	59 : 100	15%	44%	30%	11%	5.5	19.1	4	4
2021	31 : 100	22%	56%	22%	0%	5.5	19.1	4	4
2022	34 : 100	20%	53%	28%	0%	6.5	18.4	5	4
2023	37 : 100	31%	42%	23%	4%	5.5	21.0	4	4
2024	74 : 100	15%	85% 2+ Year Old			5.5	20.6	4	3.5

2024 - JCR Evaluation Form

SPECIES: Mule Deer | PERIOD: 6/1/2024 - 5/31/2025

HERD: MD751 - BLACK HILLS

HUNT AREAS: 1-6 | PREPARED BY: MATT HUIZENGA

	2019 - 2023 Average	2024	2025 Proposed
Population:	18,460	13,055	14,386
Harvest:	1,664	1,195	1,400
Hunters:	4,535	3,071	3,400
Hunter Success:	37%	39%	41 %
Active Licenses:	4,690	3,071	3,400
Active License Success:	35%	39%	41 %
Recreation Days:	14,352	9,495	11,000
Days Per Animal:	8.6	7.9	7.9
Males per 100 Females	21	17	
Juveniles per 100 Females	59	86	

Population Objective (± 20%) : 30000 (24000 - 36000)

Management Strategy: Recreational

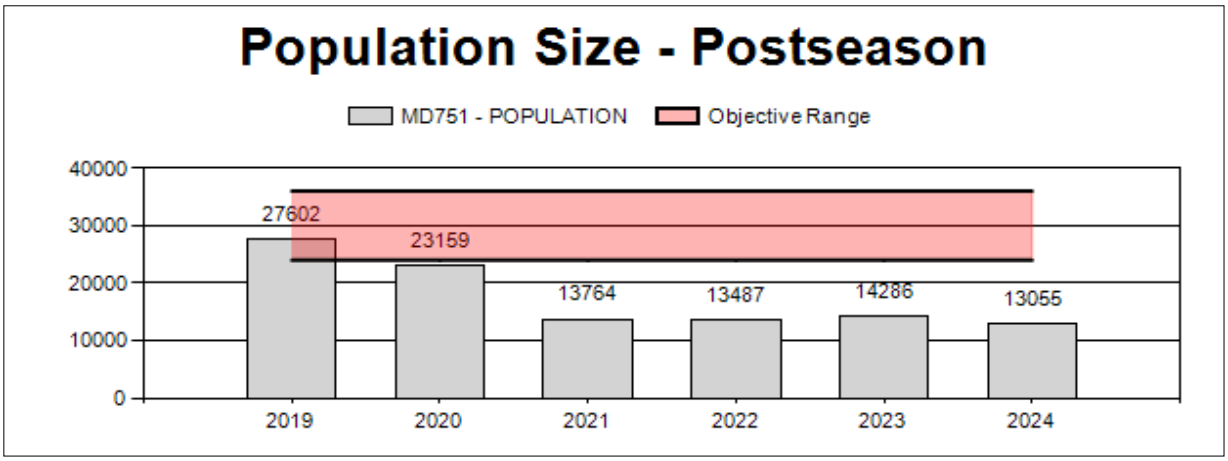
Percent population is above (+) or below (-) objective: -56.5%

Number of years population has been + or - objective in recent trend: 5

Model Date: 02/28/2025

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	0%	0%
Males ≥ 1 year old:	45%	24%
Proposed change in post-season population:	+6.0%	+10.0%



1. Population estimates are historic through 2022 and do not reflect currently modeled population. Modeling methodology changed in 2021.

2025 Hunting Seasons
Black Hills Mule Deer (MD751)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
1	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 20		Antlered deer
2	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 20		Antlered deer
3	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 20		Antlered deer
4	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 20		Antlered deer; except the lands of the State of Wyoming's Ranch A property shall be closed
5	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 20		Antlered deer
6	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 20		Antlered deer

2025 Region A Nonresident Quota: 2,000

2024 Hunter Satisfaction: 63% Satisfied 22% Neutral 15% Dissatisfied

2025 Management Summary

Hunting Season Evaluation

This herd exhibits regular population cycles. Following a low in 2012, it rebounded due to excellent productivity and survival, most notably in 2014 and 2015. It then peaked in 2016. Over the same period, post-season buck to doe ratios climbed above historic values. Between 2016 and 2022, the population declined substantially due to low recruitment, increased over-winter mortality in bio-year 2018, low fawn numbers between 2020 and 2022 (mean of 53 fawns per 100 does post-season), and losses to Epizootic Hemorrhagic Disease (EHD) and Blue Tongue Virus (BTV) in 2021 and 2022. Because hunting seasons remained fairly consistent as the population initially dropped, post-season buck to doe ratios returned to long-term values (~23 bucks per 100 does) between 2018 and 2020. In response to the declining population and buck to doe ratio, more conservative hunting seasons were implemented each year from 2020 through 2023. Even with a conservative hunting season in place, the post-season buck to doe ratio dropped to 16 bucks per 100 does in 2022, a level not seen in 10 years. In 2023, the most restrictive hunting season in many years was implemented, with no doe mule deer hunting and General License season that allowed only buck deer to be taken with a closing date of November 17. In 2023, the post-season fawn to doe ratio increased to 72 fawns per 100 does, the post-season buck to doe ratio climbed to 20 bucks per 100 does, and the estimated, post-season population increased 8%, while the preseason trend count was up 20%. Area managers left license issuance and limitations unchanged and extended the season to November 20 in 2024, which is something a recent survey of landowners, outfitters, and hunters revealed was most widely supported. Post-season fawn to doe ratios increased again to 86 fawns per 100 does in 2024, while buck ratios were slightly lower at 17 bucks per 100 does. Managers continued with the same framework in 2025 which will promote increasing buck ratios and overall population numbers.

Management Objective Review
The objective and management strategy for the Black Hills Mule Deer Herd was last evaluated and approved in 2020. For the 2025 (5-year) objective review, the current objective and recreational management strategy will be maintained for the next five years following an internal evaluation.

Chronic Wasting Disease (CWD)
The Black Hills Mule Deer Herd was prioritized for CWD sampling from 2021 to 2023. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). To date, no CWD management actions have occurred in this herd unit. Although, managers should continue to monitor the "hot spots" in Hunt Area 3 and within the municipalities in the Black Hills as future management actions are considered. Due to only 8 samples being taken in 2020, prevalence is not accurate and should be overlooked for that specific year and only used in an average.

Table 1. CWD prevalence for hunter-harvested mule deer in the Black Hills Mule Deer Herd, 2020-2024.

Year(s)	Percent CWD-Positive and (n) - *Hunter Harvest Only*			Percent of Harvested Adult Males Sampled
	Adult Males (CI = 95%)	Yearling Males	Adult Females	
2020	**50% (n=4)**	0% (2)	0% (2)	0.3
2021	**7% (n=89)**	0% (8)	0% (24)	7.8
2022	**0% (n=27)**	20% (5)	0% (4)	2.3
2023	**11% (n=44)**	0% (12)	0% (12)	4.5
2024	**9% (n=22)**	0% (3)	8% (13)	1.9
2020-2024	**8% (n=186)**	4% (28)	2% (55)	3.1

Population Modeling
The 2023 Time Varying Reproduction, Constant Adult Survival, and Time Varying Juvenile Survival IPM postseason population estimate for this herd unit was approximately 14,400 mule deer (95% CI ~ 13,000 – 15,900) using license number as the effort variable. The model's post-season population estimate is 23% above the composition abundance estimate garnered in late November, but well within its 95% confidence interval (11,589, CI = 7,613 – 15,564). However, that abundance estimate was thought to be low, due to poor sightability of deer in timbered habitat and relatively warm weather. Post-season population estimates produced by the model are 89% correlated with preseason trend counts. Consequently, local managers are quite comfortable with the estimates produced by the model. The 2024 IPM postseason population estimate for this herd unit was approximately 13,100 mule deer (95% CI ~10,166 – 16,759). This model used the same survival parameters as in 2023, however changed the effort variable to days/harvest. While this estimate is lower than the previous year's modeled estimate, it better aligns with the abundance estimate and falls within both CI's. With additional data, managers feel the 2023 model was likely slightly high and the 2024 model more accurately shows the current population trend.

Appendix 1

2019 - 2024 Postseason Classification Summary

for Mule Deer Herd MD751 - BLACK HILLS

		MALES							FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Post Pop	Ylg	2+ Cls 1	2+ Cls 2	2+ Cls 3	2+ UnCls	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Yling	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2019	27,602	67	98	21	1	0	187	12%	822	51%	597	37%	1,606	1,508	8	15	23	± 2	73	± 5	59
2020	23,159	65	99	38	7	0	209	14%	884	58%	425	28%	1,518	1,462	7	16	24	± 2	48	± 4	39
2021	13,764	52	38	8	0	0	98	11%	497	57%	276	32%	871	942	10	9	20	± 3	56	± 5	46
2022	13,487	67	66	12	0	0	145	10%	869	58%	478	32%	1,492	905	8	9	17	± 2	55	± 4	47
2023	14,286	37	35	6	0	0	78	10%	392	52%	283	38%	753	1,409	9	10	20	± 3	72	± 7	60
2024	13,055	23	37	5	0	0	65	9%	373	49%	319	42%	757	1,074	6	11	17	± 3	86	± 8	73

2024 - JCR Evaluation Form

SPECIES: Mule Deer
PERIOD: 6/1/2024 - 5/31/2025

HERD: MD755 - NORTH CONVERSE

HUNT AREAS: 22
PREPARED BY: KYE HICKS

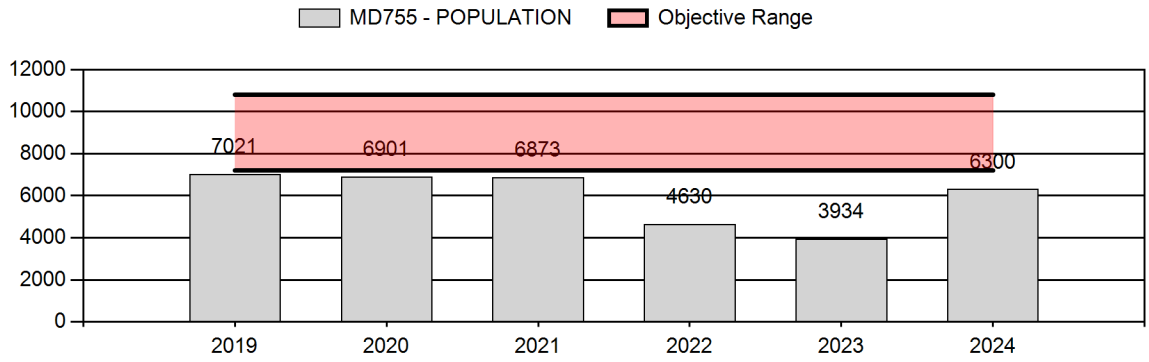
	2019 - 2023 Average	2024	2025 Proposed
Population:	5,872	6,300	5,227
Harvest:	273	180	240
Hunters:	395	273	400
Hunter Success:	69%	66%	60 %
Active Licenses:	395	273	300
Active License Success:	69%	66%	80 %
Recreation Days:	1,665	1,056	1,000
Days Per Animal:	6.1	5.9	4.2
Males per 100 Females	42	45	
Juveniles per 100 Females	56	72	

Population Objective (± 20%) :	9000 (7200 - 10800)
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	-30%
Number of years population has been + or - objective in recent trend:	16
Model Date:	2/19/2025

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	0%	0%
Males ≥ 1 year old:	22%	14%
Proposed change in post-season population:	-4.0%	.83%

Population Size - Postseason



2025 Hunting Seasons
North Converse Mule Deer Herd Unit (MD755)

Hunt Area	License Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
22	1	Sep. 1	Sep. 30	Oct. 1	Oct. 14	150	Antlered mule deer or any white-tailed deer
22	2	Sep. 1	Sep. 30	Oct. 1	Oct. 14	250	Antlered mule deer or any white-tailed deer valid south and east of Wyoming Highway 95, 55 Ranch Road (Converse County Road 23), Sage Creek Divide/Blizzard Heights Road, and Ross Road (Converse County Road 31)

2024 Hunter Satisfaction: 69% Satisfied, 17% Neutral, 14% Dissatisfied

2025 Management Summary

Hunting Season Evaluation

The 2025 season structure will be conservative in an effort to allow for population growth and maintain buck ratios within special management parameters. This hunt area is predominantly private land with much of the public land inaccessible to hunters or difficult to access. Public land mule deer hunting is very limited in this area. Many of the large landowners have concerns over mule deer populations and have limited the number of hunters they allow. License issuance is largely based on access to private lands and limited to prevent saturation of available public lands. In 2024, managers implemented a Type 2 license valid only in the eastern portion of Area 22 to better focus hunting pressure in areas of higher deer density and alleviate crowding on public lands. In 2024, there was a decrease in mule deer harvested (180), with the five-year average of 272. With the addition of the Type 2 license harvest success matched the five-year average of 65%. There were 56 unsold Type 2 licenses. In 2025, there will be 150 Type 1 and 250 Type 2 licenses available. This will be no change from the previous year.

The North Converse Herd Unit experienced a dramatic reduction in population through 2011 likely caused by years of drought, culminating in a harsh winter and habitat loss due to anthropogenic disturbance. This herd unit has been subjected to a very high level of energy development disturbance over the past decade. Impacts from this development on the long-term carrying capacity of mule deer habitats are unknown, but potentially significant. The population showed a slight

upward trend through 2018, but has remained below objective and declined from 2019 to 2023. Fawn production/survival has generally been poor over the past five years, which contributed to population decline and stagnation. In 2024, fawn ratios increased to 72 fawns per 100 does (Table 2.), which is up from the five year average. Buck ratios have been consistently high in this herd and have averaged 44 bucks per 100 does over the past three years, which follows the Special Management strategy criteria. Stratified random composition and abundance surveys have been used in this herd unit in 2021, 2022 and 2023. This survey method is being improved each year with survey design and adjusting flight budgets The Department flew a sightability survey for this herd in January of 2025 (Appendix A). This survey found significantly more deer in the herd unit than what was presumed to be. The Integrated Population Model (IPM) now estimates this population in this area has around 3,000 more deer than what was estimated in 2023.

Management Objective Review

The objective and management strategy for the North Converse Mule Deer Herd was last evaluated and approved in 2020. For the 2025 objective review, the current objective and recreational management strategy will be maintained for the next five years following an internal evaluation.

Chronic Wasting Disease Management

The North Converse Herd Unit was selected as a priority surveillance area in 2023. A total of 39 hunter harvested adult buck mule deer were tested with four testing positive for Chronic Wasting Disease (CWD). In 2024, Area 22 was selected as a mandatory surveillance area. This action was taken due to the low number of samples received in 2023. A total of 100 samples were taken from adult buck mule deer with 12 testing positive for CWD. In both 2023 and 2024, letters were sent out to all license holders to inform them of the CWD sampling requests.

Table 1. CWD prevalence for hunter-harvested mule deer in the North Converse Mule Deer Herd, 2020 - 2024.

Year(s)	Percent CWD-Positive and (*n*) – *Hunter Harvest Only*			Percent of Harvested Males Sampled
	Adult Males (CI = 95%)	Yearling Males	Adult Females	
2020	**29% (n=7)**	0% (1)	0% (0)	2.9
2021	**14% (n=7)**	0% (0)	0% (1)	2.7
2022	**0% (n=4)**	0% (0)	0% (0)	1.7
2023*	**10.3% (n=39)**	0% (7)	0% (1)	19.5
2024*	**12% (n=100)**	0% (3)	0% (1)	57.7
2020-2024	**12.1% (n=157)**	0% (11)	0% (3)	7.4

*Mandatory or Priority CWD sampling effort

Population Modeling
The Integrated Population Model (IPM) was used to model this herd. The default structure for mule deer, i.e. constant adult survival, time-varying reproduction and juvenile survival was selected. The days per harvest variable was selected to best represent the most predictable annual harvest. In addition to this, data was selected from 2013-2026 to best represent this herd. With these settings in place the observed data for the IPM included twelve years of harvest and ratio data along with abundance estimates from surveys conducted in 2021, 2022, 2023 and 2024. IPM convergence was acceptable, with the max Rhat value being 2.36.

A sightability survey was flown for this herd unit in January 2025 (Appendix A). This provided an abundance estimate of approximately 10,692 mule deer (CL = 6,938-14,445). As with past sightability's flown in this herd unit, the estimated abundance exceeded modeled population estimates. Through observations, both managers and landowners feel that this is a high estimate.

The total post-season population estimate for 2024 is 6,300 mule deer (CL 4,727-8,470), which represents a significant increase from the population estimate in 2023. The three composition abundance and one sightability survey helped align the model and the population abundance estimate is reasonable. Even with the increased population estimate this herd remains well below objective.

Additional Information
Additional Management Data Collected in the North Converse Herd Unit Includes: In 2023, antler spread measurements (N=46) were collected from harvested adult male mule deer. Class II bucks (20"- 25") represented only 11% of all bucks sampled, while Class I bucks (< 20") represented the other 89%. The average width was 16 inches and the average age was 4.4. This data collection occurred again in 2024. Antler spread measurements (N=80) were collected from harvested adult male mule deer. Class III bucks (>25") represented 6% of the bucks sampled. Class II bucks (20"-25") represented 31% of bucks sampled, and Class I bucks (< 20") represented 63%. The average width was 18.5 inches and the average age was 4.6.

Table 2. 2020 - 2024 Postseason Classification by Hunt Area

for Mule Deer Herd MD755 - NORTH CONVERSE - Hunt Area 22

			Males							Females		Juveniles				Males/100 Females			Young/100	
Year	Area	% Herd	# Ylg	# 2+ Cls 1	# 2+ Cls 2	# 2+ Cls 3	# 2+ Other	Total Male	% Male	#	% Fem	#	% Juv	Total	Class Obj	Ylg	Adult	Males	Female	Adult
2020	22	0%	25	82	41	2	0	150	23%	326	50%	173	27%	649	1,240	8	38	46	53	36
2021	22	0%	7	22	14	0	0	43	17%	138	55%	72	28%	253	964	5	26	31	52	40
2022	22	0%	14	45	13	1	0	73	23%	148	46%	99	31%	320	0	9	40	49	67	45
2023	22	0%	9	22	7	0	0	38	20%	100	53%	52	27%	190	0	9	29	38	52	38
2024	22	0%	23	26	14	1	0	64	21%	141	46%	102	33%	307	0	16	29	45	72	50

Appendix A. 2025 MD 755 North Converse Aerial Abundance Results

Surveyors: Brandon Werner, Kye Hicks, Sean Cotteleer, Simon Martinez, Rod Lebert

Date: 1/18/2025 – 1/21/2025

Vendor/Helicopter: Helicopter Solutions, MT (Kent Potter) / Bell Jet Ranger

Total Polygons Surveyed: One hundred and fifty polygons were flown.

Total Survey Time: 25.3 flight hours.

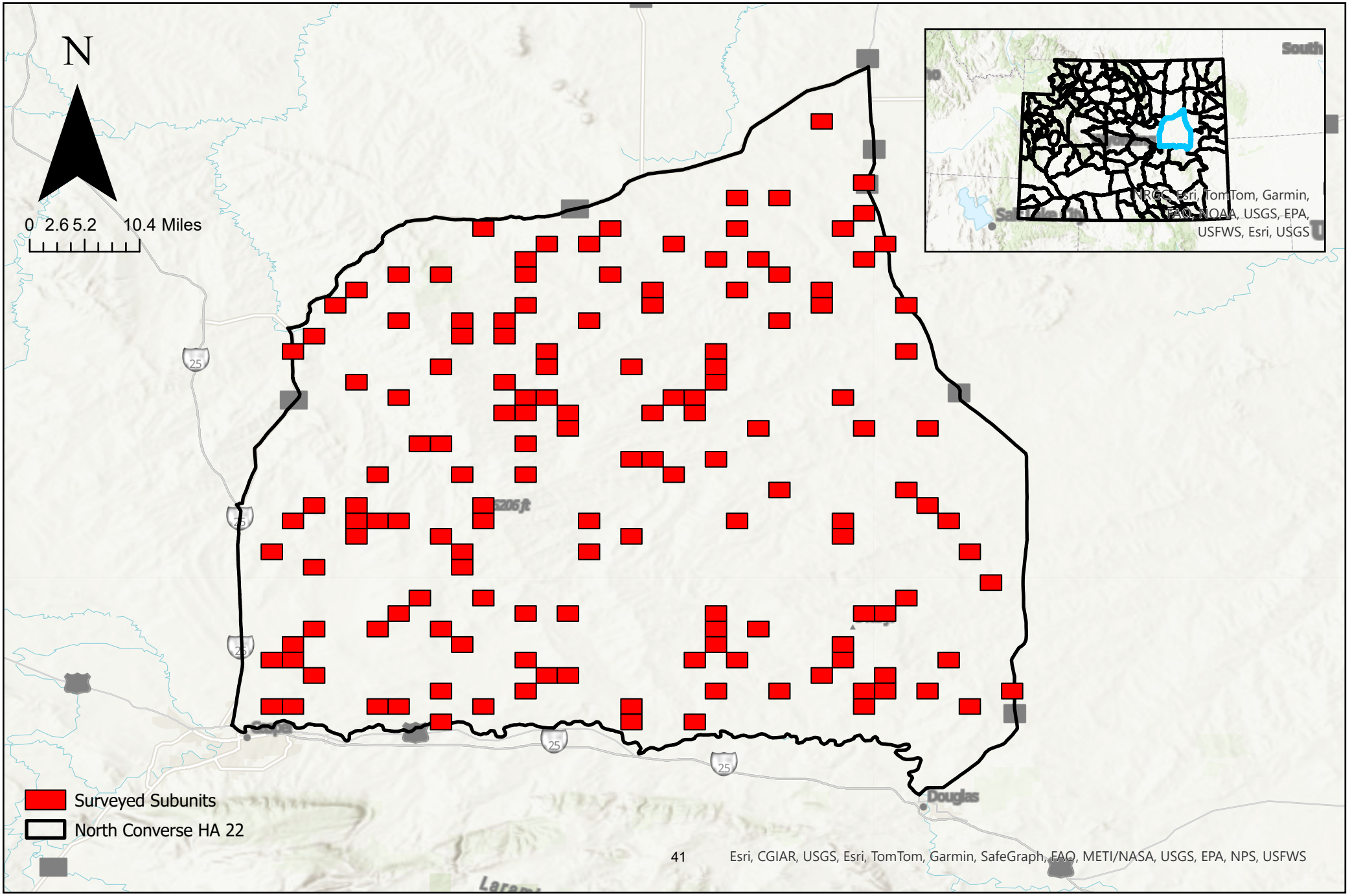
Costs: The total cost for the entire project was $25,539.00

Weather: The weather was ideal for the duration of the project. While the temperature was below freezing every day the sun was out with minimal cloud cover. There was light to no wind on all the days that were flown. The east side of the hunt area had little to no snow and made detection fairly easy. However, on the west side of the hunt area the snow was very patchy and made detection more difficult.

Results: During this survey a total of 979 mule deer were observed. With this high sample size there was a high confidence interval. Using the IPM managers estimated a population of 10,692 (CI =6,938 - 14,445). This estimated abundance exceeded modeled population observations, both managers and landowners feel that this is a high estimate.

2025 HA 22 Sightability Estimate							
Raw Count	**Total Estimate**	**LCI**	**UCI**	**Total Variance**	**Sampling Variance**	**Sightability Variance**	**Model Variance**
979	10692.09	6938.81	14445.37	3666994.159	2499603.1	414812.534	752578.525

2025 North Converse Sightability Abundance Survey



2024 - JCR Evaluation Form

SPECIES: Mule Deer
PERIOD: 6/1/2024 - 5/31/2025

HERD: MD756 - SOUTH CONVERSE

HUNT AREAS: 65
PREPARED BY: KYE HICKS

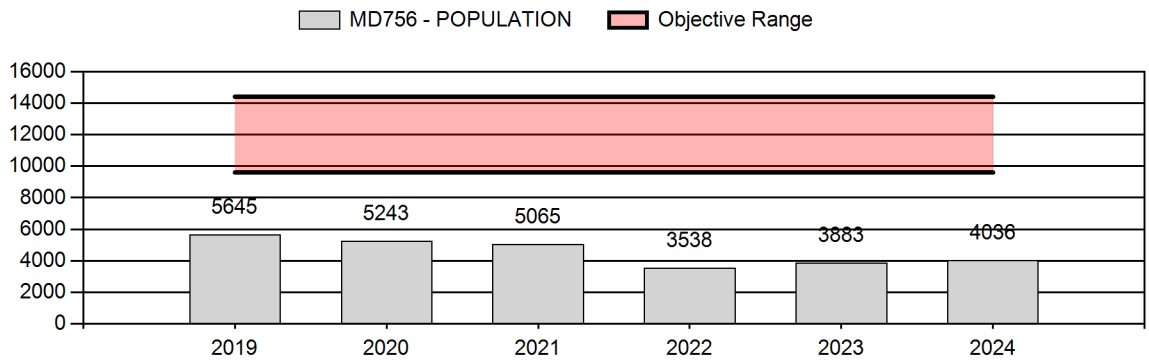
	2019 - 2023 Average	2024	2025 Proposed
Population:	4,675	4,036	3,940
Harvest:	257	331	280
Hunters:	766	792	800
Hunter Success:	34%	42%	35 %
Active Licenses:	766	792	800
Active License Success:	34%	42%	35 %
Recreation Days:	3,146	3,436	3,500
Days Per Animal:	12.2	10.4	12.5
Males per 100 Females	37	34	
Juveniles per 100 Females	52	67	

Population Objective (± 20%) :	12000 (9600 - 14400)
Management Strategy:	Private Land
Percent population is above (+) or below (-) objective:	-66.4%
Number of years population has been + or - objective in recent trend:	18
Model Date:	02/11/2024

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	0%	0%
Males ≥ 1 year old:	23.0%	25%
Proposed change in post-season population:	-3.0%	.98%

Population Size - Postseason



2025 Hunting Seasons
South Converse Mule Deer Herd Unit (MD756)

Hunt Area	License Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
65	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer or any white-tailed deer

2025 Region J nonresident quota: 750 licenses

2024 Hunter Satisfaction: 52% Satisfied, 28% Neutral, 20% Dissatisfied

2025 Management Summary

Hunting Season Evaluation
The 2025 season structure will have no changes and continue with a 10-day season with no antler point restriction. This area historically has maintained high buck ratios and high Chronic Wasting Disease (CWD) prevalence. After hitting a low point in 2012, mule deer numbers grew through 2017 due to favorable environmental conditions, and have since remained stagnant in the population. Therefore, seasons are more conservative due to low population numbers and significant landowner concerns with longer season dates.

This herd unit was hit with a significant spring storm in March of 2021 which caused higher winter mortality. Above average snowfall and periods of frigid temperatures throughout the 2022/2023 winter possibly caused higher winter mortality as well. Between 2023 and 2024 this Area experience a significant drought. However, any does that survived through the 2022/2023 winter were able to raise an above average fawn crop in 2024 (67 fawns per 100 does) (Table 2). This is thought to have occurred because of increased available forage in 2023.

A stratified random composition/abundance survey was conducted in November 2023 by helicopter. Managers classified 190 mule deer with a fawn ratio of (53 fawns per 100 does) and (21 bucks per 100 does). The observed buck ratio is suspected to be far lower than actual ratios, likely a byproduct of a small sample size due to an inability to classify an adequate number of mule deer given aerial survey budget constraints. Buck ratios over the past 10 years have averaged approximately (40 bucks per 100 does). However, the past three years have been variable with the new survey design, and only ground classifications were completed in 2021 due to extreme wind. Since this technique has been implemented, the only year with good observation conditions and an adequate classification sample size (2022) yielded a buck ratio of 41 bucks per 100 does. Given the private land nature of this herd unit coupled with conservative hunting seasons, actual buck ratios simply do not fluctuate as much as observed ratios derived from composition / abundance surveys flown in 2022 and 2023. Buck ratios for 2024 remain around the five year average of 33 bucks per 100 does. This herd was ground classified due to flight budget restraints in 2024. Stratification and survey effort will continue to be refined in the future to ensure classifications are more representative.

Harvest in 2024 was a record high in comparison to the past five years, with 331 mule deer bucks being harvested in Area 65. Managers can contribute this high harvest to a very mild fall in 2024. Sportsmen were able to access the entire area throughout the entire season. In recent years, harvest has not changed significantly with changes in season structure (i.e., utilizing Antler Point Restrictions with longer season length).

Management Objective Review: The objective and management strategy for the South Converse Mule Deer Herd was last evaluated and approved in 2023, and will not be reviewed again until 2028.

Chronic Wasting Disease Management: This herd was prioritized for CWD sampling beginning in 2022 and continued through 2024. Mandatory CWD testing was implemented in the South Converse Herd Unit in 2022.

Table 1. CWD prevalence for hunter-harvested mule deer in the South Converse Mule Deer Herd, 2020 - 2024.

Year(s)	Percent CWD-Positive and (*n*) – *Hunter Harvest Only*			Percent of Harvested Males Sampled
	Adult Males (CI = 95%)	Yearling Males	Adult Females	
2020	**12% (n=16)**	0% (1)	50% (2)	5.3
2021	**36.8% (n=19)**	0% (0)	0% (1)	6.3
2022*	**22.4% (n=147)**	11% (9)	50% (2)	59
2023*	**25% (n=16)**	33.3% (3)	0% (1)	7.2
2024	**0% (n=10)**	0% (1)	0% (0)	3.0
2020-2024	**22% (n=208)**	14.3% (14)	33.3% (6)	14.8

*Mandatory or Priority CWD sampling effort

Population Modeling: The Integrated Population Model (IPM) was used to model this herd. The default structure for mule deer, i.e. constant adult survival, time-varying reproduction and juvenile survival was selected. The license variable was selected by managers to best represent the most predictable annual harvest. In addition to this managers selected data from 2000-2026 to best represent this herd. With these settings in place the observed data for the IPM included twenty-five years of harvest and ratio data along with abundance estimates from surveys conducted in 2022 and 2023. The IPM convergence was acceptable, with the max Rhat value of 1.86.

Managers flew a sightability survey in January of 2023 which produced an abundance estimate of 4,682 (CI=3,368 - 5,996) deer. While estimates are variable between composition/abundance surveys, sightability surveys, and modeled populations, the overall stagnant trend is believed to be accurate.

The total post-season population estimate for 2024 is 4,036 mule deer (CI=3,396 - 4,683), which represents a slight increase from the population estimate in 2023. Managers can contribute this increase to good fawn production in 2024. This herd still remains well below objective.

Additional Information: In 2022, managers collected antler spread measurements (N=113) from adult male mule deer harvested in the South Converse Herd Unit. Of all bucks sampled, 75% were Class I bucks (<20”), 22% were Class II bucks (20”-25”), and 3% were Class III bucks (>25”).

Table 2. 2020 - 2024 Postseason Classification by Hunt Area

for Mule Deer Herd MD756 - SOUTH CONVERSE - Hunt Area 65

			Males							Females		Juveniles				Males/100 Females			Young/100	
Year	Area	% Herd	# Ylg	# 2+ Cls 1	# 2+ Cls 2	# 2+ Cls 3	# 2+ Other	Total Male	% Male	#	% Fem	#	% Juv	Total	Class Obj	Ylg	Adult	Males	Female	Adult
2020	65	0%	52	70	25	2	0	149	21%	388	55%	167	24%	704	1,030	13	25	38	43	31
2021	65	0%	17	16	4	0	0	37	13%	167	59%	79	28%	283	794	10	12	22	47	39
2022	65	0%	33	15	23	1	0	72	19%	175	46%	130	34%	377	0	19	22	41	74	53
2023	65	0%	9	15	7	0	0	31	16%	104	55%	55	29%	190	0	9	21	30	53	41
2024	65	0%	48	38	12	1	0	99	17%	293	50%	197	33%	589	0	16	17	34	67	50

2024 - JCR Evaluation Form

SPECIES: Mule Deer

PERIOD: 6/1/2024 - 5/31/2025

HERD: MD757 - BATES HOLE/HAT SIX

HUNT AREAS: 66-67

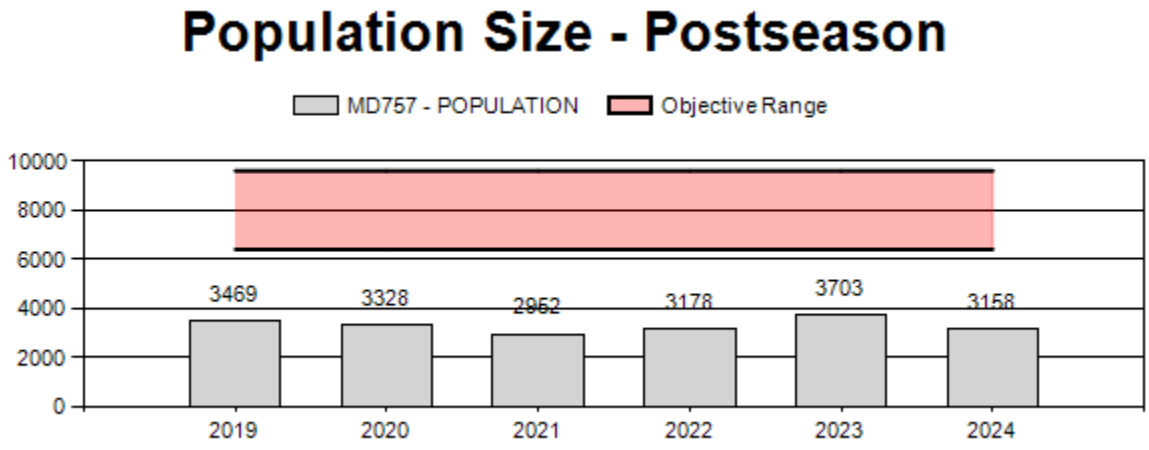
PREPARED BY: BRANDON WERNER

	2019 - 2023 Average	2024	2025 Proposed
Population:	3,326	3,158	3,101
Harvest:	246	328	272
Hunters:	779	871	820
Hunter Success:	32%	38%	33 %
Active Licenses:	779	871	820
Active License Success:	32%	38%	33 %
Recreation Days:	2,718	2,642	2,500
Days Per Animal:	11.0	8.1	9.2
Males per 100 Females	30	28	
Juveniles per 100 Females	66	85	

Population Objective (± 20%) :	8000 (6400 - 9600)
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	-60.5%
Number of years population has been + or - objective in recent trend:	24
Model Date:	02/07/2025

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	.02%	0%
Males ≥ 1 year old:	38%	21%
Proposed change in post-season population:	1.1%	.98%



2025 HUNTING SEASONS
BATES HOLE / HAT SIX MULE DEER HERD (MD757)

Hunt Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
66	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 21		Antlered mule deer or any white-tailed deer

2025 Region D Nonresident Quota: 300

2024 Hunter Satisfaction: 49% Satisfied, 27% Neutral, 24% Dissatisfied

2025 Management Summary:

Hunting Season Evaluation

After declining from 2009 through 2013, this population grew through 2016 but then declined until 2020. Since 2020, the population has remained stagnant. Postseason classifications have yielded mediocre fawn ratios in the 60s per 100 does for the last eight years, which is enough to maintain the herd. (Table 1) There was a vast improvement in 2024 to 85 fawns per 100 does, the highest since 1996. Below average spring and summer moisture with warm temperatures occurred in 2024, but fawn ratios were much higher than the five-year average of 69:100 does. This is thought to be from the incredible forage production from 2022-2023 followed by a mild winter in 2024. Antler-point restrictions (APRs) of three (3) points or more on either antler are used in some years, with the goal of conserving younger age-class bucks and reducing harvest pressure in years when the buck ratio is low. Managers applied an APR to the hunting season from 2019-2022. The APR was removed for the 2023 and 2024 season as buck ratios remained strong, and managers wanted to distribute harvest across all male age classes. The winter of 2022-2023 was harsh in most of this herd unit although core winter ranges were not as severely affected. Collar data indicated over-winter survival in adult females was near normal. In 2024, a total of 407 deer were classified, which is within the 300-500 sample goal and increases confidence in the ratio data (Table 2). Overall hunter success decreased in 2024 to 38%, but was still above the five-year average of 34%. Nonresident harvest success increased to 71%, far higher than the five-year average of 45%. An estimated 328 mule deer bucks were harvested in 2024, higher than the five-year average of 200. Improved success rates likely stem from mild weather conditions during the 2024 season, which allowed hunters to easily access all of the hunt area. In addition, the continued removal of the APR led to more yearling bucks being harvested resulting in increased overall harvest. Tooth samples and antler measurements were collected from 24 harvested mule deer bucks in 2024. The average cementum annuli tooth age of those sampled was 3.5 years old, and average antler spread of 17 inches.

2019 - 2024 Postseason Classification Summary

for Mule Deer Herd MD757 - BATES HOLE/HAT SIX

		MALES							FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Post Pop	Ylg	2+ Cls 1	2+ Cls 2	2+ Cls 3	2+ UnCls	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Yling	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2019	3,469	55	89	10	4	0	158	15%	536	51%	356	34%	1,050	1,058	10	19	29	± 3	66	± 5	51
2020	3,328	43	41	6	0	0	90	16%	278	50%	187	34%	555	1,070	15	17	32	± 5	67	± 7	51
2021	2,952	0	0	0	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	± 0	0	± 0	0
2022	3,178	34	30	15	0	0	79	16%	260	51%	170	33%	509	906	13	17	30	± 5	65	± 8	50
2023	3,703	15	17	3	0	0	35	14%	127	52%	81	33%	243	0	12	16	28	± 7	64	± 11	50
2024	3,158	26	18	8	1	0	53	13%	191	47%	163	40%	407	0	14	14	28	± 5	85	± 11	67

Table 1. Postseason classification summary for MD757.

Bio-Year	Total Class N for HA	# Bucks Classified					Buck Ratios per 100 Females					
		Ylng	Class I	Class II	Class III	Total	Ylng	Class I	Class II	Class III	All Adult	Total
2008	1,254	75	57 (50%)	41 (36%)	16 (14%)	189	12	9	6	2	18	29
2009	1,320	59	61 (54%)	41 (37%)	10 (9%)	171	8	8	6	1	15	23
2010	1,479	82	49 (49%)	42 (42%)	9 (9%)	182	9	5	5	1	11	20
2011	1,248	47	52 (56%)	33 (36%)	7 (8%)	139	7	8	5	1	14	21
2012	1,272	28	55 (59%)	30 (32%)	9 (9%)	122	4	8	4	1	13	17
2013	1,483	86	50 (61%)	25 (30%)	7 (9%)	168	10	6	3	1	10	20
2014	1,403	83	79 (71%)	26 (23%)	7 (6%)	195	12	12	4	1	17	29
2015	2,061	164	97 (70%)	29 (21%)	13 (9%)	303	16	9	3	1	13	29
2016	1,836	132	198 (85%)	31 (13%)	4 (2%)	365	15	22	3	1	26	41
2017	1,165	54	108 (80%)	23 (17%)	4 (3%)	189	9	18	4	1	22	31
2018	734	32	59 (89%)	7 (11%)	0 (0%)	98	8	15	2	0	17	26
2019	1,050	55	89 (86%)	10 (10%)	4 (4%)	158	10	17	2	1	19	29
2020	555	43	41 (87%)	6 (13%)	0 (0%)	90	15	15	2	0	17	32
2021	0	0	0	0	0	0	0	0	0	0	0	0
2022	509	34	30 (66%)	15 (33%)	0 (0%)	79	13	11	5	0	17	30
2023	243	15	17 (85%)	3 (15%)	0 (0%)	35	12	13	2	0	16	28
2024	407	26	18 (67%)	8 (30%)	1 (3%)	53	14	9	4	0	14	28

Table 2. Antler classification analysis for Area 66 within the Bates Hole/Hat Six Mule Deer Herd Unit, 2008-2024.

For the 2025 hunting season, managers prescribed a seven-day general license season, which is typical for the herd. Buck ratios have been steady, averaging 30:100 does over the last five years (excluding no data in 2021).

Management Objective Review

The objective and management strategy for the Bates Hole/Hat Six Mule Deer Herd was last evaluated and approved in 2020. For the 2025 (5-year) objective review, the current objective and recreational management strategy will be maintained for the next five years following an internal evaluation.

Mule Deer Initiative Habitat Information

As part of the Mule Deer Initiative, managers collect Rapid Habitat Assessment (RHA) data throughout the herd unit in some years. RHA data was collected within the Bates Hole – Hat Six Mule Deer Herd during the 2024 reporting period. Numerous habitat treatments are ongoing and being planned including sagebrush treatments, noxious weed control, juniper removal, and wildlife friendly fence conversions.

Chronic Wasting Disease Management

Elevated Chronic Wasting Disease (CWD) surveillance efforts have occurred in this herd in recent years due to ongoing CWD research (Table 3). From 2020-2022, a total of 162 adult male mule deer were sampled, which is below the sample goal of 200. This herd is exhibiting a high prevalence of CWD (28%) in adult bucks, which has been sustained over the past five-years of CWD surveillance. Managers believe this high prevalence is contributing to poor adult survival in this herd. To date, no meaningful CWD management actions have occurred in this herd unit. In 2019, a multi-year research project was initiated in this herd by WGFD in collaboration with the University of Wyoming. This study focused on interactions between mountain lion predation, mule deer and CWD. This study will conclude in 2025 and analysis will be forthcoming.

Year(s)	Percent CWD-Positive and (*n*) – *Hunter Harvest Only*			Percent of Harvested Males Sampled
	Adult Males (CI = 95%)	Yearling Males	Adult Females	
2020*	**25% (n=61)**	0% (5)	0% (1)	28
2021*	**28% (n=29)**	0% (1)	0% (2)	15
2022*	**32% (n=72)**	100% (1)	0% (5)	32
2023	**23% (n=30)**	14% (7)	50% (2)	7
2024	**32% (n=25)**	18% (11)	0% (0)	7
2020-2024	**28% (17-35%, n=217)**	16% (25)	16% (10)	16

*Years with mandatory or priority sampling

Table 3. 2020-2024 CWD prevalence for hunter-harvested deer in MD757.

Population Modeling

The PopR Integrated Population Model (IPM) seems to model this population well. Managers chose to model this herd using the default structure for mule deer (i.e. constant adult survival, time-varying reproduction and juvenile survival) in the IPM. Days per harvest was selected as the most related to annual harvest. Twenty-five years of harvest and ratio data were included in the model, as well as five annual survival estimates for adult female mule deer stemming from research along with four abundance estimates (Table 4). Chronic low survival (73% in 2017, 66% in 2021, 72% in 2022, 65% in 2023, and 78% in 2025) of adult does is largely responsible for this population remaining stagnant. These independent estimates will improve model performance over time (Table 4).

	2018	2022
Survey Result	3,512 (CL 3,238 – 3,786)	3,686 (CL 2,575 - 4,797)
IPM Estimate	3,067 (CL 2,782 – 3,351)	3,164 (CL 2,786 - 3,582)

Table 4. MD757 survey results compared to IPM estimates for survey years 2018 and 2022.

The 2025 postseason population estimate for this herd from the IPM is approximately 3,101 (CI=2,223 – 3,339) mule deer, which is well below objective. Based on the composition/ abundance and sightability survey estimates, the 2025 population estimate produced by the IPM is believed to be accurate.

Appendix A
2024 MD 757 Bates Hole-Hat Sex Aerial Classification Results

Date: December 3, 2024

Survey Time: 7.4 hours

Surveyors: Kye Hicks, Brandon Werner, and Simon Martinez

Vendor/Helicopter: Helicopter Solutions, MT (Kent Potter) / Bell Jet Ranger

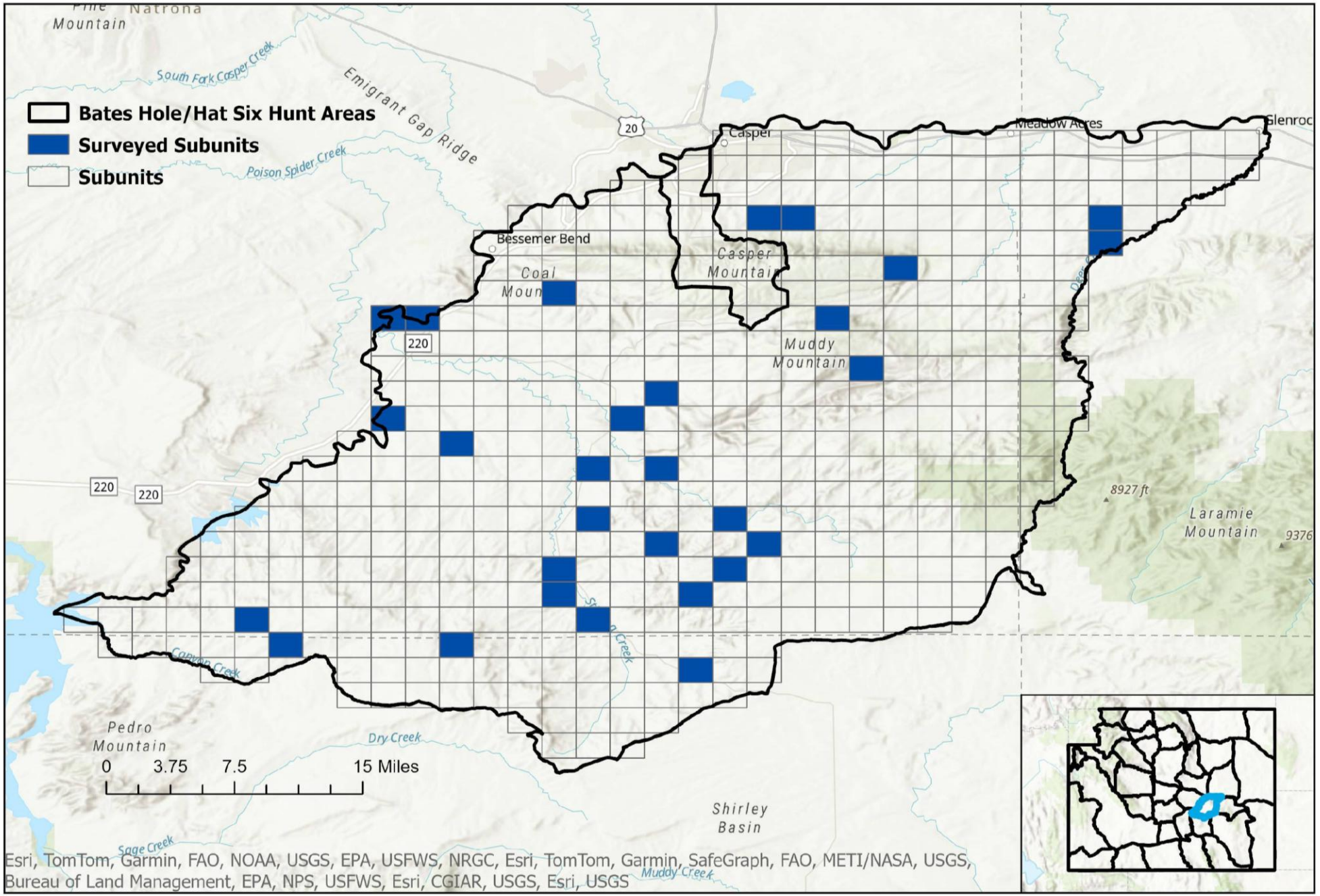
Cost: $12,192

Weather: Clear with little snow cover, temps 28-54°F.

Results: Twenty-nine polygons were surveyed, 24 of which were considered high density and five of low density. The total number of deer counted for this classification survey was 407, from which a low precision abundance estimate of 5,017 was produced (CI = 0 - 10,626).

2025 MD757 Classification Results			
Raw Count	**Total Estimate**	**LCI**	**UCI**
407	5017	0	10626

2024 Bates Hole/Hat Six Composition Abundance Survey



Appendix B

Weather Data for the Bates Hole/Hat Six Mule Deer Herd Unit

Precipitation

From October 2023 through September 2024 (Water Year 2024), precipitation in the Bates Hole / Hat Six Mule Deer Herd Unit was 1.5 inches lower than the 30-year average for the same water year timeframe (Figure 1). The growing season (April-June) precipitation in 2024 (5.8 inches) was also about 0.4 inches lower than the 30-year growing season average. Precipitation during this time of year is extremely important for shrubs because this is when the majority of annual growth occurs. July and August of 2024, the driest months during the summer, received 1.6 inches of precipitation which is 0.3 inches below the 30-year average for July and August. The herd unit received 2.0 inches of precipitation during September and October 2024, which is below the 30-year average by 0.7 inches. Precipitation received during this timeframe is beneficial to help jumpstart plant growth the following growing season. The overall precipitation for water year 2024 was below normal, which is not ideal for creating adequate fall green up conditions to assist with mule deer body condition going into winter. The 2025 water year precipitation thus far has been below average.

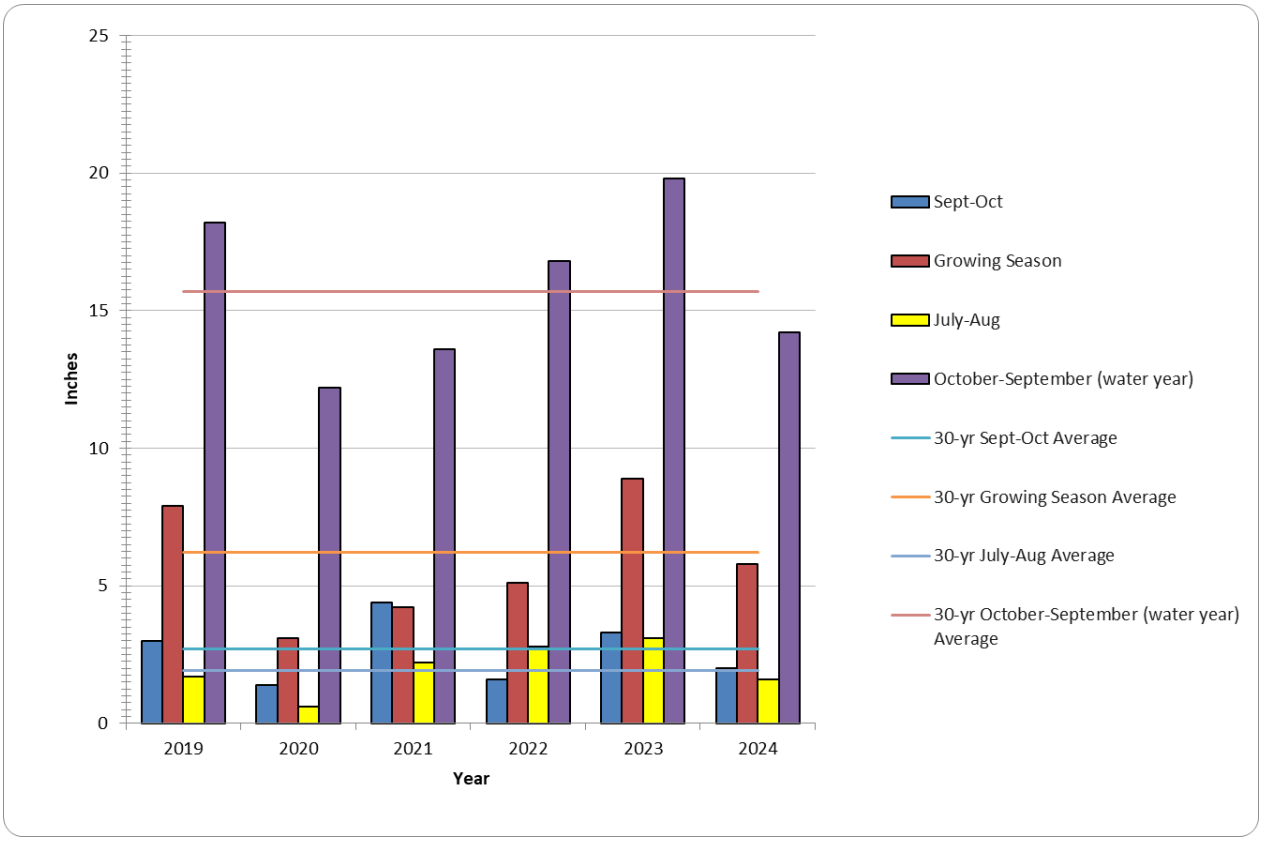


Figure 1. Seasonal precipitation received compared to 30-year averages within the Bates Hole/Hat Six Mule Deer Herd Unit

2024 - JCR Evaluation Form

SPECIES: Mule Deer

PERIOD: 6/1/2024 - 5/31/2025

HERD: MD758 - RATTLESNAKE

HUNT AREAS: 88-89

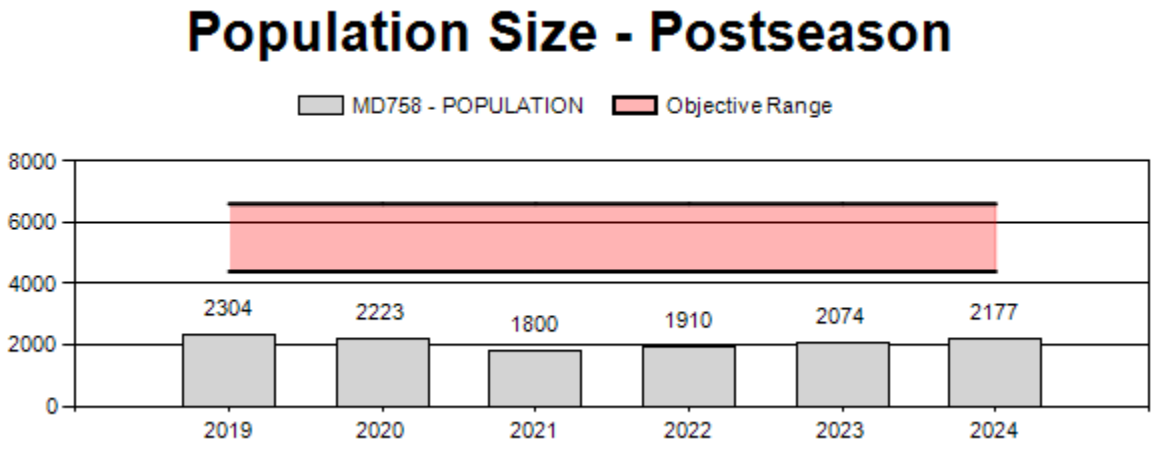
PREPARED BY: BRANDON WERNER

	2019 - 2023 Average	2024	2025 Proposed
Population:	2,062	2,177	2,037
Harvest:	195	224	220
Hunters:	410	482	470
Hunter Success:	48%	46%	47%
Active Licenses:	411	503	490
Active License Success:	47%	45%	45%
Recreation Days:	1,468	1,651	1,550
Days Per Animal:	7.5	7.4	7.0
Males per 100 Females	36	35	
Juveniles per 100 Females	55	73	

Population Objective (± 20%) :	5500 (4400 - 6600)
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	-60.4%
Number of years population has been + or - objective in recent trend:	19
Model Date:	02/07/2025

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	.03%	.02%
Males ≥ 1 year old:	.31%	.33%
Proposed change in post-season population:	1.05%	.94%



2025 HUNTING SEASONS
RATTLESNAKE MULE DEER HERD (MD758)

Hunt Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
88	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 21		Antlered mule deer or any white-tailed deer
88	7	Sep. 1	Sep. 30	Oct. 15	Dec. 15	75	Doe or fawn valid on private land
89	1	Sep. 1	Sep. 30	Oct. 15	Oct. 31	125	Antlered deer

2025 Region D Nonresident Quota: 300

2024 Hunter Satisfaction: Herd Unit: 67% Satisfied, 19% Neutral, 15 % Dissatisfied

HA 88: 60% Satisfied, 16% Neutral, 23% Dissatisfied
HA 89: 58% Satisfied, 25% Neutral, 17% Dissatisfied

2025 Management Summary:

Hunting Season Evaluation
The model for this herd depicts a population that declined until 2021, then grew from 2021 to 2024 during years of improved fawn production and overwinter survival. Fawn production for the whole herd unit increased in 2022 and 2023 but is still under desired levels. In 2024, fawn production reached the highest level since 2015 at 73 fawns per 100 does (Table 1). Buck ratios remained in the special management threshold at 35 bucks per 100 does. Postseason classification data was collected using a stratified random-sample survey design via helicopter in 2024. The resulting sample size (N=283) was just below the sample goal of 300-500 deer. Typically this survey is conducted when deer are more concentrated on winter range. The fall of 2024 was extremely mild which resulted with less deer being observed in the survey area due to them being more disbursed. The proportion of larger mature (Class II & Class III) bucks has been remaining steady, even though overall population has slightly grown in recent years (Table 2). After two years of assessing the extreme winter of 2022-2023, it is apparent that losses in this herd were minimal. The increased moisture from the harsh winter, as well as from summer 2023, resulted in more available forage. This, in addition to the mild winter of 2023-2024, resulted in good body condition in does which in turn increased fawn production despite the dry summer of 2024. Harvest success on Area 89 Type 1 licenses decreased to 60% in 2024, down from an average of 69%. This was thought to have occurred due to the mild fall conditions during the

season resulting in less deer movement. General license success in Area 88 decreased to 35%, which is above the five-year average of 34%.

2019 - 2024 Postseason Classification Summary

for Mule Deer Herd MD758 - RATTLESNAKE

		MALES							FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Post Pop	Ylg	2+ Cls 1	2+ Cls 2	2+ Cls 3	2+ UnCls	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Ylng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2019	2,304	34	65	21	1	0	121	19%	345	53%	184	28%	650	1,410	10	25	35	± 4	53	± 5	39
2020	2,223	24	45	25	4	0	98	20%	248	51%	139	29%	485	881	10	30	40	± 5	56	± 7	40
2021	1,800	3	23	9	1	6	48	22%	124	56%	48	22%	220	786	2	31	39	± 8	39	± 8	28
2022	1,910	14	14	16	1	0	45	17%	133	51%	84	32%	262	803	11	23	34	± 7	63	± 10	47
2023	2,074	24	17	7	0	0	48	16%	154	51%	101	33%	303	0	16	16	31	± 6	66	± 10	50
2024	2,177	12	26	9	1	0	48	17%	136	48%	99	35%	283	0	9	26	35	± 7	73	± 11	54

Table 1. Postseason classification summary for MD757.

Bio-Year	Total Class N for HA	# Bucks Classified					Buck Ratios per 100 Females					
		Ylng	Class I	Class II	Class III	Total	Ylng	Class I	Class II	Class III	All Adult	Total
2008	1,220	71	126 (74%)	40 (23%)	5 (3%)	242	11	20	6	1	27	38
2009	848	31	74 (53%)	54 (39%)	12 (9%)	171	7	17	13	3	33	40
2010	778	38	59 (54%)	45 (41%)	6 (5%)	148	9	14	11	1	26	35
2011	1,009	48	114 (62%)	61 (33%)	9 (5%)	232	9	21	11	2	34	43
2012	503	17	61 (84%)	10 (14%)	2 (3%)	90	6	22	4	1	26	32
2013	548	11	53 (74%)	18 (25%)	1 (1%)	83	4	17	6	0	24	27
2014	684	37	66 (65%)	30 (29%)	6 (6%)	139	12	22	10	2	34	46
2015	896	80	90 (69%)	38 (29%)	3 (2%)	211	20	22	9	l	28	48
2016	717	45	78 (74%)	25 (24%)	3 (2%)	151	13	22	7	l	30	42
2017	762	31	53 (39%)	78 (58%)	4 (3%)	166	10	16	24	l	42	51
2018	620	46	64 (73%)	22 (25%)	2 (2%)	134	21	29	10	l	40	61

2019	281	13	37 (79%)	9 (19%)	1 (2%)	60	9	26	6	l	34	43
2020	485	24	45 (61%)	25 (34%)	4 (5%)	98	10	18	10	2	30	40
2021	190	3	23 (64%)	9 (25%)	1 (3%)	36	3	20	9	l	29	32
2022	262	14	14 (45%)	16 (52%)	1 (3%)	45	11	11	12	l	24	34
2023	200	20	15 (71%)	6 (29%)	0 (0%)	41	22	16	7	0	24	54
2024	192	5	23 (77%)	6 (20%)	1 (3%)	35	6	26	7	1	34	40

Table 2. Antler classification analysis for Area 89 within the Rattlesnake Mule Deer Herd Unit, 2008-2024

Tooth samples and antler measurements were also collected from 44 harvested adult male mule deer from Area 89 in 2024 (Table 3). The average cementum annuli tooth age of those sampled was 5.3 years, near the long term mean for the hunt area, with the median age being 5.5. The average antler spread was 20 inches, which is typical. In Area 89, even with the lower harvest success in 2024, the average age of deer harvested is consistent with previous years, and buck ratios remain acceptable in Area 89, so no change in the amount of Type 1 license issuance is warranted. The 2024 season continues to provide quality hunting opportunities in Area 89. For this area, 125 Type 1 licenses will be available for antlered deer, which is no change from 2024. For Area 88, managers continue to offer a 7-day general license season with licenses valid for antlered mule deer or any white-tailed deer. In 2023, managers prescribed a Chronic Wasting Disease (CWD) management hunt in Area 88 with Type 7 licenses valid for doe or fawn on private land (see CWD section). The Type 7 license will stay at 75 licenses in 2025 to put continued pressure on CWD "hotspot" areas. This season was extended to target deer as they congregate during the winter on the agricultural fields.

	2012	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Average Tooth Age	5.07	5.83	5.88	5.67	5.4	5.09	5.18	5.05	5.41	6.1	5.6	5.3
Median Tooth Age	4.5	6.5	5.5	5.5	5.5	4.5	5.5	5.5	5.5	5.5	5.5	5.5
Average Antler Spread	20	23	23	23	23	20	21	20	21.25	22.9	20	20
Total Sample Size (N)	37	13	8	12	20	54	20	28	24	18	55	44

Table 3. Hunter-submitted tooth age and antler measurement data from Area 89 deer, 2012-2024.

Management Objective Review

The objective and management strategy for the Rattlesnake Mule Deer Herd was last evaluated and approved in 2020. For the 2025 (5-year) objective review, the current objective and recreational management strategy will be maintained for the next five years following an internal evaluation.

Chronic Wasting Disease Management (CWD)

This herd was not a priority area for CWD surveillance in 2024. This herd was under mandatory surveillance in 2023 and 2024 on the General, 89-1, and 88-7 licenses (Table 4). Due to the CWD management hunt and a low sample size in does, the 88-7 licenses will stay under mandatory surveillance in 2025. There was good hunter compliance for mandatory sampling in 2023 and 2024 with a total of 303 hunter harvested deer sampled. CWD prevalence from harvested mule deer in the five-year prevalence rates continued to be considerably higher in adult bucks in Area 88 (37%) compared to Area 89 (6.5%). According to the Wyoming Game and Fish Department CWD Management Plan, a potential way to reduce CWD on the landscape is to identify "hot spots" or areas where CWD is concentrated and reduce deer densities. An analysis of harvest locations from CWD-positive deer in Area 88 indicated many agricultural fields are CWD hot spots. Managers therefore continue to provide doe mule deer harvest in Area 88, which contains both irrigated landscapes and riparian habitats. This may provide a focused and meaningful way to reduce CWD prevalence while limiting the spread to adjacent Area 89. Doe prevalence was found to be high at 24% (N=37). Increased buck harvest is not warranted in Area 88 due to low buck ratios of resident deer. Yearling buck prevalence is also high in Area 88 at 18% (N=39) as is the harvest on these yearling bucks. Low buck ratios and high yearling buck harvest in Area 88 may be reducing transmission of CWD to adjacent areas.

Year(s)	Percent CWD-Positive and (*n*) – *Hunter Harvest Only*			Percent of Harvested Males Sampled
	Adult Males (CI = 95%)	Yearling Males	Adult Females	
2020*	**18% (n=54)**	33% (6)	33% (3)	22.8
2021	**33% (n=12)**	0% (1)	0% (0)	8.8
2022	**7% (n=13)**	0% (0)	25% (4)	9.7
2023*	**11% (n=102)**	22% (18)	25% (12)	78
2024*	**27% (n=104)**	7% (14)	23% (22)	63
2020-2024	**19% (12-24%, n=285)**	18% (39)	24% (34)	36.6

*Years with mandatory or priority sampling

Table 4. CWD prevalence for hunter-harvested mule deer in the Rattlesnake Mule Deer Herd 2020-2024

Population Modeling

The trends depicted by the model are reasonable, and results from five low precision abundance estimates help align the model for more accurate population estimates. The most recent low precision abundance estimate from the composition abundance survey was 2,522 in 2024. The postseason population estimate for this herd unit from the Integrated Population Model was approximately 2,177 (CI=1,910-2,465) mule deer, which is well below objective. The time varying reproduction and juvenile survival, with the constant adult survival structure was used to model the herd.

Appendix A. 2024 MD 758 Rattlesnake Aerial Classification Results

Date: December 1, 2024
December 2, 2024

Survey Time: 6.9 hours

Surveyors: Brandon Werner, Sean Cotteleer, Austin Swingholm

Vendor/Helicopter: Helicopter Solutions, MT (Kent Potter) / Bell Jet Ranger

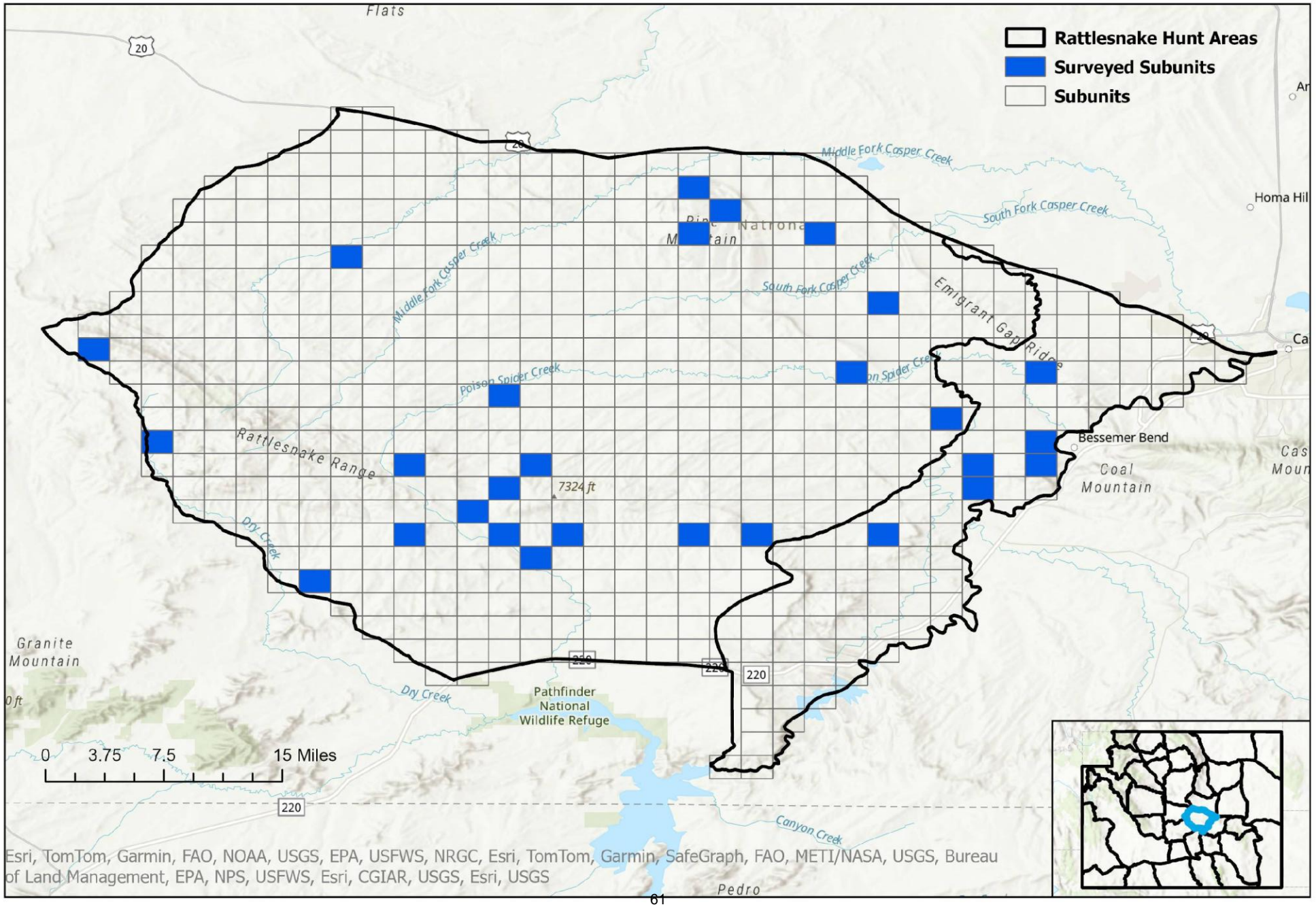
Cost: $12,150

Weather: Both days were sunny with little snow cover. Low temps were 27-30°F and highs were 40-62°F.

Results: Twenty-eight subunits were surveyed, of which 23 we classified as high density and five were low density. The total number of deer counted for this classification survey was 283, from which a low precision abundance estimate of 2522 was produced (CI = 907 - 4137).

2025 MD758 Classification Results			
Raw Count	**Total Estimate**	**LCI**	**UCI**
283	2522	907	4137

2024 Rattlesnake Composition Abundance Survey



2024 - JCR Evaluation Form

SPECIES: Mule Deer

PERIOD: 6/1/2024 - 5/31/2025

HERD: MD759 - NORTH NATRONA

HUNT AREAS: 34

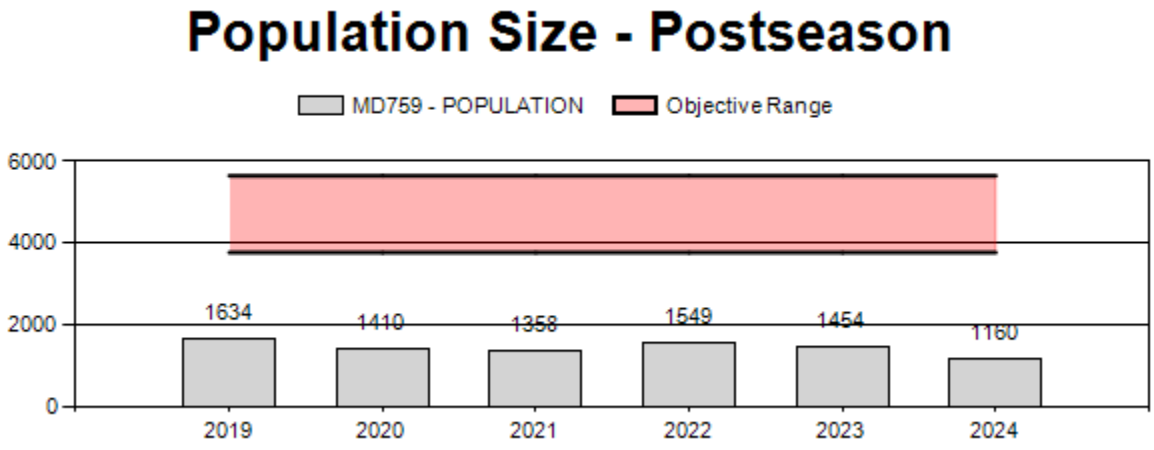
PREPARED BY: BRANDON WERNER

	2019 - 2023 Average	2024	2025 Proposed
Population:	1,481	1,160	1,125
Harvest:	171	81	109
Hunters:	234	136	150
Hunter Success:	73%	60%	73%
Active Licenses:	249	136	155
Active License Success:	69%	60%	70%
Recreation Days:	1,088	710	800
Days Per Animal:	6.4	8.8	7.3
Males per 100 Females	36	49	
Juveniles per 100 Females	52	84	

Population Objective (± 20%) :	4700 (3760 - 5640)
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	-75.3%
Number of years population has been + or - objective in recent trend:	10
Model Date:	02/12/2025

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	2%	3%
Males ≥ 1 year old:	27%	32%
Proposed change in post-season population:	0.99%	0.97%



2025 HUNTING SEASONS
NORTH NATRONA MULE DEER HERD (MD759)

Hunt Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
34	1	Sep. 1	Sep. 30	Oct. 15	Oct. 31	125	Antlered mule deer or any white-tailed deer
	7			Aug 15	Dec. 15	25	Doe or fawn valid east of Bucknum Road (Natrona County Road 125) and south of the Burlington Northern Santa Fe railroad right-of-way

2024 Hunter Satisfaction: 59% Satisfied, 22% Neutral, 19% Dissatisfied

2025 Management Summary:

Hunting Season Evaluation

After experiencing a very severe winter in 2011, this herd suffered critical losses but was able to recover and gradually increase its population until 2017. The preceding three years (2017-2019) yielded only moderate fawn production and survival rates which led to a drop in the herd's total population. This trend of declining herd numbers continued until 2021. Though far from objective, improved fawn production in 2022, 2023, and 2024 resulted in a stable and now slightly increasing population in North Natrona. Yearling buck ratios improved as well averaging 22 bucks per 100 does in 2023 and 2024 which was the highest since 2007 (Table 1, Table 2). This indicates improved fawn production and survival rates could provide a much needed increase to the population over the next few years. Above average moisture in 2023 resulted in a build-up of stable fat reserves leading to increased fawn production despite droughts in 2024.

2019 - 2024 Postseason Classification Summary

for Mule Deer Herd MD759 - NORTH NATRONA

		MALES							FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Post Pop	Ylg	2+ Cls 1	2+ Cls 2	2+ Cls 3	2+ UnCls	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Yling	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2019	1,634	11	27	3	0	0	41	18%	114	49%	79	34%	234	1,134	10	26	36	± 8	69	± 12	51
2020	1,410	21	81	24	1	0	127	20%	370	59%	125	20%	622	1,096	6	29	34	± 3	34	± 3	25
2021	1,358	8	18	5	0	0	31	15%	125	60%	51	25%	207	479	6	18	25	± 6	41	± 8	33
2022	1,549	23	27	11	1	0	62	16%	192	49%	137	35%	391	743	12	20	32	± 5	71	± 9	54
2023	1,454	41	32	19	1	0	93	24%	177	46%	116	30%	386	0	23	29	53	± 7	66	± 9	43
2024	1,160	42	35	15	3	0	95	21%	193	43%	163	36%	451	0	22	27	49	± 6	84	± 9	57

Table 1. Postseason classification summary for MD759.

Bio- Year	Total Class N for HA	# Bucks Classified					Buck Ratios per 100 Females					
		Ylng	Class I	Class II	Class III	Total	Ylng	Class I	Class II	Class III	All Adult	Total
2008	1,023	59	111 (73%)	36 (24%)	5 (3%)	211	11	20	7	1	28	39
2009	1,009	51	87 (60%)	44 (31%)	13 (9%)	195	9	16	8	2	26	35
2010	905	47	55 (46%)	44 (37%)	21 (18%)	167	10	12	9	4	25	35
2011	760	52	64 (63%)	34 (33%)	4 (4%)	154	13	16	8	1	25	38
2012	868	36	91 (78%)	20 (17%)	6 (5%)	153	7	18	4	1	23	30
2013	637	28	60 (75%)	19 (24%)	1 (1%)	108	8	18	6	0	23	32
2014	1,033	51	84 (72%)	30 (26%)	2 (2%)	167	12	19	7	1	26	38
2015	1,065	78	93 (80%)	22 (19%)	1 (1%)	194	17	21	5	0	26	43
2016	1,208	68	105 (73%)	36 (25%)	3 (2%)	144	12	18	6	1	26	37
2017	924	57	124 (78%)	34 (21%)	2 (1%)	217	14	31	8	1	40	54
2018	745	56	116 (86%)	17 (13%)	2 (1%)	191	16	32	4	1	38	53
2019	234	11	27 (90%)	3 (10%)	0 (0%)	41	10	23	3	0	26	36
2020	622	21	81 (76%)	24 (23%)	1 (1%)	127	6	22	6	0	29	34
2021	207	8	18 (78%)	5 (22%)	0 (0%)	31	6	10	4	0	18	25
2022	391	23	27 (69%)	11 (28%)	1 (3%)	62	12	14	6	1	20	32
2023	386	41	32 (79%)	19 (19%)	1 (2%)	93	23	14	8	1	29	53
2024	451	42	35 (66%)	15 (28%)	3 (6%)	95	22	18	8	2	27	49

Table 2. Antler classification analysis for the North Natrona Mule Deer Herd Unit, 2008-2024.

This herd was ground classified in 2024 yielding a total number of 451 mule deer. This was an increase from the number of deer classified using the same drive routes in 2023 by approximately 17%. Buck ratios remained high at 49 per 100 does, but more Class I (< 20") and Class III (>25") bucks were surveyed in 2024 than in 2023. The fawn ratio was 84:100 does, the highest it has been since 2015, which is enough to increase the total herd population. The five-year average for success on a Type 1 license is 70% and in 2024 the Type 1 harvest success was 67%, lower than 2023 (71%). In 2024, teeth and antler measurements were collected from 28 harvested mule deer. Both the average and median cementum annuli tooth age of those sampled deer was 4.5 years old with an average antler spread of 18.3 inches (Table 3).

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Average Age	5.4	5.27	5.27	4.85	4.6	4.7	4.8	5.1	5.25	5.34	5.38	4.5
Median Age	5.5	4.5	4.5	5.5	4.5	4.5	4.5	5.5	5.5	5.5	5.0	4.5
Average Antler Spread	21.2	20	20.9	21.5	20.7	19.9	18.1	18.1	18.5	19.8	20.2	18.3
Sample Size (N) =	52	44	32	40	51	49	58	72	33	29	26	28

Table 3. Hunter-submitted tooth age and antler measurement data from Area 34 deer, 2012-2024.

There will be a total of 125 Type 1 licenses, valid for antlered mule deer or any whitetail, and 25 Type 7 licenses, valid for a doe or fawn east of Bucknum Road (Natrona County Road 125) and south of the Burlington Northern Santa Fe railroad right-of-way, allotted for the 2025 hunting season. No changes have been made following the 2024 hunting season due to the high buck ratios, Chronic Wasting Disease (CWD) concerns, low herd numbers, and lower harvest success.

Management Objective Review

The objective and management strategy for the North Natrona Mule Deer Herd was last evaluated and approved in 2024, and will not be reviewed again until 2029.

Chronic Wasting Disease Management

The North Natrona mule deer herd has not been a priority area for Chronic Wasting Disease (CWD) surveillance since 2019-2020. This means that the most recent CWD data for this area is from 2020. Therefore, Area 34 will fall under mandatory surveillance during the 2025 hunting season in order to obtain a better sample size. The data suggests that harvests should be focused in areas with high deer density, primarily irrigated landscapes where the highest prevalence of CWD occurs. The utilization of the Type 7 license helps focus the hunting pressure on agricultural fields in the southeast portion of the Area in hopes of reducing the spread of CWD throughout this herd (Table 4).

Year(s)	Percent CWD-Positive and (*n*) – *Hunter Harvest Only*			Percent of Harvested Males Sampled
	Adult Males (CI = 95%)	Yearling Males	Adult Females	
2020*	**6.7% (n=75)**	0% (0)	42.9% (7)	41.2
2021	**16.7% (n=12)**	0% (1)	33.3% (3)	12.5
2022	**12.5% (n=8)**	0% (0)	50% (4)	7.8
2023	**12.5% (n=8)**	0% (0)	0% (1)	8.2
2024	**12.5% (n=8)**	0% (0)	0% (0)	10
2020-2024	**10.8% (5.1-18.1%, n=111)**	0% (1)	40% (15)	19.8

Table 4. CWD prevalence for hunter-harvested deer in the MD759.

Population Modeling

The 2024 postseason population estimate for this herd from the PopR Integrated Population Model (IPM) using the time varying reproduction, time varying juvenile survival, and constant adult survival structure is approximately 1,160 (CI=961-1,381) mule deer. This estimate is significantly below the objective for the North Natrona mule deer herd of 4,700. There has only been one composition abundance estimate conducted on this herd. In 2021, this result was 2,670 (CI=0-7741) deer. The model confidence is high with an Rhat of 1.05. However, managers feel that the population is higher than 1,160 deer. This herd is slated for a sightability survey in 2025 which will provide a high precision abundance estimate and better align the model in future years.

2024 - JCR Evaluation Form

SPECIES: White tailed Deer
PERIOD: 6/1/2024 - 5/31/2025

HERD: WD706 - BLACK HILLS

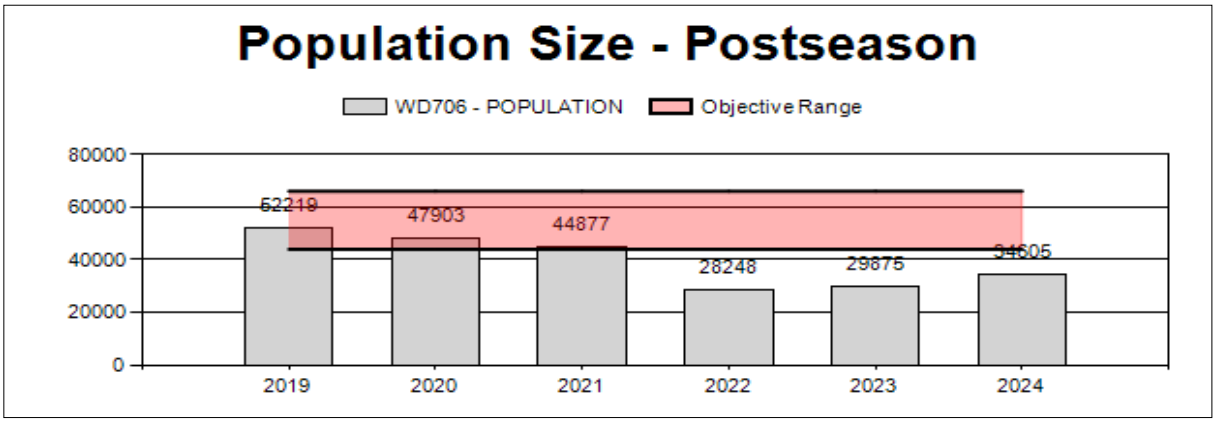
HUNT AREAS: 1-6
PREPARED BY: MATT HUIZENGA

	2019 - 2023 Average	2024	2025 Proposed
Population:	40,624	34,605	39,734
Harvest:	4,129	2,512	2,655
Hunters:	7,601	5,118	5,200
Hunter Success:	54%	49%	51 %
Active Licenses:	7,940	5,323	5,200
Active License Success:	52%	47%	51 %
Recreation Days:	30,677	21,550	21,500
Days Per Animal:	7.4	8.6	8.1
Males per 100 Females	28	20	
Juveniles per 100 Females	55	57	

Population Objective (± 20%) :	55000 (44000 - 66000)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	-37.1%
Number of years population has been + or - objective in recent trend:	4
Model Date:	02/28/2025

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	1.3%	1.5%
Males ≥ 1 year old:	30.0%	30.3%
Proposed change in post-season population:	+17.1%	+14.8%



1. Population estimates are historic through 2022 and do not reflect currently modeled population estimates for those years.

2025 Hunting Seasons
Black Hills White-Tailed Deer (WD706)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
1	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 20		Antlered deer
1, 2, 3	8	Sep. 1	Sep. 30	Nov. 1	Nov. 20	350	Doe or fawn white-tailed deer valid on private land
2	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 20		Antlered deer
3	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 20		Antlered deer
4	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 20		Antlered deer; except the lands of the State of Wyoming's Ranch A property shall be closed
4	8	Sep. 1	Sep. 30	Nov. 1	Nov. 20	25	Doe or fawn white-tailed deer valid on private land
5	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 20		Antlered deer
6	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 20		Antlered deer

2025 Region A Nonresident Quota: 2,000

2024 Hunter Satisfaction: 63% Satisfied 23% Neutral 14% Dissatisfied

2025 Management Summary

Hunting Season Evaluation
This herd experiences cyclic population fluctuations due to weather, changes in harvest, and periodic disease outbreaks. Following a population low in 2012, the population grew steadily, peaking about 25% above objective in 2017. It then began to decline due to increased harvest and reduced recruitment. This decline was exasperated by considerable mortality during the 2018-19 winter and a truly significant die off from Epizootic Hemorrhagic Disease (EHD) and Blue Tongue Virus (BTV) in 2021, followed by further EHD and BTV mortalities in 2022. As a result of these two back to back years of EDH / BTV outbreaks, some ranches reported losing in excess of 75% of their resident white-tailed deer, most particularly in the northern half of the herd unit.

As this population declined, hunting seasons became more conservative between 2020 and 2023. However, even with changes to hunting seasons, hunter success steadily dropped from an average of 65% between 2014 and 2020 to 53% in 2021, and then to 45% in 2022. Similarly, hunter effort, which averaged 6.2 days per harvest between 2014 and 2020 increased to 7.8 and 9.3 days per harvest in 2021 and 2022, respectively. These changes in harvest statistics were borne out in hunter satisfaction, which fell from about 80% in 2017 & 2018 to around 70% in 2019 & 2020, then to 55% in 2021, and just 49% in 2022. In 2023, with the most conservative hunting season in decades, hunter success and satisfaction increased a couple percentage points, and effort declined about 0.5

days per harvest.

Region A, Non-Resident General license issuance dropped 27% in 2022, and the hunting season closed November 20 in all hunt areas. Type 7 license issuance was also cut substantially, and 864 unsold Type 7 licenses were pulled from sale prior to the start of the hunting season. In 2023, the Region A quota was reduced another 27% to 2,000 and the hunting season closed November 17. That year, doe-fawn license issuance was reduced an additional 88%, and all doe/fawn licenses converted to Type 8, which allowed only harvest of antlerless white-tailed deer on private land. In 2024, as this herd appeared to have begun to rebound, the Region A quota remained unchanged, while the season closing date returned to November 20, and an additional 100 type 8 licenses were issued. Total buck harvest increased by 23%, hunter satisfaction increased to 63%, however days/harvest stayed consistent. As this population is still recovering, managers left the 2025 season framework unchanged from 2024. It is anticipated the 2025 hunting season will harvest 30% of the adult bucks, compared to the previous three-year average of 34%.

Management Objective Review
The objective and management strategy for the Black Hills White-Tailed Deer Herd was last evaluated and approved in 2020. For the 2025 (5-year) objective review, the current objective and recreational management strategy will be maintained for the next five years following an internal evaluation.

Chronic Wasting Disease (CWD)
The Black Hills White-Tailed Deer herd was prioritized for CWD sampling from 2021 to 2023. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). To date, no CWD management actions have occurred in this herd unit. Although, managers should continue to monitor the "hot spots" in Hunt Area 3 and within the municipalities in the Black Hills as future management actions are considered.

Table 1. CWD prevalence for hunter-harvested white-tailed deer in the Black Hills White-Tailed Deer Herd, 2020-2024.

Year(s)	Percent CWD-Positive and (n) - *Hunter Harvest Only*			Percent of Harvested Adult Males Sampled
	Adult Males (CI = 95%)	Yearling Males	Adult Females	
2020	**9% (n=34)**	0% (1)	13% (24)	0.9
2021	**7% (n=217)**	0% (16)	9% (58)	7.5
2022	**4% (n=56)**	7% (14)	11% (38)	2.9
2023	**19% (n=21)**	33% (6)	0% (8)	1.2
2024	**5% (n=21)**	0% (1)	0% (0)	0.9
2020-2024	**7% (n=349)**	8% (38)	9% (46)	2.8

Population Modeling
Population estimates for this herd continue to rely on the Department's spreadsheet system. This model purposely inflates the number of bucks observed during preseason classifications by 30%, as historically this seems to be about the number of bucks missed on average during classification efforts. The model also accounts for archery harvest that occurs prior to these classifications.

However, estimates produced by the model are tenuous at best. This is because the herd does not represent a closed population; sightability of bucks during pre-season classifications can vary widely; and estimated survival rates are not realistic in some years. Due to employee turnover, white-tailed deer surveys were not completed in 2024, therefore classification data was estimated from the previous year. However, generally pre-season population estimates are well correlated with pre-season trend counts along with hunter effort and success. Therefore, the trends produced by the model seem realistic.

Appendix 1

2019 - 2024 Preseason Classification Summary

for White tailed Deer Herd WD706 - BLACK HILLS

		MALES				FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Pre Pop	Ylg	Adult	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Yling	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2019	58,425	95	226	321	14%	1,246	54%	733	32%	2,300	1,221	8	18	26	± 0	59	± 0	47
2020	53,763	137	286	423	18%	1,239	53%	680	29%	2,342	1,039	11	23	34	± 0	55	± 0	41
2021	49,541	80	210	290	14%	1,124	56%	601	30%	2,015	936	7	19	26	± 0	53	± 0	43
2022	30,560	62	110	172	14%	702	57%	368	30%	1,242	892	9	16	25	± 0	52	± 0	42
2023	32,100	49	134	183	16%	645	55%	336	29%	1,164	909	8	21	28	± 0	52	± 0	41
2024	37,369	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	± 0	0	± 0	0

2024 - JCR Evaluation Form

SPECIES: White tailed Deer
PERIOD: 6/1/2024 - 5/31/2025

HERD: WD707 - CENTRAL

HUNT AREAS: 7-14, 21-22, 34, 65-67, 88-89
PREPARED BY: KYE HICKS

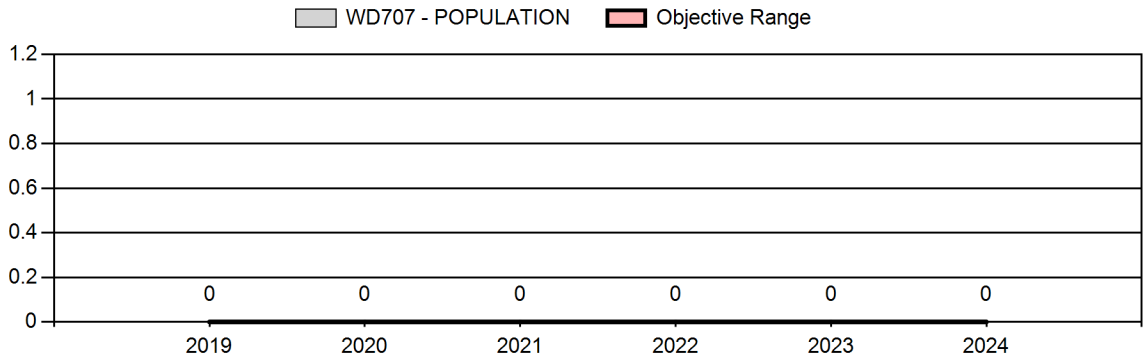
	2019 - 2023 Average	2024	2025 Proposed
Population:	0	N/A	N/A
Harvest:	1,287	1,345	1,450
Hunters:	2,595	2,488	2,600
Hunter Success:	50%	54%	56%
Active Licenses:	3,032	3,107	3,250
Active License Success:	42%	43%	45 %
Recreation Days:	11,425	14,457	14,600
Days Per Animal:	8.9	10.7	10.1
Males per 100 Females	34	40	
Juveniles per 100 Females	59	60	

Population Objective (± 20%) :	0 (0 - 0)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	N/A%
Number of years population has been + or - objective in recent trend:	0
Model Date:	None

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	0%	0%
Males ≥ 1 year old:	0%	0%
Proposed change in post-season population:	0%	0%

Population Size - Postseason



2025 Hunting Seasons
Central White-tailed Deer Herd Unit (WD707)

Hunt Area	License Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
8	3	Sep. 1	Sep. 30	Oct. 1	Nov. 30	50	Any white-tailed deer
8	8	Sep. 1	Sep. 30	Oct. 1	Nov. 30	50	Doe or fawn white-tailed deer
10	3	Sep. 1	Sep. 30	Oct. 1	Nov. 30	25	Any white-tailed deer
10	8	Sep. 1	Sep. 30	Oct. 1	Nov. 30	25	Doe or fawn white-tailed deer
11	Gen			Oct. 16	Nov. 30		Any white-tailed deer
11,12, 13,14	3	Sep. 1	Sep. 30	Oct. 1	Nov. 30	200	Any white-tailed deer
11,12, 13,14	8	Sep. 1	Sep. 30	Oct. 1	Nov. 30	200	Doe or fawn white-tailed deer
12	Gen			Oct. 16	Nov. 30		Any white-tailed deer
13	Gen			Oct. 16	Nov. 30		Any white-tailed deer
14	Gen			Oct. 16	Nov. 30		Any white-tailed deer
21	8	Sep. 1	Sep. 30	Oct. 1	Oct. 31	50	Doe or fawn white-tailed deer valid on private land.
22	3	Sep. 1	Sep. 30	Oct. 1	Nov. 30	75	Any white-tailed deer
22	8	Sep. 1	Sep. 30	Oct. 1	Nov. 30	100	Doe or fawn white-tailed deer
34	3	Sep. 1	Sep. 30	Oct. 15	Nov. 30	50	Any white-tailed deer
34	8			Aug. 15	Dec. 15	50	Doe or fawn white-tailed deer
65	3	Sep. 1	Sep. 30	Oct. 15	Nov. 30	400	Any white-tailed deer, also valid in that portion of Area 66 in Converse County
65	8	Sep. 1	Sep. 30	Oct. 15	Dec. 31	800	Doe or fawn white-tailed deer, also valid in that portion of Area 66 in Converse County

66,88,89	3	Sep. 1	Sep. 30	Oct. 15	Nov. 30	100	Any white-tailed deer
66,88,89	8			Aug. 15	Oct. 14	100	Doe or fawn white-tailed deer only valid in Area 88
66,88,89	8	Sep. 1	Sep. 30	Oct. 15	Nov. 30		Doe or fawn white-tailed deer

Note: The above season limitations are restricted to only those lines in the Chapter 6 Regulation that directly affect white-tailed deer hunting. Additional general and limited quota seasons occur in Hunt Areas 7-14, 21, 34, 65-66, 88, and 89 but are not captured here.

Hunter Satisfaction: 53% Satisfied, 25% Neutral, 22% Dissatisfied

2025 Management Summary

Hunting Season Evaluation

The 2025 season structure was kept somewhat liberal to allow for high hunter opportunity within the recreational management strategy. White-tailed deer numbers had grown substantially from a low in 2013 through 2020, harvest also increased each year through 2020. Due to a massive Epizootic Hemorrhagic Disease (EHD) die-off in 2021, managers were forced to reduce licenses in 2022 given the sharp reduction of white-tailed deer. Continued documentation of EHD in 2022 led to slow population recovery. Managers observed increased numbers of white-tailed deer in most Areas in the herd unit and therefore increased license quotas in multiple Areas in 2024. The majority of white-tailed deer classifications come from Areas 7, 8, 9, 13, 14, and 65 (Table 1.). In 2024, Area 8 – Type 3 licenses were increased by 25 and a new Type 8 license was added with 50 licenses available. Managers observed a lower number of white-tailed deer in Hunt Area 22 during the hunting season and while conducting classifications. Because of the lower numbers and low harvest success rates, Type 3 licenses were reduced by 25 and Type 8 licenses were reduced by 50 in Hunt Area 22. Most limited quota white-tailed deer licenses for the Central White-tailed Deer Herd Unit sold out in 2024. For most of the herd unit, white-tailed deer populations are beginning to rebound with fawn production being high across the herd unit. However, in Area 65 there was good harvest success on the Type 3 and Type 8 license. The Type 8 license was sold out by the end of October. In addition, there is an increased landowner concern regarding damage to crops. With this information the Area 65 Type 8 licenses increased to 800 and the Type 3 license to 400 to address these concerns.

Chronic Wasting Disease Management

Chronic Wasting Disease (CWD) sample sizes within the Central White-Tailed Deer Herd Unit were not sufficient to report an accurate prevalence for most hunt areas. Increased sampling effort was put forth in Hunt Areas 22 and 65 in conjunction with priority mule deer surveillance in 2023. In Hunt Area 65, from 2020-2024 managers were able to obtain 164 CWD samples from white-tailed deer. Of those samples, 17 were positive for a prevalence of 10%. Managers are working on a small-scale CWD project in Hunt Area 65 tracking CWD status within an area known for high densities of white-tailed deer northwest of Douglas.

Population Modeling

There is no population model for this herd unit.

Table 1. 2020 - 2024 Postseason Classification Summary

for White tailed Deer Herd WD707 - CENTRAL

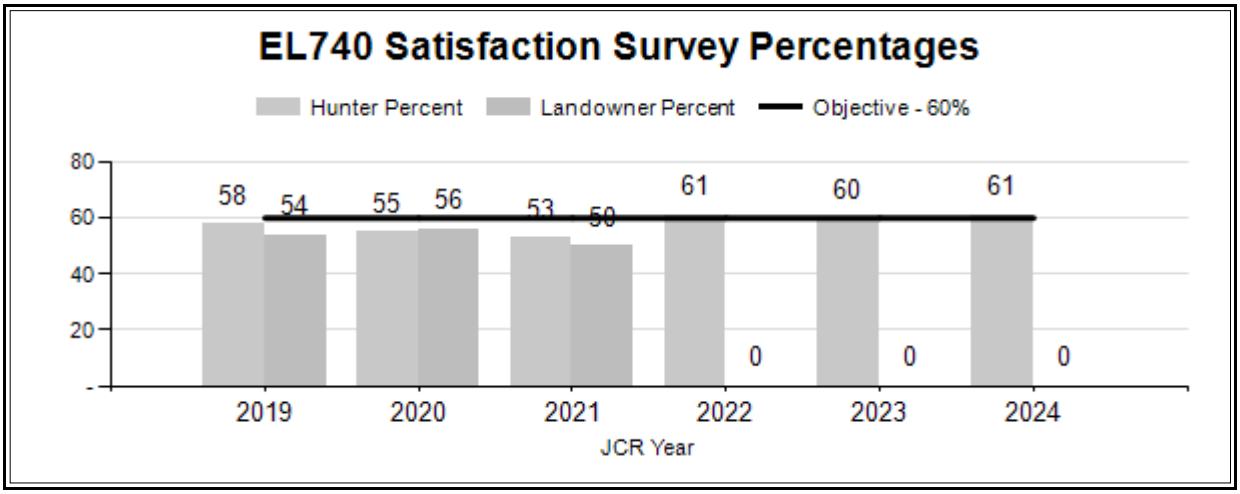
		MALES				FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Post Pop	Ylg	Adult	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Yling	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2020	0	84	244	328	21%	772	49%	466	30%	1,566	0	11	32	42	± 0	60	± 0	42
2021	0	19	36	55	19%	151	52%	87	30%	293	964	13	24	36	± 0	58	± 0	42
2022	0	44	98	142	18%	421	53%	228	29%	791	0	10	23	34	± 0	54	± 0	40
2023	0	40	73	113	15%	443	57%	221	28%	777	0	9	16	26	± 0	50	± 0	40
2024	0	29	64	93	20%	234	50%	141	30%	468	0	12	27	40	± 0	60	± 0	43

2024 - JCR Evaluation Form

SPECIES: Elk
PERIOD: 6/1/2024 - 5/31/2025
HERD: EL740 - BLACK HILLS
HUNT AREAS: 1, 116-117
PREPARED BY: MATT HUIZENGA

	2019 - 2023 Average	2024	2025 Proposed
Hunter Satisfaction Percent	58%	61%	60%
Landowner Satisfaction Percent	53%	N/A	N/A
Harvest:	856	1,362	1,500
Hunters:	2,080	2,440	2,550
Hunter Success:	41%	56%	59 %
Active Licenses:	2,224	2,869	2,750
Active License Success:	38%	47%	55 %
Recreation Days:	20,743	26,884	29,000
Days Per Animal:	24.2	19.7	19.3
Males per 100 Females:	N/A	N/A	
Juveniles per 100 Females	N/A	N/A	

Satisfaction Based Objective	N/A
Management Strategy:	Reduce Elk Numbers
Percent population is above (+) or (-) objective:	N/A
Number of years population has been + or - objective in recent trend:	N/A



[a] **Landowner data not collected since 2021**
[b] **Objective under review since 2023. Current management direction is to reduce elk numbers on private land to address damage complaints.**

2025 Hunting Seasons
Black Hills Elk (EL740)

Hunt Area	Type	Archery Dates Opens	Archery Dates Closes	Season Dates Opens	Season Dates Closes	Quota	Limitations
1	1	Sep. 1	Sep. 30	Oct. 15	Nov. 30	100	Any elk
1	4	Sep. 1	Sep. 30	Oct. 15	Nov. 30	75	Antlerless elk
116	Gen	Sep. 1	Sep. 30	Oct. 15	Nov. 10		Any elk
116	Gen			Nov. 11	Nov. 30		Antlerless elk
116	1	Sep. 1	Sep. 30	Nov. 11	Dec. 31	100	Any elk valid off national forest
116	1			Jan. 1	Jan. 31		Antlerless elk valid off national forest
116	8			Aug. 1	Jan. 31	Unlimited	Cow or calf valid on private land
117	1	Sep. 1	Sep. 30	Oct. 15	Nov. 30	500	Any elk
117	1			Dec. 1	Jan. 31		Antlerless elk
117	3	Sep. 1	Sep. 30	Oct. 15	Jan. 31	350	Spike or antlerless elk
117	6	Sep. 1	Sep. 30	Oct. 15	Jan. 31	150	Cow or calf
117	8			Aug. 1	Jan. 31	Unlimited	Cow or calf valid on private land

2025 Region E Nonresident Quota: 1000

2024 Hunter Satisfaction:	61% Satisfied	24% Neutral	15% Dissatisfied
Landowner Satisfaction JCR[1]	*18% Below*	*49% At*	*34% Above*
Landowner Satisfaction Surveyed[2]	*43% Satisfied*	*14% Neutral*	*43% Dissatisfied*

2025 Management Summary

Hunting Season Evaluation

The harvest strategy for this herd continues to be harvesting as many elk as possible on private land given the limited access afforded to hunters. To facilitate this harvest, a Hunt Management Coordinator has been hired from 2017-2023 to assist hunters with access to private land, and an auxiliary hunting season was conducted in Hunt Area (HA) 117 in 2023. It is estimated the HMAP program and auxiliary season increased harvest in HA 117 by about 175 elk over the traditional season structure in 2023. In addition to these programs, regular license issuance in HA 117 was increased 25% in 2023. Increases in license issuance and the auxiliary season resulted in a 41% increase in the total number of licenses issued for this particular hunt area compared to the previous

[1] Bio-Year 2021. This was the last year these data were collected. Landowner response when asked if elk numbers are below, at, or above desired level.
[2] Bio-Year 2021. This was the last year these data were collected. These figures are from landowner survey asking specifically about satisfaction in the same manner as the harvest survey of hunters.

year. This yielded an estimated harvest of 999 elk from HA 117,[3] and an estimated harvest of 1,312 elk from the herd unit as a whole. This was a significant increase from the prior 3-year average of ~800 elk harvested per year.

Changes to the 2024 hunting season were structured to give landowners more flexibility to reduce elk numbers, while maintaining bull quality and attempting to diminish hunter crowding on accessible public land. To these ends, 2024 changes included: Increasing HA 116 Type 7 license issuance 33%; decreasing HA 117 Type 1 license issuance 17%; eliminating HA 117 Type 2 and Type 4 licenses and replacing those license types with a Type 3 license valid for spike or antlerless elk; dropping the lowest success license - HA 117 Type 6 issuance by 50 tags; eliminating HA 117 Type 7 licenses; and issuing unlimited HA 117 Type 8 licenses valid on private land, along with the ability for hunters to have an unlimited number of these licenses. The reduction in HA 117 Type 1 licenses (despite 2023 reported harvest success being 63%) was enacted because local managers believe the harvest estimate is biased high (see footnote 3), especially given that issuance of this license type was increased 50% in 2023 and resulted in significant crowding on accessible public land and complaints from Type 1 license holders regarding crowding and the lack of access to private land. Unfortunately, due to changing desires and landowner commitments, the Hunt Management Coordinator position and program was eliminated in 2024. In HA 117, antlerless license sales and harvest increased significantly, however with the reduction in Type 1 licenses and removal of Type 2 licenses, bull harvest decreased a similar amount resulting in the overall harvest dropping slightly from 2023. These changes resulted in a harvest of about 1,360 elk from the herd unit in 2024.

To continue with previous changes and allow for more flexibility for harvest on private lands in 2025, the HA 116 Type 7 license was eliminated and a Type 8 license was added valid on private land. The southern boundary of HA 117 was also changed to Highway 16 from the South Dakota border to Newcastle. This moved the portion of HA 117 south of Highway 16 into HA 126.

Management Objective Review

This herd has been slated for an objective review in 2025. The Department will develop recommendations for a revised objective in June of 2025 in conjunction with a public review process. This proposed change will be presented to the Wyoming Game and Fish Commission at the September 2025 meeting.

Chronic Wasting Disease Management

The Black Hills Elk Herd has limited CWD prevalence data available, and no CWD management actions have occurred. Despite limited data, the five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). This herd has not been prioritized for CWD surveillance because of low CWD prevalence in surrounding herds.

[3] The estimated harvest is likely biased high, especially on HA 117 Type 1 and General Licenses. This is due to successful hunter response bias not being accounted for, and the fact that HA 117 Type 1 harvest projections were based upon just 40 resident and 17 nonresident 117 Type 1 licenses holders (10% of the license holders) reporting they harvested 34 elk; and only 2 General License holders responding that they hunted that portion of HA 117 open to General License hunting.

Table 1. CWD prevalence for hunter-harvested elk in the Black Hills Elk Herd, 2020-2024.

Year(s)	Percent CWD-Positive and (n) - *Hunter Harvest Only*	Percent of Harvested Adult Elk Sampled
	All Adult Elk	
2020	**5% (n=21)**	3.4
2021	**0% (n=20)**	2.6
2022	**2% (n=55)**	7.3
2023	**0% (n=8)**	0.8
2024	**0% (n=9)**	0.8
2020-2024	**2% (n=113)**	2.6

Population Data

In late February of 2016 and 2020, The Department partially funded South Dakota Game Fish & Parks (SDGF&P) helicopter-based, late winter elk sightability surveys. This funding was used to survey a significant portion of occupied elk habitat in HAs 1 & 117. In 2016, 31 subunits were surveyed and 923 elk observed. This yielded a sightability estimate of 1,091 elk (CL = 988 - 1,521) within the survey area. In 2020, 42 subunits were flown and 1,519 elk found. This effort produced a sightability estimate of 1,687 (CL = 1,584 - 2,118). Directly comparing the 31 subunits flown in both 2016 and 2020 revealed a 36% increase in the estimated number of elk present. However, changes in elk distribution may have influenced the magnitude of the relative change. Finally, in both years most groups of elk observed were not classified due to their large size.

In late February of 2024, a trend count in HA 117 was conducted. The survey was done from a Bell Jet Ranger helicopter flown at an average altitude above ground level (AGL) of 350 feet, along eighteen, north-south transects spaced about 2 miles apart, at an average ground speed of 45 knots. Some deviation from the established AGL, ground speed, and set lines (up to about ½ mile) was allowed to augment sightability of elk and increase efficiency. Just over eight hours of total survey time were expended and about 450 miles of survey flight flown. The weather varied from overcast to clear, with temperatures ranging from 27 to 47 degrees F and winds 5- 15 MPH. Snow cover was fairly nonexistent, except for some north facing slopes and on USFS lands, where it ranged from 15% to 90%. A total of 1,702 elk were counted, with larger groups being videotaped and then counted and classified after the survey. Observers were familiar with elk distribution, and conjectured that sightability of cow and calf groups was about 90%, that of spike elk 85%, and mature bulls only 25%. Consequently, about 2,100 elk were estimated to be wintering in the hunt area. At a meeting of Hunt Area 117 landowners following the trend count, no suggestions were proffered from the landowners when asked by the Department as to percentage change they would like to see in elk numbers. Instead, a general direction was received to reduce elk numbers and collect future trend count data.

In mid-January of 2025, a sightability survey in HA 117 was conducted (Appendix 1). The survey sampled 54 polygons, with 34 high density polygons and 20 low density. A total of 531 elk were counted in the polygons, however an additional 1,598 elk were counted in two groups outside selected polygons. Adjustments were made to the model to incorporate these groups as estimates without them were not realistic. Managers currently estimate a total of ~2,500 wintering elk in HA 117.

Appendix 1

2025 HA117 Elk Sightability

Date and Time: January 15, 2025 0745-1500
January 16, 2025 0745-0810

Surveyors: Matt Huizenga and Nate Holst

Vendor/Helicopter: Helicopter Solutions, MT (Kent Potter) / Bell Jet Ranger

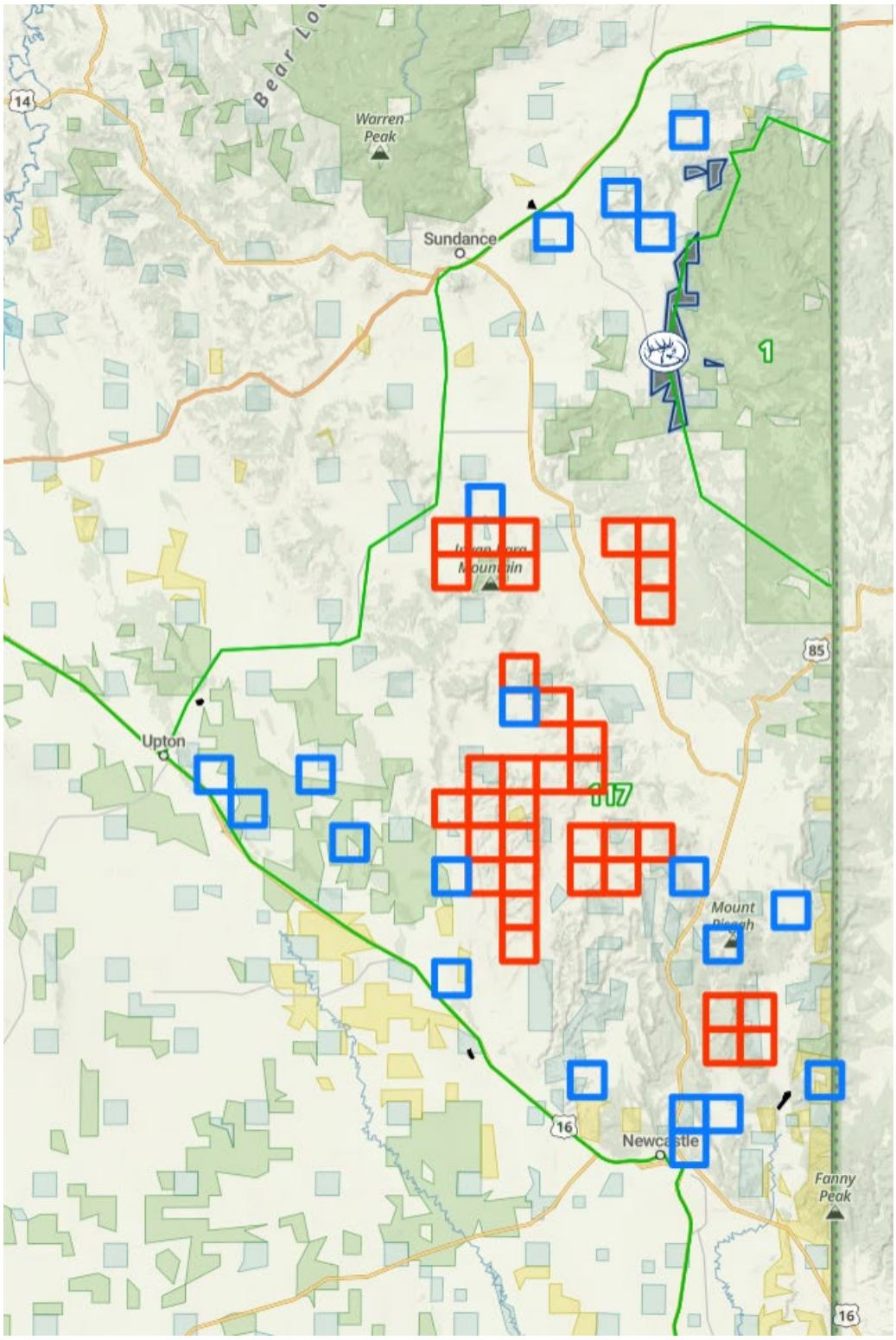
Cost: $27,076.75

Weather: Clear to partly cloudy both days. Almost 100% snow cover throughout the hunt area. Temps 15-28 degrees F

Results: Surveyed 54 polygons with 34 high density and 20 low density polygons. Elk were located in 22 of the 58 polygons. Two large herds of elk were located and counted outside polygons. Those herds were significant enough that results would have been greatly skewed by not including them, so they were included as an add-in without being extrapolated by the model. Total number of elk physically counted was 2,149 which produced an estimate of 2,502 (2,110-2,896) elk in HA 117.

2025 HA117 Sightability Estimate								
Raw Count	Total Estimate	LCI	UCI	Total Inflation	Total Variance	Sampling Variance	Sightability Variance	Model Variance
2149	2502.965644	2109.558772	2896.372516	1.164711793	40287.63192	34965.51521	5057.488239	264.6284681

2025 Elk HA117 Sightability Design
Red = High Density
Blue = Low Density



2024 - JCR Evaluation Form

SPECIES: Elk | PERIOD: 6/1/2024 - 5/31/2025

HERD: EL741 - LARAMIE PEAK/MUDDY MOUNTAIN

HUNT AREAS: 7, 19 | PREPARED BY: KYE HICKS

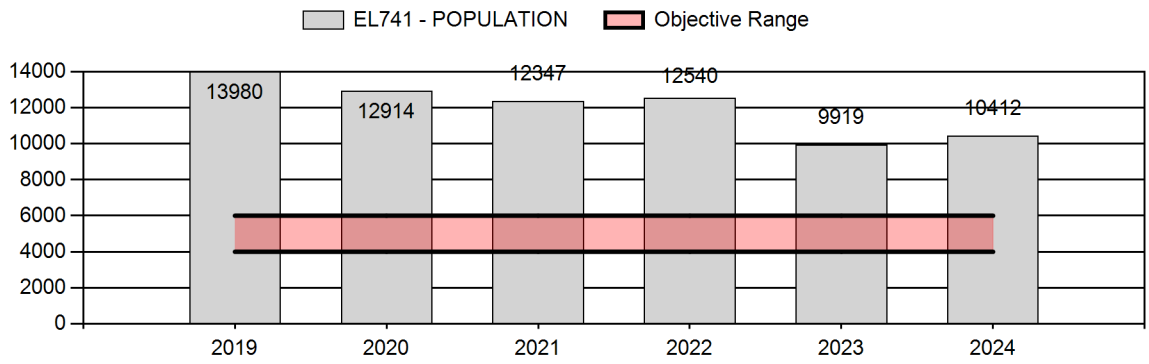
	2019 - 2023 Average	2024	2025 Proposed
Population:	12,340	10,412	8,006
Harvest:	2,146	2,926	2,900
Hunters:	4,659	4,864	4,800
Hunter Success:	46%	60%	60%
Active Licenses:	4,821	5,954	5,900
Active License Success:	45%	49%	49%
Recreation Days:	36,040	59,837	60,000
Days Per Animal:	16.8	20.5	20.7
Males per 100 Females	26	9	*not accurate ratios
Juveniles per 100 Females	39	15	

Population Objective (± 20%) :	5000 (4000 - 6000)
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	108%
Number of years population has been + or - objective in recent trend:	25
Model Date:	2/28/2025

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	24.9%	24.2%
Males ≥ 1 year old:	23.5%	27.6%
Proposed change in post-season population:	-17.8%	-25.7%

Population Size - Postseason



2025 Hunting Seasons
Laramie Peak/Muddy Mountain Elk Herd Unit (EL741)

Hunt Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
7	1	Sep. 1	Sep. 30	Oct. 15	Nov. 20	1500	Any elk
7	1			Nov. 21	Dec. 31		Antlerless elk
7	2			Nov. 21	Dec. 31	350	Antlered elk five (5) points or less on either antler; valid in Converse County
7	6	Sep. 1	Sep. 30	Oct. 15	Dec. 31	2000	Cow or calf
7	8			Aug. 15	Oct. 14	Unlimited	Cow or calf valid on private land in Albany and Carbon counties; also valid in all of Platte County; not valid in Converse or Natrona counties or on Commission owned lands
7	8			Oct. 15	Jan. 31		Cow or calf valid on private land in Converse County; also valid off national forest in the remainder of the area
19	1	Sep. 1	Sep. 30	Oct. 1	Oct. 14	150	Any elk
19	1			Dec. 1	Dec. 14		Any elk
19	1			Dec. 15	Jan. 31		Antlerless elk
19	2	Sep. 1	Sep. 30	Nov. 1	Nov. 30	175	Any elk
19	2			Dec. 15	Jan. 31		Antlerless elk
19	4	Sep. 1	Sep. 30	Oct. 1	Oct. 14	125	Antlerless elk
19	4			Dec. 1	Jan. 31		Antlerless elk
19	5	Sep. 1	Sep. 30	Nov. 1	Jan. 31	125	Antlerless elk
19	6	Sep. 1	Sep. 30	Oct. 1	Oct. 14	225	Cow or calf
19	6			Nov. 1	Jan. 31		Cow or calf

2024 Hunter Satisfaction: 60% Satisfied, 20% Neutral, 20% Dissatisfied

2025 Management Summary

Hunting Season Evaluation
The 2024 season structure continued to be liberal in an effort to maximize harvest to reduce this population toward objective. Elk numbers in this herd unit continue to remain far above objective

despite very liberal license issuance and long season length. With the implementation of the Type 8 license and favorable weather during the hunting season in 2024, there was an increase in harvest. Harvest increased by about 500 antlerless elk compared to previous years. In addition, Area 7 saw the largest bull harvest in the past five years at 1,066. The previous five-year annual bull harvest is 802. Harvest success on the Type 1 license matched the five-year average of around 60%. However, Type 2 license success increased significantly from 44% in 2023 to 54% in 2024. Type 4 license success decreased from 51% in 2023 to 24% in 2024. Type 6 license success increased from 38% in 2023 to 41% in 2024. With the Type 8 license being implemented in 2024, there was 50% success in its first year of being available. This high success can also be attributed to the mild fall and winter in 2024. Sportsmen were able to access areas that have not been accessible in past years. Groups of bulls were also more accessible on public land in November and December due to the mild winter hence the higher bull harvest on the Type 2 license.

The weather in Hunt Area 19 in 2024 was extremely mild, which lead to many elk taking refuge on one large private ranch with limited hunting access. Due to an overall lack of snow and cold weather, many of these elk remained on this ranch throughout a lot of the season, but more commonly distributed onto public land later in the season. Despite the mild weather, Area 19 saw the largest bull harvest in the past ten years at 203. The previous five-year average annual bull harvest is 154. Harvest success on the Type 1 license was 66%, which is the highest since 2015, with Type 2 success at 63%, which is average. This high success can be attributed to both of those licenses being valid for any elk in December, an extended season length that has only recently been in place. Harvest success on the Type 1 license in October is usually good as bulls are more dispersed at the end of the breeding season. During the November and December seasons bachelor groups of bulls often leave the safety of a private land refuge and move onto public lands, which usually results in good harvest success. Antlerless harvest was above average as well at 127. The harvest success on full price antlerless licenses (Type 4 and 5) was low (36%), but above average on the Type 6 (40%).

There will be little change in Hunt Area 7 this year. With low success on the Type 4, and implementation of the Type 8 license, this license was completely removed and the quota from this license type was added to the Type 6 quota. The Type 6 regular season will continue to run from October 15 – December 31 with a quota of 2,000. To continue to address damage concerns and the overabundance of elk, the Type 8 license will continue to be unlimited and valid from August 15 – September 30 on private land in Albany and Carbon Counties; also valid in all of Platte County. However, the Type 8 license will not be valid in Converse and Natrona Counties as well as Wyoming Game and Fish Department Commission owned lands until October 15. The Type 8 license will then open October 15 and run until January 31 to keep addressing damage problems later in the season on private land only in Converse County and will be valid in all other counties off National Forest. Managers will continue to address chronic elk damage issues as needed with Chapter 34 Auxiliary Management Seasons outside of normal season dates. Season dates in Area 19 were changed on the Type 2 license, the regular season and will now run from November 1 – November 30 to still provide a month of opportunity but to reduce hunter saturation during the

months of October and December. The Type 4 license dates were also changes and will now run from December 1 – January 31 to coincide with the Type 2 season dates being changed.

In 2018, a large composition/abundance survey was flown in this herd unit, with a total of 9,359 elk classified. This provided a population estimate of 11,182 (SE=1,312) elk. This survey produced high confidence ratio data due to the sample size. This included high bull ratios (51 bulls per 100 cows) and high calf ratios (42 calves per 100 cows) (Table 3.). In 2023, managers were able to classify a large number of elk in conjunction with aerial mule deer surveys. All classifications were completed by helicopter, with 2,336 elk being classified. As noted in the evaluation form, reported male classification ratios are not representative of actual ratios.[1] The lack of elk-specific aerial surveys and limited ground access in recent years allows managers to obtain a good sample size of cows and calves for a juvenile ratio, but limited mature bull observations skew male:female ratios in years we do not fly intensive surveys. No flight time was allocated to the Laramie Peak/Muddy Mountain Herd Unit for classification surveys in 2024 as money was allocated for a large sightablility survey conducted in spring of 2024 (see Population Modeling Section).

Management Objective Review

The objective and management strategy for the Laramie Peak/Muddy Mountain Elk Herd was last evaluated and approved in 2023, and will not be reviewed again until 2028. This herd has been over objective for many years. Managers continue to make efforts to maximize female harvest and work to preserve public land hunting quality with license quotas and limitations. The addition of the Type 8 license will continue to assist in that effort by allowing more flexibility and options to maximize harvest and minimize damage on private lands.

Chronic Wasting Disease Management

This herd was prioritized for Chronic Wasting Disease (CWD) sampling in 2022. In 2024, 210 samples were received from hunter harvested elk. Of those samples, six tested positive, making prevalence 2.9%. The three-year prevalence for this herd unit with 536 samples is 3.5%. To date, no meaningful CWD management actions have occurred in this herd unit.

[1] Despite a lack of accurate ratio data, an analysis of harvest metrics and population modeling indicated bull ratios (40 bulls per 100 cows) continue to remain high.

Table 1. CWD prevalence for hunter-harvested elk in the Laramie Peak/Muddy Mountain Elk Herd, 2020 - 2024.

Year(s)	Percent CWD-Positive and (*n*) – *Hunter Harvest Only*	Percent of Harvested Adult Elk Sampled
	All Adult Elk (CI = 95%)	
2020	**8.4% (n=119)**	4.6
2021	**3.3% (n=91)**	4.6
2022*	**4.9% (n=223)**	10.7
2023	**1.9% (n=103)**	4.4
2024	**2.9% (n=210)**	7.0
2020-2024	**4.3% (n=746) (CI=2.8%-6.0%)**	6.3

*Mandatory or Priority CWD sampling effort

Population Modeling

The Time-Specific Juvenile & Constant Adult Survival (TSJ, CA) Spreadsheet model was used to estimate the post-hunt population of 10,412 in 2024. A sightability survey was flown in April of 2024. This survey provided an estimate of 9,563 (SE=2,817) elk for this herd. This gave managers an abundance estimate which increased confidence in model estimates going forward. This herd unit will remain above objective for the foreseeable future. The model estimates 8,006 elk for the post hunt population in 2025. While population estimates continue to trend downward, this herd will need several years of high harvest before this population will reach objective.

Chapter 34 & 56

During the 2024 hunting season, there were six authorizations for auxiliary elk harvest in this herd unit under the Chapter 34 Regulation and one Chapter 56 permit. In total, a minimum of 228 elk and an estimated 238 elk were harvested under these authorizations in addition to totals reported in the harvest survey. Details are as follows:

AUX2024-F – Elk Hunt Area 7

- Converse County – 18 participating landowners
- Season Dates: July 25, 2024 – January 31, 2024
- 2024 Area 7 – Type 8 and unused licenses authorized
  Minimum harvest = 90 elk
- Estimated harvest = 95 elk

AUX2024-O – Elk Hunt Area 7

- Converse County – 1 participating landowner
- Season Dates: August 1, 2024 – January 31, 2025
- 2024 Area 7 – Type 8 and unused licenses authorized
  Minimum harvest = 125 elk
- Estimated harvest = 130 elk

AUX2024-H, J, K, L – Elk Hunt Area 7

- Albany County – 4 participating landowner
- Season Dates: July 25, 2024 – August 14, 2024
- 2024 Area 7 – Type 8 license used
- Minimum harvest = 1 elk
- Estimated harvest = 1 elk

Chapter 56 Permit – Elk Hunt Area 7

- Converse County – 1 participating landowner
- Permit Dates: July 26, 2024 – March 1, 2025
  Authorization for removal of up to 50 antlerless elk
- Total harvest = 12 elk

Additional Information

Antler classification data has been collected since 2008 during postseason classification surveys. The percentage of Class II bulls being classified is showing a downward trend while the percentage of Class I bulls is increasing. This contradicts tooth age data which shows the average age of harvested bulls is increasing. This is also likely an artifact of not conducting aerial surveys designed to garner accurate bull composition data (Table 2.).

Beginning in February 2024, managers began capturing and deploying GPS tracking collars on 40 cow elk in the southern portion of Area 7. The main objective of this study is to observe interactions with sympatric collared mule deer. These collars will be also used to document elk survival and movements. This study is ongoing and the results will be reported in future years.

Table 2. Hunt Area 7 Post-Season Classifications[1] and Tooth Age Data

Calendar Year	Spike Bull: 100 Cows	Adult Bull: 100 Cows	Total Bull: 100 Cows	% Class I	% Class II	Average Age Harvested Bull
2008	11	15	26	24	76	
2009	12	25	37	47	53	
2010	18	26	44	48	51	4.6
2011	10	19	29	68	32	3.5
2012	10	19	29	55	45	5.2
2013	12	18	30	58	42	6
2014	9	10	19	64	36	5.6
2015	15	15	30	74	26	4.8
2016	14	19	33	70	30	6.3
2017	12	20	32	71	29	6.4
2018	18	34	52	59	41	6.1
2019	12	20	32	56	44	6
2020	10	13	24	73	27	6.1
2021	19	32	50	66	34	7.0
2022	9	15	23	56	44	6.7
2023	10	7	17	68	32	6.3
2024*	NA	NA	NA	NA	NA	6.7

(* no classifications gathered in 2024)

[1] Not accurate ratios due to low sample sizes in some years.

Table 3. 2019 - 2024 Postseason Classification Summary

for Elk Herd EL741 - LARAMIE PEAK/MUDDY MOUNTAIN

		MALES				FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Post Pop	Ylg	Adult	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Yling	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2019	13,980	120	188	308	16%	1,125	60%	454	24%	1,887	888	11	17	27	± 2	40	± 3	32
2020	12,914	132	130	262	14%	1,153	60%	518	27%	1,933	898	11	11	23	± 2	45	± 3	37
2021	12,347	120	202	322	25%	638	51%	303	24%	1,263	745	19	32	50	± 4	47	± 4	32
2022	12,540	212	368	580	15%	2,331	61%	923	24%	3,834	630	9	16	25	± 1	40	± 2	32
2023	9,919	170	101	271	12%	1,572	67%	493	21%	2,336	0	11	6	17	± 1	31	± 2	27
2024	10,412	21	73	94	8%	997	80%	148	12%	1,239	0	2	7	9	± 1	15	± 2	14

2024 - JCR Evaluation Form

SPECIES: Elk

PERIOD: 6/1/2024 - 5/31/2025

HERD: EL742 - RATTLESNAKE

HUNT AREAS: 23

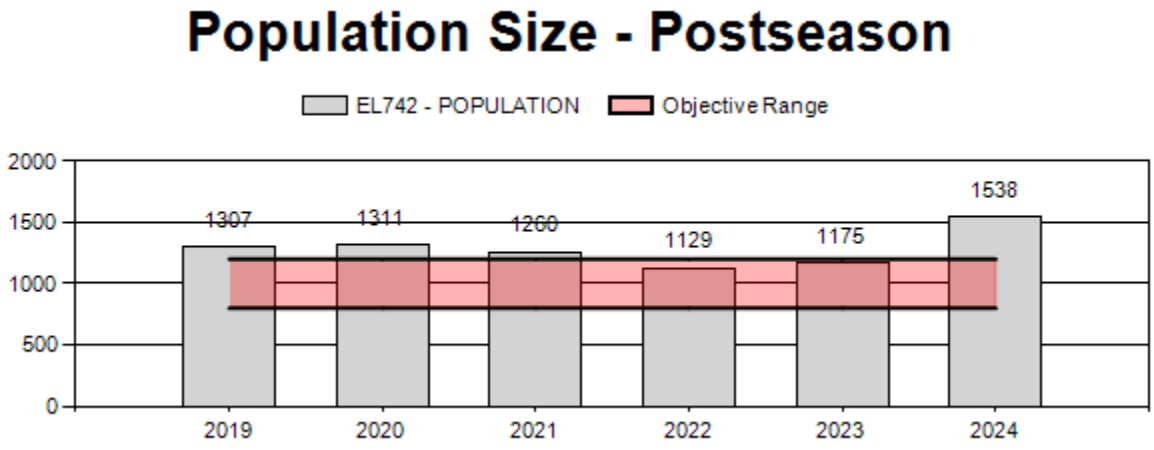
PREPARED BY: BRANDON WERNER

	2019 - 2023 Average	2024	2025 Proposed
Population:	1,236	1,538	1,554
Harvest:	176	291	300
Hunters:	398	462	475
Hunter Success:	44%	63%	63 %
Active Licenses:	450	526	535
Active License Success:	39%	55%	56 %
Recreation Days:	4,071	4,662	4,500
Days Per Animal:	23.1	16.0	15
Males per 100 Females	25	13	
Juveniles per 100 Females	36	36	

Population Objective (± 20%) :	1000 (800 - 1200)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	54%
Number of years population has been + or - objective in recent trend:	33
Model Date:	02/28/2025

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females ≥ 1 year old:	13%	9%
Males ≥ 1 year old:	32%	26%
Proposed change in post-season population:	-1%	1%



2025 HUNTING SEASONS
RATTLESNAKE ELK HERD (EL742)

Hunt Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
23	1			Oct 1.	Oct. 21	150	Any elk
23	1			Nov. 1	Nov. 21		Any elk; Also valid in area 128 east of Castle Gardens Road (Fremont County Road 507), east of Wyoming Highway 136, east of Ore Road (Fremont County Road 5), and north of Beaver Rim Road (B.L.M. Road 2401)
23	1			Dec. 1	Dec. 15		Any elk; Also valid in area 128 east of Castle Gardens Road (Fremont County Road 507), east of Wyoming Highway 136, east of Ore Road (Fremont County Road 5), and north of Beaver Rim Road (B.L.M. Road 2401)
23	4			Oct. 1	Oct. 21	200	Antlerless elk
23	4			Nov. 1	Nov. 21		Antlerless elk; Also valid in area 128 east of Castle Gardens Road (Fremont County Road 507), east of Wyoming Highway 136, east of Ore Road (Fremont

							County Road 5), and north of Beaver Rim Road (B.L.M. Road 2401)
23	4			Dec. 1	Dec. 15		Antlerless elk; Also valid in area 128 east of Castle Gardens Road (Fremont County Road 507), east of Wyoming Highway 136, east of Ore Road (Fremont County Road 5), and north of Beaver Rim Road (B.L.M. Road 2401)
23	6			Oct. 1	Oct. 21	200	Cow or calf
23	6			Nov. 1	Nov. 21		Cow or calf; Also valid in area 128 east of Castle Gardens Road (Fremont County Road 507), east of Wyoming Highway 136, east of Ore Road (Fremont County Road 5), and north of Beaver Rim Road (B.L.M. Road 2401)
23	6			Dec. 1	Dec. 15		Cow or calf; Also valid in area 128 east of Castle Gardens Road (Fremont County Road 507), east of Wyoming Highway 136, east of Ore Road (Fremont County Road 5), and north of Beaver Rim Road (B.L.M. Road 2401)

23	9			Sep. 1	Sep. 30	50	Any elk, archery only

2024 Hunter Satisfaction: 66% Satisfied, 21% Neutral, 13% Dissatisfied

2025 Management Summary:

Hunting Season Evaluation

The 2025 season structure was modified compared to what it has been for the last several years, the same goal remained: to maximize cow harvest in an over-objective herd with constrained public access. In 2024, a record of 291 elk were harvested (Table 1). The average five-year harvest is 204 elk. Harvest success on Type 1 licenses tends to be good from year to year, in the 50-60th percentile, but was the highest in nine years at 68%. Harvest on females is consistently poor due to large numbers of cows and calves taking refuge on one property that does not allow hunting access. In 2024, elk more commonly left the private land sanctuary, leading to a higher harvest. Elk may have left the private land sanctuary in search of resources, which lead them to be more prone to harvest. A record 1,551 elk were classified post season in 2024. Hunter satisfaction increased as well in 2024.

Some changes in season structure were implemented in 2025 based on wildlife manager's suggestions and a sportsperson survey (see additional surveys). The most notable is the Type 9 license. A Type 9 license will be valid for any elk, archery only from September 1-30. This was implemented to reduce hunting pressure and human activity during September. An analysis from 2020-2024 indicated only 5% of the total elk harvest in Area 23 occurred during the special archery season. The statewide average archery success is around 10%. Statewide success on a Type 9 license is around 30%. The implementation of a Type 9 license may slightly increase overall archery harvest. The reduction in pressure and human presence should make elk more available when the regular season begins, thus increasing overall regular season harvest. The special archery season was removed from all other license types. In addition, the season dates were shifted around to make an additional season break. Past season breaks in this area have been beneficial, as removing human pressure allows elk to often move out of the private land sanctuary and onto public land. Harvest is typically good the first couple of days after the season reopens. For the 2025 regular season, Area 23 will be broken down into three segments, October 1-21, November 1-21 and December 1-15. There will be a total of eight weeks of regular season, which is typical.

Management Objective Review

The objective and management strategy for the Rattlesnake Elk Herd was last evaluated and approved in 2023, and will not be reviewed again until 2028.

Population Modeling

Small herd size, disparate harvest of males versus females, skewed classification data, and an open population make accurate modeling of this herd difficult. The addition of an abundance estimate for the 2019 bio-year helped to better align the model. Trends from consecutive years of surveys have also helped to align the model. In 2025, the Integrated Population Model (IPM) was used to model this herd. This model was selected because of its ability to track population trends, survey data and produce a close convergence. The 2024 post hunt population estimate is 1,538 and is projected to remain stable over the next year. The model also predicts this population is trending higher. This seems to be accurate as calculations of female harvest percentages indicate cow harvest would have to increase one and a half times just to maintain the herd. Managers presume this herd is reaching carrying capacity and elk are dispersing into adjacent herd units.

Chronic Wasting Disease Monitoring and Management

This herd was not up for priority Chronic Wasting Disease (CWD) sampling in 2024. This herd was a priority in 2023 but the sample size was minimal at 13. From 2020-2024, 46 elk were CWD sampled in this herd. CWD was first detected in this elk herd in 2024. Managers will be continuing to monitor this disease.

Additional Surveys

In 2024, an email survey was sent to anyone that held an Area 23 license in the past five years. The goal was to gauge interest in additional license types and other aspects of elk hunting specific to Area 23. In total, 1,116 recipients received the survey, with 212 surveys completed (19%). The survey indicated that 84% of sportsmen hunt on public land, and that 44% of hunters hunt Area 23 most years. With multiple licenses available, only 14% stated they typically hold more than one Area 23 license. Over 41% of respondents believe the elk population is increasing. Only 31% of sportsmen use both archery and firearms to hunt elk in Area 23. Fifty-six percent of people claimed they would support an increased amount of any-elk licenses if it meant that they would have better odds of drawing an any-elk license, even if it decreased the length of season on which their tag was valid. Also, 65% of respondents said they would support additional license types if it meant decreased hunter pressure. Of the comments, 10% requested an archery only season. Most of the remaining comments explained their dissatisfaction with hunter pressure and elk held up on private land. Responses from this survey and a landowner meeting lead managers to implement the Type 9 license and an additional season split in 2025.

2019 - 2024 Postseason Classification Summary

for Elk Herd EL742 - RATTLESNAKE

		MALES				FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Post Pop	Ylg	Adult	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Yling	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2019	1,307	66	216	282	27%	603	58%	155	15%	1,040	428	11	36	47	± 2	26	± 1	18
2020	1,311	27	59	86	20%	275	63%	76	17%	437	481	10	21	31	± 4	28	± 4	21
2021	1,260	52	2	54	7%	476	60%	267	34%	797	512	11	0	11	± 1	56	± 3	50
2022	1,129	47	64	111	14%	476	59%	215	27%	802	483	10	13	23	± 2	45	± 3	37
2023	1,175	51	67	118	11%	775	69%	224	20%	1,117	0	7	9	15	± 0	29	± 1	25
2024	1,538	14	117	131	8%	1,047	68%	373	24%	1,551	0	1	11	13	± 0	36	± 0	32

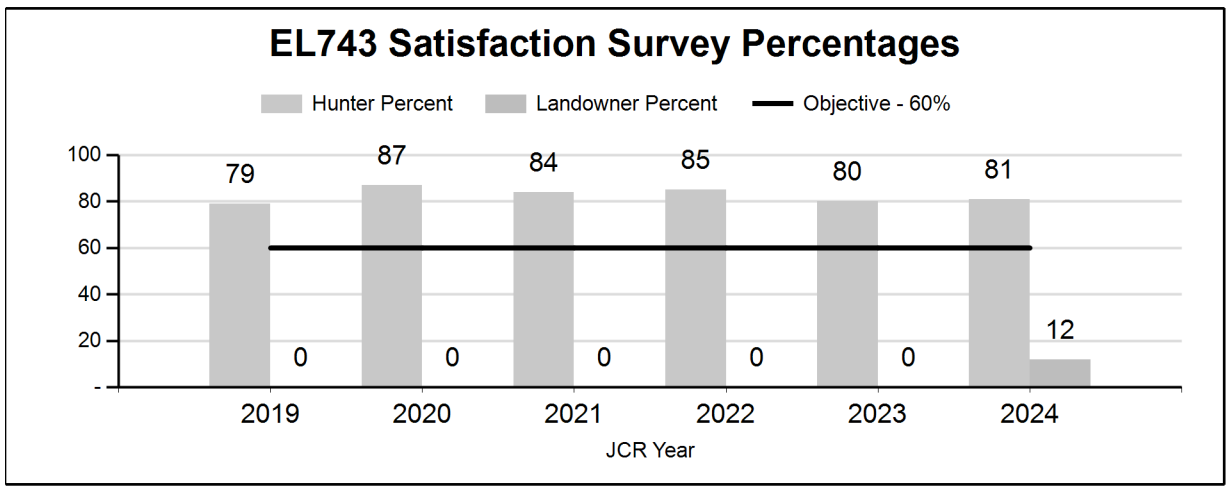
Table 1. Postseason classification summary for EL742.

2024 - JCR Evaluation Form

SPECIES: Elk
PERIOD: 6/1/2024 - 5/31/2025
HERD: EL743 - PINE RIDGE
HUNT AREAS: 122
PREPARED BY: KYE HICKS

	2019 - 2023 Average	2024	2025 Proposed
Hunter Satisfaction Percent	83%	81%	81%
Landowner Satisfaction Percent	0%	12%	0%
Harvest:	167	310	315
Hunters:	237	366	350
Hunter Success:	70%	85%	90 %
Active Licenses:	252	429	430
Active License Success:	66%	72%	73 %
Recreation Days:	864	2,035	2,035
Days Per Animal:	5.2	6.6	6.5
Males per 100 Females:	40	0	
Juveniles per 100 Females	42	0	

Satisfaction Based Objective	60%
Management Strategy:	Private Land
Percent population is above (+) or (-) objective:	-14%
Number of years population has been + or - objective in recent trend:	15



2025 Hunting Seasons
Pine Ridge Elk Herd Unit (EL743)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
122	1	Sep. 1	Sep. 30	Oct. 1	Nov. 30	150	Any elk
122	1			Dec. 1	Dec. 31		Antlerless elk
122	2			Oct. 15	Nov. 30	150	Antlered elk five (5) points or less on either antler
122	6	Sep. 1	Sep. 30	Oct. 1	Dec. 31	150	Cow or calf
122	8			Aug. 1	Jan. 31	Unlimited	Cow or calf valid on private land

2024 Hunter Satisfaction: 80% Satisfied, 10% Neutral, 10% Dissatisfied

2025 Landowner Satisfaction: 0% below desired levels, 13% at or about at desired levels, 87% above desired levels

2025 Management Summary

Hunting Season Evaluation
The majority of elk are located on private land or inaccessible (or difficult to access) public land in this area. Licenses are therefore issued based primarily on the amount of private land access allowed by landowners. The 2025 season structure was set to address a landowner-perceived growing population, high bull ratios, and minimize overcrowding of the minimal public land access points. To address high bull ratios along with a desire to maintain bull quality there will be 150 Type 2 licenses available for antlered elk, five points or less on either antler. The Type 8 unlimited license will continue to address any damage concerns landowners may have.

There is no population model for this herd. Minimum population size and trend is based off aerial winter trend counts (Table 2.) and landowner input, resulting in a minimum estimate of approximately 1,000 elk. Both managers and landowners agree the current population size likely exceeded 1,000 and could possibly have been closer to 2,000. Field personnel were directed to revise the objective for this herd from a satisfaction-based objective to a postseason numeric objective. Because of this change in objective, the herd unit was a priority for aerial abundance surveys in May of 2025. For this survey managers flew 110 polygons, 76 that were in low stratum areas and 34 that were in high stratum (Appendix A). Within these polygons, 542 elk were observed. With the official population estimate of 2,030 (CI=1199 - 2861).

Success in this area over the prior five years is high, averaging 73%, with an average of 5.1 days per harvest. In 2023, hunter success dropped to 57% with an average of 8.2 days to harvest. This is likely a result of increased license availability with no increase in access. However, in 2024 with increased concern from landowners regarding elk numbers and the implementation of the Type 8 license, there was 82% hunter success and an additional 104 antlerless elk harvested.

Objective Review
This herd has been slated for an objective review in 2025. The Department will develop recommendations for a revised objective in June of 2025 in conjunction with a public review process. This herd will be changing from a landowner Satisfaction based objective to a Population based objective. This proposed change will be presented to the Wyoming Game and Fish Commission at the September 2025 meeting.

Chronic Wasting Disease Management
This herd has not been prioritized for Chronic Wasting Disease (CWD) surveillance because historically harvest has been too low to obtain an adequate sample size for a statistically valid prevalence estimate. Sample sizes and prevalence are provided below, albeit based on very low sample sizes. (Table 1.)

Table 1. CWD prevalence for hunter-harvested elk in the Pine Ridge Elk Herd, 2020 - 2024.

Year(s)	Percent CWD-Positive and (*n*) – *Hunter Harvest Only*	Percent of Harvested Adult Elk Sampled
	All Adult Elk (CI = 95%)	
2020	**0% (n=4)**	2.3
2021	**0% (n=2)**	1.2
2022	**0% (n=6)**	2.9
2023	**16.7% (n=6)**	3.2
2024	**0% (n=7)**	2.2
2020-2024	**4% (n=25) (CI=0.1%-20.4%)**	2.4

Additional Information
Over the past few years managers have noticed an increase in bull ratios throughout the area. With these changes and the implementation of the Type 2 license, mangers would like to see if a reduction in bull ratios will have an impact on the overall size of bulls in the area. In 2024, managers sent out a tooth box to every hunter who held a Type 1 and 2 license so the hunter could provide a tooth for age as well as beam length and base circumference. In 2024, managers were able to obtain 30 samples. The average age was 6.65, with a beam length of 41.375 inches, and the base circumference of 8.36 inches. This research will continue over time to track trends.

Table 2. 2022 - 2023 Postseason Classification by Hunt Area

for Elk Herd EL743 - PINE RIDGE - Hunt Area 122

			Males				Females		Juveniles				Males/100 Females			Young/100	
Year	Area	% Herd	# Ylg	# Adult	Total Male	% Male	#	% Fem	#	% Juv	Total	Class Obj	Ylg	Adult	Males	Female	Adult
2022	122	0%	56	143	199	22%	508	57%	180	20%	887	0	11	28	39	35	25
2023	122	0%	20	67	87	22%	199	49%	118	29%	404	0	10	34	44	59	41

Appendix A. 2025 EL 743 Pine Ridge Aerial Abundance Results

Surveyors: Brandon Werner, Kylie Sinclair, Sean Cotteleer, Simon Martinez

Date: 4/28/2025 – 4/29/2025

Vendor/Helicopter: 307 Aviation/Red Robinson R66

Total Polygons Surveyed: One hundred and ten polygons were flown, 76 low stratum and 34 of high stratum.

Total Survey Time: 19 flight hours were flown.

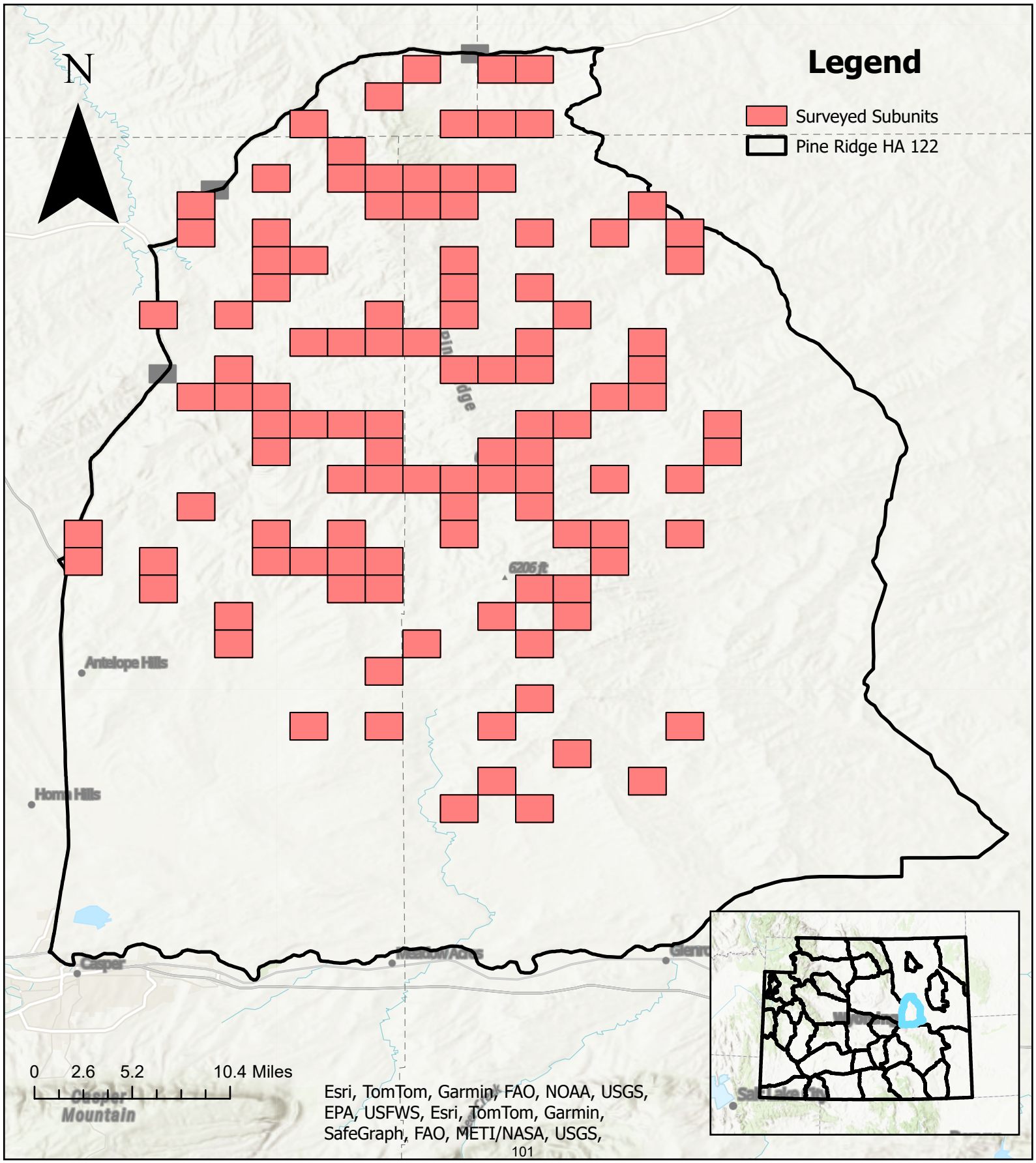
Costs: The total cost of the survey was $21,178.00

Weather: The weather was ideal for the duration of the project. The temperature was around 60 degrees both days. There was light to no wind on both days that were flown. There was no snow on the ground which increased the probability of detection.

Results: Managers flew 110 polygons, 76 that were in low stratum areas and 34 that were in high stratum. Within these polygon 542 elk were observed. Using a spreadsheet model manager's estimate a population of 2,030 (CI=1199 - 2861) elk in this herd unit.

2025 HA 122 Sightability Estimate							
Raw Count	**Total Estimate**	**LCI**	**UCI**	**Total Variance**	**Sampling Variance**	**Sightability Variance**	**Model Variance**
542	2030.0763	1199.125	2861.027	179737.4201	168574.732	8205.379813	2957.30825

2025 Pine Ridge Sightability Abundance Survey



2024 - JCR Evaluation Form

SPECIES: Bighorn Sheep

PERIOD: 6/1/2024 - 5/31/2025

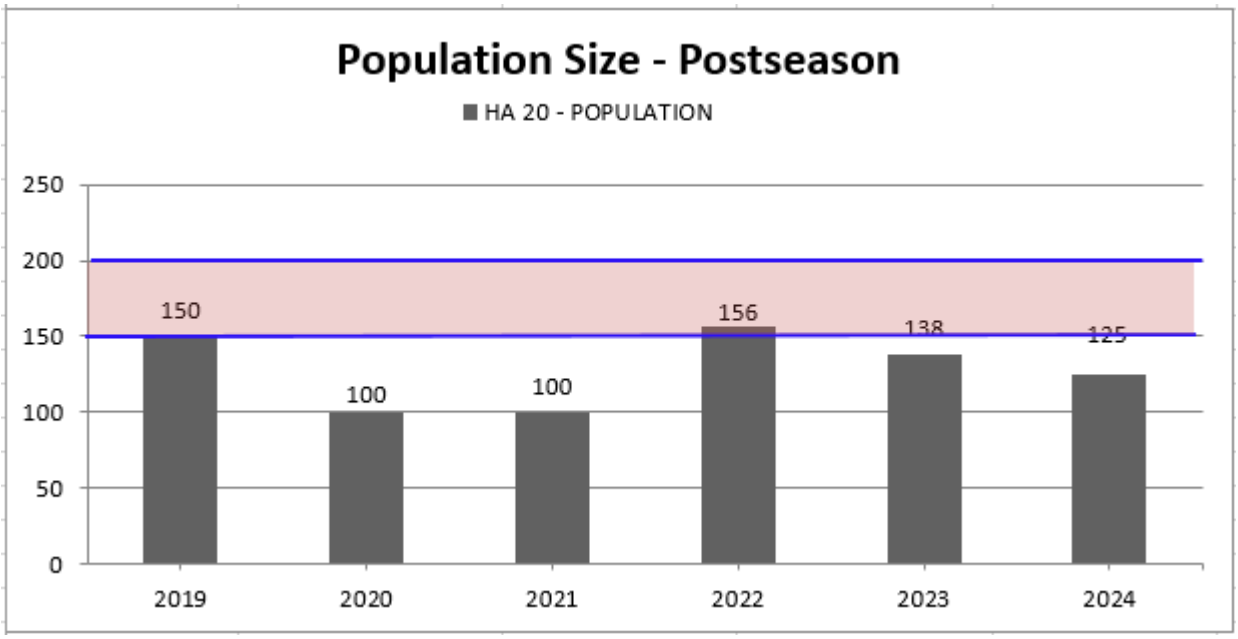
HERD: BS720 (Non-Herd Unit)

HUNT AREAS: 20 (Kouba Canyon)

PREPARED BY:MATT HUIZENGA

	2019 - 2024 Average	2024	2025 Proposed
Population:	154	125	140
Harvest:	2.2	1	1
Hunters:	2.2	1	1
Hunter Success:	100%	100%	100%
Active Licenses:	2.2	1	1
Active License Success:	100%	100%	100%
Recreation Days:	10	18	5
Days Per Animal:	6.6	18	5.0
Males per 100 Females	109	112	
Juveniles per 100 Females	45	68	

Population Objective (± 20%) :	150 – 200
Management Strategy:	*Joint Management with South Dakota*
Number of years population has been + or - objective in recent trend:	2
Model Date:	No Model (Pop. Est. from ground Survey)



2025 HUNTING SEASONS

BIGHORN SHEEP HUNT AREA 20 (KOUBA CANYON)

NON-HERD UNIT

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
20	1	Aug. 15	Aug. 31	Sep. 1	Nov. 30	1	Any ram (1 resident)

2024 Hunter Satisfaction: *Bighorn Sheep (BHS) Hunters Not Surveyed*

2025 Management Summary

Hunting Season Evaluation

At the start of the 2021 bio-year, there were 21 ewes and 17 rams with active VHF radio collars in this herd. In addition, there were at least three active VHF collars on ewes collared as part of a previous project. Over the next 12 months, five of the collared ewes and eight of the collared rams died, yielding an annual mortality rate 21% for collared ewes and 47% for collared rams, with two of the collared rams being harvested by hunters. Bighorn sheep observations during the 2021-22 winter indicated a large proportion of radio-collared sheep in the herd and virtually no lambs. Poor lamb survival and lower numbers of observed sheep suggested this herd had declined, perhaps as a result of an Epizootic Hemorrhagic Disease (EHD) die-off that had affected area deer and antelope herds significantly. A sightability flight flown in February, 2022 detected 75 total sheep, including 22 of the 23 collared sheep known to be in the survey area. However, it did not produce a useable population estimate. In November, 2022 South Dakota Game Fish and Parks (SDGF&P) ran multiple ground-based sightability surveys in this herd. The fifth and final survey produced the best results. A total of 76 bighorn sheep were observed producing a population estimate of 156 sheep (95% CI= 96 – 254) and a ratio of 47 lambs:100 ewes:58 rams, while the mean of all the classifications made during the surveys yielded 60 lambs:100 ewes:98 rams. In November of 2023, SDGF&P again conducted their ground-based survey using radio-collared sheep yielding an estimated population of 138 sheep (95% CI = 56-340). The minimum count produced during the 2023 effort was 25 rams, 21 ewes, and 14 lambs, for a total minimum count of 60 sheep residing in both states. The average, observed sex/age ratio of all five surveys was 58 lambs:100 ewes:92 rams, with about 45% of the rams being classified as Class IV (trophy class), compared to about 60% in 2022. A helicopter classification flight flown in Wyoming in February, 2024 detected 56 sheep, with an observed lamb:ewe:ram ratio of 15:100:93. Ground counts were again completed by SDGF&P in Nov./Dec. 2024. From these counts, the minimum count produced 28 rams, 25 ewes, and 17 lambs, for a total minimum count of 70 sheep. The observed ratio was 68 lambs:100 ewes:112 rams. Ram classification data was not obtained in 2024. Due to a lack of observed collared sheep, managers were not able to produce a valid mark-remark estimate, however managers estimated a total population of approximately 125 sheep in 2024.

Following the perceived population decline in bio-year 2021, this hunt area went from three Wyoming licenses available to one for the 2022 season, while SDGF&P continued to issue three licenses. After discussions with SDGF&P, it was decided to issue two Wyoming licenses for the 2023 hunting season, and both hunters harvested mature rams. There were possibly up to 8 radio-

collared rams available to hunters at the beginning of the 2023 hunting season, but 2 of these collars had not been detected since 2021. Of the five rams hunters harvested in 2023 (2 WY, 3 SD), four were collared. This high proportion of collared rams in the harvest, coupled with the fact that days to harvest a ram increased from an average of 2.8 between 2015 and 2020 to an average of 5.1 days since 2021, has local managers concerned about the availability of trophy class rams. Because of this, and what seems to be a declining herd, Wyoming issued one any-ram license in 2024 and 2025. In addition, three rams will likely be harvested in South Dakota due to the number of licenses they are required to issue. Using average classification counts and the 2023 population estimate produced by South Dakota's fall survey, the data suggest there were about 50 mature rams in the population, of which perhaps 20 were Class IV rams. If the combined interstate harvest objective of four rams is again met in 2025, it likely will not exceed the management objective of harvesting no more than 10% of the rams, or 50% of the class IV rams. Instead, it would be a conservative harvest, which the local Wyoming managers continue to foster in 2025 before revisiting license issuance and population estimates with South Dakota for 2026.

Management Objective

In 2012, joint management criteria for this herd were agreed upon with SDGF&P. This management framework includes an interstate population objective of 150 to 200 sheep. Additionally, hunting seasons are to be implemented when there is a combined Wyoming and South Dakota population of at least 75 to 100 sheep. These seasons are intended to provide trophy ram hunting, such that harvest of rams in relation to population demographics allows for replacement of Class IV (¾ curl) rams taken. To this end, harvest should not normally exceed 50% of known number of Class IV rams, and annual harvest should not exceed 10% of the total rams.

Population Estimation and Research Projects

Garnering an accurate population estimate of this herd is vital to its management, and three methods have been tried, all with limited success:

A ground-based mark-resight survey relying on radio-collared BHS was developed as part of a graduate student project in 2013. Most years, this method has produced estimates with very wide confidence intervals due to the limited number of radio-collared sheep available. Mark-resight data have been analyzed using a modified Lincoln-Peterson estimate, and one based upon a Poisson distribution, along with a detection rate function. Completing these surveys as designed in recent years has become difficult due to more restricted access to private land.

A forward-looking infrared (FLIR) survey was attempted in June, 2018. However, the FLIR system was not able to effectively detect BHS.

Between December 2019 and February 2022, a project was conducted to develop a helicopter-based sightability model for this herd in conjunction with radio-collared sheep. This study was conducted in tandem with SDGF&P. In mid-February of 2022, a sightability flight was flown. However, detection of sheep on set transects not relying on radio collar signals was extremely low, resulting in an estimate with exceedingly wide confidence intervals. It appeared that the bighorn sheep were very sensitive to the presence of a helicopter and sought hiding cover to avoid detection. As such, this method was deemed untenable for producing a reliable population estimate.