

## TABLE OF CONTENTS

<u>Antelope</u>	<u>Herd #</u>	<u>Hunt Area #</u>	<u>Pages</u>
Copper Mountain	201	76,79,114,115.....	1-5
Fifteenmile	204	77, 83,110.....	6-9
Carter Mountain	205	78, 81, 82.....	10-12
Badger Basin	207	80 .....	13-14
 <u>Mule Deer</u>			
Paintrock	207	41, 46, 47.....	15-19
Southwest Bighorns	208	35-37, 39, 40, 164.....	20-26
Basin	209	125,127.....	27-29
Greybull River	210	124,165.....	30-33
Shoshone River	211	121-123.....	34-37
Owl Creek/Meeteetse	212	116-120 .....	38-44
Upper Shoshone	215	110-115 .....	45-49
Clarks Fork	216	105, 106, 109,121 .....	50-55
 <u>White-Tailed Deer</u>			
Big Horn Basin	201	36, 37 47, 51, 53, 110-113, 116-118, 121-122, 124, 127, 164, 165.....	56-61
 <u>Elk</u>			
Medicine Lodge	211	41, 45.....	62-65
Gooseberry	214	62-64 .....	66-69
Cody	216	55, 56, 58-61, 66.....	70-74
Clarks Fork	217	51, 53, 54.....	75-78
 <u>Moose</u>			
Absaroka	201	8, 9, 11.....	79-82
 <u>Bighorn Sheep</u>		(HA/sub unit)	
Absaroka	200	1-5, 22, OCM/WRIR.....	83-85
Devils Canyon	212	12.....	86-89
 <u>Rocky Mountain Goat</u>			
Beartooth	201	1, 3, (514 MT) .....	90-91

## 2024 - JCR Evaluation Form

SPECIES: Pronghorn

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

HERD: PR201 - COPPER MOUNTAIN

HUNT AREAS: 76, 79, 114-115

PREPARED BY:ASHLEIGH RHEA

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Population:	5,683	5,749	6,000
Harvest:	603	386	400
Hunters:	702	447	465
Hunter Success:	86%	86%	86%
Active Licenses:	779	481	500
Active License Success:	77%	80%	80%
Recreation Days:	2,883	1,685	1,650
Days Per Animal:	4.8	4.4	4.1
Males per 100 Females	45	50	
Juveniles per 100 Females	53	61	

Population Objective ( $\pm$  20%) : 4800 (3840 - 5760)

Management Strategy: Recreational

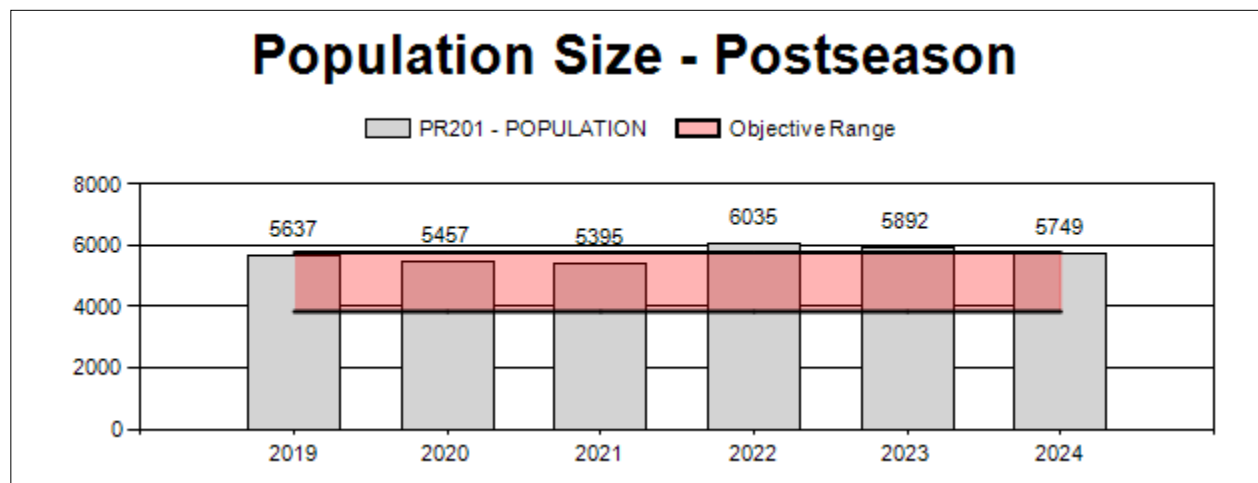
Percent population is above (+) or below (-) objective: 20%

Number of years population has been + or - objective in recent trend: 3

Model Date: 03/18/2025

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq$ 1 year old:	2%	3%
Males $\geq$ 1 year old:	9%	15%
Proposed change in post-season population:	24%	-9%



**2025 Hunting Seasons**  
**Copper Mountain Pronghorn (PR201)**

Hunt Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
76	1	Aug. 15	Sep. 30	Oct. 1	Oct. 31	100	Any antelope
79	0			Oct. 1	Oct. 31	25	Any antelope, muzzle-loading firearms only
79	1			Oct. 1	Oct. 15	25	Any antelope valid on or within one-half (1/2) mile of irrigated land
79	6			Sep. 1	Nov. 30	75	Doe or fawn valid on or within one-half (1/2) mile of irrigated land
79	9			Aug. 15	Sep. 30	50	Any antelope, archery only
114	1	Aug. 15	Sep. 30	Oct. 1	Oct. 31	50	Any antelope
114	6	Aug. 15	Aug. 31	Sep. 1	Oct. 14	25	Doe or fawn valid on or within one-half (1/2) mile of irrigated land
114	7	Aug. 15	Aug. 31	Oct. 15	Nov. 30	25	Doe or fawn valid on or within one-half (1/2) mile of irrigated land
115	1	Aug. 15	Sep. 30	Oct. 1	Oct. 31	150	Any antelope
115	6	Aug. 15	Aug. 31	Sep. 1	Nov. 30	50	Doe or fawn valid east of the Nowood River or south of the Nowater Stock Trail (B.L.M. Road 1404)

**2024 Hunter Satisfaction:** 84% Satisfied, 11% Neutral, 6% Dissatisfied

**2025 Hunt Management Summary**

**Hunting Season Evaluation**

The herd unit has seen excellent increases in fawn production the past three years (70:100 does, 2022; 60:100, 2023; and 61:100, 2024), however, the 2025 season structure remains conservative due to a history of drought and a significant late winter mortality event in 2018–2019 and

uncertainty around the most recent line-transect abundance estimate. Total number of animals classified prior to the hunting season reflects an upward trend from a low classification year in 2021 of 947 animals to a four-year high of 1,293 animals classified in 2024. Hunter success was 86% in 2024, a marked improvement from the 75% success in 2023 and days per harvest continues to trend down (4.4 days per harvest) compared to the recent high of 5.8 days per harvest in 2022. Despite these positive improvements and high hunter satisfaction (84%), field personnel estimates that a 50% decline has occurred in this pronghorn population when compared to numbers prior to 2019. Overall habitat conditions continue to decline in this herd due to increases in cheatgrass prevalence and expansion. Under these scenarios, pronghorn numbers will continue to decline and exhibit population fluctuations when drier weather patterns occur.

Due to unseasonably warm and dry conditions in the summer and fall of 2024, a large number of damage issues occurred throughout the herd unit. The reimplementation of the Hunt Area 114 Type 7 licenses and alteration of Hunt Area 114 Type 6 license dates, will allow for targeted damage issues to be addressed in both the early and late fall hunting seasons. Given the recent increase in fawn ratios and total number classified, particularly in Hunt Area 79, 25 Type 0 licenses will be introduced in Hunt Area 79. This allows for additional, but limited hunter opportunity in a hunt area where recreational opportunity has previously been restricted to Type 9 licenses or under the limitation of within one-half (1/2) mile of irrigated land. Balancing these additions, no quota changes will be implemented for the Type 1, Type 6, and Type 9 licenses within the herd unit.

Damage issues associated with dry weather patterns will continue to be a management concern for this pronghorn herd, especially in those agricultural areas surrounding Worland. Adjusting doe/fawn licenses will be considered annually to allow for crop damage prevention, regardless of population trends.

### **Management Objective Review**

The Copper Mountain Pronghorn herd unit objective was reviewed in 2022, with no changes. The herd unit objective will be evaluated again in 2027.

### **Population Modeling**

Given the large population and harvest fluctuations observed in this herd unit, and in particular a large decrease in female harvest in 2020, managers opted to deviate from the default structure for pronghorn and used a fixed effect model that incorporated constant adult survival in addition to constant reproduction and juvenile survival. Furthermore, managers incorporated a wide timespan (2000–2026) to better capture these unpredictable population changes. This timeframe also allowed managers to include abundance estimates conducted in 2000, 2004, and 2007. A more recent line-transect abundance estimate was conducted in the spring of 2024. This survey estimated the population for the Copper Mountain herd unit as 11,514 (CL = 10,624–12,404). Potential sources of error lie in a violation of the assumptions of detection within a line-transect survey and the low density nature of this herd despite a large herd unit. Using this abundance estimate, the 2024 postseason population estimate for this herd from the PopR IPM was 5,749 (CL = 5,215–6,544). IPM convergence was excellent, with all Rhat Max values less than 1.1. Managers agree that the final PopR IPM model better depicts the current population compared to the line-transect abundance estimate.

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**Appendix A. 2024 PR 201 – Copper Mountain Pronghorn Line Transect Summary**

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Survey Dates:	5/28 –5/31/2024
Total Survey Hours:	26.8
Survey Cost:	\$9,402.00
Flight Service:	Wyoming Aero Photo
Aircraft:	Cessna 182M
Observers:	Rhea, A. and Stephens, S.

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**Flight Conditions**

Surveys were conducted both in the morning and evenings, from 06:00 –11:00 in the mornings and 17:30 and 20:45 in the evenings. Cloud cover was minimal (<15%) and temperatures ranged from 50 – 72 degrees Fahrenheit. Transects were flown in a north-to-south orientation and at a nominal altitude of 300 feet above ground level.

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**Survey Design and Flight Data**

Number of Transects:	121
Total Transect Length Surveyed (mi):	1922.1
Occupied Habitat (mi <sup>2</sup> ):	2766
Number of Transects w/ Pronghorn:	78
Number of Individuals Detected:	720
Number of Groups Detected:	362
Mean Group Size:	2.0

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**Model Output**

Density Estimate (animals/mi <sup>2</sup> 95% CI):	4.62 (3.33 –6.03)
Population Estimate (95% CI):	12,786 (9,223 –16,676)
Detection Probability (95% CI):	0.65 (0.55 –0.67)

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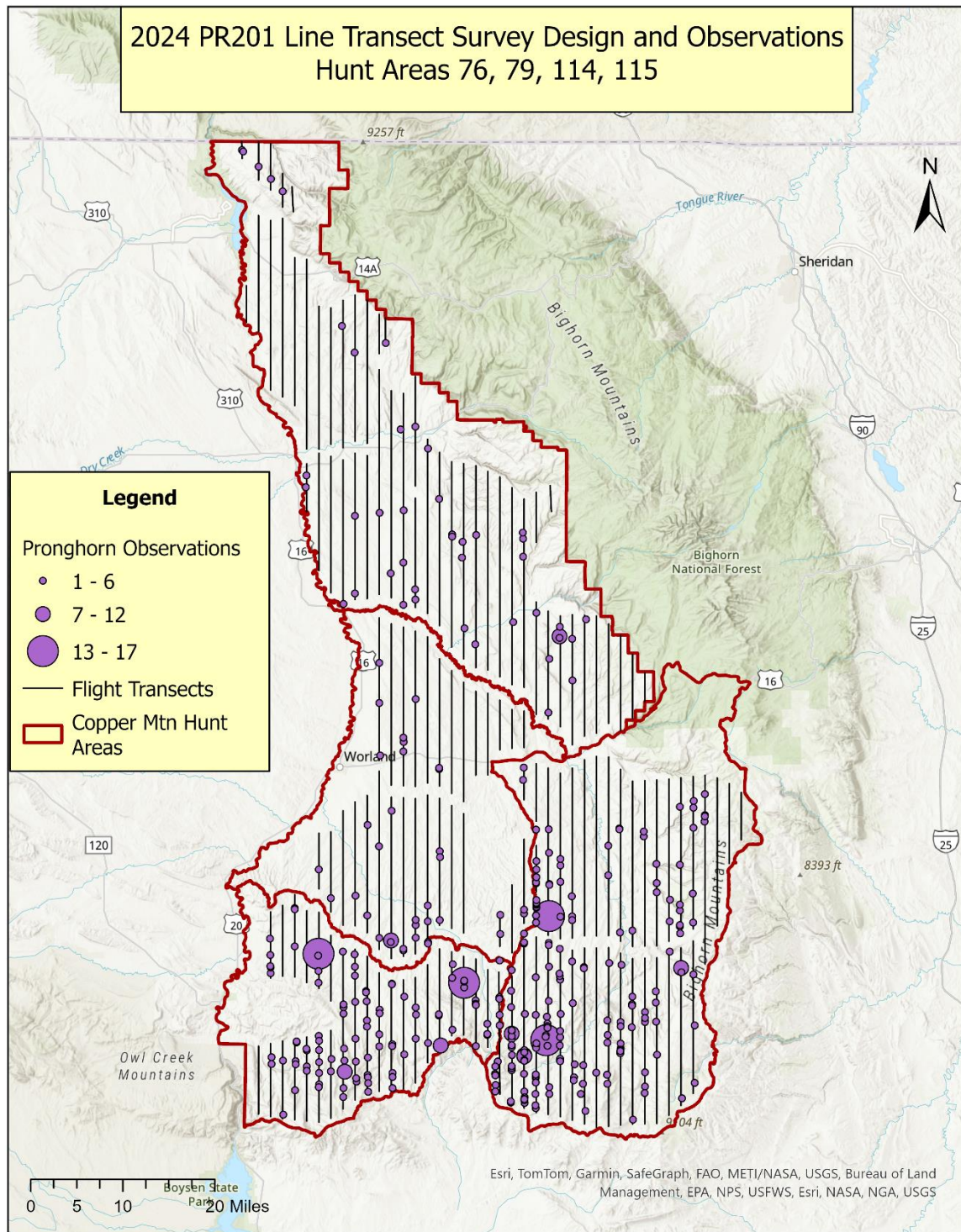


Figure 1: Map of study design and pronghorn observations for line transect abundance survey conducted May 2024 in the Copper Mountain Pronghorn Herd (PR201); Hunt Areas 76, 79, 114, and 115.

## 2024 - JCR Evaluation Form

SPECIES: Pronghorn

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

HERD: PR204 - FIFTEENMILE

HUNT AREAS: 77, 83, 110

PREPARED BY:ASHLEIGH RHEA

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Population:	5,020	6,512	6,000
Harvest:	574	484	500
Hunters:	615	494	525
Hunter Success:	93%	98%	95%
Active Licenses:	692	559	570
Active License Success:	83%	87%	88%
Recreation Days:	1,938	1,646	1,650
Days Per Animal:	3.4	3.4	3.3
Males per 100 Females	42	35	
Juveniles per 100 Females	59	79	

Population Objective ( $\pm 20\%$ ): 4600 (3680 - 5520)

Management Strategy: Recreational

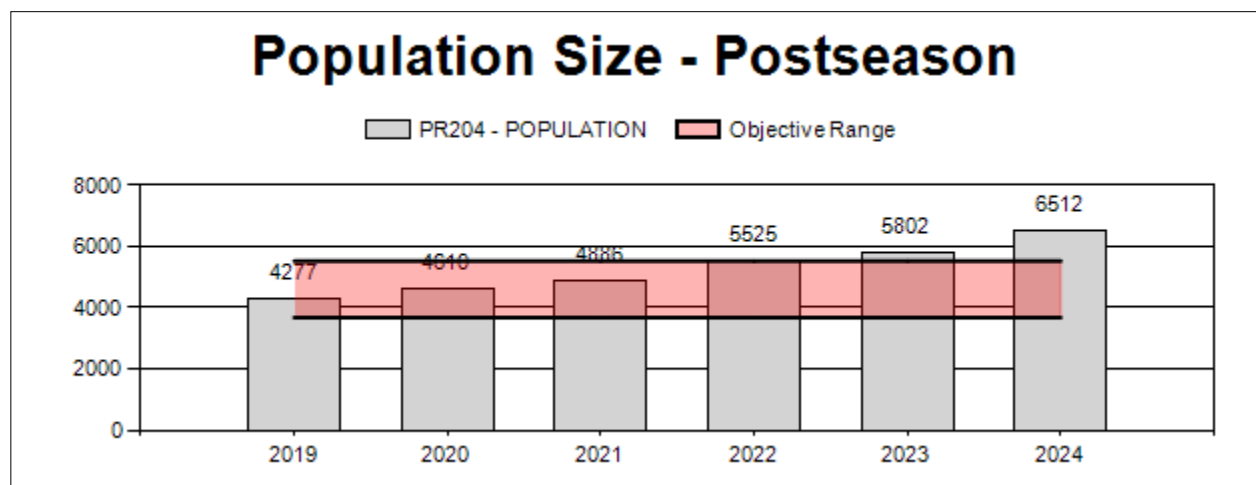
Percent population is above (+) or below (-) objective: 42%

Number of years population has been + or - objective in recent trend: 3

Model Date: 02/12/2025

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq 1$ year old:	5%	5%
Males $\geq 1$ year old:	24%	24%
Proposed change in post-season population:	15%	-9%



### 2025 Hunting Seasons

## Fifteen Mile Pronghorn (PR204)

Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
77	1	Aug. 15	Sep. 19	Sep. 20	Oct. 14	125	Any antelope
77	6	Aug. 15	Aug. 31	Sep. 1	Oct. 14	25	Doe or fawn valid on or within one-half (1/2) mile of irrigated land
77	7	Aug. 15	Aug. 31	Oct. 15	Nov. 30	25	Doe or fawn valid on or within one-half (1/2) mile of irrigated land
77	8	Aug. 15	Aug. 31	Sep. 1	Oct. 31	25	Doe or fawn valid north of Wyoming Highway 30 or within one-half (1/2) mile south of Wyoming Highway 30
83	1	Aug. 15	Sep. 19	Sep. 20	Nov. 7	200	Any antelope
83	6	Aug. 15	Aug. 31	Sep. 1	Nov. 30	100	Doe or fawn valid on or within one-half (1/2) mile of irrigated land
83	7	Aug. 15	Aug. 31	Sep. 1	Oct. 14	50	Doe or fawn valid on or within one-half (1/2) mile of irrigated land within Gooseberry drainage
83	8	Aug. 15	Aug. 31	Oct. 15	Dec. 15	50	Doe or fawn valid on or within one-half (1/2) mile of irrigated land within Gooseberry drainage
110	1	Aug. 15	Sep. 19	Sep. 20	Oct. 14	150	Any antelope
110	6	Aug. 15	Sep. 19	Sep. 20	Oct. 14	75	Doe or fawn

**2024 Hunter Satisfaction:** 88% Satisfied, 9% Neutral, 3% Dissatisfied

## 2025 Management Summary

### Hunting Season Evaluation

The 2025 season structure for the Fifteen Mile herd unit is once again, relatively conservative due to declines in pronghorn numbers in recent years. A 2018–2019 significant winter loss, ensued by two consecutive years of drought conditions, have facilitated this population decline. However, with milder winter conditions from 2023–2025 and increased spring moisture in 2023, this population appears to be trending upwards. Preseason classification counts for 2024 (2,032 animals) increased substantially from the previous 5-year average of 1,335 animals and constitute the highest count since 2018 where 2,100 animals were classified. Fawn ratios the past three years have been favorable at an average of 69:100 does and this past year 79:100 does were counted,



which is the highest fawn ratio in 10 years. Days per animal harvested has been relatively consistent since 2021 at an average of 3.4 days per animal. Hunter success had declined from a record high of 110% in 2018 to a record low of 84% in 2021, but has since improved to 98% in 2024. Overall, habitat conditions continue to decline in this herd due to increases in cheatgrass prevalence and expansion. Under these scenarios, pronghorn numbers will continue to decline and exhibit population fluctuations when dry weather patterns occur.

Due to unseasonably warm and dry conditions in the summer and fall of 2024, a large number of damage issues occurred throughout the herd unit. In response to damage issues, the Hunt Area 77 Type 7 license will be reintroduced. The addition of the Hunt Area 77 Type 8 license is to address chronic damage complaints on a limited number of properties surrounding Wyoming Highway 30. In Hunt Area 83, a quota increase of 75 licenses was warranted to address damage issues on agricultural grounds surrounding Thermopolis. These licenses will also help address residential issues of pronghorn within Thermopolis city limits. The addition of both the Hunt Area 83 Type 7 and Type 8 licenses will address numerous damage scenarios concentrated along Gooseberry Creek. The different but abutting regular season dates for the Hunt Area 83 Type 7 and Type 8 licenses will address differences in pronghorn densities on agricultural fields throughout the fall hunting season and ensure that there hunters with unfilled licenses are readily available. Balancing these additions and considering a low buck ratio of 41:100 on average, no quota changes will be implemented for the Type 1 licenses within the herd unit.

Damage issues associated with dry weather patterns will continue to be a management concern for this pronghorn herd, especially in those agricultural areas surrounding Thermopolis and along both Owl Creek and Gooseberry Creek in Hunt Areas 77 and 83. Adjusting doe/fawn licenses will be considered annually to allow for crop damage prevention, regardless of population trends. During the 2024 hunting season, there was one authorization for auxiliary doe/fawn harvest under the Chapter 34 Regulation. In total, 14 antelope (12 does and 2 fawns) were harvested under these authorizations in addition to totals reported in the harvest survey. Details are as follows:

- **Auxiliary Hunt 1 – Antelope Hunt Area 83**
  - Washakie County – 1 participating landowner
  - Season Dates: September 28, 2024–October 20, 2024
  - 15 auxiliary licenses issued
  - Harvest = 14 antelope (12 does and 2 fawns)

### **Management Objective Review**

The Fifteen Mile Pronghorn herd unit objective was last reviewed in 2022 and is next scheduled to undergo review in 2027.

### **Population Modeling**

Managers chose to model this herd using the default structure for pronghorn; incorporating constant adult survival and time-varying juvenile survival and reproduction. Furthermore, managers incorporated a wide timespan (2000–2026) to better capture long-term and varying population fluctuations. The 2024 postseason population estimate for this herd from the PopR IPM was 6,512 (CL = 5,790–7,175). A line-transect abundance survey was conducted in the spring of

2023 for the Fifteen Mile herd and calculated an approximate herd abundance estimate of 9,941 (CL = 5,831–14,051) pronghorn. Despite differences between estimates, the PopR model estimate does fall within the confidence levels estimated from the line-transect abundance.

IPM convergence was suitable and fawn ratio estimates produced by the IPM aligned well with recorded data for this herd. One drawback of the model can be seen in the alignment of observed buck ratios with the IPM modeled ratio. A potential explanation may be found in how buck ratios have seen somewhat extreme fluctuations over time, while fawn ratios have tended to experience an increase or decrease and then level off. With more regular abundance estimates throughout time, we expect the model to reach a more accurate estimate in the future. Given the recent increases in the number of animals classified and higher fawn ratios, managers agree that this herd unit undergoing population increase just not to the extent that the model depicts.

## 2024 - JCR Evaluation Form

SPECIES: Pronghorn

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

HERD: PR205 - CARTER MOUNTAIN

HUNT AREAS: 78, 81-82

PREPARED BY: SAM STEPHENS

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Population:	7,974	6,342	6,000
Harvest:	925	859	850
Hunters:	957	815	800
Hunter Success:	97%	105%	106 %
Active Licenses:	1,099	958	950
Active License Success:	84%	90%	89 %
Recreation Days:	3,490	2,802	2,800
Days Per Animal:	3.8	3.3	3.3
Males per 100 Females	50	49	
Juveniles per 100 Females	52	61	

Population Objective ( $\pm 20\%$ ) : 7000 (5600 - 8400)

Management Strategy: Recreational

Percent population is above (+) or below (-) objective: -9.4%

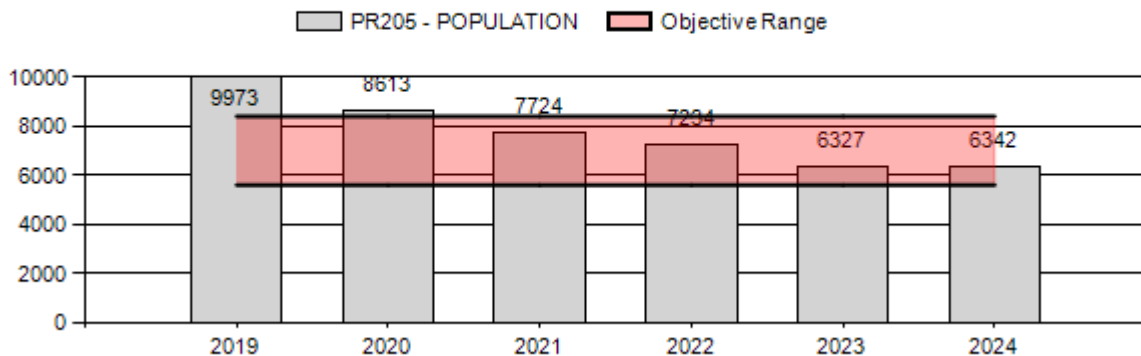
Number of years population has been + or - objective in recent trend: 3

Model Date: 01/29/2025

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq 1$ year old:	9%	9%
Males $\geq 1$ year old:	22%	22%
Proposed change in post-season population:	101%	94%

## Population Size - Postseason



**2025 HUNTING SEASONS**  
**CARTER MOUNTAIN PRONGHORN HERD (PR205)**

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
78	1	Aug. 15	Sep. 19	Sep. 20	Oct. 31	100	Any antelope
78	6			Aug. 15	Nov. 30	100	Doe or fawn valid on irrigated land
78	7			Oct. 15	Nov. 30	50	Doe or fawn valid on irrigated land in Big Horn County
81	1	Aug. 15	Sep. 19	Sep. 20	Nov. 15	175	Any antelope
81	6	Aug. 15	Sep. 19	Sep. 20	Nov. 15	150	Doe or fawn
82	1	Aug. 15	Sep. 19	Sep. 20	Oct. 14	175	Any antelope
82	2	Aug. 15	Sep. 19	Oct. 15	Nov. 15	100	Any antelope valid east of Wyoming Highway 120
82	6	Aug. 15	Sep. 19	Sep. 20	Oct. 14	175	Doe or fawn
82	8	Aug. 15	Sep. 19	Oct. 15	Nov. 30	25	Doe or fawn valid in Big Horn County

**2024 Hunter Satisfaction:** 88% Satisfied, 9% Neutral, 3% Dissatisfied

**2024 Management Summary**

**1.) Hunting Season Evaluation:**

Quota reductions were made in 2024 in response to a decreasing population and lack of recruitment from the 2023 biological year. In 2024 recruitment improves slightly to 61 fawns per 100 does. The post-season population estimate (6,342) is within 20% of the population objective (7000) but modeled estimates indicate moderate population decline (0.94) in 2025. Increased harvest from 2021-2022 paired with significant winter mortality were likely responsible for bringing the herd under objective from 2023-24. Crop damage concerns have emanated from increased concentrations of pronghorn in the eastern portion of Hunt Area 78. Migratory animals are congregating in Late October and early November. From 2021-2023 this issue was addressed with doe/fawn licensed restricted to private lands in Bighorn County. This license type was removed in 2024 due to a lack of damage concerns. The Type 7 license is intended to address some of these concerns in 2025. In order to balance out the harvest, the Hunt Area 82 Type 8 license was reduced to 25 licenses. This is unlikely to be an issue, since an average of 29 animals were taken on this license type from 2023 to 2024.

**2.) Herd Unit Objective Review:**

In 2025, managers proposed a change to the Carter Mountain Pronghorn Herd Unit boundary. This proposal would effectively increase the size of the Carter Mountain Herd Unit with the

addition of approximately half of current Hunt Area 110. Prior to reviewing the current management objective, managers will wait until this revision is finalized. The review of the current objective will be postponed until 2026.

### **3.) Population Modeling:**

Managers chose to model this herd using constant adult survival, time-varying reproduction and juvenile survival. Based on visual comparison of the available effort variables, “licenses” was selected by managers as the variable most predictably related to annual harvest. The 2024 post season population estimate for this herd unit from the PopR IPM is 6,342 (CL=5,577 – 7,076) pronghorn. This was selected as the most accurate model where convergence was likely due to a lower rhat value (1.05). Additionally it tracks well with an apparent decrease in abundance since the population peaked in 2019 when the last Line-Transect Density Survey was conducted and rendered an estimate of approximately 8600 pronghorn.

## 2024 - JCR Evaluation Form

SPECIES: Pronghorn

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

HERD: PR207 - BADGER BASIN

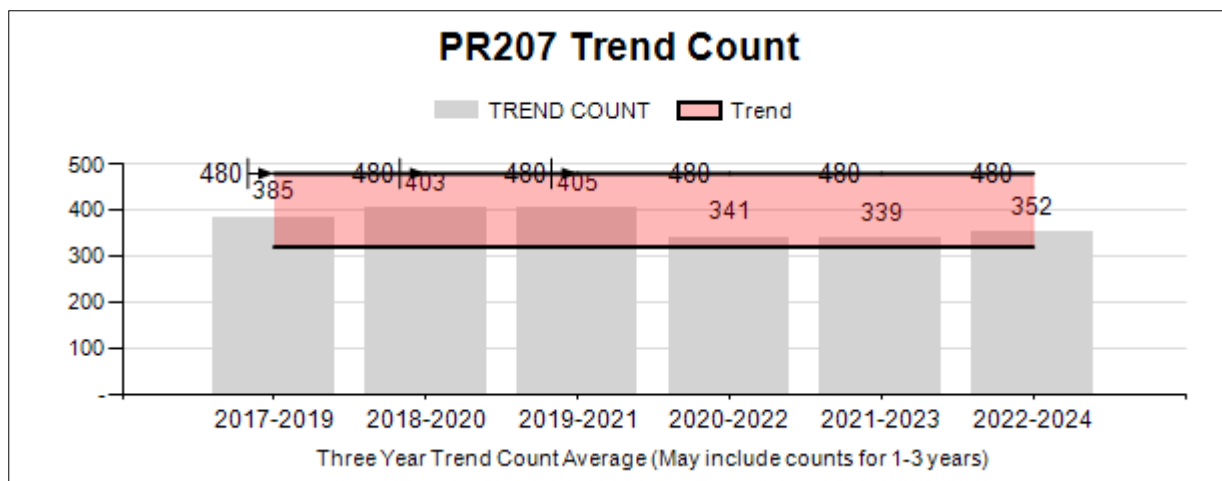
HUNT AREAS: 80

PREPARED BY: TONY MONG

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Trend Count:	381	364	375
Harvest:	117	190	190
Hunters:	128	186	185
Hunter Success:	91%	102%	103 %
Active Licenses:	143	243	245
Active License Success	82%	78%	78 %
Recreation Days:	499	1,126	1,100
Days Per Animal:	4.3	5.9	5.8
Males per 100 Females:	38	60	
Juveniles per 100 Females	36	41	
Trend Based Objective (± 20%)			400 (320 - 480)
Management Strategy:			Recreational
Percent population is above (+) or (-) objective:			-9%
Number of years population has been + or - objective in recent trend:			5

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

	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	n/a%	n/a%
Males ≥ 1 year old:	n/a%	n/a%
Juveniles (< 1 year old):	n/a%	n/a%
Total:	n/a%	n/a%
Proposed change in post-season population:	n/a%	n/a%



**2025 Hunting Seasons  
Badger Basin (PR207)**

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
80	1	Aug. 15	Sep. 19	Sep. 20	Oct. 31	100	Any antelope
80	2	Aug. 15	Sep. 19	Sep. 20	Oct. 31	25	Any antelope valid on private land east of Wyoming Highway 120
80	6	Aug. 15	Sep. 19	Sep. 20	Nov. 15	75	Doe or fawn valid on private land
80	7	Aug. 15	Sep. 19	Sep. 20	Nov. 15	75	Doe or fawn valid on private land east of Wyoming Highway 120

**2024 Hunter Satisfaction:** 77% Satisfied, 11% Neutral, 12% Dissatisfied

## 2024 Management Summary

### Hunting Season Evaluation

We have seen the number of pronghorn on irrigated meadows in the Heart Mountain and Clark areas stabilize and did not make any changes to seasons for 2025. The numbers of pronghorn throughout the herd seem to be stable despite lower fawn ratios (5-year average: 37:100). Fawn ratios have traditionally been low in this herd unit with a 20-year average of 37 (range = 16 to 50). This year fawn ratios (41) were higher than the previous 5-year average (37). Despite the low fawn ratios over the last several years, we have had mild winters which most likely lead to higher fawn survival. The Type 2 and 7 licenses were effective at decreasing higher densities of pronghorn in areas where we are having private land damage issues, with 100% success and 75% success respectively. Overall landowners and hunters are happy with the licenses designed to address damage in the areas east of Wyoming Highway 120. Success of the Type 1 license (90%) indicates hunters were fairly successful in finding pronghorn in the Hunt Area to harvest.

### Management Objective Review

The objective and management strategy for the Badger Basin Pronghorn Herd was last evaluated and approved in 2022, and will not be reviewed again until 2027.

## 2024 - JCR Evaluation Form

SPECIES: Mule Deer

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

HERD: MD207 - PAINTROCK

HUNT AREAS: 41, 46-47

PREPARED BY: SAM STEPHENS

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Population:	6,739	7,124	7,361
Harvest:	634	535	535
Hunters:	1,318	1,348	1,348
Hunter Success:	48%	40%	40%
Active Licenses:	1,393	1,401	1,401
Active License Success:	46%	38%	38%
Recreation Days:	5,772	6,435	6,435
Days Per Animal:	9.1	12.0	12.0
Males per 100 Females	24	31	
Juveniles per 100 Females	62	65	

Population Objective ( $\pm 20\%$ ) : 8000 (6400 - 9600)

Management Strategy: Recreational

Percent population is above (+) or below (-) objective: -11.0%

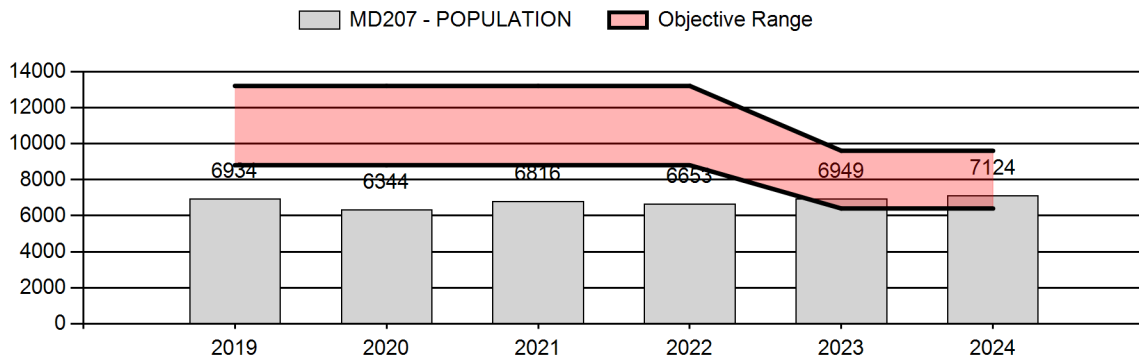
Number of years population has been + or - objective in recent trend: 0

Model Date: 3/18/2025

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq 1$ year old:	3%	4%
Males $\geq 1$ year old:	27%	27%
Proposed change in post-season population:	106%	103%

## Population Size - Postseason





## 2025 PROPOSED HUNTING SEASONS

### PAINTROCK MULE DEER HERD (MD207)

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
41	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Any deer
41	Gen			Oct. 25	Oct. 31		Any deer valid on or within one-half (1/2) mile of irrigated land
41	6	Sep.1	Sep. 30	Oct. 15	Nov. 15	100	Doe or fawn valid on or within one-half (1/2) mile of irrigated land
46	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer or any white-tailed deer
47	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Any deer
47	Gen			Oct. 25	Oct. 31		Any deer valid on or within one-half (1/2) mile of irrigated land
47	6	Sep. 1	Sep. 30	Oct. 15	Nov. 15	100	Doe or fawn valid on or within one-half (1/2) mile of irrigated land

**2025 Region R nonresident quota:** 500 licenses

**2024 Hunter Satisfaction:** 56% Satisfied, 24% Neutral, 20% Dissatisfied

### 2024 Management Summary

#### 1) Hunting Season Evaluation:

Mule deer buck harvest showed a slight decrease in 2024. Warmer weather and a lack of snowfall degraded hunting conditions. This was slightly offset by an abundance of younger bucks in the yearling to 3 y.o range. Buck harvest increased from 407 (2022) to 523 in 2023, but decreased to 377 in 2024. This decrease could be partly attributed to changes made in 2024 which removed Type 1 licenses in Hunt Areas 41 and 47 and a reduction in the Nonresident Region R quota. Collectively, these changes account for a reduction of 150 licenses from 2023 to 2024. Decreases in the nonresident quota aimed to decrease hunter crowding and could be responsible for a slight increase in hunter satisfaction from 2023 (48%) to 2024 (56%). The 2024 abundance estimate showed a slight increase in population from 2023 to 2024. This seems to be accurate given increased fawn recruitment (2022-23) and a stable survival rate seen from GPS collared does in 2024 (82%). Fawn recruitment dipped slightly in 2024 to 65 fawns per 100 does. This could be an indication of future population stagnation following sequential years of growth where recruitment averaged 71:100

(2021-23). Consecutive years of good fawn recruitment has also contributed to increased buck ratios. In spite of higher buck ratios (31:100) hunters continue to raise concerns with a lack of “trophy” bucks. Tooth ages collected in conjunction with CWD sampling showed the median age of harvested bucks was 3.5 in 2024 with this age class accounting for approximately 51% of all bucks checked during the season, a significant increase from 31% (2020-23 average). Older aged (5+ ) bucks are consistently harvested and accounted for approximately 27% of the bucks checked in the field from 2020 to 2023, however this older cohort only accounted for approximately 7% of bucks checked in the field in 2024. Additionally antler class data correlated with ages suggests bucks develop antlers at a slower rate in the Paintrock Herd. Bucks averaged an outside antler spread of 20 inches at ages 4.5, 5.5, and 6.5 (2021-24) compared to a 2024 statewide average of 20, 22, and 23 inches respectively. Post season classifications showed bucks with an antler spread exceeding 20 inches composed 16% of all bucks classified in 2024, which was slightly down from the previous five year average (22%). Adult survival has remained steady in the herd unit with 82% of collared does (n=60) and 83% of collared bucks (n=6) surviving in 2024. Model derived harvest rates suggest 27% of bucks are harvested annually. Maintaining a liberal harvest rate could be beneficial in reducing the transmission of Chronic Wasting Disease.

## **2) Herd Management Objective Review:**

The Paintrock herd is managed with a population based objective of 8000 deer. This objective was reviewed in 2023 and is scheduled to be reviewed again in 2028.

## **3) Chronic Wasting Disease Management:**

The Paintrock mule deer herd was prioritized for CWD sampling in 2021 and 2022. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). Adult males consistently show the highest CWD prevalence rates with the most recent five-year average of 16%. There is fluctuation within years, with 2021 showing the highest percentage of positive adult males and the largest sample size. Yearling males and adult females show lower prevalence estimates than adult males but confidence and fluctuations in estimates are limited by sample sizes. Sampling rates are relatively high, generally exceeding 25% of the harvested male population. Overall the Paintrock mule deer herd has observed a concerning rise in CWD prevalence among adult males since 2015-17 with recent estimates remaining at or below 20%. In 2021, public surveys and meetings specifically held for the Paintrock mule deer herd on CWD management indicated support for targeting hotspots of CWD positive animals, increasing harvest of male mule deer relative to females or overall population reduction, and increasing adult male harvest with later hunting seasons (Table 2). In response, management actions within the Paintrock herd have included extended general seasons near irrigated lands, liberal white-tailed deer quotas, and continued doe mule deer harvest through “any deer” seasons, all aimed at controlling CWD spread and managing CWD prevalence in this deer herd.

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

Year(s)	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>			
	Adult Males (CI = 95%)	Yearling Males	Adult Females	Percent of Harvested Males Sampled
2020	9% (n=47)	0% (2)	7% (15)	11.9
2021	20% (n=140)	5% (20)	8% (37)	31.5
2022	19% (n=107)	0% (14)	9% (35)	29.7
2023	12% (n=126)	11% (19)	19% (31)	27.7
2024	17% (n=89)	23% (13)	0% (27)	27.0
2020-2024	16% (11-20%, n=509)	9% (68)	9% (145)	25.9

\*Mandatory CWD sampling effort

Table 2. Proportion of survey responses supporting various harvest strategies aimed at reducing CWD in the Paintrock herd unit, 2021.

Respondents	Proportion of Responses in Support of Each Harvest Strategy within Category of Respondent								
	Address Hotspots	Mule Deer			White-Tailed Deer			Male Late Season	Do Nothing
		Male Harvest	Female Harvest	Population Reduction	Male Harvest	Female Harvest	Population Reduction		
All <sup>a</sup>	78	54	39	19	62	50	30	69	8
Hunters	70	44	35	9	52	44	17	83	9

### 3) Population Modeling:

In 2021, WGFD biologists began using PopR integrated population models (IPM) to estimate population indices for pronghorn and mule deer. The 2024 postseason population estimate for the Paintrock Herd is 7,124 (CL=5,838-8,755). This estimate appears to be accurate given that the model was anchored to a sightability survey in 2023 which estimated approximately 6,000 deer. Followed by two years of increased fawn recruitment, it is expected that we would see moderate population growth in that time. Convergence was achieved with an Rhat value of 1.04 indicating that modeled and observed values were in agreement.

### 4) GPS Collaring:

In December of 2022, 100 GPS collars were deployed on doe mule deer throughout the Paintrock and Southwest Bighorn Herd Units. The objective of this project is to collect baseline movement and survival data with the goal of improving our understanding of seasonal use, movement, and herd unit interchange to better monitor and manage for CWD. Determining cause-specific mortality is also an important function of collaring animals. Mortality signals are sent remotely and a prompt response is necessary to determine what the cause of death was for each animal. Compiling this data over a two year period will help managers establish whether or not CWD is a significant cause of decline at the population level. This data also helps managers better define herd-unit boundaries and determine what level of interchange between neighboring herd units

could be contributing to CWD transmission. Additionally: maintaining a robust sample of marked individuals will help inform managers what the harvest rates of adult females is for each herd unit and whether or not it's significant to broader population declines. The total sample of collared mule deer in the Paintrock Herd includes 53 collared does, 18 fawns, and 10 bucks. Annual survival and cause specific mortality has been estimated since collars were initially deployed in 2021 during a research project focusing on the neighboring North Bighorn Herd.

**Table 3.** Proportion of marked does that survived from January 1st-December 31st in the Paintrock Herd 2021-24.

Year	Female Survival	Juvenile Survival ( <i>Est</i> )
2021	0.83 (n=12)	0.61
2022	0.88 (n=24)	0.72
2023	0.86 (n=58)	0.62
2024	0.82 (n=60)	0.70

**Table 4.** Cause specific mortality of collared mule deer (does) in the Paintrock Herd from January- December 2024.

Paintrock CWD- 60 collared, 11 mortalities documented (2024)					
Cause-of-death		CWD-Positive	CWD - Not Detected	CWD - Unknown	Total
Clinical CWD		1			1
Predation	Coyote		3	1	4
Predation	Lion	1	1		2
Harvest			1		1
Poaching			1		1
Malnutrition			1		1
Unknown			1		1
Total mortalities		2	8	1	11
Notes - Annual adult female survival is 0.82 in 2024; study ongoing until 2025					

## 2024 - JCR Evaluation Form

SPECIES: Mule Deer

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

HERD: MD208 - SOUTHWEST BIGHORNS

HUNT AREAS: 35-37, 39-40, 164

PREPARED BY:ASHLEIGH RHEA

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Population:	8,245	8,455	8,455
Harvest:	697	545	550
Hunters:	1,448	1,061	1,075
Hunter Success:	48%	51%	51 %
Active Licenses:	1,505	1,123	1,130
Active License Success:	46%	49%	49 %
Recreation Days:	6,290	4,961	4,950
Days Per Animal:	9.0	9.1	9
Males per 100 Females	32	35	
Juveniles per 100 Females	61	75	

Population Objective ( $\pm 20\%$ ): 16000 (12800 - 19200)

Management Strategy: Recreational

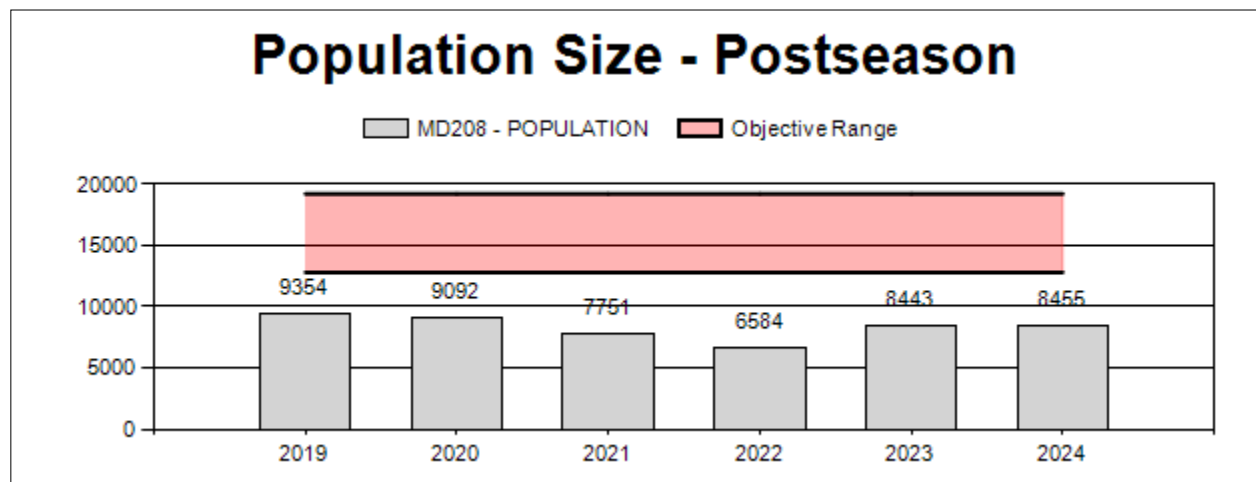
Percent population is above (+) or below (-) objective: -47.2%

Number of years population has been + or - objective in recent trend: 22

Model Date: 02/26/2025

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq 1$ year old:	2%	2%
Males $\geq 1$ year old:	24%	23%
Proposed change in post-season population:	+2%	+4%



**2025 Hunting Seasons**  
**Southwest Bighorns Mule Deer (MD208)**

Hunt Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
35	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer or any white-tailed deer
36	1	Sep. 1	Sep. 30	Oct. 15	Oct. 31	100	Antlered mule deer or any white-tailed deer
36	8	Sep. 1	Sep. 30	Oct. 15	Oct. 31	25	Doe or fawn white-tailed deer
37	1	Sep. 1	Sep. 30	Oct. 15	Oct. 31	50	Antlered mule deer or any white-tailed deer
37, 39	3	Sep. 1	Sep. 30	Nov. 1	Dec. 15	50	Any white-tailed deer
37	6	Sep. 1	Sep. 14	Sep. 15	Nov. 30	25	Doe or fawn valid on or within ½ mile of irrigated land within the Buffalo Creek Drainage
37, 39	8	Sep. 1	Sep. 30	Oct. 15	Dec. 15	100	Doe or fawn white-tailed deer
39	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer or any white-tailed deer
40	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer or any white-tailed deer
40	3	Sep. 1	Sep. 30	Oct. 15	Nov. 30	50	Any white-tailed deer; also valid in Area 35
40	6	Sep. 1	Sep. 30	Oct. 15	Oct. 31	50	Doe or fawn valid on or within one-half (1/2) mile of irrigated land
40	8	Sep. 1	Sep. 30	Oct. 15	Nov. 30	300	Doe or fawn white-tailed deer; also valid in Area 35
164	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 14		Antlered mule deer or any white-tailed deer
164	1	Sep. 1	Sep. 30	Nov. 15	Nov. 30	50	Antlered mule deer or any white-tailed deer within one (1) mile of irrigated land
164	3	Sep. 1	Sep. 30	Oct. 1	Dec. 15	100	Any white-tailed deer
164	6	Sep. 1	Sep. 30	Oct. 1	Nov. 15	50	Doe or fawn valid on or within one-half (1/2) mile of irrigated land

164	7	Sep. 1	Sep. 30	Nov. 15	Nov. 30	50	Doe or fawn valid on or within one (1) mile of irrigated land
164	8			Sep. 1	Dec. 31	200	Doe or fawn white-tailed deer

**2025 Region M nonresident quota:** 400 licenses

**2024 Hunter Satisfaction:** 67% Satisfied, 18% Neutral, 15% Dissatisfied

## **2025 Management Summary**

### **Hunting Season Evaluation**

The Southwest Bighorns Mule Deer herd has experienced significant population declines over the past few years, beginning around 2016. A significant winter mortality event in 2018–2019, two consecutive years of drought following this winter, high CWD prevalence, persistent EHD, and reduced habitat quality associated with cheatgrass invasion and expansion have all been contributing factors in this decline. Accounting for all of these variables, the 2025 hunting season structure will remain relatively conservative with a few exceptions. Hunter success experienced a significant decline from 2020–2022, with a 3-year average of 43% success. The past two years, however, have experienced an increase in hunter success with 55% and 53% success in 2023 and 2024, respectively. Days per harvest has seen a decline in effort from a high in 2021 (11.5 days/harvest) to 8.5 days/harvest in 2024. Fawn ratios experienced a low point from 2018–2022, with an average of 57:100 does. This trend has only begun to reverse in 2023 with a ratio of 72:100 that again increased to 75:100 in 2024. Buck ratios are also seeing a similar trend from a low point in 2020 to the ratio of 35:100 does counted in 2024. Despite the current positive trend in population growth, habitat conditions continue to decline throughout the herd unit as cheatgrass continues to expand. Managers predict that mule deer numbers will continue to struggle and expect population fluctuations as desirable growing conditions, and therefore desirable forage species, experience frequent changes over time.

Given the recreational status of this herd unit and recent increases in hunter success and high buck and fawn ratios, the quota for the Hunt Area 36 Type 1 license increased by 25 licenses. Low harvest in Hunt Area 125 over recent years prompted managers to remove the “also valid in Hunt Area 125” limitation on both the Hunt Area 164 Type 3 and Type 8 licenses.

Addressing high prevalence of CWD and chronic hot spots throughout the Southwest Bighorns herd, and in particular, within Hunt Area 164 has been a high priority for hunters and the general public (see Table 2). Recent increases in CWD prevalence in both 2023 and 2024 (see Table 1) are concerning and merit special attention from managers. The agricultural fields along the northeast corner of Hunt Area 164 is a known CWD hot-spot where both mule deer and white-tailed deer congregate. This portion of the Hunt Area 164 also serves as a wintering ground for both resident and migratory mule deer. GPS collars deployed in 2021 document deer wintering within this hot-spot in Hunt Area 164 and then migrating to portions of Hunt Areas 37, 39, and 40. The addition of both the Hunt Area 164 Type 1 and Type 7 licenses are to serve as a probe in determining the CWD prevalence of both buck and doe mule deer migrating into this hotspot and the efficacy of using harvest to decrease CWD prevalence within the herd unit that stems from this

restricted but high prevalence area. The later hunt season dates allow for migratory animals to complete their migration and be available for harvest. Both the Hunt Area 164 Type 1 and Type 7 licenses will be considered mandatory sampling licenses, to ensure animals harvested from these efforts supply the largest amount of data possible regarding CWD status and age across both sexes.

### Management Objective Review

The Southwest Bighorns Mule Deer herd unit objective was last reviewed in 2024 and is next scheduled to undergo review in 2029.

### Chronic Wasting Disease Monitoring and Management

The Southwest Bighorns mule deer herd was prioritized for CWD sampling from 2019–2021 and again starting in 2024. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). Adult males consistently show the highest CWD prevalence with the most recent five-year average of 23%. Additionally, adult males have been trending up in prevalence year over year, with a noticeable spike of 38% in 2023 from 29 total samples. While sample sizes remain limited overall, adult males consistently provide the largest sample sizes across years and demographic groups. Consequently, prevalence estimates for adult males are the most reliable. Yearling males and adult females, with smaller sample sizes, exhibit lower prevalence and confidence in estimates. Sample dispersion is broad across the unit, with concentrations of detections around Worland and along the Bighorn River tributaries, especially in Hunt Area 164 (Figure 1 & 2). Management efforts have previously been focused on maintaining low deer densities among CWD hotspots, including for white-tailed deer. To better understand deer movement and inform future CWD management, 60 radio collars were deployed on adult doe mule deer in Hunt Area 164 in December 2022. This data will be used to assess and direct further CWD management effectiveness within this herd. In 2021, public surveys and meetings regarding CWD management were held for the Southwest mule deer herd, particularly for Hunt Area 164. Feedback from these outreach surveys and meetings indicated support for targeting hot-spots of CWD positive animals, increasing harvest of male mule deer relative to females or overall population reduction, and increasing adult male deer harvest with later hunting seasons (Table 2). In response to these scoping efforts and the rise in CWD prevalence trends, the 2025 season has additional CWD management actions proposed within the Southwest Bighorns to be focused near Hunt Area 164. These include the addition of the Hunt Area 164 Type 1 and Type 7 licenses detailed in the Hunting Season Evaluation and Appendix 1.

Table 1. CWD prevalence for hunter-harvested mule deer in the Southwest Bighorns Mule Deer Herd, 2020–2024.

Year(s)	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>			
	<b>Adult Males (CI = 95%)</b>	Yearling Males	Adult Females	Percent of Harvested Males Sampled
2020	<b>15% (n=39)</b>	0% (2)	0% (2)	6.3
2021	<b>19% (n=21)</b>	0% (1)	21% (14)	5.1
2022	<b>20% (n=35)</b>	0% (7)	13% (8)	11.4



2023	<b>38% (n=29)</b>	0% (5)	25% (4)	8.5
2024	<b>24% (n=59)</b>	15% (13)	7% (14)	15.8
2020–2024	<b>23% (14–30%, n=183)</b>	7% (28)	14% (42)	9.0

Table 2. Proportion of survey responses supporting various harvest strategies aimed at reducing CWD in the Southwest Bighorns herd unit, 2021.

Proportion of Responses in Support of Each Harvest Strategy within Category of Respondent									
Respondents	Address Hotspots	Mule Deer			White-Tailed Deer			Male Late Season	Do Nothing
		Male Harvest	Female Harvest	Population Reduction	Male Harvest	Female Harvest	Population Reduction		
All <sup>a</sup>	78	54	39	19	62	50	30	69	8
Hunters	71	50	33	17	63	50	33	58	13

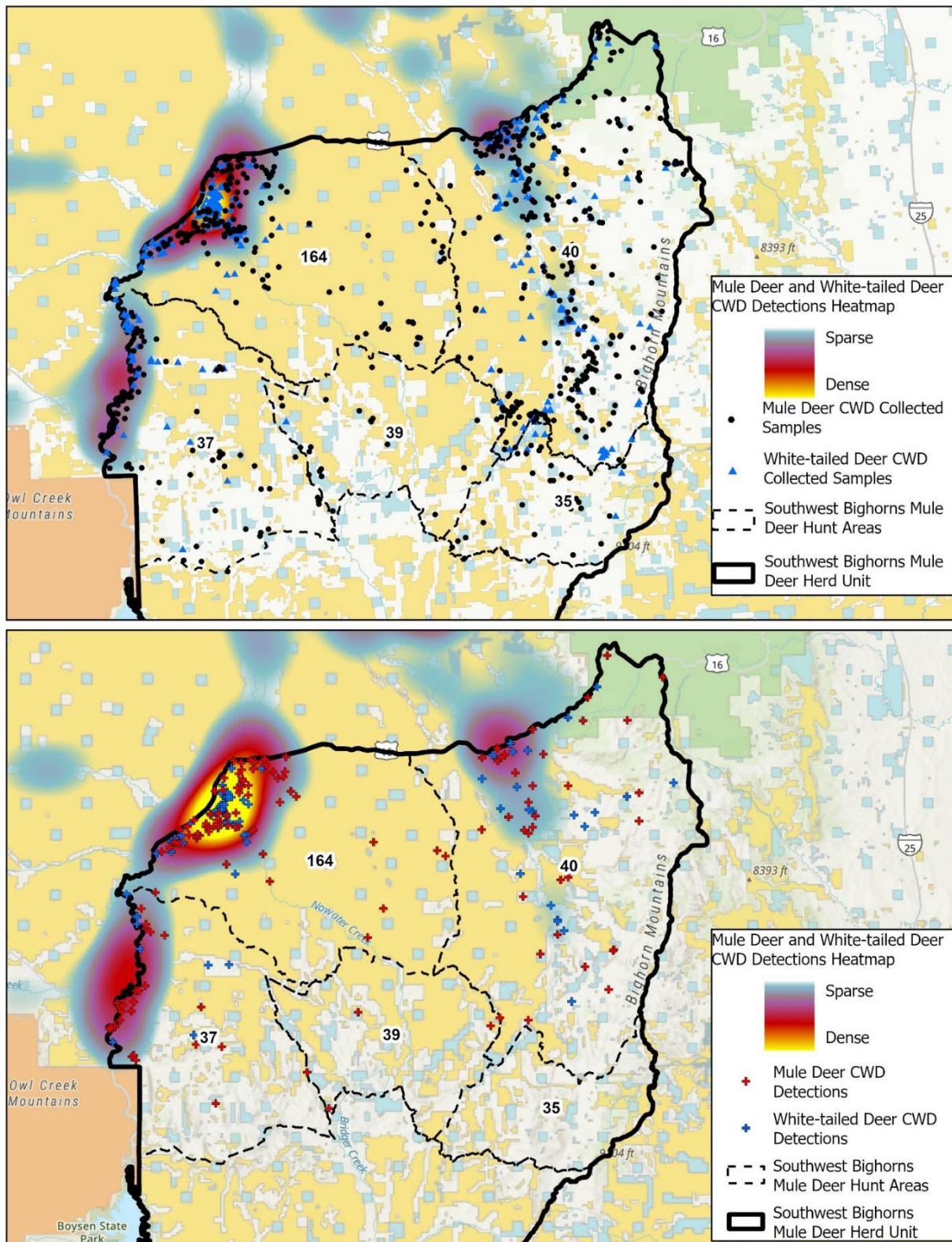


Figure 1 & 2. Total CWD samples collected and heat map of detections (top) and total CWD detections and heat map (bottom) for mule deer and white-tailed deer in the Southwest Bighorns Mule Deer Herd, 2014–2024.

### **Population Modeling**

Given several large population fluctuations and abundance surveys conducted in 2017 and 2021, managers opted to incorporate a wide time frame (2000–2026) to provide a more representative abundance estimate for this dynamic herd unit. Managers maintained the default model structure for mule deer, incorporating constant adult survival and time-varying reproduction and juvenile survival. The 2024 postseason estimate from the PopR IPM was 8,455 (CI=7,648–9,302). IPM convergence was suitable and ratio estimates produced by the IPM aligned well with recorded data for this herd. Last year's postseason estimate for the Southwest Bighorns Mule Deer herd was 8,661 (CL=7,494–10,102) mule deer and an abundance/composition survey conducted in 2021 estimated that there was 7,700 deer in the herd unit. Considering the similarities in number of deer classified, harvest, and both buck and fawn ratios between 2023 and 2024, and that 2021 was a recent low point in the population, field personnel concur that this population is slowly increasing.

## 2024 - JCR Evaluation Form

SPECIES: Mule Deer

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

HERD: MD209 - BASIN

HUNT AREAS: 125, 127

PREPARED BY: ASHLEIGH  
RHEA

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Population:	1,059	824	915
Harvest:	69	66	66
Hunters:	209	172	175
Hunter Success:	33%	38%	38 %
Active Licenses:	210	172	175
Active License Success:	33%	38%	38 %
Recreation Days:	815	711	700
Days Per Animal:	11.8	10.8	10.6
Males per 100 Females	32	33	
Juveniles per 100 Females	58	76	

Population Objective ( $\pm 20\%$ ): 3600 (2880 - 4320)

Management Strategy: Recreational

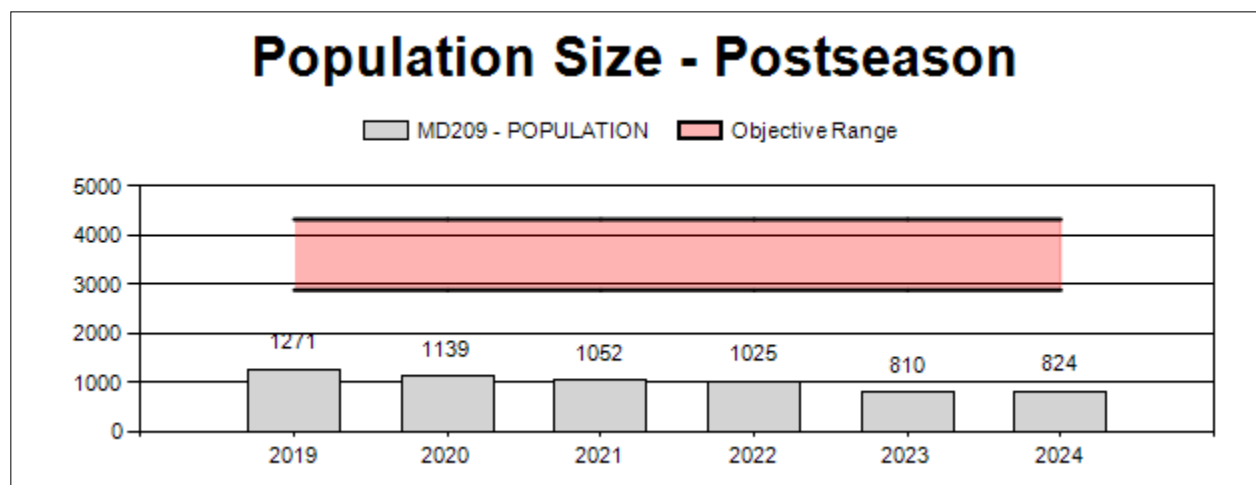
Percent population is above (+) or below (-) objective: -77.1%

Number of years population has been + or - objective in recent trend: 17

Model Date: 02/22/2025

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq 1$ year old:	0%	0%
Males $\geq 1$ year old:	31%	31%
Proposed change in post-season population:	-1%	-6%



## 2025 Hunting Season Basin Mule Deer (MD209)

Hunt Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
125	1	Sep. 1	Sep. 30	Nov. 1	Nov. 15	75	Antlered mule deer or any white-tailed deer
125	1			Nov. 16	Dec. 15		Any white-tailed deer
125	8	Sep. 1	Sep. 30	Nov. 1	Dec. 15	25	Doe or fawn white-tailed deer
127	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer or any white-tailed deer
127	3	Sep. 1	Sep. 30	Nov. 1	Dec. 15	50	Any white-tailed deer
127	8	Sep. 1	Sep. 30	Oct. 15	Dec. 15	100	Doe or fawn white-tailed deer

**2025 Region X nonresident quota:** 100 licenses

**2025 Hunter Satisfaction:** 40% Satisfied, 29% Neutral, 31% Dissatisfied

## 2025 Management Summary

### Hunting Season Evaluation

Recent hunting seasons for the Basin Mule Deer Herd Unit have been very conservative due to low deer numbers throughout the herd unit. Even under these conservative hunting seasons, growth of this herd has been minimal to nonexistent, and has often shown a continuing population decline. A late winter die-off in 2018–2019, along with severe drought conditions in 2020 and 2021, have further depressed this population. The number of deer observed during classification surveys has declined by nearly 60% in recent years. Poor fawn ratios were observed in 2018 and 2019 (53:100 and 44:100), however 2020–2023 fawn ratio averaged 66:100 does and a high ratio of 76:100 does was observed in 2024. Buck ratios are relatively high, with a 5-year average of 31:100, but the total number of bucks classified annually remain low (54 in 2024). A total of 66 bucks were harvested in 2024, which is an improvement from 2023 when an all-time low of 53 bucks were harvested. Hunter satisfaction continues to trend down with a 40% hunter satisfaction rate. No changes regarding mule deer harvest will be implemented for the 2025 hunting season. The cross-over option on the Hunt Area 127 type 3 license was eliminated due to minimal or nonexistent harvest on that license type within Hunt Area 125. To continue allowing for the harvest of white-tailed deer in Hunt Area 125, the addition of the Type 8 license was implemented.

Habitat conditions continue to decline throughout the Basin Mule Deer Herd Unit, largely due to cheatgrass prevalence and expansion, but chronic drought and the lack in available water resources besides cropland may also be contributing to these declines. High prevalence of CWD persists within this herd and will influence the potential for population growth in the future.

### Management Objective Review

The Basin Mule Deer Herd Unit objective was last reviewed in 2024 and is next scheduled to undergo review in 2029.

### Chronic Wasting Disease Monitoring and Management

The Basin Mule Deer Herd has not been prioritized for CWD sampling due to low deer numbers and insufficient hunting licenses to realistically achieve the target sample size of 200 adult males within a three-year timeframe. Despite limited sampling, the five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). CWD prevalence in adult males is high, with a five-year average of 34%. However, the confidence intervals are wide (15–49%) due to small sample sizes. This herd is experiencing continuous population declines, and CWD is likely a contributing factor. The only CWD management action implemented in this herd unit has been the reduction of white-tailed deer densities through increased harvest. These management actions will continue in 2025 with the addition of the Hunt Area 125 Type 8 license.

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

Year(s)	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>			
	Adult Males (CI = 95%)	Yearling Males	Adult Females	Percent of Harvested Males Sampled
2020	22% (n=9)	0% (0)	0% (0)	11.6
2021	30% (n=10)	0% (0)	0% (0)	15.6
2022	11% (n=9)	0% (0)	0% (0)	14.1
2023	50% (n=6)	0% (0)	33% (3)	11.3
2024	54% (n=13)	0% (1)	0% (0)	21.2
2020–2024	34% (15–49%, n=47)	0% (1)	33% (3)	14.8

### Population Modeling

Managers chose to model this herd using the default structure for mule deer, incorporating constant adult survival and time-varying juvenile survival and reproduction. Managers also incorporated a wide timespan (2010–2026) to exclude the most extreme population changes while including relevant annual fluctuations. The 2024 postseason population estimate for this herd from the PopR IPM was 824 (CL = 516–1,422). A comp/abundance survey was conducted in 2021 with a population estimate of 2,100 deer. Given the slight increases in harvest, fawn ratios, and total number of deer classified, field personnel agree with the increase in population size conveyed by the 2024 IPM but suggest that this increase is likely larger than depicted. IPM convergence was suitable and ratio estimates produced by the IPM aligned well with recorded data for this herd.



## 2024 - JCR Evaluation Form

SPECIES: Mule Deer

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

HERD: MD210 - GREYBULL RIVER

HUNT AREAS: 124, 165

PREPARED BY: SAM STEPHENS

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Population:	1,817	531	476
Harvest:	235	90	90
Hunters:	554	406	406
Hunter Success:	42%	22%	22 %
Active Licenses:	605	415	415
Active License Success:	39%	22%	22 %
Recreation Days:	1,997	1,236	1,236
Days Per Animal:	8.5	13.7	13.7
Males per 100 Females	29	42	
Juveniles per 100 Females	55	70	

Population Objective ( $\pm$  20%) : 4000 (3200 - 4800)

Management Strategy: Recreational

Percent population is above (+) or below (-) objective: -86.7%

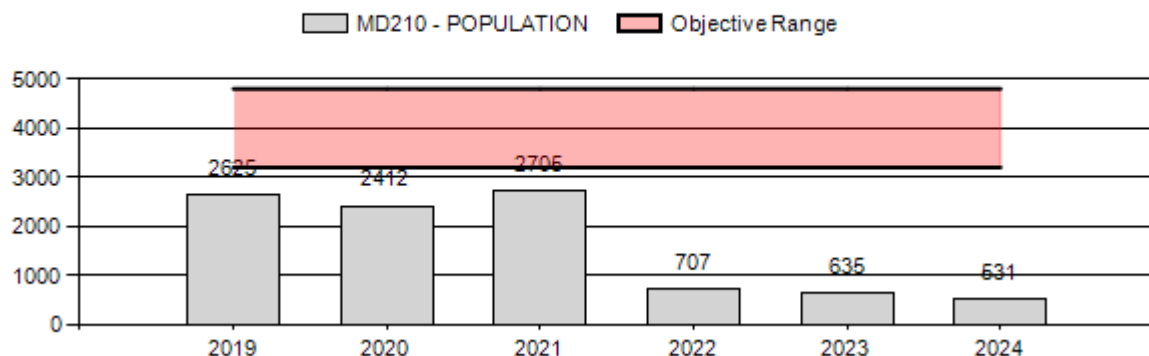
Number of years population has been + or - objective in recent trend: 10

Model Date: 02/12/2025

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq$ 1 year old:	12%	0%
Males $\geq$ 1 year old:	57%	57%
Proposed change in post-season population:	92%	90%

## Population Size - Postseason



## 2025 HUNTING SEASONS

### GREYBULL RIVER MULE DEER HERD (MD210)

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
124	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 10		Antlered mule deer or any white-tailed deer
124	6	Sep. 1	Sep. 30	Nov. 1	Nov. 30	25	Doe or fawn valid on or within one-half (1/2) mile of irrigated land
165	1	Sep. 1	Sep. 30	Oct. 15	Oct. 31	50	Antlered mule deer or any white-tailed deer

**2025 Region X nonresident quota:** 100 licenses

**2024 Hunter Satisfaction:** 36% Satisfied, 25% Neutral, 39% Dissatisfied

### 2024 Management Summary

#### 1) Hunting Season Evaluation:

Mule deer abundance and subsequent harvest have continued to decline in the Greybull River Herd. General season hunter success decreased again from 25% in 2023 to 19% in 2024. This negative trend was in spite of efforts made to reduce harvest and hunter crowding with the reduction of the Nonresident Region X quota in 2024. Standardized efforts to classify mule deer in the post-season period resulted in another record low count in Hunt Areas 124 and 165. Depressed fawn recruitment rates have impacted population growth since 2017 but showed a slight increase to 70 fawns per 100 does in 2024. Habitat degradation from invasive species (cheatgrass) is likely the primary driver behind long-term population decline for mule deer herds living in low elevation arid environments, however high rates of Chronic Wasting Disease (CWD) appear to be having a more immediate and significant population level impact. In 2024 hunters experienced another significant decline in mule deer harvest (-62%) from the 2018-22 average. This could partially be due to changes which restricted hunters to only harvest mule deer bucks in Hunt Area 124 and decreased hunter numbers. Similarly, the raw number of deer counted during annual classification surveys was 33% below the previous five year average. Post-season classification data elucidates a similar trend with mature buck recruitment. From 2015 to 2019, class 2 and 3 bucks ( $\geq 20''$ ) accounted for approximately 29% (range: 22-43%) of the total bucks counted during post-season surveys. In 2020 this proportion decreased to 12% and showed a slight increase to 18% in 2021 (Figure. 1). In 2022 this proportion decreased to 7% and increased slightly to 14% in 2023 and 2024. This is likely being driven by CWD decreasing buck survival.



## 2) Herd Unit Objective Review

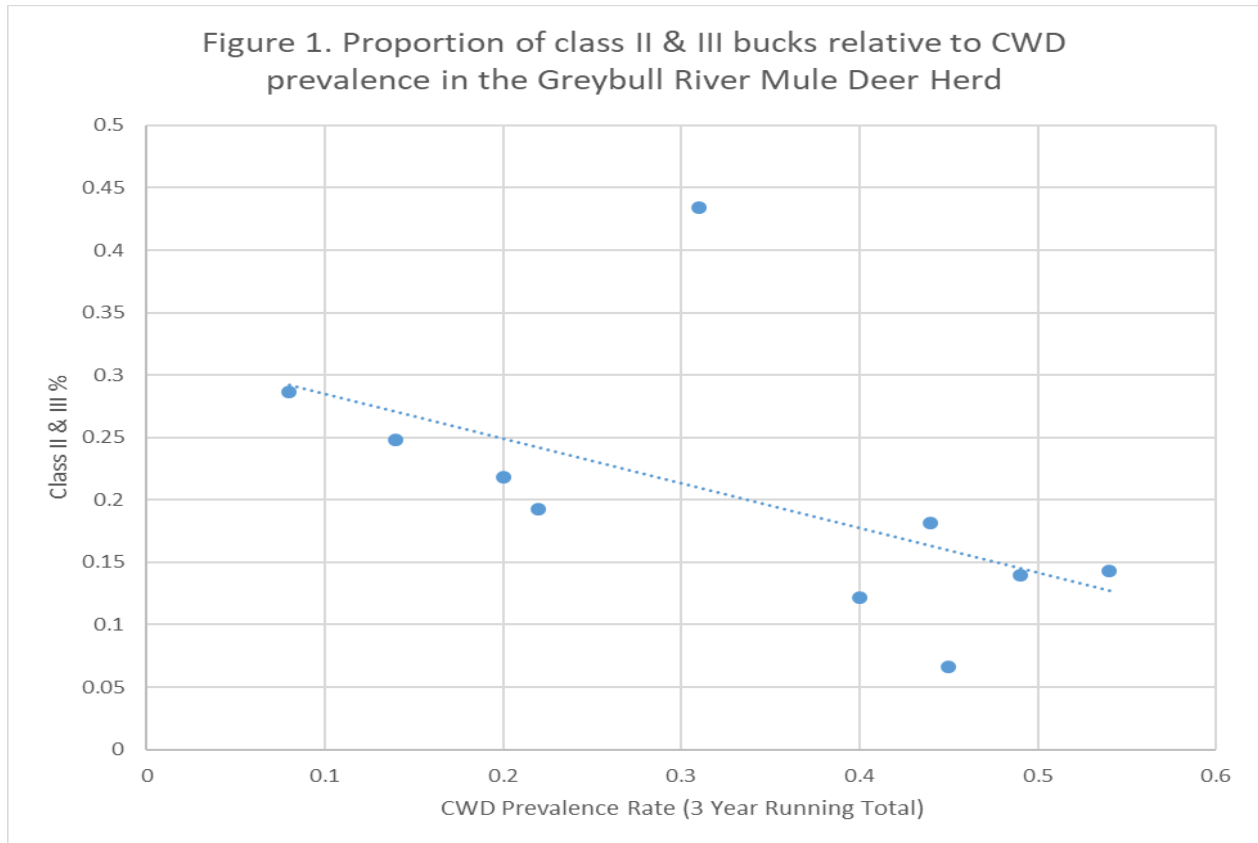
This herd was reviewed in 2021 and is managed to a population based objective of 4000 deer. It is scheduled to be reviewed again in 2026.

## 3) Chronic Wasting Disease Management

The Greybull River mule deer herd was prioritized for CWD sampling from 2020-2022. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). Mule deer abundance and subsequent harvest have continued to decline in the Greybull River herd unit, making it difficult to achieve target CWD sampling sizes. During prioritized sampling from 2020 to 2022, the target sample size of 200 adult males was not achieved, despite increased field presence and outreach through CWD signage, business cards, direct mailings, and expanded check station operations. The percentage of harvested males sampled across years is adequate when compared to other mule deer herds meeting sampling targets, but limited mule deer numbers result in limited harvest and sampling availability. Overall, adult male CWD prevalence is among the highest observed in the Cody Region and is likely contributing to population declines and adult male age structure/quality (Figure 1). Sampling and prevalence estimates for yearling males and adult females are limited and variable. CWD sample distribution and detections are primarily concentrated along the Greybull River corridor, mirroring hotspot trends in neighboring mule deer herds with sympatric white-tailed deer populations. To date, no mule deer harvest strategies have been implemented specifically to address CWD. However, increases in white-tailed deer Type 3 and 8 licenses have aimed to address CWD in the sympatric population.

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

Year(s)	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>			
	Adult Males (CI = 95%)	Yearling Males	Adult Females	Percent of Harvested Males Sampled
2020	45% (n=65)	27% (15)	18% (33)	49.7
2021	42% (n=36)	56% (9)	8% (26)	33.6
2022	53% (n=15)	0% (6)	0% (3)	15.7
2023	59% (n=17)	100% (1)	0% (1)	20.2
2024	50% (n=18)	0% (2)	0% (1)	23.8
2020-2024	47% (25-55%, n=151)	30% (33)	13% (64)	30.6



### 3.) Population Modeling:

The 2024 postseason population estimate for this herd unit from the PopR IPM is 531 (CL=411 – 680) mule deer. The model achieved convergence with an Rhat value of 1.02 indicating agreement between modeled and observed input values. Despite an abrupt decrease from the 2021 population estimate, the past three year estimates matches a steep decline in the population as evident by a rapid decrease in harvest since 2018.

## 2024 - JCR Evaluation Form

SPECIES: Mule Deer

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

HERD: MD211 - SHOSHONE RIVER

HUNT AREAS: 121-123

PREPARED BY: SAM STEPHENS

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Population:	2,894	1,403	1,390
Harvest:	446	293	292
Hunters:	1,190	1,017	1,017
Hunter Success:	37%	29%	29 %
Active Licenses:	1,266	1,064	1,064
Active License Success:	35%	28%	27 %
Recreation Days:	4,217	3,766	3,766
Days Per Animal:	9.5	12.9	12.9
Males per 100 Females	31	34	
Juveniles per 100 Females	61	49	

Population Objective ( $\pm 20\%$ ) : 5000 (4000 - 6000)

Management Strategy: Recreational

Percent population is above (+) or below (-) objective: -71.9%

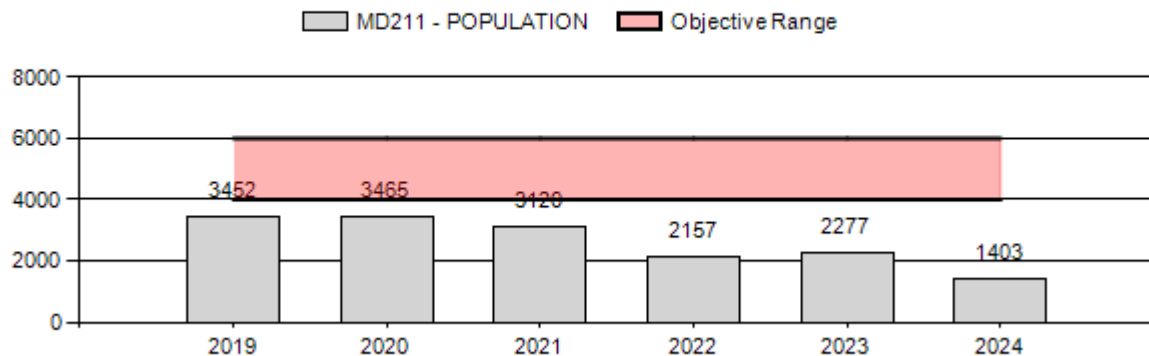
Number of years population has been + or - objective in recent trend: 9

Model Date: 02/12/2025

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq 1$ year old:	9%	9%
Males $\geq 1$ year old:	42%	42%
Proposed change in post-season population:	79%	99%

## Population Size - Postseason



## 2025 HUNTING SEASONS

### SHOSHONE RIVER MULE DEER HERD (MD211)

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
121	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 10		Any deer on private land; antlered mule deer or any white-tailed deer off private land
121	6			Aug. 15	Nov. 30	100	Doe or fawn valid on private land
122	Gen	Sep. 1	Sep. 30	Nov. 1	Nov. 10		Any deer on private land; antlered mule deer or any white-tailed deer off private land
122	6	Sep. 1	Sep. 30	Oct. 15	Nov. 30	100	Doe or fawn valid on private land
123	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Antlered mule deer or any white-tailed deer
123	6	Sep. 1	Sep. 30	Oct. 15	Nov. 30	25	Doe or fawn valid on private land

**2025 Region X nonresident quota:** 100 licenses

**2024 Hunter Satisfaction:** 47% Satisfied, 28% Neutral, 25% Dissatisfied

### 2024 Management Summary

#### 1.) Hunting Season Evaluation:

Similar to other low elevation populations in the Bighorn Basin, abundance and subsequent harvest continue to decline in the Shoshone River Herd. General season hunter success remained low at 27% while effort slightly increased to 12.9 days/harvest. Standardized efforts to classify mule deer in the 2024 post-season period resulted in a decreased count of 203 (2019-23 avg; 250). Depressed fawn recruitment rates have impacted population growth since 2020. High prevalence of Chronic Wasting Disease (CWD) appears to be having a more lasting population level impact on adult deer. In 2024 hunters experienced another significant decline in harvest (-34%) from the 2019-24 average. Similarly hunter satisfaction also decreased from 2022 to 2023 (46% to 41%). While reductions in license quotas have aimed to alleviate hunter-crowding the reality of a declining deer population and fewer mature bucks is likely driving the decreases in

hunter satisfaction. Despite a significant population decrease, Type 6 "doe or fawn" licenses are still in place to address damage concerns however doe harvest has been minimal, not exceeding 100 since changes were made in 2022 to decrease these quotas.

## 2.) Management Objective Review:

This herd objective was reviewed in 2021 and is managed to a population based objective of 5000 deer. This objective is scheduled to be reviewed in 2026.

## 3.) Chronic Wasting Disease Management:

The Shoshone River mule deer herd was prioritized for CWD sampling in 2019 and 2020 and again starting in 2024. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). Mule deer abundance and subsequent harvest have continued to decline in the Shoshone River herd unit, making annual sampling efforts difficult. Since prioritized sampling in 2019 and 2020, sample collection has continued to decline, despite increased field presence and outreach through CWD signage, business cards, direct mailings, and expanded check station operations during prioritized sampling efforts in 2024. Overall, adult male CWD prevalence is among the highest observed in the Cody Region, comparable to the Greybull mule deer herd. The declines within this herd are, in part, due to the high prevalence of CWD. Sampling and prevalence estimates for yearling males and adult females are limited and variable. CWD sample distribution and detections are primarily throughout agricultural lands of the herd unit, with positive cases concentrated near Cody, Lovell, and Deaver. CWD management actions are limited in this herd unit due to low deer numbers and current harvest availability.

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

Year(s)	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>			
	Adult Males (CI = 95%)	Yearling Males	Adult Females	Percent of Harvested Males Sampled
2020	41% (n=90)	0% (14)	8% (39)	29.3
2021	53% (n=30)	25% (4)	25% (12)	13.2
2022	46% (n=26)	0% (2)	36% (11)	12.3
2023	63% (n=27)	0% (3)	50% (2)	14.4
2024	50% (n=18)	0% (2)	100% (2)	9.2
2020-2024	48% (26-55%, n=191)	4% (25)	20% (66)	17.1

#### **4.) Population Modeling:**

The 2023 postseason population estimate for this herd unit from the PopR IPM is 2,277 (CL=1,799-2,819) mule deer. The model achieved convergence with an  $r^2$  value of 1.02 indicating agreement between modeled and observed input values.

## 2024 - JCR Evaluation Form

SPECIES: Mule Deer

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

HERD: MD212 - OWL CREEK/MEETEETSE

HUNT AREAS: 116-120

PREPARED BY:ASHLEIGH RHEA

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Population:	1,512	2,002	2,271
Harvest:	211	176	175
Hunters:	305	275	285
Hunter Success:	69%	64%	61 %
Active Licenses:	317	276	275
Active License Success:	67%	64%	64 %
Recreation Days:	1,311	1,140	1,150
Days Per Animal:	6.2	6.5	6.6
Males per 100 Females	38	34	
Juveniles per 100 Females	65	81	

Population Objective ( $\pm 20\%$ ): 5000 (4000 - 6000)

Management Strategy: Special

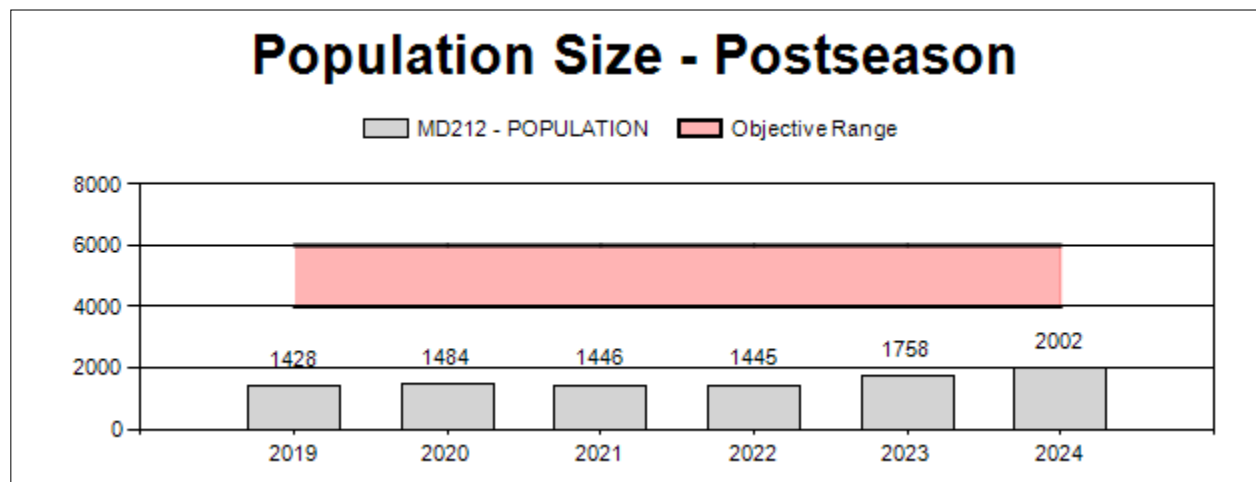
Percent population is above (+) or below (-) objective: -60.0%

Number of years population has been + or - objective in recent trend: 17

Model Date: 02/22/2025

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq 1$ year old:	0%	0%
Males $\geq 1$ year old:	36%	32%
Proposed change in post-season population:	+1%	-2%



## 2025 Hunting Seasons

### Owl Creek/Meeteetse Mule Deer (MD212)

Hunt Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
116	1	Sep. 1	Sep. 30	Oct. 15	Oct. 31	75	Antlered mule deer or any white-tailed deer
116, 117	3	Sep. 1	Sep. 30	Nov. 1	Nov. 30	100	Any white-tailed deer
116	7			Sep. 1	Oct. 14	125	Doe or fawn white-tailed deer valid on private land in the Wood River drainage
116, 117	8	Sep. 1	Sep. 30	Oct. 15	Nov. 30	200	Doe or fawn white-tailed deer
117	1	Sep. 1	Sep. 14	Sep. 15	Oct. 15	50	Antlered mule deer or any white-tailed deer
118	1	Sep. 1	Sep. 30	Oct. 15	Oct. 31	25	Antlered mule deer or any white-tailed deer
118	1			Nov. 1	Nov. 30		Any white-tailed deer
118, 119	8	Sep. 1	Sep. 30	Oct. 15	Nov. 30	25	Doe or fawn white-tailed deer
119	1	Sep. 1	Sep. 30	Nov. 1	Nov. 15	50	Antlered mule deer or any white-tailed deer
119	2	Sep. 1	Sep. 30	Oct. 15	Oct. 31	50	Antlered mule deer or any white-tailed deer
119, 120	3	Sep. 1	Sep. 30	Oct. 1	Nov. 30	100	Any white-tailed deer
120	1	Sep. 1	Sep. 30	Nov. 1	Nov. 15	75	Antlered mule deer or any white-tailed deer
120	8			Sep. 1	Dec. 15	200	Doe or fawn white-tailed deer

**2024 Hunter Satisfaction:** 67% Satisfied, 21% Neutral, 12% Dissatisfied

## 2025 Management Summary

### Hunting Season Evaluation

The 2025 season structure for the Owl Creek/Meeteetse Herd Unit will remain conservative with limited mule deer harvest. There has been a lack of doe mule deer harvest in recent years and low Type 1 quotas have been sufficient at maintaining high buck ratios (5-year average of 39:100). Despite this long-term, conservative framework the population is currently well below objective levels. Hunter satisfaction decreased from 76% in 2023 to 67% in 2024, yet the number of days per harvest remained the same at 5.6 days. Hunter success also decreased from 71% in 2023 to 64% in 2024. Managers classified the lowest number of mule deer (545 animals) from 10 years of annual counts in 2024, however, the highest fawn ratio (81:100 does) was also recorded in 2024.



A sightability survey was conducted in January 2025 for the first time in the Owl Creek/Meeteetse Herd and a total of 710 deer were detected during the flight.

Season dates on the Hunt Area 119 Type 2 license were pushed back from October 1–October 15 to October 15–October 31. The Type 2 license is considered a desirable license type by the public, often requiring several points for nonresidents to draw and low draw odds for residents, yet this license type had low hunter success (45%) in 2024. By changing the season dates managers seek to increase hunter success and align season dates with the Hunt Area 119 Type 1 license. Regarding white-tailed deer licenses in the herd unit, managers added a Type 8 license valid in Hunt Areas 118 and 119 to allow doe/fawn harvest throughout these hunt areas but with particular focus on private lands accessible to the public through the Absaroka Front HMA. To balance out this change, Hunt Area 118 was removed from the Type 8 license available in Hunt Areas 116 and 117. An additional 25 licenses were added to the Type 116 Type 7 license, since this license has an excellent success rate of 90% and increased landowner buy-in and access. The intent of these licenses is to decrease the resident white-tailed deer population that congregates along the Wood River, thus decreasing damage issues and, ideally, CWD prevalence.

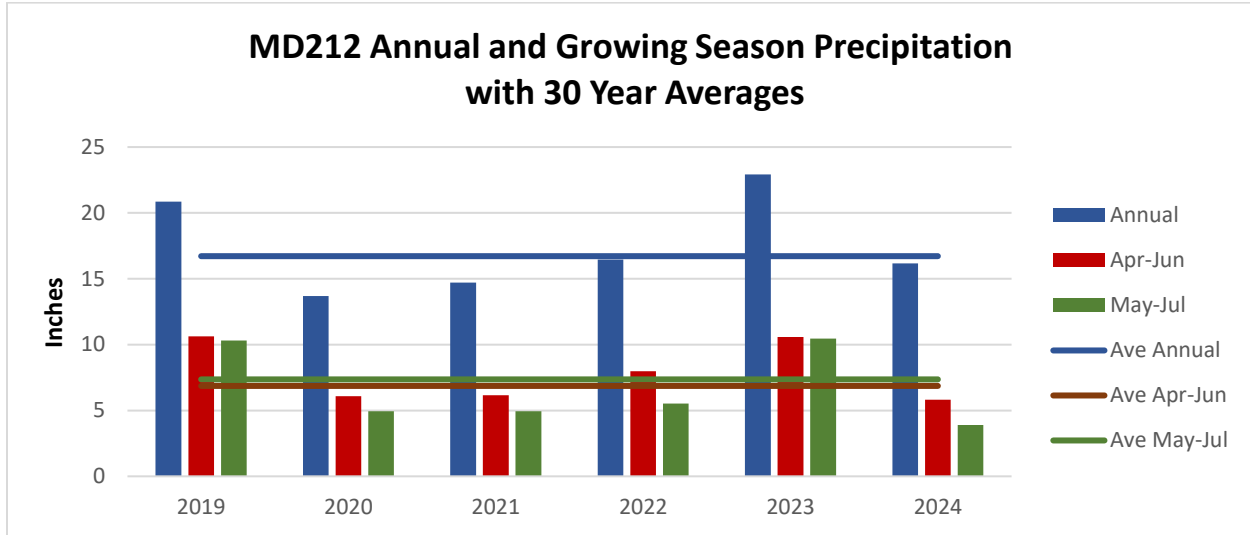
During 2024, there was one authorization for a Chapter 56 permit within the Owl Creek/Meeteetse Mule Deer Herd Unit. In total, 5 deer (2 fawns, 1 yearling doe, and 2 adult does) were harvested and donated under these authorizations in addition to totals reported in the harvest survey. Details are as follows:

- **Chapter 56 Permit – Deer Hunt Area 116**
  - Park County – Town of Meeteetse
  - Season Dates: November 1, 2023–December 31, 2024
  - Authorization for removal of up to 5 antlerless deer
  - Total harvest = 5 deer (2 fawns, 1 yearling doe, and 2 adult does)

### **Management Objective Review**

The Owl Creek/Meeteetse Herd Unit objective was last reviewed in 2024 and is next scheduled to undergo review in 2029.

## Mule Deer Initiative Habitat Information



### *Precipitation and Winter Conditions*

Annual precipitation within the herd unit October 2023–September 2024 was 97% of the 30-year average. Growing season precipitation (April–June 2024) within winter ranges was 85% of average. Growing season precipitation (May–July 2024) within spring/summer/fall ranges was 52% of average. Overall, the winter (December 2024 –March 2025) was mild with minimal snowfall.

### **Chronic Wasting Disease Monitoring and Management**

The Owl Creek/Meeteetse Mule Deer Herd has not been prioritized for CWD sampling due to low deer numbers and limited hunting licenses to realistically achieve the target sample size of 200 adult males within a three-year timeframe. Despite limited sampling, the five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). CWD prevalence in adult males is trending upward annually, with an overall five-year average of 18%. Despite its limited quota license structure and low harvest, this herd has remained stagnant, and as CWD prevalence increases, it will negatively impact herd performance. The only CWD management action implemented in this herd unit has been the reduction of white-tailed deer in high-density areas and hotspots within riparian and agricultural fields through increased harvest. These management actions will continue in 2025 through the increase in quota on the Hunt Area 116 Type 7 license type and the addition of the Hunt Area 118/119 Type 8 license.

Table 1. CWD prevalence for hunter-harvested mule deer in the Owl Creek/Meeteetse Mule Deer Herd, 2020–2024.

Year(s)	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>			
	<b>Adult Males (CI = 95%)</b>	Yearling Males	Adult Females	Percent of Harvested Males Sampled
2020	<b>13% (n=16)</b>	33% (3)	0% (1)	10.1
2021	<b>14% (n=22)</b>	0% (2)	0% (6)	12.4

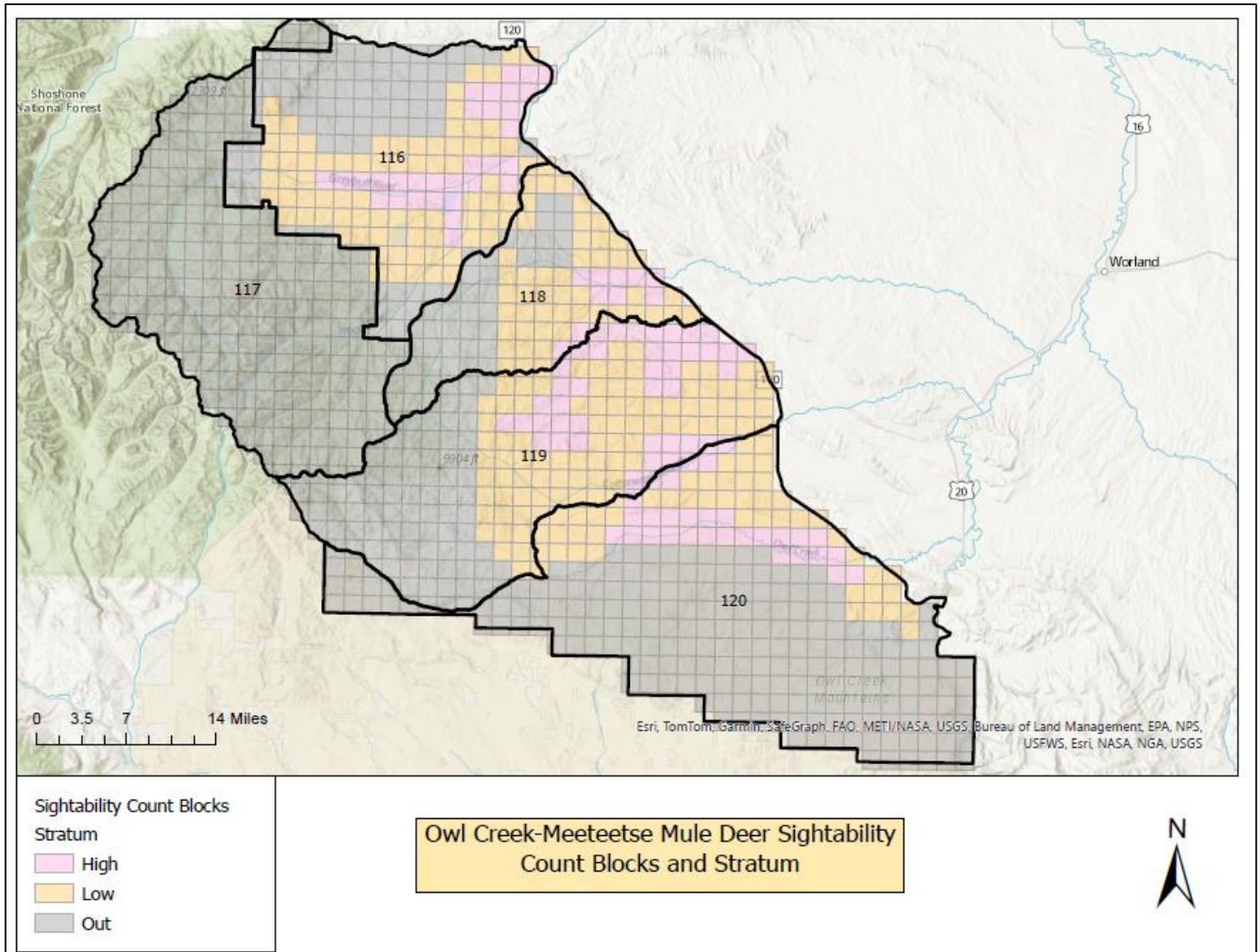
2022	<b>22% (n=18)</b>	0% (0)	20% (5)	10.3
2023	<b>19% (n=21)</b>	0% (0)	0% (2)	10.8
2024	<b>30% (n=10)</b>	0% (2)	43% (7)	7.1
2020–2024	<b>18% (9–28%, n=87)</b>	14% (7)	19% (21)	10.2

### Population Modeling

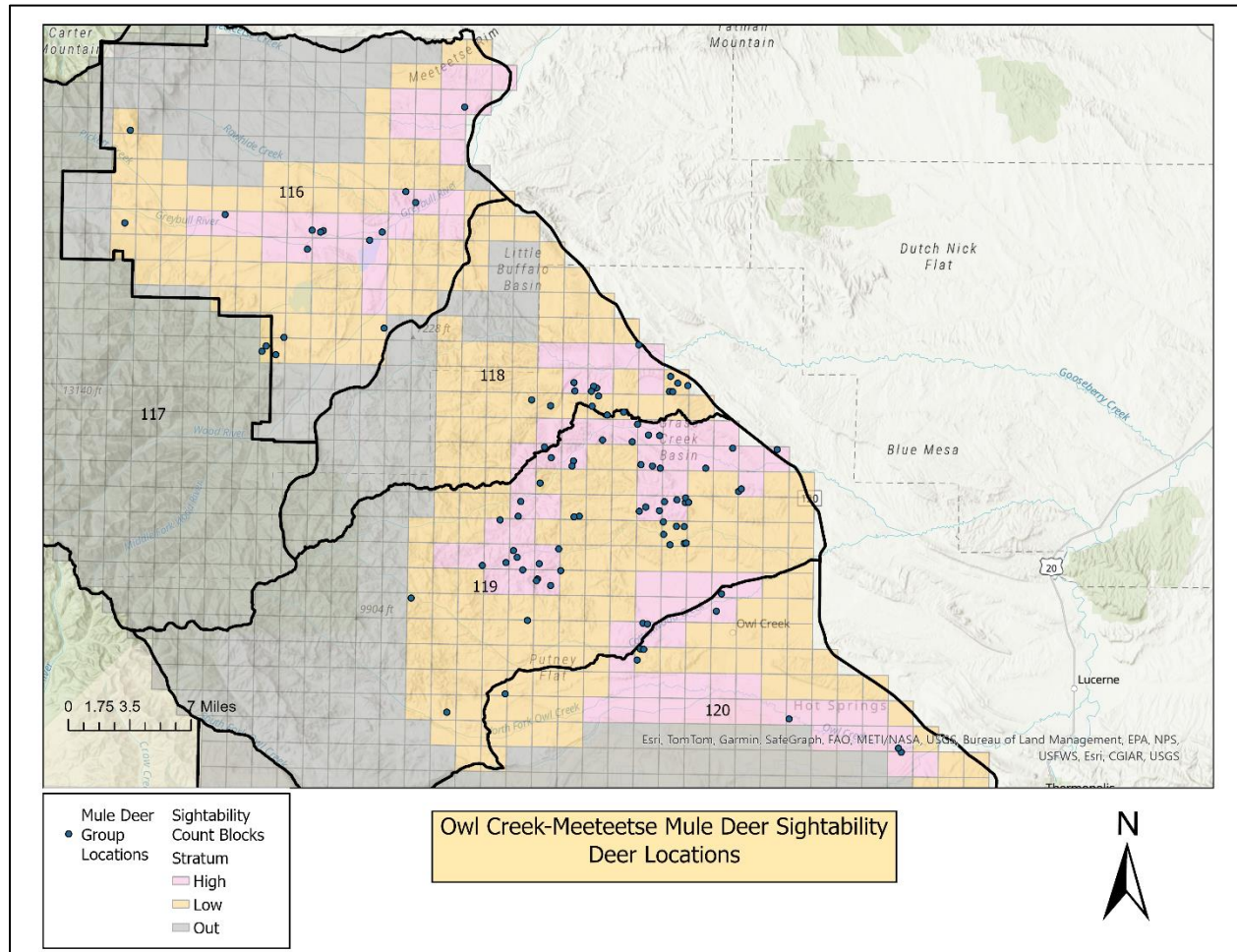
Given several sharp declines in the population from the early 2000s and relying more heavily on a sightability survey conducted in early 2025, managers opted to incorporate a narrower time frame (2014–2026) to provide a more representative abundance estimate for this herd unit. Managers maintained the default model structure for mule deer, incorporating constant adult survival and time-varying reproduction and juvenile survival. The sightability survey conducted, estimated the population for the Owl Creek/Meeteetse Mule Deer Herd as 2,364 (CL = 1,447–3,281). Using this abundance estimate, the 2024 postseason population estimate for this herd from the PopR IPM was 2,002 (CL = 1,476–2,595). IPM convergence was excellent, with all Rhat values less than 1.1 and the model aligns well with observed buck and fawn ratios. The previous year’s population estimate was 1,714 (CL=1,334–2,262) mule deer. Given the overlapping confidence intervals for all three models, managers suggest that the true population estimate is likely less than that depicted by the sightability survey but are captured within the 2024 IPM. Future sightbility surveys will need to be conducted at regular intervals to truly ground and inform PopR IPMs, with additional changes to survey design as field personnel become better at depicting mule deer distribution throughout the herd unit.

Appendix A. Owl Creek-Meeteetse Mule Deer Sightability Information. 1) Distribution of count blocks, 2) Distribution of mule deer groups, 3) Analysis table.

1) Distribution of sightability count blocks



## 2) Distribution of mule deer groups



## 3) Analysis table for the survey

DAU	BioYear	RawCount	Estimate	LCL	UCL	SightInflation	SampInflation	SampVar	SightVar	ModVar	TotalVar
Owl Creek - Meeteetse 212	2024 - 2025	710	2363.7	1446.776	3280.624	1.381818951	2.409255528	138554.7	39338.9	40960.52	218854.2

## 2024 - JCR Evaluation Form

SPECIES: Mule Deer

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

HERD: MD215 - UPPER SHOSHONE

HUNT AREAS: 110-115

PREPARED BY: TONY MONG

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Population:	7,310	8,000	8,300
Harvest:	509	606	606
Hunters:	1,233	1,516	1,500
Hunter Success:	41%	40%	40 %
Active Licenses:	1,253	1,550	1,535
Active License Success:	41%	39%	39 %
Recreation Days:	6,114	9,134	9,200
Days Per Animal:	12.0	15.1	15.2
Males per 100 Females	28	27	
Juveniles per 100 Females	64	69	

Population Objective ( $\pm 20\%$ ) :

12000 (9600 - 14400)

Management Strategy:

Recreational

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

-33.3%

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

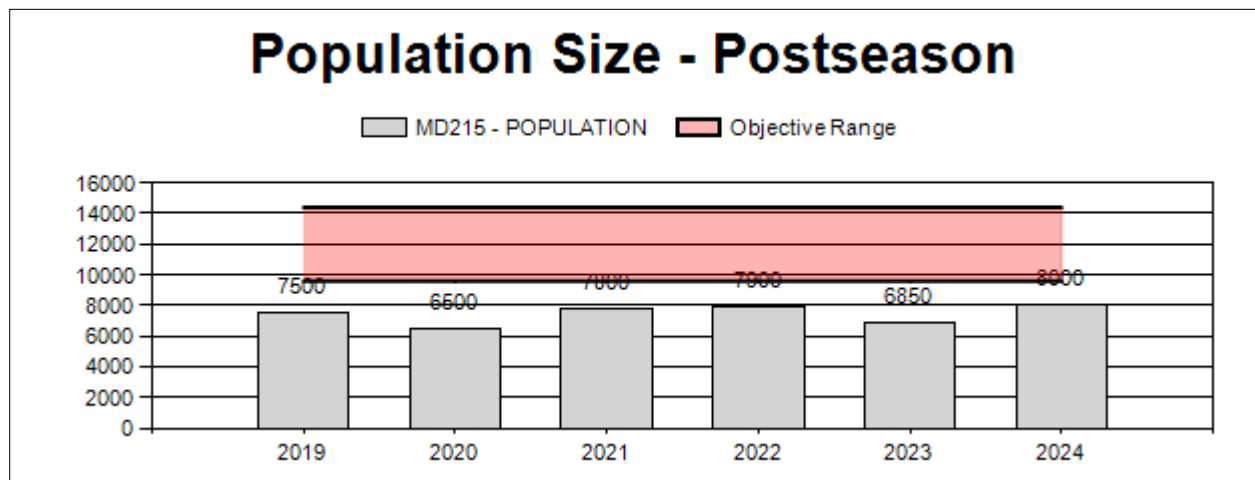
8

Model Date:

02/26/2025

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq 1$ year old:	1%	1%
Males $\geq 1$ year old:	38%	34%
Proposed change in post-season population:	0.95%	1.0%





**2025 Hunting Seasons  
Upper Shoshone Mule Deer (MD215)**

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
110	Gen	Sep. 1	Sep. 30	Oct. 15	Nov. 10		Antlered mule deer or any white-tailed deer
110, 111	1	Sep. 1	Sep. 30	Nov. 1	Nov. 20	25	Antlered mule deer or any white-tailed deer
110, 111	8	Sep. 1	Sep. 30	Oct. 1	Dec. 31	100	Doe or fawn white-tailed deer
111	Gen	Sep. 1	Sep. 30	Oct. 15	Nov. 10		Antlered mule deer or any white-tailed deer
112	Gen	Sep. 1	Sep. 30	Oct. 15	Nov. 10		Antlered mule deer or any white-tailed deer
112, 113, 114	1	Sep. 1	Sep. 30	Nov. 1	Nov. 20	25	Antlered mule deer or any white-tailed deer
112, 113	3	Sep. 1	Sep. 30	Oct. 1	Dec. 31	75	Any white-tailed deer
112, 113	8	Sep. 1	Sep. 30	Oct. 1	Dec. 31	300	Doe or fawn white-tailed deer
113	Gen	Sep. 1	Sep. 30	Oct. 15	Nov. 10		Antlered mule deer or any white-tailed deer
113	7	Sep. 1	Sep. 14	Sep. 15	Dec. 31	100	Doe or fawn valid north and east of Carter Creek
114	Gen	Sep. 1	Sep. 30	Oct. 15	Nov. 10		Antlered mule deer or any white-tailed deer
115	Gen	Sep. 1	Sep. 9	Sep. 10	Oct. 27		Antlered mule deer or any white-tailed deer

**2025 Region F nonresident quota:** 550 licenses

**2024 Hunter Satisfaction:** 52% Satisfied, 24% Neutral, 24% Dissatisfied

### 2024 Management Summary

#### Hunting Season Evaluation

We have seen increases in the total number of deer along with an increase of buck ratios, however, 2024 showed a decrease in harvest which was due to warmer temperatures and virtually no snow during the normal fall time frame. Collar data and trail camera data indicate deer moving back from summer range much later in 2024 than the previous several years. Because harvest depends

on availability of deer on migration routes and winter range this caused a lower harvest. The lower harvest is not indicative of a lower population or buck numbers.

We continue to see higher buck ratios (27:100) and increasing CWD rates within the herd. CWD prevalence seems to be driven by the South Fork portion of the herd, however, ground classification data on buck ratios are high (27:100) with the North (30:100) than the South Fork (26:100). Tooth age data shows that the average age of harvested bucks has been 4.5 for the last 2 years (N = 347). The 5-year average of fawn ratios is 64:100 with 2024 being higher at 69:100. However, recent winter conditions have caused higher mortality in our fawns than normal with a mortality of 23% of fawns collared in January as of March 24, 2025. Despite these tough conditions we have only had a 2 collared adult doe mortalities and no collared adult buck mortalities.

Season dates for the General season were increased in order to decrease overall buck ratios and decrease the potential for CWD transmission. Because harvest in this herd is driven by later dates and the movement of deer off of protected summer range (Yellowstone National Park) the change will result in a higher buck harvest and a post season decrease in overall buck ratios. CWD is also the reason for the change in dates and removal of private land requirements for doe deer licenses on the South Fork and lengthening the Hunt Area 112/113 Type 3 season. Overall, our goal in the Herd is to try and stabilize or decrease CWD rates within the South Fork portion of the herd and try and keep the North Fork portion of the herd from increasing to the same levels as the South Fork.

### **Management Objective Review**

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

### **Chronic Wasting Disease Monitoring & Management**

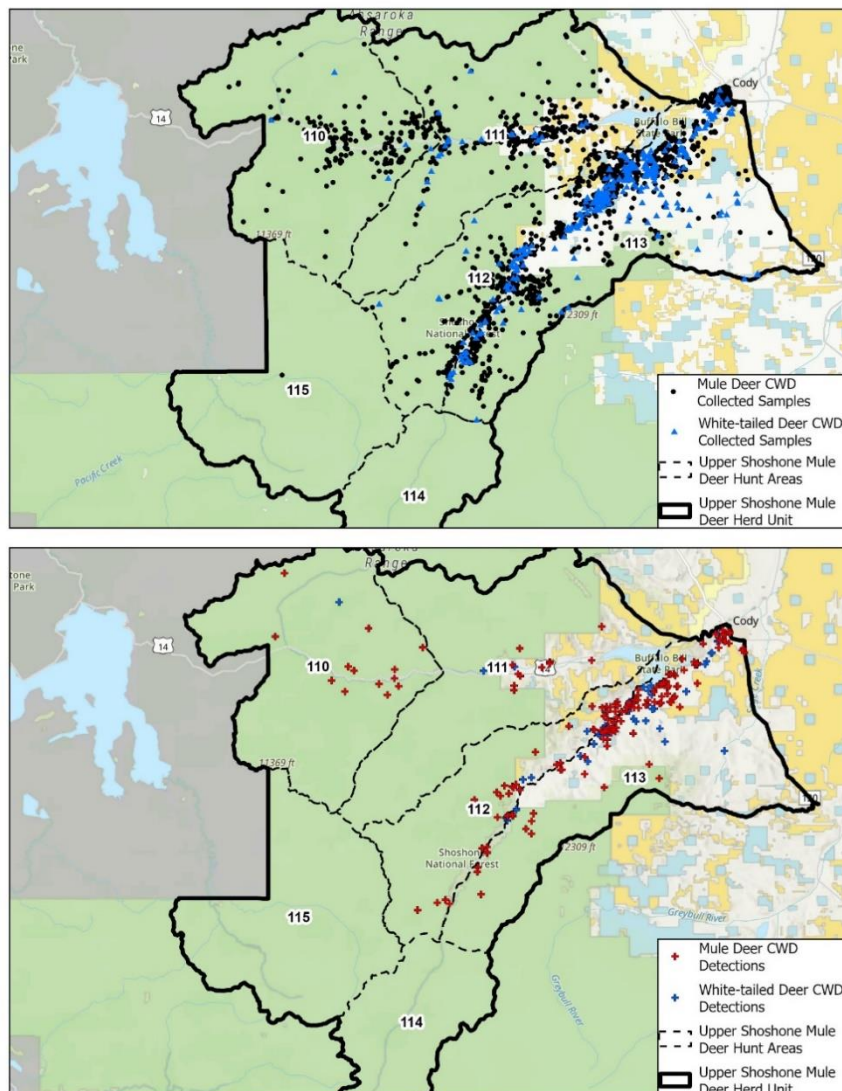
The Upper Shoshone mule deer herd was prioritized for CWD sampling in the 2020 and 2021 seasons, but given the location of the South Fork check station and a 10-day annual operation, sampling in this herd consistently exceeds 200 target samples within 3-year blocks. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). Adequate annual sampling, especially in adult males, has provided high confidence in prevalence estimates across years. Over the past seven years, this herd has observed an increasing trend of CWD prevalence in adult males. Yearling males and adult females experience limited harvest compared to adult males and in turn limited samples for estimating and tracking prevalence estimates. Harvest and sampling is concentrated along the North Fork and South Fork of the Shoshone River (limited samples from HA 114 and 115), with positives primarily concentrated on private land in the South Fork Drainage (Figure 1). With increasing trends of CWD within this herd unit, CWD management has and will continue to be a priority. CWD management focused seasons have been in place for multiple years both for mule deer and white-tailed deer addressing the unique structure of this herd which includes portions of a resident population of both mule deer and white-tailed deer and a migratory portion of mule deer (Table 2). Due to the difficulty of accessing private lands, addressing CWD concerns within the resident deer populations (white-tailed deer and mule deer), is a significant challenge. In 2020, managers conducted extensive meetings and a survey to gauge knowledge of CWD as well as preferred management actions to deal with increasing CWD prevalence both in the mule deer and white-tailed deer populations (See Cody Region Job Completion Report 2020). Despite outreach and management efforts, CWD prevalence on the South Fork continues to increase and is likely starting to have population affects, especially within the adult male portion of the population.



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

Year(s)	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>			
	Adult Males (CI = 95%)	Yearling Males	Adult Females	Percent of Harvested Males Sampled
2020	<b>2% (n=82)</b>	0% (3)	0% (9)	25.4
2021	<b>18% (n=93)</b>	0% (2)	13% (8)	18.0
2022	<b>19% (n=136)</b>	0% (10)	0% (13)	26.8
2023	<b>25% (n=179)</b>	0% (11)	0% (6)	28.9
2024	<b>22% (n=135)</b>	15% (12)	0% (1)	25.3
2020-2024	<b>19% (13-22%, n=625)</b>	0% (38)	3% (37)	25.1

Figure 1 & 2. Total CWD samples collected (top) and total CWD detections (bottom) for mule deer and white-tailed deer in the Upper Shoshone Mule Deer Herd, 2014-2024.



**Population Modeling**

Managers chose to model this herd using the default structure for mule deer, i.e. constant adult survival, time-varying reproduction and juvenile survival and have feel the estimate is fairly reasonable. Based on visual comparison of the available effort variables, active licenses was selected by managers as the variable most predictably related to annual harvest. The 2024 postseason population estimate for this herd unit was 8,000 (CL = 7,000-9,000) mule deer. This herd is difficult to model due to the way we have to hunt the mule deer in this herd, a lack of any type of population estimation “anchor” and limited collar survival data. We are therefore assessing estimates based on our perception of where deer numbers are in relation to an “objective level” rather than relying on the actual estimate.

## 2024 - JCR Evaluation Form

SPECIES: Mule Deer

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

HERD: MD216 - CLARKS FORK

HUNT AREAS: 105-106, 109

PREPARED BY: TONY MONG

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Population:	3,020	4,100	4,400
Harvest:	170	256	256
Hunters:	534	672	680
Hunter Success:	32%	38%	38 %
Active Licenses:	535	672	680
Active License Success:	32%	38%	38 %
Recreation Days:	2,914	3,759	3,650
Days Per Animal:	17.1	14.7	14.3
Males per 100 Females	30	35	
Juveniles per 100 Females	60	70	

Population Objective ( $\pm 20\%$ ) : 5000 (4000 - 6000)

Management Strategy: Recreational

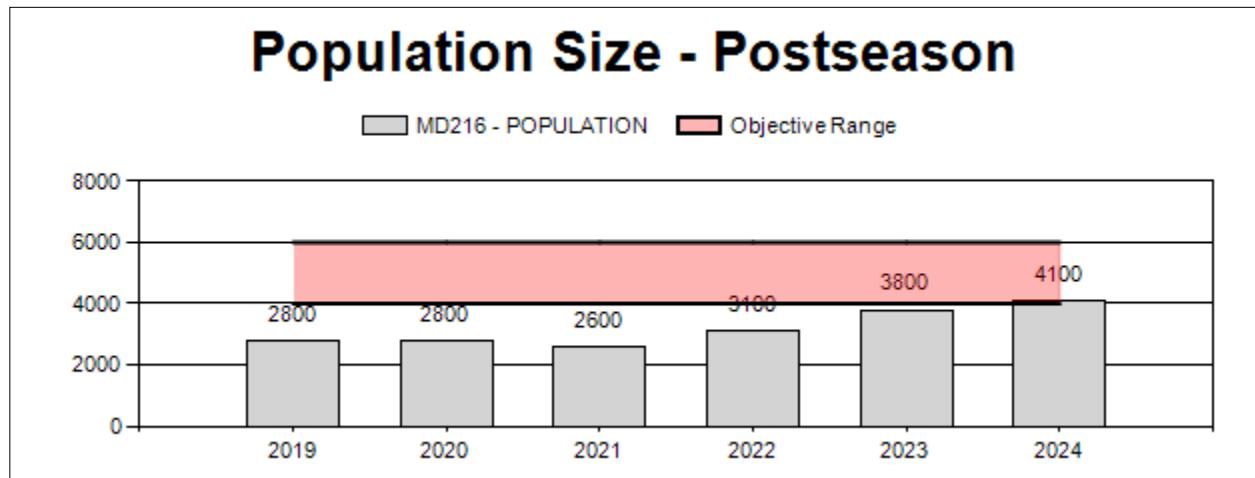
Percent population is above (+) or below (-) objective: -18%

Number of years population has been + or - objective in recent trend: 0

Model Date: 02/27/2025

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq 1$ year old:	2%	1%
Males $\geq 1$ year old:	24%	15%
Proposed change in post-season population:	1%	1%



**2025 Hunting Seasons  
Clark's Fork Mule Deer (MD216)**

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
105	Gen	Sep. 1	Sep. 30				Antlered mule deer or any white-tailed deer valid in the entire area
105	Gen			Oct. 1	Oct. 31		Antlered mule deer valid on national forest; any mule deer valid on irrigated land; any white-tailed deer valid in the entire area
105	Gen			Nov. 1	Nov. 5		Antlered mule deer valid off national forest; any white-tailed deer valid in the entire area
105	Gen			Nov. 6	Nov. 17		Antlerless deer valid on private land
105, 106, 109	1	Sep. 1	Sep. 30	Oct. 1	Nov. 20	25	Any deer
105	8			Sep. 1	Dec. 31	75	Doe or fawn white-tailed deer
106	Gen			Oct. 1	Oct. 14		Antlered mule deer within the North Absaroka Wilderness; any white-tailed deer valid in the entire area
106	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Antlered mule deer or any white-tailed deer
106	8	Sep. 1	Sep. 30	Oct. 1	Dec. 15	50	Doe or fawn white-tailed deer
109	3	Sep. 1	Sep. 30	Nov. 1	Dec. 31	35	Any white-tailed deer
109	8	Sep. 1	Sep. 30	Nov. 1	Dec. 31	125	Doe or fawn white-tailed deer

**2024 Region F nonresident quota:** 550 licenses

**2024 Hunter Satisfaction:** 52% Satisfied, 31% Neutral, 17% Dissatisfied

## **2024 Management Summary**

### **Hunting Season Evaluation**

We are going to increase opportunity for mule deer bucks by increasing the number of days on the general season in Hunt Areas 105 and 106 and increase opportunity for white-tailed bucks and doe deer by increasing licenses and dates. Overall population is returning to objective levels in addition we have seen an increase in buck ratios over the last 5 years (2024, 35; 5-year average, 29). Harvest has increased to levels seen prior to the large die-off in 2016/17 and 2017/18 however, because of the migratory nature of a majority of the population adding days onto the end of the season should increase buck harvest and decrease overall buck ratios. In order to address an issue of running a later General season and the possibility of deer being extremely vulnerable in the “switch-back” area of Hunt Area 106 we changed the Hunt Area boundary to exclude this portion from the General hunt area and added it to the Limited Quota Hunt Area 109 area (see proposal attachment). This will help to alleviate high numbers of younger bucks being harvested while allowing for a higher overall harvest in the remainder of Hunt Area 106 with the increase in General Season dates.

### **Management Objective Review**

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

### **Chronic Wasting Disease Management**

The Clark’s Fork mule deer herd was prioritized for CWD sampling in 2019 and 2020 seasons. Despite failing to meet the target of 200 mule deer buck samples, prioritized sampling was discontinued in 2021. This decision stemmed from the low sample return relative to effort (approximately 8 personnel hours per sample) and the low likelihood of achieving the goal within three years. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). Limited and variable annual sample sizes across all age and sex classes have resulted in fluctuating prevalence estimates and wide confidence intervals, indicating significant uncertainty. Consistently, adult males exhibit the highest prevalence rates (Table 1). Sampling is concentrated in Sunlight Basin (HA106), with positive cases clustered along the Clark’s Fork river corridor near Clark (HA105) in both mule deer and white-tailed deer. Current management focuses on increasing white-tailed deer harvest due to their rising numbers and CWD prevalence, rather than implementing harvest strategies specifically for CWD in mule deer. Currently, CWD does not appear to be a limiting factor for the Clark’s Fork mule deer herd; however, increased prevalence could pose future challenges.

Table 1. CWD prevalence for hunter-harvested mule deer in the Clark's Fork Mule Deer Herd, 2020 - 2024.

Year(s)	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>			
	<b>Adult Males (CI = 95%)</b>	Yearling Males	Adult Females	Percent of Harvested Males Sampled
2020	<b>6% (n=33)</b>	0% (6)	0% (0)	22.9
2021	<b>7% (n=15)</b>	0% (1)	0% (4)	9.9
2022	<b>0% (n=6)</b>	0% (2)	0% (3)	5.6
2023	<b>20% (n=15)</b>	0% (1)	0% (0)	9.1
2024	<b>5% (n=19)</b>	50% (2)	0% (0)	8.7
2020-2024	<b>8% (3-16%, n=88)</b>	8% (12)	0% (7)	11.2

### Population Modeling

Managers chose to model this herd using constant reproduction, and fixed effect survival for juveniles and adults. We used the linear effort prediction method based and active licenses was selected by managers as the variable most predictably related to annual harvest. In 2021/22 we conducted a winter range trail camera occupancy study which resulted in an estimate of 3,693 mule deer (SE = 239, LCI = 3,253, UCI = 4,193) and in 2023 we conducted a sightability survey which resulted in an estimate of 3,787 mule deer (SE = 347, LCI = 3,107, UCI = 4,466). The 2024 postseason population estimate for this herd unit was 4,000 (CL = 3,400-4,800) mule deer. Our confidence in this model is low because of the change in variables required to model this population as increasing to match what we are observing on the ground.

## **Hunt Area 106/109 boundary change accepted proposal.**

February 28, 2025

### **MEMORANDUM**

TO: Dan Smith, Craig Smith, Justin Binfet, Martin Hicks

FROM: Tony Mong, Jordan Winter

COPY TO: Corey Class, Grant Gerharter

SUBJECT: Clark's Fork Mule Deer (MD216) Boundary Change Proposal

The Cody Region proposes to change the mule deer hunt area boundaries within the Clark's Fork mule deer herd to protect vulnerable migrating deer during the later portion of a General season. We propose to remove the Dead Indian switchbacks from HA 106 (General) and place them into HA109 (LQ) because of the vulnerability to road hunting along these switchbacks (Figures 1 and 2). The migration goes straight through the switchback area which in a General season context makes these deer extremely vulnerable to harvest if they are migrating during the season. If we can remove that portion of the hunt area from the General Season we would be able to increase opportunity within the General season in Hunt Area 106 without worry about the vulnerability of mule deer if they are migrating during that time period. We have spent time discussing this with many different hunters in the area and have received positive feedback to this point.

### **Proposed hunt area boundary descriptions:**

**Area 106. Crandall-Sunlight.** All of the drainage of Soda Butte Creek outside of Yellowstone National Park; ~~all of the south drainage of Clark's Fork River down to and including Dead Indian Creek drainage~~ extending east to include all of the southern drainages of the Clark's Fork River down to Dead Indian Creek. Southerly along Dead Indian Creek to the North Absaroka Wilderness boundary, easterly along said boundary to the top of Dead Indian Creek drainage and southerly to include the remainder of Dead Indian Creek drainage.

**Area 109. Bald Ridge.** Beginning where the Clark's Fork River crosses Wyoming Highway 120; southwesterly along said river to Dead Indian Creek; southerly along said creek to the North Absaroka Wilderness Boundary; easterly along said boundary to the top of the Paint Creek drainage and including ~~All~~ all of the drainage of Pat O'Hara Creek, Paint Creek, Trail Creek, Cottonwood Creek, Dry Creek, Newmeyer Creek and Dead Indian Gulch north of the North Fork of the Shoshone River and west of Wyoming Highway 120.



Figure 1. Close up view of the proposed change to mule deer Hunt Areas 106/109 boundary.

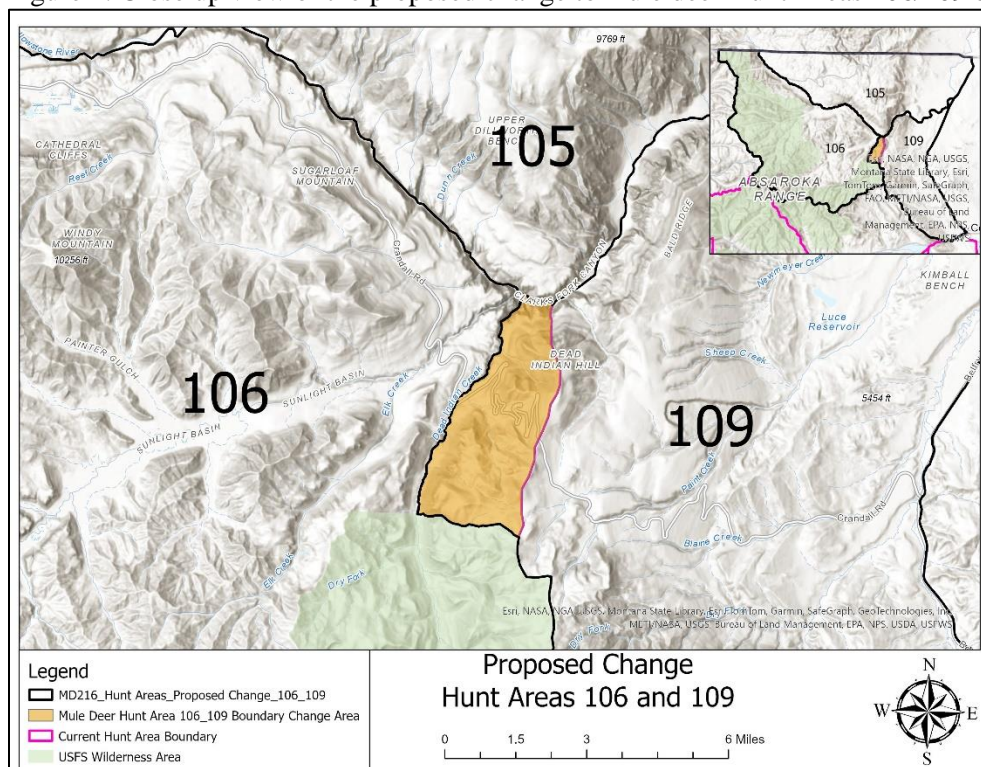
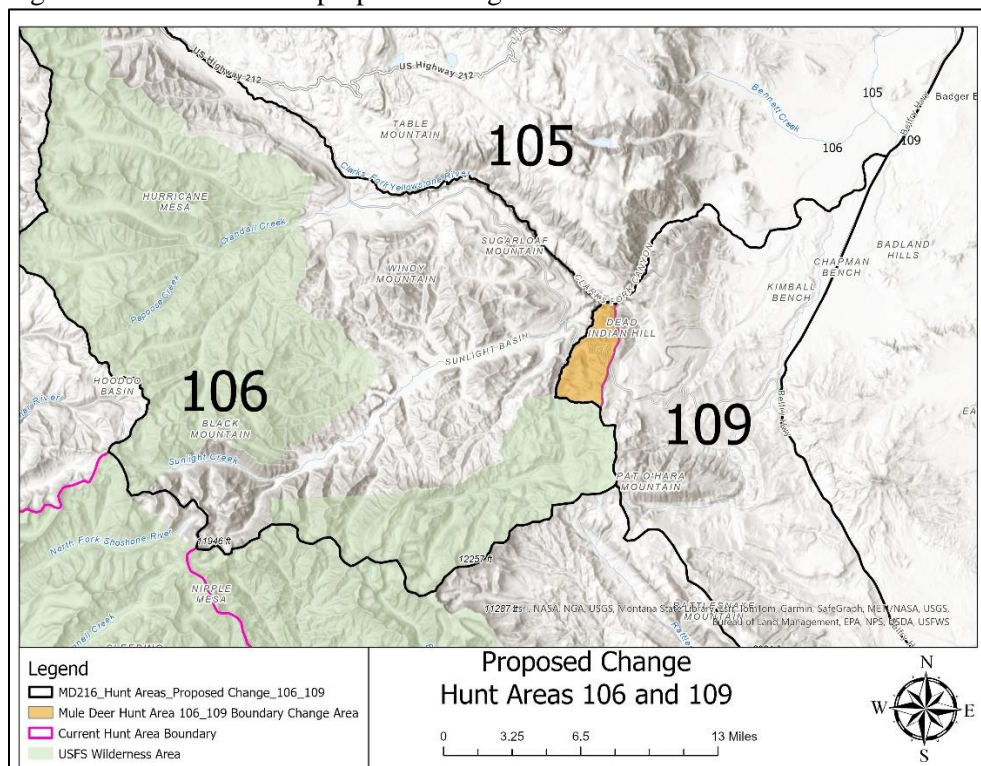


Figure 2. Overview of the proposed change to mule deer Hunt Areas 106/109 boundary.





## 2024 - JCR Evaluation Form

SPECIES: White tailed Deer

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

HERD: WD201 - BIGHORN BASIN

HUNT AREAS: 35, 37, 39-41, 46-47, 50-53, 105-106, 109-125, 127, 164-165

PREPARED BY: SAM STEPHENS

	<b><u>2019 - 2023 Average</u></b>	<b><u>2024</u></b>	<b><u>2025 Proposed</u></b>
Population:	0	N/A	N/A
Harvest:	2,674	2,669	2,670
Hunters:	4,658	4,520	4,500
Hunter Success:	57%	59%	59 %
Active Licenses:	6,007	6,133	6,105
Active License Success:	45%	44%	44 %
Recreation Days:	24,193	27,947	27,800
Days Per Animal:	9.0	10.5	10.4
Males per 100 Females	30	24	
Juveniles per 100 Females	63	74	

Population Objective ( $\pm$  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):**

	<b><u>JCR Year</u></b>	<b><u>Proposed</u></b>
Females $\geq$ 1 year old:	0%	0%
Males $\geq$ 1 year old:	0%	0%
Proposed change in post-season population:	0%	0%

## 2025 HUNTING SEASONS

### BIGHORN BASIN WHITE-TAILED DEER HERD (WD201)

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
36	8	Sep. 1	Sep. 30	Oct. 15	Oct. 31	25	Doe or fawn white-tailed deer
37,39	3	Sep. 1	Sep. 30	Nov. 1	Dec. 15	50	Any white-tailed deer
37,39	8	Sep. 1	Sep. 30	Oct. 15	Dec. 15	100	Doe or fawn white-tailed deer
40	3	Sep. 1	Sep. 30	Oct. 15	Nov. 30	50	Any white-tailed deer; also valid in Hunt Area 35
40	8	Sep. 1	Sep. 30	Oct. 15	Nov. 30	300	Doe or fawn white-tailed deer; also valid in Hunt Area 35
41	3	Sep. 1	Sep. 30	Oct. 15	Nov. 30	125	Any white-tailed deer
41	8			Sep. 1	Dec. 31	250	Doe or fawn white-tailed deer, also valid in Hunt Area 46
47,51,52	3	Sep.1	Sep. 30	Oct. 15	Nov. 30	100	Any white-tailed deer
47	8			Sep. 1	Dec. 31	150	Doe or fawn white-tailed deer, also valid in Hunt Area 46
51	8			Sep. 1	Dec. 31	200	Doe or fawn white-tailed deer
105	8			Sep. 1	Dec. 31	75	Doe or fawn white-tailed deer
106	8	Sep. 1	Sep. 30	Oct. 1	Dec. 15	50	Doe or fawn white-tailed deer
109	3	Sep. 1	Sep.30	Nov. 1	Dec. 31	35	Any white-tailed deer
109	8	Sep. 1	Sep. 30	Nov. 1	Dec. 31	125	Doe or fawn white-tailed deer
110, 111	8	Sep. 1	Sep. 30	Oct. 1	Dec. 31	100	Doe or fawn white-tailed deer
112, 113	3	Sep. 1	Sep. 30	Oct. 1	Dec. 31	75	Any white-tailed deer
112, 113	8	Sep. 1	Sep. 30	Oct. 1	Dec. 31	300	Doe or fawn white-tailed deer
116, 117	3	Sep. 1	Sep. 30	Nov. 1	Nov. 30	100	Any white-tailed deer
116, 117	8	Sep. 1	Sep. 30	Oct. 15	Nov. 30	200	Doe or fawn white-tailed deer

118,119	8			Oct. 15	Nov. 30	25	Doe or fawn white-tailed deer
119, 120	3	Sep. 1	Sep. 30	Oct. 1	Nov. 30	100	Any white-tailed deer
120	8			Sep. 1	Dec. 15	200	Doe or fawn white-tailed deer
121	3	Sep. 1	Sep. 30	Nov. 1	Dec. 15	75	Any white-tailed deer
121	8	Sep. 1	Sep. 30	Nov. 1	Dec. 15	100	Doe or fawn white-tailed deer
122	3	Sep. 1	Sep. 30	Nov. 1	Dec. 15	75	Any white-tailed deer
122	8	Sep. 1	Sep. 30	Nov. 1	Dec. 15	200	Doe or fawn white-tailed deer
124	3	Sep. 1	Sep. 30	Nov. 1	Nov. 30	100	Any white-tailed deer
124	8	Sep. 1	Sep. 30	Nov. 1	Nov. 30	250	Doe or fawn white-tailed deer
125	8			Nov. 1	Dec. 15	25	Doe or fawn white-tailed deer
127	3	Sep. 1	Sep. 30	Nov. 1	Dec. 15	50	Any white-tailed deer
127	8	Sep. 1	Sep. 30	Oct. 15	Dec. 15	100	Doe or fawn white-tailed deer
164	3	Sep. 1	Sep. 30	Oct. 1	Dec. 15	100	Any white-tailed deer
164	8			Sep. 1	Dec. 31	200	Doe or fawn white-tailed deer, also valid in Hunt Area 125
165	3	Sep. 1	Sep. 30	Oct. 15	Dec. 15	100	Any white-tailed deer
165	8	Sep. 1	Sep. 30	Oct. 15	Dec. 31	300	Doe or fawn white-tailed deer

**2024 Hunter Satisfaction:** 60% Satisfied, 24% Neutral, 16% Dissatisfied

## Management Summary

### 1.) Hunting Season Evaluation:

White-tailed deer in the Bighorn Basin are managed as one herd unit consisting of 33 hunt areas under recreational management. Hunting seasons for white-tailed deer are typically set in conjunction with mule deer hunting seasons by hunt area. Hunting opportunity exists for licenses exclusive for white-tailed bucks such as Type 3 licenses and white-tailed does or fawns with Type 8 licenses. Significant epizootic hemorrhagic disease (EHD) outbreaks in 2001, 2007, 2011, 2012, and 2020 reduced white-tailed deer abundance in parts of the Basin. Estimating the percent of the white-tailed deer population affected by disease mortality was never attempted, because no population estimate exists. Following sporadic outbreaks of EHD in certain hunt areas in 2020, the population appears to be on the rise and white-tailed deer are still expanding their range throughout the Bighorn Basin. White-tailed deer hunting seasons are set to address

landowner concerns and provide a late season opportunity to pursue bucks during the rut. White-tailed deer specific licenses (Types 3 & 8) are needed to obtain adequate harvest. 2025 season changes include some modest adjustments to Type 3 and 8 license quotas along the Shoshone and Clarks Fork of the Yellowstone River. Additionally some changes were made to address a lack of deer and hunter crowding concerns in Hunt Areas 41 and 125.

## **2.) Herd Unit Objective Review**

The Bighorn Basin white-tailed deer herd is not managed to an objective. White-tailed deer hunting opportunity has historically been offered both through the liberal allocation of Type 3 and 8 licenses as well as general season opportunity. No license type or season exists within the Herd Unit which restricts hunters to only harvest mule deer. Given the deficient state of sympatric mule deer populations and increasing prevalence of Chronic Wasting Disease, a population objective is unnecessary to adjust the current management strategies with regard to white-tailed deer in the Bighorn Basin.

## **3.) Chronic Wasting Disease Management:**

The Bighorn Basin white-tailed deer herd has not been prioritized for CWD sampling. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). The Bighorn Basin white-tailed deer herd overlaps nine separate mule deer herds where sampling for CWD in white-tailed deer occurs opportunistically. The CWD five-year average prevalence for hunter-harvested white-tailed deer within these nine corresponding mule deer herds are also presented below (Table 2). Overall for the Bighorn Basin white-tailed deer herd, sample sizes for adult males and adult females are high. This provides high confidence both on an annual basis and for the five-year averages. Adult males consistently show the highest CWD prevalence through time and across all the mule deer herd units. Adult females also show high prevalence as well with lower sample sizes for yearling males making it hard to draw strong conclusions about that demographic. There is variability in white-tailed deer prevalence rates across mule deer herd units in the Bighorn Basin suggestive of differences in white-tailed deer densities, distributions, and/or suitable habitat such as riparian or agricultural areas that white-tailed deer select for in the Bighorn Basin. Density of CWD samples and detections in white-tailed deer remain concentrated along agricultural lands of rivers and major tributaries, with numerous hotspots throughout the Bighorn Basin. Crucially, the high CWD prevalence observed is likely having impacts in areas/hotspots for white-tailed deer populations. This is likely causing increased mortality, potentially leading to population declines or altered age structures. Furthermore and most importantly, the presence of CWD in white-tailed deer poses a risk of transmission to sympatric mule deer populations. Because these two cervid species do share habitats especially winter range in areas, the potential for cross-species transmission is a serious concern. Together, these two cervid species are further increasing transmission rates within and among populations and into the environment in hotspots. This creates a scenario where disease transmission is amplified, further impacting cervid populations in the Bighorn Basin.

Extensive CWD outreach and education efforts, including nine pre- and post-season scoping meetings (both in-person and online) and five sampling training sessions, were conducted in 2021. Surveys and focused conversations in the field were aimed to assess public support for

various mule deer and white-tailed deer management options in HAs 41, 46, 47 (Paintrock); 164 (Southwest Bighorn); 105, 106, 109 (Clark’s Fork); and 110-115 (Upper Shoshone). Survey questions were standardized within Paintrock and Southwest Bighorn herd scoping efforts (East Basin), and within Clark’s Fork and Upper Shoshone herd scoping efforts (West Basin). A total of 145 surveys were completed by residents, non-residents, and non-hunters. East Basin respondents (n=74, 82% hunters) favored management actions targeting CWD hotspots, increasing harvest of adult male deer (both white-tailed and mule) through later hunting seasons, and prioritizing white-tailed deer population reduction over mule deer (Table 3). West Basin respondents (n=71, 17% non-residents) supported later general hunting seasons and increased limited quota licenses for both male and female white-tailed deer (Table 4). To specifically address CWD in white-tailed deer, increased Type 3 and 8 licenses were initiated in 2019 for hunt area 164.

Overall, CWD management for white-tailed deer in the Bighorn Basin has prioritized controlling deer densities and expanding distributions. This strategy aims to limit CWD transmission within white-tailed deer populations, between white-tailed deer and struggling mule deer populations, and within localized environments creating CWD hotspots. To achieve this, harvest seasons and quotas have been liberalized across the Bighorn Basin, particularly in known high-density CWD hotspots.

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

Year(s)	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>			
	Adult Males (CI = 95%)	Yearling Males	Adult Females	Percent of Harvested Sampled
2020	<b>38% (n=190)</b>	20% (25)	20% (113)	10.9
2021	<b>32% (n=165)</b>	7% (14)	21% (146)	13.2
2022	<b>36% (n=209)</b>	15% (13)	26% (140)	14.2
2023	<b>37% (n=161)</b>	15% (13)	23% (112)	10.6
2024	<b>39% (n=135)</b>	8% (13)	19% (110)	9.7
2020-2024	<b>36% (33-40%, n=860)</b>	14% (78)	22% (621)	11.6

Table 2. CWD five-year average prevalence for hunter-harvested white-tailed deer by corresponding mule deer herd.

Herd	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>		
	Adult Males (CI = 95%)	Yearling Males	Adult Females
MD 207 Paintrock	<b>29% (n=82)</b>	0% (9)	20% (80)
MD208 Southwest Bighorns	<b>29% (n=137)</b>	8% (12)	31% (62)

MD209 Basin	<b>39% (n=28)</b>	12% (8)	29% (14)
MD210 Greybull River	<b>46% (n=137)</b>	27% (15)	26% (105)
MD211 Shoshone River	<b>44% (n=195)</b>	21% (19)	25% (68)
MD212 Owl Creek/Meeteetse	<b>32% (n= 75)</b>	0% (2)	16% (137)
MD215 Upper Shoshone	<b>21% (n=121)</b>	20% (5)	14% (81)
MD216 Clark's Fork	<b>40% (n=25)</b>	0% (1)	24% (37)
*MD321 North Bighorn	<b>46% (n=59)</b>	0% (2)	31% (29)

\*Only includes hunt areas in the Cody Region (i.e., 50, 51, 52, 53)

Table 3. Proportion of responses supporting various harvest strategies aimed at reducing CWD in the Paintrock (PR) and Southwest Bighorns (SB) mule deer herd units, 2021 (n = 74 surveys).

Proportion of Responses in Support of Each Harvest Strategy within Category of Respondent									
Respondents	Address Hotspots	Mule Deer			White-Tailed Deer			Male Late Season	Do Nothing
		Increase Male Harvest	Increase Female Harvest	Population Reduction	Increase Male Harvest	Increase Female Harvest	Population Reduction		
All <sup>a</sup>	78	54	39	19	62	50	30	69	8
PR Hunters	70	44	35	9	52	44	17	83	9
SB Hunters	71	50	33	17	63	50	33	58	13

<sup>a</sup> Includes responses of hunters and non-hunters

Table 4. Proportion of responses supporting various white-tailed deer harvest strategies aimed at reducing CWD in the Upper Shoshone and Clark's Fork mule deer herd units, 2021 (n = 71 surveys).

Proportion of Responses in Support of Each White-Tailed Deer Harvest Strategy within Sex within Herd Unit								
Mule Deer Herd Unit	Males				Females			
	Earlier Season <sup>a</sup>	Later General Season	Later Ltd Quota Season	Increased Ltd Quota Licenses	Earlier Season <sup>a</sup>	Later General Season	Later Ltd Quota Season	Increased Ltd Quota Licenses
Upper Shoshone	11	33	17	39	19	22	20	39
Clark's Fork	14	50	14	21	13	53	20	13

<sup>a</sup> Combined responses regarding earlier general and limited quota seasons

## 2024 - JCR Evaluation Form

SPECIES: Elk

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

HERD: EL211 - MEDICINE LODGE

HUNT AREAS: 41, 45

PREPARED BY: SAM STEPHENS

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Trend Count:	2,676	1,484	2,000
Harvest:	758	804	500
Hunters:	2,053	2,057	1,500
Hunter Success:	37%	39%	33 %
Active Licenses:	2,172	2,305	1,900
Active License Success	35%	35%	26 %
Recreation Days:	15,290	17,316	14,000
Days Per Animal:	20.2	21.5	28
Males per 100 Females:	28	44	
Juveniles per 100 Females	29	30	

Trend Based Objective ( $\pm 20\%$ ) 2,200 (1760 - 2640)

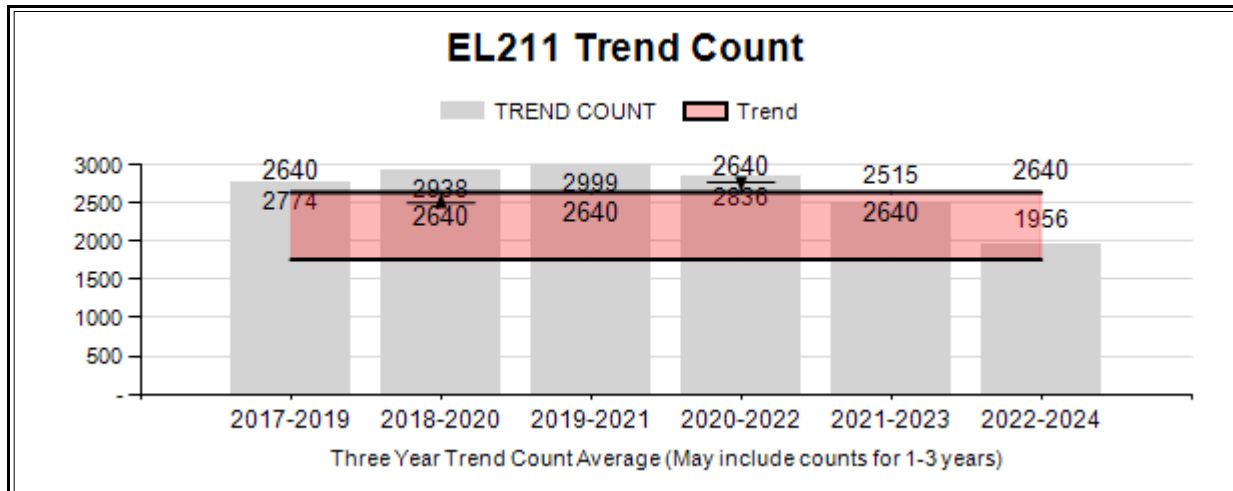
Management Strategy: Recreational

Percent population is above (+) or (-) objective: -32.5%

Number of years population has been + or - objective in recent trend: 1

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq 1$ year old:	30%	20%
Males $\geq 1$ year old:	35%	35%
Juveniles ( $< 1$ year old):	11%	10%
Total:	30%	10%
Proposed change in post-season population:	-30%	25%



**2025 Proposed Hunting Seasons**  
**MEDICINE LODGE ELK HERD (EL211)**

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
41	1			Oct. 15	Nov. 4	250	Any elk
41	2			Nov. 5	Nov. 20	75	Any elk
41	3			Sep. 1	Oct. 14	25	Any elk valid off national forest north of Trapper Creek
41	4			Nov. 5	Dec. 21	350	Antlerless elk
41	6			Dec. 1	Dec. 21	100	Cow or calf
41	7			Sep. 1	Dec. 21	200	Cow or calf valid off national forest north of Trapper Creek
41	9			Sep. 1	Sep. 30	100	Any elk, archery only
45	1			Oct. 15	Nov. 4	300	Any elk
45	4			Oct. 15	Nov. 30	250	Antlerless elk
45	5			Oct. 1	Oct. 10	200	Antlerless elk
45	5			Oct. 25	Nov. 30		Antlerless elk
45	6			Sep. 1	Oct. 14	50	Cow or calf valid on or within 1 mile of irrigated land
45	7	Sep. 1	Sep. 30	Dec. 1	Dec. 21	50	Cow or calf



45	9			Sep. 1	Sep. 30	175	Any elk, archery only
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**2024 Hunter Satisfaction:** 52% Satisfied, 20% Neutral, 28% Dissatisfied

## **2024 Management Summary**

### **1) Hunting Season Evaluation:**

Changes for the 2025 season are intended to modulate Medicine Lodge elk harvest in order to maintain elk abundance within the established trend objective. Trend counts collected over a three year period averaged 1,956 which falls within 20% of our 2,200 trend count objective. This decline in elk abundance has been the result of an aggressive campaign by wildlife managers to curb population growth. Changes implemented in 2022 included the addition of 125 “any elk” and 350 “cow or calf” licenses, as well as significant season length extensions. This change fostered an increase in elk harvest, averaging 412 cows harvested annually over the past three hunting seasons as compared to the previous three year average (310). Decline in elk abundance has been perceived by both hunters and wildlife managers over the past two hunting seasons. This perception is supported by a 11% decrease in hunter satisfaction from 2022 to 2024. Hunter comments collected in the field and through the standardized harvest survey suggest a growing dissatisfaction with the lack of elk regardless of Hunt Type or Hunt Area. This combined with a decreasing trend count is the basis for quota reductions in both Hunt Areas. Between 2023 and 2024 an average of 100 adult bulls were classified in Hunt Area 41, this is down 58% from the 2020-22 average of 241. Moderate decreases to the Type 1, 2, and 9 license quotas in Hunt Area 41 are intended to adjust hunter pressure to current conditions. The addition of Hunt Area 41 Type 3 licenses has been successful in targeting resident elk within a matrix of public and private lands on Shell Rim. With a disparate success rate of over 70%, hunters are growing concerned over a lack of bulls due to increased harvest. While the sex ratios in elk are often higher than what’s observed, a decreasing ratio corroborates hunters’ perceptions and success rates. A slight reduction of 10 licenses is warranted for the Type 3 quota. A decrease in Type 1 licenses is also warranted for Hunt Area 45. The number of adult bulls classified in Hunt Area 45 has decreased slightly from 165 (2020-22) to 145 (2023-24), however, hunter effort is showing a negative trend from averaging 14 days/harvest (2019-23) to 25 days/harvest in 2024. Type 1 licenses were increased in Hunt Area 45 from 300 to 350 in 2007 in response to increased elk abundance. Collectively to decreases to “any elk” licenses are intended to balance hunter numbers to a level commensurate with current elk availability. These changes are unlikely to significantly impact bull harvest but should increase hunter satisfaction. Hunt Area 41 cow harvest peaked in 2022 when favorable weather conditions aligned with increased hunter pressure. The following season, harvest decreased due to persistent warm weather and a lack of snow. In the 2024-25 season, managers were successful in harvesting an estimated 232 cows. This was predominantly due to the Type 6 season being moved into January which allowed large groups of elk to move to publicly accessible areas and remain available throughout the season. Despite a successful season in 2024, managers feel the increased harvest during a January season is no longer warranted given current elk abundance. Therefore a reduction of 250 licenses and a reversion back to a three week December season is

appropriate for the Type 6 license. Similar reductions to Type 6 and 7 licenses are warranted in Hunt Area 45 where winter trend counts have declined below the Hunt Area sub-objective (900) for the fourth year in a row. Given the prolific nature of elk populations in the Bighorn Mountains, managers are cautious not to reduce harvest too much. In order to maintain some harvest pressure during November and December, an extension to both the Hunt Area 41 Type 4 and Type 7 licenses is intended to ensure a moderate level of cow harvest, particularly in the Northern portion of the Hunt Area where access and subsequent harvest is limited by private land and steep topography.

## 2) Herd Unit Objective Review:

The management objective for the Medicine Lodge Elk Herd is a trend-based objective of 2200 elk averaged over the most recent three-year period. This management objective was reviewed in 2021 and is scheduled to be reviewed in 2026.

## 3) Chronic Wasting Disease Management:

The Medicine Lodge elk herd was prioritized for CWD sampling in 2021 and 2022. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). Prioritized sampling efforts helped in nearly achieving the sampling target of 200 adult elk samples within a three-year timeframe (2020-2022). CWD was first detected in this herd unit in 2020 (HA45), and was detected again in 2021 (HA41). Although limited sample data exists annually, the five-year average data suggests low prevalence (Table 1). Sample distribution is nearly even between HA 41 and 45. New harvest strategies implemented in 2022 to address concentrated, overabundance of elk and help manage CWD included the addition of Type 3 and 7 licenses in HA 41, addition of Type 7 licenses in HA 45, and overall increased numbers of licenses and extension of seasons in both HA 41 and 45.

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

Year(s)	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>	Percent of Harvested Adult Elk Sampled
	<b>All Adult Elk (CI = 95%)</b>	
2020	<b>4% (n=27)</b>	3.4
2021	<b>1% (n=80)</b>	12.3
2022	<b>0% (n=81)</b>	8.8
2023	<b>0% (n=20)</b>	2.6
2024	<b>0% (n=22)</b>	2.7
2020-2024	<b>1% (1-3%, n=230)</b>	5.9

## 2024 - JCR Evaluation Form

SPECIES: Elk

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

HERD: EL214 - GOOSEBERRY

HUNT AREAS: 62-64

PREPARED BY: ASHLEIGH RHEA

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Trend Count:	2,538	1,449	2,100
Harvest:	636	666	700
Hunters:	1,135	1,244	1,250
Hunter Success:	56%	54%	56%
Active Licenses:	1,190	1,380	1,400
Active License Success	53%	48%	50%
Recreation Days:	7,222	9,663	9,500
Days Per Animal:	11.4	14.5	13.6
Males per 100 Females:	25	31	
Juveniles per 100 Females	18	43	

Trend Based Objective ( $\pm 20\%$ )

2,000 (1600 - 2400)

Management Strategy:

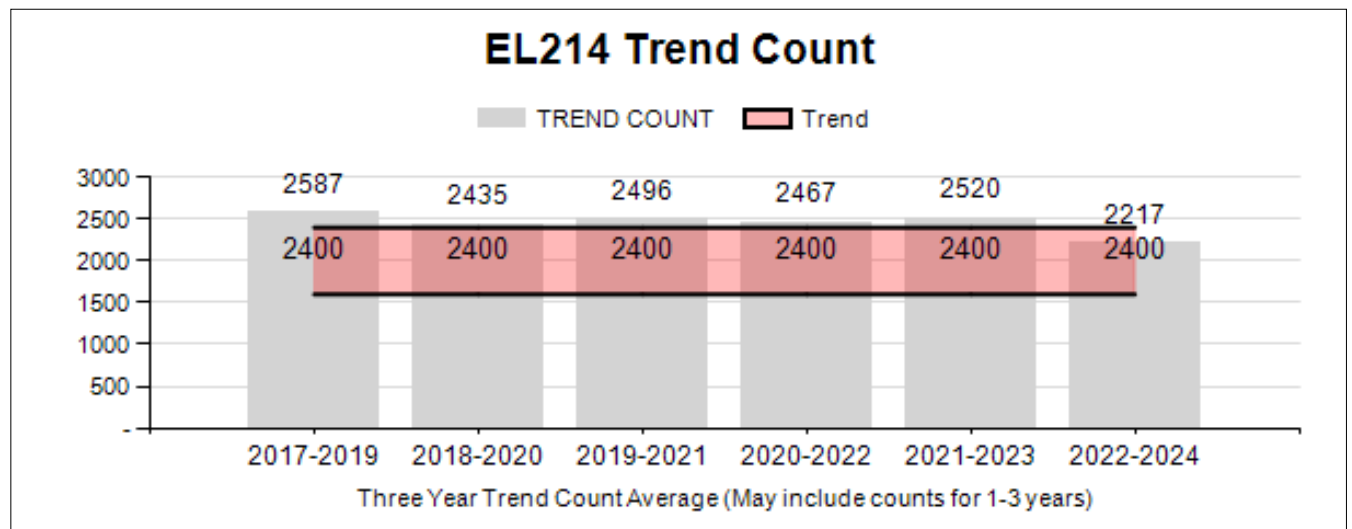
Special

Percent population is above (+) or (-) objective:

-27.6%

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

1



## 2025 Hunting Seasons

### Gooseberry Elk (EL214)

Hunt Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
62	1	Sep. 1	Sep. 30	Oct. 1	Oct. 21	125	Any elk
62	4	Sep. 1	Sep. 30	Oct. 1	Oct. 21	75	Antlerless elk
62, 63	5	Sep. 1	Sep. 30	Oct. 22	Dec. 21	175	Antlerless elk
63, 64	1	Sep. 1	Sep. 30	Oct. 1	Oct. 21	200	Any elk
63, 64	2	Sep. 1	Sep. 30	Oct. 1	Oct. 21	35	Any elk valid within the Washakie Wilderness
63, 64	3	Sep. 1	Sep. 30	Nov. 1	Nov. 15	75	Any elk
63	4	Sep. 1	Sep. 30	Oct. 1	Dec. 21	100	Antlerless elk
63	6			Aug. 15	Oct. 31	200	Cow or calf valid off national forest north of Gooseberry Creek
63	6	Sep. 1	Sep. 30	Nov. 1	Dec. 21		Cow or calf valid in the entire area
64	6			Sep. 1	Nov. 14	250	Cow or calf valid in that portion of the Cottonwood Creek Drainage downstream of and including the 21-Creek Drainage, also valid within the Grass Creek Drainage downstream of the Grass Creek/Little Grass Creek confluence
64	6	Sep. 1	Sep. 30	Nov. 15	Dec. 21		Cow or calf valid in the entire area
64	7	Sep. 1	Sep. 30	Oct. 15	Dec. 21	300	Cow or calf valid south of and including the Cottonwood Creek drainage

**2024 Hunter Satisfaction:** 63% Satisfied, 20% Neutral, 17% Dissatisfied

## 2025 Management Summary

### Hunting Season Evaluation

The 2025 hunting season structure is relatively liberal, with numerous Type 4, 6, and 7 licenses available with long seasons aimed at reducing cow elk numbers. Type 1 and 3 quotas (any elk licenses) remain consistent in order to continue providing a quality hunting experience while maintaining good bull numbers and hunter success. The combined 2024 herd unit hunter success was 54%, and hunter effort was 14.5 days/harvest, which was the highest number of days per animal harvested in the last 10 years. Based on hunter comments, the unseasonably warm

conditions surrounding the majority of season dates played a large role in hunter success and experience. A total of 666 elk were harvested in 2024, which was a reduction from the high (729) number of elk harvested in 2023. However, the 2024 harvest was above the five-year average of 653. The total number of elk counted on the winter trend flight for 2024 was 1,449 elk for the herd unit. The 3-year average count is 2,217, which is 11% above the objective of 2,000 elk. Calf ratios were 43:100 in 2024, constituting a high count since 2005. While bull ratios were 31:100, a substantial increase from 18:100 and 20:100 in 2023 and 2022, respectively. This herd experiences a significant amount of interchange among hunt areas, thus necessitating the need for cross-over licenses. Cow/calf and antlerless licenses tend to have more complicated limitations than seen in other herd units. Type 6 licenses in both Hunt Areas 63 and 64 as well as the 64 Type 7 licenses are structured to allow hunting opportunities on private lands, while still offering significant public lands opportunities during portions of the hunting season.

Despite a low count of 1,449 during our winter trend flight, this decrease in elk numbers is unlikely a true population decline and can be attributed to mild winters conditions and lack of snowfall surrounding when the survey was conducted. Approximately 2,000 elk were seen in hunt area 62, two weeks post-survey that likely moved into the area after multiple weather events that changed elk distribution. Yet the presence of these animals supports manager's skepticism on whether this past year's trend count was representative of the herd unit's population. Given the fluctuations in total number of animals classified compared to previous years, relatively low hunter success, and the unusual weather events present throughout the 2024 hunting season, managers opted to maintain the season structure from 2024 into the 2025 hunting season.

### Management Objective Review

The Gooseberry elk herd unit objective was last reviewed in 2021, and no changes to the current objective were made. This herd unit will be reviewed again in 2026.

### Chronic Wasting Disease Monitoring and Management

The Gooseberry elk herd has been a low priority for surveillance and limited CWD sampling data has been collected. Despite limited sampling, the five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). Over the previous 5 years, there have been no CWD detections within this herd unit, but sample sizes are significantly below the 200 adult elk target within a three-year timeframe. To date, there has been no specific elk management actions to address CWD.

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

Year(s)	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>	Percent of Harvested Adult Elk Sampled
	<b>All Adult Elk (CI = 95%)</b>	
2020	<b>0% (n=23)</b>	3.5
2021	<b>0% (n=15)</b>	2.5
2022	<b>0% (n=21)</b>	3.5
2023	<b>0% (n=26)</b>	3.6
2024	<b>0% (n=29)</b>	4.4
2020-2024	<b>0% (0-3%, n=114)</b>	3.5

### Brucellosis Monitoring and Management

Brucellosis is present within this herd, and measures to track prevalence and to reduce elk/cattle interaction have and will continue to be a priority. Brucellosis monitoring is done annually through hunter harvest to estimate prevalence (Table 1).

Table 2. Brucellosis sampling and seropositive prevalence estimates by hunt area in the Gooseberry Elk Herd; current year, five year, and ten year sampling and prevalence estimates from all collected samples.

	2024			5 Year (2020-2024)			10 Year (2015-2024)		
Elk Herd	Tested	POS	Prevalence	Tested	POS	Prevalence	Tested	POS	Prevalence
EL215 Gooseberry	37	7	18.92%	370	73	19.73%	734	152	20.71%

## 2024 - JCR Evaluation Form

SPECIES: Elk

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

HERD: EL216 - CODY

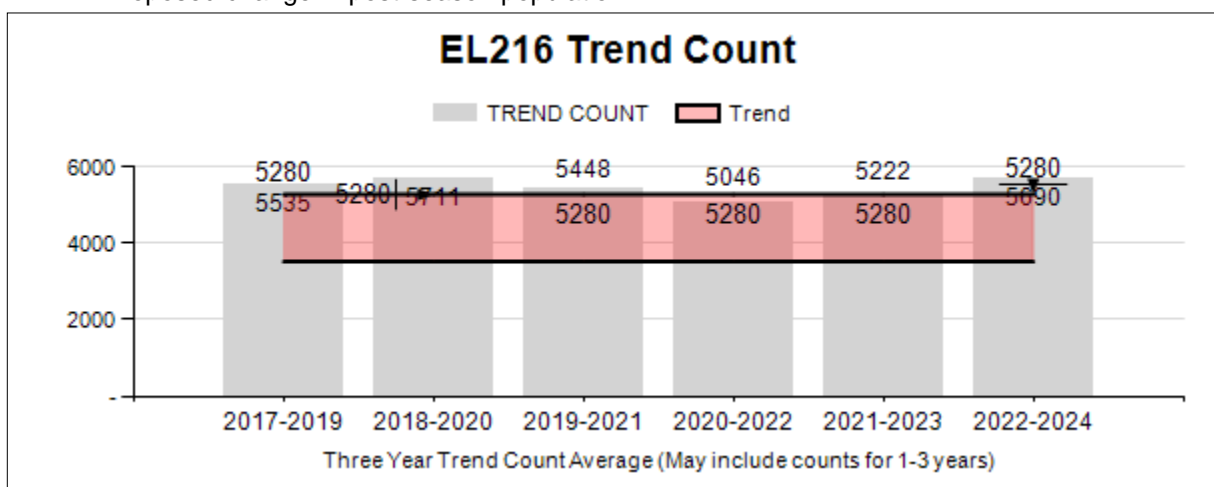
HUNT AREAS: 55-56, 58-61, 66

PREPARED BY: TONY MONG

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Trend Count:	5,386	6,484	6,200
Harvest:	1,183	1,097	1,200
Hunters:	2,548	2,731	3,000
Hunter Success:	46%	40%	40%
Active Licenses:	2,723	3,052	3,300
Active License Success	43%	36%	36 %
Recreation Days:	16,402	19,231	21,000
Days Per Animal:	13.9	17.5	17.5
Males per 100 Females:	30	29	
Juveniles per 100 Females	20	21	
Trend Based Objective (± 20%)			4,400 (3520 - 5280)
Management Strategy:			Special
Percent population is above (+) or (-) objective:			47%
Number of years population has been + or - objective in recent trend:			1

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

	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	n/a%	n/a%
Males ≥ 1 year old:	n/a%	n/a%
Juveniles (< 1 year old):	n/a%	n/a%
Total:	n/a%	n/a%
Proposed change in post-season population:	n/a%	n/a%



**2025 Hunting Seasons  
Cody Elk (EL216)**

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
55	1	Sep. 1	Sep. 30	Oct. 1	Oct. 31	60	Any elk
55	9			Sep. 1	Sep. 30	25	Any elk, archery only
56	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 21		Any elk
56	1	Sep. 1	Sep. 30	Nov. 5	Nov. 30	10	Any elk; also valid in Area 55
56	6	Sep. 1	Sep. 30	Oct. 1	Dec. 21	200	Cow or calf
56	7	Sep. 1	Sep. 30				Cow or calf
56	7			Sep. 1	Dec. 21	200	Cow or calf valid off national forest
56	7			Jan. 1	Jan. 15		Cow or calf valid off national forest within the South Fork Shoshone River drainage
56	9			Sep. 1	Sep. 30	30	Any elk, archery only
58	1	Sep. 1	Sep. 30	Oct. 1	Nov. 30	35	Any elk
58	6	Sep. 1	Sep. 30	Oct. 1	Dec. 21	300	Cow or calf
58	6			Jan. 1	Jan. 15		Cow or calf
59	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 21		Any elk
59	1	Sep. 1	Sep. 30	Nov. 1	Nov. 30	10	Any elk
59	6	Sep. 1	Sep. 30	Oct. 1	Dec. 21	200	Cow or calf
59	6			Jan. 1	Jan. 15		Cow or calf
59	7	Sep. 1	Sep. 30				Cow or calf
59	7			Oct. 1	Nov. 30	50	Cow or calf valid within the Washakie Wilderness
59	9			Sep. 1	Sep. 30	25	Any elk, archery only
60	Gen	Sep. 1	Sep. 19				Any elk
60	Gen			Sep. 20	Oct. 27		Antlered elk
60	9			Sep. 1	Sep. 30	20	Any elk, archery only
61	1	Sep. 1	Sep. 30				Any elk; also valid in that portion of Area 62 within the Washakie Wilderness south of Avalanche Creek
61	1			Oct. 1	Oct. 31	150	Any elk; also valid in that portion of Area 62 within the Washakie Wilderness south of Avalanche Creek



61	2	Sep. 1	Sep. 30	Oct. 7	Nov. 15	50	Any elk
61	4	Sep. 1	Sep. 30	Oct. 15	Dec. 21	100	Antlerless elk
61	6	Sep. 1	Sep. 30	Nov. 7	Dec. 21	300	Cow or calf
61	7			Sep. 1	Dec. 21	500	Cow or calf valid on or within one-half (1/2) mile of irrigated land or north of and including the Rawhide Creek Drainage
61	7			Jan. 1	Jan. 15		Cow or calf valid on or within one-half (1/2) mile of irrigated land or north of and including the Rawhide Creek Drainage
61	9			Sep. 1	Sep. 30	25	Any elk, archery only; also valid in that portion of Area 62 within the Washakie Wilderness south of Avalanche Creek
66	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 21		Any elk
66	6			Aug. 15	Jan. 15	150	Cow or calf

**2025 Region West Nonresident Quota: 2,775**

**2024 Hunter Satisfaction:** 56% Satisfied, 23% Neutral, 21% Dissatisfied

## 2024 Management Summary

### Hunting Season Evaluation

We made changes to seasons this year to increase cow harvest across the Herd Unit. Three year average trend count numbers have increased in the Herd Unit over the last 3 years. Within each of the count blocks Hunt Areas 55-56 is above the upper limits of the objective. The 3-year average trend is 1,547, the highest since 2006. Hunt Areas 58 and 59 are within the objective range with 1.287 but has been increasing since 2022. In Hunt Area 61 we see the trend continue to decrease to within the objective range, however, we continue to see variability in the number of elk counted on the winter range in Hunt Area 61, over the last 5 years we have seen the total number of elk counted range from a low of 1,016 (2022) to 4,307 (2020). The number of elk counted in 2024 was almost 2000 lower than 2023, indicating plasticity in the movement of these elk across Hunt Areas 61 and 58 as well as across the entire the Greater Yellowstone Ecosystem. The number of cow licenses in Hunt Area 61 have saturated the available hunting areas with

hunters and a decrease in those numbers may result in higher harvest in the area. In order to decrease overall numbers across the rest of the herd unit we are adding cow licenses, opening up opportunity early across Hunt Area 56, removing bull only restrictions on the General hunt and adding late season cow hunting opportunity. These changes have been implemented to decrease total number of elk in the herd unit, especially in Hunt Area 56, 58 and 59. With the increasing number of elk in the herd and the shift in weather patterns to later snow fall and warmer temperatures lasting into October we added 5 days to the Hunt Area 60 General season to allow for more opportunity on elk that typically spend most of the fall within Yellowstone National Park. Trail camera data indicates that bull numbers have been increasing over the last several years with close to 600 bulls being counted through 1 camera on the migration from Yellowstone National Park through Hunt Areas 60 and 59.

Harvest success across the unit was down from previous years, dropping from 55% in 2023 to 36% in 2024. We saw some of the most unseasonably warm temperatures and dry conditions we have seen in recent years in the Cody region. The lack of snow and warm temperatures delayed migration and movement of elk in the entire Cody elk herd and made harvest extremely difficult.

### **Management Objective Review**

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

### **Chronic Wasting and Brucellosis Disease Management**

The Cody elk herd was prioritized for CWD sampling in 2023 and 2024. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). Prioritized sampling efforts assisted in achieving the target of 200 adult elk samples collected within a three-year timeframe (2022-2024). Outreach and communication efforts focused through CWD signage, business cards, direct mailings, newspaper articles, and increased outreach and coordination by field staff played a vital role in meeting this sampling target. CWD detections have been limited within this herd unit, with the first detection in 2018, and has since had detections in hunter-harvested elk in 2020, 2021, and 2023. Although sample data is variable annually, the five-year average data suggests low prevalence within this herd unit with narrow confidence intervals (Table 1). There have been no harvest strategies implemented to directly address CWD due to limited detections and low prevalence.

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

Year(s)	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>	Percent of Harvested Adult Elk Sampled
	All Adult Elk (CI = 95%)	
2020	3% (n=108)	10.5
2021	3% (n=31)	2.9
2022	0% (n=30)	2.4
2023	3% (n=115)	7.8
2024	0% (n=60)	5.5
2020-2024	2% (1-4%, n=344)	5.8

**Brucellosis Monitoring:** Brucellosis is present within this herd, and measures to track prevalence and to reduce elk/cattle interaction have and will continue to be a priority. Brucellosis monitoring is done annually through hunter harvest to estimate prevalence (Table 1).

Table 1. Brucellosis sampling and seropositive prevalence estimates by hunt area in the Cody Elk Herd; current year, five year, and ten year sampling and prevalence estimates from all collected samples.

	2024			5 Year (2020-2024)			10 Year (2015-2024)		
	Tested	POS	Prevalence	Tested	POS	Prevalence	Tested	POS	Prevalence
Elk Herd									
EL216 Cody	28	3	10.71%	388	89	22.29%	1057	166	15.70%

## 2024 - JCR Evaluation Form

SPECIES: Elk

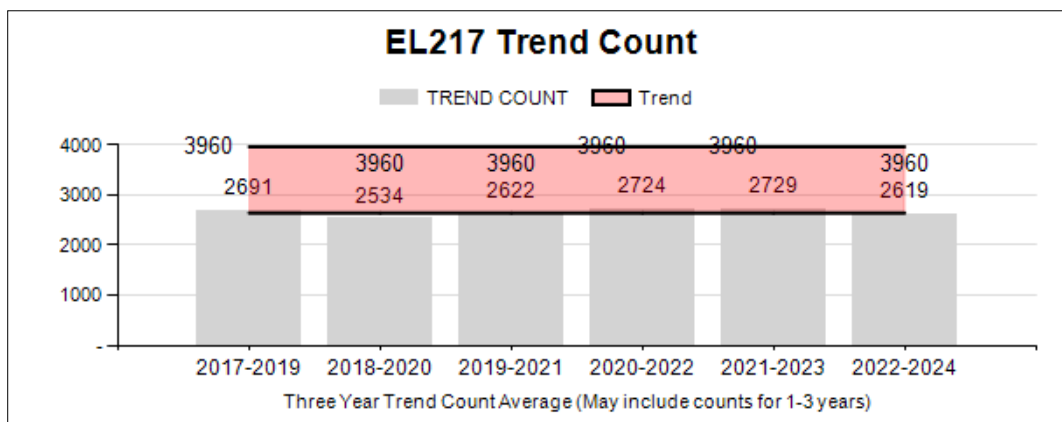
PERIOD: 6/1/2024 - 5/31/2025

HERD: EL217 - CLARKS FORK

HUNT AREAS: 51, 54, 65

PREPARED BY: TONY MONG

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Trend Count:	2,611	2,670	2,800
Harvest:	381	382	425
Hunters:	865	939	950
Hunter Success:	44%	41%	45 %
Active Licenses:	918	1,040	1,100
Active License Success	42%	37%	39 %
Recreation Days:	6,832	7,096	7,200
Days Per Animal:	17.9	18.6	16.9
Males per 100 Females:	18	27	
Juveniles per 100 Females	19	23	
Trend Based Objective (± 20%)			3,300 (2640 - 3960)
Management Strategy:			Special
Percent population is above (+) or (-) objective:			-19.1%
Number of years population has been + or - objective in recent trend:			5
<b>Proposed harvest rates (percent of pre-season estimate for each sex/age group):</b>			
	<u>JCR Year</u>	<u>Proposed</u>	
Females ≥ 1 year old:	n/a%	n/a%	
Males ≥ 1 year old:	n/a%	n/a%	
Juveniles (< 1 year old):	n/a%	n/a%	
Total:	n/a%	n/a%	
Proposed change in post-season population:	n/a%	n/a%	



**2025 Hunting Seasons  
Clark's Fork Elk (EL217)**

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
51	1			Oct. 1	Oct. 31	120	Any elk south and west of the Clarks Fork River
51	2			Oct. 1	Oct. 31	40	Any elk north and east of the Clarks Fork River
51	4			Nov. 16	Dec. 15	50	Antlerless elk
51	9			Sep. 1	Sep. 30	80	Any elk, archery only
54	1			Oct. 1	Oct. 31	50	Any elk valid south of the Clarks Fork River; also valid in Area 65
54	2			Oct. 1	Oct. 31	25	Any elk valid north of the Clarks Fork River
54	3			Nov. 1	Nov. 30	25	Any elk
54	6	-	-	Oct. 1	Oct. 31	100	Cow or calf
54	7	-	-	Aug. 15	Dec. 21	100	Cow or calf valid north of the Clarks Fork River and within the North Fork of the Shoshone River drainage
54	9			Sep. 1	Sep. 30	40	Any elk, archery only; also valid in Area 65
65	1	Sep. 1	Sep. 30	Oct. 1	Oct. 31	25	Any elk
65	4			Aug. 15	Dec. 21	150	Antlerless elk
65	4			Jan. 1	Jan. 31		Antlerless elk
65	6			Aug. 15	Oct. 31	150	Cow or calf
65	7			Nov. 1	Dec. 21	250	Cow or calf

**2025 Region West Nonresident Quota: 2,775**

**2024 Hunter Satisfaction:** 56% Satisfied, 22% Neutral, 22% Dissatisfied

## **2024 Management Summary**

### **Hunting Season Evaluation**

Elk hunting across this herd unit was difficult due to above average fall temperatures and below average snow fall. Overall success dropped from the previous 5-year average of 42% to 37%. The recent trend had been increasing from a low in 2021 of 34% to 48% in 2023, the drop in success can be fully attributed to poor weather conditions especially in Hunt Area 51 that made elk difficult to access and in most cases inaccessible because they were in Yellowstone National Park. The Hunt Area 51 Type 1 license was the most difficult bull license to fill with a success of 36% which was a large decrease from the 2023 success rate of 55%, however, both the Hunt Area 54 Type 1 and 2 licenses were similar in harvest success as the previous years (2024 = 59% and 56 % respectively; previous 5-year averages, 62% and 60% respectively). Cow harvest in the newly created Hunt Area 65 increased from previous years with average success of cow/calf licenses at 30% and the Type 7 licenses having the highest success at 41% and a total of 118 cows harvested. During our trend count flights we only counted 264 elk in Hunt Area 65 which is down from the 5-year average of 343 elk counted.

This was the first year of the new Hunt Area boundary shift and addition of Hunt Area 65. Because we were unsure if the new seasons and quotas would be successful for harvest and/or hunter satisfaction we made some slight changes to the Hunt Areas 54 and 65. Due to comments from hunters as well as field manager's experience during the hunting season we shifted 15 licenses from the Type 1 to the Type 3 license. This will help to alleviate pressure during the October time frame and will allow for more November opportunity when more migrating bulls typically come into the area. With the cow licenses in the area, overall we are within objective level for Hunt Area 54 and we want to maintain overall population levels at their current level and we believe 200 cow license will achieve that objective. Because there are movements of elk out of Hunt Area 51, where we are below objective, seasons dates on the Type 6 and area restrictions of the Type 7 have been created to avoid harvesting cows that migrate into Hunt Area 54 from Hunt Area 51. The Type 7 license was created to deal with damage in the areas specified whereas the Type 6 is to help maintain current population levels.

In Hunt Area 65 we are made a slight shift in how we target later season cow/calf groups. We removed the General season in order to use focused Type 4 licenses and increase the number of days during that late season for those hunters to harvest cows. In 2024, General season hunters only harvested 11 elk during the January season, focusing Type 4 hunters to the late season, increasing those licenses and allowing those hunters opportunity from January 1 to January 31 should increase overall harvest.

### **Management Objective Review**

This herd is currently managed by a 3-year average mid-winter trend count by Hunt Area blocks (HA51, HA54 and HA65). The objective was updated in 2024. Hunt Area 51 has an objective of 1,800, Hunt Area 54 has an objective of 1,400 and Hunt Area 65 has an objective of 100.

### **Chronic Wasting and Brucellosis Disease Management:**

The Clark's Fork elk herd has been a low priority for surveillance and limited CWD sampling data has been collected. Despite limited sampling, the five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). Over the previous 5 years, there have been no CWD detections within this herd unit, but sample

sizes are significantly below the 200 adult elk target within a three-year timeframe. To date, there has been no specific elk management actions to address CWD.

Table 1. CWD prevalence for hunter-harvested elk in the Clark's Fork Elk Herd, 2020 - 2024.

Year(s)	Percent CWD-Positive and (n) – <i>Hunter Harvest Only</i>	Percent of Harvested Adult Elk Sampled
	All Adult Elk (CI = 95%)	
2020	0% (n=25)	5.5
2021	0% (n=10)	3.7
2022	0% (n=13)	3.8
2023	0% (n=16)	3.6
2024	0% (n=10)	2.6
2020-2024	0% (0-5%, n=74)	3.9

**Brucellosis Monitoring:** Brucellosis is present within this herd, and measures to track prevalence and to reduce elk/cattle interaction have and will continue to be a priority. Brucellosis monitoring is done annually through hunter harvest to estimate prevalence (Table 1).

Table 1. Brucellosis sampling and seropositive prevalence estimates by hunt area in the Clark's Fork Elk Herd; current year, five year, and ten year sampling and prevalence estimates from all collected samples.

	2024			5 Year (2020-2024)			10 Year (2015-2024)		
	Tested	POS	Prevalence	Tested	POS	Prevalence	Tested	POS	Prevalence
Elk Herd									
EL217 Clark's Fork	34	1	2.94%	168	13	7.74%	269	16	5.95%

### Chapter 56 Permit

- 1 Participating Landowner
- Season Dates: August 15, 2024 – February 15, 2025
- Authorization for removal of up to 30 antlerless elk within 3 miles of private land in Hunt Area 65
- Total harvest = 5 cows

## 2024 - JCR Evaluation Form

SPECIES: Moose

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

HERD: MO201 - ABSAROKA

HUNT AREAS: 8-9, 11

PREPARED BY:ASHLEIGH RHEA

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Population:	N/A	N/A	N/A
Harvest:	8	8	8
Hunters:	8	8	8
Hunter Success:	100%	100%	100 %
Active Licenses:	8	8	8
Active License Success:	100%	100%	100 %
Recreation Days:	88	97	90
Days Per Animal:	11	12.1	11.2
Males per 100 Females	75	114	
Juveniles per 100 Females	49	71	

Limited Opportunity Objective:

5-year median age of  $\geq 4.0$  years for harvested moose

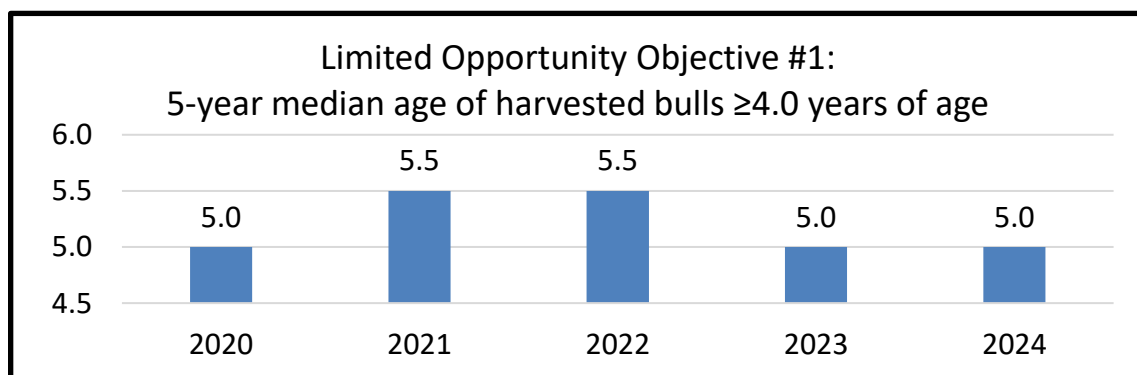
5-year average of  $\leq 10$  days/animal to harvest

Secondary Objective:

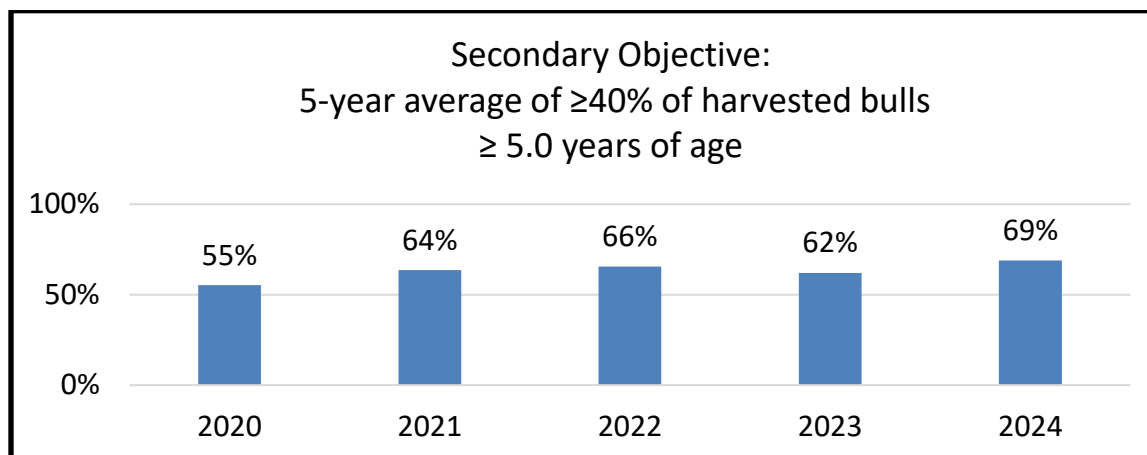
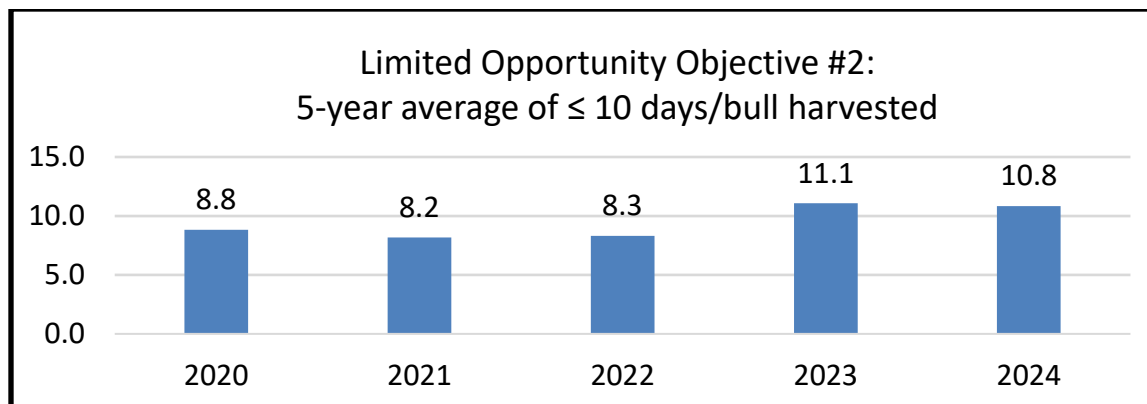
5-year average of  $\geq 40\%$  of harvested moose are  $\geq 5$  years of age

Management Strategy:

Special







## 2025 Hunting Seasons

### Absaroka Moose (MO201)

Hunt Area	Type	Special Archery Dates		Regular Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
8							Closed
9	1	Sep. 1	Sep. 30	Oct. 1	Oct. 31	3	Antlered moose (3 residents)
11	1	Sep. 1	Sep. 30	Oct. 1	Oct. 31	5	Antlered moose (5 residents)

## 2025 Hunt Management Summary

### Hunting Season Evaluation

The 2025 hunting season for the Absaroka Moose Herd will remain unchanged from the 2024 hunting season. The Absaroka Moose Herd has long been considered a low density herd unit, however, there appears to be a large enough population to support limited bull harvest. Number of moose observed during the annual, winter trend count was 20 moose in Hunt Area 9 and 20 moose in Hunt Area 11. Eight (8) bulls were harvested in 2024, constituting a 100% hunter success across both open hunt areas. The 2024 5-year median age of harvested bulls is 5.0 years (limited opportunity objective #1), and more than half (69%) of bulls harvested the past 5 years are  $\geq 5$  years of age (secondary objective). The 5-year average hunter effort was 10.8, a slight decrease from the 5-year average reported for 2023. The 2023 hunting season saw a historic high in days per harvest (26 days) that have now tapered off with 8.8 days per harvest reported in 2024. Field personnel agree that this metric is not representative of bull availability, but rather an artifact of highly selective hunters in Hunt Area 11 using a large portion of the hunting season. With the exception of the 5-year average days per harvest objective, the remaining two herd unit objectives are currently being satisfied.

The collection of teeth from harvested bull moose will remain a difficult but vital part of the management of this herd unit. This past year teeth were submitted for 6 out of the 8 moose harvested. Managers emphasize the need to continue contacting hunters throughout the hunting season to obtain these samples.

### Management Objective Review

The objective and management strategy for the Absaroka Moose Herd was last evaluated and approved in 2019. For the 2024 (5-year) objective review, the current set of limited opportunity objectives and special management strategy will be maintained for the next five years following an internal evaluation. Managers discussed possible replacements for the current objective criteria for this herd and came to the consensus that, with such low densities of moose, age and harvest data is the best way to assess whether this herd unit is meeting recreational goals while maintaining population stability.

### Additional Management Data

Trail cameras have been deployed throughout the herd unit since 2018 to monitor the presence of moose from August–October annually, with the goal of documenting bull presence throughout the rut. Managers will continue these efforts into the foreseeable future. From 2020–2023, the

University of Wyoming, Meeteetse Moose Project, monitored GPS collared bull and cow moose in Hunt Area 9 with the objectives of; 1) identifying population limiting factors, 2) measuring adult and calf survival rates, 3) assessing the quality of thermal refuges and the habitats moose during peak temperatures, 4) compare habitat use between male and female moose, and 5) evaluate bull rutting behavior and responses to increasing temperatures. Findings from this work continue to broaden manager's knowledge and provide context on moose behavior in a warming environment. Publications from this work are listed in the Literature Cited section.



Figure 1: Trail camera photos of bull moose in Hunt Area 9, collected in 2024.

### Literature Cited

- Levine, R. L., Dwinnell, S. P. H., Kroger, B., Class, C., and Monteith, K. L. (2021). Helicopter-based immobilization of moose using butorphanol-azaperone-medetomidine. *The Wildlife Society Bulletin*, 46. <https://doi.org/10.1002/wsb.1327>
- Levine, R. L., Kroger, B., & Monteith, K. L. (2024). Thermal conditions alter the mating behaviour of males in a polygynous system. *Functional Ecology*, 38, 2553–2563. <https://doi.org/10.1111/1365-2435.14664>

## 2024 - JCR Evaluation Form

SPECIES: Bighorn Sheep

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

HERD: BS200 - ABSAROKA

HUNT AREAS: 1-5, 22, 999

PREPARED BY: TONY MONG

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Population:	4,140	4,630	4,800
Harvest:	102	98	105
Hunters:	127	124	124
Hunter Success:	80%	79%	85 %
Active Licenses:	127	124	124
Active License Success:	80%	79%	85 %
Recreation Days:	1,113	1,019	1,000
Days Per Animal:	10.9	10.4	9.5
Males per 100 Females	35	64	
Juveniles per 100 Females	38	49	

Population Objective ( $\pm 20\%$ ) 4500 (3600 - 5400)

Management Strategy: Special

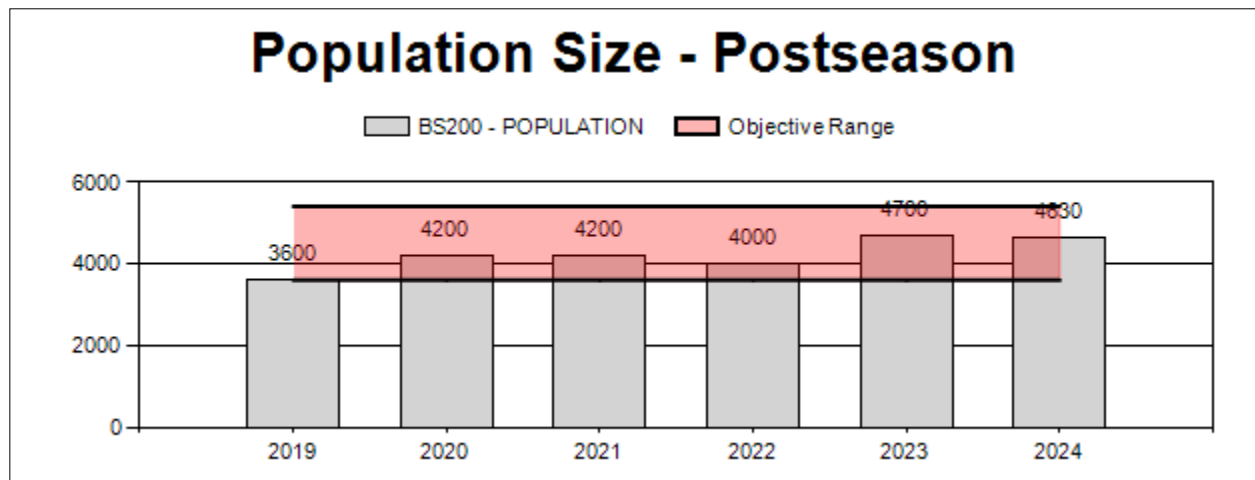
Percent population is above (+) or below (-) objective: 3%

Number of years population has been + or - objective in recent trend: 0

Model Date: 2/20/2025

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq 1$ year old:	0%	0%
Males $\geq 1$ year old:	10%	10%
Proposed change in post-season population:	1.02%	3.0%



**2025 Hunting Seasons  
Absaroka Bighorn Sheep (BS200)**

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
1	1	Aug. 15	Aug. 31	Sep. 1	Oct. 31	15	Any ram (14 residents, 1 nonresident)
2	1	Aug. 15	Aug. 31	Sep. 1	Oct. 31	25	Any ram (22 residents, 3 nonresidents)
3	1	Aug. 15	Aug. 31	Sep. 1	Oct. 31	20	Any ram (18 residents, 2 nonresidents)
4	1	Aug. 15	Aug. 31	Sep. 1	Oct. 31	20	Any ram (18 residents, 2 nonresidents)
5	1			Aug. 1	Aug. 31	35	Any sheep valid within the Owl Creek drainage (31 residents, 4 nonresidents)
5	1	Aug. 15	Aug. 31	Sep. 1	Oct. 31		Any ram
22	1	Aug. 15	Aug. 31	Sep. 1	Oct. 31	5	Any ram, also valid in Area 5 (5 residents)

## 2024 Management Summary

### Hunting Season Evaluation

We are not changing total number of licenses in the herd unit this year. Overall harvest success was fair with an overall success of 79%, however across the Herd Unit it was variable with Hunt Area 3 having the lowest success at 70% and Hunt Area 4 at 94%. Average age of harvested rams is doing well with an overall average of 7.4 and a range of 6.9 (Hunt Area 1) to 8.0 (Hunt Area 2). Because of the unseasonably warm and dry fall we experienced we expected lower success rates, however, this only occurred in Hunt Areas 1 and 3. We continue to be concerned with the number of sheep in Hunt Area 3, however, Hunt Areas 1, 2 and 5 have shown great harvest success and ram quality over the last several years, and Hunt Area 4 had the highest success rates since 2003. Adjustments to each area have been made to meet the 90/10 resident/nonresident requirement.

Winter flights for classification data were only conducted on a small portion of the herd in Hunt Area 5. This was due to a lack of funding and weather conditions that were not conducive to flying.

### Management Objective Review

The objective and management strategy for the Absaroka Bighorn Sheep Herd was last evaluated and approved in 2022, and will not be reviewed again until 2027.

### **Population Modeling**

Managers chose to model this herd using the default structure for bighorn sheep, i.e. constant adult survival, time-varying reproduction and juvenile survival. Based on visual comparison of the available effort variables, active licenses was selected by managers as the variable most predictably related to annual harvest. Trends in harvest have changed significantly in the last 10 years so we restricted data to 2016 to 2026 within the IPM. With these settings the observed data for the IPM included 9 years of harvest and ratio data along with an abundance estimate from surveys in 2020. IPM convergence was excellent, with all Rhat values less than 1.1. IPM abundance estimates also aligned well with the results obtained from an aerial sightability survey completed in 2020 (4,750; UCL = 5,269, LCL = 4,230). The total post-season abundance estimate for 2024 was 4,632 sheep (CL 3,833 – 5,563), which represents a relatively flat population trend, which matches managers field observations of sheep populations. Because this is a large population spread over a very large area, the herd level objective is only used a very course level to determine the herd performance.

## 2024 - JCR Evaluation Form

SPECIES: Bighorn Sheep

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

HERD: BS212 - DEVIL'S CANYON

HUNT AREAS: 12

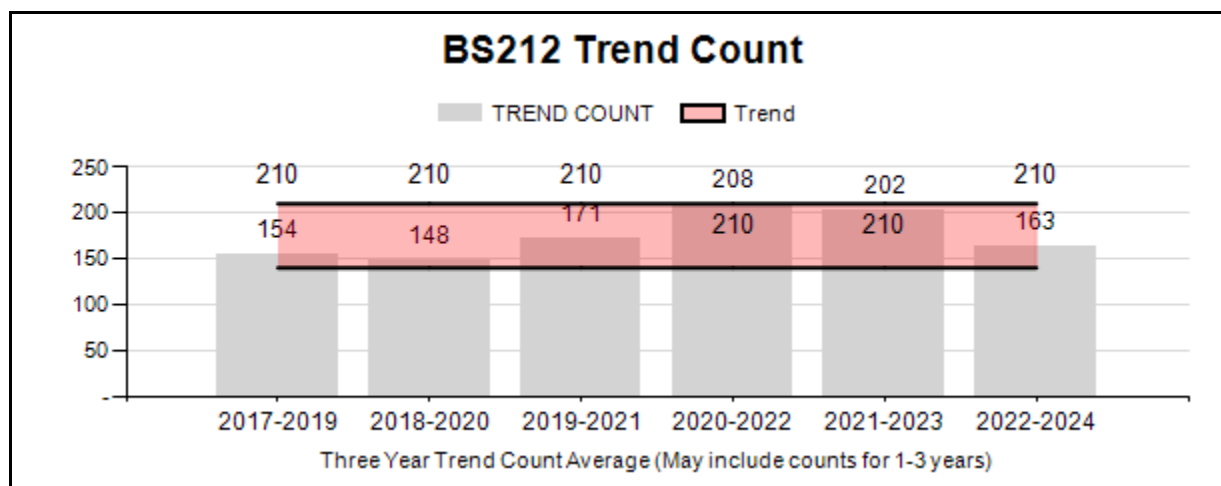
PREPARED BY: SAM STEPHENS

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Trend Count:	181	94	100
Harvest:	6	9	8
Hunters:	7	8	8
Hunter Success:	86%	112%	100 %
Active Licenses:	7	8	8
Active License Success	86%	112%	100 %
Recreation Days:	36	26	26
Days Per Animal:	6	2.9	3.2
Males per 100 Females:	59	58	
Juveniles per 100 Females	45	30	

Trend Based Objective ( $\pm 20\%$ )	175 (140 - 210)
Management Strategy:	Special
Percent population is above (+) or (-) objective:	-46.3%
Number of years population has been + or - objective in recent trend:	2

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

	<u>JCR Year</u>	<u>Proposed</u>
Females $\geq 1$ year old:	2%	0%
Males $\geq 1$ year old:	20%	23%
Juveniles ( $< 1$ year old):	0%	0%
Total:	8%	0%
Proposed change in post-season population:	66%	109%



**2025 HUNTING SEASONS  
DEVILS CANYON BIGHORN SHEEP HERD (BS212)**

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
12	1	Aug. 1	Aug. 14	Aug. 15	Oct. 15	4	Any ram (3 residents, 1 nonresident)
12	2	Aug. 1	Aug. 14	Aug. 15	Oct. 31	4	Any ram less than three-quarter (3/4) curl (4 residents)

## 2024 Management Summary

### 1.) Hunting Season Evaluation:

In 2022, increased sheep harvest was applied to address an overabundance of bighorns in Devil's Canyon. This included a modest increase to Type 1 licenses as well as the issuance of a new Type 6 ewe license. Female harvest was intentionally low in 2022 as this was the first time ewe tags were employed as a management tool. Therefore only 4 licenses were issued. Immediately following the end of the 2022 hunting season a significant mortality event impacted the Devils Canyon Herd. Wildlife Health Laboratory staff concluded that this event was triggered by a novel strain of the pathogen *Mannheimia haemolytica* which caused pneumonia. Disease related mortality continued through the fall and into the winter. By December 31, 2022: approximately 44% of the collared sheep (n=6 ewes; 6 rams) were lost to the pneumonia outbreak.

Standardized aerial trend counts were conducted in July of 2023 where 142 sheep were observed. Two weeks after the flight a second pneumonia outbreak impacted the herd. Mortality notifications lasting through August prompted the recovery and investigation of dead collared ewes. Field necropsies and samples submitted to the Wyoming State Veterinary Lab confirmed a second outbreak of *Mannheimia haemolytica*. Unlike the initial outbreak, the second episode seemed to primarily impact ewes. During the month long die-off, no lamb or ram carcasses were detected despite many orphaned lambs being found in close proximity to ewe carcasses that were



later confirmed positive for the pathogen. Marked individuals were drastically reduced during this period from 13 to 2 collared ewes. The reason why lambs showed resistance to *Mannheimia haemolytica*, could be due to a passive immunity developed through nursing. Lamb mortality could have resumed later in the year but was never detected. In the late summer, rams are typically sexually segregated in Devils Canyon. Rams often congregate in bands at higher elevations away from ewe/lamb groups. This behavior likely protected them from the die-off. Based on 2023 observations, rams appeared to be unaffected from the second outbreak. At the time this phenomenon rendered an increased ram ratio. In 2024 managers increased ram harvest with the introduction of Type 2 licenses, valid for any ram less than  $\frac{3}{4}$  curl. This license type targeted younger aged rams (<4 y.o) which is an age cohort more prone to wander outside of the herd unit. Hunters achieved 100% success with five Type 2 and three Type 1 licenses filled, for a total of eight rams harvested in 2024. A trend count was conducted from the air in November, 2024 where 94 sheep were classified. This is slightly higher than managers anticipated, following the 2023 die-off. Ram ratios appeared lower (58:100) than in 2023, which could be due to increased harvest. Some rams could have been missed, however, given that the survey was conducted during breeding season, it's assumed that the sexes would be comingling. Lamb ratios decreased again for the second year in a row (30:100). This could be an indication that *Mannheimia haemolytica* impacted pregnancy rates. Given the suppressed lamb recruitment over the past three years (2022-24) it's evident that recruitment of Class 1 and 2 rams will stagnate. Prior to the initial die-off, Class 1 rams accounted for 31% of the total rams classified in 2022. Following the die-off this ratio decreased to 9% in 2023 and climbed to 21% in 2024. Due to this aging demographic of rams, one license was removed from the Type 2 quota and added to the Type 1 quota to maintain a harvest of eight rams while shifting the target range forward in age class.

## **2.) Herd Unit Objective Review**

In 2025 managers reviewed the trend count objective of 175 (2015) and determined it needed to be reduced to reflect the sensitive nature of the isolated Devils Canyon sheep herd. A trend based objective of 150 sheep would direct wildlife managers to maintain between 120 (-20% limit) and 180 (+20% limit) in the herd. This would prompt a more proactive response to reduce density with ewe hunting or transplants before a potential disease outbreak. Secondly, increased ram abundance poses a threat to the future recovery of this herd. Ram ratios have ranged from 21 to 91:100 in the past 10 years with higher ratios resulting in increased dispersal incidents. Allowing ram ratios to exceed 50:100 risks the introduction of novel pathogens and increased competition. A sub-objective to manage ram ratios at a lower range of 30-50:100 would be a more effective means of reducing ram dispersal and possible disease transmission risk.

## **2.) Devils Canyon Bighorn Sheep Movement Analysis:**

With disease sampling funding secured through the Wyoming chapter of the Wild Sheep Foundation, additional funding was opportunistically granted by the organization (\$12,450) and the Wyoming Governors Big Game License Coalition (\$15,000) in 2019 to purchase GPS collars (n=30) to monitor habitat use, seasonal movement, and annual recruitment rates of Devils Canyon bighorn sheep. Amongst four capture efforts (November 2019, March 2020, December 2020, and January 2022) we maintained a sample size of 10 adult males (1-7 y.o) and 20 adult females fitted with GPS collars. GPS collars proved to be a critical tool in detecting and

monitoring disease related mortalities following the initial *Mannheimia haemolytica* die-off throughout the 2022-23 winter and 2023 summer. A total of 13 mortalities were detected from a starting total of 15 GPS collared sheep in 2023. Each event was investigated and cause was attributed to each mortality (Figure 1).

Figure 1. Cause-Specific Mortality of GPS Collared Bighorn Sheep (n=30)

<b>SEX</b>	<b>Time of Mortality</b>	<b>Cause of Death</b>
Ewe	February 2022	Capture Myopathy
Ram	August 2022	Poached
Ram	September 2022	Mountain Lion Predation
Ewe	October 2022	Disease
Ewe	October 2022	Disease
Ewe	October 2022	Disease
Ewe	October 2022	Disease
Ewe	November 2022	Disease
Ram	November 2022	Disease
Ram	November 2022	Disease
Ram	November 2022	Disease
Ram	December 2022	Disease
Ram	December 2022	Disease
Ewe	December 2022	Disease
Ram	December 2022	Disease
Ram	April 2023	Disease
Ram	April 2023	Mountain Lion Predation
Ewe	July 2023	Disease
Ewe	July 2023	Disease
Ewe	July 2023	Disease
Ewe	July 2023	Disease
Ewe	July 2023	Disease
Ewe	August 2023	Disease
Ewe	August 2023	Disease
Ewe	August 2023	Disease
Ewe	August 2023	Disease
Ewe	August 2023	Disease
Ewe	August 2023	Disease
Ewe	September 2024	Mountain Lion Predation

## 2024 - JCR Evaluation Form

SPECIES: Mountain Goat

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

HERD: MG201 - BEARTOOTH

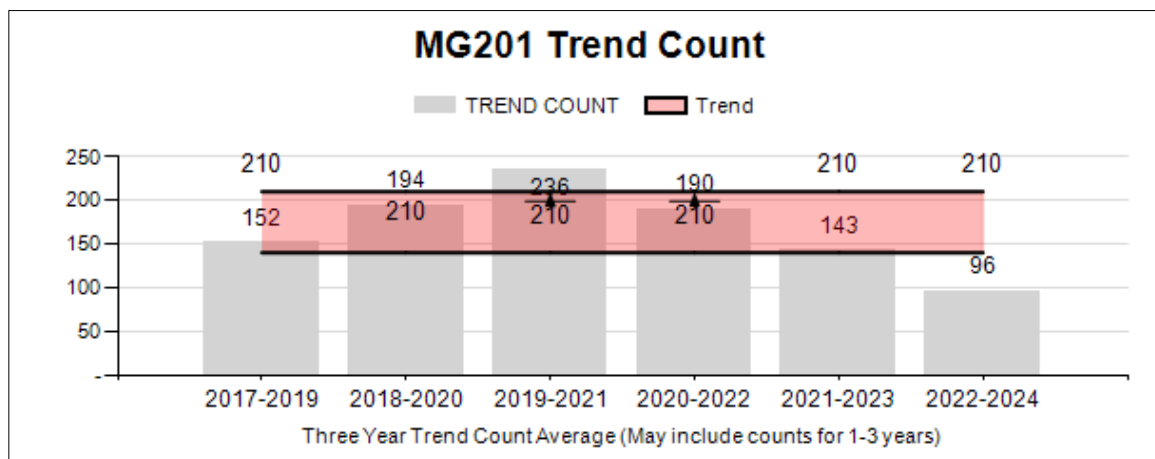
HUNT AREAS: 1, 3, 5, 514, 999

PREPARED BY: TONY MONG

	<u>2019 - 2023 Average</u>	<u>2024</u>	<u>2025 Proposed</u>
Trend Count:	190	48	190
Harvest:	33	31	20
Hunters:	47	36	26
Hunter Success:	70%	86%	77%
Active Licenses:	47	36	26
Active License Success	70%	86%	77%
Recreation Days:	325	260	200
Days Per Animal:	9.8	8.4	10
Males per 100 Females:	0	0	
Juveniles per 100 Females	32	0	
Trend Based Objective (± 20%)			175 (140 - 210)
Management Strategy:			Special
Percent population is above (+) or (-) objective:			-72.6%
Number of years population has been + or - objective in recent trend:			0

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

	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	n/a%	n/a%
Males ≥ 1 year old:	n/a%	n/a%
Juveniles (< 1 year old):	n/a%	n/a%
Total:	n/a%	n/a%
Proposed change in post-season population:	n/a%	n/a%



**2025 Hunting Seasons  
Beartooth Herd (MG201)**

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
1	1	Aug. 15	Aug. 31	Sep. 1	Oct. 31	10	Any mountain goat (9 residents, 1 nonresident)
3	1	Aug. 15	Aug. 31	Sep. 1	Oct. 31	9	Any mountain goat (8 residents, 1 nonresident)
3	2	Aug. 15	Aug. 31	Sep. 1	Oct. 31	9	Any mountain goat valid in the North Fork Shoshone River drainage; also valid in Area 5 (9 residents)

## 2024 Management Summary

### Hunting Season Evaluation

There will be a decrease in the Hunt Area 3 Type 1 licenses again this year as reports from the field and success rates indicate it is tougher to find a goat in the area. We typically fly this herd every other summer, however, due to budgetary constraints and poor weather conditions we were only able to fly a very small portion of Hunt Area 3. The data used for the 3-year trend data should not be considered reliable or a representation of the entire herd. Overall harvest success within the herd was the highest it has been since 2018 at 86%. Nanny harvest was lower than the 5-year previous average (31%) at 26%. Within the herd, the Type 1 license in Hunt Area 3 had the lowest success rate at 69% and longest days to harvest at 13.4 days compared to 4.4 with the Type 2 license and 6.9 days with the Hunt Area 1 license. Based on that information and discussions with hunters that had the Hunt Area 3 Type 1 license we decreased licenses down to 9 total licenses. Due to statewide regulations requiring a split of 90% resident licenses and 10% non-resident licenses we had to adjust licenses in Hunt Area 3 to balance licenses across the state. This caused us to offer an irregular number of licenses for the Type 1 and Type 2.

Hunt Area 5A was created to keep goats from expanding into this area. Although we have had very few reports of goats in this area, we would like the opportunity to have a hunter in this area if a goat is found, therefore the Hunt Area 3 Type 2 licenses will still be valid within Hunt Area 5A.

### Management Objective Review

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