# 2024 Job Completion Reports
# Laramie Region
# Wyoming Game and Fish Department

# Table of Contents

Pronghorn
1) Chalk Bluffs Pronghorn (PR520)… ..... Pages 1-4
2) Hawk Springs Pronghorn (PR521)…..... Pages 5-8
3) Meadowdale Pronghorn (PR522)…..... Pages 9-12
4) Iron Mountain Pronghorn (PR523)… ..... Pages 13-16
5) Dwyer Pronghorn (PR524)…..... Pages 17-20
6) Medicine Bow Pronghorn (PR525)…..... Pages 21-24
7) Cooper Lake Pronghorn (PR526)…..... Pages 25-28
8) Centennial Pronghorn (PR527)… ..... Pages 29-32
9) Elk Mountain Pronghorn (PR528)… ..... Pages 33-38
10) Big Creek Pronghorn (PR529)… ..... Pages 39-44

Deer
11) Goshen Rim Mule Deer (MD534)…..... Pages 45-51
12) Laramie Mountains Mule Deer (MD537)… ..... Pages 52-62
13) Sheep Mountain Mule Deer (MD539)… ..... Pages 63-67
14) Shirley Mountain Mule Deer (MD540)…..... Pages 68-74
15) Platte Valley Mule Deer (MD541)… ..... Pages 75-88
16) Southeast WY White-tailed Deer (WD504)…..... Pages 89-93

Elk
17) Iron Mountain Elk (EL531)…..... Pages 94-97
18) Snowy Range Elk (EL533)…..... Pages 98-105
19) Shirley Mountain Elk (EL534)… ..... Pages 106-112
20) Rawhide Elk (EL730)…..... Pages 113-118

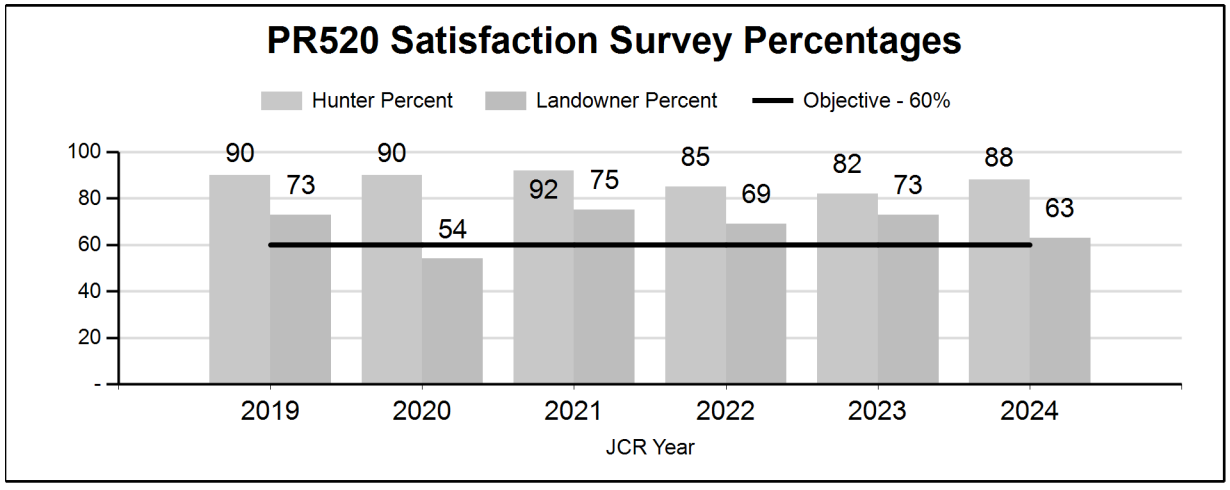
Bighorn Sheep
21) Douglas Creek Bighorn Sheep (BS516)…..... Pages 119-122
22) Laramie Peak Bighorn Sheep (BS517)…..... Pages 123-130
23) Encampment River Bighorn Sheep (BS519)…..... Pages 131-136

Moose
24) Snowy Range Moose(MO545)… ..... Pages 137-150

# 2024 - JCR Evaluation Form

SPECIES: Pronghorn
PERIOD: 6/1/2024 - 5/31/2025
HERD: PR520 - CHALK BLUFFS
HUNT AREAS: 111
PREPARED BY: KEATON WEBER

| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Hunter Satisfaction Percent | 88% | 88% | 80% |
| Landowner Satisfaction Percent | 69% | 63% | 65% |
| Harvest: | 155 | 126 | 130 |
| Hunters: | 166 | 153 | 150 |
| Hunter Success: | 93% | 82% | 87 % |
| Active Licenses: | 189 | 175 | 150 |
| Active License Success: | 82% | 72% | 87 % |
| Recreation Days: | 692 | 521 | 500 |
| Days Per Animal: | 4.5 | 4.1 | 3.8 |
| Males per 100 Females: | 42 | 35 | |
| Juveniles per 100 Females | 48 | 47 | |
| Satisfaction Based Objective | | | 60% |
| Management Strategy: | | | Private Land |
| Percent population is above (+) or (-) objective: | | | 16% |
| Number of years population has been + or - objective in recent trend: | | | 0 |



**2025 Hunting Seasons**
**Chalk Bluffs Pronghorn Herd Unit (PR520)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 111 | 1 | Aug. 15 | Sep. 19 | Sep. 20 | Oct. 14 | 150 | Any antelope |
| 111 | 6 | Aug. 15 | Sep. 19 | Sep. 20 | Dec. 31 | 50 | Doe or fawn |

**2024 Hunter Satisfaction:** 87% Satisfied, 8% Neutral, 5% Dissatisfied
**2024 Landowner Satisfaction:** 26% Above Desired Levels, 63% At Desired Levels, 11% Below Desired Levels

**2025 Management Summary**

**Hunting Season Evaluation**
The 2025 season is designed to provide opportunity while maintaining a hunter and landowner satisfaction of 60%. The regular season date opens early to take advantage of pronghorn before some animals begin to migrate south into Colorado and to address damage concerns as early as possible. This herd is experiencing consecutive years of poor fawn survival due to multiple years of severe drought and habitat loss (Appendix A – classification summary). However, the Type 6 season will continue to run through December 31 to mitigate damage situations on croplands as the season progresses into winter. A reduction in Type 6 quota (50) is not warranted at this time due to consistent damage concerns. In the last three hunting seasons (2022-2024), on average, only 30 females are harvested annually and is not a significant enough harvest to impact the population negatively. Access continues to be an issue in this herd unit, so managers are cognizant of monitoring the satisfaction level of hunters (which is well above desired objective levels) along with success and effort trends to determine license structure. Most hunters were overwhelmingly satisfied with their hunt (87% satisfied) in 2024. It appears that the majority of hunters who are applying for this license have access secured prior to their hunt.

**Management Objective Review**
The objective and management strategy for the Chalk Bluffs pronghorn herd unit was last evaluated and approved in 2023, and will not be reviewed again until 2028.

**Weather and Habitat Data**
Precipitation events throughout 2024 were below normal during each month of the year in this herd unit, except for August. Precipitation totals in the month of August were double the long term averages. Total precipitation for the year was reported at 33% below average for the Cheyenne NOAA weather station. Marginal habitat conditions exist for pronghorn in this herd unit. The majority of lands in this area have been converted to cropland or face continued pressure of being converted to housing developments on the outskirts of Cheyenne. Large subdivisions have been plotted south and southeast of Cheyenne, with new home construction coming in the near future. Subdivisions are often associated with new fence construction,

invasive weed infestations, new road construction, and increased wildlife disturbance by outdoor pets and human activity. Invasive plants such as cheatgrass and Dalmatian toadflax are continual threats to native habitats that support pronghorn, particularly in areas that have been disturbed. In addition to subdivisions, solar and wind developments continue to be proposed and completed within the herd unit. Completed solar farms comprise of 9,100 acres within the herd unit. Approximately 3,200 acres are proposed for wind energy development in the upcoming years.

Appendix A – Chalk Bluffs Pronghorn Herd (PR520) Classification Summary, 2019-2024

**2019 - 2024 Preseason Classification Summary**

for Pronghorn Herd PR520 - CHALK BLUFFS

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Pre Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 0 | 14 | 47 | 61 | 16% | 194 | 52% | 121 | 32% | 376 | 399 | 7 | 24 | 31 | ± 0 | 62 | ± 0 | 47 |
| 2020 | 0 | 45 | 59 | 104 | 30% | 167 | 48% | 79 | 23% | 350 | 331 | 27 | 35 | 62 | ± 0 | 47 | ± 0 | 29 |
| 2021 | 0 | 17 | 32 | 49 | 23% | 102 | 48% | 60 | 28% | 211 | 0 | 17 | 31 | 48 | ± 0 | 59 | ± 0 | 40 |
| 2022 | 0 | 1 | 18 | 19 | 16% | 76 | 64% | 23 | 19% | 118 | 0 | 1 | 24 | 25 | ± 0 | 30 | ± 0 | 24 |
| 2023 | 0 | 7 | 20 | 27 | 20% | 87 | 65% | 19 | 14% | 133 | 0 | 8 | 23 | 31 | ± 0 | 22 | ± 0 | 17 |
| 2024 | 0 | 0 | 15 | 15 | 19% | 43 | 55% | 20 | 26% | 78 | 0 | 0 | 35 | 35 | ± 0 | 47 | ± 0 | 34 |

# 2024 - JCR Evaluation Form

SPECIES: Pronghorn

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

HERD: PR521 - HAWK SPRINGS

HUNT AREAS: 34

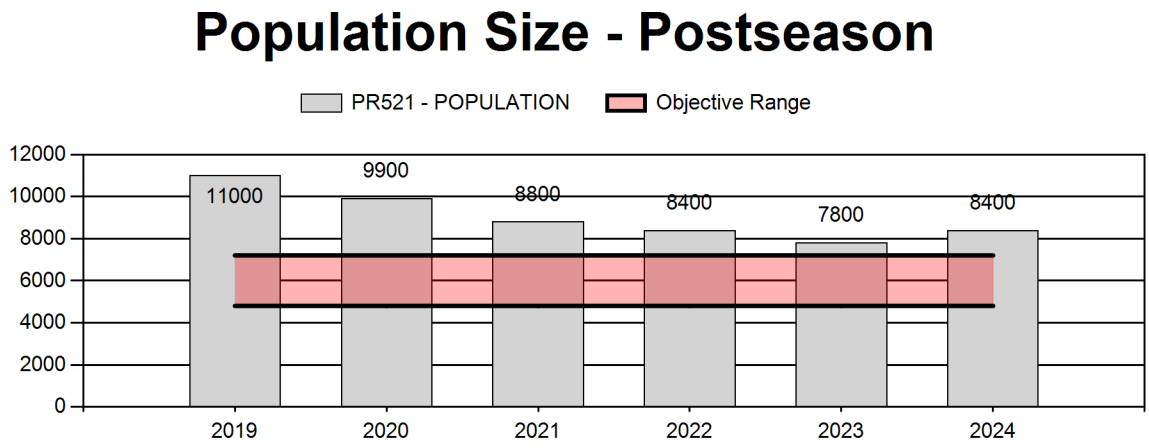
PREPARED BY: KEATON WEBER

| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 9,180 | 8,400 | 8,100 |
| Harvest: | 618 | 463 | 450 |
| Hunters: | 805 | 543 | 550 |
| Hunter Success: | 77% | 85% | 82% |
| Active Licenses: | 840 | 556 | 550 |
| Active License Success: | 74% | 83% | 82% |
| Recreation Days: | 3,224 | 2,002 | 2,000 |
| Days Per Animal: | 5.2 | 4.3 | 4.4 |
| Males per 100 Females | 37 | 45 | |
| Juveniles per 100 Females | 31 | 54 | |

| | |
|---|---|
| Population Objective (± 20%) : | 6000 (4800 - 7200) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | 40% |
| Number of years population has been + or - objective in recent trend: | 12 |
| Model Date: | 2/10/2025 |

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

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 1% | 1% |
| Males ≥ 1 year old: | 19% | 19% |
| Proposed change in post-season population: | 7% | -4% |



**2025 Hunting Seasons**
**Hawk Springs Pronghorn Herd Unit (PR521)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 34 | 1 | Aug. 15 | Sep. 19 | Sep. 20 | Oct. 14 | 600 | Any antelope |
| 34 | 6 | Aug. 15 | Sep. 19 | Sep. 20 | Nov. 30 | 25 | Doe or fawn |

**2025 Hunter Satisfaction:** 85% Satisfied, 10% Neutral, 5% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation**
Type 1 and Type 6 licenses have drastically been reduced since 2019 to address a population that has experienced harsh winter conditions, late spring snow events, and poor fawn recruitment for five consecutive years (5-year average = 32 fawns per 100 does). Since 2019, the Type 1 licenses have been reduced by 40% and the Type 6 licenses have been reduced by 96%. Due to the drastic reductions in licenses over the previous four years, no license quota changes are warranted this year and managers will closely monitor population metrics for improvements before increasing or further decreasing licenses again. Managers still expect to see missing mature age classes due to poor survival and fawn recruitment from previous years (Appendix A – classification summary). Thus, an increase in hunting opportunity is not warranted. The regular season opens September 20th for both the Type 1 and Type 6 to address damage situations early on in the fall through hunting opportunity. This season length is currently 25 days and extending this season length until the end of October is not warranted due to the consistent years of poor fawn production and recent population decline. In 2024, The Type 6 season length was reduced from a December 31st closing date to November 30th to reduce doe harvest due to population decline. As this population recovers, managers will address license quotas and closing dates accordingly.

In 2024, the percentage of buck's harvested > 1 year old was 19% and the 3 year average is 19%. This is likely attributed to the poor fawn recruitment and population decline in previous years. At this time, this herd cannot withstand an increase in buck harvests to achieve the goal of harvesting 25% of preseason males.

**Management Objective Review**
The objective and management strategy for the Hawk Springs pronghorn herd unit was last evaluated and approved in 2023, and will not be reviewed again until 2028.

**Weather and Habitat Data**
Precipitation in Hunt Area 34 was below normal for the biological year. NOAA weather station data from sites in Cheyenne, Torrington, and Fort Laramie documented a decrease in annual precipitation of 33%, 37%, and 37% from average. Timing of precipitation is important to note, as winter and spring precipitation was lacking in much of this herd unit. In July, one significant

hailstorm event occurred in the Goshen Hole, near Yoder and Veteran. Local WGFD personnel and private landowners noticed a significant decline in fawns after this event.

Pronghorn depend on non-native vegetation for much of their year-round nutritional requirements due to a large amount of native rangelands being converted to dryland croplands in this herd unit. Continued poor fawn survival in this herd unit may be partially attributed to poor mid to late-summer forage quality, particularly in areas lacking vegetative diversity, including dryland cropland, introduced monoculture cool season grass pastures, and CRP enrolled lands. Cheatgrass infestations continue to be a cause for concern in native habitats and cropland areas. In years like 2024, managers tend to see increased use of irrigated croplands by pronghorn, resulting in damage situations. However, due to low pronghorn numbers throughout the herd unit, landowners have been tolerant of some pronghorn use.

A 5,580 acre wildfire occurred on the southern end of the Goshen Rim, near Bear Mountain. A high-intensity fire, it is anticipated that sagebrush and mixed mountain shrub habitats found in the limestone cliff bands will likely experience high mortality rates and will be prone to cheatgrass invasion and severe wind erosion until perennial vegetation is re-established. Landowner interest in invasive species control is lacking at the current time in this location.

Subdivision continues to occur on the outskirts of Cheyenne in the southern portions of this herd unit, resulting in habitat loss. Subdivisions are often associated with new fence construction, invasive weed infestations, new road construction, and increased wildlife disturbance by outdoor pets and human activity. In addition to subdivisions, solar and wind developments continue to be proposed and completed within the herd unit. Approximately 38,000 acres of solar and wind energy development are currently proposed within the herd unit.

**Population Modeling**

The bio-year 2024 postseason population estimate for this herd unit from the PopR IPM was approximately 8,400 (CL = 7,000 – 10,000) pronghorn. Due to large fluctuations in fawn production in recent years, the model struggled to predict recruitment. This model estimate of 8,400 was achieved by simplifying the model by inputting Fixed-Effect structures on reproduction, juvenile survival and adult survival. Although this population estimate of 8,400 is 40% above the objective of 6,000 pronghorn, general public sentiment is that this population is still below desired levels. This indicates that the objective may need to be increased at the next objective review in 2028. The most recent line transect survey was in 2015 and estimated 15,200 pronghorn and managers plan to conduct another line transect survey prior to 2028 to better inform the model estimate as well as provide a reliable estimate prior to the next objective review.

**Additional Management Data**

Managers of the Hawk Springs Herd Unit have expressed concern for this herd's historic poor fawn recruitment. There is speculation that habitat quality has degraded to a point that it is lacking the proper nutrient requirements for lactating does to sustain a fawn to weaning age. A grant was submitted to the USDA in 2020 for a 3-year survival study and was not granted. Managers will continue to seek other funding sources to further investigate the relationship between habitat use, parturition areas, survival and condition of CRP in southeast Wyoming.

Appendix A – Hawk Springs Pronghorn Herd (PR521) Classification Summary, 2019-2024

**2019 - 2024 Preseason Classification Summary**

for Pronghorn Herd PR521 - HAWK SPRINGS

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Pre Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 11,900 | 21 | 90 | 111 | 16% | 446 | 63% | 156 | 22% | 713 | 1,306 | 5 | 20 | 25 | ± 4 | 35 | ± 5 | 28 |
| 2020 | 10,500 | 63 | 117 | 180 | 24% | 422 | 57% | 140 | 19% | 742 | 923 | 15 | 28 | 43 | ± 6 | 33 | ± 5 | 23 |
| 2021 | 9,600 | 69 | 113 | 182 | 25% | 410 | 56% | 139 | 19% | 731 | 0 | 17 | 28 | 44 | ± 6 | 34 | ± 5 | 23 |
| 2022 | 9,100 | 66 | 122 | 188 | 24% | 448 | 56% | 160 | 20% | 796 | 0 | 15 | 27 | 42 | ± 6 | 36 | ± 5 | 25 |
| 2023 | 8,600 | 73 | 129 | 202 | 21% | 608 | 64% | 136 | 14% | 946 | 0 | 12 | 21 | 33 | ± 4 | 22 | ± 3 | 17 |
| 2024 | 9,500 | 89 | 179 | 268 | 23% | 598 | 50% | 325 | 27% | 1,191 | 0 | 15 | 30 | 45 | ± 5 | 54 | ± 6 | 38 |

# 2024 - JCR Evaluation Form

SPECIES: Pronghorn

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

HERD: PR522 - MEADOWDALE

HUNT AREAS: 11

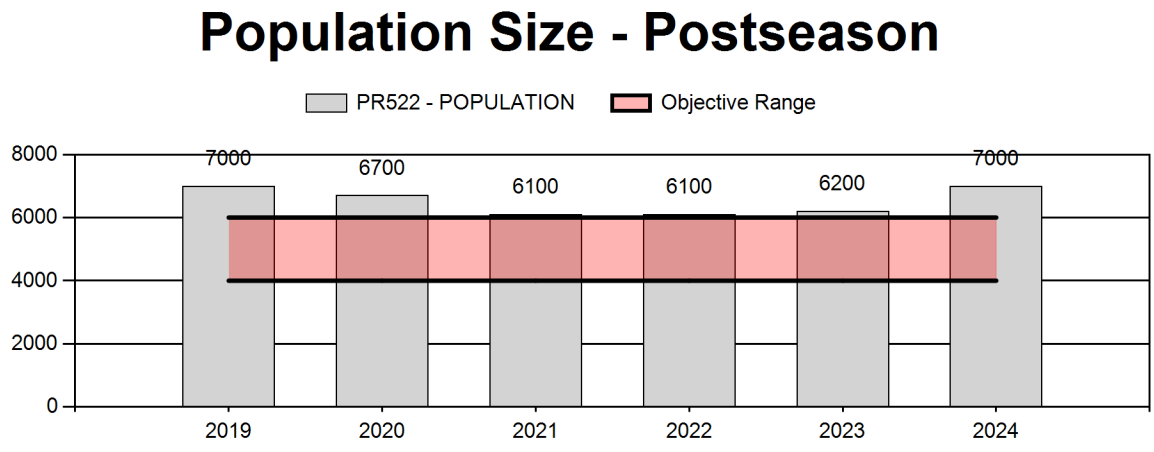
PREPARED BY: KEATON WEBER

| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 6,420 | 7,000 | 7,000 |
| Harvest: | 436 | 341 | 350 |
| Hunters: | 522 | 433 | 450 |
| Hunter Success: | 84% | 79% | 78% |
| Active Licenses: | 577 | 468 | 450 |
| Active License Success: | 76% | 73% | 78% |
| Recreation Days: | 2,037 | 1,537 | 1,500 |
| Days Per Animal: | 4.7 | 4.5 | 4.3 |
| Males per 100 Females | 34 | 54 | |
| Juveniles per 100 Females | 38 | 61 | |

| | |
|---|---|
| Population Objective (± 20%) : | 5000 (4000 - 6000) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | 40% |
| Number of years population has been + or - objective in recent trend: | 12 |
| Model Date: | 2/28/2025 |

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

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 2% | 2% |
| Males ≥ 1 year old: | 14% | 14% |
| Proposed change in post-season population: | 12% | 3% |



**2025 Hunting Seasons**
**Meadowdale Pronghorn Herd Unit (PR522)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 11 | 1 | Aug. 15 | Sep. 30 | Oct. 1 | Oct. 31 | 400 | Any antelope |
| 11 | 6 | Aug. 15 | Sep. 30 | Oct. 1 | Nov. 30 | 50 | Doe or fawn |

**2024 Hunter Satisfaction:** 87% Satisfied, 5% Neutral, 8% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation**
Since 2019, Type 1 licenses have been reduced by 27% and the Type 6 licenses have reduced by 88% to address extremely poor fawn recruitment, low buck ratios, and overall population decline. Weather conditions throughout the herd unit were very favorable for production and survival throughout 2024. A very mild winter and timely spring precipitation allowed for increased survival across all age and sex classes of the population. The 2024 fawn ratio was 61 fawns per 100 does, the best fawn production this herd has had since 2015 (70 fawns:100 does). Fawn ratios have not exceeded 41 fawns per 100 does in any of the previous 5 years (2019-2023 average fawn ratio 37 fawns:100 does). Buck ratios in 2024 reached 54 bucks per 100, the highest buck ratio this herd has seen since 2006. However, the average buck ratio for the previous 5 years (2019-2023) was 35 bucks per 100 does. A classification summary of the last 6 years (2019-2024) can be found in Appendix A. The Type 6 license is still warranted through November to address concerns of pronghorn damage on croplands during late fall months. Although population metrics in 2024 indicate this population increased, managers still expect to see missing mature age classes due to poor survival and fawn recruitment from previous years. Thus, managers would like to see two consecutive years of good fawn production before increasing license quotas and increasing hunting opportunity. As this population recovers, managers will address license quotas and closing dates accordingly.

In 2024, the percentage of buck's harvested > 1 year old was 15% and the 3 year average is 15%. At this time, this herd cannot withstand an increase in buck harvests to achieve the goal of harvesting 25% of preseason males due to population decline and extremely poor fawn recruitment over consecutive previous years.

**Management Objective Review**
The objective and management strategy for the Meadowdale pronghorn herd unit was last evaluated and approved in 2023, and will not be reviewed again until 2028.

**Weather and Habitat Data**
Precipitation in Hunt Area 11 was below average for the biological year. Annual precipitation data collected in Torrington, Fort Laramie, and Douglas was 37%, 37%, and 22% below long-term averages in 2024. Lack of snow and subsequent spring moisture resulted in poor overall

forage production. Cheatgrass invasion into native rangelands continues to be a cause for concern. The 28,984-acre Pleasant Valley wildfire occurred in this hunt area in late July 2024. The fire primarily affected short and mixed grass prairie, with some coniferous forest and mixed mountain shrub habitats affected in the Haystacks Mountains southeast of Hartville.

Efforts are underway to address cheatgrass infestations in 2025, with herbicide applications likely in late summer 2025 and into 2026, as funding is secured.

**Population Modeling**

The bio-year 2024 postseason population estimate for this herd unit from the PopR IPM was approximately 7,000 (CL = 6,100 – 8,200) pronghorn. Although this population estimate of 7,000 is 40% above the objective of 5,000 pronghorn, general public sentiment is that this population is still below desired levels and an increase in licenses is not warranted at this time. Additionally, managers are skeptical of the model estimate at 7,000 pronghorn. The model estimate is likely inflated due to such a drastic increase in fawn production in one year (2024). The most recent line transect survey was in 2022 and estimated 4,700 pronghorn. Since that survey, there has only been one good year of fawn production and recruitment, indicating that this year's estimate of 7,000 pronghorn is highly unlikely with only one good year of fawn production since 2022.

Appendix A – Meadowdale Pronghorn Herd (PR522) Classification Summary, 2019-2024

**2019 - 2024 Preseason Classification Summary**

for Pronghorn Herd PR522 - MEADOWDALE

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Pre Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Ylng | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 8,000 | 66 | 232 | 298 | 19% | 944 | 59% | 359 | 22% | 1,601 | 1,373 | 7 | 25 | 32 | ± 3 | 38 | ± 3 | 29 |
| 2020 | 7,200 | 42 | 148 | 190 | 20% | 562 | 59% | 207 | 22% | 959 | 855 | 7 | 26 | 34 | ± 4 | 37 | ± 5 | 28 |
| 2021 | 6,700 | 39 | 101 | 140 | 23% | 373 | 60% | 108 | 17% | 621 | 0 | 10 | 27 | 38 | ± 6 | 29 | ± 5 | 21 |
| 2022 | 6,800 | 35 | 134 | 169 | 19% | 498 | 57% | 204 | 23% | 871 | 0 | 7 | 27 | 34 | ± 5 | 41 | ± 5 | 31 |
| 2023 | 7,000 | 57 | 135 | 192 | 21% | 520 | 56% | 211 | 23% | 923 | 0 | 11 | 26 | 37 | ± 5 | 41 | ± 5 | 30 |
| 2024 | 7,600 | 56 | 104 | 160 | 25% | 299 | 47% | 183 | 29% | 642 | 0 | 19 | 35 | 54 | ± 8 | 61 | ± 9 | 40 |

# 2024 - JCR Evaluation Form

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

HERD: PR523 - IRON MOUNTAIN

HUNT AREAS: 38
PREPARED BY: LEE KNOX

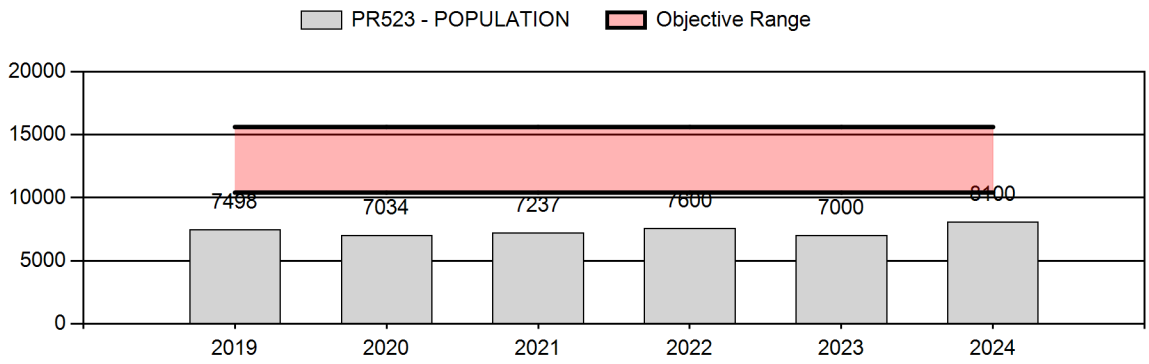
| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 7,274 | 8,100 | 9,200 |
| Harvest: | 702 | 520 | 550 |
| Hunters: | 900 | 621 | 650 |
| Hunter Success: | 78% | 84% | 85% |
| Active Licenses: | 920 | 626 | 670 |
| Active License Success: | 76% | 83% | 82% |
| Recreation Days: | 3,327 | 2,275 | 2,100 |
| Days Per Animal: | 4.7 | 4.4 | 3.8 |
| Males per 100 Females | 39 | 29 | |
| Juveniles per 100 Females | 45 | 60 | |

| | |
|---|---|
| Population Objective (± 20%) : | 13000 (10400 - 15600) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | -37.7% |
| Number of years population has been + or - objective in recent trend: | 6 |
| Model Date: | 02/07/2025 |

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

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 2% | 2% |
| Males ≥ 1 year old: | 30% | 31% |
| Proposed change in post-season population: | 1% | 13% |

## Population Size - Postseason



**2025 Hunting Seasons**
**Iron Mountain Pronghorn (PR523)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 38 | 1 | Aug. 15 | Oct. 4 | Oct. 5 | Oct. 31 | 400 | Any antelope |
| 38 | 2 | Aug. 15 | Oct. 4 | Oct. 5 | Nov. 30 | 300 | Any antelope south of Wyoming Highway 34 |
| 38 | 6 | Aug. 15 | Oct. 4 | Nov. 1 | Dec. 31 | 25 | Doe or fawn |

**2024 Hunter Satisfaction:** 92% Satisfied, 7% Neutral, 1% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation**: The postseason population objective is 13,000 (±20% 10,400-15,600) pronghorn, and the management strategy is recreational management which prescribes for a buck ratio of 30-59:100 does. The 2024 postseason population estimate is 38% below the objective at 8,100(CI 7,000- 9,400) pronghorn. The Iron Mountain pronghorn herd has precipitously declined due to poor fawn recruitment driven by prolonged drought conditions and has remained below the postseason population objective. The three-year average fawn ratio is 47:100 does; however, in 2024, we saw a substantial increase to 60:100 does. Buck ratios are 29:100 does, just below the recreational management minimum of 30:100 does and the yearling buck ratio remains poor at 10:100 does. Yet there was a slight increase from 6:100 does in 2024, and a positive trend mirroring the increased fawn ratio. Despite the increase, the low yearling buck ratio indicates that along with poor fawn recruitment in previous years, fawn over-winter survival has been low, and we have seen the long-term effects in our adult buck ratios (Appendix A). We have significantly reduced licenses from 2,050 in 2018 to 725 in 2024 to address poor fawn recruitment, and the population being below the population objective. The 2024 season will remain status quo to allow the population to continue to rebound.

Male harvest rates were 30% in 2024 and are predicted to remain nearly the same in 2025 at 31% meeting the goal of ≥25% male harvest in recreationally managed herds.

**Management Objective Review:** The current objective was set at 13,000 in 1997. The objective was last reviewed in 2024. We will review this herd objective again in 2029; however, if the situation arises that a change is needed, we will review and submit a proposal as needed.

**Habitat:** Precipitation in Hunt Area 38 was below normal in the hunt area, with NOAA weather station data from Laramie documenting a 5% decrease, and Cheyenne a 33% decrease from average annual precipitation. No major winter snowstorm events were documented in this hunt area, and persistent snows were lacking in all but the highest elevations. Monsoonal moisture patterns in early August resulted in some green-up of rangeland forages, but did little from a

production standpoint. Lack of precipitation in spring resulted in poor forage production for landscapes dominated by cool season grasses and forbs. Shrubs exhibited little to no annual leader production. Leftover standing forage from the 2023 growing season was important to carry big game animals through 2024.

Cheatgrass continues to be a concern for land managers in this herd unit. Proactive steps are being taken to address large infestations associated with previous wildfires. In the Richeau Hills and further south into Laramie County, Dalmatian toadflax is another competitive noxious weed that threatens native rangeland habitats. Efforts are underway to inventory and begin to treat large infestations in 2025. Herbicides effective for Dalmatian toadflax control often have negative impacts on mixed mountain shrubs and sagebrush, so caution must be used by land managers to reduce collateral damage to forages utilized by pronghorn. Over 900 acres of mixed mountain shrub habitats in the Richeau Hills will be treated in 2025 to control Dalmatian toadflax and cheatgrass. A 1,500 acre wildfire occurred in the Bear Creek drainage in September. Efforts are underway to treat this area with Rejuvra herbicide in 2025 to control cheatgrass, which is expected to encroach due to fire severity and its presence pre-fire. An additional 2,100 acres burned in the Richeau Hills, just west of Chugwater in September, affecting mixed mountain shrub and grassland habitats.

Subdivision of ranchlands continues to occur on the outskirts of Cheyenne and Laramie, resulting in a loss of habitat. Subdivisions are often associated with new fence construction, invasive weed infestations, new road construction, and increased wildlife disturbance by outdoor pets and human activity.

**Population Modeling:** The bio-year 2024 postseason population estimate from the PopR IPM was approximately 8,100 (CL = 7,000 – 9,400) pronghorn. The working model was run using 13 years of harvest and classification data and the number of licenses as the effort variable. Adult survival and reproduction was constant, while juvenile survival was time-varying.

Appendix A. Preseason age and sex classification summary for Iron Mountain pronghorn herd beginning in 2019 and ending in 2024.

**2019 - 2024 Preseason Classification Summary**

for Pronghorn Herd PR523 - IRON MOUNTAIN

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Pre Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 10,431 | 142 | 158 | 300 | 21% | 726 | 50% | 417 | 29% | 1,443 | 1,609 | 20 | 22 | 41 | ± 4 | 57 | ± 5 | 41 |
| 2020 | 8,743 | 90 | 211 | 301 | 24% | 696 | 55% | 276 | 22% | 1,273 | 0 | 13 | 30 | 43 | ± 5 | 40 | ± 4 | 28 |
| 2021 | 8,500 | 24 | 189 | 213 | 24% | 472 | 53% | 199 | 23% | 884 | 0 | 5 | 40 | 45 | ± 6 | 42 | ± 6 | 29 |
| 2022 | 8,500 | 61 | 157 | 218 | 21% | 566 | 54% | 268 | 25% | 1,052 | 0 | 11 | 28 | 39 | ± 5 | 47 | ± 5 | 34 |
| 2023 | 7,900 | 31 | 96 | 127 | 16% | 510 | 63% | 171 | 21% | 808 | 0 | 6 | 19 | 25 | ± 4 | 34 | ± 5 | 27 |
| 2024 | 9,100 | 33 | 60 | 93 | 15% | 326 | 53% | 194 | 32% | 613 | 0 | 10 | 18 | 29 | ± 5 | 60 | ± 9 | 46 |

# 2024 - JCR Evaluation Form

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

HERD: PR524 - DWYER

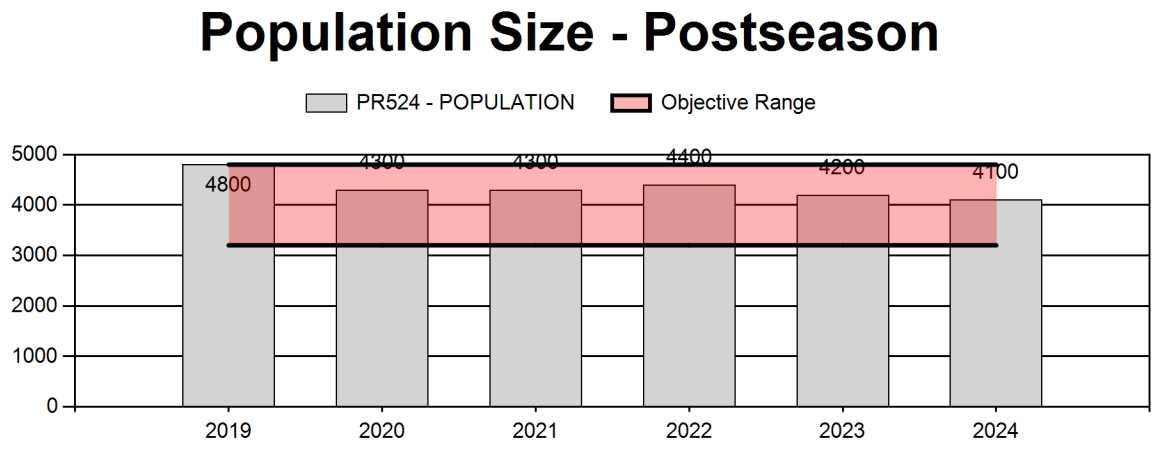
HUNT AREAS: 103
PREPARED BY: KEATON WEBER

| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 4,400 | 4,100 | 4,800 |
| Harvest: | 343 | 203 | 203 |
| Hunters: | 436 | 244 | 260 |
| Hunter Success: | 79% | 83% | 78% |
| Active Licenses: | 474 | 269 | 265 |
| Active License Success: | 72% | 75% | 77% |
| Recreation Days: | 1,577 | 826 | 800 |
| Days Per Animal: | 4.6 | 4.1 | 3.9 |
| Males per 100 Females | 35 | 29 | |
| Juveniles per 100 Females | 28 | 29 | |

| | |
|---|---|
| Population Objective (± 20%) : | 4000 (3200 - 4800) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | 2% |
| Number of years population has been + or - objective in recent trend: | 25 |
| Model Date: | 1/30/2025 |

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

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 30% | 30% |
| Males ≥ 1 year old: | 12% | 12% |
| Proposed change in post-season population: | 2% | 5% |



**2025 Hunting Seasons**
**Dwyer Pronghorn Herd Unit (PR524)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 103 | 1 | Aug. 15 | Oct. 4 | Oct. 5 | Oct. 31 | 250 | Any antelope |
| 103 | 6 | Aug. 15 | Oct. 4 | Oct. 5 | Nov. 30 | 25 | Doe or fawn |

**2024 Hunter Satisfaction:** 74% Satisfied, 15% Neutral, 11% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation**
Since 2019, the Type 1 quota has been reduced by 56% and Type 6 licenses reduced by 94% to address a population that has continually declined as a result of poor fawn recruitment for six consecutive years along with significant winter and spring mortality events. The fawn ratio in 2024 was 29 fawns per 100 does and the 5 year average fawn ratio is 30 fawns per 100 does. This herd has historically struggled to have good fawn production, averaging 39 fawns per 100 does over the last 15 years. At these levels of fawn ratios, the population cannot increase; however, steady trends in buck ratios indicate that fawns that do survive and make it to adult age have high probability of survival. Buck ratios have consistently been at the lower limits of recreational management guidelines of 30 to 59 bucks per 100 does. The 2024 buck ratio was 29 bucks per 100 does and the 5 year average is 31 bucks per 100 does. A classification summary of the last 6 (2019-2024) years can be found in Appendix A. There still continues to be isolated damage concerns so the Type 6 licenses are still needed, but at a much lower level than 4 years ago.

In 2024, the percentage of bucks harvested > 1 year old was 12% and the 3 year average is 12%. Poor adult buck harvest is likely attributed to poor fawn and yearling buck recruitment over multiple years and consequently fewer bucks on the landscape. Given the current hunting structure and predicted fawn production an increase in license numbers is not warranted.

**Management Objective Review**
The objective and management strategy for the Dwyer pronghorn herd unit was last evaluated and approved in 2024, and will not be reviewed again until 2029.

**Weather and Habitat Data**
Precipitation in this herd unit was below normal in 2024. NOAA weather station data collected in Torrington, Douglas, and Fort Laramie showed a 37%, 22%, and 37% departure from average annual precipitation levels. There were no significant winter or spring snow storms recorded. Carryover standing herbaceous forage from the 2023 growing season were important to carry animals through 2024.

Cheatgrass establishment continues to be a concern in native rangeland environments. Aerial herbicide application to control cheatgrass on 566 acres of the foothills near Johnson Mountain was completed in August 2024.

**Population Modeling**

The bio-year 2024 postseason population estimate for this herd unit from the PopR IPM was approximately 4,100 (CL = 3,700 – 4,600) pronghorn. Although this population estimate of 4,100 is right at the objective of 4,000 pronghorn, general public sentiment is that this population is still and has been well below desired levels. This indicates that the objective may need to be decreased at the next objective review in 2029. Managers plan to conduct a Line Transect population survey in 2025, which will provide a robust population estimate to provide more confidence in the herds population estimate and potentially inform an objective change in 2029.

Appendix A – Dwyer Pronghorn Herd (PR524) Classification Summary, 2019-2024

**2019 - 2024 Preseason Classification Summary**

for Pronghorn Herd PR524 - DWYER

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Pre Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 5,500 | 46 | 102 | 148 | 26% | 343 | 60% | 84 | 15% | 575 | 1,096 | 13 | 30 | 43 | ± 7 | 24 | ± 5 | 17 |
| 2020 | 4,700 | 17 | 117 | 134 | 20% | 430 | 64% | 111 | 16% | 675 | 791 | 4 | 27 | 31 | ± 5 | 26 | ± 4 | 20 |
| 2021 | 4,800 | 25 | 61 | 86 | 21% | 236 | 58% | 84 | 21% | 406 | 0 | 11 | 26 | 36 | ± 7 | 36 | ± 7 | 26 |
| 2022 | 4,700 | 6 | 20 | 26 | 12% | 146 | 66% | 49 | 22% | 221 | 0 | 4 | 14 | 18 | ± 6 | 34 | ± 9 | 28 |
| 2023 | 4,600 | 37 | 63 | 100 | 24% | 259 | 62% | 61 | 15% | 420 | 0 | 14 | 24 | 39 | ± 7 | 24 | ± 5 | 17 |
| 2024 | 4,500 | 15 | 28 | 43 | 19% | 147 | 63% | 42 | 18% | 232 | 0 | 10 | 19 | 29 | ± 8 | 29 | ± 8 | 22 |

# 2024 - JCR Evaluation Form

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

HERD: PR525 - MEDICINE BOW

HUNT AREAS: 30-32, 42, 46-48
PREPARED BY: LEE KNOX

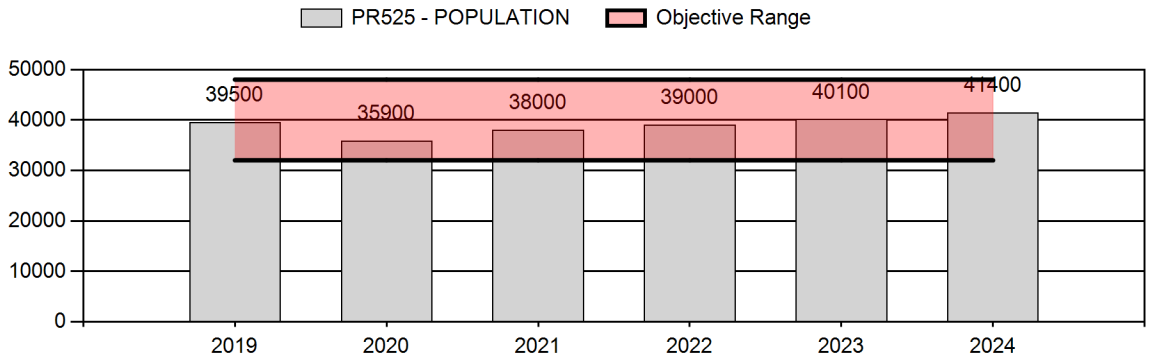
| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 38,500 | 41,400 | 42,400 |
| Harvest: | 3,111 | 3,246 | 3,800 |
| Hunters: | 3,400 | 3,080 | 3,100 |
| Hunter Success: | 92% | 105% | 123% |
| Active Licenses: | 3,795 | 3,695 | 4,332 |
| Active License Success: | 82% | 88% | 88 % |
| Recreation Days: | 10,344 | 9,962 | 10,000 |
| Days Per Animal: | 3.3 | 3.1 | 2.6 |
| Males per 100 Females | 43 | 43 | |
| Juveniles per 100 Females | 65 | 75 | |

| | |
|---|---|
| Population Objective (± 20%) : | 40000 (32000 - 48000) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | 4% |
| Number of years population has been + or - objective in recent trend: | 0 |
| Model Date: | 02/08/2025 |

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

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 4% | 4% |
| Males ≥ 1 year old: | 22% | 22% |
| Proposed change in post-season population: | 1% | 3% |

## Population Size - Postseason



**2025 Hunting Seasons**
**Medicine Bow Pronghorn Herd Unit (PR525)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 30 | 1 | Aug. 15 | Sep. 24 | Sep. 25 | Oct. 31 | 500 | Any antelope |
| 30 | 6 | Aug. 15 | Sep. 24 | Sep. 25 | Oct. 31 | 50 | Doe or fawn |
| 31 | 1 | Aug. 15 | Sep. 24 | Sep. 25 | Oct. 31 | 100 | Any antelope |
| 32 | 1 | Aug. 15 | Sep. 24 | Sep. 25 | Oct. 31 | 700 | Any antelope |
| 32 | 6 | Aug. 15 | Sep. 24 | Sep. 25 | Oct. 31 | 600 | Doe or fawn |
| 32 | 7 | Aug. 15 | Sep. 24 | Sep. 25 | Nov. 15 | 150 | Doe o fawn valid on or within one(1) mile of irrigated land |
| 42 | 1 | Aug. 15 | Sep. 24 | Sep. 25 | Oct. 31 | 300 | Any antelope |
| 42 | 6 | Aug. 15 | Sep. 24 | Sep. 25 | Oct. 31 | 50 | Doe or fawn |
| 46 | 1 | Aug. 15 | Sep. 24 | Sep. 25 | Oct. 31 | 150 | Any antelope |
| 46 | 2 | Aug. 15 | Sep. 24 | Oct. 5 | Oct. 31 | 100 | Any antelope |
| 47 | 1 | Aug. 15 | Sep. 24 | Sep. 25 | Oct. 31 | 600 | Any antelope |
| 47 | 2 | Aug. 15 | Sep. 24 | Oct. 5 | Oct. 31 | 500 | Any antelope |
| 47 | 6 | Aug. 15 | Sep. 24 | Sep. 25 | Oct. 31 | 600 | Doe or fawn |
| 48 | 1 | Aug. 15 | Sep. 24 | Sep. 25 | Oct. 31 | 200 | Any antelope |
| 48 | 2 | Aug. 15 | Sep. 24 | Oct. 5 | Oct. 31 | 150 | Any antelope |
| 48 | 6 | Aug. 15 | Sep. 24 | Sep. 25 | Oct. 31 | 50 | Doe or fawn |

**2024 Hunter Satisfaction:** 97% Satisfied, 2% Neutral, 1% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation:** The management strategy is recreational management which prescribes for a buck ratio of 30-59:100 does. 2024 buck ratios remain within the recreational management guidelines with 43:100 does, and a three-year average of 46:100 does. Fawn ratios in 2024 were 76:100 does, up from 59:100 does in 2023, and above the three-year average of 66:100 does (Appendix A). Fawn production was up throughout all hunt areas with the highest fawn ratios seen in hunt areas 32, 47 and 48. The 2024 postseason population estimate is 41,400 (CI 38,600-44,300) pronghorn, and within 20% of the postseason population objective of 40,000 (±20% 32,000-48,000) pronghorn. With the population meeting objective, and the above-average fawn ratios indicating a growing population, we increased hunter opportunity in several hunt areas with a total increase of 500 type 1 licenses and 250 type 6 and 7 licenses.

Male harvest rates were 22% in 2024 and predicted to be 22% in 2025, shy of meeting the goal of 25% male harvest in recreationally managed herds.

**Management Objective review:** The current objective was set at 40,000 pronghorn postseason in 2014. The objective was last reviewed in 2024. We will review this herd objective again in

2029; however, if the situation arises that a change is needed, we will review and submit a proposal as needed.

**Habitat**: Precipitation levels were 25% below normal for the 2024 biological year. Unlike other portions of the WGFD's Laramie Region that observed monsoonal moisture patterns in August, bringing two to three times the average monthly precipitation typically received, the Shirley Basin area received 50% of normal August precipitation amounts. Shrub conditions continue to be very poor, with this landscape being dominated by late seral shrub plant communities and long-term, severe hedging and overutilization by big game.

In Hunt Area 48, the RR316 wildlife burned 14,200 acres in spring, summer and fall pronghorn ranges in 2020. The burn resulted in the loss of sagebrush habitats and it will take decades for them to recover. Herbaceous production in this burn scar has been excellent. Some small inclusions of cheatgrass have been identified and will be monitored in the burn scar, where more severe soil erosion occurred or in areas where fire severity was higher due to a dense shrub canopy.

The Department plans to work with conservation partners to improve habitats in uplands in Area 47 and Area 48. In 2024, 3.5 miles of woven wire fence was converted near Wilson Ridge, to a 4 wire fence, utilizing wire spacings that will allow for improved pronghorn movements. Habitat improvements are also planned through construction of Zeedyk structures in ephemeral draws, which may improve the availability of summer forage quality and quantity. Department personnel will prioritize potential Zeedyk site selection,structure design, planning, and some implementation in 2025.

In 2024, the acquisition of the Mule Creek WHMA was completed. This 2,660 acre property may provide some additional pronghorn hunting opportunities in the future.

**Line Transect**: The 2022 end of bio-year Line Transect estimate was 35,700 (CI 27,900-43,400). We flew 1,472 miles over 110 transects. Total flight time was 25 hours.

**Population Modeling:** The bio-year 2024 postseason population estimate for this herd unit from the PopR IPM was approximately 41,400 (CL = 38,600 – 44,300).The 2024 IPM model used a fixed effect structure. Recreation days was the effort variable, and harvest and classification data were from the years 2000-2026. Model convergence was good.

Appendix A. Preseason age and sex classification summary for Medicine Bow pronghorn herd beginning in 2019 and ending in 2024.

**2019 - 2024 Preseason Classification Summary**

for Pronghorn Herd PR525 - MEDICINE BOW

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Pre Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 49,195 | 335 | 791 | 1,126 | 21% | 2,612 | 48% | 1,730 | 32% | 5,468 | 2,349 | 13 | 30 | 43 | ± 2 | 66 | ± 3 | 46 |
| 2020 | 42,300 | 260 | 724 | 984 | 19% | 2,599 | 51% | 1,560 | 30% | 5,143 | 0 | 10 | 28 | 38 | ± 2 | 60 | ± 3 | 44 |
| 2021 | 50,900 | 253 | 634 | 887 | 18% | 2,345 | 47% | 1,724 | 35% | 4,956 | 0 | 11 | 27 | 38 | ± 2 | 74 | ± 4 | 53 |
| 2022 | 45,400 | 400 | 712 | 1,112 | 22% | 2,318 | 47% | 1,548 | 31% | 4,978 | 0 | 17 | 31 | 48 | ± 3 | 67 | ± 3 | 45 |
| 2023 | 45,900 | 380 | 790 | 1,170 | 23% | 2,392 | 48% | 1,422 | 29% | 4,984 | 0 | 16 | 33 | 49 | ± 3 | 59 | ± 3 | 40 |
| 2024 | 47,400 | 255 | 548 | 803 | 20% | 1,870 | 46% | 1,404 | 34% | 4,077 | 0 | 14 | 29 | 43 | ± 3 | 75 | ± 4 | 53 |

# 2024 - JCR Evaluation Form

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

HERD: PR526 - COOPER LAKE

HUNT AREAS: 43
PREPARED BY: LEE KNOX

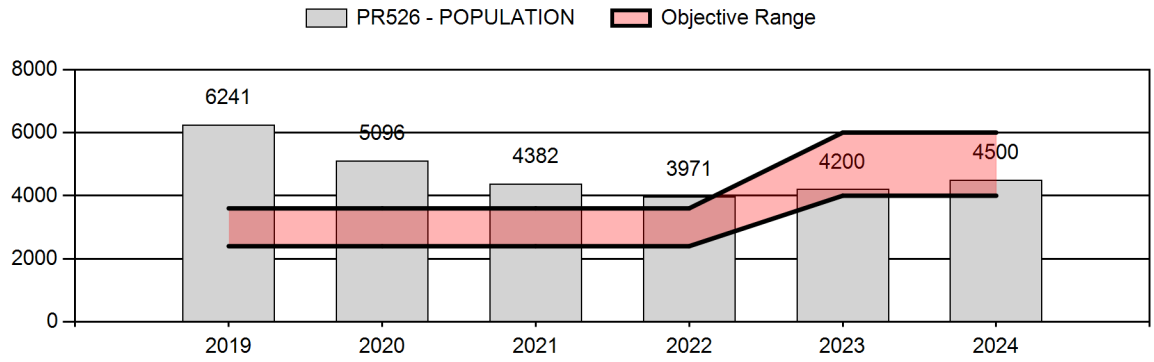
| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 4,778 | 4,500 | 4,700 |
| Harvest: | 536 | 217 | 240 |
| Hunters: | 722 | 237 | 260 |
| Hunter Success: | 74% | 92% | 92% |
| Active Licenses: | 764 | 237 | 260 |
| Active License Success: | 70% | 92% | 92% |
| Recreation Days: | 2,327 | 761 | 800 |
| Days Per Animal: | 4.3 | 3.5 | 3.3 |
| Males per 100 Females | 37 | 76 | |
| Juveniles per 100 Females | 73 | 91 | |

| | |
|---|---|
| Population Objective (± 20%) : | 5000 (4000 - 6000) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | -10% |
| Number of years population has been + or - objective in recent trend: | 0 |
| Model Date: | 02/05/2025 |

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

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 3% | 3% |
| Males ≥ 1 year old: | 17% | 19% |
| Proposed change in post-season population: | 9% | 5% |

## Population Size - Postseason



**2025 Hunting Seasons**
**Cooper Lake (PR526)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 43 | 1 | Aug. 15 | Sep. 14 | Sep. 15 | Oct. 31 | 250 | Any antelope |

**2024 Hunter Satisfaction: 87% Satisfied, 9% Neutral, 4% Dissatisfied**

**2025 Management Summary**
**Hunting Season Evaluation:** The management strategy for the Cooper Lake herd is recreational which prescribes for a buck ratio of 30-59:100 does. Buck ratios drastically improved from 30:100 does in 2023 to 76:100 does in 2024. The majority of the increase came from the yearling buck segment which saw significant increase from 9:100 does in 2023 to 34:100 does in 2024. Fawn recruitment also improved from an all-time low at 55:100 does in 2022, to 91:100 in 2024( Appendix A). Both this count and the adult buck ratio indicate that the population may have experienced high fawn survival from the previous winter, potentially influenced by mild winter weather and ample precipitation in the spring and summer. The postseason population estimate for 2024 was 4,500 (CL = 3,700 – 4,800), within 20% of the postseason population objective of 5,000 (4,000-6,000). The Cooper Lake herd unit is predominantly a private land herd. The majority of the harvest comes from the Laramie River and Diamond Lake Hunter Management Areas (HMA). The Diamond Lake HMA was greatly reduced in size in 2023 and 2024 for the construction of the Rock Creek Wind Energy Project, and will remain at the reduced acreage during the 2025 season. Additionally, significant cuts in licenses were made in the last few years from a total of 1,100 licenses in 2021, to 250 licenses in 2023 to address a significant decline in the population. We would like to sustain these quotas over three-year periods to better evaluate population changes over time. The season structure has been the same for two years and will remain status quo in 2025 so that we can allow another year of data to be collected to ensure the population is recovering before making significant increases in licenses. We feel the license quotas for 2025 should provide opportunity while managing the population toward the objective.

The male harvest rate for 2024 was 17%, and is predicted to be 19% in 2025, with a three-year average of 18%. The predicted harvest rates do not meet the goal of >25% male harvest in recreational management herds, but because the population is still recovering and allowing the current license quotas another season to generate feedback, the 2025 license quota is justified.

**Management Objective Review:** The previous objective of 3,000 was set in 1986. The objective was last reviewed during the 2023 season setting process. The objective was increased to 5,000 based on public input. The objective will be reviewed again in 2028.

**Habitat:**
Precipitation levels were below normal for the 2024 biological year. No significant precipitation events in late winter and early spring were observed that would have impacted adult survival. NOAA weather station data from Laramie indicated a negative departure from average annual precipitation of 5%. Poor overall precipitation in the growing season for cool season grass and

forb species resulted in poor forage productivity. August brought favorable monsoonal moisture patterns, with monthly precipitation totals between 1.93” and 2.99” observed at Laramie area NOAA stations, far exceeding long term averages of 1.14” typically received in August. This resulted in late season green-up of herbaceous vegetation, but did little in the way of producing much additional forage. Across the landscape, green-up in August exceeded what was observed in Spring. Annual precipitation has been below normal for 6 of the last 7 years at the Laramie weather station. Seasonal lakes and playas in this herd unit are important for pronghorn as a water source aiding in pronghorn distribution throughout the herd unit, and as an area to seek out green succulent forage, as water levels recede in late summer. Long-term drought has had a significant impact on these water sources.

**Population Modeling:** The bio-year 2024 postseason population estimate for this herd unit from PopR IPM was approximately 4,500 (CL = 3,7000 – 4,800) pronghorn using the random effect structure. Juvenile and adult survivals were set as constants to reason with the high fawn ratios. The effort variable for this model was licenses, and classification and harvest data used the years 2000-2026. Model convergence was good, but not perfect.

Appendix A. Preseason age and sex classification for Cooper Lake pronghorn herd beginning in 2019 and ending in 2024.

**2019 - 2024 Preseason Classification Summary**

for Pronghorn Herd PR526 - COOPER LAKE

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Pre Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 7,137 | 34 | 100 | 134 | 19% | 336 | 48% | 236 | 33% | 706 | 1,959 | 10 | 30 | 40 | ± 6 | 70 | ± 9 | 50 |
| 2020 | 5,447 | 48 | 52 | 100 | 18% | 268 | 49% | 182 | 33% | 550 | 0 | 18 | 19 | 37 | ± 7 | 68 | ± 10 | 49 |
| 2021 | 5,400 | 23 | 55 | 78 | 19% | 171 | 41% | 167 | 40% | 416 | 0 | 13 | 32 | 46 | ± 10 | 98 | ± 17 | 67 |
| 2022 | 4,392 | 18 | 35 | 53 | 15% | 195 | 55% | 108 | 30% | 356 | 0 | 9 | 18 | 27 | ± 7 | 55 | ± 10 | 44 |
| 2023 | 4,800 | 13 | 31 | 44 | 14% | 148 | 47% | 121 | 39% | 313 | 0 | 9 | 21 | 30 | ± 8 | 82 | ± 16 | 63 |
| 2024 | 5,100 | 78 | 97 | 175 | 29% | 230 | 37% | 209 | 34% | 614 | 0 | 34 | 42 | 76 | ± 12 | 91 | ± 13 | 52 |

# 2024 - JCR Evaluation Form

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

HERD: PR527 - CENTENNIAL

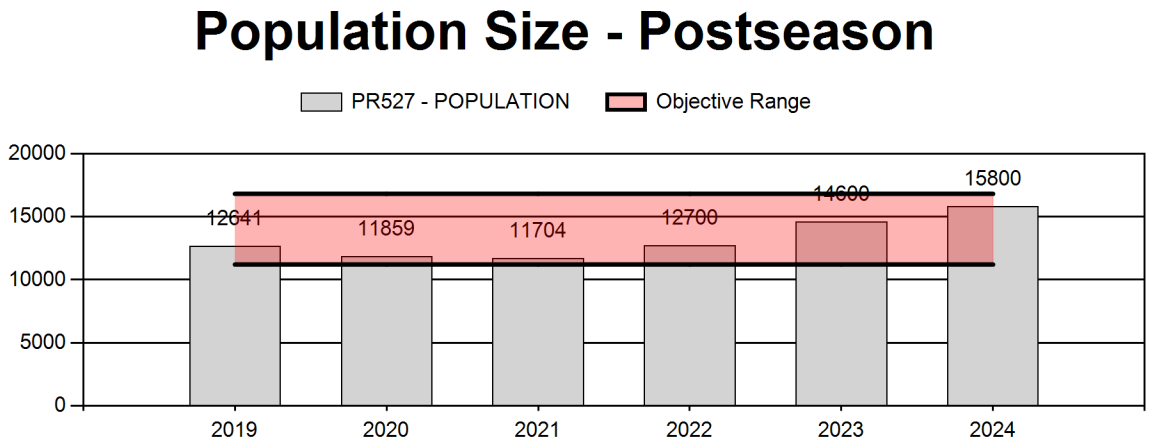
HUNT AREAS: 37, 44-45
PREPARED BY: LEE KNOX

| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 12,701 | 15,800 | 16,700 |
| Harvest: | 901 | 895 | 900 |
| Hunters: | 1,023 | 1,002 | 1,000 |
| Hunter Success: | 88% | 89% | 90% |
| Active Licenses: | 1,130 | 1,116 | 1,100 |
| Active License Success: | 80% | 80% | 82% |
| Recreation Days: | 3,933 | 3,494 | 3,900 |
| Days Per Animal: | 4.4 | 3.9 | 4.3 |
| Males per 100 Females | 40 | 43 | |
| Juveniles per 100 Females | 55 | 71 | |

| | |
|---|---|
| Population Objective (± 20%) : | 14000 (11200 - 16800) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | 13% |
| Number of years population has been + or - objective in recent trend: | 2 |
| Model Date: | 02/11/2025 |

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

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 4% | 4% |
| Males ≥ 1 year old: | 17% | 17% |
| Proposed change in post-season population: | 1% | 7% |



**2025 HUNTING SEASONS**
**Centennial Pronghorn Herd (PR527)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 37 | 1 | Aug. 15 | Sep. 19 | Sep. 20 | Oct. 31 | 400 | Any antelope |
| 37 | 6 | Aug. 15 | Sep. 19 | Sep. 20 | Oct. 31 | 100 | Doe or fawn |
| 44 | 1 | Aug. 15 | Sep. 14 | Sep. 15 | Oct. 31 | 150 | Any antelope |
| 45 | 1 | Aug. 15 | Sep. 14 | Sep. 15 | Oct. 31 | 600 | Any antelope |
| 45 | 6 | Aug. 15 | Sep. 14 | Sep. 15 | Oct. 31 | 200 | Doe or fawn |

**2024 Hunter Satisfaction:** 86% Satisfied, 8% Neutral, 6% Dissatisfied

**2025 Management Summary**
**Hunting Season Evaluation:** The management strategy is recreational management which prescribes a buck ratio of 30-59:100 does. Buck ratios remain within management guidelines with the three-year average buck ratio of 43:100 does, and the 2024 buck ratio at 43:100 does as well. Fawn ratios increased from 50:100 does in 2023 to 71:100 in 2024, and well above the five-year average fawn ratio of 55:100 does (Appendix A). The 2024 postseason population estimate was 15,700 (CI 14,600 - 17,000) and within 20% of the postseason population objective of 14,000 (± 20% 11,200- 16,800). Hunt area 44 has suffered from severe drought conditions since 2021, and an Epizootic Hemorrhagic Disease (EHD) outbreak in 2022. In 2024, we saw noticeably more pronghorn within the hunt area, and with the increase in fawn ratios to 69:100 does, we should continue to see pronghorn numbers rebound in Hunt Area 44. At this time we do not feel that adding back the type 6 license is valid, but there is room for more opportunity on the type 1 license which was increased to 150 licenses. We increased type 1 licenses in Hunt Area 45 for the 2024 season, and there was a 10% decline in hunter success. The type 1 license will remain status quo to look at longer-term changes. However with the population at objective and predicted to increase, we increased the Hunt Area 45 type 6 licenses by 150. Hunt Area 37 will remain status quo for 2025. We feel the license quotas for 2025 should provide opportunity while managing the population toward the objective. We would like to sustain these quotes for the next three years to better evaluate population changes over time.

Male harvest rates were 17% in 2024 and predicted to be 17% in 2025. The three year average is 17%, shy of meeting the goal of 25% male harvest in recreationally managed herds. We are maximizing opportunity where possible and increased type 1 licenses by 75 and type 6 licenses by 150.

**Management Objective review:** The current objective was set at 14,000 in 1997. The management objective was last reviewed during the 2023 season setting process with no change.

We will review this herd objective again in 2028; however, if the situation arises that a change is needed, we will review and submit a proposal as needed.

**Habitat** Precipitation levels were below normal for the 2024 biological year. The NOAA weather station in Laramie received 5% less total precipitation for the year compared to long-term averages, with 10.04 inches of total precipitation received. Precipitation events through winter and spring were well below normal in low elevations. Mountain snowpack was at or slightly above normal. Poor overall precipitation in the growing season for cool season grass and forb species, resulted in poor forage productivity. August brought favorable monsoonal moisture patterns, with monthly precipitation totals between 1.93" and 2.99" observed at Laramie area NOAA stations, far exceeding long-term averages of 1.14" typically received in August. This resulted in temporary, late-season green-up of herbaceous vegetation, but did little in the way of producing much additional forage. Across the landscape, green-up in August exceeded what was observed in Spring in many areas. In the Centennial herd unit, private irrigated lands continue to be important for pronghorn by providing green succulent forages late in summer, when precipitation is below normal. Through fall and early winter 2024, conditions remained mild, and precipitation for this period was well below normal, while temperatures were above normal. Annual precipitation has been below normal in 6 of the last 7 years in this herd unit. It is important to note that timing of precipitation can be a large contributor to annual forage production. While precipitation was only slightly below normal for the calendar year, the timing of rainfall did not coincide with the window necessary for optimal forage production for grasses, forbs, and shrubs.

**Line Transect:** 2023 end of bio-year Line Transect estimate was 16,500 (CI 15,300-17,700). We flew 602 miles over 60 transects for a total of 13 flight hours.

**Population Modeling:** The bio-year 2024 postseason population estimate for this herd unit from the PopR IPM was approximately 15,800 (CL = 14,600 – 17,100) pronghorn. The 2024 IPM model used a Fixed-ffect structure, reproduction and adult survival were constant while juvenile survival was time-varying. Days to harvest was the effort variable, and harvest and classification data was from 2000-2026. Model convergence was good.

Appendix A. Preseason age and sex classification summary for Centennial pronghorn herd beginning in 2019 and ending in 2024.

**2019 - 2025 Preseason Classification Summary**

for Pronghorn Herd PR527 - CENTENNIAL

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Pre Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 0 | 132 | 328 | 460 | 23% | 1,006 | 50% | 562 | 28% | 2,028 | 1,609 | 13 | 33 | 46 | ± 4 | 56 | ± 4 | 38 |
| 2020 | 0 | 79 | 207 | 286 | 20% | 743 | 53% | 383 | 27% | 1,412 | 0 | 11 | 28 | 38 | ± 4 | 52 | ± 5 | 37 |
| 2021 | 0 | 61 | 170 | 231 | 17% | 747 | 54% | 400 | 29% | 1,378 | 0 | 8 | 23 | 31 | ± 4 | 54 | ± 5 | 41 |
| 2022 | 14,000 | 106 | 130 | 236 | 19% | 627 | 50% | 393 | 31% | 1,256 | 0 | 17 | 21 | 38 | ± 5 | 63 | ± 6 | 46 |
| 2023 | 16,673 | 78 | 196 | 274 | 25% | 554 | 50% | 279 | 25% | 1,107 | 0 | 14 | 35 | 49 | ± 6 | 50 | ± 6 | 34 |
| 2024 | 17,500 | 98 | 185 | 283 | 20% | 662 | 47% | 471 | 33% | 1,416 | 0 | 15 | 28 | 43 | ± 5 | 71 | ± 7 | 50 |
| 2025 | 0 | 0 | 0 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0 | 0 | 0 | 0 | ± 0 | 0 | ± 0 | 0 |

# 2024 - JCR Evaluation Form

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

HERD: PR528 - ELK MOUNTAIN

HUNT AREAS: 50
PREPARED BY: TEAL CUFAUDE

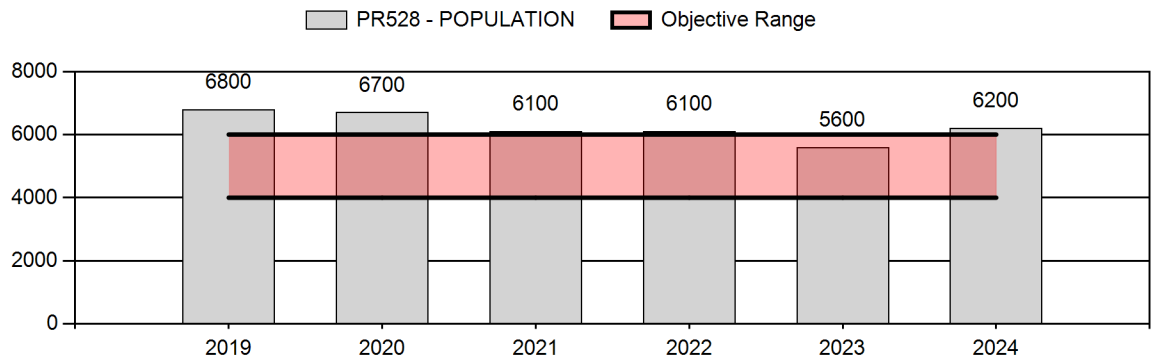
| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 6,260 | 6,200 | 6,000 |
| Harvest: | 376 | 365 | 375 |
| Hunters: | 411 | 374 | 400 |
| Hunter Success: | 91% | 98% | 94% |
| Active Licenses: | 454 | 426 | 450 |
| Active License Success: | 83% | 86% | 83% |
| Recreation Days: | 1,255 | 1,465 | 1,500 |
| Days Per Animal: | 3.3 | 4.0 | 4 |
| Males per 100 Females | 44 | 45 | |
| Juveniles per 100 Females | 43 | 64 | |

| | |
|---|---|
| Population Objective (± 20%) : | 5000 (4000 - 6000) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | 24% |
| Number of years population has been + or - objective in recent trend: | 5 |
| Model Date: | 2/18/2025 |

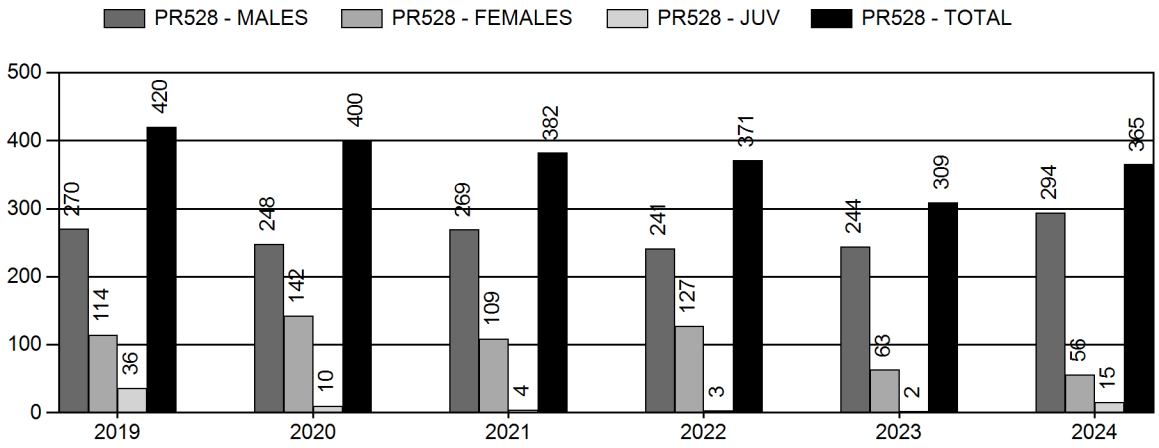
**Proposed harvest rates (percent of pre-season estimate for each sex/age group):**

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 2% | 2% |
| Males ≥ 1 year old: | 18% | 18% |
| Proposed change in post-season population: | 7% | -3% |

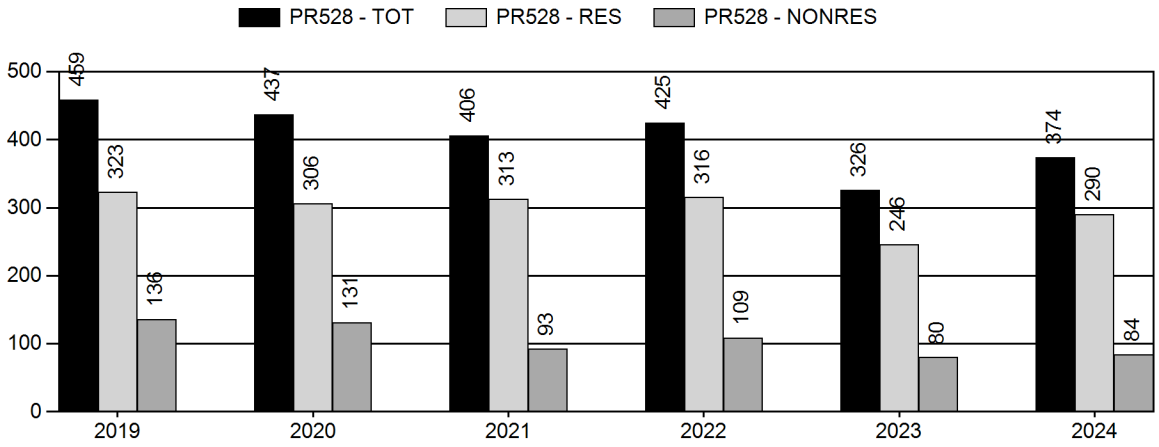
## Population Size - Postseason



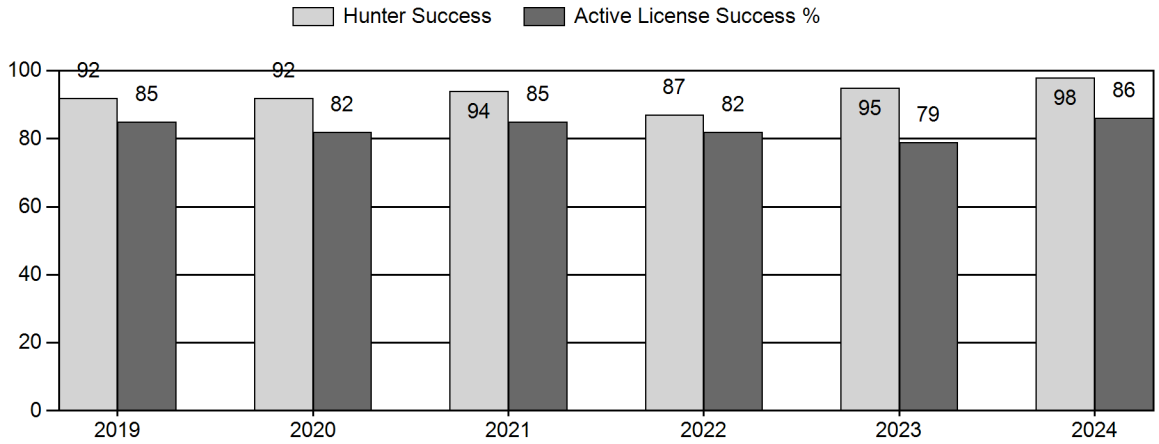
# Harvest



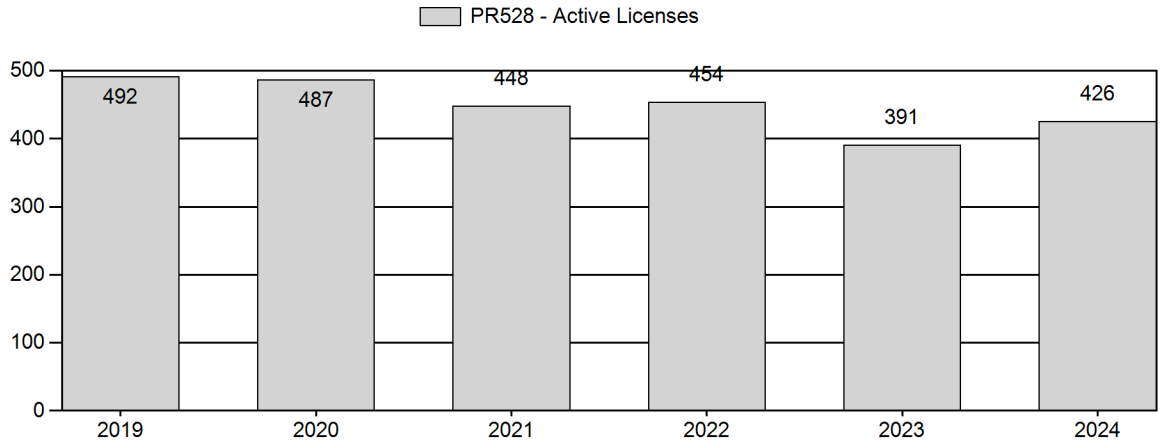

# Number of Hunters



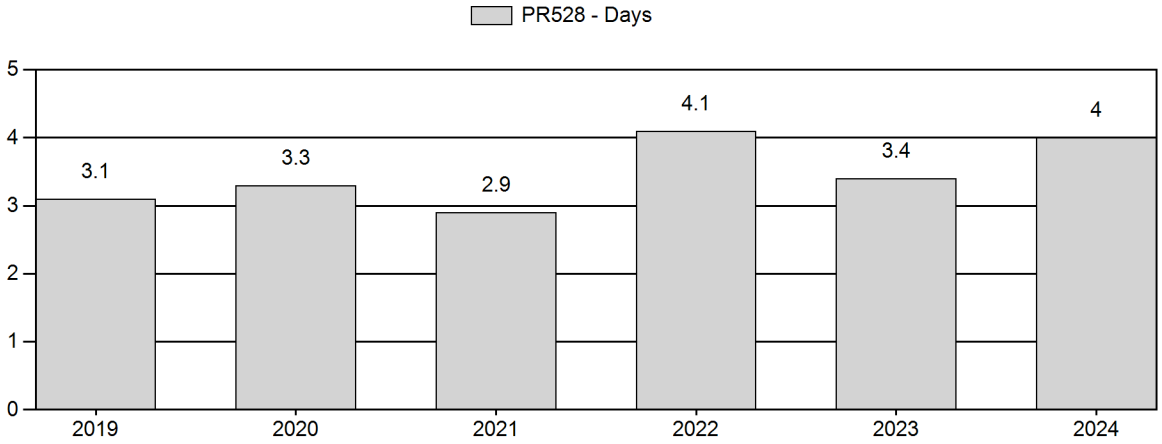

# Harvest Success



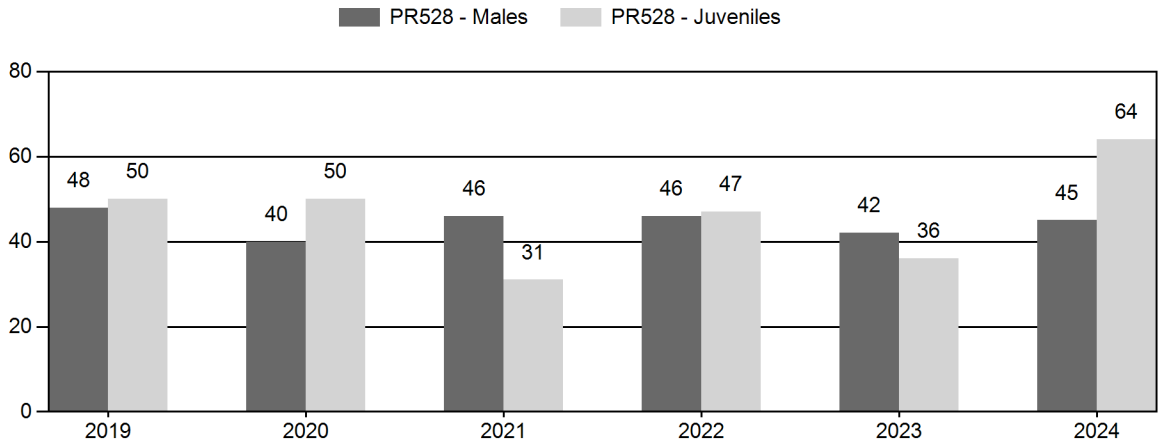
# Active Licenses




# Days Per Animal Harvested




# Preseason Animals per 100 Females



**2025 Hunting Seasons**
**Elk Mountain Pronghorn (PR528)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 50 | 1 | Aug. 15 | Aug. 31 | Sep. 16 | Oct. 31 | 300 | Any antelope |
| 50 | 6 | Aug. 15 | Aug. 31 | Sep. 16 | Oct. 31 | 100 | Doe or fawn |
| 50 | 0 | | | Sep. 1 | Sep. 15 | 50 | Any antelope, muzzle-loading firearms only |

**2024 Hunter Satisfaction:** 90.4% Satisfied, 7.4% Neutral, 2.2% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation**
The 2024 pre-hunting season buck-to-doe ratio (45/100) was slightly higher than the previous five-year average (44/100) and remained within the recreational management objective parameters of 30-59 bucks per 100 does. The yearling buck-to-doe ratio (12/100), indicated improved overwinter fawn survival in 2023-24 and is closer to the average yearling buck ratio observed in previous years. The fawn-to-doe ratio (64/100) increased and was higher than the five-year average of 42/100 (Appendix A).

The 2024 harvest survey indicated hunter success on type 0 (82%), type 1 (88%), and type 6 (82%) licenses improved compared to 2023. Hunter success on type 0 and type 1 licenses also exceeded their respective five-year averages. Days to harvest increased on type 1 and type 6 licenses, possibly due to limited accessibility for pronghorn hunters or hunters being more selective.

Liberal season structures, periods of severe drought, and the 2022-23 winter all likely contributed to a decrease in the population towards the objective of 5,000 pronghorn (4,000-6,000) in 2023. Managers were concerned about buck recruitment and the number of bucks for harvest based on lower fawn survival in 2023. However, improved range conditions in summer 2023, followed by mild winter conditions, contributed to the observed improvement in pronghorn recruitment, productivity, and abundance.

The harvest rate of adult bucks was projected to be 18% in 2025, which is similar to the three-year average of 19.6%. Hunter access to pronghorn via Access Yes properties was not expected to improve in 2025. The pre-hunting buck ratios were not expected to be at the high end of the recreational management parameters so type 1 licenses were not increased.

Changes to this herd unit's hunt season structure and quotas were made in 2023. We planned to maintain the season structure for three years, through the 2025 hunting season, if there were no significant requests or biological rationale for changes. This herd was expected to have average fawn production, similar harvest rates, and a decrease in post-hunting season abundance from 6,200 in 2024 to 6,000 pronghorn in 2025.

**Management Objective Review**
The management objective for Elk Mountain pronghorn is a post-hunting season population objective of 5,000 pronghorn (±20%) and was last reviewed in 2019. Following an internal evaluation, the current objective and recreational management strategy will be maintained for the next five years.

**Weather/Habitat**
Precipitation in hunt area 50 was below normal for the 2024 biological year. Rawlins' NOAA weather station data reported a 9.5% decrease in average annual precipitation. Early spring precipitation occurred in April and May but diminished by early June. Poor overall precipitation in the growing season for cool season grass and forb species resulted in poor forage productivity. Through fall and early winter 2024, conditions remained mild and precipitation for this period was below normal, while temperatures were above normal.

Through the Platte Valley Habitat Partnership, the Saratoga-Encampment-Rawlins Conservation District, BLM, WGFD, USFS, and private landowners have worked together to identify fences in the Platte Valley in need of wildlife-friendly conversion. Approximately 10 miles of hazardous fencing was converted to wildlife-friendly design in hunt area 50. One mile of unnecessary, woven wire fence was permanently removed. The BLM and Saratoga-Encampment-Rawlins Conservation District continued their large-scale juniper removal project in the Corral Creek area. Encroaching junipers were masticated on approximately 469 acres of important sagebrush habitat.

**Line Transect (LT) Survey**
An LT was conducted to estimate pronghorn abundance at the end of the 2022 biological year. The population estimate was 5,200 pronghorn (95% CI 2,900-7,400).

**Population Modeling**
The 2024 post-hunting season population estimate was 6,200 pronghorn (5,600-6,900). Managers chose to model this herd using the default structure for pronghorn, i.e. constant adult survival, time-varying reproduction and juvenile survival. Based on visual comparison of the available effort variables, active licenses was selected as the variable most predictably related to annual harvest. Trends in harvest from 2000 onward were included in the Integrated Population Model (IPM). With these settings the observed data for the IPM included 25 years of harvest and ratio data along with abundance estimates from LT surveys in 2000, 2004, 2007, 2010, 2012, 2018 and 2022. IPM convergence was good. Fawn and buck ratio estimates produced by the IPM aligned well with recorded data for this herd. IPM abundance estimates also aligned well with the results obtained from aerial surveys. The post-hunting season abundance estimate agrees with the perceptions of managers and stakeholders that this herd is beginning to recover after winter 2022-23.

**Appendix A.** 2019-2024 Classification Summary (PR528)

## 2019 - 2024 Preseason Classification Summary

for Pronghorn Herd PR528 - ELK MOUNTAIN

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Pre Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 0 | 95 | 197 | 292 | 24% | 610 | 50% | 308 | 25% | 1,210 | 1,214 | 16 | 32 | 48 | ± 5 | 50 | ± 5 | 34 |
| 2020 | 0 | 85 | 187 | 272 | 21% | 677 | 53% | 340 | 26% | 1,289 | 1,606 | 13 | 28 | 40 | ± 4 | 50 | ± 5 | 36 |
| 2021 | 0 | 43 | 219 | 262 | 26% | 570 | 57% | 176 | 17% | 1,008 | 1,220 | 8 | 38 | 46 | ± 5 | 31 | ± 4 | 21 |
| 2022 | 6,800 | 30 | 134 | 164 | 24% | 359 | 52% | 168 | 24% | 691 | 1,572 | 8 | 37 | 46 | ± 7 | 47 | ± 7 | 32 |
| 2023 | 6,300 | 63 | 193 | 256 | 23% | 614 | 56% | 221 | 20% | 1,091 | 0 | 10 | 31 | 42 | ± 5 | 36 | ± 4 | 25 |
| 2024 | 7,100 | 70 | 202 | 272 | 22% | 603 | 48% | 388 | 31% | 1,263 | 1,568 | 12 | 33 | 45 | ± 5 | 64 | ± 6 | 44 |

# 2024 - JCR Evaluation Form

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

HERD: PR529 - BIG CREEK

HUNT AREAS: 51
PREPARED BY: TEAL CUFAUDE

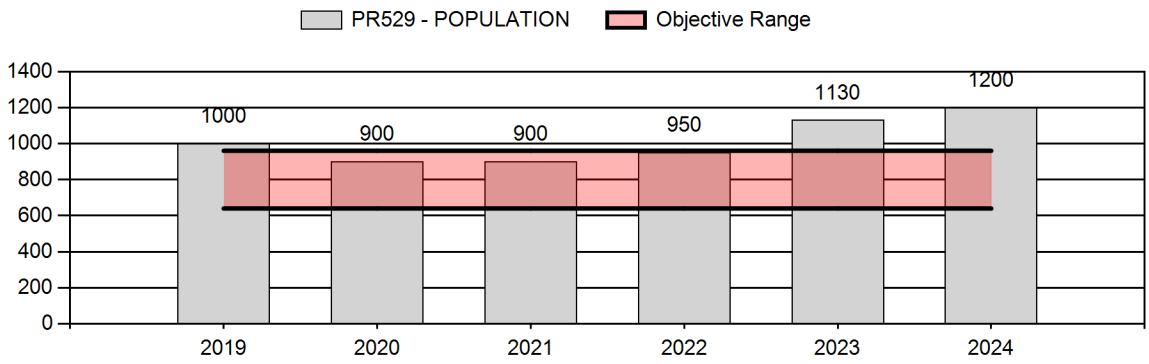
| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 976 | 1,200 | 1,300 |
| Harvest: | 140 | 96 | 100 |
| Hunters: | 156 | 108 | 110 |
| Hunter Success: | 90% | 89% | 91% |
| Active Licenses: | 179 | 116 | 120 |
| Active License Success: | 78% | 83% | 83% |
| Recreation Days: | 571 | 414 | 400 |
| Days Per Animal: | 4.1 | 4.3 | 4 |
| Males per 100 Females | 67 | 60 | |
| Juveniles per 100 Females | 56 | 59 | |

| | |
|---|---|
| Population Objective (± 20%) : | 800 (640 - 960) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | 50% |
| Number of years population has been + or - objective in recent trend: | 1 |
| Model Date: | 2/14/2025 |

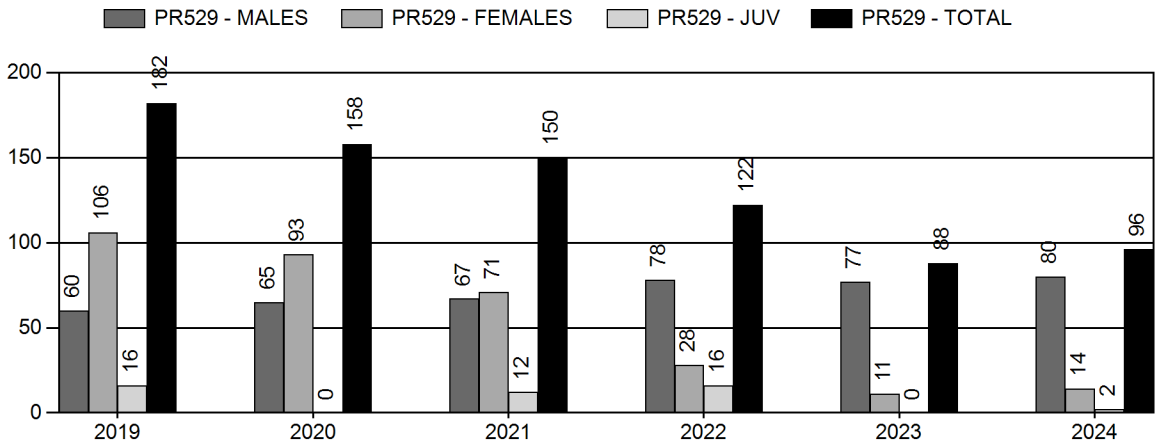
**Proposed harvest rates (percent of pre-season estimate for each sex/age group):**

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 5% | 3% |
| Males ≥ 1 year old: | 15% | 15% |
| Proposed change in post-season population: | 7% | 2% |

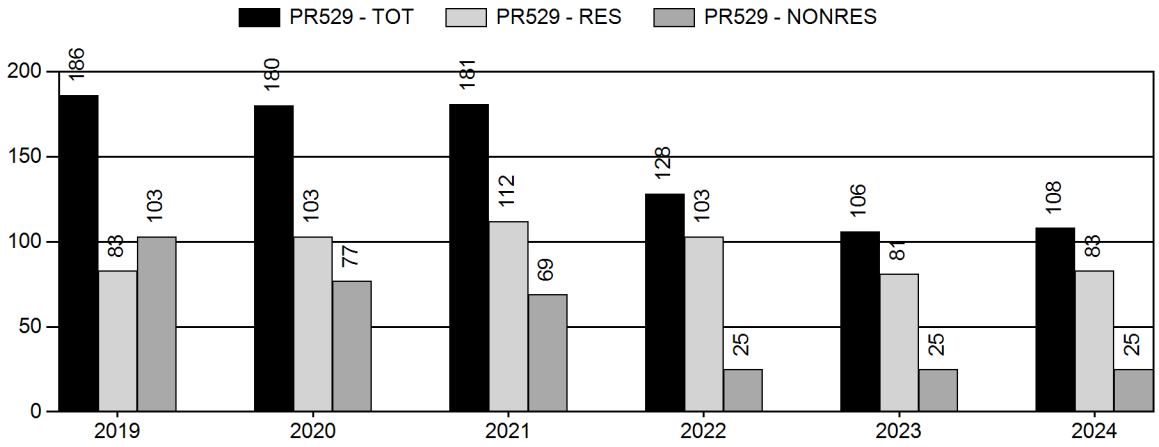
## Population Size - Postseason



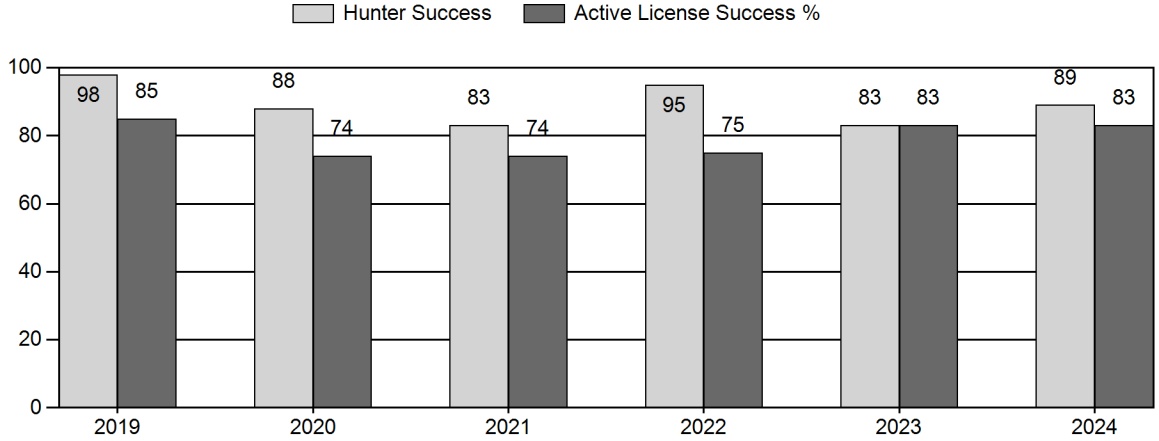
# Harvest



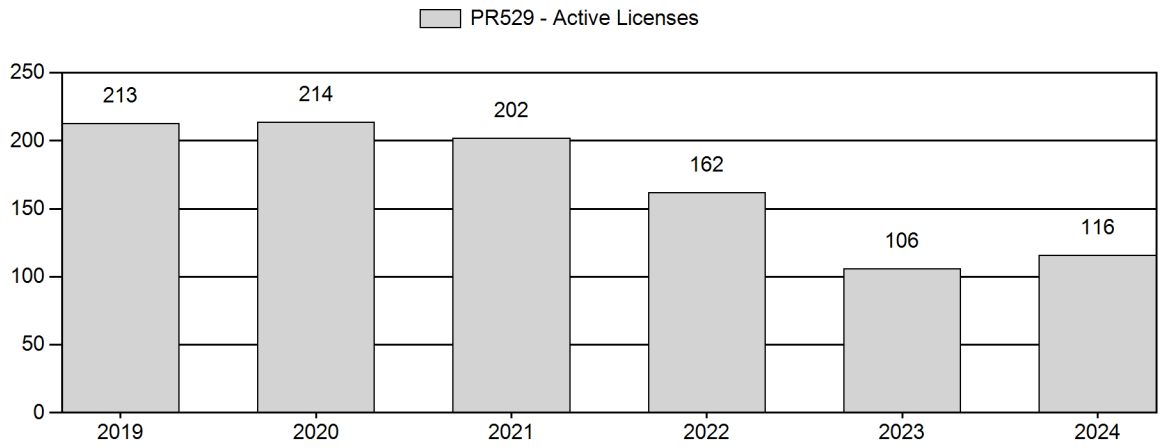

# Number of Hunters



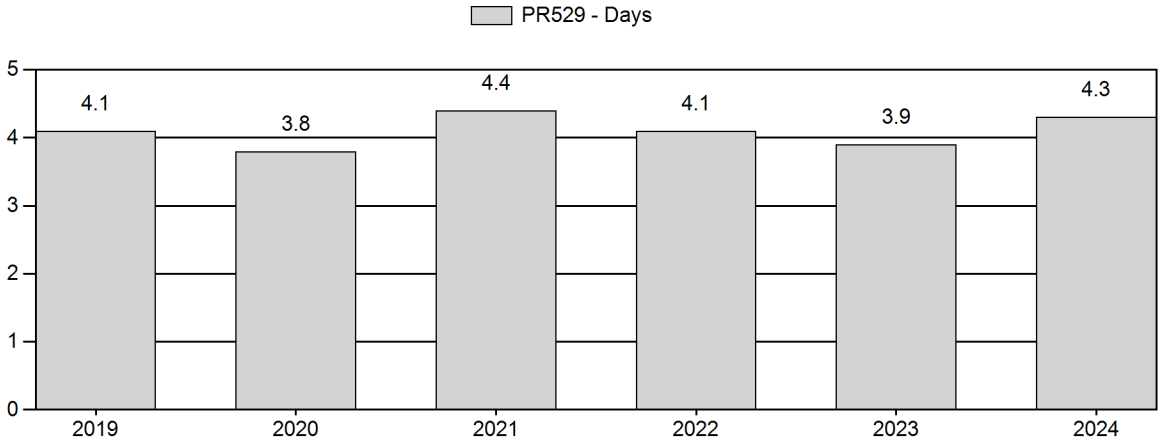

# Harvest Success



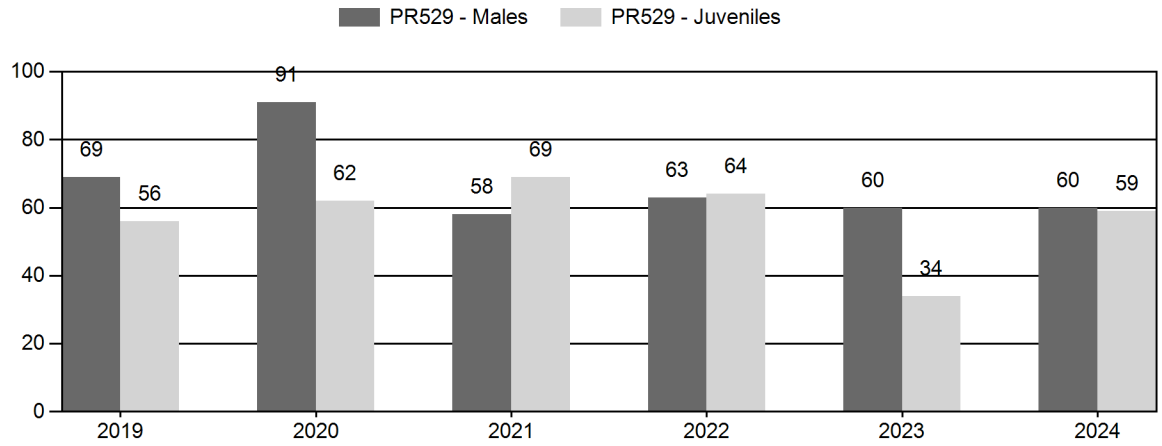
# Active Licenses




# Days Per Animal Harvested




# Preseason Animals per 100 Females



**2025 Hunting Seasons**
**Big Creek Pronghorn (PR529)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 51 | 1 | Aug. 15 | Sep. 15 | Sep. 16 | Nov. 14 | 100 | Any antelope |
| 51 | 6 | Aug. 15 | Sep. 15 | Sep. 16 | Nov. 14 | 25 | Doe or fawn |

**2024 Hunter Satisfaction**: 95% Satisfied, 5% Neutral, 0% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation**
The 2024 pre-hunting season buck-to-doe ratio (60/100) was lower than the preceding five-year average (68/100), but exceeded the recreational management objective parameters of 30-59 bucks per 100 does. The yearling buck-to-doe ratio (14/100) indicated improved overwinter fawn survival in 2023-24. The fawn-to-doe ratio (59/100) improved, and was slightly higher than the five-year average of 57/100 (Appendix A). Improved range conditions in summer 2023, followed by mild winter conditions, contributed to the observed improvement in pronghorn recruitment, productivity, and abundance.

The 2024 harvest metrics for type 1 licenses (86% hunter success, 4.2 days to harvest, and high hunter satisfaction) indicated pronghorn hunting was adequate in 2024. Pronghorn can be difficult to access in this herd unit as they often congregate on private land during the hunting season. The 2024 type 6 hunter success (68%) improved slightly from 2023 but remained below the five-year average of 70%. Low participation and poor hunter success on the type 6 licenses in 2024 were the primary reasons type 6 licenses were not increased in 2025. There were no reports of private land damage by pronghorn in 2024 and no damage is anticipated in 2025, which further justified maintaining season structure and license quotas in 2025.

If type 1 hunter success remains unchanged in 2025, the projected harvest rate of adult bucks is estimated to be 15%. Access to buck pronghorn on public lands has been limited and without improved hunter access in the herd unit, this adult male harvest rate is acceptable, but increased type 1 license quotas will be considered in 2026.

Changes to this herd unit's hunt season structure and quotas were made in 2023. We planned to maintain the season structure for three years, through the 2025 hunting season, if there were no major requests or biological rationale for changes. The 2025 license allocation is expected to maintain pronghorn numbers slightly above the 800 pronghorn (640-960) objective range.

**Management Objective Review**
The management objective for Big Creek pronghorn is a post-hunting season population objective of 800 pronghorn (±20%). The objective was last reviewed in 2024 and will be reviewed again in 2029.

**Weather/Habitat**
Precipitation in Hunt Area 51 was below normal for the 2024 biological year. The NOAA weather

station data from Rawlins reported a 9.5% decrease in average annual precipitation. Early spring precipitation occurred in April and May but diminished by early June. Poor overall precipitation in the growing season for cool season grass and forb species resulted in poor forage productivity. Through fall and early winter 2024, conditions remained mild and precipitation for this period was well below normal, while temperatures were above normal.

Through the Platte Valley Habitat Partnership, the Saratoga-Encampment-Rawlins Conservation District, BLM, WGFD, USFS, and private landowners have worked together to identify fences in the Platte Valley in need of wildlife-friendly conversion. Approximately 3.75 miles of hazardous fencing was converted to wildlife-friendly design in Hunt Area 51. These fence conversions are intended to increase overall habitat connectivity, decrease big game mortalities, and maintain proper grazing systems.

**Line Transect (LT) Survey**
An LT survey was conducted to estimate pronghorn abundance at the end of biological year 2023. The end of the biological year population estimate was 1,000 pronghorn (95% CI 900 - 1,200).

**Population Modeling**
The 2024 post-hunting season population estimate for this herd unit from the PopR Integrated Population Model (IPM) was 1,200 pronghorn (1,100-1,400). Managers chose to model this herd using the default structure for pronghorn, i.e. constant adult survival, time-varying reproduction and juvenile survival. Based on visual comparison of the available effort variables, active licenses was selected as the variable most predictably related to annual harvest. Trends in harvest from 2000 onward were included in the Integrated Population Model (IPM). With these settings the observed data for the IPM included 25 years of harvest and ratio data along with abundance estimates from LT surveys in 2004, 2007, 2010, 2012, 2018 and 2023. IPM convergence was excellent, Rhat values were below 1.1, fawn and buck ratio estimates produced by the IPM aligned well with recorded data for this herd. IPM abundance estimates also aligned well with the results obtained from the most recent LT survey. The post-hunting season abundance estimate agrees with the perceptions of managers and stakeholders that this herd is increasing after winter 2022-23.

**Appendix A.** 2019-2024 Classification Summary (PR529)

## 2019 - 2024 Preseason Classification Summary

for Pronghorn Herd PR529 - BIG CREEK

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Pre Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 0 | 52 | 144 | 196 | 31% | 283 | 44% | 159 | 25% | 638 | 448 | 18 | 51 | 69 | ± 3 | 56 | ± 3 | 33 |
| 2020 | 0 | 38 | 185 | 223 | 36% | 245 | 39% | 153 | 25% | 621 | 587 | 16 | 76 | 91 | ± 9 | 62 | ± 7 | 33 |
| 2021 | 0 | 11 | 155 | 166 | 26% | 287 | 44% | 197 | 30% | 650 | 640 | 4 | 54 | 58 | ± 5 | 69 | ± 6 | 43 |
| 2022 | 0 | 58 | 159 | 217 | 28% | 346 | 44% | 223 | 28% | 786 | 536 | 17 | 46 | 63 | ± 5 | 64 | ± 5 | 40 |
| 2023 | 1,285 | 37 | 190 | 227 | 31% | 381 | 52% | 131 | 18% | 739 | 766 | 10 | 50 | 60 | ± 5 | 34 | ± 4 | 22 |
| 2024 | 1,400 | 46 | 157 | 203 | 27% | 339 | 46% | 200 | 27% | 742 | 586 | 14 | 46 | 60 | ± 6 | 59 | ± 6 | 37 |

# 2024 - JCR Evaluation Form

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

HERD: MD534 - GOSHEN RIM

HUNT AREAS: 15
PREPARED BY: KEATON WEBER

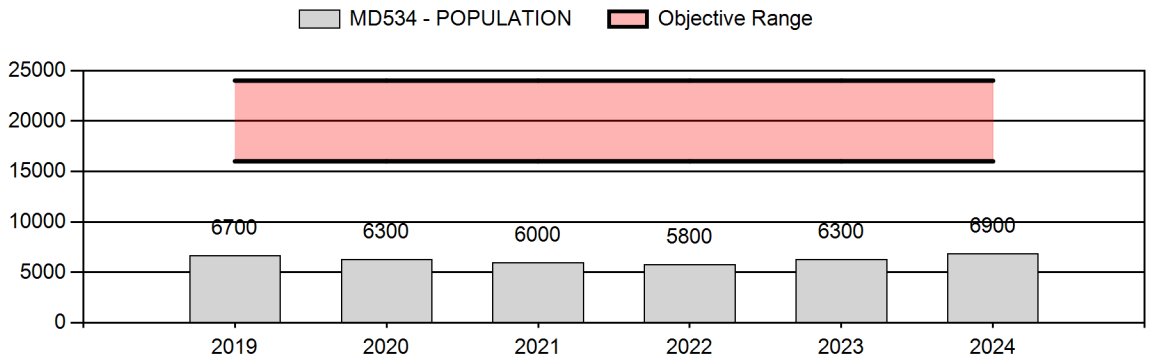
| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 6,220 | 6,900 | 7,100 |
| Harvest: | 732 | 659 | 500 |
| Hunters: | 1,556 | 1,420 | 1,300 |
| Hunter Success: | 47% | 46% | 38% |
| Active Licenses: | 1,631 | 1,488 | 1,300 |
| Active License Success: | 45% | 44% | 38% |
| Recreation Days: | 6,714 | 7,272 | 6,000 |
| Days Per Animal: | 9.2 | 11.0 | 12 |
| Males per 100 Females | 28 | 36 | |
| Juveniles per 100 Females | 49 | 65 | |

| | |
|---|---|
| Population Objective (± 20%) : | 20000 (16000 - 24000) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | -65.5% |
| Number of years population has been + or - objective in recent trend: | 13 |
| Model Date: | 2/17/2025 |

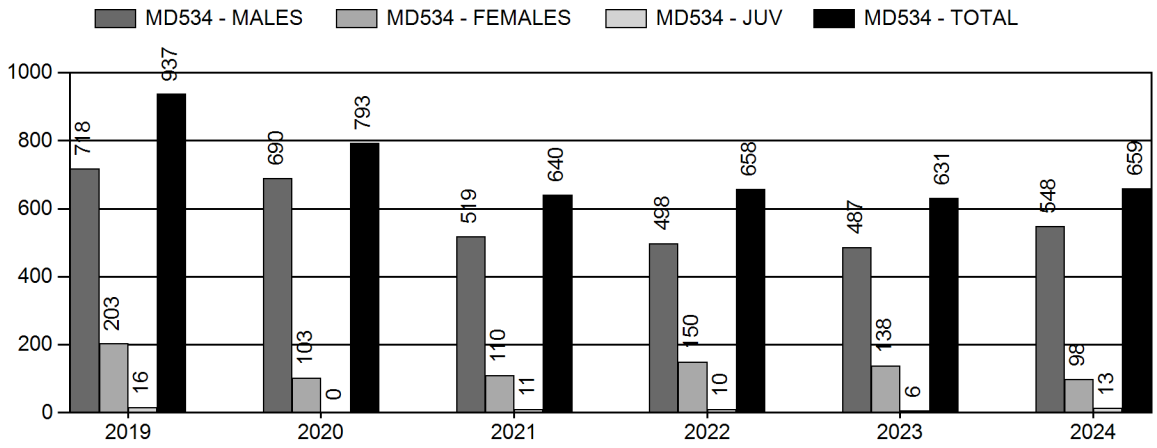
**Proposed harvest rates (percent of pre-season estimate for each sex/age group):**

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 3% | 3% |
| Males ≥ 1 year old: | 32% | 32% |
| Proposed change in post-season population: | 1% | 3% |

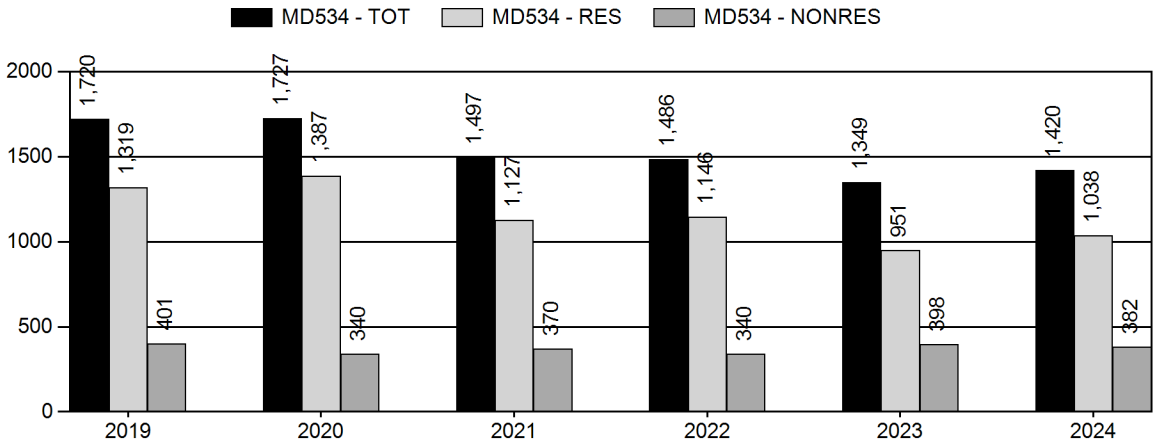
## Population Size - Postseason



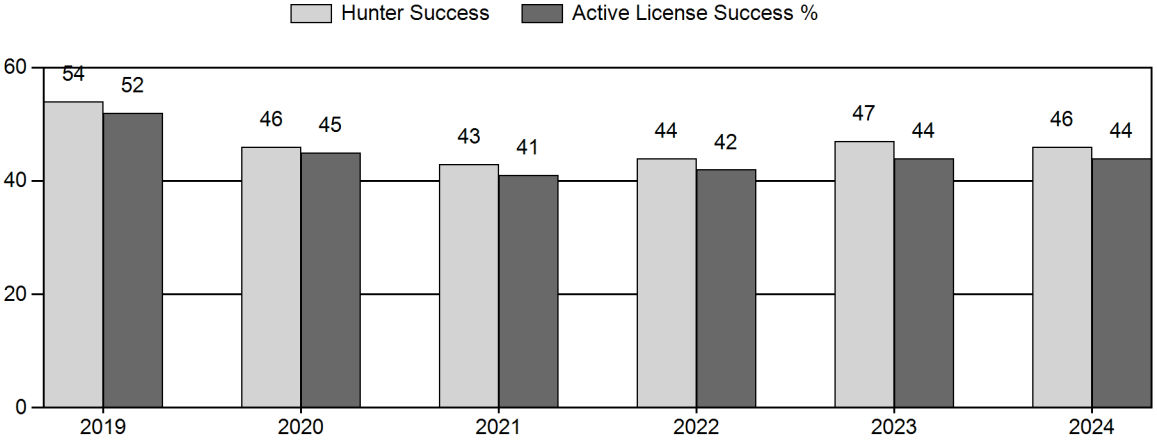
# Harvest



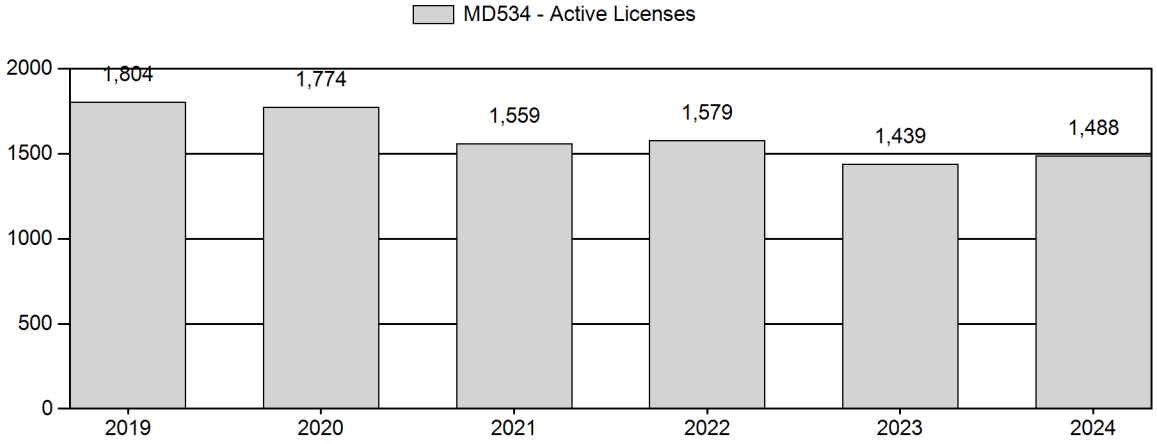

# Number of Hunters



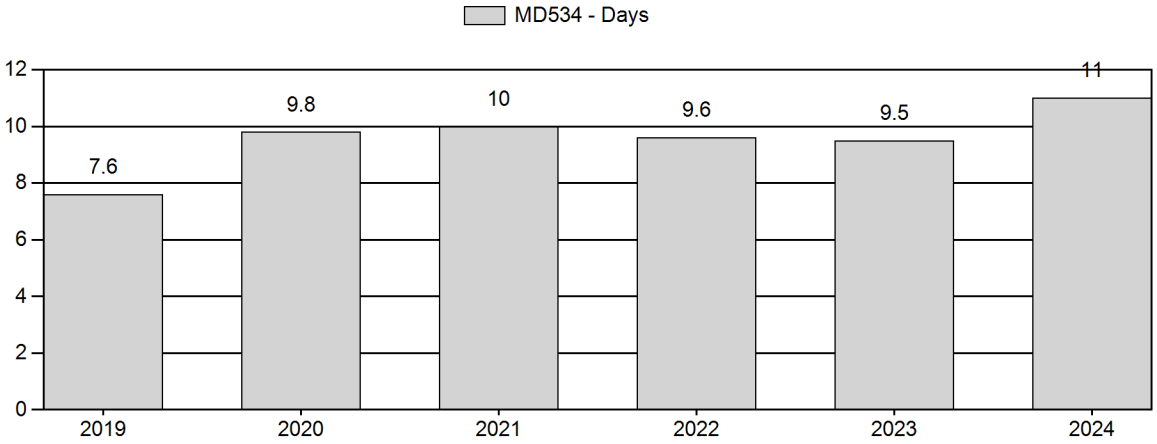

# Harvest Success



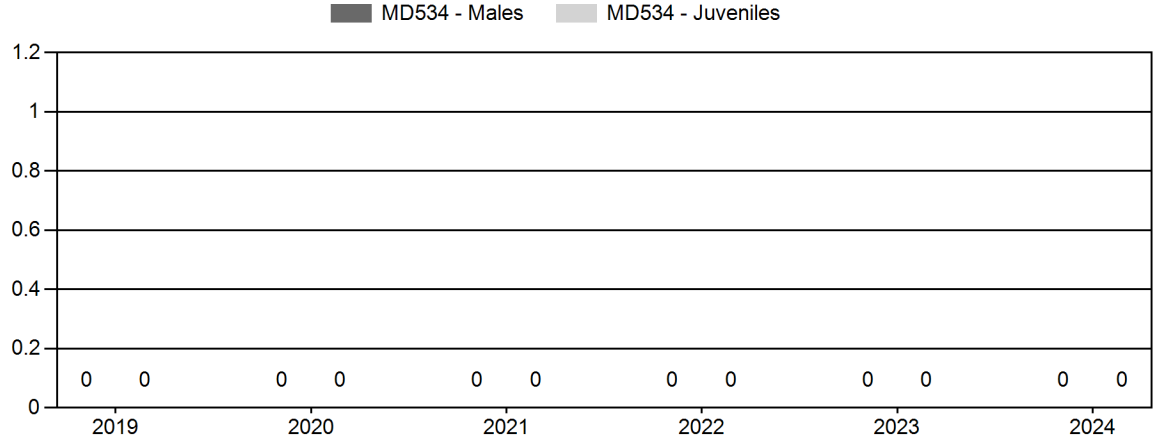
# Active Licenses




# Days Per Animal Harvested




# Preseason Animals per 100 Females



**2025 Hunting Seasons**
**Goshen Rim Mule Deer Herd Unit (MD534)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 15 | Gen | Sep. 1 | Sep. 30 | Oct. 20 | Oct. 31 | | Antlered mule deer or any white-tailed deer |
| 15 | 6 | Sep. 1 | Sep. 30 | Oct. 1 | Dec. 31 | 150 | Doe or fawn valid on private land |

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

**2024 Hunter Satisfaction:** 61% Satisfied, 21% Neutral, 18% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation**
Goshen Rim Mule Deer Herd Unit has been below the objective of 20,000 mule deer for 13 years, so the season is structured to be conservative while still addressing minimal damage concerns throughout the herd unit. A reduction in season length and shift of season dates later into October is in response of many years of public comment to align with agriculture practices, colder weather conditions and reduce harvest on mature age class males. Irrigated and non-irrigated croplands (primarily corn) are heavily selected by mule deer throughout September and October and deer utilize these crops for shading and security, making hunting opportunity difficult. Shifting the season later in October will address public sentiment and increase hunter success. This population of mule deer is 66% below objective, and the local public has expressed strong concern of mature buck availability and would like the season length to be shorter to allow for decreased mature buck harvest. Thus, managers have shortened the season length from to align with these concerns from previous year's comments.

In 2024, the type 6 was reduced by 100 licenses and resulted in a 32% decrease in female harvest. Type 6 licenses are valid on private land only to minimize doe harvest on the limited public lands and to make sure those licenses are available to address damage situations on private croplands. Hunter success on the type 6 license was 85% in 2024, indicating these licenses are successfully being used on private lands. We continue to have pressure from agriculture producers to continue to have doe harvest opportunity to address congregations of mule deer on irrigated lands throughout early fall and winter. Thus, the season opens October 1 and is open until the end of December. Fawn ratios in 2024 were 65 fawns per 100 does, a slight increase from the 2023 fawn ratio of 60 fawns per 100 does. Prior to 2023, fawn recruitment was extremely poor (2018-2022 average fawn ratio = 46 fawns per 100 does). These recent high fawn ratios are likely contributed to a combination of above-average spring and summer precipitation in 2023 and mild winters that allowed for high fawn survival. High overwinter survival across all age classes and increased fawn recruitment is also reflected in the 2024 buck ratios. The 2024 yearling buck ratio was 14 yearling bucks per 100 does, an increase from an average of 10 yearling bucks per 100 in the previous 4 years (2020-2023). Total buck ratios in 2024 were 36 bucks per 100 does, above the previous 5-year average buck ratio of 29 bucks per 100 does (Appendix A). CWD is and will continue to be an issue within this herd unit and will be up for priority surveillance again in 2025.

**Management Objective Review**
The objective and management strategy for the Goshen Rim mule deer herd unit was last evaluated and approved in 2023, and will not be reviewed again until 2028.

**Weather and Habitat Data**
Annual precipitation was below normal in the Goshen Rim herd unit in 2024. NOAA weather station data from several towns within the herd unit including Torrington, Cheyenne, and Fort Laramie, showed a 37%, 33 %, and 37% decrease respectively from average for the year. Due to the juxtaposition of annual and perennial agricultural croplands intermixed with rangeland habitats, mule deer utilize annual row crops and perennial crops like alfalfa in addition to native rangeland forage to meet their nutritional demands throughout the year. Mixed mountain shrub habitats found on the Goshen Rim remain in late seral stages due to a lack of managed disturbance on the landscape. Annual shrub production and shrub nutritive content are both compromised as plants mature. Cheatgrass remains a large threat in the understory of shrub communities and cropland environments. Conservation Reserve Program (CRP) enrolled lands continue their downward spiral, provide very little in hiding, fawning, and thermal cover, and exhibit equally poor forage production and nutritive quality for much of the year. Juniper encroachment into riparian areas and upland areas, including Ponderosa pine forests in the northern portion of the herd unit, and mixed mountain shrub habitats throughout the entire herd unit, have resulted in more xeric conditions and a reduction of understory herbaceous forages in portions of this herd unit.

Two large wildfires occurred in the herd unit in 2024, the Goshen Rim Wildfire and Pleasant Valley Wildfire, totaling 5,580 acres and 28,984 acres respectively. Cheatgrass invasion is likely due to the timing and severity of these wildfires. Mixed mountain shrub regeneration post-fire will likely be poor, often witnessed with summer fires. Juniper encroachment in areas helped to fuel these wildfires. Landowner interest in controlling cheatgrass post-wildfire is variable. Efforts to reach out to affected landowners will continue in 2025 to plan future potential herbicide treatments to combat invasives.

Subdivision continues to occur on the outskirts of Cheyenne in the southern portions of this herd unit, resulting in a loss of habitat. Subdivisions are often associated with new fence construction, invasive weed infestations, new road construction, and increased wildlife disturbance by outdoor pets and human activity. In addition to subdivisions, solar and wind developments continue to be proposed and completed within the herd unit. Approximately 39,200 acres of wind energy development is proposed and 10,400 acres of solar energy has been approved, totaling 49,600 acres of energy development. The 10,400 acres of solar energy development is considered a complete loss of habitat due to exclusionary fences. We have worked with developers as much as possible to allow for wildlife egress through and around these solar developments.

**Chronic Wasting Disease Management**
The Goshen Rim mule deer herd was last prioritized for CWD sampling in 2020. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). Annual sample sizes are low and prevalence estimates for each individual year have wide confidence intervals and should be used with caution. The 5 year (2020-

2024) average prevalence estimate of 35% is a stronger representative of herd unit prevalence since it has a sample size of >200 samples. Considering prevalence has remained above 20% in adult males for many years, CWD is likely suppressing adult male survival. As seasons are made more conservative and less adult males are harvested, managers will closely monitor prevalence response. Managers are concerned with this high prevalence in the herd unit; however, there is public opposition for implementation of CWD management strategies and thus managers will continue to monitor prevalence and engage in education of CWD management strategies.

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

| Year(s) | Percent CWD-Positive and (*n*) – *Hunter Harvest Only* | | | Percent of Harvested Adult Males Sampled |
|---|---|---|---|---|
| | **Adult Males (CI = 95%)** | Yearling Males | Adult Females | |
| 2020 | **32% (n = 105)** | 7% (15) | 6% (16) | 15.2 |
| 2021 | **54% (n=28)** | 0% (5) | 0% (1) | 5.4 |
| 2022 | **31%(n=36)** | 0% (1) | 0% (6) | 7.2 |
| 2023 | **35% (n=23)** | 0% (1) | 25% (4) | 4.7 |
| 2024 | **35% (n=22)** | 0% (4) | 25% (4) | 4.0 |
| 2020-2024 | **35% (21-42%, n=214)** | 4% (26) | 10% (31) | 7.8 |

**Population Modeling**

The bio-year 2024 postseason population estimate for this herd unit was 6,900 (CL = 5,900 – 8,000) mule deer. Due to large fluctuations in fawn ratios, managers chose to model this herd using the time varying metrics for reproduction and constant metrics juvenile and adult survival. Days per harvest was selected by managers as the effort variable because this herd is a General area and a License effort variable is difficult to quantify. Due to the amount of roads in this herd, managers are able to obtain large sample sizes of classification data from the ground and thus aerial population surveys are not conducted. Without having robust aerial population survey estimates to input into the IPM model, population estimates have higher confidence intervals.

Appendix A – Goshen Rim Mule Deer Herd (MD534) Classification Summary, 2019-2024

**2019 - 2024 Postseason Classification Summary**

for Mule Deer Herd MD534 - GOSHEN RIM

| | | MALES | | | | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Post Pop | Ylg | 2+ Cls 1 | 2+ Cls 2 | 2+ Cls 3 | 2+ UnCls | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 6,700 | 102 | 90 | 42 | 4 | 0 | 238 | 16% | 800 | 55% | 422 | 29% | 1,460 | 1,094 | 13 | 17 | 30 | ± 2 | 53 | ± 4 | 41 |
| 2020 | 6,300 | 82 | 96 | 37 | 3 | 0 | 218 | 15% | 837 | 59% | 356 | 25% | 1,411 | 806 | 10 | 16 | 26 | ± 2 | 43 | ± 3 | 34 |
| 2021 | 6,000 | 62 | 75 | 30 | 0 | 0 | 167 | 16% | 621 | 60% | 250 | 24% | 1,038 | 0 | 10 | 17 | 27 | ± 3 | 40 | ± 4 | 32 |
| 2022 | 5,800 | 35 | 45 | 26 | 0 | 0 | 106 | 17% | 353 | 57% | 158 | 26% | 617 | 0 | 10 | 20 | 30 | ± 4 | 45 | ± 5 | 34 |
| 2023 | 6,300 | 79 | 93 | 44 | 2 | 0 | 218 | 16% | 736 | 53% | 441 | 32% | 1,395 | 0 | 11 | 19 | 30 | ± 3 | 60 | ± 4 | 46 |
| 2024 | 6,900 | 94 | 104 | 47 | 7 | 0 | 252 | 18% | 696 | 50% | 455 | 32% | 1,403 | 0 | 14 | 23 | 36 | ± 3 | 65 | ± 5 | 48 |

# 2024 - JCR Evaluation Form

SPECIES: Mule Deer

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

HERD: MD537 - LARAMIE MOUNTAINS

HUNT AREAS: 59-60, 64

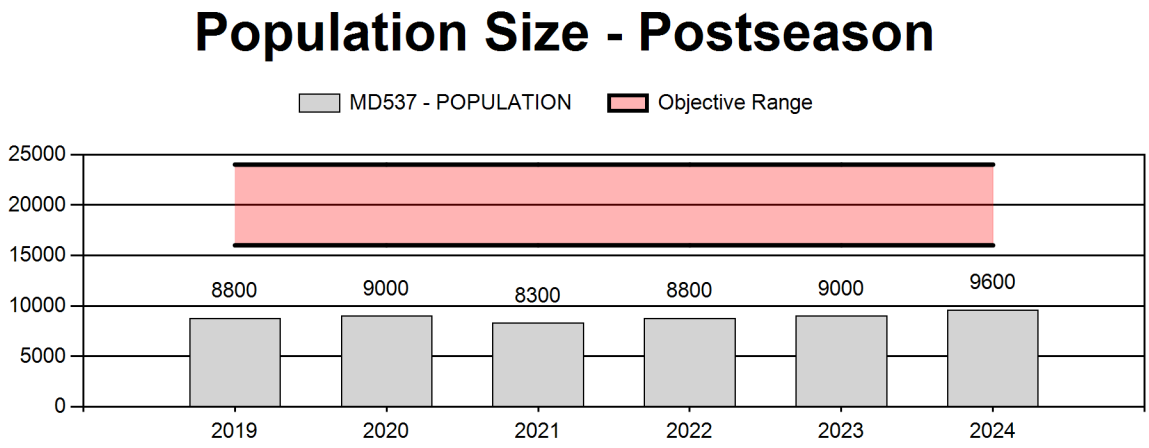
PREPARED BY: KEATON WEBER

| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 8,780 | 9,600 | 10,000 |
| Harvest: | 830 | 867 | 700 |
| Hunters: | 1,831 | 1,789 | 1,400 |
| Hunter Success: | 45% | 48% | 50 % |
| Active Licenses: | 1,882 | 1,840 | 1,500 |
| Active License Success: | 44% | 47% | 47 % |
| Recreation Days: | 8,622 | 8,960 | 7,000 |
| Days Per Animal: | 10.4 | 10.3 | 10 |
| Males per 100 Females | 36 | 21 | |
| Juveniles per 100 Females | 54 | 60 | |

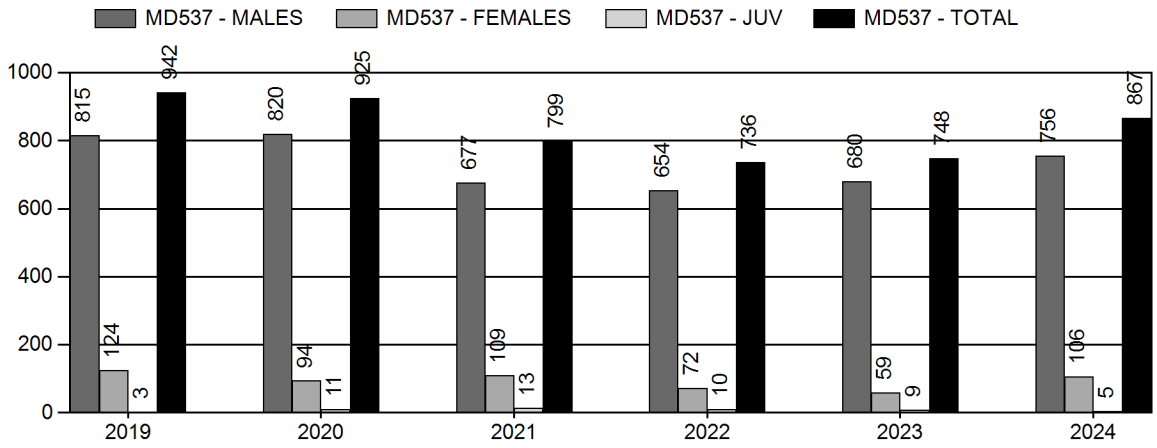
| | |
|---|---|
| Population Objective (± 20%) : | 20000 (16000 - 24000) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | -52% |
| Number of years population has been + or - objective in recent trend: | 8 |
| Model Date: | 2/23/2025 |

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

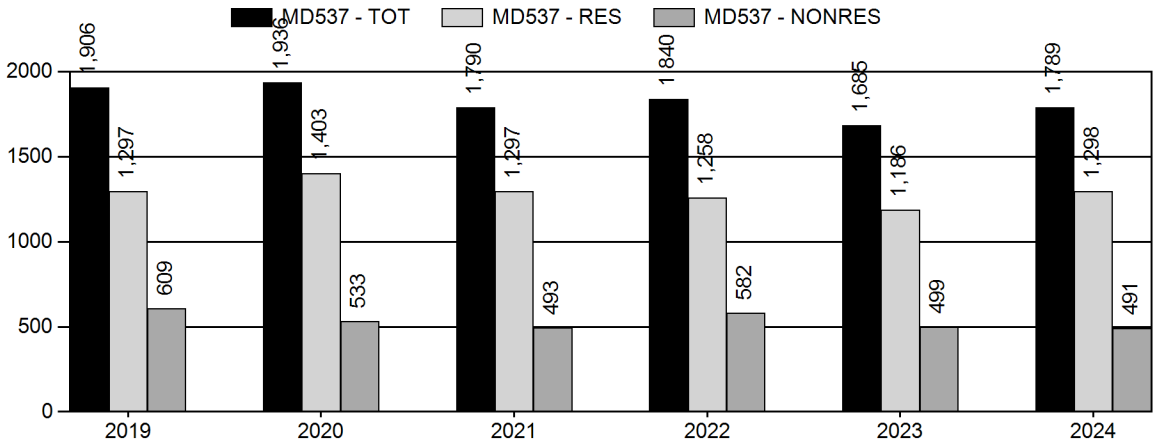
| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 2% | 2% |
| Males ≥ 1 year old: | 32% | 32% |
| Proposed change in post-season population: | 6% | 4% |



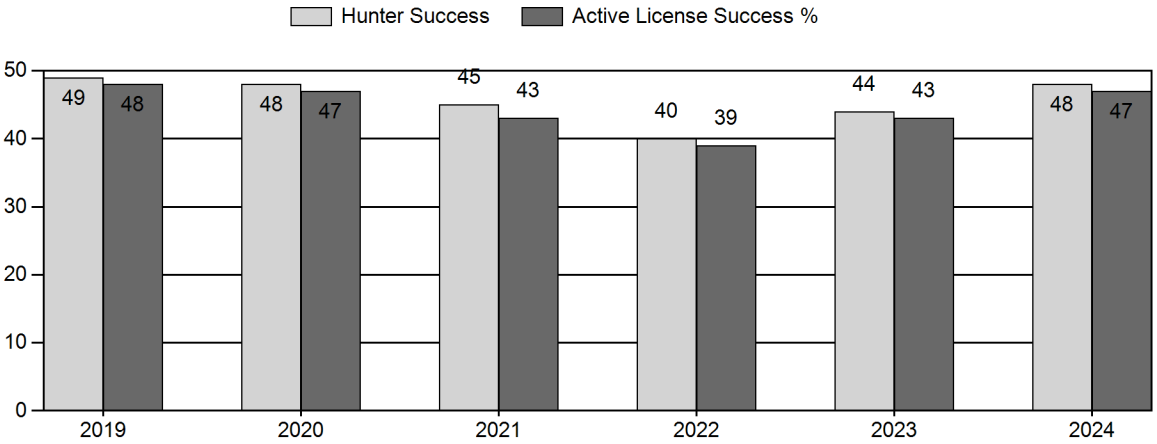
# Harvest



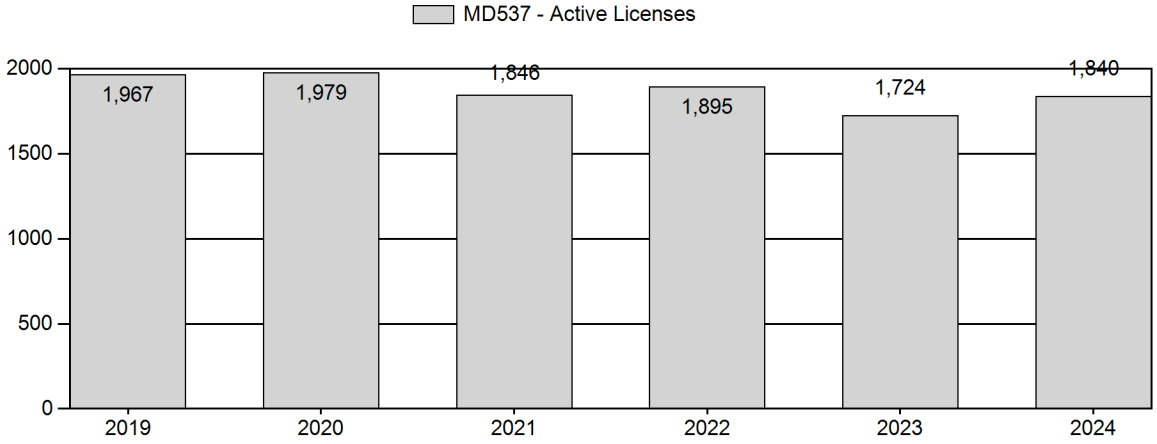

# Number of Hunters



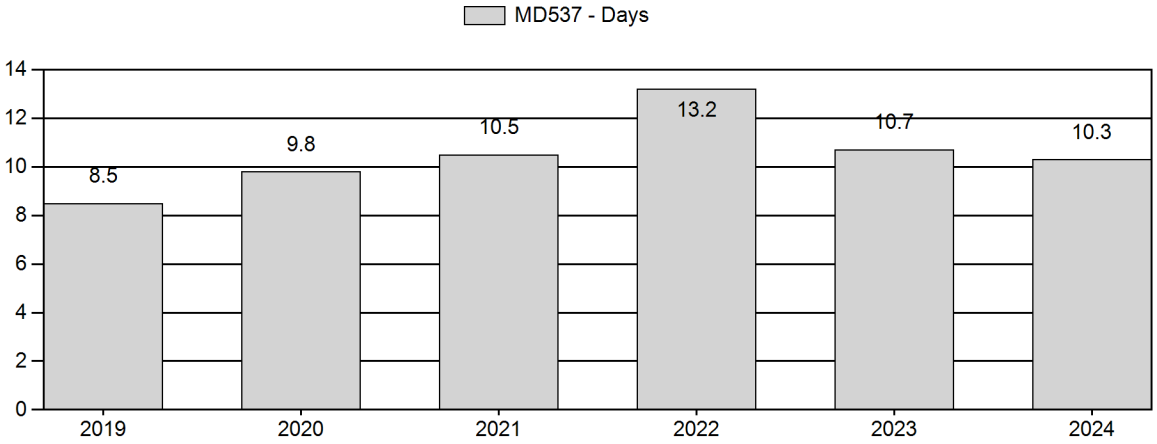

# Harvest Success



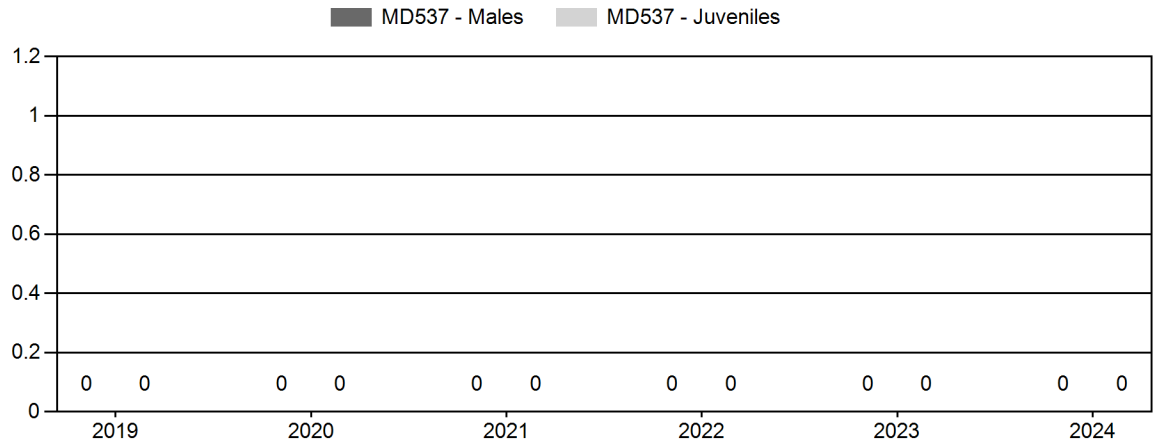
# Active Licenses




# Days Per Animal Harvested




# Preseason Animals per 100 Females



**2025 Hunting Seasons**
**Laramie Mountains Mule Deer Herd Unit (MD537)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 59 | Gen | Sep. 1 | Sep. 30 | Oct. 20 | Oct. 31 | | Antlered mule deer or any white-tailed deer |
| 59, 64 | 6 | Sep. 1 | Sep. 30 | Oct. 20 | Oct. 31 | 100 | Doe or fawn valid on private land |
| 59, 64 | 6 | | | Nov. 1 | Dec. 31 | | Doe or fawn white-tailed deer valid in the entire area |
| 60 | 1 | Sep. 1 | Sep. 30 | Oct. 15 | Nov. 5 | 100 | Any deer |
| 60 | 2 | Sep. 1 | Sep. 30 | Oct. 15 | Nov. 5 | 200 | Any deer off national forest |
| 60 | 6 | Sep. 1 | Sep. 30 | Oct. 15 | Nov. 30 | 50 | Doe or fawn |
| 64 | Gen | Sep. 1 | Sep. 30 | | | | Antlered mule deer or any white-tailed deer valid in the entire area |
| 64 | Gen | | | Oct. 20 | Oct. 31 | | Antlered mule deer or any white-tailed deer except the Wyoming Game and Fish Commission's Tom Thorne/Beth Williams Wildlife Habitat Management Area and the Laramie Peak Wildlife Habitat Management Area north of the Tunnel Road (Albany County Road 727) shall be closed |
| 64 | 2 | Sep. 1 | Sep. 30 | Oct. 20 | Oct. 31 | 100 | Antlered mule deer or any white-tailed deer |

**2025 Region J nonresident quota:** 750 licenses

**2024 Hunter Satisfaction:** 59% Satisfied, 23% Neutral, 18% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation**
The Laramie Mountains Mule Deer Herd Unit's population continues to be well below the objective of 20,000 mule deer and as a result the 2024 season is conservative in structure. The public has expressed extreme concern about the decline of this population and the availability of mature bucks. Over the past decade managers have received written comments during the season setting commenting period to shorten the season length. Although decreasing the season length will not improve population level trends, reducing the season length by 5 days will align with public concerns. Type 6 licenses are valid on private land only to minimize doe harvest on

limited public lands and ensure those licenses are available to address damage situations on private croplands. Managers continue to have pressure from agriculture producers to continue to have doe harvest opportunity to address congregations of mule deer on irrigated lands. Hunt area 60 allows for the most female harvest opportunity and the season has the latest closing date which is likely preventing CWD spread to an extent. Hunt area 60 continues to have the lowest CWD prevalence (5 year prevalence 9%, n=108) compared to all surrounding herd units. The 5 year (2020-2024) CWD prevalence is 35% (n=214) in hunt area 15 to the east, 21% (n=299) in hunt area 59 to the north, 20% (n=304) in hunt area 64 to the north, and 14% (n=43) in hunt area 61 to the south. Moreover, it is likely that consistent doe and later season mature buck harvest in hunt area 60 is contributing to consistently lower CWD prevalence.

Although buck ratios have decreased slightly in 2024 to 21 bucks per 100 does, they are still within recreational management guidelines of 20-29 bucks per 100 does. Managers expected to see a slight decline in buck ratios as a result of poor fawn production and low yearling buck ratios in previous years (Appendix A). Increased fawn ratios in 2023 (69 fawns:100 does) and 2024 (60 fawns:100 does) indicate this herd is no longer declining. These high fawn ratios are likely a direct response to favorable spring moisture and mild winter conditions. These favorable weather conditions also allow for adult females to finish winter in good bodily condition and provide increased support for healthy fawns and increased probability of fawn survival.

**Management Objective Review**

The objective and management strategy for the Laramie Mountains mule deer herd unit was last evaluated and approved in 2024, and will not be reviewed again until 2029.

**Weather and Habitat**

Annual precipitation in the herd unit was below normal based on weather data analyzed from Cheyenne, Laramie, and Douglas weather stations. NOAA weather station data showed a 33%, 5%, and 22% decrease from average for the year. Standing dead forages left over from the exceptional 2023 year, were utilized by wildlife and livestock, as little new forage was grown in spring 2024. Late summer monsoonal moisture helped contribute to annual precipitation totals, resulted in some temporary green-up of forages, but did little to assist with annual forage production. Late winter and early spring precipitation is critical to the growth of cool season grasses, forbs, and shrubs. Generally, undisturbed shrub communities throughout the Laramie Range remain mostly in late seral successional stages, with decreased shrub productivity and nutritive content compared to more early seral shrub communities associated with some recent disturbances. In many places, large wildfire scars throughout the Laramie Range have not seen mixed mountain shrub recovery due to the timing and severity of the disturbances. Antelope bitterbrush and sagebrush species have been hit particularly hard by summer wildfires, and historic mixed mountain shrub communities have been significantly altered for the foreseeable future. Aspen response in burned areas has been very good, and provides important fawning and fawn rearing habitats for mule deer. Competition with elk is likely in limited aspen habitats.

Cheatgrass spraying occurred in the Johnson Mountain area, northwest of Wheatland, totaling 566 acres. Dalmatian toadflax and cheatgrass are both present in mixed mountain shrub habitats in the southern portions of the herd unit, south of Hwy 34, causing concern for habitat managers, as herbicides traditionally used for Dalmatian toadflax control have resulted in significant non

target plant injury. The use of Rejuvra herbicide may aid in control of cheatgrass and Dalmatian toadflax in the future, and result in less non-target plant injury. Approval of this herbicide by the Bureau of Land Management occurred in 2024, and will now be broadly utilized on all lands, regardless of surface ownership, going forward. In Spring 2024, USFS aerially treated 5,900 acres of rangelands in the Pole Mountain area with Rejuvra herbicide, to control cheatgrass and Dalmation toadflax infestations. Areas treated include mixed mountain shrub habitats that are utilized by moose in fall and winter months.

A 1,500-acre wildfire occurred in the Bear Creek drainage, south of Sybille Canyon in late summer. Plans are in place to treat this area for expected cheatgrass infestations in summer 2025. An additional 2,100 acres burned in the eastern flanks of the Richeau Hills outside of Chugwater in September. This fire affected true mountain mahogany shrub stands and grasslands. Swift moving and lacking the intensity of the wildfire that occurred earlier in the year in Bear Creek, we anticipate vegetative response to this fire to be more favorable.

Fence conversion efforts from woven wire/barbed wire, or 5 and 6 strand barbed wire continue in the Laramie Mountains herd unit. On three separate sites including the Mule Creek PAA, Thorne Williams WHMA, and Laramie Peak WHMA, efforts are ongoing to convert to wildlife friendly line spacing and overall wire heights. Conversion to wildlife friendly fence standards remains a high priority for the Laramie Region on Commission owned lands.

Competition with elk for basic habitat requirements is likely a contributing factor for poor mule deer performance within the herd unit. Within deer hunt areas 59 and 60 we continue to see elk competition, putting strains on habitats historically and previously occupied mostly by mule deer. Dietary overlap in spring, summer, and fall ranges between elk, mule deer, and cattle can, and likely do result in increased competition for resources.

Subdivision continues to occur on the outskirts of Cheyenne in the southern portions of this herd unit, resulting in a loss of habitat. Subdivisions are often associated with new fence construction, invasive weed infestations, new road construction, and increased wildlife disturbance by outdoor pets and human activity. In addition to subdivisions, wind developments continue to be proposed within the herd unit. Approximately 40,000 acres of wind energy development is proposed. We have worked with developers as much as possible to minimize impacts to wildlife.

Exploration for rare earth minerals in the Laramie Range is ongoing, with one mine site working its way through permitting processes now. Mining activity may result in permanent loss of habitat, and increased disturbances due to increased human activity may be detrimental to mule deer, particularly on crucial winter ranges.

**Chronic Wasting Disease Management**

The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). The Laramie Mountains mule deer herd was last prioritized for CWD sampling in 2022 in which mandatory sampling was implemented and 390 samples were taken. Mandatory sampling helped increase sample sizes from areas with historically low levels of CWD samples. Specifically, Hunt Area 60 has limited licenses available, so managers have struggled to obtain sufficient sample sizes. The average annual

sample size from 1997-2021 in hunt area 60 was 13 samples; in 2022, 67 samples were collected, which is an 81% increase in sample size. Mandatory sampling also enabled managers to collect female samples, which in the past was difficult to accomplish. The average annual sample size from 1998-2021 in the herd unit was 5 female samples, in 2022, 60 female samples were collected throughout the herd unit. This sample size of 60 allowed for managers to obtain a more confident CWD prevalence rate within the female portion of the population (Table 1). Thus, allowing for a better understanding of how CWD is impacting the reproductive portion of the population.

A local CWD Working Group, comprised of 11 members of the public from the local area, was created in July of 2022. This Local CWD Working Group aimed to formulate CWD management recommendations from the Department's CWD Management Plan. Over the course of 12 months and 6 meetings, the group reviewed the Department's CWD management plan and what CWD management actions within that plan would be applicable and acceptable locally to implement within the Laramie Mountains mule deer herd unit.

Below is a summary of the CWD management options within the Department's CWD Management Plan and the Local CWD Working Group's recommendations on those options:

1. Reduce artificial sources of concentration – YES (unanimous)
    a. Reduce concentrations of deer (i.e. exclusion fencing, exclusion from salt/mineral sources, etc.)
2. Hunter Harvest Management
    a. Increase mature male harvest – YES (8 in favor, 3 opposed)
    b. Decrease deer densities in localized areas ("hot spots") of high prevalence – NO (unanimous)
3. Regulatory and Agency Actions – YES (unanimous)
    a. Regulations on carcass disposal, carcass transport, feeding, etc.
    b. Education, outreach, and research on CWD
    c. Inter-agency (State, Federal, Tribal and International) communication on CWD management
    d. Mandatory CWD Sampling

In July 2023, managers presented the above recommendations to the WGFD Commission to seek approval to begin implementation of these recommendations. After public comment and deliberation by the Commission, it was decided that there was not enough broad public support to implement harvest management. There was strong public and Commission opposition to a late season to increase mature male harvest to stabilize or reduce CWD prevalence within the herd unit. Managers will begin to implement the other approved management options that were recommended by the working group. In 2024, a carcass dumpster was available in Wheatland for carcass disposal throughout the month of October and WGFD will continue to provide a dumpster in the future.

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

| Year(s) | Percent CWD-Positive and (*n*) – *Hunter Harvest Only* | | | Percent of Harvested Adult Males Sampled |
|---|---|---|---|---|
| | **Adult Males (CI = 95%)** | Yearling Males | Adult Females | |
| 2020 | **15% (n =19)** | 17% (6) | 11% (9) | 2.3 |
| 2021 | **19% (n=83)** | 0% (6) | 25% (4) | 12.2 |
| 2022 | **19% (n=390)** | 8% (37) | 3% (60) | 59.6 |
| 2023 | **19% (n=88)** | 0% (7) | 0% (10) | 12.9 |
| 2024 | **23% (n=78)** | 0% (4) | 8% (12) | 10.3 |
| 2020-2024 | **19% (13-22%, n=711)** | 7% (60) | 5% (95) | 19.8 |

**Population Modeling**

The bio-year 2024 postseason population estimate for this herd unit from the PopR IPM was approximately 9,600 (CL = 8,300 – 11,200) mule deer. Model convergence was good and managers feel the model estimate is fairly accurate; however, it is more likely that the population is at the upper end of the confidence intervals and closer to the 2022 sightability estimate of 11,800 mule deer as a result of the last two years of increased fawn ratios and recruitment.

**Additional Management Data**

In 2022, the Department began a 5-year statewide focal mule deer monitoring research project. Five mule deer herds throughout the state were selected for a robust GPS collaring effort. This includes the following herd units: Laramie Mountains, Sweetwater, Wyoming Range, Upper Shoshone, and North Bighorns. The goal of this focal herd project is to better understand survival, as it relates to the role of disease, habitat and predation has on the population. Additionally, we will learn more about movement patterns, seasonal ranges, drivers of herd performance and more. In each of these five herds, 80 does, 30 bucks and 100 juveniles (6 month olds) are collared with GPS collars. The doe and buck sample sizes will be maintained throughout the five years and 100 juveniles will be collared each year of the project.

The Laramie Mountains herd unit is one of two herds that has a cause-specific mortality component, which will provide a clearer picture of what each cohort is succumbing to. In the event of a collar mortality notification, WGFD personnel respond in a timely manner to investigate and determine what the cause of death was. A summary of preliminary causes of mortality can be found in Appendix B. When the project is complete, a more thorough summary of these data will be available.

During the winter of 2023-2024, the Laramie Mountains experienced below normal winter severity. Survival rates of bucks, does, and fawns within the Laramie Mountains herd unit were extremely high due to the combination of excellent conditions throughout the summer of 2023 and very mild winter conditions of 2023-2024. Laramie Mountains annual doe survival was 83% and overwinter buck survival was 58%. Overwinter survival (Jan. 1 – May 31, 2024) for juveniles was 92%. Survival rates for all statewide focal herds can also be found in Appendix C.

## Appendix A.

**2019 - 2024 Postseason Classification Summary**

for Mule Deer Herd MD537 - LARAMIE MOUNTAINS

| | | MALES | | | | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Post Pop | Ylg | 2+ Cls 1 | 2+ Cls 2 | 2+ Cls 3 | 2+ UnCls | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 8,800 | 117 | 181 | 92 | 13 | 0 | 403 | 20% | 1,038 | 52% | 554 | 28% | 1,995 | 1,329 | 11 | 28 | 39 | ± 3 | 53 | ± 3 | 38 |
| 2020 | 9,000 | 27 | 48 | 30 | 3 | 0 | 108 | 18% | 302 | 51% | 183 | 31% | 593 | 955 | 9 | 27 | 36 | ± 5 | 61 | ± 7 | 45 |
| 2021 | 8,300 | 20 | 55 | 29 | 4 | 0 | 108 | 19% | 321 | 57% | 132 | 24% | 561 | 0 | 6 | 27 | 34 | ± 5 | 41 | ± 5 | 31 |
| 2022 | 8,800 | 0 | 0 | 0 | 0 | 0 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0 | 0 | 0 | 0 | ± 0 | 0 | ± 0 | 0 |
| 2023 | 9,000 | 22 | 13 | 11 | 3 | 0 | 49 | 14% | 173 | 51% | 119 | 35% | 341 | 0 | 13 | 16 | 28 | ± 6 | 69 | ± 10 | 54 |
| 2024 | 9,600 | 31 | 16 | 23 | 0 | 0 | 70 | 12% | 326 | 55% | 196 | 33% | 592 | 0 | 10 | 12 | 21 | ± 4 | 60 | ± 7 | 49 |

## Appendix B.

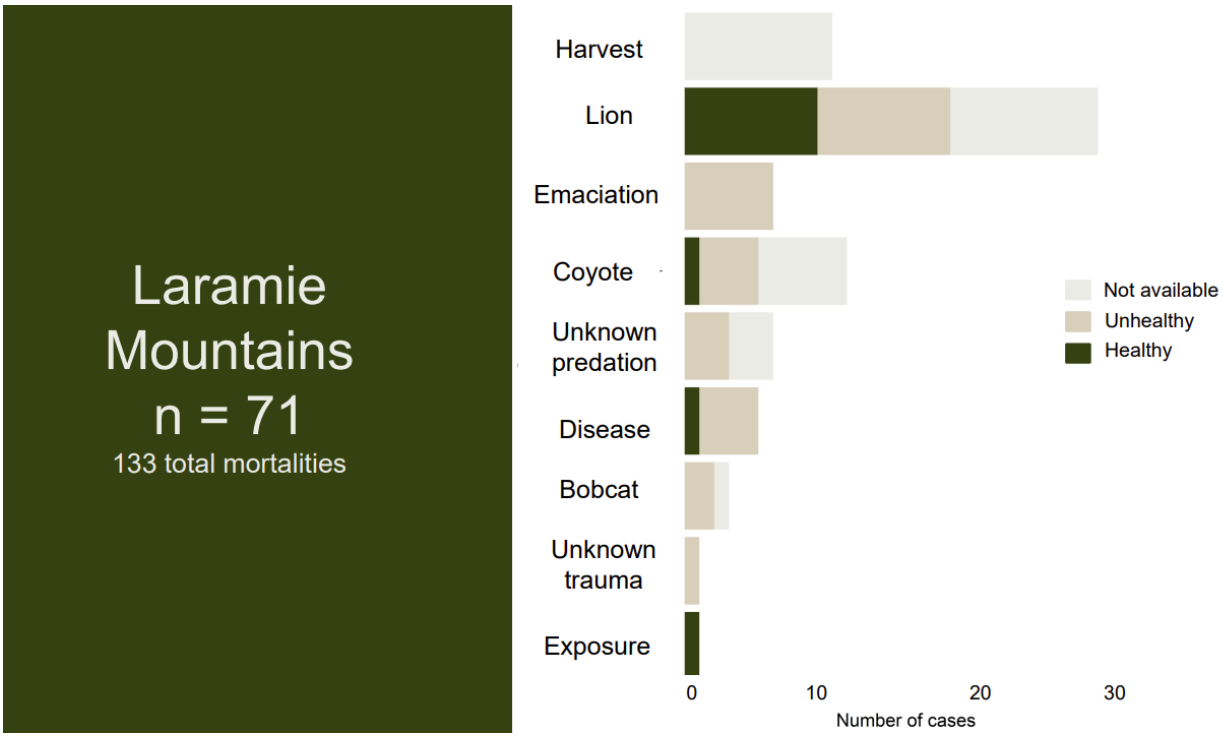



Image 1. Preliminary summary of causes of mortalities in the Laramie Mountains mule deer herd unit from 2022-2025

**Appendix C.**

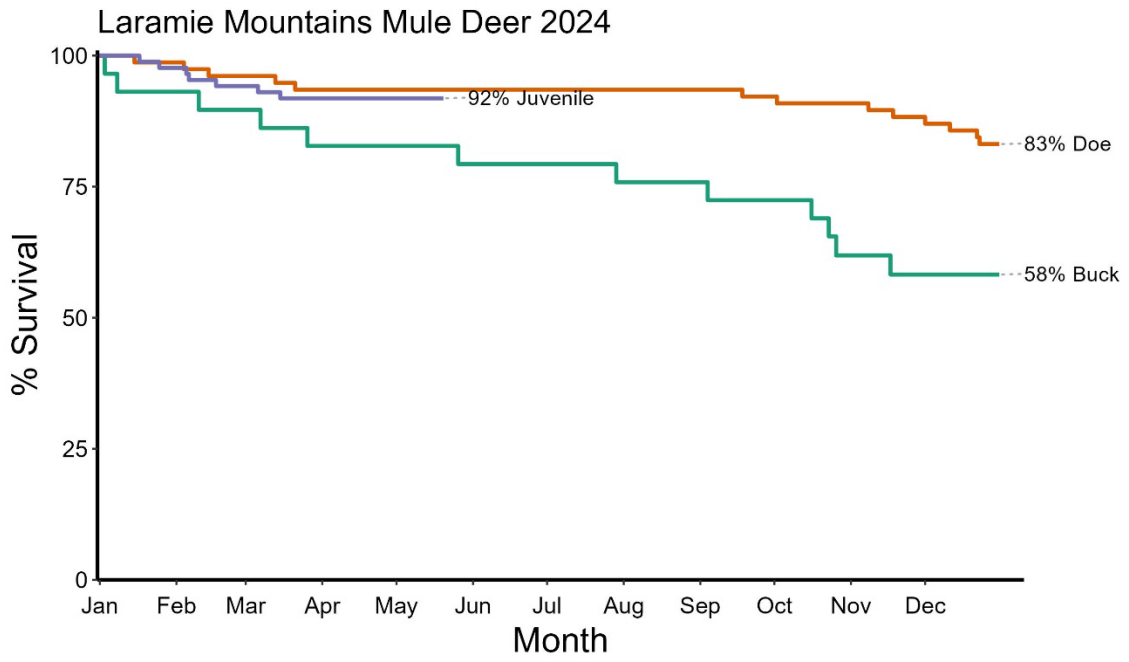



Image 1. 2024 Survival rates for Laramie Mountains mule deer bucks, does and juveniles.

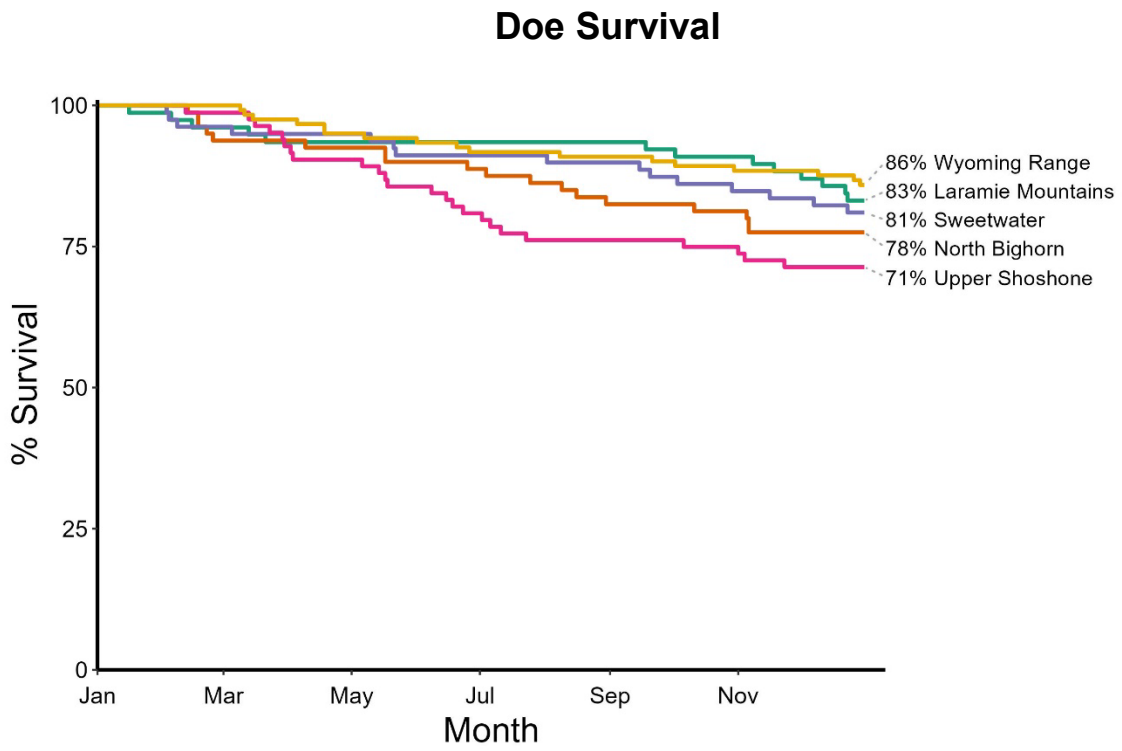



Image 2. Statewide Adult doe annual survival rates for Wyoming Focal Herd Project during 2024.

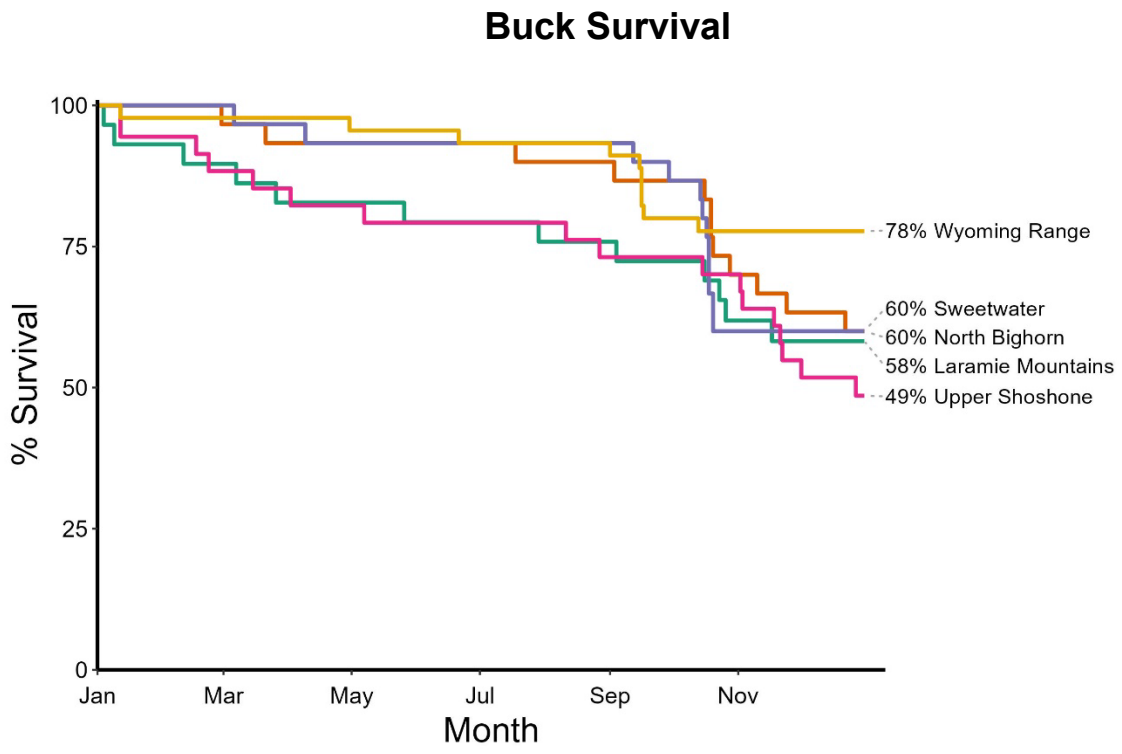



Image 3. Statewide Buck annual survival rates for Wyoming Focal Herd Project during 2024.

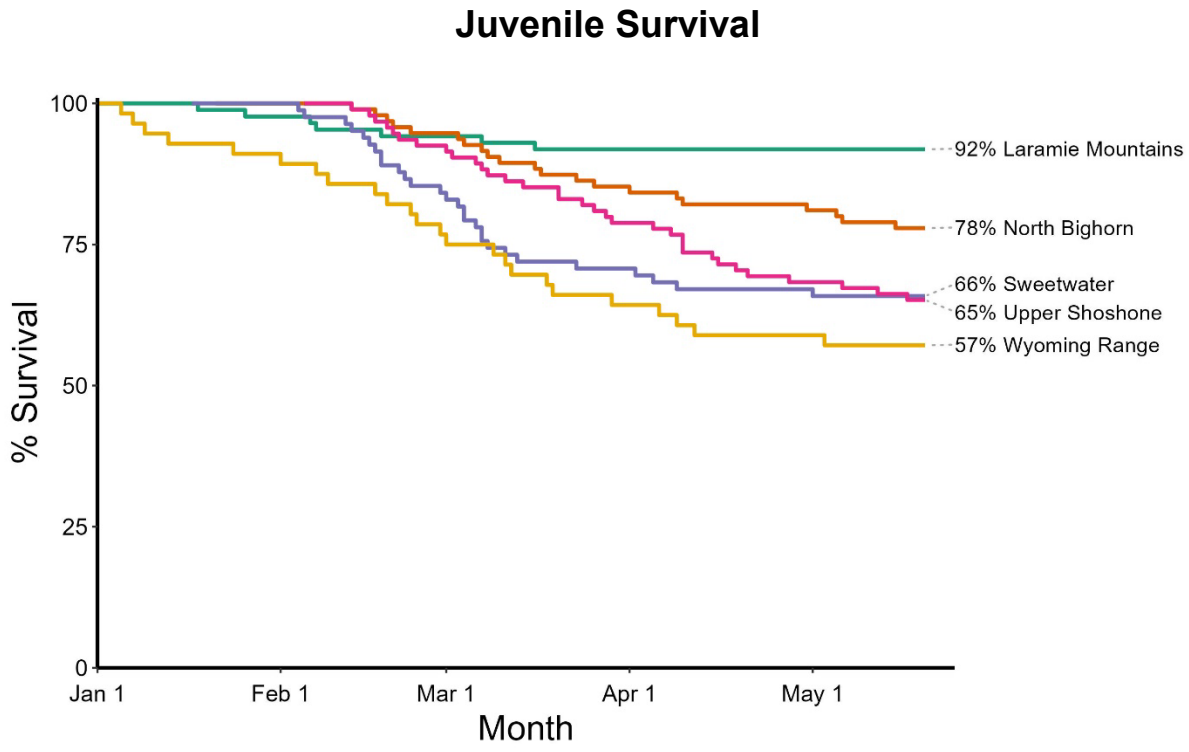



Image 4. Statewide Juvenile overwinter (Jan. 1 – May 31, 2024) survival rates for Wyoming Focal Herd Project.

# 2024 - JCR Evaluation Form

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

HERD: MD539 - SHEEP MOUNTAIN

HUNT AREAS: 61, 74-77
PREPARED BY: LEE KNOX

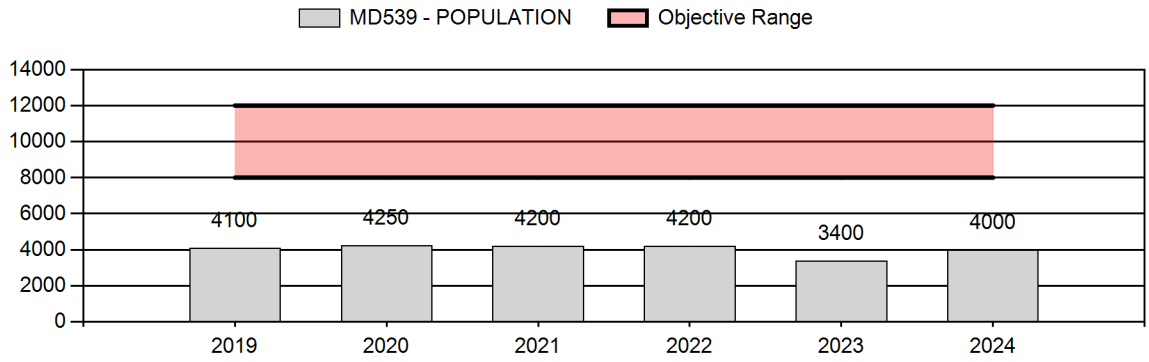
| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 4,030 | 4,000 | 4,000 |
| Harvest: | 357 | 385 | 400 |
| Hunters: | 1,466 | 1,613 | 1,500 |
| Hunter Success: | 24% | 24% | 27% |
| Active Licenses: | 1,466 | 1,613 | 1,500 |
| Active License Success: | 24% | 24% | 27 % |
| Recreation Days: | 8,654 | 9,794 | 9,000 |
| Days Per Animal: | 24.2 | 25.4 | 22.5 |
| Males per 100 Females | 32 | 21 | |
| Juveniles per 100 Females | 58 | 72 | |

| | |
|---|---|
| Population Objective (± 20%) : | 10000 (8000 - 12000) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | -60% |
| Number of years population has been + or - objective in recent trend: | 10 |
| Model Date: | 2/28/2025 |

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

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 0% | 0% |
| Males ≥ 1 year old: | 36% | 36% |
| Proposed change in post-season population: | 3% | 1% |

## Population Size - Postseason



**2025 Hunting Seasons**
**Sheep Mountain Mule Deer (MD539)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 61 | Gen | Sep. 1 | Sep. 30 | Oct. 1 | Oct. 14 | | Antlered mule deer or any white-tailed deer |
| 74 | Gen | Sep. 1 | Sep. 30 | Oct. 1 | Oct. 14 | | Antlered mule deer or any white-tailed deer |
| 75 | Gen | Sep. 1 | Sep. 30 | Oct. 1 | Oct. 14 | | Antlered mule deer or any white-tailed deer |
| 76 | Gen | Sep. 1 | Sep. 30 | Oct. 1 | Oct. 14 | | Antlered mule deer or any white-tailed deer |
| 77 | Gen | Sep. 1 | Sep. 30 | Oct. 1 | Oct. 14 | | Antlered mule deer or any white-tailed deer |

**2025 Region D nonresident quota:** 300 licenses

**2024 Hunter Satisfaction:** 45% Satisfied, 35% Neutral, 20% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation:** The management strategy is recreational management which prescribes for a buck ratio of 20-29:100 does. The Sheep Mountain Mule Deer Herd Unit remains below the postseason population objective of 10,000(±20% 8,000-12,000). The 2024 postseason population estimate was 4,000 (CI 3,600-4,500) mule deer, which is 60% below the objective. This is not a reflection of a significant loss of the population, but rather driven by the 2021 sightability estimate of 3,300 mule deer. An estimate of 4,000 mule deer is likely a more accurate population estimate than previously estimated, and the objective will be revisited in 2026 after a second sightability estimate is conducted. The 2024 hunting season was warm and dry, providing better than average access throughout the herd unit. However the same conditions likely contributed to mature buck mule deer being less vulnerable to harvest which is indicated in our harvest statistics. Hunters harvested 385 buck mule deer in 2024, slightly above the five year average of 356 bucks harvested. Hunter success was 24% in 2024, same as the five-year average. Due to mechanical issues with our helicopter vendor, our mule deer classification flights occurred towards the end of January which is not ideal. This likely skewed our buck and fawn ratios due to some buck's having already dropped their antlers and being classified as does. We did still classify around 100 bucks, but we believe the 2024 buck ratio of 21:100 does under represents what's actually in the field. Fawn ratios in 2024 were 72:100, the highest we have seen since 2014, and likely underrepresented as neighboring herds like Platte Valley and Baggs saw fawn ratios into the 80:100 does. With the five-year average buck ratio at 27:100 does. The 2025 season will remain status quo to continue to provide two weeks of hunting opportunity, and to maintain buck ratios within recreational management guidelines.

**Management Objective:** The management objective for the Sheep Mountain Mule Deer Herd is a postseason population estimate of 10,000 mule deer. The management objective was last reviewed in 2020, maintaining a recreational management strategy of 20- 29 bucks:100 does. When the objective is reviewed again in 2026 managers will explore a more realistic objective.

**CWD Management:** Sheep Mountain Mule Deer was a focal herd and was a priority for CWD sampling from 2019 to 2021 with a prevalence of 14.7% (n=170). Prevalence estimates and sample sizes from 2020-2024 are presented below in Table 1.

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

| Year(s) | Percent CWD-Positive and (*n*) – *Hunter Harvest Only* | | | Percent of Harvested Adult Males Sampled |
|---|---|---|---|---|
| | **Adult Males (CI = 95%)** | Yearling Males | Adult Females | |
| 2020 | **10% (n=29)** | 0% (3) | 0% (2) | 12 |
| 2021 | **16% (n=80)** | 0% (17) | 0% (7) | 18 |
| 2022 | **8% (n=39)** | 10% (10) | 0% (3) | 10 |
| 2023 | **19% (n=37)** | 0% (8) | 3% (1) | 10 |
| 2024 | **11% (n=27)** | 0% (8) | 0% (3) | 7 |
| 2020-2024 | **14% (8-19%, n=212)** | 2% (46) | 0% (16) | 12 |

**Habitat and Weather:** Precipitation received in water year 2024 was 14% below long term 30 year averages. Within the 5 year review period of 2020 – 2024, annual precipitation exceeded the 30 year average in only one year.

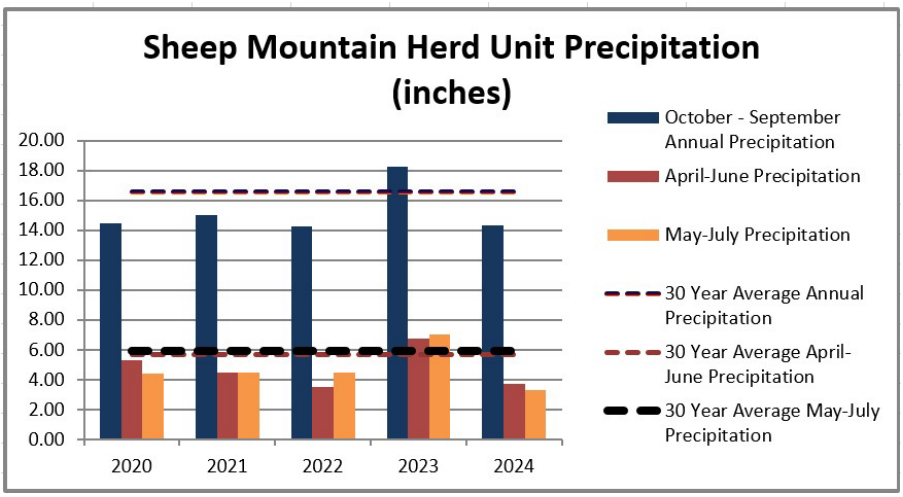



Figure 1. Derived Environmental Variability Indices Spatial Extractor (DEVISE) Models were utilized to estimate precipitation for the Sheep Mountain mule deer herd unit.

In addition to overall annual precipitation being below the 30 year average in 2024, moisture events in the critical growth months for herbaceous and woody vegetation was 44% less than normal. Precipitation in the May – July period in Spring, Summer, Fall ranges for mule deer, were also 44% below the 30 year averages. In the last 5 years, 2024 produced the least amount of May-July precipitation. Precipitation falling in this time period is essential for growth at high elevations in the herd unit. The importance of lush, succulent and nutritious forage availability in summer fawn rearing habitats cannot be overstated. Mountain snowpack was normal in the higher elevations, above 8,000'. The foothills and plains located adjacent to the Snowy Range experienced very dry conditions through winter months, with little green-up in the spring. Throughout the herd unit, some late summer monsoonal weather patterns developed and continued to bring rain to higher and lower elevations. At Laramie area weather stations, 1.93" – 2.99" of moisture was received in the month of August. Long term averages for the month of August are 1.14" annually. Green up of forage was witnessed after these August storms, but did not result in a lot of production.

**Population Modeling:** The bio-year 2024 postseason population estimate from the PopR IPM was approximately 4,000 (CL = 3,600– 4,500) mule deer. Classification and harvest data was used from years 2000-2026. The effort variable that best matched harvest licenses. Model convergence was good.

Appendix A. Postseason age and sex classification beginning in 2019 and ending in 2024.

**2019 - 2024 Postseason Classification Summary**

for Mule Deer Herd MD539 - SHEEP MOUNTAIN

| | | MALES | | | | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Post Pop | Ylg | 2+ Cls 1 | 2+ Cls 2 | 2+ Cls 3 | 2+ UnCls | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 4,100 | 65 | 60 | 44 | 13 | 0 | 182 | 20% | 474 | 51% | 268 | 29% | 924 | 0 | 14 | 25 | 38 | ± 4 | 57 | ± 5 | 41 |
| 2020 | 4,250 | 32 | 43 | 26 | 4 | 0 | 105 | 16% | 333 | 50% | 230 | 34% | 668 | 923 | 10 | 22 | 32 | ± 4 | 69 | ± 7 | 53 |
| 2021 | 4,200 | 36 | 27 | 27 | 7 | 0 | 97 | 15% | 361 | 56% | 192 | 30% | 650 | 0 | 10 | 17 | 27 | ± 4 | 53 | ± 6 | 42 |
| 2022 | 4,200 | 40 | 37 | 20 | 4 | 0 | 101 | 14% | 379 | 54% | 221 | 32% | 701 | 0 | 11 | 16 | 27 | ± 3 | 58 | ± 6 | 46 |
| 2023 | 3,400 | 28 | 30 | 24 | 3 | 0 | 85 | 17% | 261 | 53% | 142 | 29% | 488 | 0 | 11 | 22 | 33 | ± 5 | 54 | ± 7 | 41 |
| 2024 | 4,000 | 46 | 27 | 29 | 5 | 0 | 107 | 11% | 513 | 52% | 367 | 37% | 987 | 0 | 9 | 12 | 21 | ± 2 | 72 | ± 5 | 59 |

# 2024 - JCR Evaluation Form

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

HERD: MD540 - SHIRLEY MOUNTAIN

HUNT AREAS: 70
PREPARED BY: TEAL CUFAUDE

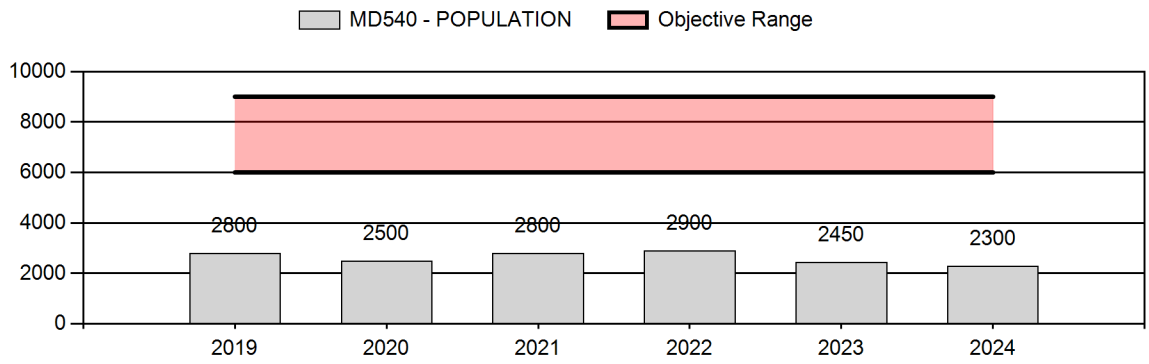
| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 2,690 | 2,300 | 2,200 |
| Harvest: | 182 | 211 | 230 |
| Hunters: | 515 | 587 | 625 |
| Hunter Success: | 35% | 36% | 37 % |
| Active Licenses: | 515 | 587 | 625 |
| Active License Success: | 35% | 36% | 37 % |
| Recreation Days: | 2,117 | 2,443 | 2,500 |
| Days Per Animal: | 11.6 | 11.6 | 10.9 |
| Males per 100 Females | 39 | 33 | |
| Juveniles per 100 Females | 60 | 74 | |

| | |
|---|---|
| Population Objective (± 20%) : | 7500 (6000 - 9000) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | -69.3% |
| Number of years population has been + or - objective in recent trend: | 5 |
| Model Date: | 3/2/2025 |

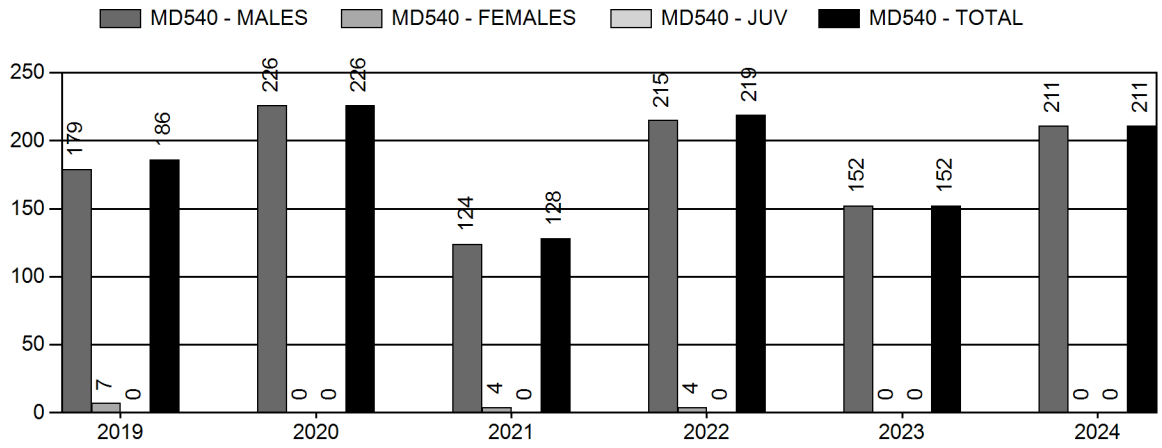
**Proposed harvest rates (percent of pre-season estimate for each sex/age group):**

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 0% | 0% |
| Males ≥ 1 year old: | 34% | 34% |
| Proposed change in post-season population: | 4% | -3% |

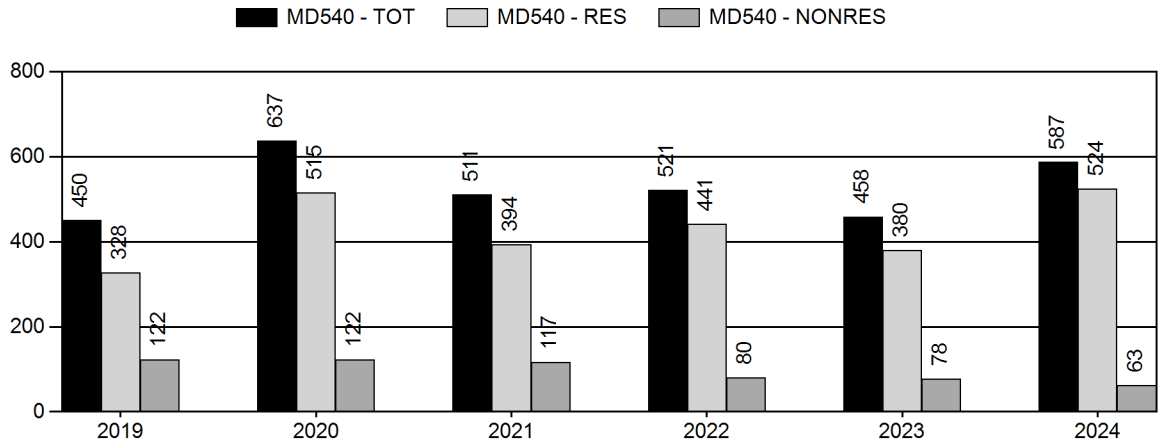
## Population Size - Postseason



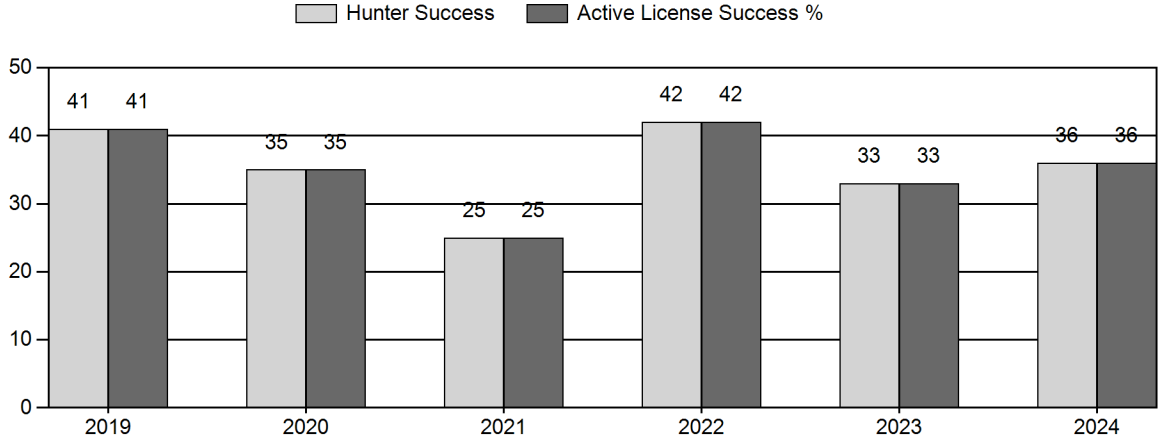
# Harvest



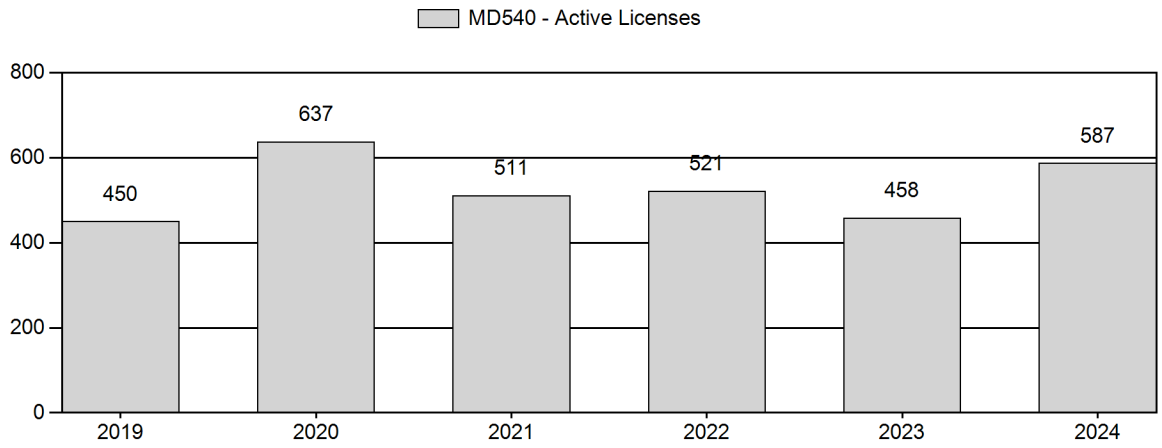

# Number of Hunters



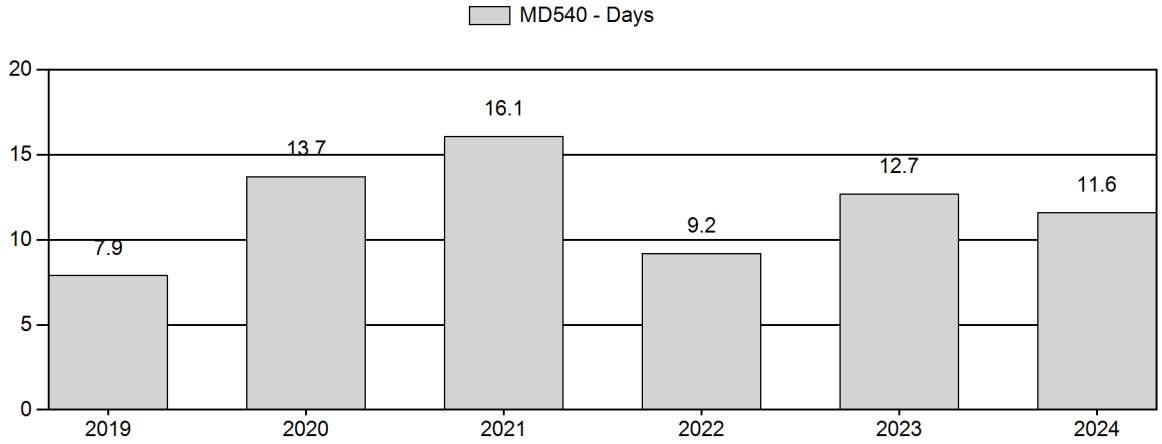

# Harvest Success



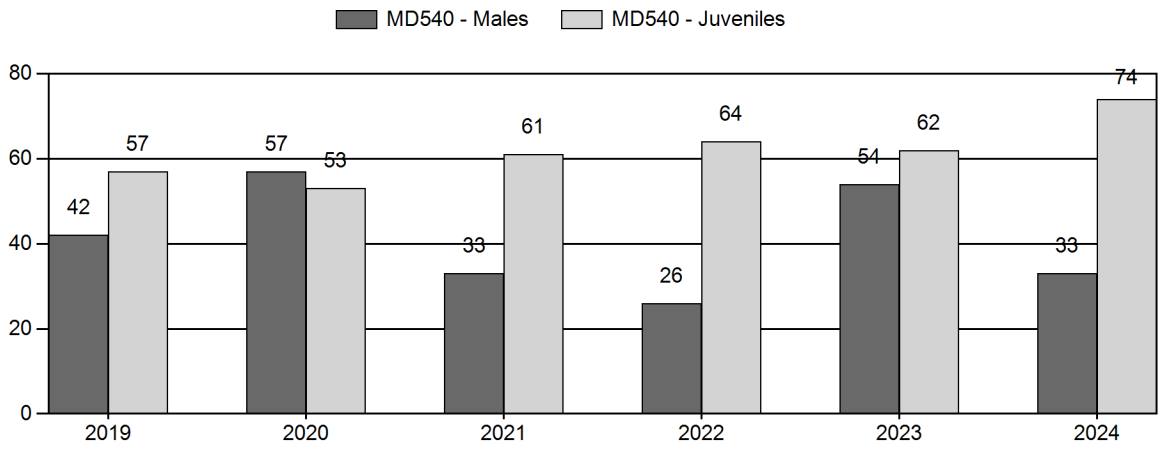
# Active Licenses




# Days per Animal Harvested




# Postseason Animals per 100 Females



**2025 Hunting Seasons**
**Shirley Mountain Mule Deer (MD540)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 70 | Gen | Sep. 1 | Sep. 30 | Oct. 15 | Oct. 21 | | Antlered mule deer or any white-tailed deer |

**2025 Region D nonresident quota:** 300 licenses

**2024 Hunter Satisfaction:** 45% Satisfied, 32% Neutral, 23% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation**
The 2024 harvest survey report estimated 587 hunters harvested 211 buck mule deer for an overall success of 36%. Hunter success increased and days to harvest (11.6) decreased compared to the respective five-year averages (35% and 11.9). These harvest metrics, along with increased hunter satisfaction indicated that mule deer hunting may have improved slightly in 2024. However, hunter comments suggested that hunting mule deer in the herd unit remained more challenging than hunters desired. Winter severity in 2022-23 was high, and above-average winter mortality across deer age and sex cohorts was expected in this herd unit. After a decrease in deer hunter participation in 2023, the number of active licensed deer hunters during the 2024 hunting season increased to the highest level since 2020.

Post-hunting season composition data, including age and sex, was collected during December ground classifications and opportunistically during a January elk survey (Appendix A). The observed fawn-to-doe ratio (74/100) improved compared to the preceding five-year average (59/100). The observed buck-to-doe ratio (33/100) was lower than the previous five-year average (42/100) but remained within recreational management parameters. As in previous years with small classification samples, these observed composition data should be interpreted with caution.

Mean antler spread, measured on hunter-harvested field-checked bucks, was 15 inches in 2024 which decreased from the mean antler spread of 17 inches in 2023. The decrease in mean antler spread was expected with increased harvest and more younger-age class bucks harvested in 2024. The mean antler spread was similar to the average measurements collected from hunter-harvested bucks in the preceding five years. Adult bucks were assigned to antler classes during post-hunting season surveys. Those surveys indicated that there are Class 2 (20-25” wide) and Class 3 (>26” wide) bucks in the herd unit.

A seven-day general season for antlered mule deer or any white-tailed deer was prescribed in 2025 and the Region D nonresident quota was maintained at 300 licenses. The 2025 season structure should maximize hunter opportunity. If the projected increased harvest of 230 mule deer bucks and normal fawn production is attained in 2025 the predicted post-hunting season population of 2,200 mule deer (1,700-2,800) will continue to be below the objective of 7,500.

**Management Objective Review**
This herd has been slated for an objective review in 2025. The 2023 sightability survey confirmed

our presumption that the number of mule deer in the herd unit was substantially below the post-hunting season herd objective. Historical model estimates, which the previous herd objectives were based on, have always been evaluated as unrealistic. We acknowledge the public's desire for more mule deer in the herd unit. However, the 7,500 mule deer (6,000-9,000) objective is not likely attainable given the challenges this mule deer herd is facing, including late seral stage habitats, prolonged drought conditions, high disease (Chronic Wasting Disease) prevalence, and increased development on and near crucial ranges. The Department will develop recommendations for a revised objective in May of 2025 in conjunction with a public review process. This proposed change will be presented to the Wyoming Game and Fish Commission at the September 2025 meeting.

**Weather/Habitat**

Precipitation levels were 25% below normal for the 2024 biological year. Unlike other portions of the WGFD's Laramie Region that observed monsoonal moisture patterns in August, bringing two to three times the average monthly precipitation typically received, the Shirley Basin area received 50% of normal August precipitation amounts. Shrub conditions continue to be very poor, with this landscape being dominated by late seral shrub plant communities and long-term, severe hedging and overutilization by big game.

The Department plans to work with conservation partners to improve habitats in uplands through construction of Zeedyk structures in ephemeral draws, which may improve the availability of summer forage quality and quantity. These structures and subsequent vegetative responses may result in better lactation for does and subsequent improved fawn survival. Department personnel will prioritize potential Zeedyk site selection, structure design, planning, and some implementation in 2025.

There are several development projects that have been sited or proposed in this herd unit. A proposed transmission line, called Wyoming Intertie Line, from Wheatland to the Aeolus substation crosses through crucial winter range habitats with a possible phase II line from the Aeolus substation to Rawlins. Both of these powerlines have the potential for temporary disturbance to mule deer during construction along with permanent habitat loss in crucial habitats. The Seminoe Pumped Storage project has been proposed for construction and is in the FERC review process. There is the possibility of habitat loss and disturbance to mule deer crucial winter range habitats from the upper reservoir construction, cement plant operation, transmission line construction, and road infrastructure construction. The Department plans to evaluate and comment on both of these projects.

**Chronic Wasting Disease (CWD) Management**

CWD was first detected in the Shirley Mountain mule deer herd in 2006. This is a Tier 3 surveillance herd and was prioritized for CWD sampling beginning in 2023 and will continue through 2025. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). During the first year of priority sampling, only 40 adult male mule deer were sampled which is below the desired sample size for estimating prevalence. This was due to lower hunter turnout and lower hunter success. Mandatory sampling in 2024 helped increase sample sizes, with 62 samples collected. Mandatory sampling will be used in 2025.

Considering prevalence has remained above 10% in adult males over the past five years, CWD may be impacting adult male survival. The CWD prevalence in adult males may indicate prevalence is also high enough in adult females to start influencing their survival rates, although sample sizes are insufficient to conclude this definitively.

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

| Year(s) | Percent CWD-Positive and (n) – Hunter Harvest Only | | | Percent of Harvested Adult Males Sampled |
|---|---|---|---|---|
| | **Adult Males (CI = 95%)** | Yearling Males | Adult Females | |
| 2020 | **31% (n=26)** | 0% (1) | 50% (2) | 12 |
| 2021 | **22% (n=9)** | 0% (0) | 0% (0) | 7 |
| 2022 | **17% (n=18)** | 0% (3) | 100% (1) | 8 |
| 2023* | **16% (n=43)** | 0% (12) | 0% (0) | 28 |
| 2024** | **13% (n=62)** | 0% (18) | 0% (1) | 29 |
| 2020-2024 | **18% (10-25%, n=158)** | 0% (34) | 50% (4) | 17 |

*Priority CWD sampling effort
**Mandatory CWD sampling effort

**Population Modeling**

The 2024 post-hunting season abundance estimate from the PopR Integrated Population Model (IPM) was approximately 2,300 mule deer (CL 1,800-2,800). Managers chose to model this herd using constant adult and juvenile survival and time-varying reproduction. Based on a visual comparison of the available effort variables, recreation days was selected as the variable most predictably related to annual harvest. With these settings the observed data for the IPM included 15 years of harvest and ratio data along with an abundance estimate from a 2023 sightability survey. IPM convergence was excellent, with all Rhat values less than 1.1, and fawn and buck ratio estimates produced by the IPM aligned with recorded data for this herd. The abundance estimate for 2022 did not align perfectly with the substantial overwinter losses we thought occurred. However, the estimate did agree with the the results from the 2023 sightability survey:

| | **2023** |
|---|---|
| **Abundance Estimate** | 2,942 (CL 1,962 - 3,922) |
| **IPM Estimate** | 2,180 (CL 1,783 -2,599) |

The abundance estimate for 2024 represented an increase of about 4% from the previous year. This agrees with the perceptions of managers and stakeholders that this herd may be slowly increasing after fair production and improved survival in 2024 and 2025.

**Appendix A.** 2019-2024 Classification Summary (MD540)

## 2019 - 2024 Postseason Classification Summary

for Mule Deer Herd MD540 - SHIRLEY MOUNTAIN

| | | MALES | | | | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Post Pop | Ylg | 2+ Cls 1 | 2+ Cls 2 | 2+ Cls 3 | 2+ UnCls | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 2,800 | 19 | 29 | 16 | 1 | 0 | 65 | 21% | 155 | 50% | 89 | 29% | 309 | 965 | 12 | 30 | 42 | ± 7 | 57 | ± 9 | 40 |
| 2020 | 2,500 | 9 | 26 | 14 | 2 | 0 | 51 | 27% | 90 | 48% | 48 | 25% | 189 | 1,024 | 10 | 47 | 57 | ± 12 | 53 | ± 12 | 34 |
| 2021 | 2,800 | 8 | 21 | 8 | 2 | 0 | 39 | 17% | 117 | 52% | 71 | 31% | 227 | 894 | 7 | 26 | 33 | ± 8 | 61 | ± 11 | 46 |
| 2022 | 2,900 | 26 | 13 | 8 | 1 | 0 | 48 | 14% | 182 | 52% | 117 | 34% | 347 | 0 | 14 | 12 | 26 | ± 5 | 64 | ± 9 | 51 |
| 2023 | 2,450 | 7 | 15 | 6 | 0 | 0 | 28 | 25% | 52 | 46% | 32 | 29% | 112 | 643 | 13 | 40 | 54 | ± 16 | 62 | ± 17 | 40 |
| 2024 | 2,300 | 9 | 11 | 14 | 2 | 0 | 36 | 16% | 110 | 48% | 81 | 36% | 227 | 872 | 8 | 25 | 33 | ± 8 | 74 | ± 13 | 55 |

# 2024 - JCR Evaluation Form

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

HERD: MD541 - PLATTE VALLEY

HUNT AREAS: 78-81
PREPARED BY: TEAL CUFAUDE

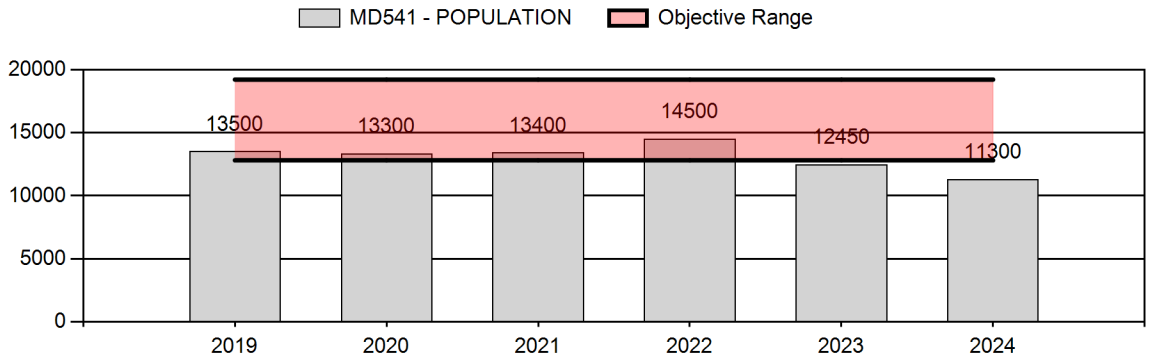
| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 13,430 | 11,300 | 11,700 |
| Harvest: | 472 | 287 | 300 |
| Hunters: | 978 | 736 | 750 |
| Hunter Success: | 48% | 39% | 40 % |
| Active Licenses: | 978 | 736 | 750 |
| Active License Success: | 48% | 39% | 40 % |
| Recreation Days: | 6,173 | 4,870 | 5,000 |
| Days Per Animal: | 13.1 | 17.0 | 16.7 |
| Males per 100 Females | 41 | 36 | |
| Juveniles per 100 Females | 66 | 81 | |

| | |
|---|---|
| Population Objective (± 20%) : | 16000 (12800 - 19200) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | -29.4% |
| Number of years population has been + or - objective in recent trend: | 1 |
| Model Date: | 2/28/2025 |

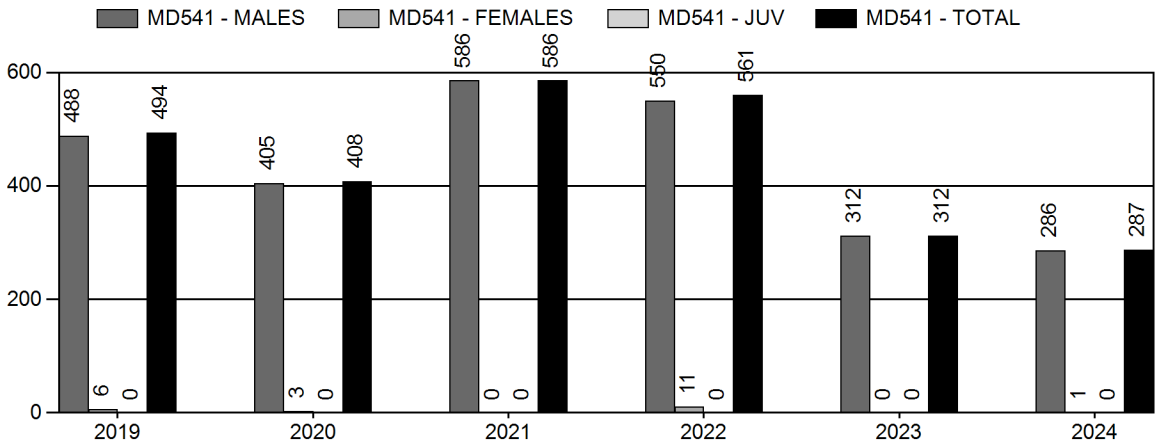
**Proposed harvest rates (percent of pre-season estimate for each sex/age group):**

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 0% | 0% |
| Males ≥ 1 year old: | 15% | 16% |
| Proposed change in post-season population: | 0% | 3% |

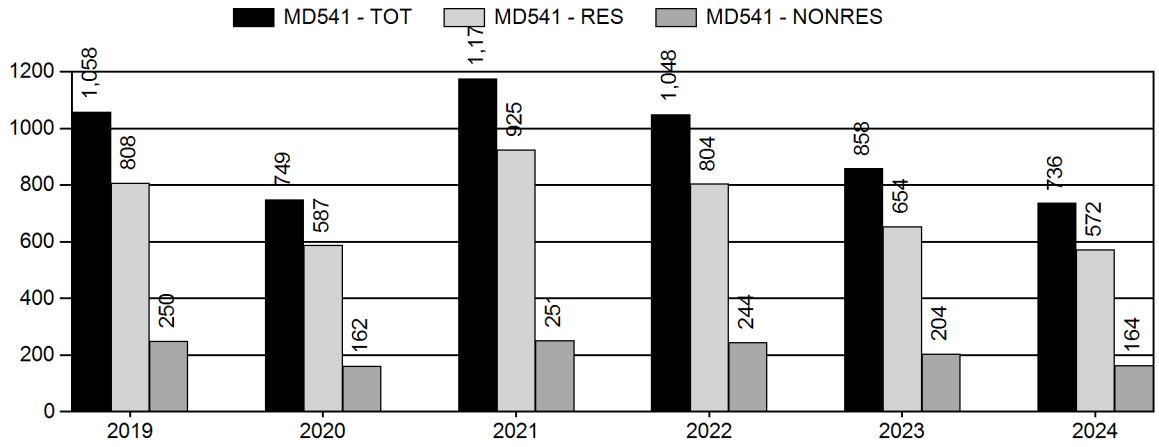
## Population Size - Postseason



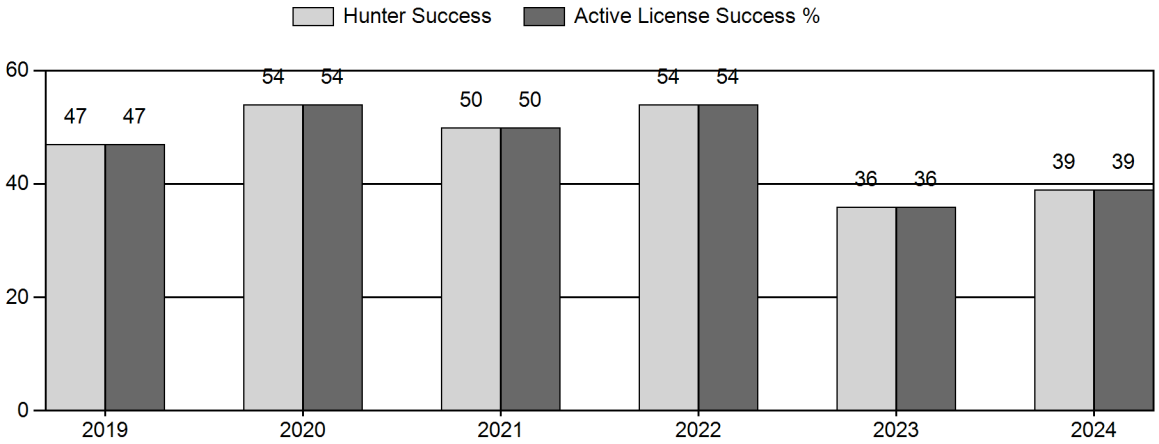
# Harvest



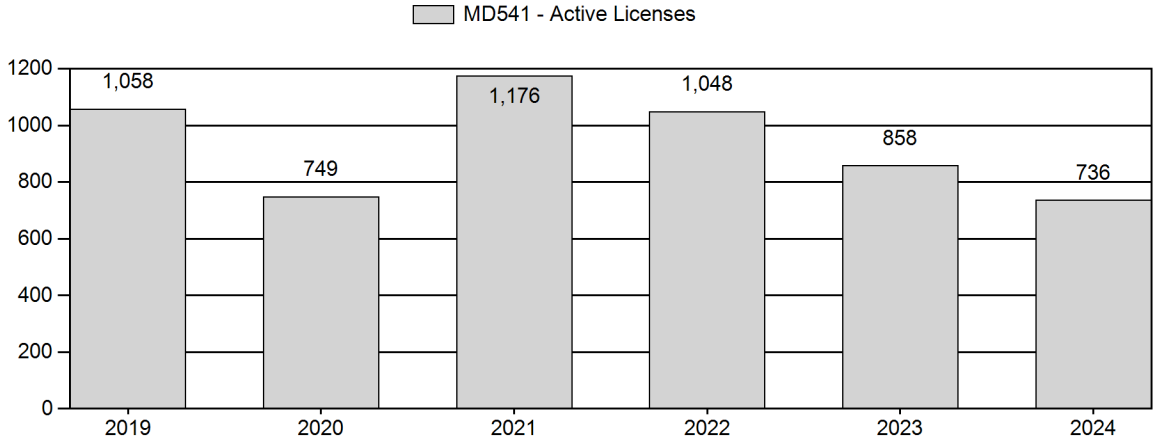

# Number of Hunters



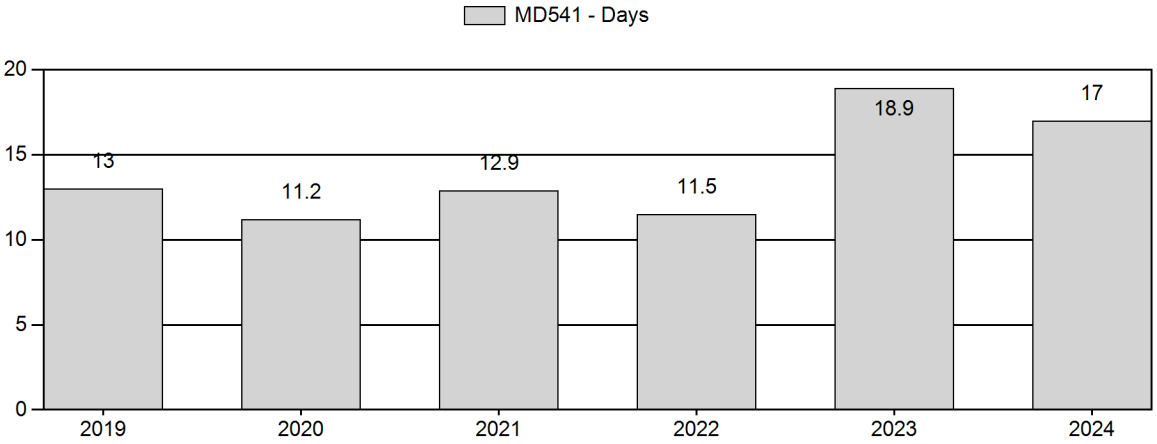

# Harvest Success



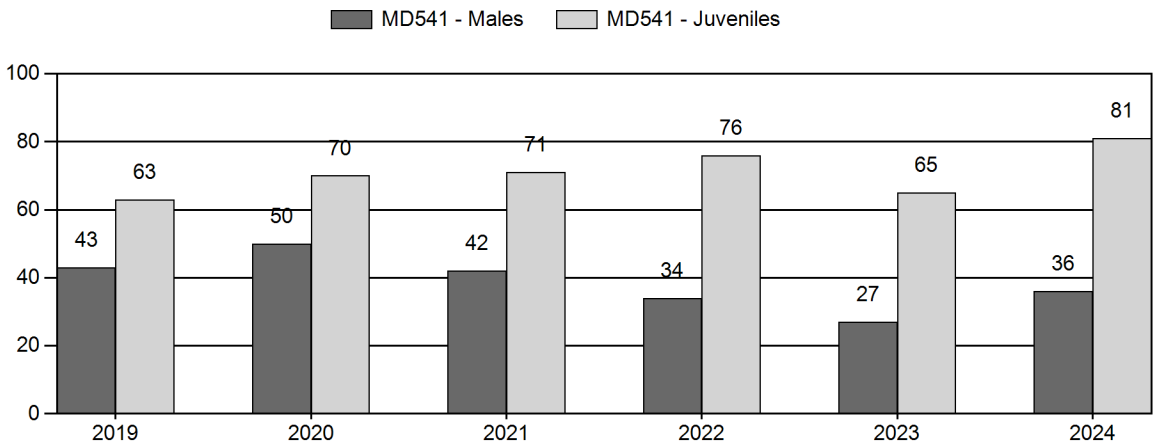
# Active Licenses




# Days per Animal Harvested




# Postseason Animals per 100 Females



**2025 Hunting Seasons**
**Platte Valley Mule Deer (MD541)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 78 | 1 | Sep. 1 | Sep. 30 | Oct. 1 | Oct. 14 | 250 | Antlered mule deer or any white-tailed deer |
| 79 | 1 | Sep. 1 | Sep. 30 | Oct. 1 | Oct. 14 | 250 | Antlered mule deer or any white-tailed deer |
| 80 | 1 | Sep. 1 | Sep. 30 | Oct. 1 | Oct. 14 | 150 | Antlered mule deer or any white-tailed deer |
| 81 | 1 | Sep. 1 | Sep. 30 | Oct. 1 | Oct. 14 | 175 | Antlered mule deer or any white-tailed deer |

**2024 Hunter Satisfaction:** 43% Satisfied, 23% Neutral, 34% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation**
According to the harvest survey report, an estimated 736 hunters harvested 286 buck mule deer in 2024. Hunter success (39%) and satisfaction increased while days to harvest (17) decreased compared to 2023. Despite improvements in satisfaction and fewer days to harvest, hunter survey comments, satisfaction, and days to harvest compared to the historical metrics indicated that deer hunting was still more challenging than hunters desired.

Hunt areas 79 and 80 showed improved hunter success while success in hunt areas 78 and 81 decreased substantially compared to 2023. One-hundred deer were harvested in hunt area 79 and success was 44% which was an improvement from 2023, but lower than the ten-year average success (51%). Sixty deer were harvested in hunt area 80 and success was 48%, which was improved from 2023, but lower than the ten-year average success (54%). Seventy-eight deer were harvested in hunt area 78, success was 35%, which was lower than the ten-year average (53%). Forty-eight deer were harvested in hunt area 81, and success was 31%, which was the lowest estimated success since going limited quota and significantly lower than the ten-year average (61%).

Post-hunting season we conducted a composition survey to assess age and sex ratios. The 2024 observed fawn-to-doe ratio of 81/100 exceeded the five-year average (69/100). The fawn ratio was above the ratio (66/100) generally needed to maintain a population. The post-hunting season buck-to-doe ratio of 36/100 exceeded recreational management strategy parameters of 20-29/100. The yearling buck-to-doe ratio (4/100) indicated below normal recruitment from 2023 to 2024, however, the lower yearling buck ratio may have been attributed to some yearling bucks being classified as Class 1 bucks during surveys. Mild winter conditions in 2023-24 and 2024-25 should result in excellent overwinter survival and productivity in 2025.

Adult (>1.5 years of age) bucks were assigned to antler classes during post-hunting season composition surveys. The total adult buck classification sample (n=114) resulted in the following:

60% Class 1 (<20”wide) bucks, 25% Class 2 (20-25”wide) bucks, and 15% Class 3 (>26” wide) bucks (Appendix A). The proportion of Class 3 bucks was the highest observed during post-hunting season surveys in the last ten years.

The 14-day limited quota seasons for antlered mule deer or any white-tailed deer were retained for 2025. License quotas remained conservative in each hunt area based on past hunter success and observed post-hunting season buck ratios. If approximately 300 bucks are harvested and normal fawn production is attained in 2025 the predicted post-hunting season population of 11,700 mule deer (CL=9,200-14,000) will be below the objective of 16,000 mule deer. The models indicated the population trajectory would be slightly increasing whether buck harvest remained the same as 2024 or increased closer to the five-year average harvest. Even with improved hunter participation and success in 2025, we estimated only 16% of pre-hunting season bucks would be harvested and no female mule deer would be harvested.

The 2024 post-hunting season buck and fawn ratios along with the projected population trajectory indicated that maintaining license quotas were appropriate, however concerns of reduced quality of hunt metrics and public comment in support of reduced quotas prompted careful consideration of license quotas across the herd unit. We continue to monitor the quality of hunt metrics within the Platte Valley Mule Deer Plan, however consideration will also be given to disease prevalence and reduced carrying capacities of deer habitats in the herd unit. Hunt areas in this herd unit have limited quota seasons to improve hunt quality, however, the hunting season and quotas are intended to maximize recreational opportunity. The 2025 license quotas reduced hunter opportunity substantially and may no longer align with the guidelines of recreational management strategy.

**Management Objective Review**
The 16,000 mule deer (±20%) objective and recreational management strategy was last evaluated and approved in 2024, and will not be reviewed again until 2029.

**Weather/Habitat**
We used the Derived Environmental Variability Indices Spatial Extractor (DEVISE) interface to extract precipitation metrics for the Platte Valley mule deer herd unit. We selected monthly temporal precipitation data using Parameter-Elevation Relationships on Independent Slopes Model (PRISM) data to estimate annual, growing season, and high elevation (spring/summer/fall; SSF) precipitation (PRISM Climate Group, Oregon State University, http://prism.oregonstate.edu, created 4 Feb 2004). Within the 6-year review period of 2019-2024, annual precipitation exceeded or was at the 30-year average in 2 of the 6 years (Figure 1). During that period, the largest deficit in annual and growing season (April – June) precipitation occurred in 2021. Precipitation during the 2024 water year (October 2023 through September 2024) was below the 30-year average of 18.98 inches.

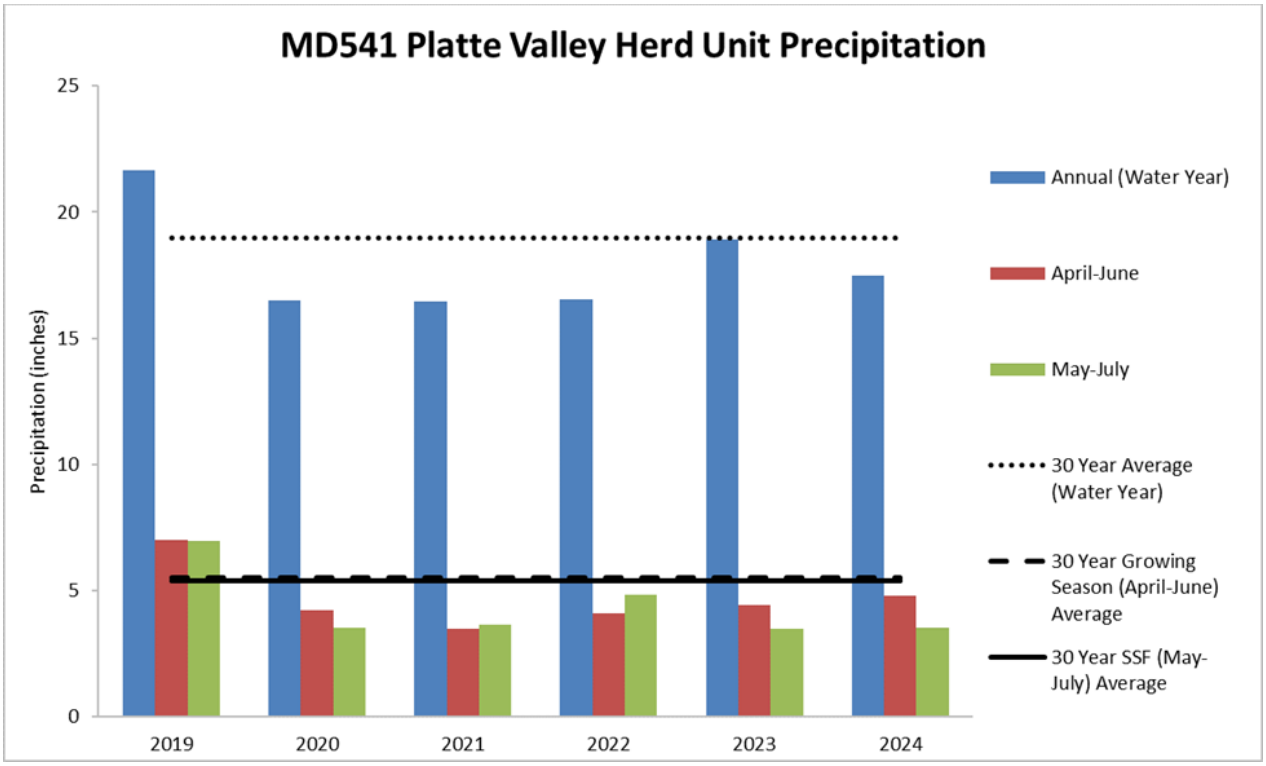



**Figure 1.** Parameter-Elevation Relationships on Independent Slopes Model (PRISM) estimate of annual, growing season, and spring/summer/fall (SSF) precipitation from 2019-2024 for the Platte Valley mule deer herd unit in Carbon County, Wyoming.

In addition to an approximately 8% deficit in annual precipitation in 2024, moisture events in the critical growing months for herbaceous and woody vegetation were below normal. The most significant deficits during these crucial growing months occurred during May – July. In 5 of the last 6 years, moisture during this period was below normal. Growing season (April – June) precipitation was higher than SSF (May-July) precipitation, however, it was still below the 30-year average. Early spring precipitation occurred in April and May but diminished by early June. Precipitation falling during these months is essential for plant growth at high elevations in this herd unit. Some late season precipitation occurred in August which likely provided some late summer green-up.

The majority of precipitation in the Platte Valley herd unit occurs outside of the primary growing season, generally in the form of snow. The 2023-2024 winter started mild, with no persistent snow accumulations through fall and early winter at lower elevations. SNOTEL sites at higher elevations on the west side of the Snowy Range and the east side of the Sierra Madres reported below-average snowpack for most of the 2023-2024 winter. As of February 2024, SNOTEL sites at higher elevations on the west side of the Snowy Range reported snow water equivalent (SWE) values ranging from 81-106% of average, while sites on the east side of the Sierra Madres reported SWE values ranging from 100-117% of average. Due to a lack of snow in the lower elevations, relatively mild temperatures, and early snowmelt, the 2023-2024 winter conditions were favorable for big game.

In 2015, Department personnel initiated the Rapid Habitat Assessment (RHA) methodology to

survey important mule deer habitats. This method strives to capture large-scale habitat quality metrics to better understand how the habitat is providing for the current population of mule deer. The overall result of this effort is to provide a standardized habitat component for discussions about how mule deer objectives should or should not be adjusted based on the general concept of carrying capacity. Rapid Habitat Assessments conducted throughout the herd unit from 2019-2024 suggest that many important shrub habitats continue to underperform due to maturity and decadence caused by a lack of disturbance. Only a few of the surveyed aspen stands were found to be in Proper Functioning Conditioning, with the majority of surveyed stands ranging from early to late seral stages. Moderate to severe levels of herbivory could be limiting aspen regeneration in important summer and transitional ranges.

There are several development projects that have been sited or proposed in this herd unit. A Phase II powerline from Aeolus substation to Rawlins could cause temporary disturbance to mule deer during construction along with permanent habitat loss in the migration corridor and winter habitats. Wind energy development is planned to occur in the Chokecherry Sierra Madre Project Area. Turbines have not been constructed, but road and pad development have occurred throughout the project area. The impacts of wind development on deer and their habitats are largely unknown, however, ongoing research within the Chokecherry Sierra Madre Project Area should show if any pronounced shifts in deer distribution, movement, or habitat use occur during the construction and post-construction phases. Housing developments and expansion of subdivided properties continued to be one of the most significant causes of habitat loss and disturbance to crucial range habitats in the herd unit. The Department plans to evaluate and comment on these projects. Appendix B describes habitat projects being implemented by WGFD and partners across the herd unit.

**Chronic Wasting Disease (CWD) Management**

CWD was first observed in the Platte Valley herd unit in 2002. During the 2023 hunting season, we did not obtain the priority sampling goal of 200 adult male mule deer as harvest was reduced due to conservative season structures and reduced hunter success. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). The 2024 prevalence and 2020-24 prevalence are similar to those observed in 2024 hunter-harvested mule deer in Colorado's D-3 mule deer herd, Baggs mule deer herd, and Sheep Mountain mule deer herd.

Considering prevalence increased above 10% in adult males over the past five years, CWD may be impacting adult male survival. The CWD prevalence in adult males may indicate prevalence is also high enough in adult females to start influencing their survival rates. However, sample sizes are insufficient to conclude this definitively. We are concerned with this increasing prevalence and continue to gather public input on feasible disease management strategies through the WGFD CWD Management Plan guidelines.

Table 1. CWD prevalence for hunter-harvested mule deer in Platte Valley Mule Deer Herd, 2021-2023.

| Year(s) | Percent CWD-Positive and (*n*) – *Hunter Harvest Only* | | | Percent of Harvested Adult Males Sampled |
|---|---|---|---|---|
| | **Adult Males (CI = 95%)** | Yearling Males | Adult Females | |
| 2020 | **8% (n=25)** | 0% (2) | 0% (3) | 6 |
| 2021 | **6% (n=67)** | 9% (11) | 0% (1) | 11 |
| 2022 | **7% (n=42)** | 0% (3) | 0% (0) | 8 |
| 2023* | **13% (n=113)** | 16% (6) | 0% (0) | 36 |
| 2024 | **13% (n=38)** | 33% (3) | 0% (0) | 13 |
| 2020-2024 | **10% (6-14%, n=285)** | 10% ( 20) | 0% (1) | 13 |

*Priority sampling year

**Population Modeling**

The 2024 post-hunting season population estimate from the PopR Integrated Population Model (IPM) was 11,300 mule deer (CL = 9,800 -12,800). This indicated a stable population from the IPM predicted 2023 post-hunting season population. Managers chose to model this herd using the default structure for mule deer, i.e. constant adult survival, time-varying reproduction and juvenile survival. Based on visual comparison of effort variables, active licenses was selected as the variable most predictably related to annual harvest. With these settings, the observed data for the IPM included 25 years of harvest and ratio data, along with an abundance estimate from a sightability survey at the end of biological year 2024. IPM convergence was good, with Rhat for maximum point estimate less than 1.1. Fawn and buck ratio estimates / confidence levels aligned with recorded data for this herd. IPM abundance estimates are also aligned with confidence limits for the survey performed at the end of the biological year 2024:

| | **2024** |
|---|---|
| **Abundance Estimate** | 12,035 (CL 8,853 - 15,217) |
| **IPM Estimate** | 11,288 (CL 9,798 -12,849) |

**Additional Management Data**

In 2012, Wyoming Game and Fish Department (WGFD) collaboratively developed the Platte Valley Mule Deer Plan. We began to implementing strategies to improve the quality of the hunting experience in this herd unit. These strategies included: 1.) change hunting season structure from traditional general seasons to limited quota seasons; 2.) achieve a buck harvest success rate of 40%; 3.) set a goal of at least 20% of field-checked harvested bucks meeting an antler spread of 24" or more; and 4.) 60% of the harvest survey respondents replying they were "satisfied" or "very satisfied" with their hunting experience. During the development of these harvest parameters, it was recognized that each could be affected by annual events unrelated to management decisions, such as weather during hunting seasons. To lessen the effect of these variables, these management

objectives were based on a three-year running average. In 2024, the buck harvest success rate was 39%, and the three-year average was 43%. In 2024, 14% of field-checked bucks (including yearlings) were ≥24". Yearling bucks made up 22% (n = 13) of the field-checked bucks. The 2022-24 average percentage of field-checked bucks ≥24" was 13%. Forty-three percent of harvest survey respondents were satisfied or very satisfied with their 2024 hunting experience, and the three-year average satisfaction was 46%. The majority of secondary management objectives were not met in 2024.

In February 2025, Department personnel conducted a sightability survey. The herd unit was divided into subunits and stratified into "high" and "low" designations depending on the probability of seeing deer during winter months. These were largely determined by past sightability surveys and 20 years of deer observation data. The subunits were then randomly selected to be sampled; 40% of "high" probability subunits and 17% of "low" probability subunits were extensively surveyed over five days via helicopter. A total of 4,292 deer were counted within selected subunits. After considering covariates such as group size and activity of counted deer, as well as vegetation and snow cover where deer were found, data were extrapolated across the entire herd unit. This resulted in an overall abundance estimate of 12,000 deer (CL= 8,900-15,200), which will help inform current and future models and management decisions (Appendix C).

## 2019 - 2024 Postseason Classification Summary

for Mule Deer Herd MD541 - PLATTE VALLEY

| | | MALES | | | | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Post Pop | Ylg | 2+ Cls 1 | 2+ Cls 2 | 2+ Cls 3 | 2+ UnCls | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 13,500 | 229 | 308 | 246 | 40 | 0 | 823 | 21% | 1,918 | 49% | 1,209 | 31% | 3,950 | 1,092 | 12 | 31 | 43 | ± 2 | 63 | ± 2 | 44 |
| 2020 | 13,300 | 57 | 104 | 67 | 15 | 0 | 243 | 23% | 487 | 46% | 340 | 32% | 1,070 | 1,168 | 12 | 38 | 50 | ± 5 | 70 | ± 6 | 47 |
| 2021 | 13,400 | 43 | 85 | 50 | 7 | 0 | 185 | 20% | 441 | 47% | 315 | 33% | 941 | 1,150 | 10 | 32 | 42 | ± 5 | 71 | ± 7 | 50 |
| 2022 | 14,500 | 32 | 50 | 32 | 8 | 0 | 122 | 16% | 361 | 48% | 275 | 36% | 758 | 1,414 | 9 | 25 | 34 | ± 4 | 76 | ± 8 | 57 |
| 2023 | 12,450 | 33 | 52 | 26 | 6 | 0 | 117 | 14% | 426 | 52% | 275 | 34% | 818 | 1,104 | 8 | 20 | 27 | ± 4 | 65 | ± 6 | 51 |
| 2024 | 11,300 | 13 | 68 | 29 | 17 | 0 | 127 | 17% | 352 | 46% | 285 | 37% | 764 | 1,365 | 4 | 32 | 36 | ± 5 | 81 | ± 8 | 59 |

**Appendix B.** Significant Weather/Habitat Events (MD541)

The Platte Valley Habitat Partnership continued to implement habitat projects across the Platte Valley herd unit. These projects included 16.8 mile of fence conversions to wildlife-friendly design and the permanent removal of 1 mile of unnecessary, hazardous fence. The BLM and Saratoga-Encampment-Rawlins Conservation District (SERCD) continued their long-term juniper removal in 2024. Approximately 469 acres of juniper was removed within sage-grouse core area and mule deer winter range. These projects were funded by SERCD, BLM, WWNRT, US Fish and Wildlife Service Partners for Fish and Wildlife, National Fish and Wildlife Foundation, Rocky Mountain Power Mitigation Funds, USFS, private landowners, and WGFD.

Habitat biologists continue to monitor the recovery of the Mullen Fire (2020) burn scar and the presence of cheatgrass. Over 10,334 acres on the western slope of the Snowy Range were aerially treated with the herbicide Rejuvra in 2021. Large-scale monitoring has taken place each year since 2021 to evaluate herbicide efficacy post-treatment. Recovery of native, perennial grasses looks promising thus far. Plant species diversity was comparable pre- and post-treatment with the exception of a few native annual forbs. Cheatgrass was documented in areas where soil movement had occurred and within the no-spray buffer around the North Platte River. In 2024, we documented additional areas where cheatgrass was present. We will continue to monitor herbicide efficacy in 2025 and evaluate the need for retreatment.

Antelope bitterbrush, serviceberry, and big sagebrush seedlings were observed throughout the burn scar, which is a promising sign for shrub recovery. Several thousand shrub seedlings were planted west of the North Platte River by USFS, WGFD personnel, and a group of volunteers in the fall of 2021 and 2022. In 2023, the Mule Deer Foundation implemented a large-scale shrub planting south of the Six Mile campground within the Platte Valley mule deer migration corridor and winter year-long seasonal range. Past large-scale wildfires within the Sierra Madre Range (Snake fire – 2016, Beaver Creek fire – 2016, and Ryan fire – 2018) are recovering at varying rates and continue to provide good early successional habitat for mule deer.

# Sightability Model Results

Wednesday March 19, 2025


- Settings
- Input Data
  - Sampling Design
  - Count Data
- Results
  - Estimates
  - Sampling Design
  - Detection Probability
  - Covariates


## Settings

| Species | Survey Type | DAU | Bio Year |
|---|---|---|---|
| Mule Deer | Sightability | Platte Valley 541 | 2024 - 2025 |

## Input Data

### Sampling Design

| DAU | Bio Year | Stratum | Subunits Available | Subunits Sampled | Prop Sampled |
|---|---|---|---|---|---|
| Platte Valley 541 | 2024 | High | 245 | 98 | 0.4 |
| Platte Valley 541 | 2024 | Low | 694 | 116 | 0.167 |
| Platte Valley 541 | 2024 | Other | 144 | 0 | 0 |

### Count Data

| GMU | SubUnit | Stratum | Groups Counted | Total Animals |
|---|---|---|---|---|
| Blackhall 81 | 10 | High | 1 | 0 |
| Blackhall 81 | 19 | Low | 1 | 0 |
| Blackhall 81 | 35 | Low | 1 | 0 |
| Blackhall 81 | 47 | Low | 1 | 0 |
| Blackhall 81 | 48 | Low | 1 | 0 |
| Blackhall 81 | 51 | Low | 1 | 0 |
| Blackhall 81 | 28 | High | 1 | 0 |
| Blackhall 81 | 29 | Low | 1 | 0 |
| Blackhall 81 | 58 | Low | 1 | 0 |
| Blackhall 81 | 65 | Low | 1 | 0 |

1–10 of 214 rows

Previous **1** 2 3 4 5 ... 22 Next

## Results

### Estimates

| Species | Survey Type | DAU | Bio Year | Demographic | Raw Count | ↓ Estimate | LCL | UCL |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Mule Deer | Sightability | Platte Valley 541 | 2024 - 2025 | Total | 4292.00 | 12034.99 | 8852.70 | 15217.27 |

## Sampling Design

| Species | Survey Type | DAU | BioYear | StratumID | Stratum | Sampled | Available | Prop. Sampled |
|---|---|---|---|---|---|---|---|---|
| Mule Deer | Sightability | Platte Valley 541 | 2024 - 2025 | 17 | High | 98 | 245 | 0.400 |
| Mule Deer | Sightability | Platte Valley 541 | 2024 - 2025 | 19 | Low | 116 | 694 | 0.167 |
| | | | | | | 214 | 939 | 0.228 |

## Detection Probability

### Summary

| Probability of Detection | Observations |
|---|---|
| 0.3 - 0.5 | 157 |
| 0.5 - 0.7 | 20 |
| 0.7 - 0.9 | 20 |
| 0.9 - 1 | 279 |
| | 476 |

### Details

| GMU | SubUnit | Stratum | GroupSize | VegClass* | Activity* | SnowCover* | CovarBeta | Theta |
|---|---|---|---|---|---|---|---|---|
| Blackhall 81 | 10 | High | 0 | 0 | 0 | 0 | -0.24990 | 2.16984 |
| Blackhall 81 | 19 | Low | 0 | 0 | 0 | 0 | -0.24990 | 2.16984 |
| Blackhall 81 | 35 | Low | 0 | 0 | 0 | 0 | -0.24990 | 2.16984 |
| Blackhall 81 | 47 | Low | 0 | 0 | 0 | 0 | -0.24990 | 2.16984 |
| Blackhall 81 | 48 | Low | 0 | 0 | 0 | 0 | -0.24990 | 2.16984 |
| Blackhall 81 | 51 | Low | 0 | 0 | 0 | 0 | -0.24990 | 2.16984 |
| Blackhall 81 | 28 | High | 0 | 0 | 0 | 0 | -0.24990 | 2.16984 |
| Blackhall 81 | 29 | Low | 0 | 0 | 0 | 0 | -0.24990 | 2.16984 |
| Blackhall 81 | 58 | Low | 0 | 0 | 0 | 0 | -0.24990 | 2.16984 |
| Blackhall 81 | 65 | Low | 0 | 2 | 0 | 0 | 0.42684 | 1.56062 |

1–10 of 476 rows

Previous 1 2 3 4 5 ... 48 Next

* Recoded for model - see covariates table

## Covariates

| | Name | Type | Description | Model Value | Beta |
|---|---|---|---|---|---|
| | Intercept | Intercept | | | -0.249895 |
| ▶ | VegClass | Categorical | Conifer | 1 | -0.655615 |
| ▶ | VegClass | Categorical | Grassland/Open | 2 | 0.676739 |
| ▶ | VegClass | Categorical | Juniper/Mahogany | 3 | -1.428629 |

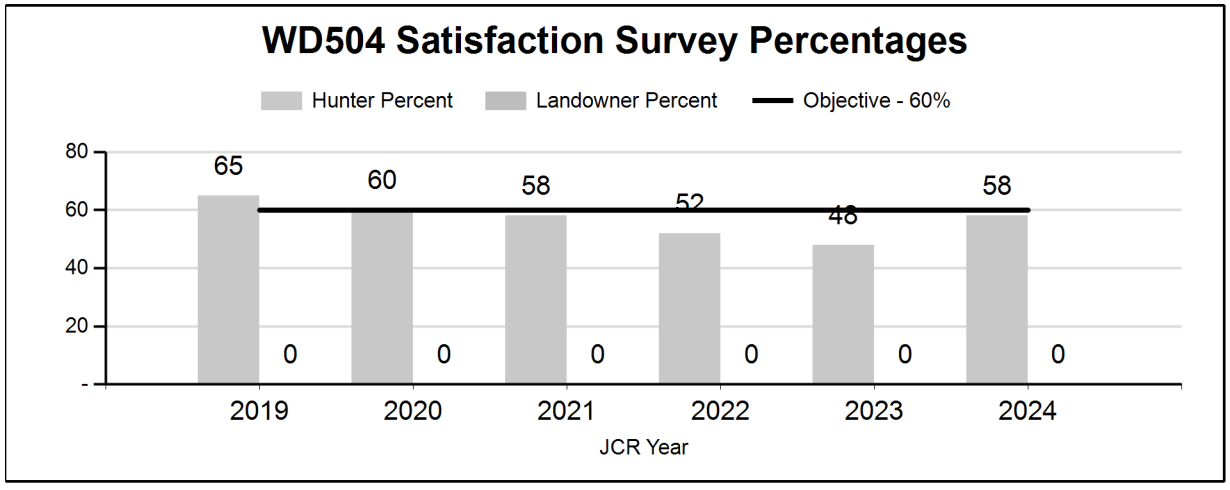
| | | | | | |
|---|---|---|---|---|---|
| ▶ | VegClass | Categorical | Aspen/Riparian/Brush | 4 | 0.330026 |
| ▶ | Activity | Categorical | Bedded | 1 | -1.355053 |
| ▶ | Activity | Categorical | Moving | 2 | 2.874367 |
| ▶ | SnowCover | Categorical | -1 - 20 | 1 | 0.495283 |
| ▶ | SnowCover | Categorical | 20 - 79 | 2 | -0.630864 |
| ▶ | GroupSize | Continuous | | | 0.059483 |

# 2024 - JCR Evaluation Form

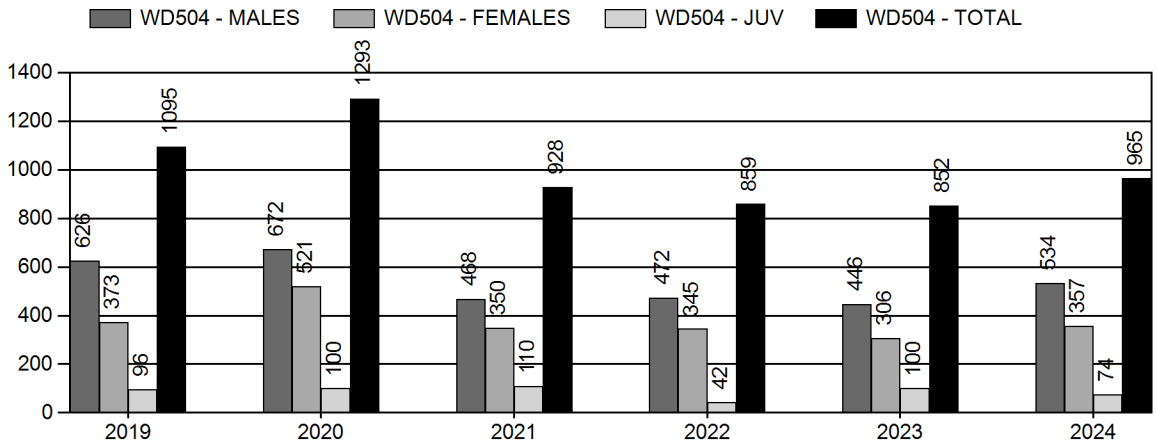
SPECIES: White tailed Deer
PERIOD: 6/1/2024 - 5/31/2025
HERD: WD504 - SOUTHEAST WYOMING
HUNT AREAS: 15, 59-64, 70, 73-81, 83, 161
PREPARED BY: KEATON WEBER

| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Hunter Satisfaction Percent | 57% | 58% | 60% |
| Landowner Satisfaction Percent | 0% | 0% | 0% |
| Harvest: | 1,005 | 965 | 1,000 |
| Hunters: | 2,457 | 2,242 | 2,500 |
| Hunter Success: | 41% | 43% | 40 % |
| Active Licenses: | 2,862 | 2,768 | 2,800 |
| Active License Success: | 35% | 35% | 36 % |
| Recreation Days: | 12,592 | 15,007 | 1,300 |
| Days Per Animal: | 12.5 | 15.6 | 1.3 |
| Males per 100 Females: | 0 | 0 | |
| Juveniles per 100 Females | 0 | 0 | |

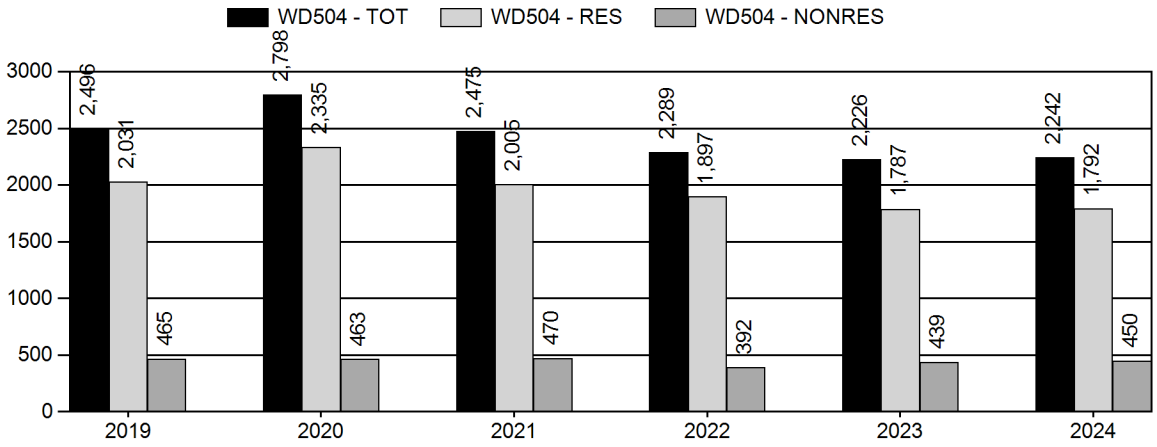
| | |
|---|---|
| Satisfaction Based Objective | 60% |
| Management Strategy: | Recreational |
| Percent population is above (+) or (-) objective: | N/A% |
| Number of years population has been + or - objective in recent trend: | 4 |



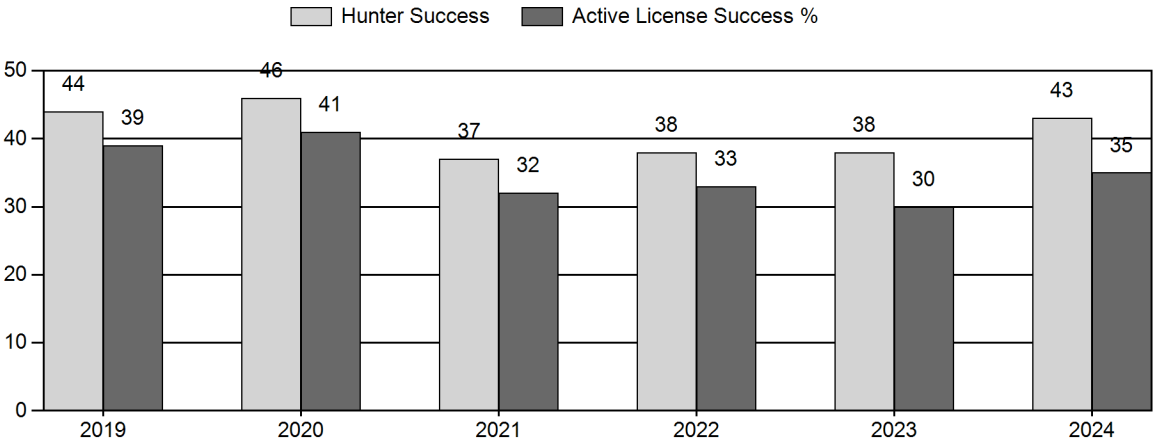
# Harvest



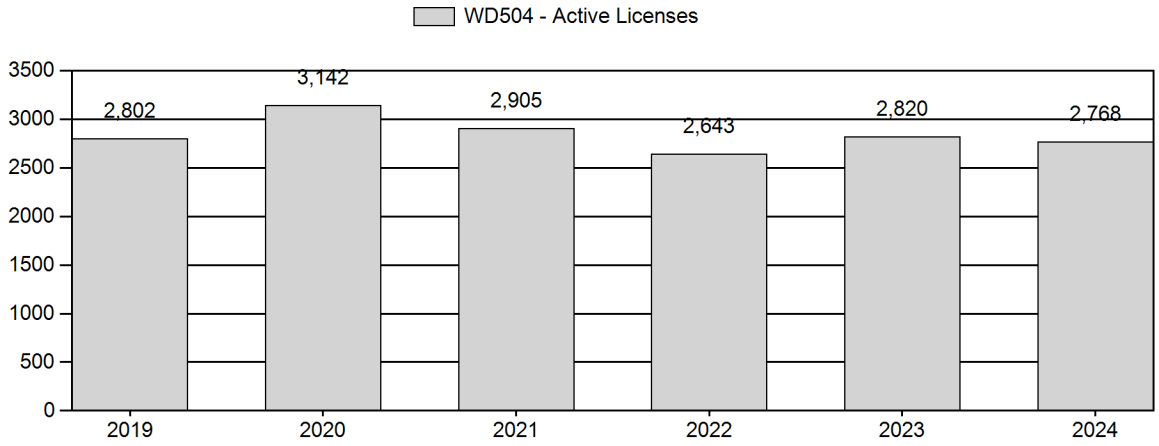

# Number of Hunters



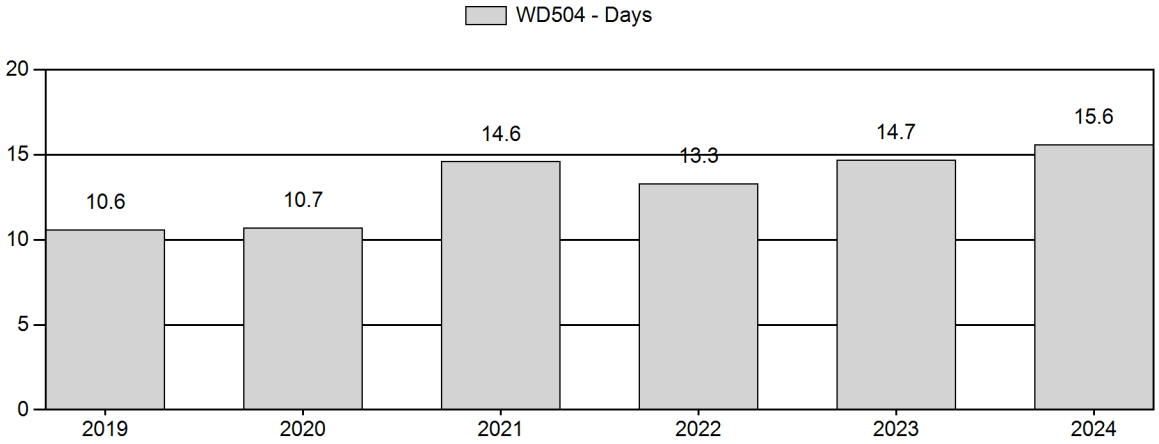

# Harvest Success



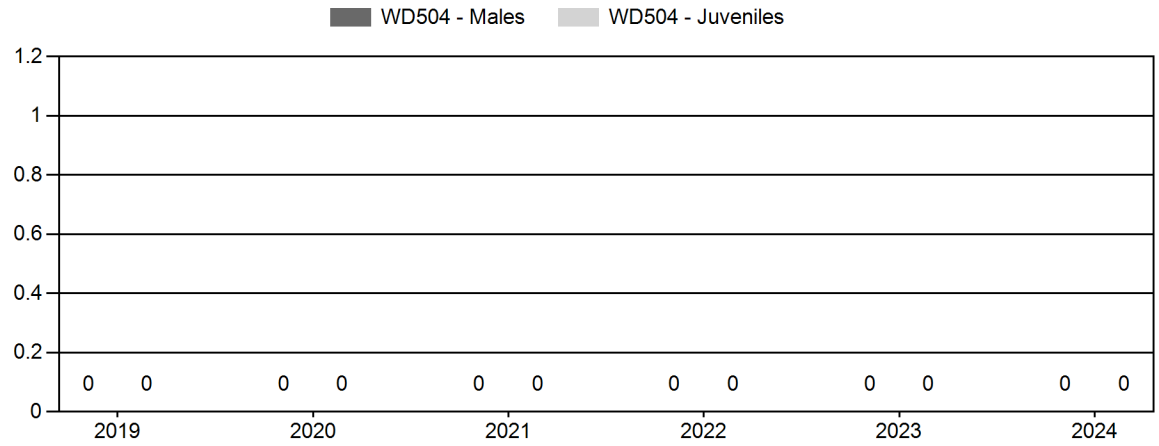
# Active Licenses




# Days Per Animal Harvested




# Preseason Animals per 100 Females



**2025 Hunting Seasons**
**Southeast Wyoming White-tailed Deer Herd Unit (WD504)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 15 | 3 | Sep. 1 | Sep. 30 | Oct. 1 | Nov. 30 | 500 | Any white-tailed deer |
| 15 | 3 | | | Dec. 1 | Dec. 31 | | Antlerless white-tailed deer |
| 15 | 8 | Sep. 1 | Sep. 30 | Oct. 1 | Dec. 31 | 450 | Doe or fawn white-tailed deer |
| 59, 64 | 3 | Sep. 1 | Sep. 30 | Oct. 1 | Nov. 30 | 250 | Any white-tailed deer |
| 59, 64 | 3 | | | Dec. 1 | Dec. 31 | | Antlerless white-tailed deer |
| 59, 64 | 8 | Sep. 1 | Sep. 30 | Nov. 1 | Dec. 31 | 350 | Doe or fawn white-tailed deer |
| 60 | 3 | Sep. 1 | Sep. 30 | Oct. 1 | Dec. 31 | 100 | Any white-tailed deer |
| 60 | 8 | Sep. 1 | Sep. 30 | Oct. 1 | Dec. 31 | 100 | Doe or fawn white-tailed deer |
| 70, 74 | 3 | Sep. 1 | Sep. 30 | Oct. 1 | Dec. 31 | 50 | Any white-tailed deer |
| 70, 74 | 8 | Sep. 1 | Sep. 30 | Oct. 1 | Dec. 31 | 75 | Doe or fawn white-tailed deer |
| 75, 76, 77 | 3 | Sep. 1 | Sep. 30 | Oct. 1 | Nov. 30 | 75 | Any white-tailed deer |
| 75, 76, 77 | 3 | | | Dec. 1 | Dec. 31 | | Antlerless white-tailed deer |
| 75, 76, 77 | 8 | Sep. 1 | Sep. 30 | Oct. 1 | Dec. 31 | 100 | Doe or fawn white-tailed deer |
| 78, 79, 80, 81 | 3 | Sep. 1 | Sep. 30 | Oct. 1 | Dec. 31 | 50 | Any white-tailed deer |
| 78, 79, 80, 81 | 8 | | | Sep. 1 | Dec. 31 | 125 | Doe or fawn white-tailed deer |

**2024 Hunter Satisfaction:** 58% Satisfied, 23% Neutral, 19% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation**
The season is designed to take advantage of high densities of white-tailed deer throughout southeast Wyoming as access allows. There were small localized outbreaks of Epizootic Hemorrhagic Disease (EHD) in the summer of 2021 and 2024 within hunt areas 15, 59 and 64. Portions of hunt areas 15, 59, and 64 that experienced these isolated EHD outbreaks may see lower deer densities in the coming years and likely will not see as many mature bucks for the coming years until fawn recruitment can replace cohorts that were lost. Hunter satisfaction has decreased since these EHD outbreaks and may remain low until the mature buck age class returns. Managers within hunt areas 75, 76, and 77 hope to reduce hunting pressure on males to improve quality and quantity of older age class bucks while still providing opportunity throughout the late season to harvest females. White-tailed deer in the Platte Valley (hunt areas 78-81) have increased in population and expanded their range in recent years. Most white-tailed deer are located on private land in the entire herd unit, so the Department is limited in managing this population.

**Management Objective Review**
The objective and management strategy for the Southeast Wyoming white-tailed deer herd unit was last evaluated and approved in 2024, and will not be reviewed again until 2029.

**Weather and Habitat**
Annual precipitation across southeast Wyoming in areas occupied by white-tailed deer was above normal. Based on NOAA weather station data from Cheyenne, Torrington, Fort Laramie, Douglas, and Laramie, precipitation was 33%, 37%, 37%, 22%, and 5% below long term averages for the year. The timing of precipitation events can be as important or more important than the actual amounts received. Precipitation was well below normal during the late winter and spring periods, negatively affecting forage production. Winter conditions in the Laramie and Centennial Valley, eastern flanks of the Laramie Range, and lowland areas of Platte and Goshen Counties, were very mild with little persistent snow cover.

White-tailed deer are typically associated with riparian habitats and irrigated annual and perennial crop areas, and in drier years, their use of these habitats is likely increased. Forage production and associated cover heights in riparian areas favored by white-tailed deer were below normal. Some standing forage remained after the exceptional 2023 moisture year, and was utilized by wildlife and livestock due to limited forage production in 2024. No significant EHD events were reported this year in any portions of the herd unit.

**Chronic Wasting Disease**
CWD samples are collected on white-tailed deer opportunistically. Results from the Southeast Wyoming White-tailed Deer Herd Unit are below (Table 1.). The majority of deer tested and that are positive come from Hunt Areas 15, 59, 60 and 64.

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

| Year(s) | Percent CWD-Positive and (*n*) – *Hunter Harvest Only* | | | Percent of Harvested Adult Males Sampled |
|---|---|---|---|---|
| | **Adult Males (CI = 95%)** | Yearling Males | Adult Females | |
| 2020 | **63% (n=63)** | 0% (2) | 28% (35) | 9.3 |
| 2021 | **25% (n=24)** | 0% (0) | 13% (16) | 5.1 |
| 2022 | **7% (n=42)** | 0% (3) | 15% ( 20) | 8.8 |
| 2023 | **15% (n=27)** | 0% (3) | 20% (10) | 6.0 |
| 2024 | **4% (n=23)** | 0% (0) | 0% (4) | 4.3 |
| 2020-2024 | **15% (n=179)** | 0% (8) | 19% (85) | 6.9 |

# 2024 - JCR Evaluation Form

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

HERD: EL531 - IRON MOUNTAIN

HUNT AREAS: 6
PREPARED BY: LEE KNOX

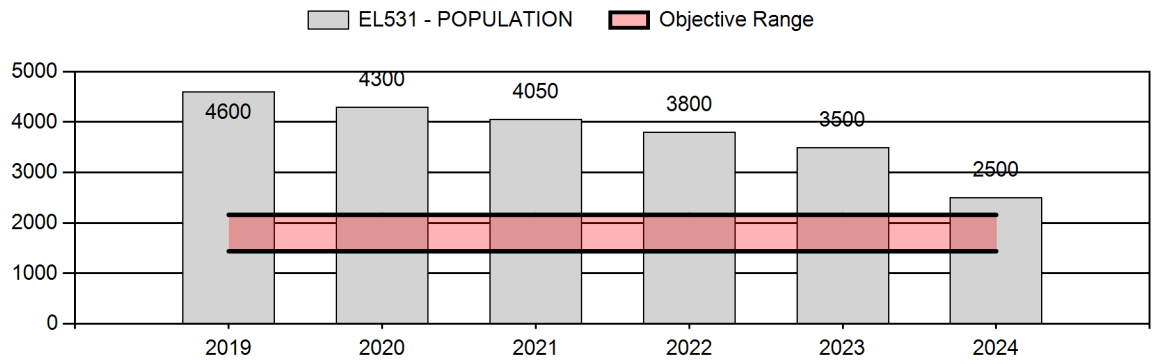
| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 4,050 | 2,500 | 1,700 |
| Harvest: | 592 | 623 | 800 |
| Hunters: | 1,303 | 1,185 | 1,200 |
| Hunter Success: | 45% | 53% | 67% |
| Active Licenses: | 1,360 | 1,335 | 1,300 |
| Active License Success: | 44% | 47% | 62% |
| Recreation Days: | 8,001 | 8,089 | 8,100 |
| Days Per Animal: | 13.5 | 13.0 | 10.1 |
| Males per 100 Females | 40 | 0 | |
| Juveniles per 100 Females | 47 | 0 | |

| | |
|---|---|
| Population Objective (± 20%) : | 1800 (1440 - 2160) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | 39% |
| Number of years population has been + or - objective in recent trend: | 20 |
| Model Date: | 2/23/2025 |

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

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | -27% | -32% |
| Males ≥ 1 year old: | -21% | -25% |
| Proposed change in post-season population: | -21% | -35% |

## Population Size - Postseason



**2025 Hunting Seasons**
**Iron Mountain Elk (EL531)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 6 | Gen | Sep. 1 | Sep. 30 | Oct. 1 | Oct. 31 | | Any elk valid off national forest |
| 6 | Gen | | | Nov. 1 | Dec. 31 | | Antlerless elk valid off national forest |
| 6 | 1 | Sep. 1 | Sep. 30 | Oct. 1 | Oct. 31 | 50 | Any elk |
| 6 | 1 | | | Nov. 1 | Jan. 31 | | Antlerless elk |
| 6 | 4 | Sep. 1 | Sep. 30 | Oct. 1 | Jan. 31 | 25 | Antlerless elk |
| 6 | 8 | | | Aug. 15 | Jan. 31 | Unlimited | Cow or calf valid off national forest |

**2025 Region E Nonresident Elk quota:** 1,000 licenses

**2024 Hunter Satisfaction**: 64% Satisfied, 23% Neutral, 13% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation:** The 2024 postseason population estimate was 2,500 elk, 45% below the 2019 postseason population estimate of 4,600 elk, but still above the postseason population objective of 1,800 (±20% 1400- 2200) elk. The 2024 season structure was designed to maximize cow elk harvest and hunter opportunity. We harvested a total of 623 elk during the regular season. The type 6 license was replaced with the unlimited type 8 license for the 2024 season to allow more flexibility to harvest elk. There were 596 type 8 licenses active in 2024, similar to the five year average of 612 type 6 active licenses. A total of 308 cow elk were harvested in 2024, similar to the previous five-year average of 316 harvested cow elk. In 2022, we started utilizing chapter 56 permits to increase cow elk harvest. We harvested an additional 129 elk in 2022, and 304 elk in 2023 and 156 in 2024. We will continue to utilize Chapter 56 permits in 2025 to help reduce the population towards the objective.

In biological year 2024, there was one chapter 56 permit authorized in hunt area 6. Details as follows:

**Lethal take (Chapter 56) Harvest Reporting Hunt Area 6**

- Permits were valid from September 1st 2024- March 31, 2025
- 30 ranches were identified, with 29 ranches participating
- 56-325 was valid for up to 600 antlerless elk to be harvested
- 495 permit coupons were distributed to these producers
- 156 elk were harvested under this permit

**Management Objective review:** The management objective for Iron Mountain is a postseason population objective of 1800 elk. This objective was set in 1997, last reviewed in 2022 and will be reviewed again in 2027.

**CWD management:** This is a Tier 2 surveillance herd, and was last prioritized for CWD sampling in 2023. It is scheduled to be intensely sampled, with the goal of sampling 200 harvested elk in 2028.

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

| Year(s) | Percent CWD-Positive and (*n*) – *Hunter Harvest Only* | Percent of Harvested Adult Elk Sampled |
|---|---|---|
| | **All Adult Elk (CI = 95%)** | |
| 2020 | **12.4% (n=97)** | 16 |
| 2021 | **15.2% (n=92)** | 15 |
| 2022 | **9.0% (n=111)** | 21 |
| 2023 | **7% (n=227)** | 38 |
| 2024 | **11% (n=135)** | 22 |
| 2020-2024 | **10.1% (7.2-12.7%), n=473)** | 16 |

**Sightability:** The Laramie region conducted an elk sightability in the Iron Mountain Herd Unit May 4th through May 8th 2023. A pre fixed wing flight on transects was conducted on April 23rd to determine if elk had distributed from winter range, and broken into smaller groups. We selected 963 of 977 possible subunits as occupied habitat. Of the 963 sub units, we randomly selected 300 subunits to fly. We observed 1,403 elk and flew 37 hours to complete the survey. The sightability model used was Elk Sightability Model for the Bell 47G by Mark A. Hurley. The estimate was 4,894 LCI 2987 UCI 6,801 p 0.920.

**Habitat and Weather:** Precipitation in the herd unit area was below normal for 2024. NOAA weather station data gathered from Laramie documented annual precipitation decline of 5% from average. A lack of late winter and spring moisture was largely to blame for overall annual precipitation declines witnessed here. Cheyenne weather station data showed a 33% decrease from average annual precipitation levels, with the month of August being the only month with above

average precipitation documented in the water year. At Laramie area weather stations, 1.93" – 2.99" of moisture was received in the month of August. Long term averages for August are 1.14" annually. Green up of forage was witnessed after these August storms, but did not result in a lot of production. Livestock and elk largely were dependent upon leftover, standing residual forages remaining from the exceptional 2023 moisture year. High population numbers of elk and their use of private lands continues to create conflicts with domestic livestock producers.

Dalmatian toadflax and cheatgrass are both present in mixed mountain shrub habitats in the southern portions of the herd unit, causing concern for habitat managers, as herbicides traditionally used for Dalmatian toadflax control result in significant non-targeted plant injury. The use of Rejuvra herbicide may aid in control of cheatgrass and Dalmatian toadflax in the future, and result in less non-targeted plant injury. Approval of this herbicide for use by BLM in 2024 was important for large scale control efforts going forward in landscapes consisting of mixed ownerships. Rejuvra will be the product of choice for cheatgrass control going forward.

Two wildfires occurred in the herd unit, 1,500 acres within the Bear Creek drainage south of Sybille Canyon, and 2,100 acres northwest of Chugwater at the edge of the Richeau Hills. High fire severity in the Bear Creek area is cause for concern for cheatgrass invasion. Efforts are underway to plan a summer 2025 herbicide application of Rejuvra via helicopter. Due to the timing and lower severity seen in the Richeau Hills wildfire, we remain more optimistic about potential recovery of native, perennial vegetation at this site.

# 2024 - JCR Evaluation Form

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

HERD: EL533 - SNOWY RANGE

HUNT AREAS: 8-12, 110, 125 | PREPARED BY: TEAL CUFAUDE

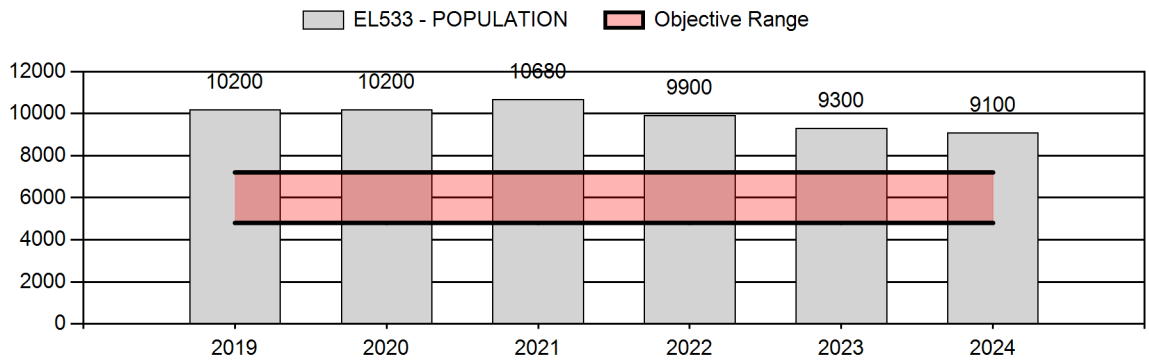
| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 10,056 | 9,100 | 7,700 |
| Harvest: | 2,137 | 2,740 | 2,800 |
| Hunters: | 5,516 | 6,382 | 6,500 |
| Hunter Success: | 39% | 43% | 43% |
| Active Licenses: | 6,106 | 7,485 | 7,500 |
| Active License Success: | 35% | 37% | 37% |
| Recreation Days: | 46,244 | 57,927 | 60,000 |
| Days Per Animal: | 21.6 | 21.1 | 21.4 |
| Males per 100 Females | 28 | 31 | |
| Juveniles per 100 Females | 37 | 40 | |

| | |
|---|---|
| Population Objective (± 20%) : | 6000 (4800 - 7200) |
| Management Strategy: | Recreational |
| Percent population is above (+) or below (-) objective: | 52% |
| Number of years population has been + or - objective in recent trend: | 10 |
| Model Date: | 02/23/2025 |

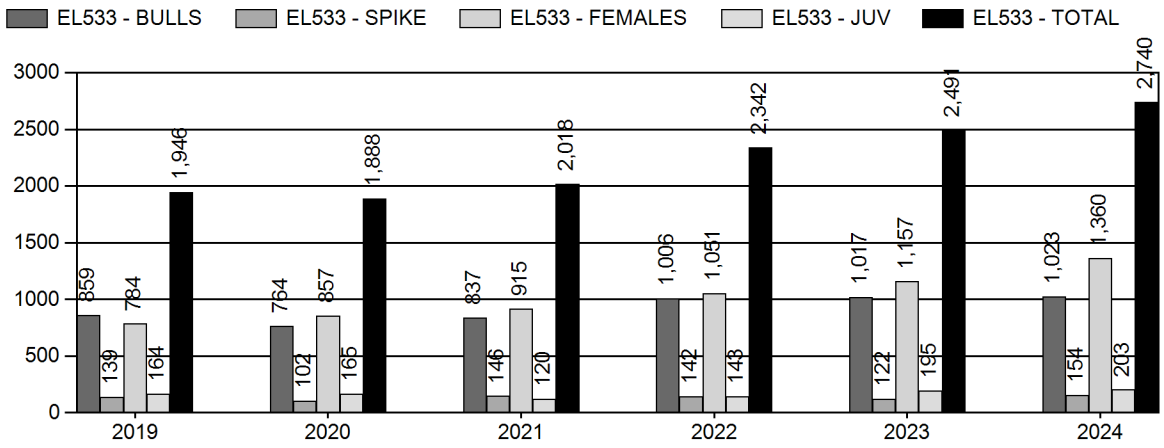
**Proposed harvest rates (percent of pre-season estimate for each sex/age group):**

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | -22% | -20% |
| Males ≥ 1 year old: | -44% | -52% |
| Proposed change in post-season population: | -13% | -15% |

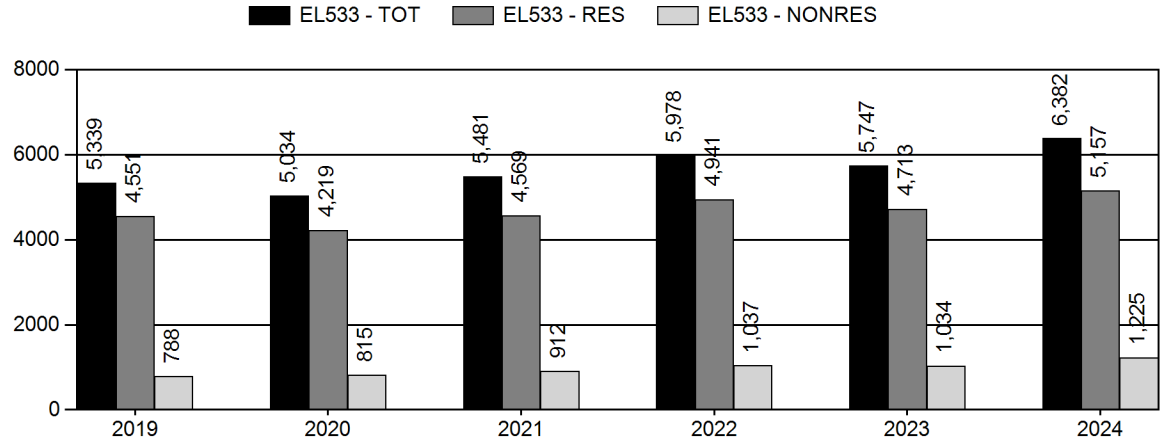
## Population Size - Postseason



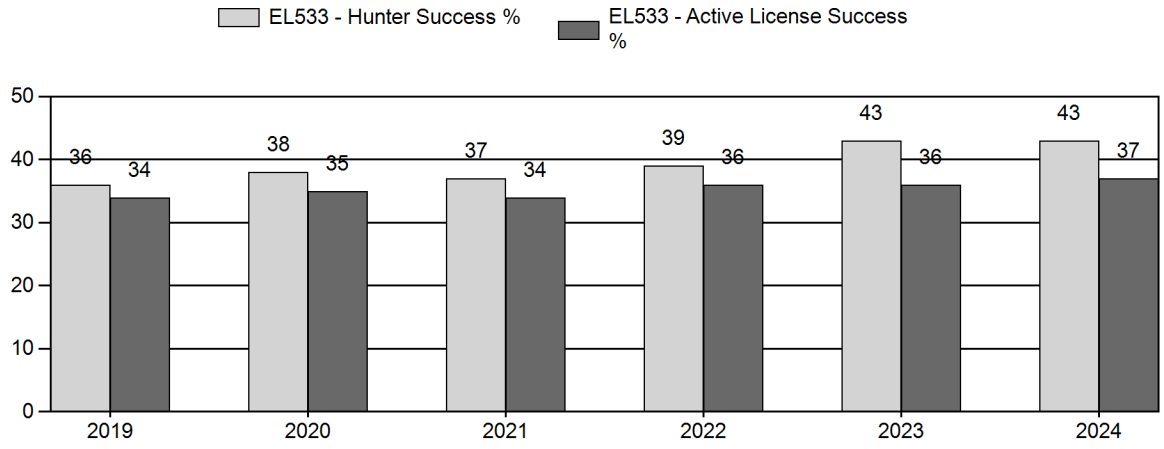
# Harvest



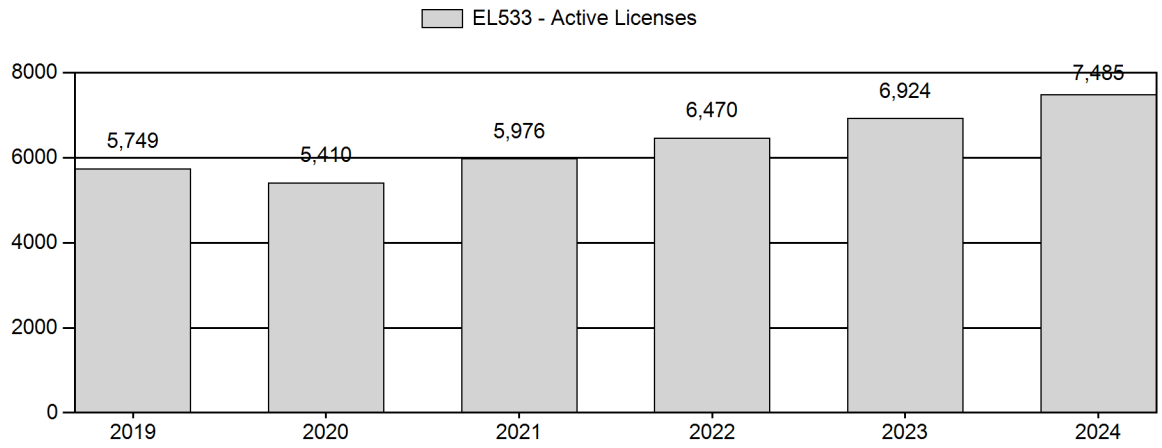

# Number of Hunters



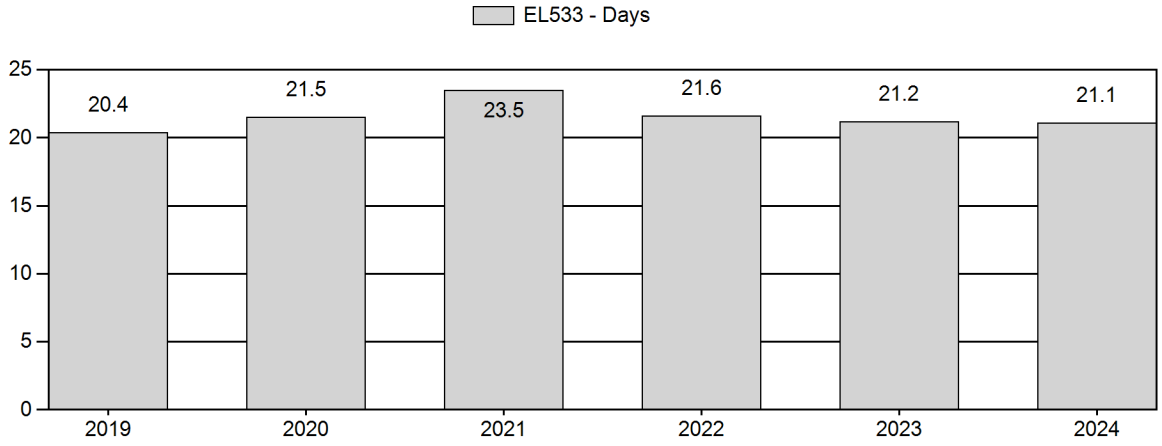

# Harvest Success



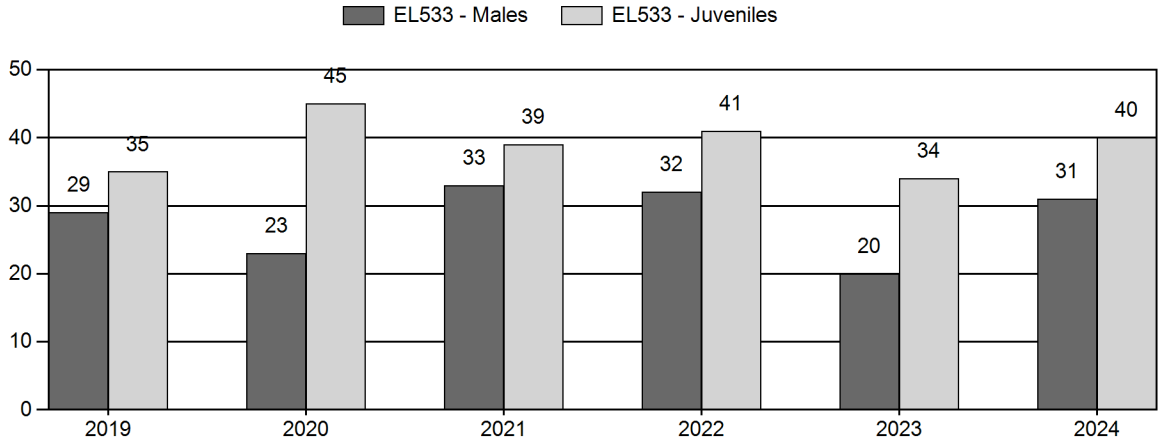
# Active Licenses




# Days per Animal Harvested




# Postseason Animals per 100 Females



**2025 Hunting Seasons**
**Snowy Range Elk Herd Unit (EL533)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 8 | 1 | Sep. 1 | Sep. 30 | Oct. 1 | Jan. 31 | 150 | Any elk |
| 8 | 8 | | | Aug. 15 | Jan. 31 | Unlimited | Cow or calf |
| 9 | Gen | Sep. 1 | Sep. 30 | Oct. 15 | Oct. 31 | | Any elk |
| 9 | Gen | | | Nov. 1 | Nov. 7 | | Antlerless elk |
| 9 | 6 | Sep. 1 | Sep. 30 | Oct. 1 | Dec. 31 | 250 | Cow or calf |
| 9, 10 | 7 | | | Aug. 15 | Jan. 31 | 350 | Cow or calf valid off national forest |
| 10 | Gen | Sep. 1 | Sep. 30 | Oct. 15 | Oct. 31 | | Any elk |
| 10 | Gen | | | Nov. 1 | Nov. 7 | | Antlerless elk |
| 10 | 6 | Sep. 1 | Sep. 30 | Oct. 1 | Dec. 31 | 300 | Cow or calf |
| 11 | 1 | Sep. 15 | Sep. 30 | Oct. 1 | Nov. 30 | 200 | Any elk |
| 11 | 1 | | | Dec. 1 | Jan. 31 | | Any elk valid off national forest |
| 11 | 2 | | | Nov. 1 | Nov. 30 | 50 | Any elk |
| 11 | 2 | | | Dec. 1 | Jan. 31 | | Any elk valid off national forest |
| 11 | 4 | Sep. 15 | Sep. 30 | Oct. 1 | Jan. 31 | 100 | Antlerless elk |
| 11 | 6 | | | Aug. 15 | Sep. 30 | 450 | Cow or calf valid off national forest and off the Wick Wildlife Habitat Management Area |
| 11 | 6 | | | Oct. 1 | Jan. 31 | | Cow or calf |
| 11 | 9 | | | Sep. 1 | Sep. 30 | 75 | Any elk, archery only |
| 12 | Gen | Sep. 1 | Sep. 30 | Oct. 15 | Oct. 31 | | Any elk |
| 12 | | | | Nov. 1 | Nov. 7 | | Antlerless elk |
| 12 | 6 | Sep. 1 | Sep. 30 | Oct. 1 | Dec. 31 | 300 | Cow or calf |
| 12, 13, 15, 110 | 7 | | | Aug. 15 | Jan. 31 | 400 | Cow or calf valid on private land |
| 110 | Gen | Sep. 1 | Sep. 30 | Oct. 15 | Oct. 31 | | Any elk |
| 110 | Gen | | | Nov. 1 | Nov. 7 | | Antlerless elk |
| 110 | 6 | Sep. 1 | Sep. 30 | Oct. 1 | Dec. 31 | 300 | Cow or calf |
| 125 | 1 | Sep. 1 | Sep. 30 | Oct. 1 | Dec. 31 | 200 | Any elk |
| 125 | 1 | | | Jan. 1 | Jan. 31 | | Antlerless elk |
| 125 | 6 | Sep. 1 | Sep. 30 | Oct. 1 | Jan. 31 | 200 | Cow or calf |

**2025 Nonresident General Elk Region S Quota: 1,050 licenses**

**2024 Hunter Satisfaction:** 63% Satisfied, 31% Neutral, 16% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation**
The harvest survey report indicated 6,382 hunters harvested 2,740 elk in 2024, which are both increases compared to last season. Hunter success (43%) increased and days to harvest remained

the same. The averages of success and days to harvest have begun to plateau, which compared to the previous 5-year average (38.6% and 21.6 days), shows that hunting continues to be fair. Cow harvest (1,360) continues its upward trend since 2019, contributing to 50% of the total harvest. A total of 1,177 bulls (yearling and branch antlered) were harvested in 2024, which was also higher than the ten-year average bull harvest (1,139). More bulls were harvested in 2024 than any year since 2013.

During the 2024 season, there were two authorizations for auxiliary elk harvests in this herd unit under the Chapter 34 Regulation. In total, 5 elk were harvested under these authorizations in addition to totals reported in the harvest survey. Details are as follows:

**Auxiliary Hunt P (AUX - 2024 P) - Elk Hunt Area 8**

- Albany County - 1 participating landowner
- Season Dates - July 25, 2024 - August 14, 2024
- Up to 75 antlerless elk auxiliary licenses authorized
- 5 Type 8 licenses used, no auxiliary licenses issued
- Total harvest - 4 elk (4 cows)

**Auxiliary Hunt D (AUX - 2025 D) - Elk Hunt Area 8**

- Albany County - 1 participating landowner
- Season Dates - February 1, 2025 - March 31, 2025
- Authorization for removal of up to 25 antlerless elk
- 13 Type 8 licenses used, 2 auxiliary licenses issued
- Total harvest - 1 elk (cow)

Appendix A describes the postseason classification summary from 2019-24. The 2024 postseason male (branched antlered and yearling) to female ratio (31/100) was below the five-year average (40/100), but the juvenile to female ratio (40/100) was above the five–year average of 39/100. Classification data were collected opportunistically during deer surveys in the western portion of the herd unit, but data in the eastern portion were collected in January specifically for classifications. Some of the sparsity of data in the west may have contributed to the change in ratios. Mild conditions may have also affected the number of adult bulls observed, as they were likely still dispersed at higher elevations during the surveys. We suspected productivity (calf to cow ratios) would improve from 2023 because of the mild winter of 2023-24 following the severe winter of 2022-23. The 2024 postseason population estimate of 9,100 elk remained above the objective of 6,000 elk (±20%). The 2025 hunting seasons in the Snowy Range herd unit provided recreational elk hunting opportunities while reducing the overall elk population toward the objective.

Hunt areas 9, 10, 12, and 110 remained general license hunting seasons and hunt areas 8, 11, and 125 remained limited quota hunting seasons in 2025. Success of the type 8 licenses in hunt area 8 went well, contributing to the increase of cow harvest. We will continue with the unlimited number of licenses to work towards the objective. Some limited interest in increasing type 1 quotas in area 125 surfaced in landowner contacts in early 2025, but the quota will remain status quo for the 2025 season due to lack of overwhelming supporting comments and the success of the 2024 season. A general license type will be shopped in hunt area 8. This would provide more

flexibility to landowners to harvest elk earlier in the season regarding damage issues. An increase in type 7 licenses will occur in areas 12, 13, 15, and 110 from 350 to 400. This will continue to help mitigate problem elk on private lands while helping to reduce the population towards the objective. An extension of the firearm season has been discussed publicly and internally, and this will be implemented in the 2025 hunting season in general hunt areas. An addition of a type 2 license in hunt area 11 in November with a quota of 50 will not only contribute towards managing down towards objective, but also give hunters more opportunity, increase bull harvest, and address damage concerns later in the season.

In 2024, nonresident regional general elk hunt areas and general elk license quotas were established. The Nonresident General Elk Southern Region (Region S) had a quota of 1,050 licenses. The license quota was based off of the 2019-21 average nonresident hunters in the general license hunt areas that comprise Region S. Geographically, Region S encompasses several limited quota hunt areas, however nonresidents with general elk region licenses are only permitted to hunt in areas designated as general and not within limited quota hunt areas.

**Management Objective Review**

The 6,000 elk (±20%) postseason population objective and recreational management strategy were last evaluated in 2023 and will not be reviewed again until 2028.

**Weather/Habitat**

Annual precipitation in the Snowy Range elk herd unit was below normal in 2024 in the herd unit. NOAA weather station data in Laramie showed a 5% decrease in annual precipitation from long term averages. DEVISE data compiled for 2024 showed a 14% decline in annual precipitation for the Sheep Mountain mule deer herd unit, which portions of the Snowy Range elk herd unit overlap. Mountain snowpack in winter 2023-2024 was normal. Winter ranges were relatively free of snow for much of the winter on the eastern flanks of the Snowy Range, below 8,000'.

Substantial precipitation declines of 44% from long term averages were seen in important April – May and May – July periods, according to DEVISE data, again for the Sheep Mountain mule deer herd unit. The foothills and plains adjacent to the Snowy Range experienced very dry conditions with little green-up in the spring. Throughout the herd unit, some late summer monsoonal weather patterns developed and brought rains to higher and lower elevations. At Laramie area weather stations, 1.93" – 2.99" of moisture was received in the month of August. Long term averages for August are 1.14" annually. Green up of forage was witnessed after these August storms, but did not result in much added production.

USFS LaVA project proposals have been largely focused on the northern half of the Snowy Range for future treatments in the near term. Approximately 118 acres of USFS lands adjacent to the Wick WHMA were treated in June and July to remove encroaching conifers through mastication in the Foote Creek drainage. Future prescribed fires will be conducted as a follow-up treatment to further encourage aspen regeneration in important transitional and winter range areas. An additional 195 acres of mastication work in burned timber areas in the Badger Creek wildfire scar area, in crucial winter range areas, was completed in 2024 to encourage aspen and mixed mountain shrub regeneration. High populations of young lodgepole pine trees in this area may negatively impact aspen regeneration potential.

Habitats within the Mullen Wildfire (2020) scar continue to rebound successfully. Aspen regeneration has been excellent, and a delayed but positive resprouting response has been seen in mixed mountain shrubs communities. Cheatgrass control efforts continue to "hold" three years post-herbicide application and native, perennial plant response has been excellent. Late seral habitats in the northern half of the Snowy Range continue to dominate the landscape. Disturbance in the form of planned mechanical or prescribed fire habitat treatments or wildfire will likely be necessary to provide optimal forage resources for elk. Additional mastication work is planned for the Wick WHMA in the Foote Creek drainage in Summer 2025, directly adjacent to mastication work completed on USFS lands in 2024. Once mastication work is complete in this drainage, prescribed fire will be planned for 2028 to further promote aspen and shrub regeneration.

Areas recently burned by the Badger Creek (2018) and Squirrel Creek wildfires (2012) are still recovering. Aspen in much of the Badger Creek wildfire scar are now approaching 6'-8' in heights, and will soon be out of the browse line of elk, resulting in successful recruitment of new age classes of aspen.

**Chronic Wasting Disease (CWD) Management**

The Snowy Range Elk Herd was prioritized for CWD sampling in 2019. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1).

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

| Year(s) | Percent CWD-Positive and (*n*) – *Hunter Harvest Only* | Percent of Harvested Adult Elk Sampled |
|---|---|---|
| | **All Elk (CI = 95%)** | |
| 2020 | 1.3% (n=78) | 4.1 |
| 2021 | 0.0% (n=142) | 8.1 |
| 2022 | 3.1% (n=98) | 4.7 |
| 2023 | 1.9% (n=107) | 4.9 |
| 2024* | 1.4% (n=207) | 8.7 |
| 2020-2024 | 1.4% ( 0.6-2.7%, n=632) | 5.5 |

*Priority CWD sampling effort

**Appendix A**. 2019-2024 Classification Summary (EL533)

## 2019 - 2024 Postseason Classification Summary

for Elk Herd EL533 - SNOWY RANGE

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Post Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 10,200 | 434 | 326 | 760 | 18% | 2,618 | 61% | 919 | 21% | 4,297 | 547 | 17 | 12 | 29 | ± 1 | 35 | ± 1 | 27 |
| 2020 | 10,200 | 41 | 46 | 87 | 13% | 384 | 60% | 174 | 27% | 645 | 573 | 11 | 12 | 23 | ± 3 | 45 | ± 5 | 37 |
| 2021 | 10,680 | 155 | 234 | 390 | 19% | 1,170 | 58% | 462 | 23% | 2,022 | 556 | 13 | 20 | 33 | ± 2 | 39 | ± 3 | 30 |
| 2022 | 9,900 | 90 | 184 | 274 | 19% | 855 | 58% | 350 | 24% | 1,479 | 475 | 11 | 22 | 32 | ± 3 | 41 | ± 3 | 31 |
| 2023 | 9,300 | 143 | 123 | 266 | 13% | 1,317 | 65% | 447 | 22% | 2,030 | 560 | 11 | 9 | 20 | ± 2 | 34 | ± 2 | 28 |
| 2024 | 9,100 | 108 | 212 | 321 | 18% | 1,031 | 58% | 413 | 23% | 1,765 | 0 | 10 | 21 | 31 | ± 2 | 40 | ± 3 | 31 |

# 2024 - JCR Evaluation Form

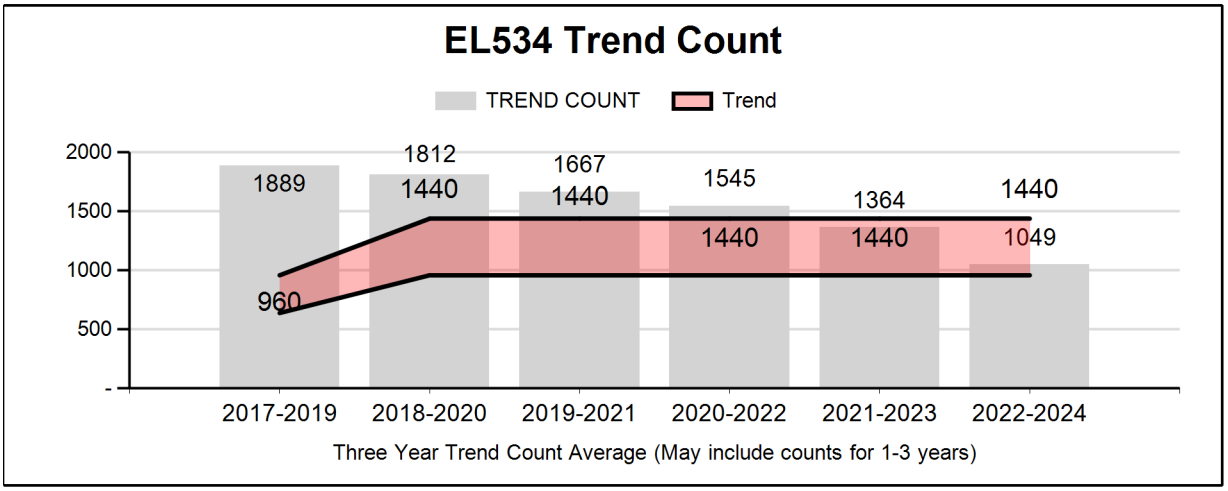
SPECIES: Elk
PERIOD: 6/1/2024 - 5/31/2025
HERD: EL534 - SHIRLEY MOUNTAIN
HUNT AREAS: 16
PREPARED BY: TEAL CUFAUDE

| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Trend Count: | 1,479 | 752 | 1,000 |
| Harvest: | 497 | 562 | 575 |
| Hunters: | 783 | 954 | 800 |
| Hunter Success: | 63% | 59% | 72 % |
| Active Licenses: | 819 | 1,023 | 1,000 |
| Active License Success | 61% | 55% | 58 % |
| Recreation Days: | 5,971 | 7,323 | 7,400 |
| Days Per Animal: | 12.0 | 13.0 | 12.9 |
| Males per 100 Females: | 38 | 109 | |
| Juveniles per 100 Females | 33 | 22 | |

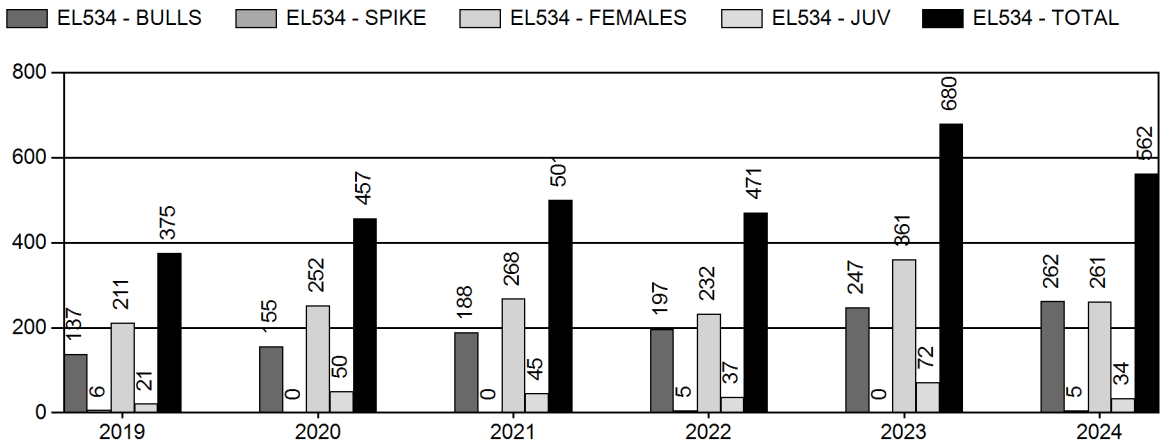
| | |
|---|---|
| Trend Based Objective (± 20%) | 1,200 (960 - 1440) |
| Management Strategy: | Special |
| Percent population is above (+) or (-) objective: | -37.3% |
| Number of years population has been + or - objective in recent trend: | 0 |

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

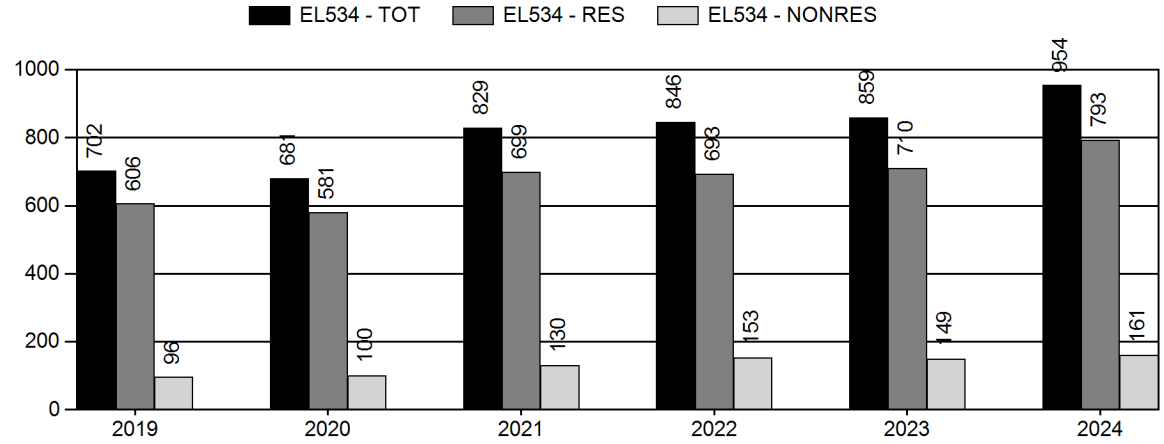
| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | N/A% | N/A% |
| Males ≥ 1 year old: | N/A% | N/A% |
| Juveniles (< 1 year old): | N/A% | N/A% |



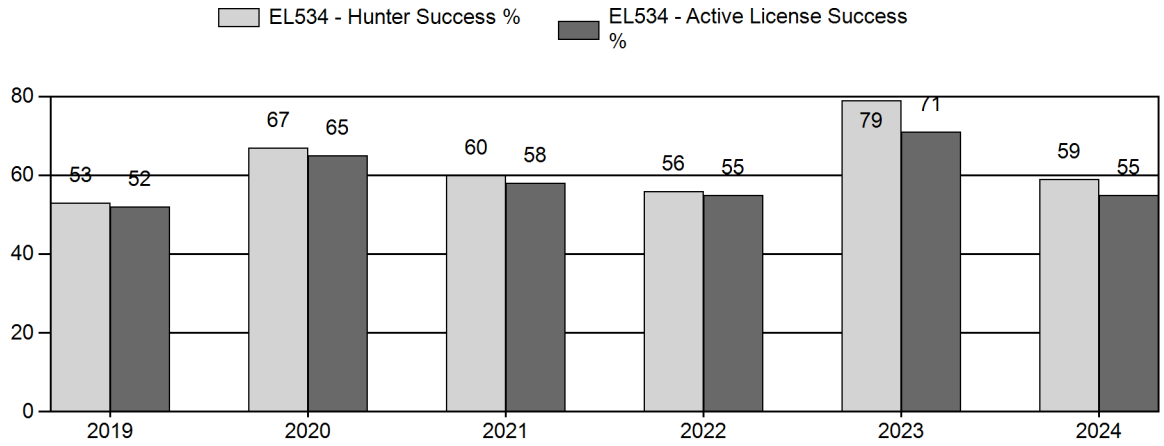
# Harvest



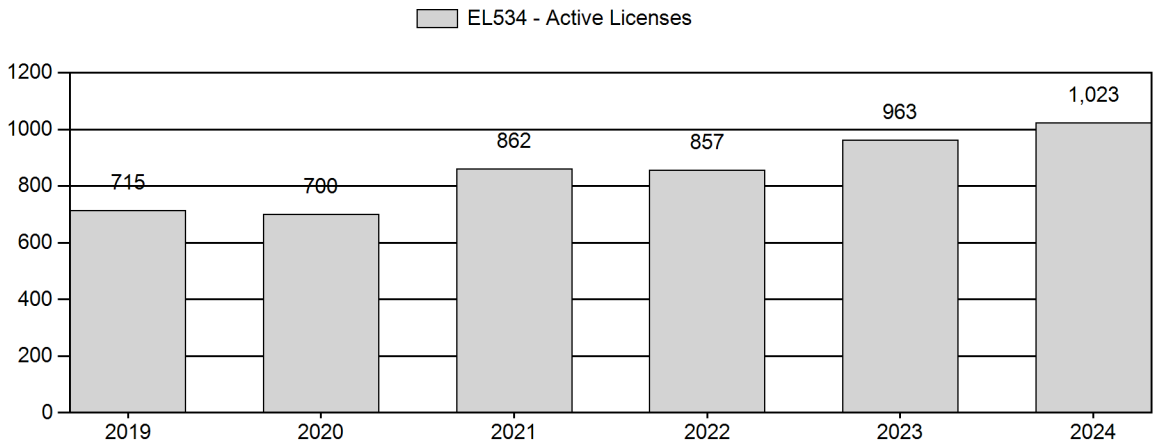

# Number of Hunters



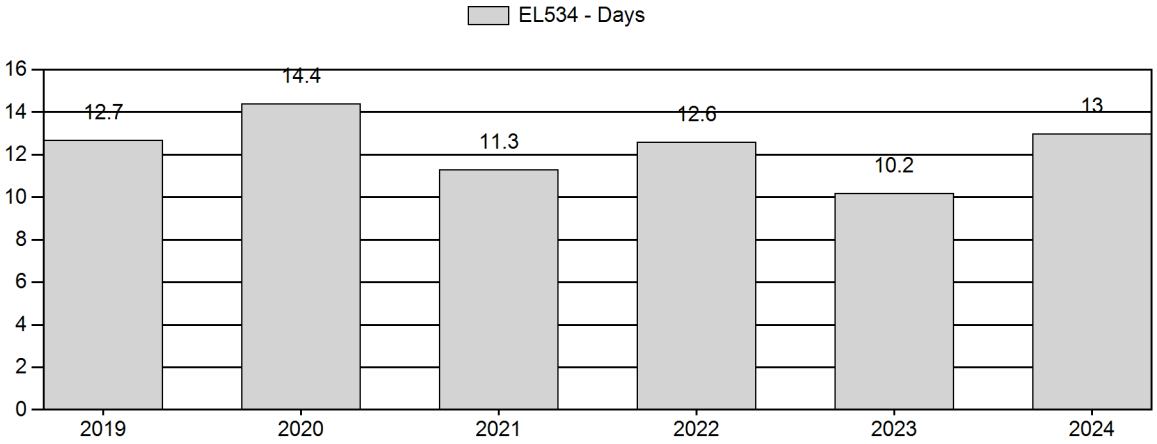

# Harvest Success



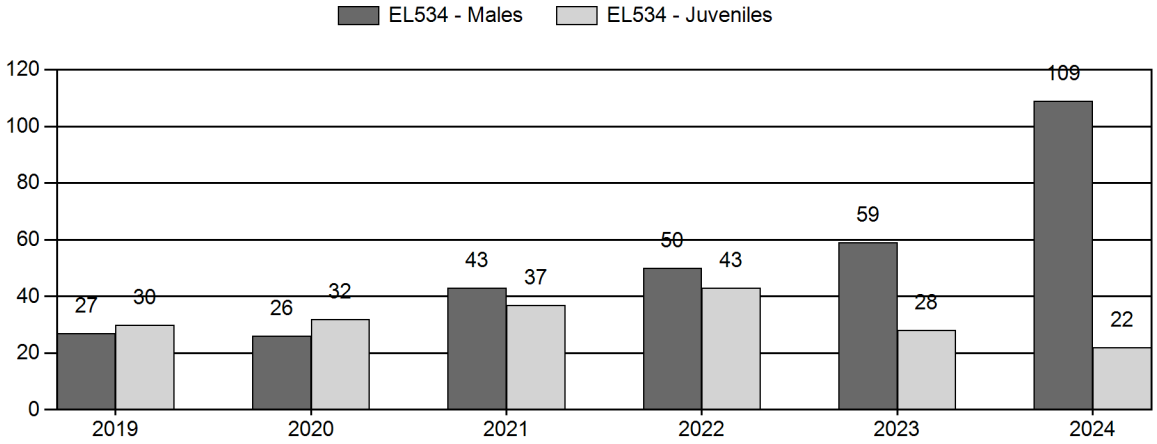
# Active Licenses




# Days per Animal Harvested




# Postseason Animals per 100 Females



**2025 Hunting Seasons**
**Shirley Mountain Elk Herd Unit (EL534)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 16 | 1 | Sep. 1 | Sep. 30 | Oct. 1 | Oct. 31 | 250 | Any elk |
| 16 | 1 | | | Dec. 1 | Jan. 31 | | Antlerless elk |
| 16 | 2 | Sep. 1 | Sep. 30 | Nov. 1 | Nov. 30 | 100 | Any elk |
| 16 | 2 | | | Dec. 1 | Jan. 31 | | Antlerless elk |
| 16 | 4 | | | Sep. 1 | Sep. 30 | 300 | Antlerless elk valid on private land; also valid on or within one-half (1/2) mile of irrigated land |
| 16 | 4 | Sep. 1 | Sep. 30 | Oct. 1 | Jan. 31 | | Antlerless elk valid in the entire area |
| 16 | 6 | | | Aug. 15 | Sep. 30 | 300 | Cow or calf valid on private land; also valid on or within one-half (1/2) mile of irrigated land |
| 16 | 6 | Sep. 1 | Sep. 30 | Oct. 1 | Nov. 30 | | Cow or calf valid in the entire area |
| 16 | 7 | | | Dec. 1 | Jan. 31 | 200 | Cow or calf |

**2024 Hunter Satisfaction:** 72% Satisfied, 18% Neutral, 10% Dissatisfied

**2025 Management Summary**

**Hunting Season Evaluation**
The harvest survey report estimated that 1,023 hunters harvested 562 elk in 2024, with an overall success of 55%. The percentage of branch-antlered bulls (99.6%) in the antlered elk harvest and the high bull ratio observed during the trend survey met special management parameters. The mid-winter trend count to estimate the wintering population of elk in the herd unit was conducted in January 2025, and 752 elk were counted. Elk were more dispersed in January due to mild and open conditions, which made elk more difficult to detect in the trend survey area. These conditions, along with the inability to classify some larger groups observed, contributed to the very high bull ratios (Appendix A). The three-year (2022-24) trend count average of 1,049 elk was within the objective range of 1,200 elk (960-1,440).

Type 1 and 2 license success has exceeded 60% over the last three years. Both the type 1 and 2 license quotas were increased in 2022 and 2023. These licenses are highly coveted, difficult to draw, and license holders expect a high-quality hunt experience. Hunter success has been high, but hunter comments on the harvest survey report and field interviews indicated that public lands are becoming increasingly crowded and could contribute to reduced success in the future by putting disproportionate hunting pressure on “public land elk.” A large portion of this herd unit can be unavailable to type 1 and 2 hunters due to the checkerboard land ownership pattern and limited private land access, so we prefer to take a conservative approach to increases in the type 1 and 2

license quotas.

Access to private lands for antlerless elk hunters decreased in 2024, resulting in reduced hunter success on type 4, 6, and 7 licenses. Access was not expected to improve significantly in 2025. The type 4 and 6 "within one-half (½) mile of irrigated land" limitation was retained to address elk damage. The type 7 license valid from December to January was retained to increase cow elk harvest, while minimizing hunter crowding concerns during the popular type 1 and 2 hunting seasons. Given the location of winter ranges elk typically occupy in December, hunters will likely need private land access in order to be successful on this license. Landowners who have provided late-season hunter access have expressed that current antlerless elk license quotas are sufficient and are concerned about significant increases in access requests.

We would like to maintain high antlerless elk hunter success, while also meeting the expectations of hunters who hold the hard-to-draw type 1 and 2 licenses. The 2025 hunting seasons were prescribed to maintain bull-to-cow ratios that meet the special management parameters and reduce elk numbers. We planned to maintain the season structure for three years, through the 2025 hunting season, if there were no significant requests or biological rationale for changes.

**Management Objective Review**
The management objective for this herd is a mid-winter trend count objective of 1,200 elk (±20%). The objective and the special management strategy were last evaluated and approved in 2020. Following an internal evaluation, the current objective and special management strategy will be maintained for the next five years.

**Weather/Habitat**
Precipitation levels were 25% below normal for the 2024 biological year. Unlike other portions of the WGFD's Laramie Region that observed monsoonal moisture patterns in August, bringing two to three times the average monthly precipitation typically received, the Shirley Basin area received 50% of normal August precipitation amounts. Shrub conditions continue to be very poor, with this landscape being dominated by late seral shrub plant communities and long-term, severe hedging and overutilization by big game.

The Department plans to work with conservation partners to improve habitats in uplands through construction of Zeedyk structures in ephemeral draws, which may improve the availability of summer forage quality and quantity. Department personnel will prioritize potential Zeedyk site selection, structure design, planning, and some implementation in 2025.

**Chronic Wasting Disease (CWD) Management**
CWD was first detected in this herd unit in 2006. The Shirley Mountain elk herd has limited CWD prevalence data available, and no CWD management actions have occurred. Despite limited data, the five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1). This herd has not been prioritized for CWD surveillance because of the challenges associated with collecting a statistically valid sample of hunter-harvested elk.

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

| Year(s) | Percent CWD-Positive and (*n*) – *Hunter Harvest Only* | Percent of Harvested Adult Elk Sampled |
|---|---|---|
| | **All Adult Elk (CI = 95%)** | |
| 2020 | **0% (n=9)** | 2 |
| 2021 | **0% (n=16)** | 3 |
| 2022 | **0% (n=15)** | 3 |
| 2023 | **8% (n=24)** | 4 |
| 2024 | **0% (n=20)** | 4 |
| 2020-2024 | **2% (0-8%, n=84)** | 3 |

**Appendix A.** 2019-2024 Classification Summary (EL534)

## 2019 - 2024 Postseason Classification Summary

for Elk Herd EL534 - SHIRLEY MOUNTAIN

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Post Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Ylng | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 0 | 168 | 126 | 294 | 17% | 1,106 | 64% | 327 | 19% | 1,727 | 0 | 15 | 11 | 27 | ± 0 | 30 | ± 0 | 23 |
| 2020 | 0 | 40 | 223 | 263 | 17% | 997 | 63% | 317 | 20% | 1,577 | 390 | 4 | 22 | 26 | ± 0 | 32 | ± 0 | 25 |
| 2021 | 0 | 124 | 164 | 289 | 24% | 679 | 56% | 252 | 21% | 1,220 | 0 | 18 | 24 | 43 | ± 0 | 37 | ± 0 | 26 |
| 2022 | 0 | 138 | 213 | 351 | 26% | 708 | 52% | 303 | 22% | 1,362 | 0 | 19 | 30 | 50 | ± 0 | 43 | ± 0 | 29 |
| 2023 | 0 | 68 | 254 | 322 | 31% | 550 | 54% | 152 | 15% | 1,024 | 519 | 12 | 46 | 59 | ± 0 | 28 | ± 0 | 17 |
| 2024 | 0 | 44 | 185 | 229 | 47% | 210 | 43% | 46 | 9% | 485 | 0 | 21 | 88 | 109 | ± 0 | 22 | ± 0 | 10 |

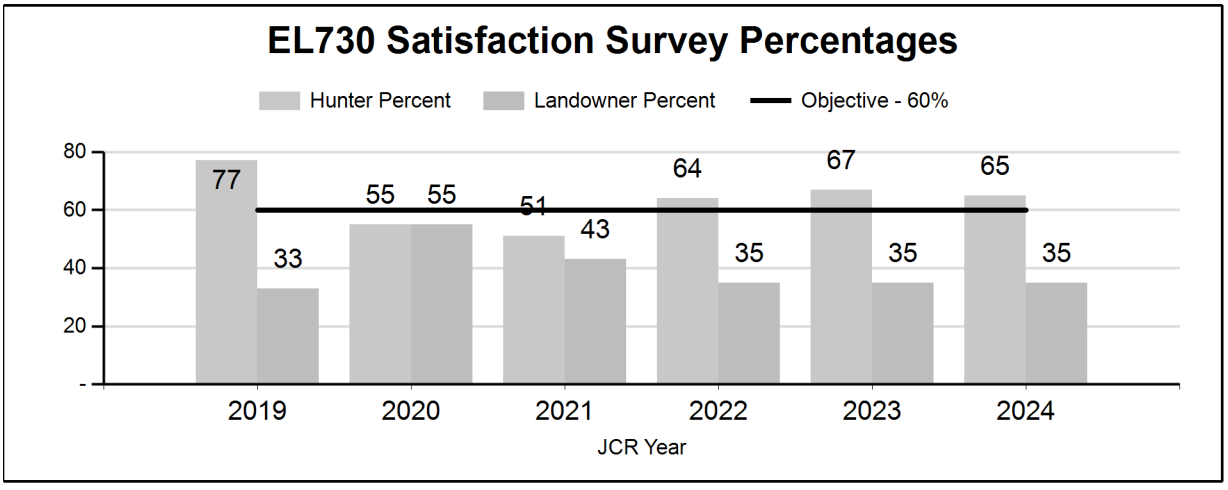
# 2024 - JCR Evaluation Form

SPECIES: Elk
HERD: EL730 - RAWHIDE
HUNT AREAS: 3

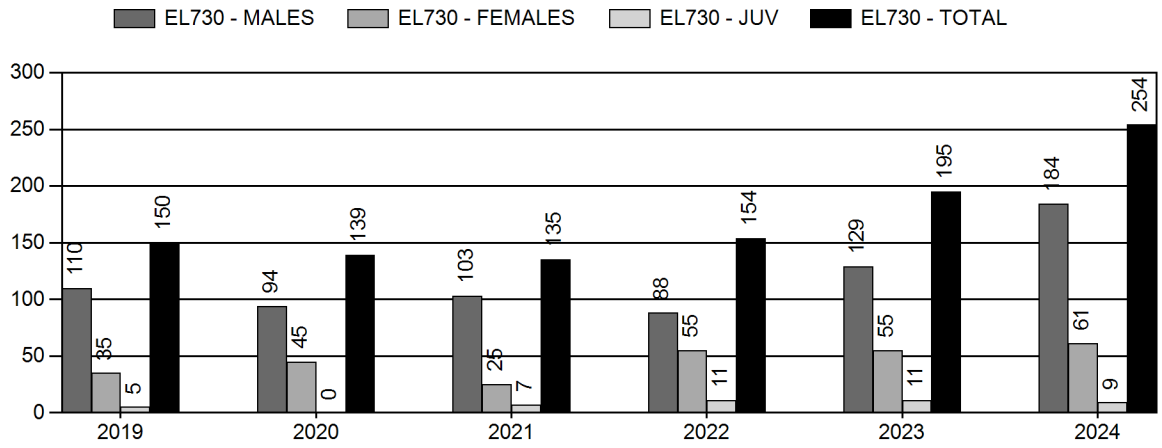
PERIOD: 6/1/2024 - 5/31/2025
PREPARED BY: KEATON WEBER

| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Hunter Satisfaction Percent | 62% | 65% | 65% |
| Landowner Satisfaction Percent | 40% | 35% | 40% |
| Harvest: | 155 | 254 | 250 |
| Hunters: | 376 | 573 | 550 |
| Hunter Success: | 41% | 44% | 45 % |
| Active Licenses: | 397 | 655 | 700 |
| Active License Success: | 39% | 39% | 36 % |
| Recreation Days: | 2,489 | 6,988 | 6,000 |
| Days Per Animal: | 16.1 | 27.5 | 24 |
| Males per 100 Females: | 0 | 0 | |
| Juveniles per 100 Females | 0 | 0 | |

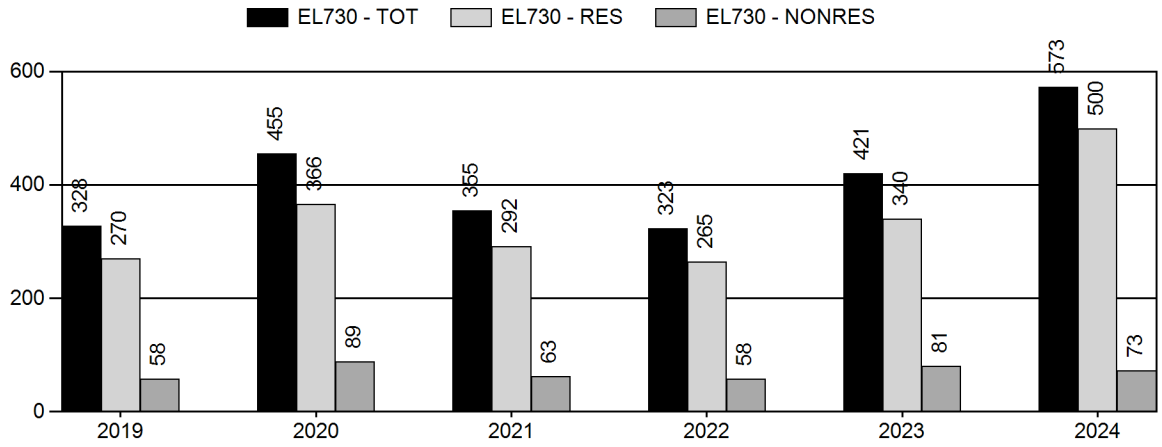
| | |
|---|---|
| Satisfaction Based Objective | 60% |
| Management Strategy: | Special |
| Percent population is above (+) or (-) objective: | -10% |
| Number of years population has been + or - objective in recent trend: | 0 |



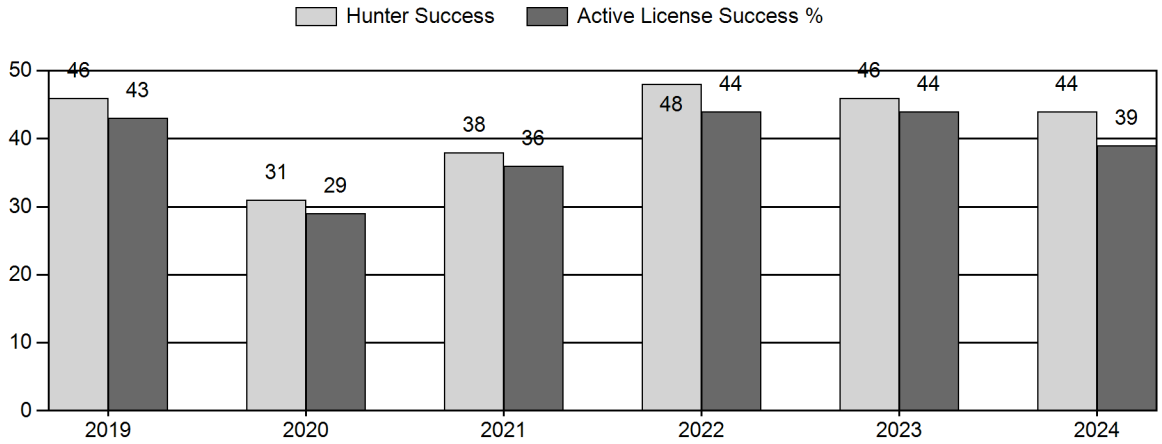
# Harvest



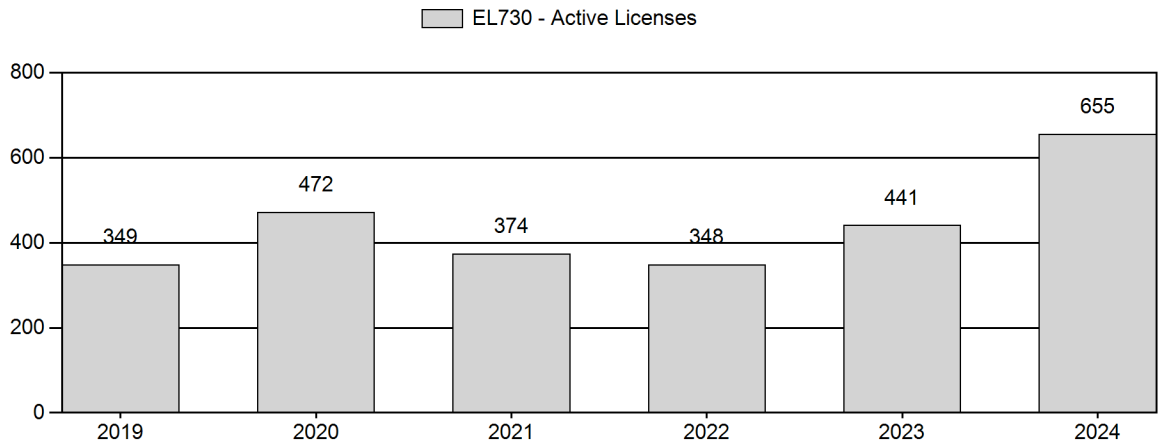

# Number of Hunters



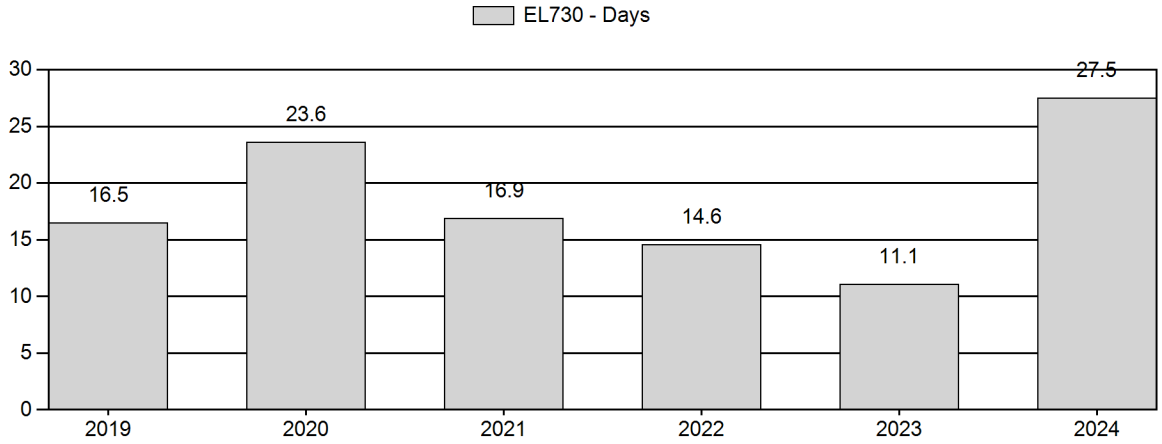

# Harvest Success



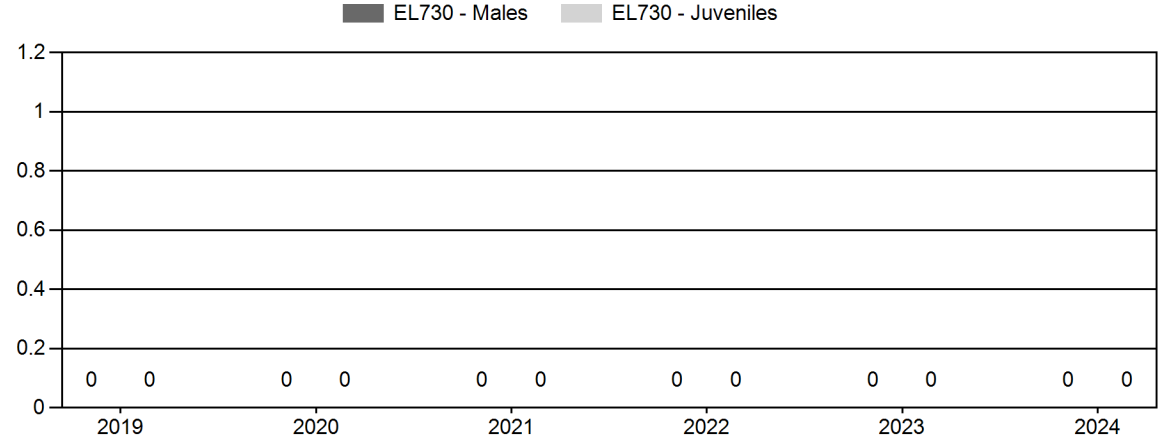
# Active Licenses




# Days Per Animal Harvested




# Preseason Animals per 100 Females



**2025 Hunting Seasons**
**Rawhide Elk Herd Unit (EL730)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 3 | Gen | Sep. 1 | Sep. 14 | Sep. 15 | Nov. 30 | | Any elk |
| 3 | Gen | | | Dec. 1 | Jan. 31 | | Antlerless elk |
| 3 | 8 | | | Aug. 15 | Jan. 31 | Unlimited | Cow or calf |

**2025 Region E Nonresident elk quota:** 1,000 licenses

**2024 Hunter Satisfaction:** 65% Satisfied, 22% Neutral, 14% Dissatisfied
**2024 Landowner Satisfaction:** 39% Above Desired Levels, 35% At Desired Levels, 26% Below Desired Levels

**2025 Management Summary**

**Hunting Season Evaluation**
The 2025 season is designed to maximize harvest to address damage situations and a growing population in a landscape dominated by private land. The non-resident Region E, has been increased to 1,000 licenses to allow for ease of license acquisition in a private land dominated area. Over the course of the previous two years, there has been an increasing amount of elk damage throughout the herd unit. The liberal season from late summer through the winter months allows for these damage situations to be addressed through hunting opportunity. The General any elk (bull) season closes November 30th in order to focus harvest on the female portion of the population in an effort to decrease the population. Type 8 licenses are available to provide maximum opportunity to address damage situations as they arise and ultimately increase cow elk harvest. In 2024, the Type 1 license was made valid area wide through Nov. 30th and consequently, bull harvest increased by 30% killing 54 more bull elk than in 2023. However, with the implementation of a Type 8 license and allowing only cow elk harvest in December and January in an effort to increase cow elk harvest, only 6 additional cow elk were harvested.

During the 2024 hunting season, there was one authorization for auxiliary elk harvest in this herd unit under one Chapter 56 permit. In total, 1 additional bull elk was harvested. Details are as follows:

**Chapter 56 Permit – Elk Hunt Area 3**
- Goshen County – 1 participating landowner
- Permit Dates: August 1 – December 31, 2024
- Authorization for removal of up to 25 any elk
- Total harvest = 1 bull elk

**Management Objective Review**
The objective and management strategy for the Rawhide elk herd was last evaluated and approved in 2022, and will be reviewed in 2025.

**Weather and Habitat Data**

Annual precipitation was well below normal in the Rawhide herd unit in 2024. NOAA weather stations in Cheyenne, Torrington, Fort Laramie, and Douglas showed decreases of 33%, 37%, 37%, and 22% respectively from long-term averages. Native rangeland habitats in the herd unit largely remain in late seral stages due to a lack of natural or managed disturbances on this landscape. Due to the close proximity of perennial and annual agricultural crops to the security cover provided by steep canyons and timber stands, elk are likely to shift their diets and utilize these forage resources in this intensive agricultural environment, especially when native rangeland forage resources may lack in productivity or forage quality. Cheatgrass remains a large threat in native rangeland plant communities and cropland environments.

Two large wildfires occurred in this herd unit in 2024. The Goshen Rim and Pleasant Valley wildfires burned 5,580 acres and 28,984 acres respectively. Over time, we have witnessed cheatgrass become well established in disturbed areas, oftentimes as a delayed response following disturbance. Landowner interest in treating invasive grasses within these fire scars is mixed. Efforts will be underway in 2025 to evaluate vegetation responses post-fire, assess risks of cheatgrass invasion, and plan herbicide treatments with willing landowners for 2025-2026.

With ongoing drought conditions, potential for livestock/elk competition for forage resources remains high in portions of this herd unit.

**Chronic Wasting Disease Monitoring and Management**

Due to the nature of this herd being located predominately on private land, managers have struggled to obtain adequate sample sizes in this herd unit to accurately estimate CWD prevalence. The five-year annual and average prevalence estimates, sample sizes, and percent of harvest sampled for CWD are presented below (Table 1).

Table 1. CWD prevalence for hunter-harvested elk in the Rawhide elk herd unit, 2020 - 2024.

| Year(s) | Percent CWD-Positive and (n) – *Hunter Harvest Only* | Percent of Harvested Adult Elk Sampled |
|---|---|---|
| | **All Adult Elk (CI = 95%)** | |
| 2020 | **0% (n=10)** | 11.4 |
| 2021 | **0% (n=5)** | 5.4 |
| 2022 | **0% (n=9)** | 11.0 |
| 2023 | **17% (n=6)** | 6.1 |
| 2024 | **8% (n=13)** | 7.4 |
| 2020-2024 | **5% (0-16% n=43)** | 8.0 |

**Additional Management Data**

The WGFD partnered with the Wyoming Military Department (Camp Guernsey) and captured 42 female elk from 2018-2022. All 42 cow elk from the Rawhide Herd were fitted with GPS collars. Animals were captured on Camp Guernsey and lands adjacent to Camp Guernsey. Collars were programmed to collect a GPS location every two (2) hours and to drop off after

three (3) years. As elk died, collars were collected and redeployed the following January. Western EcoSystems Technology, Inc (WEST) was contracted to evaluate and summarize all of the collar data and results. This projected was finalized in 2022 and the final report was completed in June of 2022.

The goal of this project was to identify 1) key winter, summer, and parturition ranges, 2) potential movement barriers, 3) important habitat components that elk select or avoid, and 4) assess whether elk are affected by military training activities or hunter activity.

Spatial location data indicated that this herd of elk is very nomadic and does not select for seasonal winter range or summer range habitats. However, data suggests most elk within this herd do have distinct parturition areas. This herd was thought to have potential movement barriers from Interstate 25 and the North Platte River. Collar data confirmed that Interstate 25 does limit natural elk movements westward across the interstate; however, elk did cross the interstate occasionally. It was also found that the North Platte River did not inhibit elk movements whatsoever. Results clearly indicated that elk were being displaced from various military training (aerial activities, range fire, personnel on site etc.) disturbance events and the elk selected for more rugged terrain during these disturbance events. There was no detection of elk being displaced due to hunter activity; however, this was likely due to the lack of fine scale hunter activity data. Managers will ultimately use these results to help minimize disturbances to the elk during military activities, identify and maintain critical habitat areas, and assist in making informative environmental comments for proposed industrial development in the area.

# 2024 - JCR Evaluation Form

SPECIES: Bighorn Sheep
PERIOD: 6/1/2024 - 5/31/2025

HERD: BS516 - DOUGLAS CREEK

HUNT AREAS: 18
PREPARED BY: LEE KNOX

| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | | N/A | N/A |
| Harvest: | 1 | 3 | 3 |
| Hunters: | 2 | 3 | 3 |
| Hunter Success: | 50% | 100% | 100 % |
| Active Licenses: | 2 | 3 | 3 |
| Active License Success: | 50% | 100% | 100 % |
| Recreation Days: | 22 | 56 | 30 |
| Days Per Animal: | 22 | 18.7 | 10 |

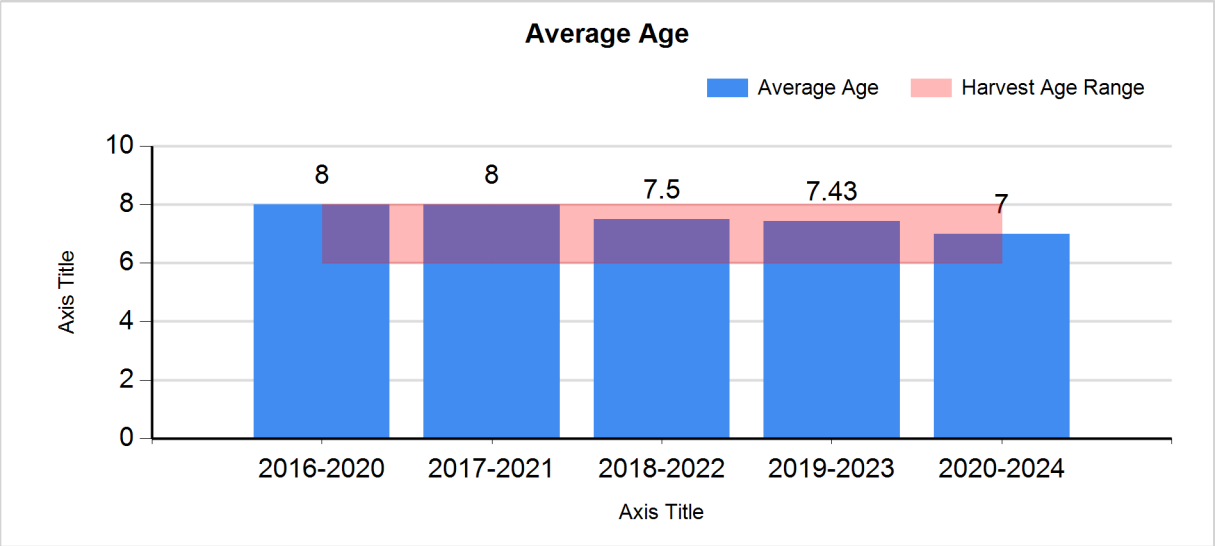
Limited Opportunity Objective:

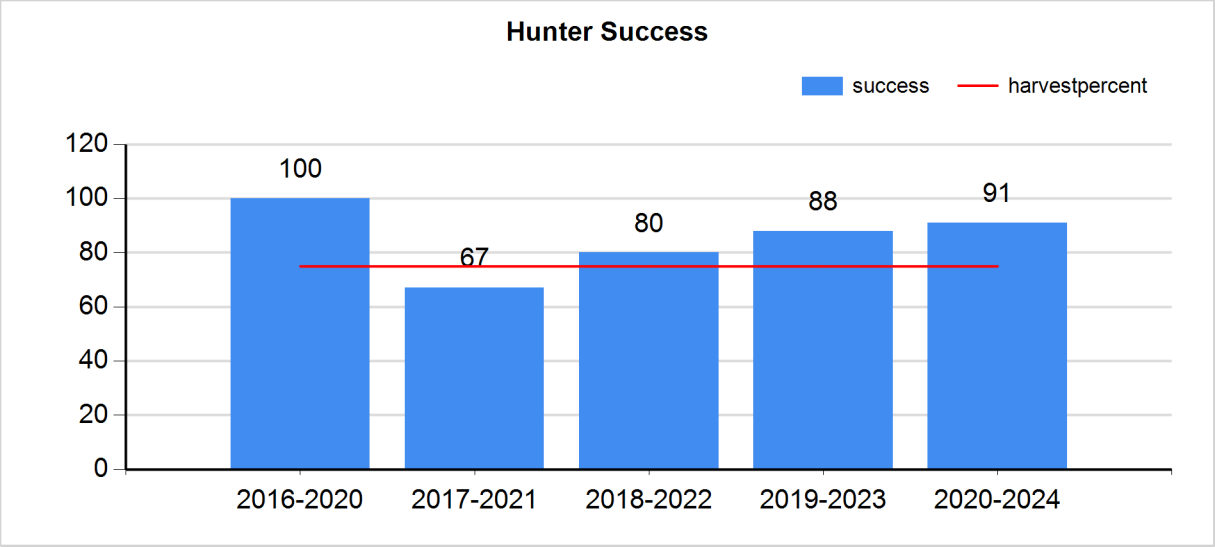
5-year average of > 75% hunter success

5-year average harvest age of 6-8 years

Secondary Objective:

Management Strategy: Special




Hunter Success
success
harvestpercent
120
100
80
60
40
20
0
100
67
80
88
91
2016-2020
2017-2021
2018-2022
2019-2023
2020-2024

**2025 Hunting Seasons**
**Douglas Creek Bighorn Sheep Herd Unit (BS 516)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 18 | 1 | Aug. 15 | Aug. 31 | Sep. 1 | Nov. 30 | 3 | Any ram (3 residents) |

**Current Management Objective:** Bighorn Sheep Limited Opportunity

1) 5-year running average of >75% hunter success
    - Currently Met: 2020-2024 Hunter Success- 91%
2) 5-year running average age of harvested rams between 6 and 8 years of age
    - Currently Met: 2020-2024 Harvest Mean Age- 7.5 years of age
3) Documented occurrence of adult rams in the population
    - Currently Met: > 6 adult rams observed in 2024

**2025 Management Summary**

**Hunting Season Evaluation** The 2024 hunting season structure provided two resident hunters and one nonresident hunter the opportunity to harvest mature rams in hunt areas 18. Based on frequent observations of mature rams in Douglas Creek (hunt area 18) and Encampment River (hunt area 21), managers continued to forgo the traditional season structure and provide more opportunity by allocating separate license quotas for each hunt area (Appendix A). There will be 3 resident licenses for the 2025 season in hunt area 18. We expect hunters will have a high likelihood of success and this herd will continue to meet the bighorn sheep limited opportunity management objectives

**Management Objective Review:** The management objective for the Douglas Creek Herd Unit is a limited opportunity. The herd management objective was reviewed in 2021 and will be reviewed again in 2026.

**Research:** We collared 19 adult ewes, including 6 recaptures, from the Douglas Creek Herd Unit on February 12, 2022. The median age was 4.5, with the oldest being 9.5, and the youngest 3.5. An additional 5 adult ewes were collared in March 2023 to maintain sample size. There were no post-capture mortalities during either capture. Tonsil and nasal swabs were sampled on all captured sheep, and Mannheima haemolytica and M. ovipneumoniae were found in the majority of the sheep sampled. This herd was previously sampled in 2019 and M. ovipneumoniae was not detected at that time. However, survival still remains high with only three mortalities in 2022 and one in 2023. The collars came off the sheep on December 1 of 2024. We will be cleaning and analyzing the data in 2025. The data gathered from these capture

efforts will be used in habitat selection and movement analyses to prioritize future habitat projects and bighorn sheep conservation.

**Habitat**: Annual precipitation in Hunt Area 18 was below average in 2024. While no NOAA weather stations are in close proximity to occupied bighorn sheep habitats in Hunt Area 18, the nearest weather stations in Laramie and Rawlins reported a 5% and 9.5% decrease in annual precipitation, respectively. Early spring precipitation occurred in April and May but diminished by early June. Poor overall precipitation in the growing season for cool season grass and forb species resulted in poor forage productivity, but leftover standing forages from good precipitation and forage production year in 2023 provided ample forage resources for bighorn sheep. Winter conditions on the western slopes of the Snowy Range remained mild for most of 2024. SNOTEL sites in the Snowy Range reported below-average to average (51-102%) snowpack from January through March 2024.

In September 2020, the Mullen Fire burned approximately 176,800 acres in the Snowy Range, including two wilderness areas. The western third of the burn area encompasses occupied bighorn sheep habitat. The wildfire likely increased line of sight visibility and created more open travel corridors for bighorn sheep, aiding their movements to escape terrain and lambing habitats. High fire severity in places is a continued cause for concern for cheatgrass invasion in Savage Run and Platte River wilderness areas, as well as other areas adjacent to North Platte River. In 2021, 10,334 acres on the western slope of the Snowy Range were aerially treated with the herbicide Rejuvra. Large-scale monitoring has taken place each year since 2021 to evaluate herbicide efficacy post-treatment. Recovery of native, perennial grasses looks promising thus far. Plant species diversity was comparable pre- and post-treatment. Cheatgrass was documented in areas where soil movement had occurred. Additionally, high densities of cheatgrass were documented within the no-spray buffer around the North Platte River. We will continue to monitor herbicide efficacy in 2025 and evaluate the need for retreatment.

Antelope bitterbrush, serviceberry, and big sagebrush seedlings were observed throughout the burn scar, which is a promising sign for shrub recovery. Several thousand mixed mountain shrub seedlings were planted west of the North Platte River in the fall of 2021, 2022, and 2023 by USFS, WGFD, MDF, and volunteers to aid in recovery.

# 2024 - JCR Evaluation Form

SPECIES: Bighorn Sheep

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

HERD: BS517 - LARAMIE PEAK

HUNT AREAS: 19

PREPARED BY: KEATON WEBER

| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | | N/A | N/A |
| Harvest: | 7 | 8 | 9 |
| Hunters: | 8 | 9 | 10 |
| Hunter Success: | 88% | 89% | 90 % |
| Active Licenses: | 8 | 9 | 10 |
| Active License Success: | 88% | 89% | 90 % |
| Recreation Days: | 102 | 153 | 130 |
| Days Per Animal: | 14.6 | 19.1 | 14.4 |

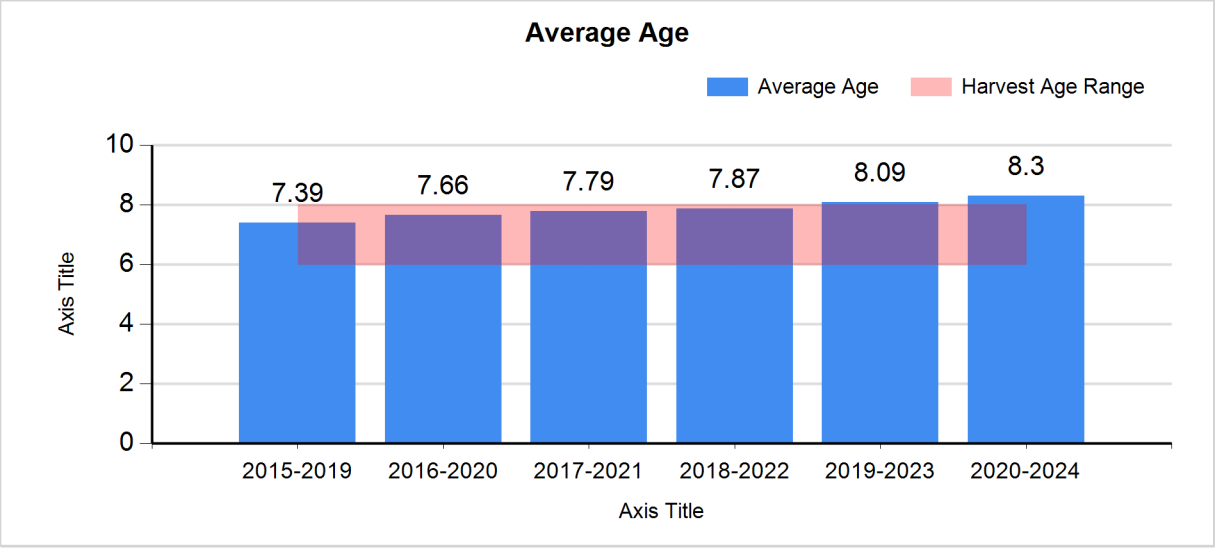
Limited Opportunity Objective:

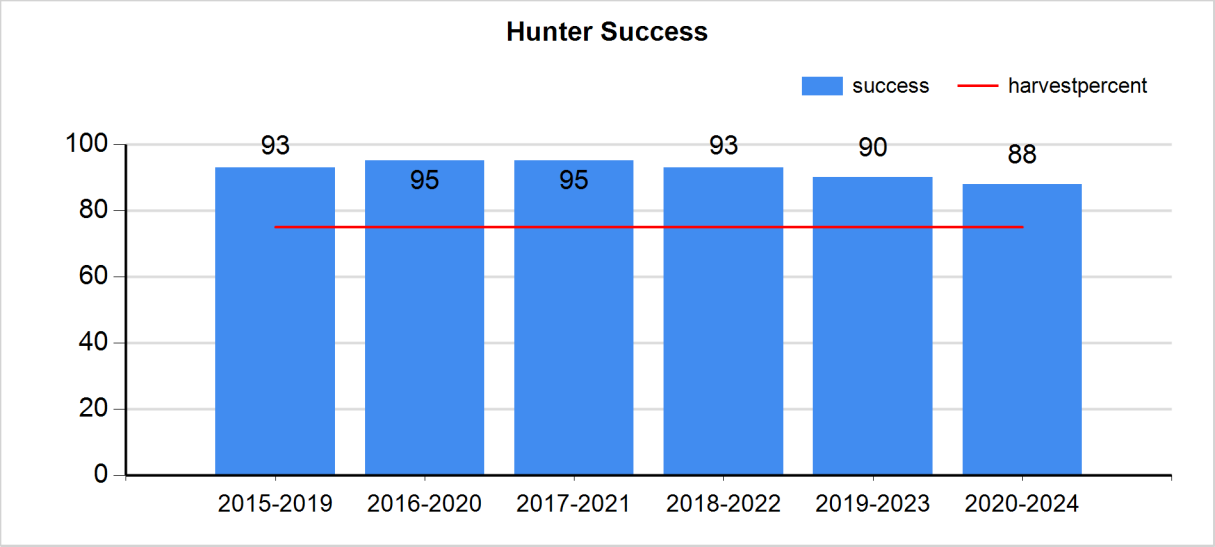
5-year average of > 75% hunter success

5-year average harvest age of 6-8 years

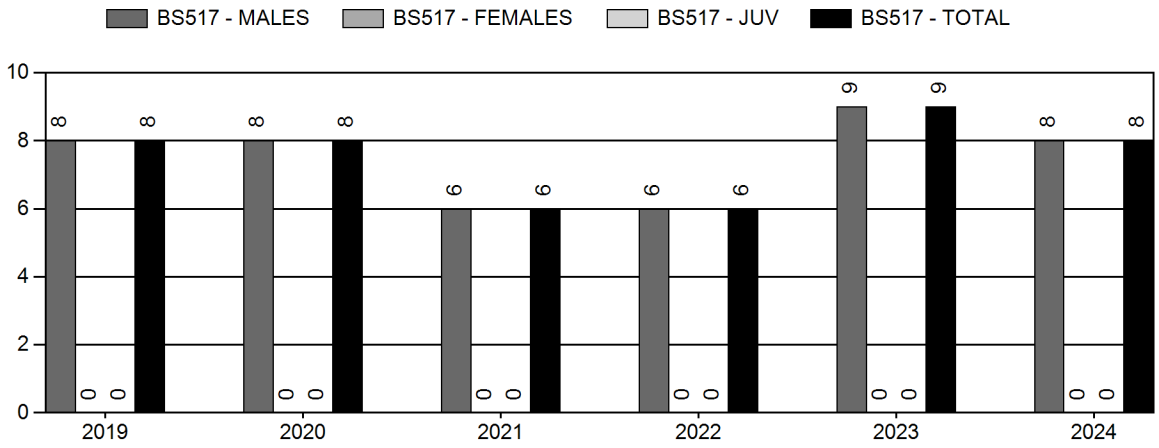
Secondary Objective:

Management Strategy: Special

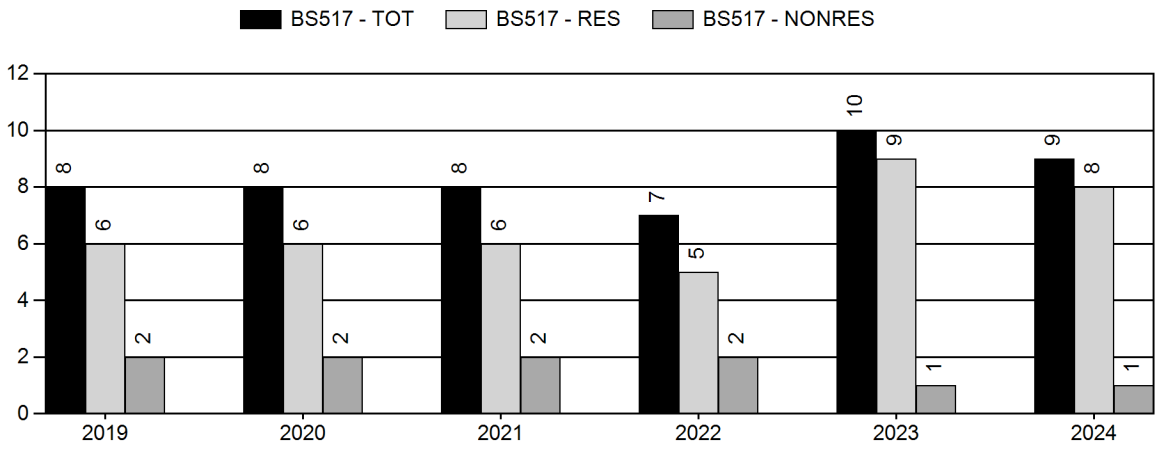



Hunter Success
success
harvestpercent
100
80
60
40
20
0
93
95
95
93
90
88
2015-2019
2016-2020
2017-2021
2018-2022
2019-2023
2020-2024

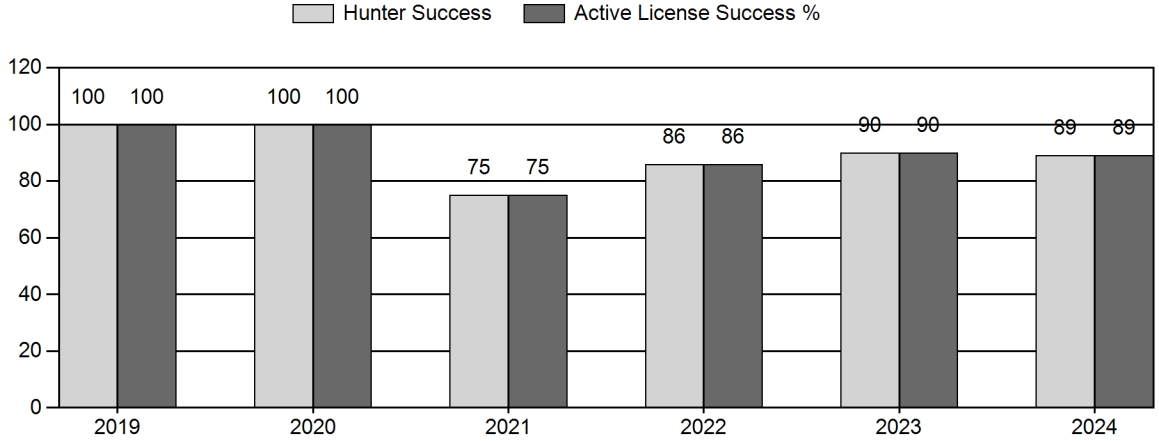
# Harvest



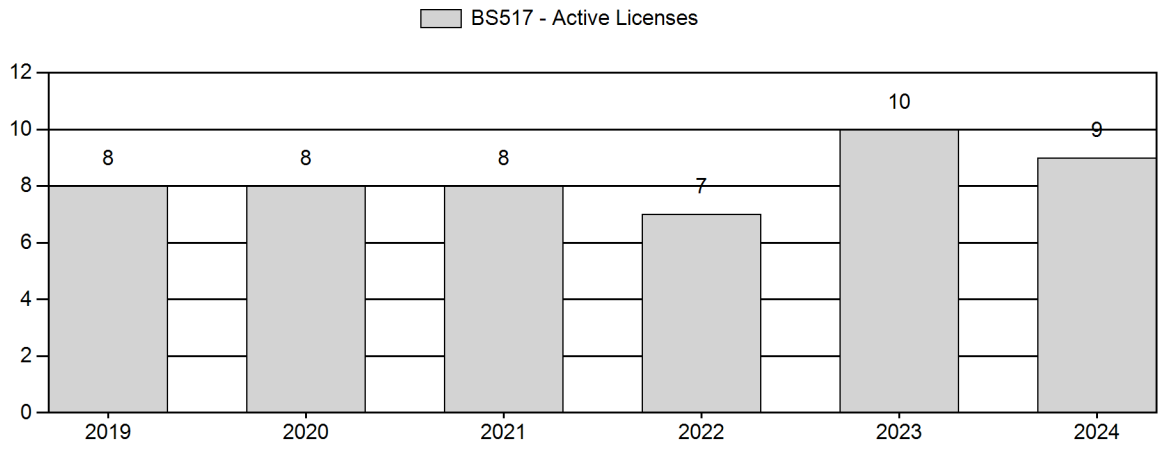

# Number of Hunters



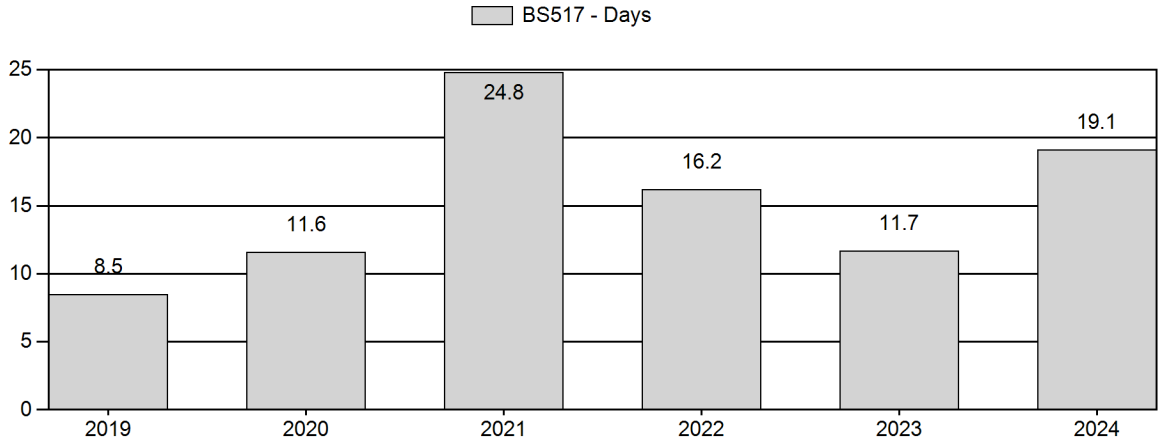

# Harvest Success



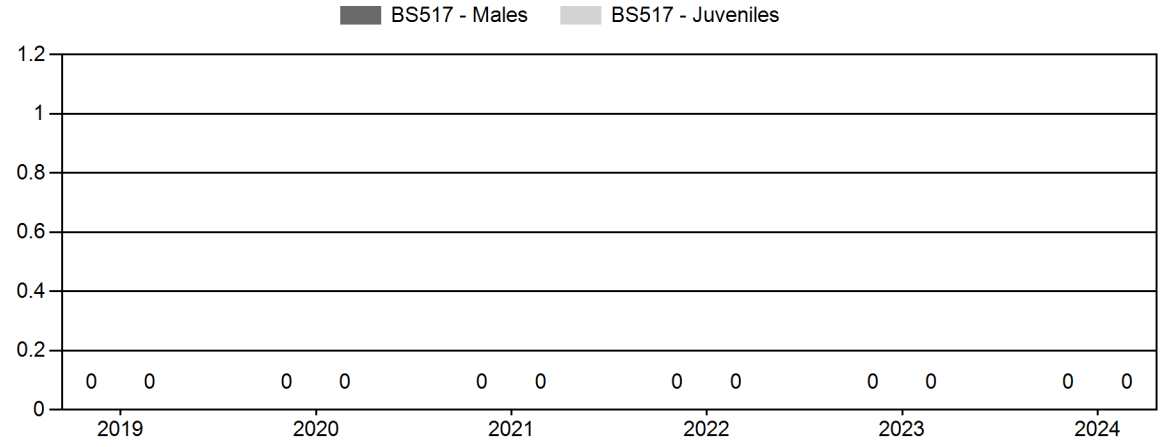
# Active Licenses




# Days Per Animal Harvested




# Preseason Animals per 100 Females



**2025 Hunting Seasons**
**Laramie Peak Bighorn Sheep Herd Unit (BS517)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 19 | 1 | Aug. 15 | Aug. 31 | Sep. 1 | Oct. 31 | 10 | Any ram (9 residents, 1 nonresident) |

**Current Management Objective:**

1) **5-year running average of >75% hunter success**
    - **Currently Met:** 2020 – 2024 Hunter Success = 88%
2) **5-year running average age of harvested rams between 6 and 8 years of age**
    - **Currently Met:** 2020-2024 Harvest Mean Age - 8
3) **Documented occurrence of adult rams in the population 3x the number of licenses issued.**
    - **Currently Met:** >30 adult rams observed in 2024 (32 adult rams observed)

**2025 Management Summary**

**Hunting Season Evaluation**

To meet the requirement of the 90/10 split in license allocation for residents and nonresidents, the quota was increased to 10 licenses (9 resident, 1 nonresident) in 2023. In 2024, there were only 9 of 10 licenses active. Of those 9 active licenses, 8/9 hunters were successful (89% hunter success). Access to the wild sheep remains difficult due to large tracts of private land within occupied sheep habitat. In recent years, wild sheep have begun to increasingly utilize the fire scar of the 2018 Britania fire and continue to utilize the fire scar of the 2012 Arapahoe wildfire. Hunter success and hunter crowding are being closely monitored to see if the increase in licenses causes overcrowding on the limited public lands and consequently a decrease in hunter success. A summary of classifications from the past 6 years (2019-2024) can be found in Appendix A.

**Management Objective Review**

The objective and management strategy for the Laramie Peak bighorn sheep herd unit was last evaluated and approved in 2024, and will not be reviewed again until 2029.

**Weather and Habitat**

Precipitation in this herd unit was below normal in 2024. While no NOAA weather stations are close to the vicinity of occupied bighorn habitats in Area 19, weather stations in Laramie reported a 5% decrease, while Cheyenne and Douglas stations reported decreases of 33% and 22%, respectively, below annual precipitation long-term averages. Winter severity and snow loading in the higher elevations of this herd unit were below normal. Spring forage production was lower than normal, but leftover standing forages from a good precipitation and forage production year in 2023 provided ample forage resources for bighorn sheep.

Cheatgrass control efforts completed in the last 4 years in Sybille Canyon and other areas directly west of Wheatland continue to show promise in recovery of native vegetation in areas burned by wildfire. The herbicide Rejuvra is mainly used for control of cheatgrass at a rate of 5 oz/acre. Many areas impacted by the Britania wildfire are now dominated or co-dominated by cheatgrass. This is cause for concern and future monitoring and surveillance is necessary. Future treatments

will be planned where necessary and as funding and time allow for proper project planning and implementation.

A 1,500 acre wildfire occurred in the Bear Creek drainage, south of Hwy 34. This area provides important year-round habitat for bighorn sheep, and we anticipate use in this area may increase following the reduction of coniferous cover and regeneration of grasses and forbs post-fire. This area is scheduled for cheatgrass control herbicide application in late Summer 2025. Due to the timing of the wildfire, high shrub mortality is anticipated.

Fence conversion efforts continue in occupied bighorn sheep habitats on the Thorne/Williams and Laramie Peak WHMA's. Unnecessary and unmaintained fences were removed on the WHMA's in 2024. Additional miles are slated for conversion in 2025 on the two WHMA's. Conversions from woven wire / barbed combination fences to 4 wire barbed/smooth wire will improve movement ability for all wild ungulates, including bighorn sheep in the Laramie Range.
A land exchange involving 1,297 acres of USFS lands was finalized in 2024, resulting in quality post-fire bighorn sheep habitats passing into private ownership on Britania, Green Mountain and the surrounding foothills. While it was USFS land, some access was typically secured annually on the parcel to hunt bighorn sheep despite being landlocked by private holdings. However, hunter access and management of habitats for the benefit of bighorn sheep is uncertain for this parcel going forward as a result of its privatization.

There is strong potential for rare earth mineral mining in the foothills of the Laramie Range. Exploratory activities in the Halleck Canyon area show some promise for potential future mining operations. Permanent loss of habitat and/or disturbance and displacement of big game species, including bighorn sheep, is possible with this activity.

**Additional Management Data**
This collaring project is part of the statewide bighorn sheep disease surveillance effort to garner baseline information on the various respiratory pathogens within Wyoming's wild sheep populations. For the Laramie Peak herd unit (hunt area 19), the primary goal is to better monitor respiratory disease outbreaks that could potentially cause large or small-scale die-offs. Additionally, this collar data will assist in identifying seasonal movement patterns, crucial winter ranges, habitat selection, lambing areas, and cause-specific mortality and survival estimates. This project has been funded through grants from Wyoming Governors Big Game License Coalition, Wyoming Wild Sheep Foundation.

The following captures have taken place within the Laramie Peak Herd Unit:

- **2017:** 6 ewes in the Iron Mountain sub-herd
- **2019**: 16 ewes, only 15 collared, 5 from the Sybille Canyon sub-herd and 10 from the Duck Creek sub-herd
- **2021:** 7 ewes, 3 from Sybille Canyon sub-herd and 4 from the Duck Creek sub-herd, collars released January 2024
- **2022:** 10 ewes, 3 from Sybille Canyon sub-herd and 7 from the Duck Creek sub-herd, collars released February 2025
- **2023:** 10 new collars and 2 redeployments, collars will release January 2026

There were 3 mortalities throughout 2024. All three mortalities were mountain lion predation.

The primary concern with this herd unit is outbreaks of respiratory pathogens. In 2019, there was a small-scale die-off due to a Pneumonia outbreak within the Sybille Canyon sub-herd and these collars will aid in monitoring future disease outbreaks and mortalities. Mortality notifications from collars will managers if there are any major die-offs occurring. As of January 29, 2025, there are 11 collars online. As current online collars reach the end of their battery-life in coming years, managers plan to deploy collars to maintain a sufficient number to monitor the herd for die-off events.

# Appendix A.

## 2019 - 2024 Postseason Classification Summary

for Bighorn Sheep Herd BS517 - LARAMIE PEAK

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Post Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 0 | 7 | 30 | 37 | 27% | 72 | 53% | 26 | 19% | 135 | 0 | 10 | 42 | 51 | ± 0 | 36 | ± 0 | 24 |
| 2020 | 0 | 2 | 14 | 16 | 21% | 43 | 56% | 18 | 23% | 77 | 0 | 5 | 33 | 37 | ± 0 | 42 | ± 0 | 31 |
| 2021 | 0 | 8 | 28 | 36 | 34% | 54 | 51% | 15 | 14% | 105 | 0 | 15 | 52 | 67 | ± 0 | 28 | ± 0 | 17 |
| 2022 | 0 | 3 | 29 | 32 | 41% | 36 | 46% | 10 | 13% | 78 | 0 | 8 | 81 | 89 | ± 0 | 28 | ± 0 | 15 |
| 2023 | 0 | 4 | 34 | 38 | 33% | 54 | 47% | 22 | 19% | 114 | 0 | 7 | 63 | 70 | ± 0 | 41 | ± 0 | 24 |
| 2024 | 0 | 4 | 32 | 36 | 35% | 48 | 47% | 18 | 18% | 102 | 0 | 8 | 67 | 75 | ± 0 | 38 | ± 0 | 21 |

# 2024 - JCR Evaluation Form

SPECIES: Bighorn Sheep

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

HERD: BS519 - ENCAMPMENT RIVER

HUNT AREAS: 21

PREPARED BY: TEAL CUFAUDE

| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | | N/A | N/A |
| Harvest: | 1 | 2 | 2 |
| Hunters: | 1 | 2 | 2 |
| Hunter Success: | 100% | 100% | 100 % |
| Active Licenses: | 1 | 2 | 2 |
| Active License Success: | 100% | 100% | 100 % |
| Recreation Days: | 5 | 66 | 30 |
| Days Per Animal: | 5 | 33 | 15 |

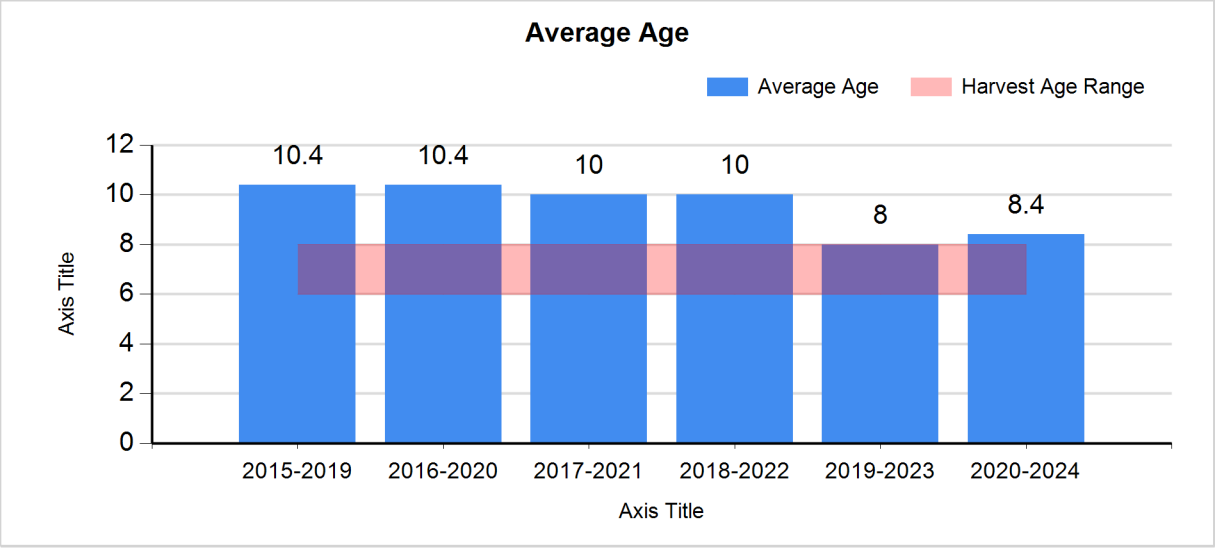
Limited Opportunity Objective:

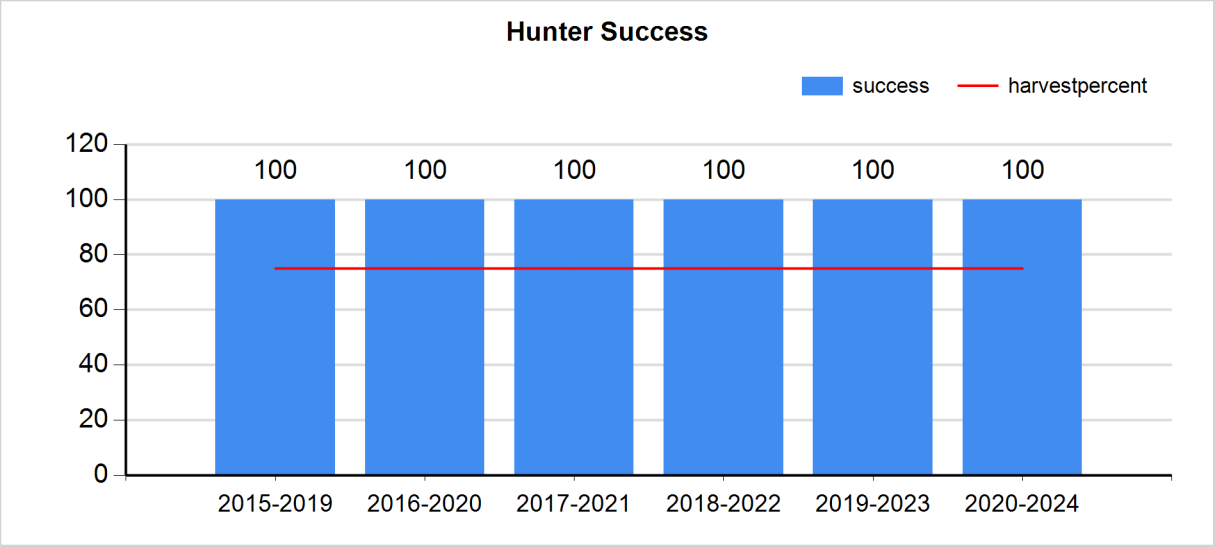
5-year average of > 75% hunter success

5-year average harvest age of 6-8 years

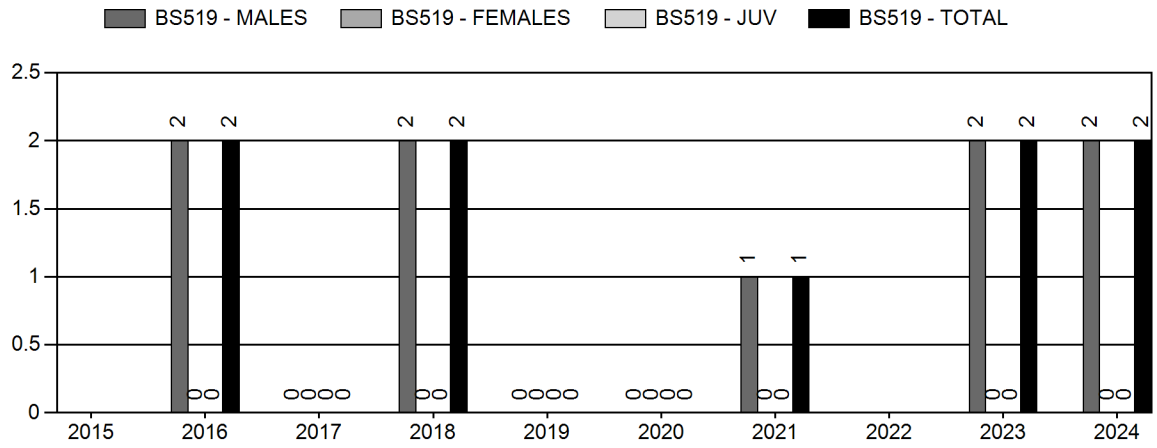
Secondary Objective:

Management Strategy: Special

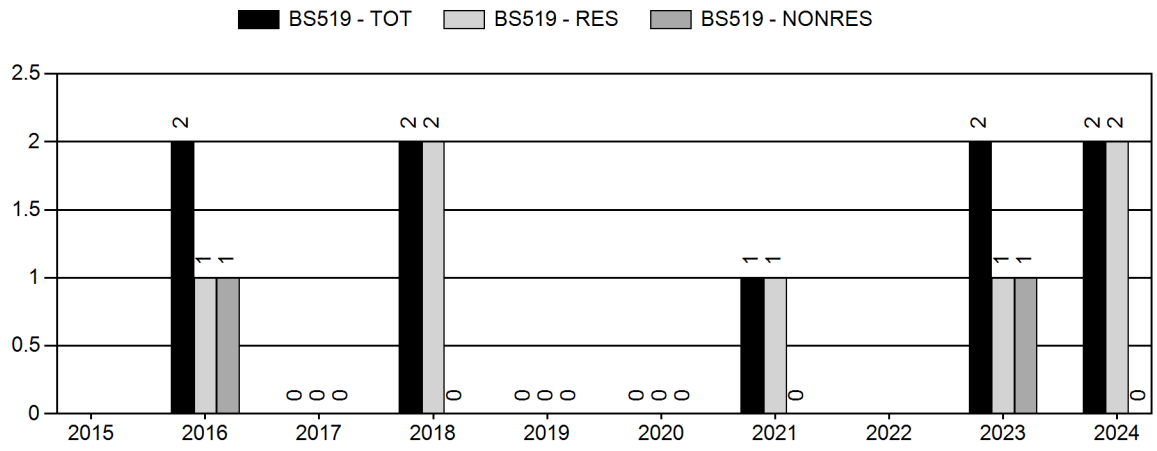



Hunter Success
success
harvestpercent
120
100
80
60
40
20
0
100
100
100
100
100
100
2015-2019
2016-2020
2017-2021
2018-2022
2019-2023
2020-2024

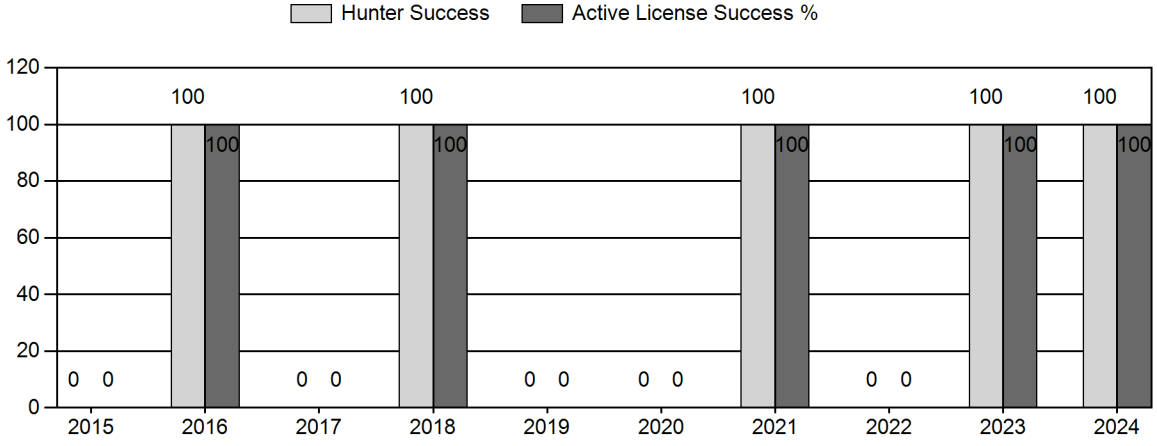
# Harvest



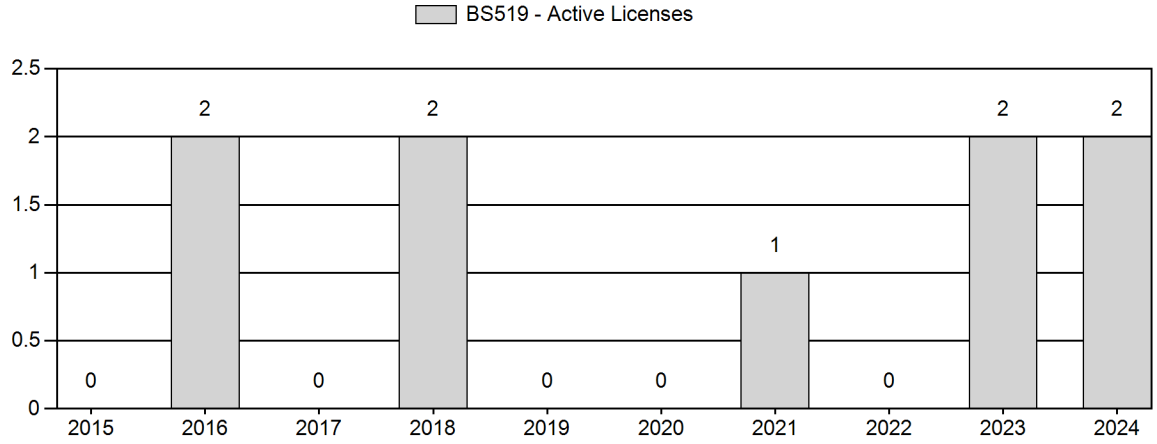

# Number of Hunters



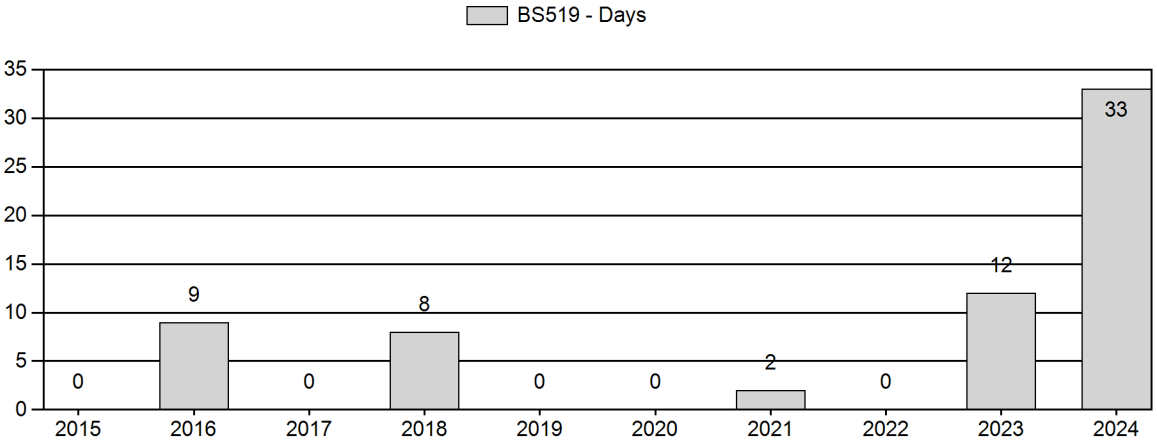

# Harvest Success



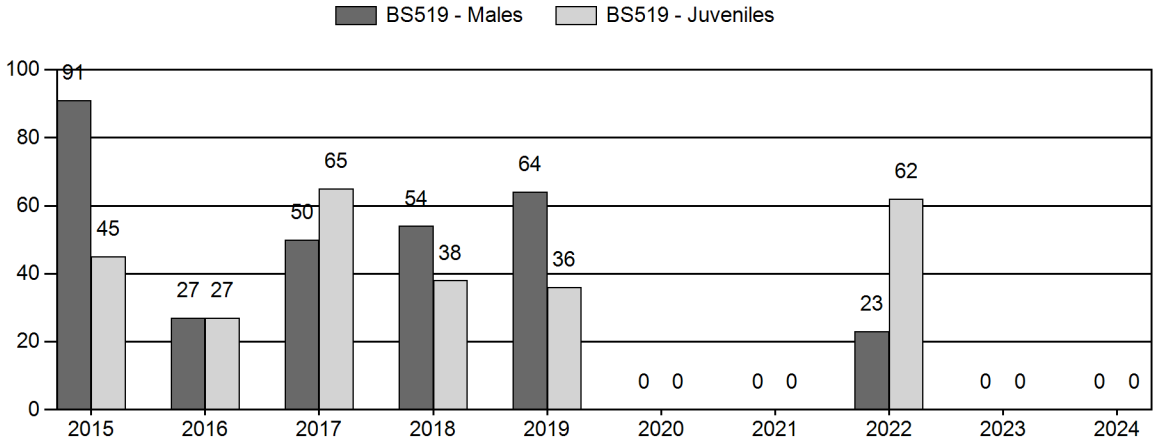
# Active Licenses




# Days per Animal Harvested




# Postseason Animals per 100 Females



**2025 Hunting Seasons**
**Encampment River Bighorn Sheep (BS519)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 21 | 1 | Aug. 15 | Aug. 31 | Sep. 1 | Oct. 31 | 2 | Any ram (1 resident, 1 nonresident) |

## 2025 Management Summary

### Hunting Season Evaluation

The 2025 hunting season structure provided one resident and one nonresident hunter the opportunity to harvest mature rams in hunt area 21. Based on frequent observations of mature rams in Douglas Creek (hunt area 18) and Encampment River (hunt area 21), managers maintained separate license quotas for each hunt area. We expect hunters will have a high likelihood of success, and this herd will continue to meet the bighorn sheep limited opportunity management objectives.

### Management Objective Review

The limited opportunity management objective was evaluated in 2021 and will not be reviewed again until 2026.

### Weather/Habitat

Annual precipitation in hunt area 21 was below average in 2024. While no NOAA weather stations are in close proximity to occupied bighorn sheep habitats in hunt area 21, the nearest weather stations in Laramie and Rawlins reported a 5% and 9.5% decrease in annual precipitation, respectively. Early spring precipitation occurred in April and May but diminished by early June. Poor overall precipitation in the growing season for cool season grass and forb species resulted in poor forage productivity. However, leftover standing forages from good precipitation and forage production year in 2023 provided ample forage resources for bighorn sheep. SNOTEL sites in the Sierra Madre mountain range reported below-average to average (76-108%) snowpack from January through March 2024.

No significant disturbances were documented within the Encampment River bighorn sheep herd unit in 2024. The lack of natural disturbances within this bighorn sheep herd unit has resulted in shrub communities trending towards late seral stages with older, decadent age classes and conifer encroachment, which may be limiting habitat availability. Cheatgrass continues to be an issue on the southeast facing slopes at lower elevations within this herd unit. The WGFD, in conjunction with the USFS, BLM, and Carbon County Weed and Pest, plan to conduct a large-scale aerial cheatgrass treatment in 2025 throughout much of the occupied bighorn sheep habitat in Area 21.

### Additional Management Data

This is a limited opportunity objective herd and the three goals associated with this objective are: five-year average hunter success rate greater than 75%, five-year average age of harvested rams between 6 and 8 years old, and a documented occurrence of adult rams in the population. Currently, all three of these goals are being met.

In 2024, there were several observations of bighorn sheep in close proximity to bands of domestic

sheep west of the Continental Divide. One young ram bighorn sheep was euthanized given its proximity to domestic sheep operations. There remains a high risk of commingling with domestic sheep herds in this area. We will continue to monitor and respond to any reports of bighorn sheep west of the Continental Divide.

# 2024 - JCR Evaluation Form

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

HERD: MO545 - SNOWY RANGE

HUNT AREAS: 38, 41, 45
PREPARED BY: TEAL CUFAUDE

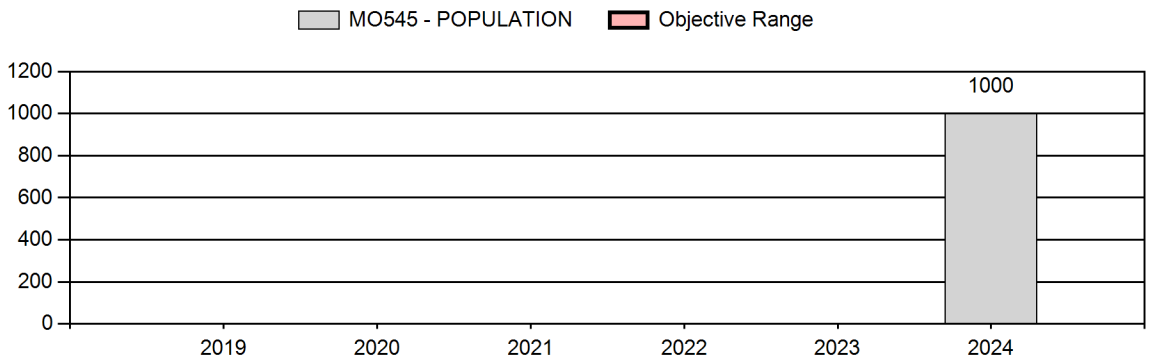
| | 2019 - 2023 Average | 2024 | 2025 Proposed |
|---|---|---|---|
| Population: | 0 | 1,000 | 1,000 |
| Harvest: | 42 | 64 | 66 |
| Hunters: | 46 | 71 | 71 |
| Hunter Success: | 91% | 90% | 93 % |
| Active Licenses: | 46 | 71 | 71 |
| Active License Success: | 91% | 90% | 93 % |
| Recreation Days: | 366 | 742 | 750 |
| Days Per Animal: | 8.7 | 11.6 | 11.4 |
| Males per 100 Females | 88 | 87 | |
| Juveniles per 100 Females | 42 | 44 | |

| | |
|---|---|
| Population Objective (± 20%) : | 950 (760 - 1140) |
| Management Strategy: | Special |
| Percent population is above (+) or below (-) objective: | 5% |
| Number of years population has been + or - objective in recent trend: | 1 |
| Model Date: | 2/28/2025 |

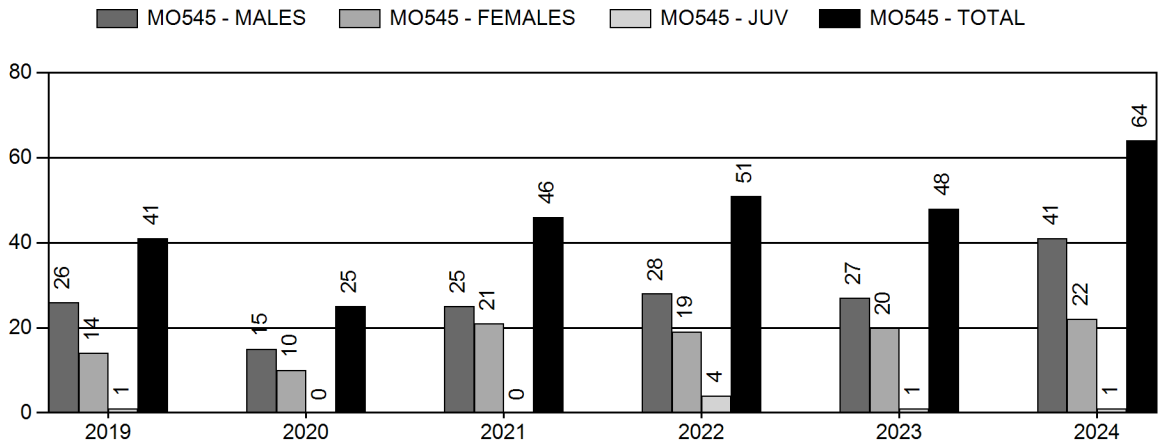
**Proposed harvest rates (percent of pre-season estimate for each sex/age group):**

| | JCR Year | Proposed |
|---|---|---|
| Females ≥ 1 year old: | 5% | 5% |
| Males ≥ 1 year old: | 10% | 10% |
| Proposed change in post-season population: | 0% | 0% |

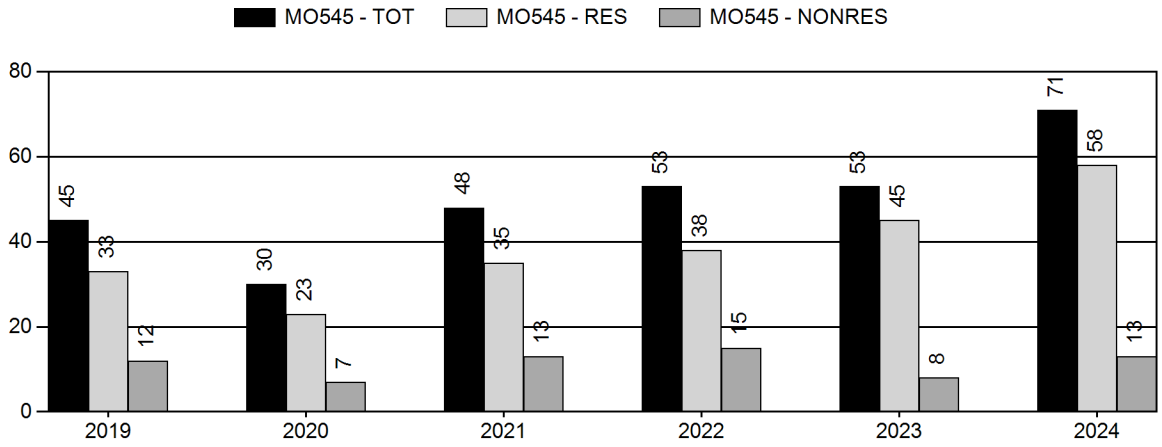
## Population Size - Postseason



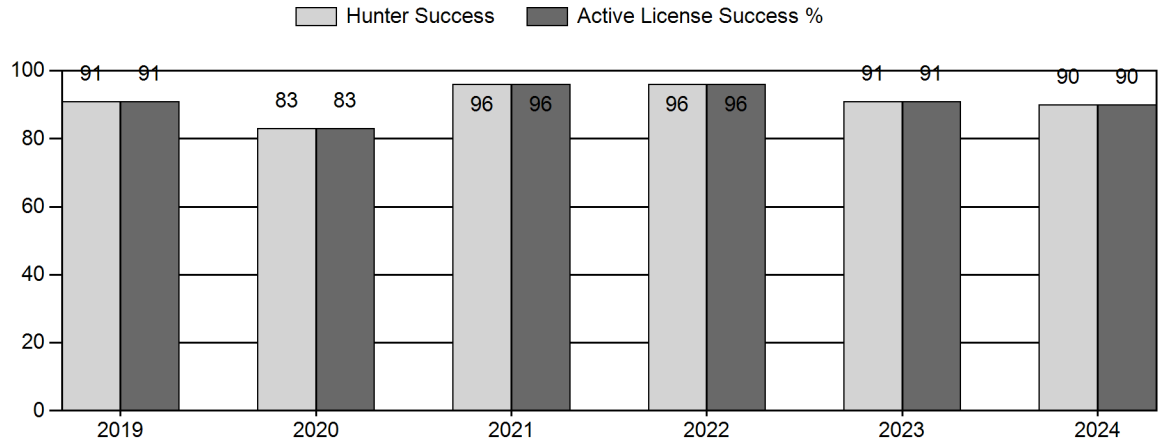
# Harvest



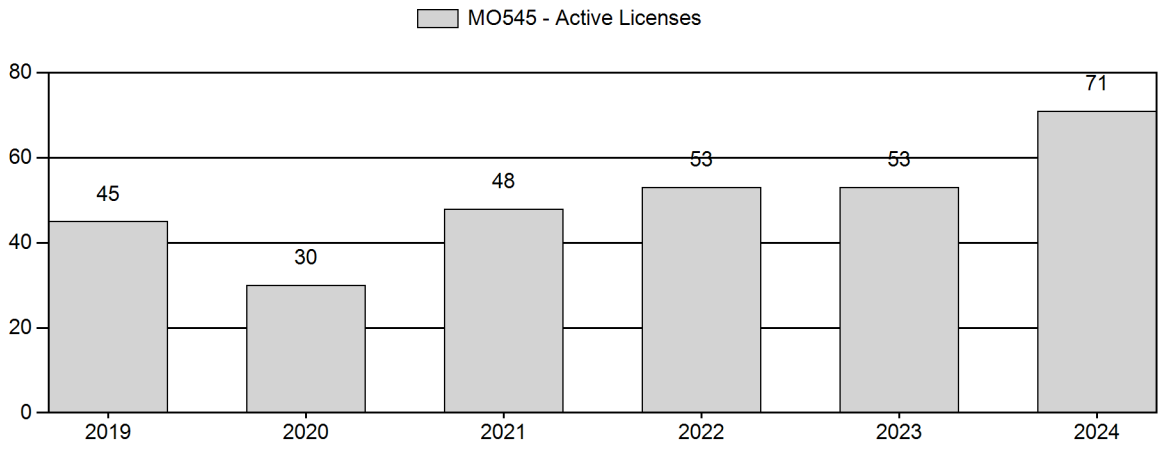

# Number of Hunters



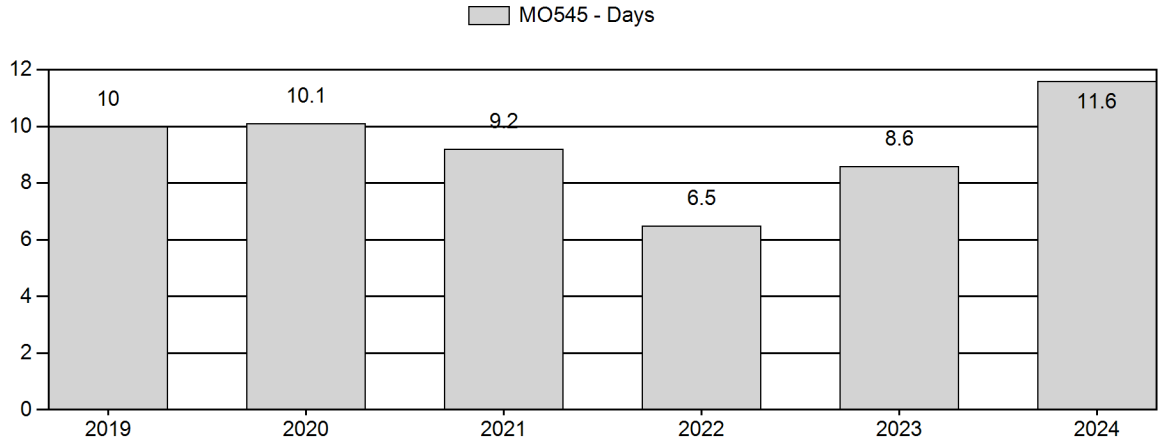

# Harvest Success



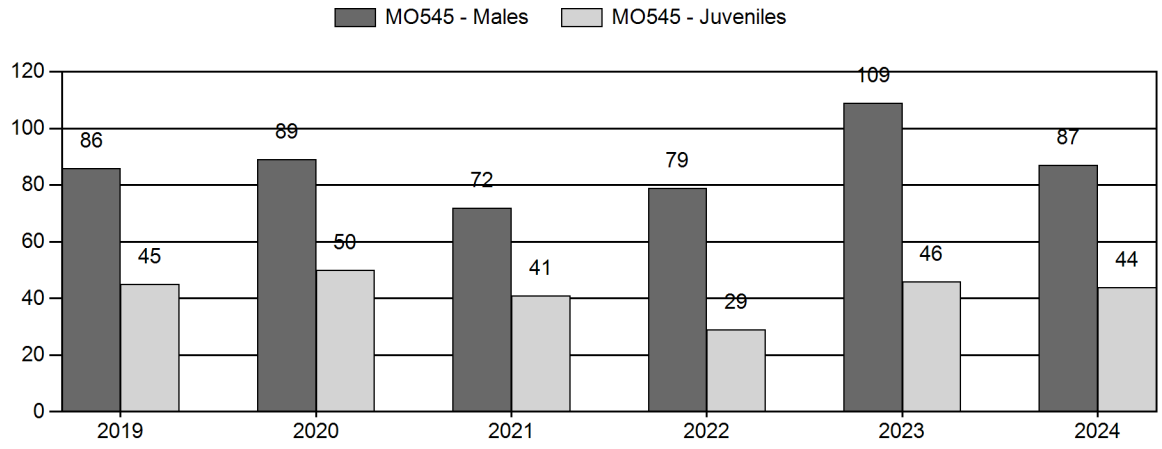
# Active Licenses




# Days per Animal Harvested




# Postseason Animals per 100 Females



**2025 Hunting Seasons**
**Snowy Range Moose (MO545)**

| Hunt Area | Type | Archery Dates | | Season Dates | | Quota | Limitations |
|---|---|---|---|---|---|---|---|
| | | Opens | Closes | Opens | Closes | | |
| 38 | 1 | Sep. 1 | Sep. 30 | Oct. 1 | Nov. 14 | 25 | Any moose, except cow moose with calf at side (21 residents, 4 nonresidents) |
| 38, 41, 45 | 4 | Sep. 1 | Sep. 30 | Oct. 1 | Nov. 14 | 33 | Antlerless moose, except cow moose with calf at side |
| 41 | 1 | Sep. 1 | Sep. 30 | Oct. 1 | Nov. 14 | 5 | Any moose, except cow moose with calf at side (5 residents) |
| 45 | 1 | Sep. 1 | Sep. 30 | Oct. 1 | Nov. 14 | 5 | Any moose, except cow moose with calf at side (4 residents, 1 nonresident) |

## 2025 Management Summary

### Hunting Season Evaluation

In 2024, 71 moose hunters harvested 64 moose with an overall success of 90%. This represented the highest harvest level since moose hunting began in the herd unit. 2024 hunter success was slightly lower than the five-year average (91%), due to reduced success on type 4 licenses. Type 1 hunter success in hunt areas 41 and 45 was 100%. Type 1 success in hunt area 38 was 97%, with only one of 32 hunters not harvesting a moose.

A total of 52 moose (31 adult bulls, 20 cows, and 1 calf) were harvested in hunt area 38. Six moose (5 adult bulls and 1 cow) were harvested in hunt area 41. Six moose (5 adult bulls and 1 cow) were harvested in hunt area 45. From 2010-24, 744 hunters have harvested 678 moose in this herd unit. During this time, 283 antlerless moose (278 cows and 28 calves) have been harvested. Only one antlerless moose has been harvested on a type 1 “any moose” license since 2010.

Sex and age ratios from 194 moose classified during a January aerial survey, yielded 44 calves/100 cows and 15 yearling bulls/100 cows. Males classified as “unknown males” were assumed to be adult males because adult males had shed their antlers. The adult bull-to-cow ratio was 87/100 (Appendix A). Bull ratios remain strong across the herd unit and productivity was excellent in 2024.

In 2023, the hunt area 38 boundary was modified and a new Pole Mountain hunt area (hunt area 45) was added. As the moose population has expanded into available habitats across the herd unit, hunter opportunities could be increased. To improve distribution of moose hunters and provide additional moose hunter opportunity, we maintained separate license quotas for each of the three hunt areas in 2025. Twenty-five (25) type 1 licenses were allocated in hunt area 38, five (5) type 1 licenses were allocated in hunt area 41, and five (5) type 1 licenses were allocated in hunt area 45.

High hunter success is expected on all type 1 licenses in 2025. The observed adult bull-to-cow ratio, tooth age data, and 2024 sightability survey estimate indicated that even with increased bull harvest

there would still be a high number of mature bulls in the population. Hunter comments indicated there is a preference by some to maintain or increase the quality of males rather than see a significant increase in bull moose licenses, so we continue to consider that when prescribing license quotas. Type 4 licenses remained at 30 and were valid in all three hunt areas. Type 1 licenses have generally not been used by hunters to harvest antlerless moose, so antlerless moose licenses are necessary to keep the population close to the objective range. The moose Super Tag and Super Tag Trifecta were awarded to two residents in 2025. Raffle tag hunters and Governor's Moose License holders could choose to hunt in area 38, as they did in 2024. Observed bull ratios indicated that hunt area 38, can support this increase in bull hunters if it does occur in 2025. Nonresident moose licenses were available in hunt area 38 and one was also available in hunt area 45 for the 2025 hunting season.

Habitat data, specifically in the Snowy Range portion of the herd unit, indicated the current moose herd is at or slightly above carrying capacity and localized overutilization may be occurring. Maintaining a moose population larger than the objective could exceed carrying capacity and cause density dependence responses such as decreased calf survival, lower pregnancy rates, and decreased body and antler size. The 2025 license quotas are expected to maintain the population at the high end of objective range and keep the age of harvested males within the secondary management objective ranges. Managing this herd toward the objective may necessitate more aggressive short term harvest regimes to balance annual population increases.

**Management Objective Review**
The objective for the Snowy Range Moose Herd is a post-hunting season population objective of 950 moose (±20%). The objective was last evaluated and approved in 2024, and will not be reviewed again until 2029 (.

**Weather/Habitat**
PRISM data, extracted from the Derived Environmental Variability Indices Spatial Extractor (DEVISE) interface, for the Snowy Range moose herd unit was analyzed to estimate precipitation across the herd unit which encompasses hunt areas 38,41, and 45. Annual precipitation throughout the herd unit was below the 30-year average. Precipitation in critical growing months for herbaceous and woody vegetation (April-July) was also below average. The 2023-2024 winter started mild, with no persistent snow accumulations through fall and early winter. SNOTEL sites in the Snowy Range reported below average to average (51-108%) snow water equivalent (SWE) during January and February. By March, SNOTEL sites on the east side of the Snowy Range reported above average SWE (105-129%). SNOTEL sites in the Sierra Madre mountain range reported below average SWE in January but increased to above average (99-150%) SWE in February and March.

The Mullen Fire (2020) burned approximately 176,800 acres in the Snowy Range, comprising the southern half of moose hunt area 38. Over 10,300 acres on the western half of moose hunt area 38 were aerially treated with the herbicide Rejuvra in 2021. Post-treatment monitoring has taken place each year since 2021 to evaluate herbicide efficacy. Cheatgrass control efforts continue to "hold" three years post-herbicide application and native, perennial plant response has been excellent. We will continue to monitor herbicide efficacy in 2025 and evaluate the need for future retreatment. Aspen regeneration has been excellent, and a delayed but positive response has been seen in mixed mountain shrub communities.

Past large-scale wildfires within the Sierra Madre Range (Snake fire – 2016, Beaver Creek fire – 2016, and Ryan fire – 2018) are recovering at varying rates. These fires have returned plant communities to earlier seral stages and increased the age-class diversity of mixed mountain shrubs and aspens. The resulting productivity and diversity should benefit moose, deer, and elk.

Late seral habitats in the northern half of the Snowy Range continue to dominate the landscape. Disturbance, in the form of planned mechanical treatments, prescribed fire or wildfire will likely be necessary to tip the scales in favor of moose in transitional and summer ranges in this area. Approximately 118 acres of USFS lands adjacent to the Wick WHMA were treated in June and July to remove encroaching conifers through mastication in the Foote Creek drainage. An additional 195 acres of mastication work in burned timber areas in the Badger Creek wildfire scar area, in crucial winter range areas, was completed in 2024 to encourage aspen and mixed mountain shrub regeneration. Lodgepole pine growth post-fire in this area may negatively impact aspen regeneration goals. Future prescribed fires will be conducted as a follow-up treatment to further encourage aspen regeneration. Additional mastication work on 245 acres is planned for the Wick WHMA in 2025, directly adjacent to mastication work completed on USFS lands in 2024. Once mastication work is complete in this drainage, prescribed fire will be planned for 2028 to further promote aspen and shrub regeneration. A 400 acre prescribed fire is planned for the Wick WHMA to set back succession to more early seral stages in mixed mountain shrub pockets near the Wick WHMA headquarters.

The Laramie biologist team established a long-term willow monitoring program in 2021 to monitor willow production and utilization within the Snowy Range and surrounding areas of available moose habitat. We evaluated willow community conditions using the Keigley Live-Dead Index (LD Index). The LD Index is a quantitative measure of browse intensity calculated by subtracting the height dead ($H_D$ ) from the height of the base of current year growth ($H_{BCYG}$).

$LD = H_{BCYG} - H_D$

Positive values indicate the willow is escaping browsing pressure, values near zero indicate the current level of browsing is preventing vertical plant growth, and negative values indicate the willow is being suppressed by browsing. In addition to the Keigley Live-Dead Index surveys, we also measured percent browse and leader length. In 2024, we completed 13 surveys. Data collected from 2021-2023 was analyzed and summarized for the Snowy Range moose herd objective review in the spring of 2024.

A three-acre riparian exclosure was constructed in the Fall Creek drainage, west of Centennial Ridge during the summer of 2023 in order to protect boreal toad breeding habitat. The multi-wire electric fence is designed to exclude all wildlife and livestock. Due to its remoteness, it has been difficult to maintain the fence. Trespass wildlife, not yet accustomed to the electric fence, routinely break in to the exclosure. WGFD personnel check on the fence throughout the summer and early fall and attempt to keep it maintained. Willow species preferred by moose are found within and outside of the exclosure area. It is evident the exclosure has reduced, but not eliminated browsing by wildlife. Willow browse is being measured inside and directly outside of the exclosure to see if a reduction in browse pressure results in willow regeneration.

Beavers play an important role in maintaining hydrologic function in riparian areas in the Snowy Range, Pole Mountain, and the Sierra Madres. Inventory and assessment of riparian habitats within the Snowy Range is ongoing. Maintaining hydrologic function in riparian areas has the potential to maintain or expand hydrophytic vegetation, including a diversity of willow species that are important browse for moose. Improving hydrologic function has the potential to increase annual forage production of grass, forb, and woody browse vegetation. Funding applications have been submitted to WGBGLC to help support trap and transplant efforts in 2025-2026.

We are evaluating the suitability of sites for potential trapping of family groups of beavers and potential locations for beavers to be released. The Wick WHMA is a likely source area for future beaver trapping efforts due to the high population of beavers currently residing on the WHMA. The Forbes WHMA and other foothill and high elevation riparian areas in the Snowies, within recently burned, as well as unburned portions of USFS lands are of interest to habitat managers. Laramie Region Aquatic, Terrestrial, and Habitat and Access Biologists plan to install BDAs and translocate beavers along South Fork Lake Creek on the Pennock WHMA in 2025. This will help reconnect the floodplain and improve moose habitat within the WHMA.

**Disease**

In 2024, nine hunters harvested moose and two other moose were tested for Chronic Wasting Disease (CWD). No sampled moose from this herd unit tested positive for CWD. Carotid artery worms were detected in one harvested moose (n=9). Eight other Snowy Range moose mortality samples have been received by the WGFD lab since 2023. Of those eight moose, carotid artery worms were detected in five.

**Population Modeling**

In 2023, we began using PopR Integrated Population Model (IPM) to estimate population indices for Snowy Range moose. The 2024 post-hunting season population estimate for this herd unit was 1,000 moose (CL=700-1,400). Managers chose to model this herd using the default structure for moose, 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. Data from 2016 onward were included in the IPM. With these settings the observed data for the IPM included nine years of harvest and ratio data along with abundance estimates from a composition abundance survey in 2022 and a sightability survey at the end of biological year 2023. IPM convergence was excellent, with all Rhat values less than 1.1, and calf and bull ratio estimates produced by the IPM aligned very well with recorded data for this herd. IPM abundance estimates also aligned well with the results obtained from aerial surveys:

| | 2022 | 2023 |
|---|---|---|
| Survey Result | 1,300 (CL 400 - 2,200) | 1,067 (CL 757 - 1,376) |
| IPM Estimate | 995 (CL 756 - 1,296) | 1,014 (CL 751 - 1,326) |

The 2024 post-hunting season abundance estimate is unchanged from the previous year. This agrees with the perceptions of managers and stakeholders that this herd is stable and performing well even with increased harvest.

**Additional Management Data**

Secondary management objectives are monitored to help ensure we balance the opportunity to hunt moose with the ability for hunters to harvest mature bulls. These management objectives are as follows:

Ensure the average age of harvested male moose over a three-year period remains at or above four years old. This metric focuses on the median age of harvested bulls to assess the bull age structure. Based on 31 teeth submitted in 2024, the median age of harvested bulls was five. Median age for hunt area 38 and 41 was five and median age for hunt area 45 was seven. Data from teeth submitted 2022-24 indicated that the objective was met and the three-year average median age of harvested bulls was five.

Maintain a harvest composition where at least 40% of bull moose are five years old or older, averaged over a three-year period. This goal promotes age diversity within the harvested population and helps ensure the presence of mature bulls for breeding. This objective is currently being met. Data from teeth submitted 2022-24 shows that 65% of harvested male moose were five years old or older, exceeding the 40% target.

Ensure the long-term sustainability of willow communities preferred by moose for browsing. Willow species play a critical role in moose habitat by providing essential food resources and thermal cover. The current status of willow habitat is addressed in the Habitat Section.

While hunters are often interested in secondary management objectives related to population age structure, they also frequently inquire about antler measurements of harvested moose. The average antler spread width of harvested moose as recorded on submitted tooth envelopes was 36 inches.

The Snowy Range moose population has been monitored through several studies over the past 15 years (2005-2006, 2015-2017, 2018-2020), allowing us the unique opportunity to compare moose habitat use, movement, and behavior pre- and post- wildfire. Since 2022, 40 female moose have been captured via helicopter darting on winter habitats within and surrounding the Mullen Creek Fire perimeter. Moose were fitted with GPS-enabled collars that are set to collect hourly fixes (locations). The fix-rate is identical to the previous Snowy Range moose studies, which will allow us to compare movement strategies and resource use of moose prior to and following the fire. These collars will be deployed for a period of three years, during which we will gather information on the status of each moose and their response to recently burned habitats. In addition, we will be able to track animals' survival and juvenile recruitment rates. This research addresses five primary objectives. These objectives include 1) quantifying movement and distribution of female moose; 2) evaluating the effects of the Mullen Creek fire on habitat selection; 3) assessing changes in habitat quality post-burn; 4) measuring female moose survival; and 5) opportunistically assessing the health of captured moose.

**Appendix A.** 2019-2024 Classification Summary (MO545)

## 2019 - 2024 Postseason Classification Summary

for Moose Herd MO545 - SNOWY RANGE

| | | MALES | | | | FEMALES | | JUVENILES | | | | Males to 100 Females | | | | Young to | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Post Pop | Ylg | Adult | Total | % | Total | % | Total | % | Tot Cls | Cls Obj | Yling | Adult | Total | Conf Int | 100 Fem | Conf Int | 100 Adult |
| 2019 | 0 | 8 | 55 | 63 | 37% | 73 | 43% | 33 | 20% | 169 | 0 | 11 | 75 | 86 | ± 0 | 45 | ± 0 | 24 |
| 2020 | 0 | 7 | 8 | 25 | 37% | 28 | 42% | 14 | 21% | 67 | 0 | 25 | 29 | 89 | ± 0 | 50 | ± 0 | 26 |
| 2021 | 0 | 10 | 72 | 96 | 34% | 133 | 47% | 54 | 19% | 283 | 0 | 8 | 54 | 72 | ± 0 | 41 | ± 0 | 24 |
| 2022 | 0 | 5 | 38 | 44 | 38% | 56 | 48% | 16 | 14% | 116 | 0 | 9 | 68 | 79 | ± 0 | 29 | ± 0 | 16 |
| 2023 | 0 | 14 | 84 | 152 | 43% | 140 | 39% | 64 | 18% | 356 | 0 | 10 | 60 | 109 | ± 13 | 46 | ± 7 | 22 |
| 2024 | 1,000 | 13 | 36 | 73 | 38% | 84 | 43% | 37 | 19% | 194 | 0 | 15 | 43 | 87 | ± 16 | 44 | ± 10 | 24 |

WYOMING GAME AND FISH DEPARTMENT

5400 Bishop Blvd. Cheyenne, WY 82006
Phone: (307) 777-4600 Fax: (307) 777-4699
wgfd.wyo.gov

GOVERNOR
Mark Gordon
DIRECTOR
Brian R. Nesvik
COMMISSIONERS
Ralph Brokaw-President
Richard Ladwig-Vice President
Mark Jolovich
Ashlee Lundvall
Kenneth D. Roberts
John Masterson
Rusty Bell

February 16, 2024

MEMORANDUM

TO: Embere Hall

FROM: Teal Cufaude, Saratoga Wildlife Biologist

COPY TO: Martin Hicks

SUBJECT: 2024 Herd Objective Review- Snowy Range Moose

**MO545- Snowy Range Moose Herd Unit**

**Current Management Objective:** Mid-winter trend count of 75 moose
**2019-2021 Mid-winter trend count average:** 173 moose
**Secondary Management Objectives:**

1. 3-year average of ≥ 4 years of age median for harvested bulls.
   Currently met: Median age for harvested bulls was 5 years of age
2. 3-year average of ≥ 40% of bulls in harvest = ≥ 5 years of age.
   Currently met: 71% of bulls in harvest = ≥ 5 years of age
3. Maintain sustainable communities of willow species preferred by moose

**Recommendation:** Change Snowy Range Moose Herd Unit objective to a postseason population estimate of 950 ±20% moose and maintain secondary management objectives.

**Rationale**

*Population Status and Monitoring*

Moose were introduced in north central Colorado during the 1970s and 1980s and subsequently migrated north into portions of adjacent Wyoming mountain ranges. The first documented sighting of a moose in the Snowy Range herd unit occurred in 1981. Since 1981, moose have continued to expand in range and numbers throughout the Snowy, Sierra Madre, and Laramie Mountain ranges of south central Wyoming. The Snowy Range Moose Herd Unit is comprised of hunt areas 38 (Snowy Range Mountains), 41 (Sierra Madre Mountains), and 45 (Pole Mountain). The boundaries of hunt area 38 were modified and expanded to create hunt area 45 in 2023.

Wyoming Game and Fish Department (WGFD) established a postseason management objective of 100 moose for the Snowy Range herd unit in 1987. By 2000, WGFD managers assumed the moose population had increased beyond the management objective and established the first hunting season for moose in this herd unit. Annual moose hunting seasons have been offered continuously in this herd unit since 2002.

Past moose population monitoring of Snowy Range moose consisted of collecting moose sex and age composition data incidentally while completing elk and mule deer postseason composition surveys. Ensuring that moose in this herd are sustainably managed is a priority for WGFD, so we have explored ways to more reliably estimate this population.

In bio-year 2014, a sightability survey for moose was conducted in this herd unit. The results of this survey produced an abundance estimate of 266 ± 56 (90% *CI*) moose. In 2016, the herd objective was reviewed and changed to a mid-winter trend count. Count blocks identified from the sightability survey were surveyed annually using repeatable methodology from 2016-2021. This survey required approximately 14 hours of helicopter flight time. The initial goal was to survey count blocks which should contain ≥75 moose during the mid-winter trend count. From 2016-2021 the average moose count during the trend survey was 168 moose. The lowest running 3-year average count was 119 moose and the highest average count was 173 moose. Although we detected more than 75 moose in the count blocks each year, the mid-winter trend objective of 75 moose and trend survey design has done little to inform us on whether moose are increasing, stable, or declining. This prompted our interest in changing the objective and how we monitor moose in this herd unit.

In January 2023, we attempted to develop a more reliable method to monitor Snowy Range moose. We flew a 20-hour composition abundance survey. The entire herd unit was divided into high, low, and out strata subunits. A stratified random sample survey of the potentially occupied area was selected due to time and budgetary restraints. Since a moose abundance survey had been conducted in 2015 and subsequent trend count surveys had been flown, we had an idea of where moose would potentially be located in late winter. We also used data from the Wildlife Observation System and the resource selection model results from Baigas to identify areas assumed to contain suitable winter moose habitat. We randomly selected 28 high and 13 low subunits to survey. During this survey, we observed 154 moose (119 in subunits). The estimated number of moose based on this survey was 1,300 (430-2,200) moose. At the time we believed this estimate was higher than the number of moose in the herd and we were uncomfortable with the wide confidence interval. We were optimistic that with an improved design an annual composition abundance survey could provide useful data for the newly developed Snowy Range moose integrated population model (IPM).

In February 2024, a sightability survey was conducted. The goal of this effort was to provide an additional estimate that could bolster the IPM population estimates. The stratification of subunits was similar to the 2023 composition abundance survey. The potentially occupied area was divided geographically into survey search units (subunits). We conducted the survey in 60 hours

and flew 50% of the randomly selected high strata and 30% of randomly selected low strata subunits. A total of 345 moose were observed in selected subunits. The abundance estimate of 1,068 (758-1,378) moose was produced for this herd unit. Moose managers in the area agree that this abundance seems plausible.

A total of 382 moose were observed, in and out of selected subunits, during the survey and 356 of those moose were classified. Sex and age ratios from all moose classified (356) during the survey yielded 46 calves/100 cows, 10 yearling bulls/100 cows, and 60 adult bulls /100 cows. Unknown males could be assumed to be adult males because adult males appeared to have shed their antlers by time the survey was conducted. When unknown males are combined with adult males, the adult bull to cow ratio was 99/100 (Table 1).

Table 1. Moose sex and age ratios from the sightability survey completed February 2024, in the Snowy Range herd unit, Wyoming.

| Survey | Sample | Unclass. | Unk. Bulls | Ad. Bulls | Yrl. Bulls | Calves | Cows | Yrl. Bulls/100 Cows | Ad. Bulls/100 Cows | Ad. Bulls & Unk. Bulls/100 Cows | All Bulls/100 Cows | Calves/100 Cows |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Selected Subunits | 345 | 18 | 138 | - | - | 58 | 129 | - | - | - | 107 | 42 |
| All Moose | 382 | 26 | 54 | 84 | 64 | 64 | 140 | 10 | 60 | 99 | 109 | 46 |

The IPM is performing okay with the data we have provided on this herd. The 2023 postseason population estimate from the IPM was 1,009 (738-1,317) moose. We believe that this estimate is biologically reasonable for the Snowy Range Moose objective.

*Habitat*

The primary limiting factor for moose across their range is the availability of suitable habitat. The Snowy Range moose herd has a secondary management objective to maintain sustainable communities of willow species preferred by moose. To meet this secondary objective, the Laramie Region managers established a willow monitoring program in 2021 to assess ungulate browsing pressure on willow communities throughout the herd unit. Excessive browsing by wild and domestic ungulates is widely known to decrease willow production and height growth as well as cause premature plant death and reduced reproduction (Keigley and Frisina 2011). We used the Keigley Live-Dead Index (LD Index) as a quantitative method to measure browse intensity. The LD Index is calculated by subtracting the height dead from browsing (HD) from the height of the tallest base of current year's growth (HBCYG).

LD = HBCYG - HD

Positive LD values indicate willows are escaping browsing pressure, values near zero indicate the current level of browsing is preventing vertical plant growth, and negative values indicate willows are being suppressed by browsing.

Willow species composition varies by elevation throughout the herd unit. Common species include planeleaf (Salix planifolia), Booth (S. boothii), Wolf (S. wolfii), Drummond (S. drummondiana), Geyer (S. geyeriana), whiplash (S. lasiandra), mountain (S. monticola), strapleaf (S. eriocephala var. ligulifolia), Bebb (S. bebbiana), and yellow (S. eriocephala var. watsonii). Moose are known to use several willow species with preferences varying by area. According to Baigas and Olson (2008), moose willow preferences in the Snowy Range are as follows, ranked from highest to lowest, planeleaf, Bebb, whiplash, Drummond, Booth, mountain, yellow, strapleaf, Geyer, and Wolf. Moose will browse on all species, however, most studies agree that planeleaf is the most extensively browsed, followed by Booth and Drummond.

Based on our survey efforts from 2021-2023, domestic and wild ungulates are impacting willow communities across the Snowy Range moose herd unit at varying intensities. Willow communities that are composed of less preferred species are experiencing light browsing intensity while more preferred willow species such as planeleaf, whiplash, and Drummond are experiencing higher browse intensity.

Planeleaf willow communities appear heavily browsed and stunted in growth throughout much of the Snowy Range. Most planeleaf willows are less than 1 meter tall and are kept from growing taller by browsing pressure. While it's difficult to say where the browsing pressure is coming from, it is likely a mix of both domestic and wild ungulates including deer, elk, and moose. Baigas and Olson (2008) documented a high degree of overlap between non-winter and winter habitat use along riparian corridors in the Snowy Range moose herd unit, suggesting that many willow communities are likely being used year-round by moose. This undoubtedly contributes to the high browsing pressure we are seeing in many of our willow communities.

Moose populations typically thrive when they first become established and that is likely what we are seeing in the Snowy Range Moose herd. However, monitoring this population and available habitat in the herd unit is essential, as we have seen other Wyoming moose herds experience population crashes if they exceed carrying capacity. It is crucial that we manage moose numbers at appropriate densities to prevent habitat damage and subsequent population declines. The 950 ±20% moose postseason population objective acknowledges that the current estimated moose population is at the upper end of the objective range. It also allows us the opportunity to address concerns of habitat damage by increasing harvest in some or all portions of the herd unit.

*Harvest*

Harvest will continue to be monitored to assure older age class bulls are maintained in the population. Harvest survey and hunter comments will be evaluated with the goal of maintaining high bull hunter success. Check station records, and hunter submitted moose teeth will be used to assess whether secondary management objectives are being met. The secondary management

objectives will help ensure we are balancing opportunity to hunt moose with the ability for hunters to harvest mature bulls. This will be accomplished by managing for the average age of harvested bulls to be >4.5 years of age.

*Proposed Objective*

Moose have become well established in the Snowy Range, Sierra Madres, and Pole Mountain areas with an estimated population of approximately 1,000 animals in winter 2024. Moose require proactive management and need to be managed at appropriate densities to maintain healthy populations and prevent future declines. We believe the current moose population is at or slightly above the carrying capacity of available habitats in the herd unit, therefore, we recommend a postseason population objective of 950 moose. The secondary management objectives will be maintained to help ensure we are balancing the opportunity to hunt moose with the ability for hunters to harvest mature bulls. To evaluate the habitat secondary management objective we plan to continue LD Index surveys. In order to carefully monitor this herd we plan to conduct an aerial survey each year, with an improved composition abundance survey design. During this survey, moose will be classified by sex and age and we will also obtain a low-precision abundance estimate. We also plan to conduct a sightability survey once every 5 years, as funding permits. We will use the PopR IPM population estimate to determine the annual status of the herd in relation to the postseason population objective.

*Public Outreach*

We plan to discuss this objective change during the 2024 public information gathering meetings. We have not identified additional constituents that we will need to engage with regarding this proposed objective change. After those meetings, we will decide if additional outreach is necessary before proceeding with a final proposal to the Commission in July.

TC