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ACKNOWLEDGEMENT

The field data contained in these reports are the result of the combined efforts of Sheridan Region Wildlife Division personnel, including the District Wildlife Biologists, District Game Wardens, Access Yes Game Warden, Habitat Biologist, Wildlife Technician, Wildlife Management Coordinator, Regional Supervisor, and other Department personnel. The authors appreciate all those who assisted with data collection.

2021 - JCR Evaluation Form

SPECIES: Pronghorn

PERIOD: 6/1/2021 - 5/31/2022

HERD: PR309 - PUMPKIN BUTTES

HUNT AREAS: 23

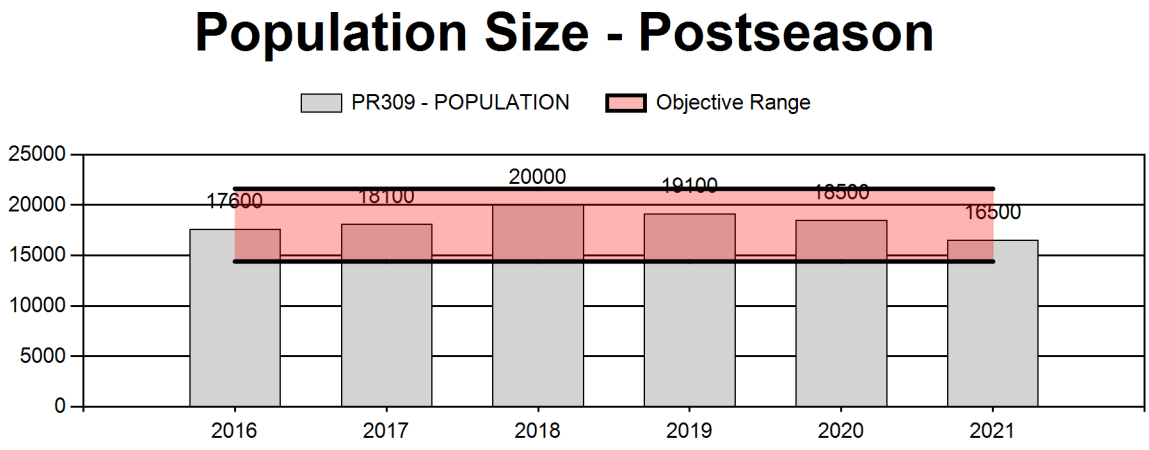
PREPARED BY: ERIKA PECKHAM

	2016 - 2020 Average	2021	2022 Proposed
Population:	18,660	16,500	14,600
Harvest:	2,572	2,106	1,888
Hunters:	2,675	2,381	2,100
Hunter Success:	96%	88%	90%
Active Licenses:	2,854	2,493	2,100
Active License Success:	90%	84%	90%
Recreation Days:	7,722	6,811	6,200
Days Per Animal:	3.0	3.2	3.3
Males per 100 Females	49	44	
Juveniles per 100 Females	74	79	

Population Objective (± 20%) :	18000 (14400 - 21600)
Management Strategy:	Private Land
Percent population is above (+) or below (-) objective:	-8.3%
Number of years population has been + or - objective in recent trend:	4
Model Date:	2/9/2022

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

	JCR Year	Proposed
Females ≥ 1 year old:	10.3%	15%
Males ≥ 1 year old:	55.4%	40%
Proposed change in post-season population:	.9%	-12%



2022 HUNTING SEASONS
PUMPKIN BUTTES PRONGHORN HERD (PR309)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
23	1	Aug. 15	Sept. 30	Oct. 1	Oct. 31	550	Any antelope
23	2	Aug. 15	Sept. 30	Oct. 1	Oct. 31	1,300	Any antelope valid on private land
23	6	Aug. 15	Sept. 30	Oct. 1	Oct. 31	300	Doe or fawn
23	7	Aug. 15	Sept. 30	Oct. 1	Oct. 31	600	Doe or fawn valid on private land

2021 Hunter Satisfaction: 76% Satisfied, 15% Neutral, 9% Dissatisfied

2022 Management Summary

1.) Hunting Season Evaluation: The 2022 license issuance was designed to address a declining population. This herd has been in a decline since 2018, according to the model, with field observations indicating that is has likely been declining for longer. This more recent decline can be explained by the relatively harsh winter of 2018-2019 and drought conditions that were experienced in 2020 and 2021. In addition to unfavorable rangeland conditions, the late summer and early fall of 2021 saw a severe outbreak of Epizootic Hemorrhagic Disease (EHD) and Blue Tongue Virus. Initial reports were confirmed with the state Vet Laboratory and verified thereafter by field personnel. Although these diseases naturally cycle through populations every 8 to 10 years, 2021 was extreme and had a negative, population-level effect. The severe drought and disease have had a negative impact on pronghorn in this herd.

As this is a private land herd, landowner surveys were also considered. 32% of respondents feel that the pronghorn numbers are below they would like to see them (n=28) in this herd. The remaining respondents felt they were where they would like to see them.

The reduction of Type 6 and 7 licenses was an effort to curb the decline that this population is experiencing. Comments from public land hunters both in the field and on the harvest survey were negative. The comments were focused on seeing very few animals in the poor rangeland conditions and overcrowding of the publicly accessible land, which is minimal in this Herd Unit. The allocation of licenses valid on public land versus private land is proportionate to the land status. However, one issue is that the largest tract of public land is contiguous to a private property enrolled in the Access Yes program. As demand for pronghorn licenses has increased, personnel have found that hunters are purchasing Type 2 and Type 7 licenses and utilizing these on the Access Yes property. Although technically private property, this was not the intended use for these licenses, as the property is a mixture of private and public land with no property boundaries marked. Additionally, the Access Yes area is more suited to mule deer hunting, with only a limited amount of pronghorn on the private land. This issue was addressed in the Access

Yes agreement, and will provide for a better quality hunt for the Type 1 and Type 6 license holders. It will also ensure that there are sufficient Type 2 and Type 7 licenses available for private land hunts. It is estimated that percentage of buck harvest over the preceding three-year period is 38% of the total bucks. With this license issuance, the herd is predicted to be 8% below objective, with 40% of the mature bucks being harvested.

2.) Population Modeling: The bio-year 2021 postseason population estimate for this herd unit from the WGFD spreadsheet model was approximately 12,500 pronghorn. In 2021, WGFD managers also began using PopR integrated population models (IPM) to estimate population indices for pronghorn. The 2021 postseason population estimate for this herd unit from the PopR IPM was approximately 14,600 pronghorn. Postseason population estimates from both models for 2021 were reported here to allow for comparison during this transitional year. The Department intends to replace the WGFD spreadsheet model with the PopR IPM in bio-year 2022. Although the abundance estimates are close, the trends are quite different and it seems that the spreadsheet model likely tracks more with what is occurring on the ground. The IPM has little fluctuation in the abundance estimate over time. The spreadsheet model indicates that this population peaked in 2007 and has overall been declining since that time, with some plateaus experienced. Field observations indicate that this herd has been slowly declining. Harvest success has fallen the last two years, even with license reduction. Additionally, it is likely the 2020 Line Transect was inaccurately inflated, and may have influenced the trends illustrated in the IPM.

2021 - JCR Evaluation Form

SPECIES: Pronghorn

PERIOD: 6/1/2021 - 5/31/2022

HERD: PR318 - CRAZY WOMAN

HUNT AREAS: 22, 113

PREPARED BY: ZACH TURNBULL

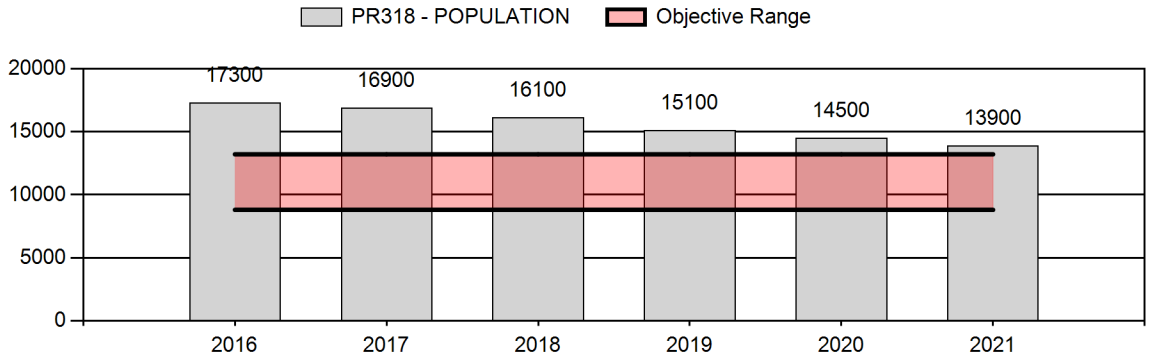
	2016 - 2020 Average	2021	2022 Proposed
Population:	15,980	13,900	12,400
Harvest:	1,629	1,275	850
Hunters:	1,805	1,760	1,150
Hunter Success:	90%	72%	74%
Active Licenses:	1,960	1,879	1,225
Active License Success:	83%	68%	69%
Recreation Days:	6,110	7,196	5,000
Days Per Animal:	3.8	5.6	5.9
Males per 100 Females	50	58	
Juveniles per 100 Females	73	75	

Population Objective (± 20%) :	11000 (8800 - 13200)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	26%
Number of years population has been + or - objective in recent trend:	5
Model Date:	2/17/2022

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

	JCR Year	Proposed
Females ≥ 1 year old:	8%	13%
Males ≥ 1 year old:	30%	34%
Proposed change in post-season population:	-14%	-11%

Population Size - Postseason



2022 Hunting Seasons
Crazy Woman Pronghorn Herd Unit (PR318)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
22	1	Aug. 15	Sep. 30	Oct. 1	Oct. 31	700	Any antelope
22	6			Sep. 1	Sep. 30	300	Doe or fawn valid on private land north of Crazy Woman Creek
22	6	Aug. 15	Sep. 30	Oct. 1	Oct. 31		Doe or fawn valid in the entire area
113	1	Aug. 15	Sep. 30	Oct. 1	Oct. 31	150	Any antelope
113	2	Aug. 15	Sep. 30	Oct. 11	Oct. 31	150	Any antelope
113	6	Aug. 15	Sep. 30	Oct. 1	Oct. 31	100	Doe or fawn

2021 Hunter Satisfaction: 68% Satisfied, 15% Neutral, 18% Dissatisfied

2022 Management Summary

1.) Hunting Season Evaluation: Significantly lower hunter satisfaction (68% satisfied) was reported in 2021 as compared to recent years (84% average from 2016-2019). Additional harvest survey efforts in 2021 indicated that a higher percentage of hunters in HA 22 use the assistance of an outfitter or hunt privately accessed lands. In contrast, a higher percentage of hunters in HA 113 do not use an outfitter, and hunt primarily on publicly accessed lands. All licenses sold out in the first draw for the third consecutive year. Some hunter crowding is to be expected on public lands within the herd unit. Hunters continue to comment on lack of public land and or access. Drought persisted through the 2021 season, impacting available forage and the availability of water.

Epizootic hemorrhagic disease, and to a lesser extent bluetongue, affected antelope through the fall and summer months, likely having population level impacts. Of 14 landowner survey replies; 36% indicated populations were below desired levels and 57% indicated populations were near desired levels. A number of hunters, landowners and outfitters expressed concerns over disease and a low abundance. From 2016-2020 hunter success for all license types was 80-89%, in 2021 success was reported at 72%. The estimated percentage of buck harvest over the preceding three-year period was 29% of the total bucks. With this license issuance, 34% of the mature bucks are predicted to be harvested in 2022. Reduced success, lower landowner satisfaction and a declining population abundance estimate led to more conservative seasons and licenses in 2022.

2.) Management Objective Review: Scheduled for 2023.

3.) Line Transect Survey: In May 2020 we conducted a line transect (LT) survey. We repeated the 2019 LT, because it resulted in an extremely high population estimate (18,865 ± 2,338) and did poorly meeting model assumptions. The 2020 survey met model assumptions with a resulting population estimate of (24,412 ± 3,646). This appears to be a gross over-estimation of the population and we have not been able to corroborate the results from these recent line transect surveys with any of the other population or harvest

metrics. We will continue to assess our methods for accuracy. It is possible that the LT surveys are a more accurate reflection of the population, in which case we would consider adjusting our herd unit objectives to better align with the best data available. A line transect survey will likely be flown in 2022 to try and better assess impacts of disease events and continuing drought and to inform the 2023 Hunt Area review.

4.) Population Modeling: The bio-year 2021 postseason population estimate for this herd unit from the WGFD spreadsheet model was approximately 12,800 pronghorn using semi-constant juvenile, and semi-constant adult survival (SCJ/SCA). The model has a good fit, with a value of 81 and an AICc of 90. While the model appears to produce a reasonable population estimate it conflicts with many harvest metrics and field observations. Most metrics and observations indicate the population is trending down, while the model of best fit indicates an upward trend.

In 2021, WGFD managers also began using PopR integrated population models (IPM) to estimate population indices for pronghorn. The 2021 postseason population estimate for this herd unit from the PopR IPM was approximately 16,600 (CL = 14,100 – 19,000) pronghorn. This estimate appears high, but does look to adequately represent field observations and other decreasing population measures. Postseason population estimates from both models for 2021 were reported here to allow for comparison during this transitional year. The Department intends to replace the WGFD spreadsheet model with the PopR IPM in bio-year 2022. For bio-year 2021 PopR model was utilized, as it appeared to most accurately describe the observed population trend. It is likely that additional population sampling will better PopR results in the future.

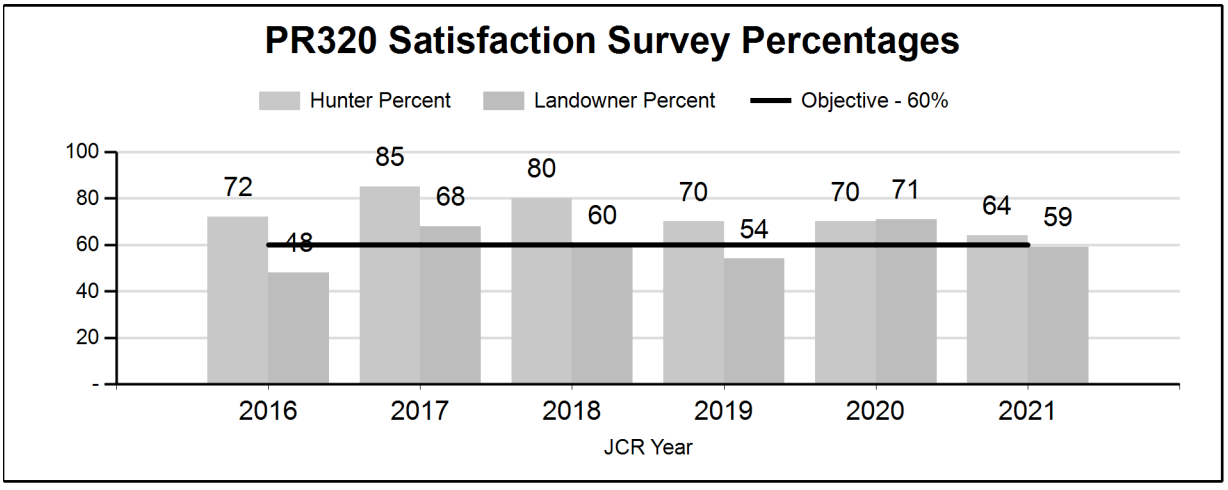
2021 - JCR Evaluation Form

SPECIES: Pronghorn
HERD: PR320 - HAZELTON
HUNT AREAS: 20, 102

PERIOD: 6/1/2021 - 5/31/2022
PREPARED BY: ZACH TURNBULL

	2016 - 2020 Average	2021	2022 Proposed
Hunter Satisfaction Percent	76%	64%	70%
Landowner Satisfaction Percent	60%	59%	60%
Harvest:	1,129	948	770
Hunters:	1,353	1,392	1,150
Hunter Success:	83%	68%	67%
Active Licenses:	1,500	1,503	1,000
Active License Success:	75%	63%	77%
Recreation Days:	5,181	5,883	4,500
Days Per Animal:	4.6	6.2	5.8
Males per 100 Females:	75	60	
Juveniles per 100 Females	77	69	

Satisfaction Based Objective	60%
Management Strategy:	Private Land
Percent population is above (+) or (-) objective:	2%
Number of years population has been + or - objective in recent trend:	0



2022 Hunting Seasons
Hazelton Pronghorn Herd Unit (PR320)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
20	1	Aug. 15	Oct. 14	Oct. 15	Nov. 15	350	Any antelope
20	6	Aug. 15	Oct. 14	Oct. 15	Nov. 15	250	Doe or fawn
102	1	Aug. 15	Oct. 14	Oct. 15	Nov. 15	400	Any antelope
102	6			Sep. 1	Sep. 30	400	Doe or fawn valid on private land
102	6	Aug. 15	Oct. 14	Oct. 15	Nov. 15		Doe or fawn valid in the entire area

2021 Hunter Satisfaction: 64% Satisfied, 12% Neutral, 23% Dissatisfied
2021 Landowner Satisfaction: 5% Above, 59% At, 36% Below Desired Levels

2022 Management Summary

1.) Hunting Season Evaluation: Multiple factors have likely led to a decline in pronghorn numbers and hunter satisfaction. Success and days/animal have worsened over the past 10 years, particularly in HA 20. Hunter harvest, hunter satisfaction and landowner satisfaction remained relatively constant in HA 102. Increased survey effort in the Region indicated the majority of unsuccessful pronghorn hunters were primarily hunting public lands. These publicly accessible lands, particularly in HA 20, seem to suffer crowding and decreased success. In 2021 fawn abundance in HA20 was estimated at 69/100. Fawns/100 does during the last 5 years averaged 72/100 compared to the previous 5 year period that averaged 93/100 in HA 20. The estimated percentage of buck harvest over the preceding three-year period was 29% of the total bucks. With this license issuance, 30% of the mature bucks are predicted to be harvested in 2022. Drought continues to likely impact population numbers and range conditions. An October 13th snowstorm immediately prior to the October 15th opener, likely affected antelope distribution, landowner perception and hunter success. Weather made travel difficult, with many roads impassable. Antelope, deer and elk hunters were largely concentrated in the same accessible areas and crowding issues were exacerbated.
2.) Management Objective Review: Scheduled for 2023.

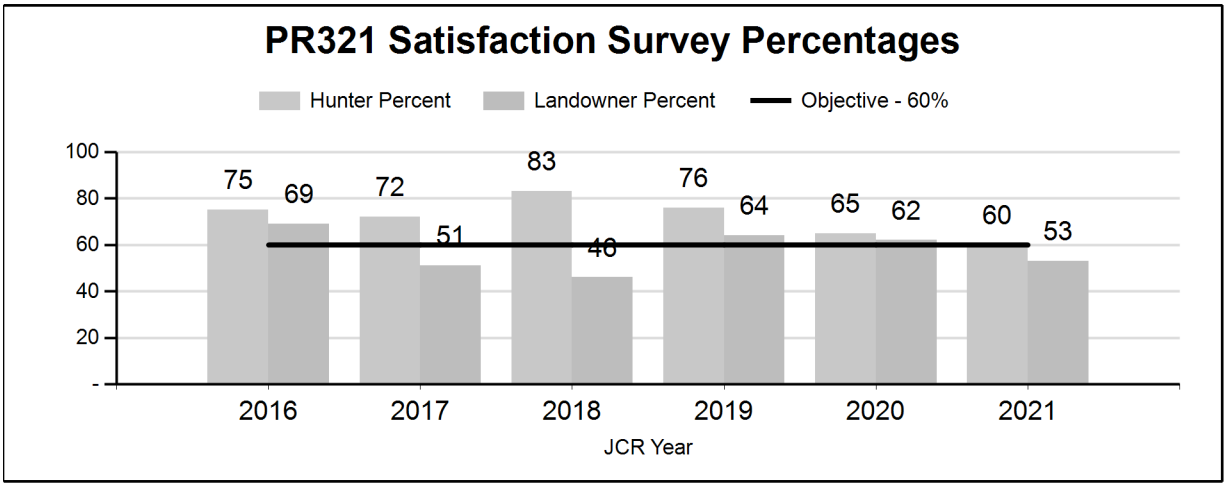
3.) Landowner Survey: The annual landowner survey was mailed out January 3, 2022 with a February 1 deadline for return. Twenty-two (22) landowners from PR320 responded, which is less than the previous three years. Landowner satisfaction was acceptable, with 59% reporting populations at desired levels and a preference for similar season structure. An increased amount of landowners requested a reduction in licenses (36%) and only one landowners requested more license

2021 - JCR Evaluation Form

SPECIES: Pronghorn
HERD: PR321 - LEITER
HUNT AREAS: 10, 15-16

PERIOD: 6/1/2021 - 5/31/2022
PREPARED BY: TIM THOMAS

	2016 - 2020 Average	2021	2022 Proposed
Hunter Satisfaction Percent	74%	60%	65%
Landowner Satisfaction Percent	58%	53%	60%
Harvest:	1,767	1,370	849
Hunters:	2,304	2,037	1,336
Hunter Success:	77%	67%	64 %
Active Licenses:	2,498	2,173	1,400
Active License Success:	71%	63%	61 %
Recreation Days:	7,919	7,537	4,500
Days Per Animal:	4.5	5.5	5.3
Males per 100 Females:	50	36	
Juveniles per 100 Females	65	63	
Satisfaction Based Objective			60%
Management Strategy:			Private Land
Percent population is above (+) or (-) objective:			-4%
Number of years population has been + or - objective in recent trend:			1



2022 HUNTING SEASONS
LEITER PRONGHORN HERD (PR321)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
10	1	Aug. 15	Sep. 30	Oct. 1	Oct. 14	200	Any antelope
	6	Aug. 15	Sep. 30	Oct. 1	Oct. 31	200	Doe or fawn
15	1	Aug. 15	Sep. 30	Oct. 1	Oct. 14	500	Any antelope
	6	Aug. 15	Sep. 30	Oct. 1	Oct. 31	400	Doe or fawn
16	1	Aug. 15	Sep. 30	Oct. 1	Oct. 14	250	Any antelope
	6	Aug. 15	Sep. 30	Oct. 1	Oct. 31	50	Doe or fawn

2021 Hunter Satisfaction Estimate: 60%
2021 Landowner Satisfaction Estimate: 53%

2022 Management Summary

1.) Hunting Season Evaluation: This herd unit is predominantly private land, with very limited accessible public lands supporting pronghorn. Private land concerns generally inform hunting season strategies. Based on responses from an annual survey, most landowners (n=17; 52%) felt they were at desired levels of pronghorn on their property. The rest of the landowners felt there were either too few (n=11; 33%) or too many (n=5; 15%) pronghorn. This is down from recent years when 30% or more of landowners felt there were too many pronghorn. Hunter satisfaction was down to 60% from 65%, the lowest since 2012, when we started collecting this parameter.

Managers received numerous comments from hunters, landowners and outfitters that pronghorn numbers seemed lower in 2021. Factors likely influencing this perception was a shift in distribution due to extreme drought conditions the past two years, mortalities due to EHDV and BTV this year, and an actual reduction in the population. Overall, harvest and hunter success have trended down and effort, as measured by number of days hunted per animal harvested, has trended up over the past 3-4 years, further suggesting a decline in the population. In Hunt Area 10, buck harvest declined 50% and effort more than doubled compared to 2020; and in Hunt Area 16, buck harvest declined 21% while effort increased 0.6 days/harvest.

Production and recruitment, measured by observed classifications ratios, have lagged in recent years. Overall, we observed 36 bucks:100 does, compared to the five year average of 49 bucks:100 does. Fawn production the past five years has average only 64 fawns:100 does, suggesting below desired production to sustain the level of harvest during those same years.

In response to the decline in the population, decline in hunter satisfaction and a decline in production, we reduced Type 1 licenses from 1,300 to 950 and Type 6 licenses from 1,400 to 650.

We observed 36 bucks:100 does during August classification surveys, the lowest observed buck:doe ratio in at least 30 years. This satisfies the secondary management objective ($\geq$ 30 bucks:100 does) and supports the proposed level of buck harvest. In Area 16, we observed 27 bucks:100 does, the lowest since at least 1982 and the only hunt area below the minimum desired

level. Over the past three years, we have harvested an estimated average of 38% of adult male pronghorn, above the desired minimum harvest rate of 25% for recreational herds.

2.) Management Objective Review: This herd is schedule for the next 5-year herd unit review in 2023.

3.) Population Modeling: We estimated a postseason population of 2,625 pronghorn based on the WGFD TSJ,CA spreadsheet model for Bio-Year 2021 (i.e. June 1, 2021-May 30, 2022). In 2021, we switched modeling software to SpeedGoat, a PopR based integrated population model (IPM), which resulted in a postseason population estimate of ~8,000 pronghorn (95% confidence level = 7,028-9,115). Postseason population estimates from both models were reported this year for comparison purposes. Going forward, we will only use SpeedGoat. While the IPM estimated a significantly higher population than the spreadsheet model, the population trend in both models was similar. Managers think the IPM model better represents perceived population dynamics.

2021 - JCR Evaluation Form

SPECIES: Pronghorn

PERIOD: 6/1/2021 - 5/31/2022

HERD: PR339 - NORTH BLACK HILLS

HUNT AREAS: 1-3, 18-19

PREPARED BY: ERIKA PECKHAM

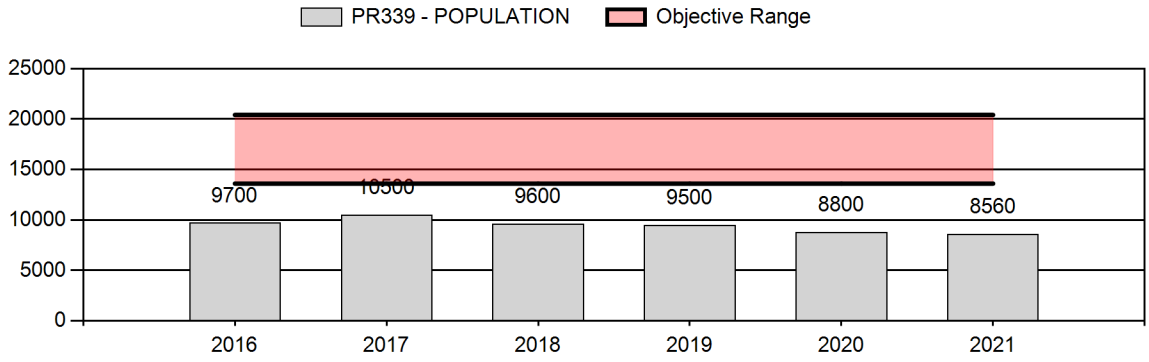
	2016 - 2020 Average	2021	2022 Proposed
Population:	9,620	8,560	8,050
Harvest:	1,336	1,031	970
Hunters:	1,496	1,213	1,100
Hunter Success:	89%	85%	88%
Active Licenses:	1,696	1,354	1,300
Active License Success:	79%	76%	75%
Recreation Days:	5,033	4,198	4,000
Days Per Animal:	3.8	4.1	4.1
Males per 100 Females	46	38	
Juveniles per 100 Females	71	62	

Population Objective (± 20%) :	17000 (13600 - 20400)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	-49.6%
Number of years population has been + or - objective in recent trend:	6
Model Date:	2/8/2022

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

	JCR Year	Proposed
Females ≥ 1 year old:	8%	8%
Males ≥ 1 year old:	58%	61%
Total:	10%	11%
Proposed change in post-season population:	-7%	-6%

Population Size - Postseason



2022 HUNTING SEASONS
NORTH BLACK HILLS PRONGHORN HERD (PR339)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
1	1	Aug. 15	Sept. 30	Oct. 1	Nov.20	250	Any antelope
1	6	Aug. 15	Sept. 30	Oct. 1	Nov.20	75	Doe or fawn
2	1	Aug. 15	Sept. 30	Oct. 1	Nov.20	150	Any antelope
2	6	Aug. 15	Sept. 30	Oct. 1	Nov.20	100	Doe of fawn
3	1	Aug. 15	Sept. 30	Oct. 1	Nov.20	200	Any antelope
3	6	Aug. 15	Sept. 30	Oct. 1	Nov.20	50	Doe or fawn
18	1	Aug. 15	Sept. 30	Oct. 1	Oct. 20	200	Any antelope
18	6	Aug. 15	Sept. 30	Oct. 1	Oct. 20	25	Doe or fawn
18	7	Aug. 15	Sept. 30	Oct. 1	Oct. 20	50	Doe or fawn valid private land
19	1	Aug. 15	Sept. 30	Oct. 1	Oct. 20	275	Any antelope
19	7	Aug. 15	Sept. 30	Oct. 1	Oct. 20	100	Doe or fawn valid private land

2021 Hunter Satisfaction: 80% Satisfied, 12% Neutral, 8% Dissatisfied

2022 Management Summary

1.) Hunting Season Evaluation: The North Black Hills Herd Unit is predominantly private land access with the exception of Hunt Area 18, and to some degree, Hunt Area 1. This herd has been trending steadily downward for the last six years. The decline in recent years can be explained by the relatively harsh winter of 2018-2019 and drought conditions that were experienced in 2020 and 2021. In addition to unfavorable rangeland conditions, the late summer and early fall of 2021 experienced a severe outbreak of Epizootic Hemorrhagic Disease (EHD) and Blue Tongue Virus. Although these diseases naturally cycle through populations every 8 to 10 years, 2021 was severe and had a negative, population-level effect.

License numbers were reduced in all but Hunt Area 3, though they were reduced in this Hunt Area the previous two years. The license issuance for Hunt Area 18 is noteworthy. Although harvest success in this area was low (69%), and hunter comments and personnel observations indicated that numbers were depressed, input received at a landowner meeting in February of 2022 suggested otherwise. Due to these comments, a fixed-wing flight was conducted. In 2.5 hours of flight time,

around 1,000 pronghorn were observed in the areas where they were reported. These pronghorn were distributed primarily along the Powder River and on private land. The Type 7 license was added to address the concern from these landowners that there are more pronghorn than desired.

With the severe drought conditions, the pronghorn were distributed differently than is typical throughout the year. An early October snowstorm resulted in large groupings of pronghorn that is more typical of winter. This alternative distribution of pronghorn made classification surveys difficult and likely contributed to lower hunter success in Hunt Area 18.

As this is a private land herd, landowner surveys are also considered. The majority of respondents were almost evenly split on there being the right amount or too few pronghorn (n=31).

It was estimated that percentage of buck harvest over the preceding three-year period is 57% of the total bucks. With this license issuance, the herd is predicted to be 50% below objective, with 61% of the mature bucks being harvested.

2.) Population Modeling: The bio-year 2021 postseason population estimate for this herd unit from the WGFD spreadsheet model was approximately 12,900 pronghorn. In 2021, WGFD managers also began using PopR integrated population models (IPM) to estimate population indices for pronghorn.The 2021 postseason population estimate for this herd unit from the PopR IPM was approximately 8,050 pronghorn. Postseason population estimates from both models for 2021 were reported here to allow for comparison during this transitional year. The Department intends to replace the WGFD spreadsheet model with the PopR IPM in bio-year 2022. Although there is a disparity in the abundance estimates of the models, they both illustrate a downward trend over the last 7 years.

2021 - JCR Evaluation Form

SPECIES: Pronghorn

PERIOD: 6/1/2021 - 5/31/2022

HERD: PR351 - GILLETTE

HUNT AREAS: 17

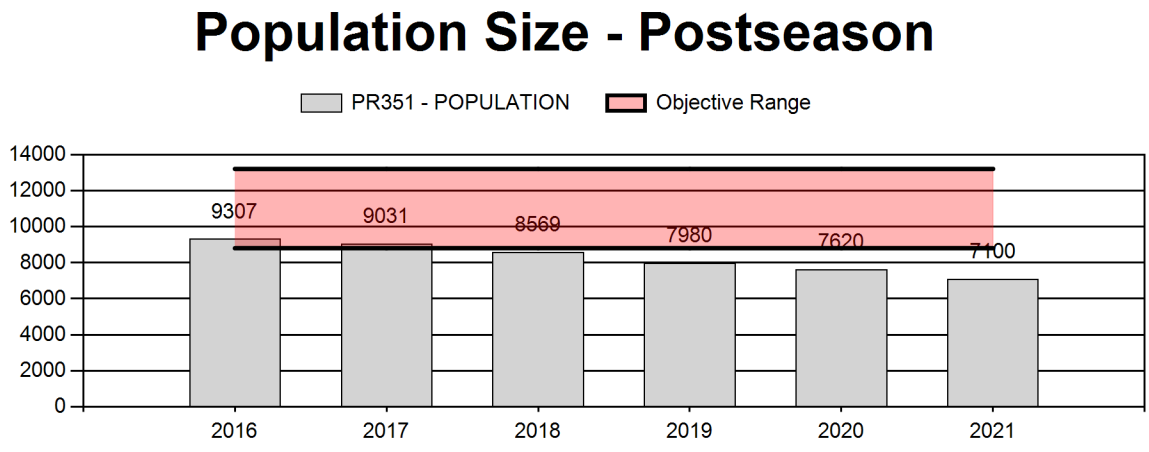
PREPARED BY: ERIKA PECKHAM

	2016 - 2020 Average	2021	2022 Proposed
Population:	8,501	7,100	6,600
Harvest:	1,048	730	645
Hunters:	1,221	945	850
Hunter Success:	86%	77%	76 %
Active Licenses:	1,282	980	800
Active License Success:	82%	74%	81 %
Recreation Days:	4,087	3,283	3,000
Days Per Animal:	3.9	4.5	4.7
Males per 100 Females	49	36	
Juveniles per 100 Females	51	45	

Population Objective (± 20%) :	11000 (8800 - 13200)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	-35.5%
Number of years population has been + or - objective in recent trend:	5
Model Date:	2/9/2022

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

	JCR Year	Proposed
Females ≥ 1 year old:	1.8%	8%
Males ≥ 1 year old:	30%	51%
Proposed change in post-season population:	6.2%	-8%



2022 HUNTING SEASONS
GILLETTE PRONGHORN HERD (PR351)

Hunt Area	Type	Archery Dates Opens	Archery Dates Closes	Dates of Seasons Opens	Dates of Seasons Closes	Quota	License	Limitations
17	1	Aug.15	Sep. 30	Oct. 1	Oct. 20	800	Limited quota	Any antelope
17	6	Aug.15	Sep. 30	Oct. 1	Oct. 20	100	Limited quota	Doe or fawn

2021 Hunter Satisfaction: 70% Satisfied, 17% Neutral, 13% Dissatisfied

1.) Hunting Season Evaluation: The 2022 license issuance was designed to address a declining population. This herd has been in a decline since 2016, according to the model, which aligns with field observations. This more recent decline can be explained by the relatively harsh winter of 2018-2019 and drought conditions that were experienced in 2020 and 2021. Consequently, observed fawn ratios in this herd have been exceptionally low in the preceding five-year period, averaging only 48:100.

In addition to unfavorable rangeland conditions, the late summer and early fall of 2021 experienced a severe outbreak of Epizootic Hemorrhagic Disease (EHD) and Blue Tongue Virus. Although these diseases naturally cycle through populations every 8 to 10 years, 2021 was severe and had a negative, population-level effect.

With the severe drought conditions, the pronghorn were distributed differently than is typical throughout the year. An early October snowstorm resulted in large groupings of pronghorn that is more typical of winter. This alternative distribution of pronghorn made classification surveys difficult.

The reduction of Type 1 and 6 licenses is an effort to curb the decline that this population is experiencing. Comments from both hunters and landowners expressed concern with the numbers of pronghorn. As this is a predominantly private land herd landowner surveys are considered. Fourty-three % of respondents (n=49) feel that the antelope are at levels below where they would like them to be. Additionally, three respondents mentioned having a shortened season. It is estimated that percentage of buck harvest over the preceding three-year period is 38% of the total bucks. With this license issuance, the herd is predicted to be 35% below objective, with 51% of the mature bucks being harvested.

In addition to a reduction of licenses, a shortened season was implemented. The month long season was first initiated in 2004. At this time, the herd was over objective. The justification at the time indicated that extending the season could give landowners the ability to take more hunters in the hopes it would bring the herd down closer to objective. With the downward trend and poor habitat conditions, it seemed appropriate to shorten the season to minimize pressure on the population. Additionally, many of the adjacent hunt areas have seasons that run from Oct. 1-October 15. This would put this area more in line with these areas.

2.) Population Modeling: The bio-year 2021 postseason population estimate for this herd unit from the WGFD spreadsheet model was approximately 8,000 pronghorn. In 2021, WGFD managers also began using PopR integrated population models (IPM) to estimate population indices for pronghorn.The 2021 postseason population estimate for this herd unit from the PopR IPM was approximately 6,600 pronghorn. Postseason population estimates from both models for 2021 were reported here to allow for comparison during this transitional year. The Department intends to replace the WGFD spreadsheet model with the PopR IPM in bio-year 2022. Although there is a disparity in the abundance estimates of the models, they both illustrate a downward trend over the last several years.

2021 - JCR Evaluation Form

SPECIES: Pronghorn

PERIOD: 6/1/2021 - 5/31/2022

HERD: PR352 - MIDDLE FORK

HUNT AREAS: 21

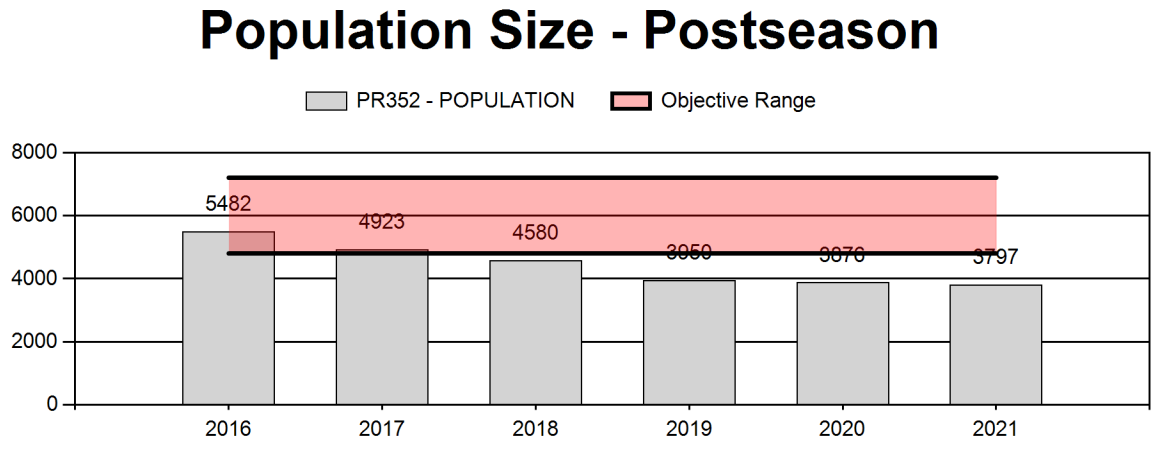
PREPARED BY: ZACH TURNBULL

	2016 - 2020 Average	2021	2022 Proposed
Population:	4,562	3,797	3,723
Harvest:	572	380	260
Hunters:	695	617	310
Hunter Success:	82%	62%	84%
Active Licenses:	762	675	340
Active License Success:	75%	56%	76%
Recreation Days:	2,309	2,807	1,500
Days Per Animal:	4.0	7.4	5.8
Males per 100 Females	47	39	
Juveniles per 100 Females	74	63	

Population Objective (± 20%) :	6000 (4800 - 7200)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	-36.7%
Number of years population has been + or - objective in recent trend:	4
Model Date:	2/17/2022

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

	JCR Year	Proposed
Females ≥ 1 year old:	4%	14%
Males ≥ 1 year old:	27%	45%
Proposed change in post-season population:	-9%	-2%



2022 Hunting Seasons
Middle Fork Pronghorn Herd Unit (PR352)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
21	1	Aug. 15	Oct. 14	Oct. 15	Oct. 31	400	Any antelope
21	6	Aug. 15	Oct. 14	Oct. 15	Oct. 31	100	Doe or fawn

2021 Hunter Satisfaction: 59% Satisfied, 16% Neutral, 25% Dissatisfied

2022 Management Summary

1.) Hunting Season Evaluation: The goal of the current season structure is to bring the population back to objective, while minimizing damage and reducing crowding on public lands. Hunter satisfaction and landowner comments support a quota reduction. Some hunter crowding on public lands is status quo, however a few concerning patterns are beginning to emerge following quota increases implemented in 2018. On average, the number of hunters in the last four years has increased, but harvest level have decreased during the same period. Between 2011-2018 overall harvest success averaged 79%. From 2019-2021 harvest success declined to an average of 62%, with a combined herd unit success of 56% in 2021. The estimated percentage of buck harvest over the preceding three-year period was 36% of the total bucks. With this license issuance, 45% of the mature bucks are predicted to be harvested in 2022. It is likely that drought has impacted pronghorn numbers and forage production. Fawn ratios in the last two years (63-68:100 does) were notably lower than those observed over the last decade (2010-2018 average was 81 fawns:100 does), providing further support for quota reductions. Nearly half (44%) of landowner survey respondents (n=9) indicated that pronghorn numbers were below desired levels.

2.) Management Objective Review: Scheduled for 2023.

3.) Line Transect Survey: In May 2021 we conducted a line transect (LT) survey. The survey was completed in eight hours over two days using a Husky Aviat supplied by Flightline LFS, Inc and one observer. The 2021 survey estimated a population of (3,654±503) which is very similar to the PopR May 31 Abundance (no fawns) population estimate of 3,517 for 2021. The survey appeared to meet most model assumptions and had relatively small standard error.

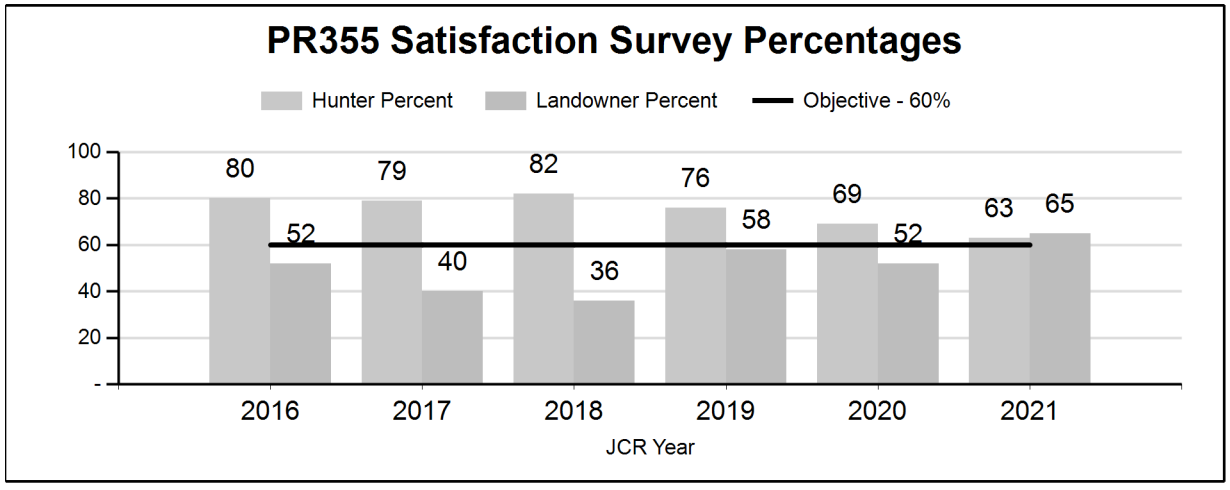
4.) Population Modeling: The bio-year 2021 postseason population estimate for this herd unit from the WGFD spreadsheet model was approximately 4,600 pronghorn. In 2021, WGFD managers also began using PopR integrated population models (IPM) to estimate population indices for pronghorn. The 2021 postseason population estimate for this herd unit from the PopR IPM was approximately 3,800 (CL = 3,200 – 4,450) pronghorn. Postseason population estimates from both models for 2021 were reported here to allow for comparison during this transitional year. Both models suggest the population is below objective (6,000). The Department intends to replace the WGFD spreadsheet model with the PopR IPM in bio-year 2022. PopR models and estimates were used in bio-year 2021. These models had an Rhat Max of 1.14 and tracked population input well. All “effort variables” were run with license numbers and hunter numbers producing similar estimates and Rhat estimates. License numbers appeared to produce an estimate that best matched field observations and reports.

2021 - JCR Evaluation Form

SPECIES: Pronghorn
HERD: PR355 - BECKTON
HUNT AREAS: 109

PERIOD: 6/1/2021 - 5/31/2022
PREPARED BY: TIM THOMAS

	2016 - 2020 Average	2021	2022 Proposed
Hunter Satisfaction Percent	77%	63%	65%
Landowner Satisfaction Percent	48%	65%	65%
Harvest:	384	368	262
Hunters:	509	591	432
Hunter Success:	75%	62%	61 %
Active Licenses:	576	643	475
Active License Success:	67%	57%	55 %
Recreation Days:	1,892	2,298	1,500
Days Per Animal:	4.9	6.2	5.7
Males per 100 Females:	29	30	
Juveniles per 100 Females	66	37	
Satisfaction Based Objective			60%
Management Strategy:			Private Land
Percent population is above (+) or (-) objective:			4%
Number of years population has been + or - objective in recent trend:			2



2022 HUNTING SEASONS
BECKTON PRONGHORN HERD (PR 355)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
109	1	Aug. 15	Sep. 14	Sep. 15	Nov. 30	300	Any antelope
	6	Aug. 15	Sep. 14	Sep. 15	Nov. 30	200	Doe or fawn

2021 Hunter Satisfaction Estimate: 63%
2021 Landowner Satisfaction Estimate: 65%

2021 Management Summary

1.) Hunting Season Evaluation: This herd unit is predominantly private land, with very limited public land access to areas that support pronghorn. Private land concerns inform hunting season strategies. Based on responses from an annual survey, all but three landowners felt pronghorn were at (n=13; 59%) or above (n=6; 27%) desired levels on their property. In recent years, most landowners felt the population was over desired level, suggesting a decline in this population.

Hunter participation on Type 1 licenses was 88% and hunter success was 71%. Hunter participation on Type 6 licenses was only 84% and success was 45%, the lowest since 1993. Even with all of the difficulties facing hunters (e.g. limited access to private lands, limited public lands, low pronghorn densities) and low success rate, hunter satisfaction (63%) remained above the desired level of 60%, although it declined from 69% in 2020 and well below the 5-year average of 77%. The decline in hunter satisfaction is likely due to decreased pronghorn on the very limited accessible public lands. High hunting pressure on these limited public lands results in reduced numbers as animals are either harvested or moved to adjacent private lands. In response to the reduced population, and to alleviate hunting pressure on the limited public lands, we reduced Type 6 license by 200.

We observed only 30 bucks:100 does during August classification surveys, at the secondary management objective (i.e. ≥ 30 bucks:100 does). This reduction in the buck to doe ratio justifies a reduction in Type 1 licenses from 350 to 300.

Hunters harvested an estimated 74% of adult males in population on average over the past three years. This is an unrealistically high harvest rate, suggesting the population simulation models are underestimating population size.

2.) Management Objective Review: This herd is schedule for the next 5-year herd unit review in 2023.

3.) Population Modeling: We estimated a postseason population of 1,608 pronghorn based on the WGFD TSJ,CA spreadsheet model for Bio-Year 2021 (i.e. June 1, 2021-May 30, 2022). In 2021, we started using a PopR based integrated population model (IPM), which resulted in a postseason population estimate of 1,371 pronghorn (95% confidence level = 1,155-1,650). Postseason population estimates from both models were reported this year for comparison purposes. Going forward, we will transition to the PopR IMP. While the IPM estimated a slightly lower population than the spreadsheet model, the population trend in both models was similar.

2021 - JCR Evaluation Form

SPECIES: Mule Deer
PERIOD: 6/1/2021 - 5/31/2022

HERD: MD319 - POWDER RIVER

HUNT AREAS: 17-18, 23, 26
PREPARED BY: ERIKA PECKHAM

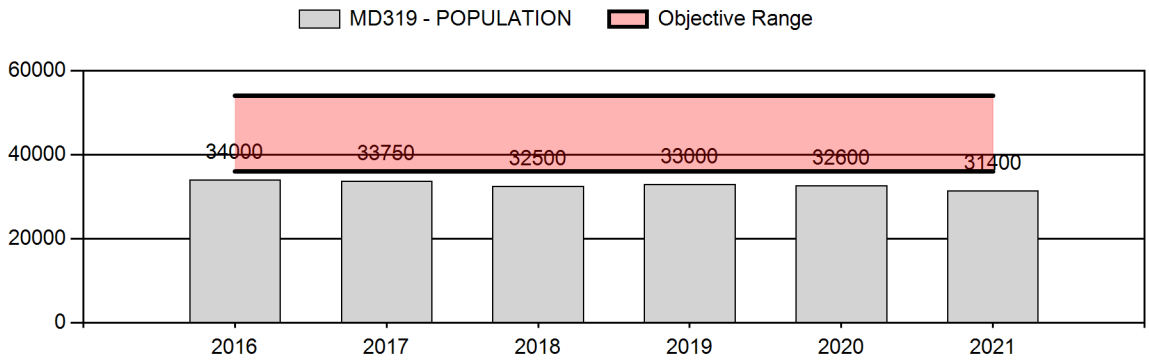
	2016 - 2020 Average	2021	2022 Proposed
Population:	33,170	31,400	31,660
Harvest:	2,884	2,342	2,250
Hunters:	4,246	3,924	3,700
Hunter Success:	68%	60%	61 %
Active Licenses:	4,382	4,039	3,800
Active License Success:	66%	58%	59 %
Recreation Days:	15,820	17,365	17,000
Days Per Animal:	5.5	7.4	7.6
Males per 100 Females	43	44	
Juveniles per 100 Females	61	51	

Population Objective (± 20%) :	45000 (36000 - 54000)
Management Strategy:	Private Land
Percent population is above (+) or below (-) objective:	-30.2%
Number of years population has been + or - objective in recent trend:	8
Model Date:	2/18/2022

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

	JCR Year	Proposed
Females ≥ 1 year old:	3.8%	4%
Males ≥ 1 year old:	25.2%	27%
Proposed change in post-season population:	-3.1%	1.01%

Population Size - Postseason



2022 HUNTING SEASONS
POWDER RIVER MULE DEER HERD (MD319)

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
17	Gen	Sep.1	Sept. 30	Oct. 1	Oct. 20		Antlered mule deer or any white-tailed deer
17	7	Sep. 1	Sept. 30	Oct. 1	Oct. 20	50	Doe or fawn valid on private land
18	Gen	Sep. 1	Sept. 30	Oct. 1	Oct. 20		Antlered mule deer or any white-tailed deer
18	7	Sep. 1	Sept. 30	Oct. 1	Oct. 20	100	Doe or fawn valid on private land
23	Gen	Sep. 1	Sept. 30	Oct. 1	Oct. 14		Antlered mule deer or any white-tailed deer
26	Gen	Sep. 1	Sept. 30	Oct. 1	Oct. 14		Antlered mule deer or any white-tailed deer
23, 26	7			Sep.1	Dec. 15	1,000	Doe or fawn valid on private land

2022 Region C nonresident quota: 2,000

2021 Hunter Satisfaction: 68% Satisfied, 15% Neutral, 17% Dissatisfied

2022 Management Summary

1.) Hunting Season Evaluation: All Hunt Areas within this Herd Unit are general season areas. License issuance was reduced by half in the 2022 hunting season, regarding the Type 7 licenses. These licenses are available to address depredation concerns although the population is below objective. Based on the harvest survey, it is estimated that less than 500 of those licenses valid in Hunt Area 23 and 26 were utilized to harvest Mule Deer and around 550 were used on White-tailed deer. The limitation changes to Hunt Areas 23 and 26 were made to simplify and standardize the language.

This herd has been well below objective for many years. This is likely due to various factors, including land use change and climatic conditions. Observed fawn ratios the last two years, 57:100 (2021) and 51:100 (2021), are well below the level required to maintain a population. In 2020, harvest success dropped 11%, to 57%, from a preceding 5-year average of 68%. The 2021 harvest success remained comparatively low at 58%. As harvest success dropped, effort required to harvest also increased in 2020 and 2021 (6.4 and 7.4 days per harvested animal, respectively). It is likely that the drought that was experienced in this time span is the cause for poor fawn ratios and declining numbers. In addition to drought conditions, a hemorrhagic disease outbreak in the late summer and early fall of 2021 was documented in this herd unit.

As this herd unit is comprised of primarily private land, a landowner survey is mailed out annually to gauge sentiments on the number of deer. Herd wide responses (n=96) indicate that 45% of

respondents feel deer numbers are where they would like, while 51% feel that the deer numbers are too low. In past years, there has been a disparity in responses depending on which side of the Powder River the response came from. The responses in 2021 indicated that most landowners felt similarly throughout the herd unit.

The population is predicted to remain 30% below objective with current license issuance.

2.) Population Modeling: The bio-year 2021 postseason population estimate for this herd unit from the WGFD spreadsheet model was approximately 32,200 mule deer. In 2021, WGFD managers also began using PopR integrated population models (IPM) to estimate population indices for mule deer. The 2021 postseason population estimate for this herd unit from the PopR IPM was approximately 31,400 mule deer, with a RHat Max of 1.05. Postseason population estimates from both models for 2021 were reported here to allow for comparison during this transitional year. The Department intends to replace the WGFD spreadsheet model with the PopR IPM in bio-year 2022. Although the abundance estimates are close, the trends are quite different over time. This herd currently has no survival data. It is possible with the research that is occurring in this area that this information may be available in the future and could further inform the IPM. Additionally, the methodology used for classification surveys is scheduled for review and revision this year, which could yield more meaningful ratio data.

3.) Research: Research in the Pumpkin Buttes and Powder River herd units is on-going. Hall Sawyer (West Inc., Laramie) is managing the study. The goals are to document movement in relation to sections of roadways with high rates of deer-vehicle collisions, as well as to document adult doe survival.

To date, adult survival has been alarmingly low. Chronic wasting disease and vehicle strikes predominate cause of death. Preliminary results also indicate an avoidance of disturbance and development in the study area. Delineated home ranges contain less disturbance than that present on the landscape. Deer in the project area are largely non-migratory, with only 1 deer out of 62 showing migratory behavior ((Sawyer, H. and A. Telander 2021. Surface disturbance and mule deer seasonal range use along the Interstate 90 Corridor. Western Ecosystems Technology, Inc., Laramie, Wyoming.) All collars from the project will drop in November 2022, at which point all data will be available for analysis.

2021 - JCR Evaluation Form

SPECIES: Mule Deer | PERIOD: 6/1/2021 - 5/31/2022

HERD: MD320 - PUMPKIN BUTTES

HUNT AREAS: 19, 29, 31 | PREPARED BY: TURNBULL

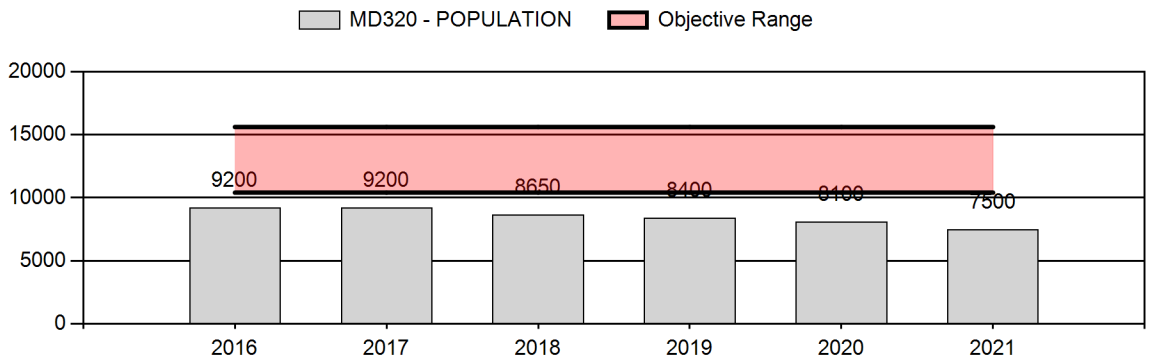
	2016 - 2020 Average	2021	2022 Proposed
Population:	8,710	7,500	7,200
Harvest:	644	454	430
Hunters:	1,042	889	800
Hunter Success:	62%	51%	54%
Active Licenses:	1,058	909	800
Active License Success:	61%	50%	54%
Recreation Days:	3,975	3,340	3,200
Days Per Animal:	6.2	7.4	7.4
Males per 100 Females	43	40	
Juveniles per 100 Females	62	42	

Population Objective (± 20%) :	13000 (10400 - 15600)
Management Strategy:	Private Land
Percent population is above (+) or below (-) objective:	-42.3%
Number of years population has been + or - objective in recent trend:	20
Model Date:	2/23/2022

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:	16%	29%
Proposed change in post-season population:	-5%	-4%

Population Size - Postseason



2022 Hunting Seasons
Pumpkin Buttes Mule Deer Herd Unit (MD320)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
19	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 20		Antlered mule deer or any white-tailed deer
19	7	Sep. 1	Sep. 30	Oct. 1	Oct. 20	50	Doe or fawn valid on private land
29	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 14		Antlered mule deer or any white-tailed deer
31	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 10		Antlered mule deer or any white-tailed deer

2022 Region C nonresident quota: 2,000

2021 Hunter Satisfaction: 60% Satisfied, 21% Neutral, 14% Dissatisfied

2022 Management Summary

1.) Hunting Season Evaluation: Current models and population metrics show downward population trends. The 2021 season had lower total harvest (n=454) then the previous 5 year average (n=644). Harvest effort, based on days per harvest, has increased markedly in particular the last two year (2020; 8.2 days to harvest, 2021 7.4 days to harvest). Low fawn ratios (42:100) were observed in 2021. This is the lowest ratio reported in a decade. Drought conditions resulted in noticeable deer distribution changes which likely impacted hunter success as well as observer effectiveness during classifications. Epizootic Hemorrhagic Disease (EHD) was observed and verified for the second consecutive year in the unit. While impacts to pronghorn and white-tailed deer were likely more significant, there certainly were impacts to mule deer numbers as well. Multiple EHD mortalities were documented on collared mule deer.

We decreased the nonresident quota to address recent disease and drought concerns, while also trying to improve hunter satisfaction. Limitations were standardized across the herd, and region, to simplify regulations. Standardizing limitations (Antlered mule deer or any white-tailed deer), will have little to no impact on mule deer harvest metrics. Some hunter crowding on public lands is status quo and mitigated by managing the nonresident quota.

2.) Management Objective Review: Scheduled for 2023.

3.) Chronic Wasting Disease Management: This is a Tier 2 surveillance herd, and was prioritized for CWD sampling beginning in 2020. From 2019-2021 we collected 170 samples (Figure 1). CWD prevalence remains a concern, particularly in HA 29. Prior sampling produced similar prevalence rates, but lacked sampling size and significance.

Figure 1. CWD Prevalence Data 2019-2021

		2019-2021 Total			95% Confidence Interval	
Herd Unit	**Species**	**Tested**	**# Pos**	**Prev**	**Lower**	**Upper**
Pumpkin Butte	Ad M MD	170	24	14.10%	8.10%	20.30%
Pumpkin Butte HA29	Ad M MD	105	22	21.00%	11.10%	30%

4.) Population Modeling: The 2021 post season population estimate using the spreadsheet model was 12,700 mule deer. The model had an AIC (113) and fit (104). In 2021, WGFD managers also began using PopR integrated population models (IPM) to estimate population indices for mule deer. The 2021 postseason population estimate for this herd unit from the PopR IPM was approximately 7,800 (CL = 7,000-8,800). Postseason population estimates from both 2021 models were reported here to allow for comparison during this transitional year. The IPM model suggest the population is below objective (13,000) but is likely influenced by a lack of sightability estimates. A sightabililty estimate would likely provide a better anchor for the population estimate. The Department intends to replace the WGFD spreadsheet model with the PopR IPM in bio-year 2022. PopR models and estimates were used in bio-year 2021. These models had an Rhat Max of 1.18.

5.) Research: Research in the Pumpkin Buttes and Powder River herd units is on-going. Hall Sawyer (West Inc., Laramie) is managing the study. The goals are to document movement in relation to sections of roadways with high rates of deer-vehicle collisions as well as to document adult doe survival. At this point, adult survival has been alarmingly low. Of the 33 deer collared south of I 90, 17 mortalities were documented in the first 18 months of the study. Chronic wasting disease and vehicle strikes predominate cause of death at this point.

Preliminary results also indicate an avoidance of disturbance and development in the study area. Delineated home ranges contain less disturbance than that present on the landscape. Deer in the project area are largely non-migratory, with only 1 deer out of 62 showing migratory behavior.

2021 - JCR Evaluation Form

SPECIES: Mule Deer
PERIOD: 6/1/2021 - 5/31/2022

HERD: MD321 - NORTH BIGHORN

HUNT AREAS: 24-25, 27-28, 50-53
PREPARED BY: TIM THOMAS

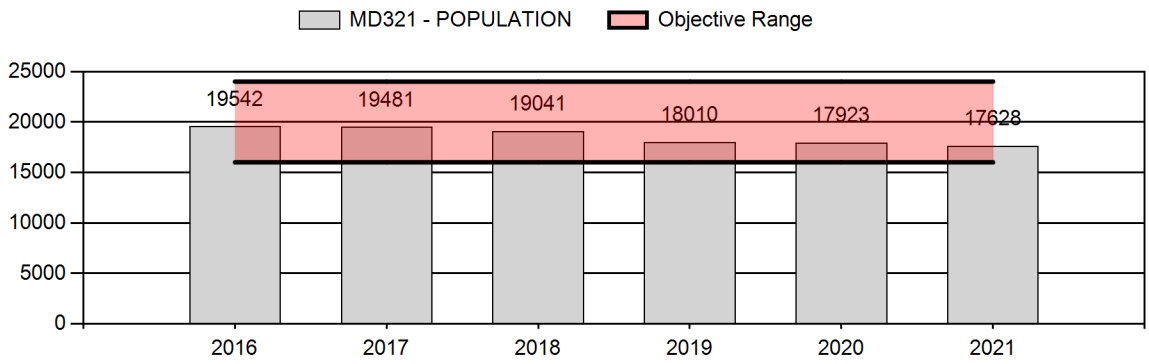
	2016 - 2020 Average	2021	2022 Proposed
Population:	18,799	17,628	17,623
Harvest:	1,184	876	865
Hunters:	3,035	2,703	2,600
Hunter Success:	39%	32%	33%
Active Licenses:	3,151	2,771	2,700
Active License Success:	38%	32%	32%
Recreation Days:	14,847	13,773	12,500
Days Per Animal:	12.5	15.7	14.5
Males per 100 Females	30	24	
Juveniles per 100 Females	67	59	

Population Objective (± 20%) :	20000 (16000 - 24000)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	-11.9%
Number of years population has been + or - objective in recent trend:	2
Model Date:	2/14/2022

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:	29%	31%
Proposed change in post-season population:	1%	1%

Population Size - Postseason



2022 HUNTING SEASONS
NORTH BIGHORN MULE DEER HERD (MD321)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
24	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Antlered mule deer or any white-tailed deer
24	7			Sep. 1	Dec. 15	250	Doe or fawn valid on private land
25	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer three (3) points or more on either antler or any white-tailed deer
27	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Antlered mule deer or any white-tailed deer
28	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer or any white-tailed deer
50	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer or any white-tailed deer
51	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer or any white-tailed deer
51	GEN			Oct. 25	Oct. 31		Antlered mule deer or any white-tailed deer valid on or within one-half (1/2) mile of irrigated land
51	6	Sep. 1	Sep. 30	Oct. 15	Nov. 15	150	Doe or fawn valid on or within one-half (1/2) mile of irrigated land

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
52	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer or any white-tailed deer
52	GEN			Oct. 25	Oct. 31		Antlered mule deer or any white-tailed deer valid on or within one-half (1/2) mile of irrigated land
52	6	Sep.1	Sep. 30	Oct. 15	Nov. 30	25	Doe or fawn valid on or within one-half (1/2) mile of irrigated land
53	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer or any white-tailed deer

Nonresident Region R Quota: 600
Nonresident Region Y Quota: 1,200

2021 Hunter Satisfaction: 53% Satisfied; 23% Neutral; 24% Dissatisfied

2022 Management Summary

1.) Hunting Season Evaluation: We have generally utilized conservative season strategies (e.g. 10 days, antlered mule deer only) in predominately public land hunt areas, while having more liberal seasons in predominately private lands hunt areas. We continued with similar season strategies for 2022. General license hunters, except youths, are restricted to antlered mule deer in all hunt areas. Limited doe harvest is restricted to primarily private lands at lower elevations.

In 2021, we observed 59 fawns:100 does during postseason classification surveys. This was the second year in the past three that observed fawn production was below desired levels to sustain or grow a population. We observed 24 bucks:100 does, the lowest observed buck:100 ratio in 20 years. In order to better understand vital rates of migratory deer, we also conducted preseason classification surveys in Areas 25 and 28. A large portion of Area 25 that normally holds a lot of deer was closed due to a wild fire. We observed 19 bucks:100 does, a decline from previous years, and 65 fawns:100 does, an increase from previous years.

Some hunters have commented on perceived low quality and quantity of mule deer, especially on public lands. Due to public demand, we instituted a 3-point antler point restriction in Area 25 in 2020. This harvest restriction was at least partially responsible for a decrease in buck harvest to the lowest level in over 40 years. In response to the support this season strategy has received, we maintained this harvest restriction for 2022. We plan to return to simply antlered mule deer for the 2023 season.

Season extensions in Hunt Areas 51 and 52 are part of a broader effort in non-resident Deer Region R to address chronic wasting disease (CWD) hot-spots within the Bear, Beaver and Shell Creek drainages. Similar season changes were implemented for hunt areas in the Paintrock Herd Unit.

Hunter satisfaction, determined by responses on harvest survey, decreased from 58% to 53% at the herd level (n=742). Hunter satisfaction decreased in five hunt areas (Areas 24, 25, 27, 52 and 53), and increased in three hunt areas (Area 28, 50 and 51). We observed similar decreasing in satisfaction for pronghorn and white-tailed deer hunters, suggesting conditions were not favorable during the hunting season.

2.) Management Objective Review: This herd is schedule for the next 5-year herd unit review in 2024.

3.) Chronic Wasting Disease Monitoring & Management: This was a Tier 1 surveillance herd scheduled for priority CWD sampling in 2021. Through increased sampling in 2021 and passive sampling during the 2019-2020 seasons, we were able to obtain an adequate desired sample size of adult (≥ 2 years old) male mule deer (n=203), resulting in an observed prevalence of 12.3% (95% confidence level=7.2-17.6%) for adult male mule deer (Table 1).

During this time, we documented CWD positive mule deer in all hunts except Hunt Area 53. Distribution of sampling was not uniform between hunt areas, with westside hunt areas (HAs 50-53) sampled at a higher rate compared to harvest (43% of harvested adult bucks sampled) and eastside hunt areas (HAs 24, 25, 27 and 28) sampled at a lower rate compared to harvest (22% of harvested adult bucks harvested). Samples from Area 24 accounted for 38% (n=77) of the total samples. The fewest samples (n=2) were collected in Hunt Area 28.

Managers in the Cody Region increased buck harvest on or adjacent to irrigate lands during late October starting this year as a CWD management action. The Sheridan Region will host a public meeting this fall to share surveillance results and discuss potential management options.

Table 1. CWD prevalence from hunter harvested male mule deer in the North Bighorn Herd Unit, 2019-2021.

		2019-2021 Total			95% Confidence Interval	
Herd Unit	**Species**	**Tested**	**# Pos**	**Prev**	**Lower**	**Upper**
North Bighorn	Ad M MD	203	25	12.3%	7.2%	17.6%

4.) Population Modeling: We estimated a postseason population of 8,971 mule based on the WGFD TSJ,CA spreadsheet model for Bio-Year 2021 (i.e. June 1, 2021-May 30, 2022). In 2021, we started using a PopR based integrated population model (IPM), which resulted in a postseason population estimate of 17,628 mule deer (95% confidence level=15,715-19,892). Postseason population estimates from both models were reported this year for comparison purposes. Going forward, we will transition to the PopR IMP. The IPM estimated a higher population than the spreadsheet model and suggests a relatively stable population compared to the spreadsheet's prediction of a slowly declining population. Managers think the IPM model better represents perceived population dynamics.

2021 - JCR Evaluation Form

SPECIES: Mule Deer

PERIOD: 6/1/2021 - 5/31/2022

HERD: MD322 - UPPER POWDER RIVER

HUNT AREAS: 30, 32-33, 163, 169

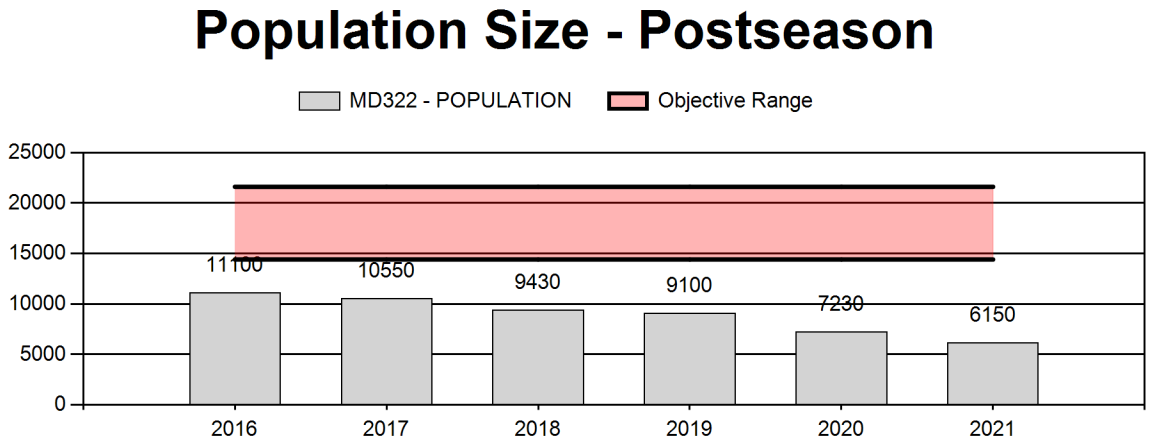
PREPARED BY: ZACH TURNBULL

	2016 - 2020 Average	2021	2022 Proposed
Population:	9,482	6,150	5,900
Harvest:	741	391	385
Hunters:	1,316	1,083	1,000
Hunter Success:	56%	36%	38%
Active Licenses:	1,325	1,083	1,000
Active License Success:	56%	36%	38%
Recreation Days:	5,401	5,288	5,000
Days Per Animal:	7.3	13.5	13.0
Males per 100 Females	39	23	
Juveniles per 100 Females	66	46	

Population Objective (± 20%) :	18000 (14400 - 21600)
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	-65.8%
Number of years population has been + or - objective in recent trend:	27
Model Date:	2/23/2022

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:	35%	31%
Proposed change in post-season population:	-9%	-6%



2022 Hunting Seasons
Upper Powder River Mule Deer Herd Unit (MD322)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
30	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Antlered mule deer or any white-tailed deer
32	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Antlered mule deer or any white-tailed deer
33	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Antlered mule deer or any white-tailed deer
163	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 21		Antlered mule deer or any white-tailed deer
169	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 21		Antlered mule deer or any white-tailed deer

2022 Region Y nonresident quota: 1,200 licenses

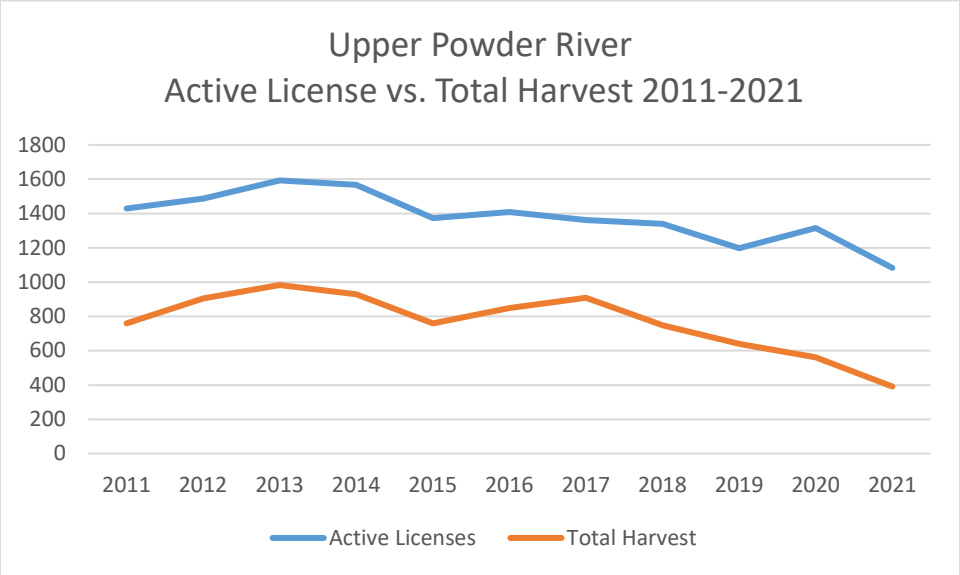
2021 Hunter Satisfaction: 51% Satisfied, 19% Neutral, 30% Dissatisfied

2022 Management Summary

1.) Hunting Season Evaluation: This herd has been below the population objective for more than a decade. Buck/doe ratio (23 bucks: 100 does) was well below the 30-45 bucks per 100 doe special management strategy target. Decreasing harvest, success and satisfaction have led to significant nonresident quota reductions in 2022 (33% reduction). Reported harvest numbers in 2021 were the lowest rates reported since 1985 (Figure 1). During that time, only two years had active hunter success lower than 50% (2020 at 43% and 2021 at 36%). We attribute the negative population trend to low adult doe survival and fawn recruitment (see section 5) and not to harvest, however harvest success is dependent on the population metrics. Our proposed reduction is heavily based on population estimates, hunter harvest metrics and continued landowner requests for further reductions of mule deer harvest. We anticipate the non-resident quota reduction to decrease crowding, increase success, and shift the buck ratio toward objective.

Limitations have been standardized across the herd unit, to simplify regulations. Standardizing limitations (Antlered mule deer or any white-tailed deer), will have little to no impact on mule deer harvest metrics. Conversely, we have very liberal seasons for species that compete with or prey on mule deer. With targeted CWD surveillance and research complete, we plan to host public meetings in 2022 and 2023 to share results and discuss management options going forward.

Figure 1. UPR Active Licenses vs Total Harvest 2011-2021.



2.) Management Objective Review: Scheduled for 2023. Mule Deer Initiative Herd.

3.) Chronic Wasting Disease Management: This is a Tier 2 surveillance herd, and was prioritized for CWD sampling began in 2020 and continued through 2021. To meet sample size requirements, samples obtained in 2019 were also used to obtain prevalence information. We collected 231 samples during this focal period (Figure 2). Prevalence during this focal period was reported at 18.6% (CI 11.5-20.2%). This level of CWD prevalence is likely having population level impacts on survival.

Figure 2. Upper Powder River CWD Statistics 2019-2021.

		2019-2021 Total			95% Confidence Interval	
Herd Unit	**Species**	**Tested**	**# Pos**	**Prev**	**Lower**	**Upper**
UPR	Ad M MD	231	43	18.60%	11.50%	20.20%

4.) Population Modeling:. The 2021 post season population estimate using the spreadsheet model was 5,900 mule deer. The model had good relative AIC (87) and fit (77). In 2021, WGFD managers also began using PopR integrated population models (IPM) to estimate population indices for mule deer. The 2021 postseason population estimate for this herd unit from the PopR IPM was approximately 6,150 (CL = 5,400 – 6,900). Postseason population estimates from both 2021 models were reported here to allow for comparison during this transitional year. Both models suggest the population is far below objective (18,000). The Department intends to replace the WGFD spreadsheet model with the PopR IPM in bio-year 2022. PopR models and estimates were used in bio-year 2021. These models had an Rhat Max of 1.24. As noted in the "Hunting Season Evaluation" section, population metrics and observed trends have led to reduced licenses in 2022.

5.) Weather: Precipitation (extrapolated from PRISM Climate Group, Oregon State University, http://prism.oregonstate.edu, created 4 Feb 2004) from October 2020 through September 2021 (water year) was below the 30 year average. Precipitation during the growing season (April through June) and high elevation SSF seasonal ranges (May - July) was also lower than the 30 year average. Overall precipitation accumulation was below long term averages for the area (Figure 3). Winter temperatures in 2021-2022 were similar to the 30 year average (28.4°F), with the temperatures averaging 28.6°F during the months of November through March as recorded in Kaycee, WY. Moisture accumulation recorded in Kaycee during this time period was 1.55 inches of precipitation (30-year average is 2.09 inches) and 23.7 inches of snow accumulation (30-year average is 30.6 inches). The snow water equivalent measured at Powder River Pass, Beartrap Meadow, Middle Powder, and Grave Springs Snotel sites recorded May 11th, 2022 was 83%, 50%, 111%, and 122% of the official mean for those respective sites. The winter of 2021-2022 was relatively dry and open. This likely benefited overwinter survival of mule deer that may have entered winter in poor condition due to prolonged drought and habitat conditions. Overall, winter temperatures were similar to the 30 year average. Given the current snow water equivalent measures, and recurring spring weather events, habitat conditions may improve across the herd unit. All winter precipitation, snowfall accumulation, and temperature data was acquired from the Kaycee NWS COOP Station 485055-5 Lat/Lon 43° 43'/106° 38'.

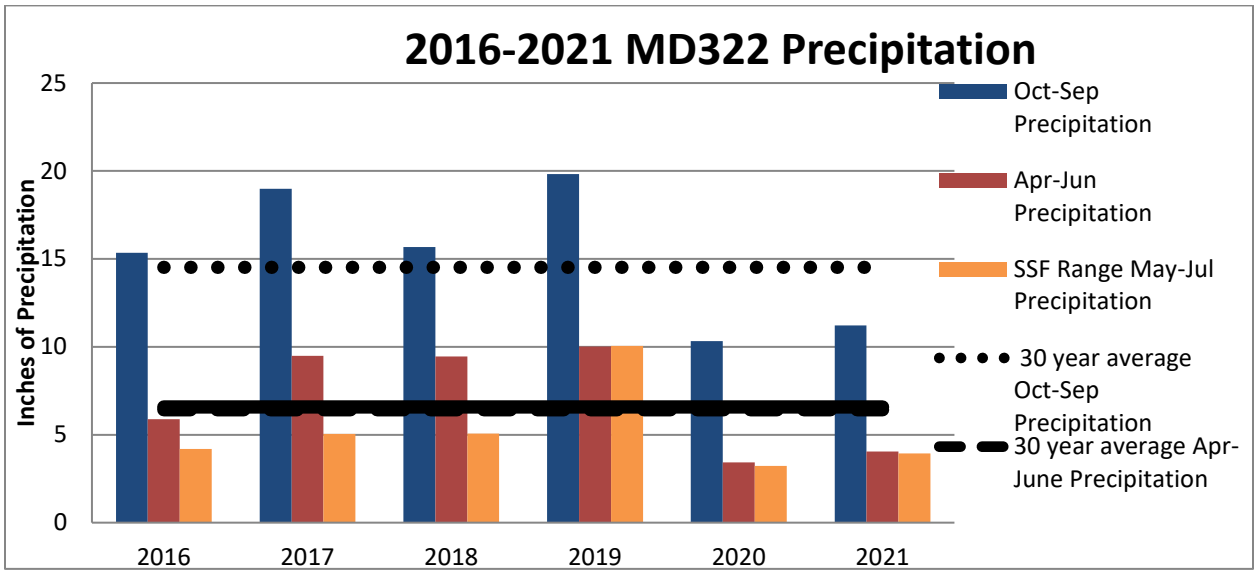


Figure 3. Upper Powder River Precipitation 2016-2021.

6.) Habitat: A number of mule deer habitat improvement projects have been completed with WGFD. Invasive annual grass treatments have occurred on high priority mule deer habitats in Outlaw Cave (702 acres, 2016) and lower Middle and North Fork of Crazy Woman Creek (4,133 acres, 2020). Additionally, 40 curl-leaf mountain mahogany plants were planted east of Outlaw Cave in an attempt to ascertain success in establishing nursery grown curl-leaf mountain mahogany plants on the landscape. On a similar project, 30 curl-leaf mahogany plants were planted on the Buckingham Ranch north of the Powder River in crucial mule deer winter range. Since 2016, a total of 2,743 acres of Curl-leaf mountain mahogany have been treated to reduce fuel loading by reducing conifer encroachment protecting crucial mule deer winter range in important deer habitat stands in Poker Creek, Slip Road, Gardner Mountain and EK Mountain. In 2021, conifer removal occurred on another 857 acres of Curl-leaf mountain mahogany on EK Mountain. Since 2018, 218 acres of conifer removal took place in aspen stands in the upper Middle

Fork Crazy Woman drainage. In 2021, and addition 4 acres of conifer removal took place in aspen stands in the upper Poison Creek drainage.

Antelope Draw (Schiermiester Ranch), is a mesic draw dominated by decadent Silver sagebrush stands. During the winter of 2015, 14 acres of thick decadent Silver sagebrush stands were treated with a Dixie harrow and planted with a mixture of native grasses and forbs. The Schiermiester Ranch also planted 10 deciduous browse trees in mesic draws in different locations on the ranch.

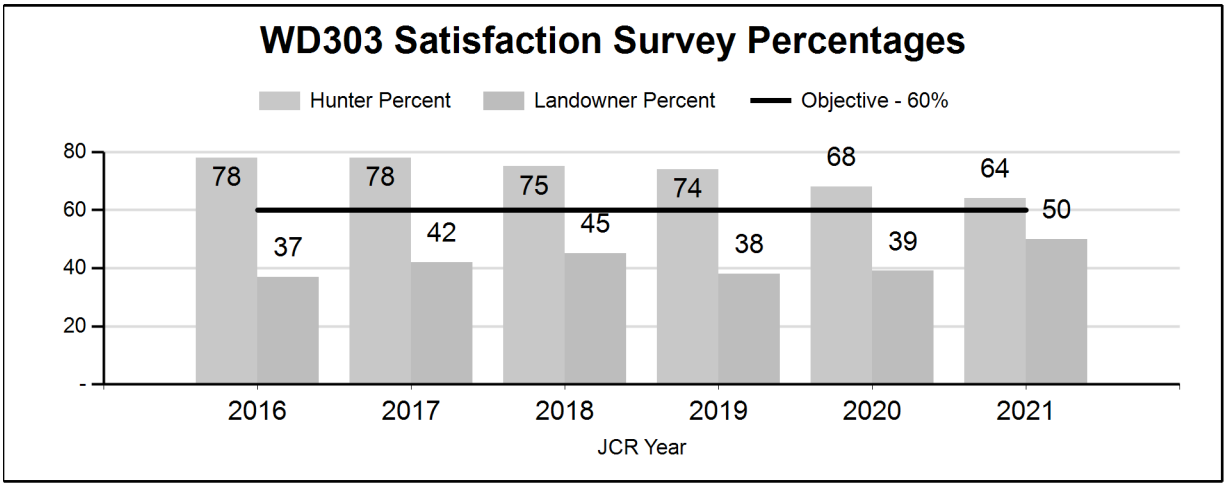
In 2020, WGFD installed 10 Beaver Dam Analog (BDA) complexes on the upper portions of Middle Fork Crazy Woman Creek improve riparian habitat and restore hydrological function. In 2021, WGFD planted 5,600 willows on the lower portions of the North Fork and Middle Fork of Crazy Woman Creek and the lower portions of Poison Creek in efforts to increase riparian habitat diversity for mule deer. In addition to the willows, an assortment of 700 native deciduous woody riparian trees and shrubs were planted on the North Fork of Crazy Woman Creek and Beartrap Meadows to provide a seed source for future deciduous woody riparian plants in efforts to restore habitat diversity for mule deer.

In 2020 and 2021, 3 riparian, 6 rangeland, 1 aspen, and 5 special rapid habitat assessments were completed in the Upper Powder River mule deer herd unit. So far from our assessments, it appears that the shrub and rangeland habitat that we have assessed have been variable in their ability at meeting the habitat needs for mule deer. In contrast, very few of the riparian areas that were assessed so far meet the habitat needs for mule deer. Rapid habitat assessments will continue during 2022. For more detailed information about these projects, please refer to the WGFD's Strategic Habitat Plan annual reports.

2021 - JCR Evaluation Form

SPECIES: White tailed Deer
PERIOD: 6/1/2021 - 5/31/2022
HERD: WD303 - POWDER RIVER
HUNT AREAS: 17-19, 23-33, 163, 169
PREPARED BY: TIM THOMAS

	2016 - 2020 Average	2021	2022 Proposed
Hunter Satisfaction Percent	74%	64%	65%
Landowner Satisfaction Percent	40%	50%	60%
Harvest:	6,162	5,690	6,000
Hunters:	8,341	8,472	8,500
Hunter Success:	74%	67%	71%
Active Licenses:	9,617	9,543	10,000
Active License Success:	64%	60%	60%
Recreation Days:	37,995	41,142	42,000
Days Per Animal:	6.2	7.2	7
Males per 100 Females:	38	40	
Juveniles per 100 Females	70	57	
Satisfaction Based Objective			60%
Management Strategy:			Private Land
Percent population is above (+) or (-) objective:			-3%
Number of years population has been + or - objective in recent trend:			10



2022 HUNTING SEASONS
POWDER RIVER WHITE-TAILED DEER HERD (WD303)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
17	GEN	Sep. 1	Sep. 30	Oct. 1	Oct. 20		Antlered mule deer or any white-tailed deer
17	GEN			Nov. 1	Nov. 30		Any white-tailed deer
17	7	Sep. 1	Sep. 30	Oct. 1	Oct. 20	50	Doe or fawn valid on private land
17	8	Sep. 1	Sep. 30	Oct. 1	Nov. 30	250	Doe or fawn white-tailed deer
18	GEN	Sep. 1	Sep. 30	Oct. 1	Oct. 20		Antlered mule deer or any white-tailed deer
18	7	Sep. 1	Sep. 30	Oct. 1	Oct. 20	100	Doe or fawn valid on private land
18	8	Sep. 1	Sep. 30	Oct. 1	Nov. 20	400	Doe or fawn white-tailed deer valid on private land
19	GEN	Sep. 1	Sep. 30	Oct. 1	Oct. 20		Antlered mule deer or any white-tailed deer
19	GEN			Nov. 1	Nov. 15		Any white-tailed deer
19	7	Sep. 1	Sep. 30	Oct. 1	Oct. 20	50	Doe or fawn valid on private land
19	8	Sep. 1	Sep. 30	Oct. 1	Nov. 15	75	Doe or fawn white-tailed deer
23	GEN	Sep. 1	Sep. 30	Oct. 1	Oct. 14		Antlered mule deer or any white-tailed deer
23	GEN			Nov. 1	Nov. 30		Any white-tailed deer
23, 26	3	Sep. 1	Sep. 30	Nov. 1	Nov. 30	500	Any white-tailed deer
23, 26	7			Sep. 1	Dec. 15	1,000	Doe or fawn valid on private land
24	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Antlered mule deer or any white-tailed deer
24	GEN			Nov. 1	Nov. 30		Any white-tailed deer
24	3	Sep. 1	Sep. 30	Nov. 1	Nov. 30	500	Any white-tailed deer
24	7			Sep. 1	Dec. 15	250	Doe or fawn valid on private land
24	8			Sep. 1	Dec. 15	3,000	Doe or fawn white-tailed deer valid on private land

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
25	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer three (3) points or more on either antler or any white-tailed deer
26	GEN	Sep. 1	Sep. 30	Oct. 1	Oct. 14		Antlered mule deer or any white-tailed deer
26	GEN			Nov. 1	Nov. 30		Any white-tailed deer
27	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Antlered mule deer or any white-tailed deer
27	GEN			Nov. 1	Nov. 30		Any white-tailed deer
27	8			Sep. 1	Sep. 30	1,200	Doe or fawn white-tailed deer valid on private land
27	8	Sep. 1	Sep. 30	Oct. 15	Dec. 15		Doe or fawn white-tailed deer valid in the entire area; also valid in Area 28
28	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 24		Antlered mule deer or any white-tailed deer
28	GEN			Oct. 25	Nov. 30		Any white-tailed deer
29	GEN	Sep. 1	Sep. 30	Oct. 1	Oct. 14		Antlered mule deer or any white-tailed deer
29	GEN			Nov. 1	Nov. 30		Any white-tailed deer
29	GEN			Dec. 1	Dec. 31		Antlerless white-tailed deer
29	8			Sep. 1	Sep. 30	700	Doe or fawn white-tailed deer valid on private land
29	8	Sep. 1	Sep. 30	Oct. 1	Dec. 31		Doe or fawn white-tailed deer valid in the entire area

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
30	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Antlered mule deer or any white-tailed deer
30	GEN			Nov. 1	Nov. 30		Any white-tailed deer
30	GEN			Dec. 1	Dec. 31		Antlerless white-tailed deer
30	8			Sep. 1	Sep. 30	500	Doe or fawn white-tailed deer valid on private land
30	8	Sep. 1	Sep. 30	Oct. 15	Dec. 31		Doe or fawn white-tailed deer valid in the entire area
31	GEN	Sep. 1	Sep. 30	Oct. 1	Oct. 10		Antlered mule deer or any white-tailed deer
32	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Antlered mule deer or any white-tailed deer
32	GEN			Nov. 1	Nov. 15		Any white-tailed deer
32, 163	8	Sep. 1	Sep. 30	Oct. 15	Nov. 15	100	Doe or fawn white-tailed deer
33	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Antlered mule deer or any white-tailed deer
33	GEN			Nov. 1	Nov. 15		Any white-tailed deer
33	GEN			Nov. 16	Dec. 15		Antlerless white-tailed deer
33	8			Sep. 1	Sep. 30	500	Doe or fawn white-tailed deer valid on private land
33	8	Sep. 1	Sep. 30	Oct. 15	Dec. 15		Doe or fawn white-tailed deer valid in the entire area
163	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 21		Antlered mule deer or any white-tailed deer
163	GEN			Nov. 1	Nov. 15		Any white-tailed deer
169	GEN	Sep. 1	Sep. 30	Oct. 15	Oct. 21		Antlered mule deer or any white-tailed deer
169	GEN			Nov. 1	Nov. 15		Any white-tailed deer

Nonresident Region C Quota: 2,000
Nonresident Region Y Quota: 1,200

2021 Hunter Satisfaction: 66% Satisfied; 18% Neutral; 16% Dissatisfied
2021 Landowner Satisfaction: 50% Satisfied; 37% Above Desired; 12% Below Desired

2021 Management Summary

1.) Hunting Season Evaluation: We manage this white-tailed deer herd based on hunter and landowner satisfaction. Hunter satisfaction has consistently been high, averaging 76% from 2015-2020. Hunter satisfaction declined to 66% in 2021, which may be related to a six point reduction in success rate and a 15% decrease in harvest. We saw similar declines in hunter satisfaction for mule deer and pronghorn antelope, suggesting hunting conditions in 2021 were less than desirable. There are liberal season strategies in most hunt areas, providing ample hunter opportunity. Hunters can hunt up to 122 days depending on the specific hunt area and license type.

We received 147 responses from landowners on their perception of white-tailed deer numbers on their property. Most landowner dissatisfaction resulted from too many deer (n=55; 37%), which was down slightly from previous years. Eighteen (12%) landowners felt they had too few deer. Due to the varying degrees of access to private land, where most white-tailed deer reside, and refuges provided by rural subdivisions, we are not confident we will ever reduce white-tailed deer densities enough to satisfy some landowners.

Some landowners expressed concern over an increase in white-tailed deer Area 18. Many of them were unaware that a hunter could purchase up to four Type 8 licenses, if available. Despite Type 8 licenses not selling out in recent years, we felt that an increase in licenses and extending this season was warranted based on landowner input.

In 2020, we eliminated the “Unlimited” Type 8 licenses in Area 24 and returned to a numeric quota (i.e. 3,000). For 2021, we sold 2,475 of these licenses, similar to the previous year. We feel the quota of 3,000 remains sufficient to meet the current demand.

We reduced Area 23/26 Type 7 licenses by 50% in response to public concern about female mule deer harvest. We may have to consider a Type 8 – white-tailed deer only license for these hunt areas if we are not able to meet hunter and landowner demand with the current Type 7 license.

In Area 24, white-tailed deer occur predominately on private lands and the vast majority of harvest occurs on these private lands. In recent years, there has been a notable increase in hunters on accessible public lands, Department Walk-In (WIA), and Department Hunter Management Areas (HMA) pursuing white-tailed deer. As such, to focus harvest and reduce hunting pressure on the limited accessible public lands, we restricted Area 24 Type 8 licenses to private land. Lower hunting pressure on the limited public land should result in more opportunity for mule deer and antelope hunters.

Hunt Area 27, Type 8 licenses were made valid in Area 28 also. This addition will allow license holders to pursue deer on the Bighorn National Forest adjacent to Area 27. White-tailed deer continue to expand westward, and this change allows for additional harvest opportunity.

General license hunting season limitations in Areas 23, 26, 29, 30, 31 and 33 were changed to standardize regulations between hunt areas. Previous limitations were inconsistent in regards to

white-tailed doe harvest on public lands. Reversely, this simplification eliminated some mule deer doe hunting opportunity on private lands. In the future, doe or fawn licenses (i.e. Type 7) may be utilized to address management, damage or disease concerns on private lands.

We removed Areas 27, 29, 30, 32, 33 and 163 from Chapter 2, Section 4(b), which allowed hunters to purchase unlimited Type 6, 7, or 8 licenses if available. This change was made to provide additional opportunity to hunters be limiting each hunter to only four of these licenses.

2.) Management Objective Review: This herd is scheduled for the next 5-year herd unit review in 2023.

3.) Chronic Wasting Disease Monitoring & Management: This is a Tier 3 surveillance herd, meaning we will not prioritize CWD sampling at the herd unit level. Sampling was prioritized at the hunt area level in conjunction with corresponding focal mule deer hunt areas. For 2021, that included Hunt Areas 19, 24, 25, 27, 28, 29, 30, 31, 32, 33, 163 and 169 of the North Bighorn, Upper Powder River and Pumpkin Buttes mule deer herd units. In 2022, there will not be any mule focal herds so CWD sampling will be on an as requested basis.

Sampling has not been consistent across hunt areas for white-tailed deer, as evident in Tables 1, 2, and 3. The majority of samples during 2019-2021 (n=950 of 1,020; 93%) were collected in only three of the 12 reported hunt areas. As we move forward and better coordinate sampling effort between the deer species, we should get better sample distribution across hunt areas.

While we have not implement specific management actions to address CWD, we continue to encourage landowners to reduce deer densities primarily through increased harvest. While these recommendations have historically been to control deer numbers, address complaints and reduce browsing pressure on shrub communities, reducing white-tailed deer density may also aid in limiting CWD prevalence and spread. The Sheridan Region will host a public meeting this fall to share surveillance results and discuss potential management options.

Table 1. Chronic wasting disease sampling results from hunter-harvested deer in select hunt areas in the Powder River White-tailed Deer Herd Unit, 2019-2021, corresponding with the Pumpkin Buttes Mule Deer Herd Unit.

		2019		2020		2021		2019-2021 Total			95% Confidence (2019-2021)	
Hunt Area	Species	Tested	# Pos	Tested	# Pos	Tested	# Pos	Tested	# Pos	Prev	Lower	Upper
19	Ad M WTD	0	0	1	1	0	0	1	1	100.0%	1.3%	100.0%
	Ad F WTD	0	0	0	0	0	0	0	0	N/A	0.0%	100.0%
	Yrlg M WTD	0	0	0	0	0	0	0	0	N/A	0.0%	100.0%
29	Ad M WTD	11	4	9	1	7	1	27	6	22.2%	6.9%	42.3%
	Ad F WTD	13	4	9	1	13	1	35	6	17.1%	5.5%	33.6%
	Yrlg M WTD	0	0	4	1	0	0	4	1	25.0%	0.5%	80.6%
31	Ad M WTD	0	0	0	0	0	0	0	0	N/A	0.0%	100.0%
	Ad F WTD	0	0	0	0	0	0	0	0	N/A	0.0%	100.0%
	Yrlg M WTD	0	0	0	0	0	0	0	0	N/A	0.0%	100.0%
Totals	Ad M WTD	11	4	10	2	7	1	28	7	25.0%	8.3%	44.9%
	Ad F WTD	13	4	9	1	13	1	35	6	17.1%	5.5%	33.6%
	Yrlg M WTD	0	0	4	1	0	0	4	1	25.0%	0.5%	80.6%

Table 2. Chronic wasting disease sampling results from hunter-harvested deer in select hunt areas in the Powder River White-tailed Deer Herd Unit, 2019-2021, corresponding with the Sheridan Region portion of the North Bighorn Mule Deer Herd Unit.

		2019		2020		2021		2019-2021 Total			95% Confidence (2019-2021)	
Hunt Area	Species	Tested	# Pos	Tested	# Pos	Tested	# Pos	Tested	# Pos	Prev	Lower	Upper
24	Ad M WTD	97	15	112	26	126	36	335	77	23.0%	15.0%	27.9%
	Ad F WTD	129	14	121	17	112	19	362	50	13.8%	9.1%	17.8%
	Yrlg M WTD	0	0	6	0	9	3	15	3	20.0%	3.5%	48.1%
25	Ad M WTD	0	0	1	0	1	0	2	0	0.0%	0.0%	84.2%
	Ad F WTD	0	0	0	0	1	1	1	1	100.0%	1.3%	100.0%
	Yrlg M WTD	0	0	0	0	0	0	0	0	N/A	0.0%	100.0%
27	Ad M WTD	16	3	27	6	35	10	78	19	24.4%	12.1%	35.4%
	Ad F WTD	12	1	41	9	34	2	87	12	13.8%	6.4%	22.9%
	Yrlg M WTD	0	0	3	0	4	0	7	0	0.0%	0.0%	41.0%
28	Ad M WTD	1	0	1	0	3	2	5	2	40.0%	3.6%	85.3%
	Ad F WTD	0	0	1	0	0	0	1	0	0.0%	0.0%	97.5%
	Yrlg M WTD	0	0	0	0	1	0	1	0	0.0%	0.0%	97.5%
Totals	Ad M WTD	114	18	141	32	165	48	420	98	23.3%	15.6%	27.7%
	Ad F WTD	141	15	163	26	147	22	451	63	14.0%	9.5%	17.5%
	Yrlg M WTD	0	0	9	0	14	3	23	3	13.0%	2.4%	33.6%

Table 3. Chronic wasting disease sampling results from hunter-harvested deer in select hunt areas in the Powder River White-tailed Deer Herd Unit, 2019-2021, corresponding with the Upper Powder River Mule Deer Herd Unit.

		2019		2020		2021		2019-2021 Total			95% Confidence (2019-2021)	
Hunt Area	Species	Tested	# Pos	Tested	# Pos	Tested	# Pos	Tested	# Pos	Prev	Lower	Upper
30	Ad M WTD	5	3	13	5	4	2	22	10	45.5%	15.4%	67.8%
	Ad F WTD	1	1	2	0	3	2	6	3	50.0%	7.1%	88.2%
	Yrlg M WTD	0	0	2	0	0	0	2	0	0.0%	0.0%	84.2%
32	Ad M WTD	0	0	2	1	0	0	2	1	50.0%	0.8%	98.7%
	Ad F WTD	0	0	1	0	5	1	6	1	16.7%	0.4%	64.1%
	Yrlg M WTD	0	0	1	0	0	0	1	0	0.0%	0.0%	97.5%
33	Ad M WTD	6	4	4	3	3	0	13	7	53.8%	14.4%	80.8%
	Ad F WTD	3	0	1	0	1	1	5	1	20.0%	0.4%	71.6%
	Yrlg M WTD	0	0	0	0	0	0	0	0	N/A	0.0%	100.0%
163	Ad M WTD	0	0	1	0	0	0	1	0	0.0%	0.0%	97.5%
	Ad F WTD	0	0	0	0	0	0	0	0	N/A	0.0%	100.0%
	Yrlg M WTD	0	0	0	0	0	0	0	0	N/A	0.0%	100.0%
169	Ad M WTD	0	0	0	0	0	0	0	0	N/A	0.0%	100.0%
	Ad F WTD	1	0	0	0	0	0	1	0	0.0%	0.0%	97.5%
	Yrlg M WTD	0	0	0	0	0	0	0	0	N/A	0.0%	100.0%
Totals	Ad M WTD	11	7	20	9	7	2	38	18	47.4%	19.5%	64.2%
	Ad F WTD	5	1	4	0	9	4	18	5	27.8%	7.3%	53.5%
	Yrlg M WTD	0	0	3	0	0	0	3	0	0.0%	0.0%	70.8%

2021 - JCR Evaluation Form

SPECIES: Elk
HERD: EL320 - FORTIFICATION
HUNT AREAS: 2

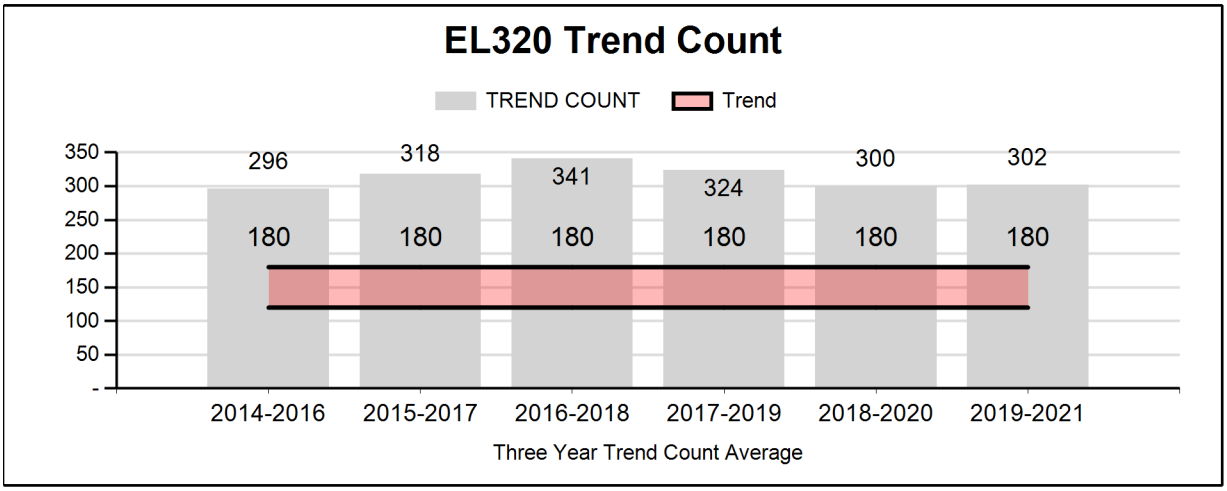
PERIOD: 6/1/2021 - 5/31/2022
PREPARED BY: ERIKA PECKHAM

	2016 - 2020 Average	2021	2022 Proposed
Trend Count:	309	384	225
Harvest:	86	116	150
Hunters:	119	156	300
Hunter Success:	72%	74%	50%
Active Licenses:	123	164	275
Active License Success	70%	71%	55%
Recreation Days:	402	605	800
Days Per Animal:	4.7	5.2	5.3
Males per 100 Females:	38	43	
Juveniles per 100 Females	55	52	

Trend Based Objective (± 20%)	150 (120 - 180)
Management Strategy:	Private Land
Percent population is above (+) or (-) objective:	156%
Number of years population has been + or - objective in recent trend:	8

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

	JCR Year	Proposed
Females ≥ 1 year old:	26.1%	27%
Males ≥ 1 year old:	7.9%	11%
Juveniles (< 1 year old):	1%	1%



2022 HUNTING SEASONS
FORTIFICATION ELK HERD (EL320)

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
2	Gen.	Sept. 20	Sept. 30	Oct. 1	Oct. 20	General	Any Elk
2	Gen.			Oct. 21	Nov. 15	General	Antlerless elk
2	6			Oct. 1	Nov. 15	100	Cow or calf

2021 Hunter Satisfaction: 81% Satisfied, 9% Neutral, 10% Dissatisfied

2022 Management Summary

1.) Hunting Season Evaluation: The season structure was greatly modified from past years in 2022. Typically, this Herd Unit has alternated between some combination of Type 1, Type 4 and Type 6, limited quota licenses. The season had been around 10-days long in late October, for many years. The last two years, there was an early cow season to address the growing population. Although this did result in some additional cow harvest, it was not near enough to keep up with recruitment in this herd. All factors considered, it was the most logical option to transition to a General harvest strategy.

This elk herd is over the objective and has been for several years. Elk are now frequently located south of I-90 and west of the Powder River, indicating that they are past carrying capacity within the boundary of Hunt Area 2, and expanding into the adjacent General Area. Complaints have been received from several landowners regarding there being too many elk and limited licenses available to address the situation via harvest. In addition to severe drought, a 5,300-acre fire occurred in elk habitat in this herd unit. This further pushed the elk to seek forage in adjacent areas. Local game and Fish personnel viewed a rangeland pasture, which had received no livestock grazing, and was overly utilized by elk, leaving very little residual growth. There was high potential for damage claims in 2021.

Landowners are coordinated with on an annual basis to discuss elk numbers and season dates. Prior to proposing a General Season, a mailing was sent to all landowners within elk habitat in Elk Area 2. In this letter, landowners were invited to a meeting regarding discussion of the direction of management of the elk in this Herd Unit. In addition to letters, phone calls were made to every landowner that has expressed interest in the elk, at any time in the past. The meeting was held in early December with 9 landowners attending. All of those present were satisfied with the season that was proposed. There was concern and discussion regarding Type 6 licenses and the need for ample licenses to accommodate hunters willing to harvest cows. This concern was addressed in the Hunt Area 129, Type 6 license issuance, with language making those licenses valid in that portion of Area 2 that falls within Johnson County. This was to focus on particular concern with elk numbers near the Powder River and provided maximum flexibility

in harvest. Another concern that local Game and Fish personnel, some landowners and sportsmen share, is suppressed mule deer numbers in this area. As there is resource overlap in these two species, it could be potentially beneficial for Mule Deer to coexist with an elk herd that is closer to objective.

The three-year average of hunter success was 71%. The general season structure will provide increased opportunity in this Herd Unit. This herd has a trend count objective of 150 elk. The 3-year average is 302 elk classified, well above the objective. Limited quota licenses have been inadequate in reducing this herd to objective and it is planned that a general season structure, with additional ability to harvest cows with Type 6 licenses, will bring this herd closer to objective.

2.) Public Access: Since 2019, portions of this hunt area have been enrolled in the Access Yes program. The program has been well received by hunters and landowners alike. Hunting access to the primary ranches that allows hunter access will again be administered through the Access Yes program in 2022. Hunter Management Area (HMA) permits will be limited to hunters holding Type 6 licenses or hunting under a General tag, for Antlerless elk only. Without access to private land via the HMA, it is difficult to access some of the further portions of Hunt Area 2. This access provides an easier opportunity for those desiring to harvest an antlerless elk.

Although access to the Wilderness Study Area is difficult due to terrain and distance, it is not at all impossible. For any resident holding a General Elk license, there is opportunity to walk into the large tract of contiguous public land that contains elk.

3.) Objective Review: This herd was due for an objective review in 2022. This was presented at the landowner and public season setting meeting and there is no proposed change to the Objective or Management Strategy.

4.) Research: Recent research has occurred in this Herd Unit pertaining to energy development and elk habitat use (Bowersock, N. and J. Merkle 2022. Lack of evidence of an energy development threshold influencing habitat use of fortification elk during winter. Department of Zoology and Physiology, University of Wyoming, Laramie Wyoming).

In summary, results of this research illustrate that elk avoid surface disturbances, and their selection for habitat decreases as roads and well pads increase.

2021 - JCR Evaluation Form

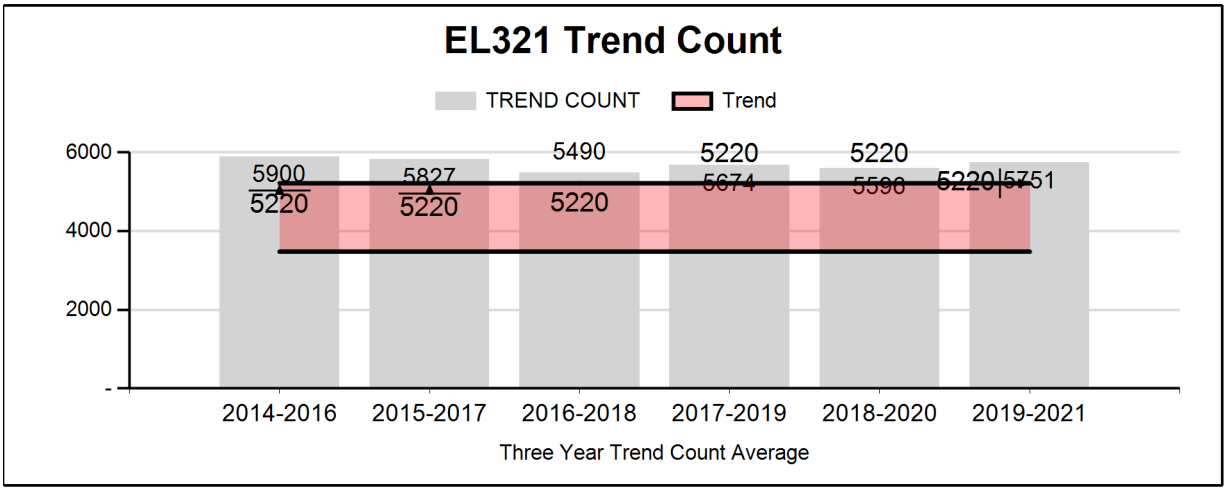
SPECIES: Elk
PERIOD: 6/1/2021 - 5/31/2022
HERD: EL321 - NORTH BIGHORN
HUNT AREAS: 35-40
PREPARED BY: TIM THOMAS

	2016 - 2020 Average	2021	2022 Proposed
Trend Count:	5,532	6,062	5,250
Harvest:	1,599	1,405	1,500
Hunters:	4,867	4,934	4,800
Hunter Success:	33%	28%	31%
Active Licenses:	5,108	5,183	5,100
Active License Success	31%	27%	29%
Recreation Days:	36,104	36,556	37,500
Days Per Animal:	22.6	26.0	25
Males per 100 Females:	26	25	
Juveniles per 100 Females	34	30	

Trend Based Objective (± 20%)	4,350 (3480 - 5220)
Management Strategy:	Special
Percent population is above (+) or (-) objective:	39%
Number of years population has been + or - objective in recent trend:	6

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

	JCR Year	Proposed
Females ≥ 1 year old:	22%	22%
Males ≥ 1 year old:	30%	28%
Juveniles (< 1 year old):	5%	5%



2022 HUNTING SEASONS
NORTH BIGHORN ELK HERD (EL321)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
35	1	Sep. 15	Sep. 30	Oct. 15	Nov. 5	150	Any elk
35	1			Nov. 6	Dec. 31		Antlerless elk
35	4	Sep. 15	Sep. 30	Oct. 15	Dec. 31	250	Antlerless elk
35	6			Aug. 15	Oct. 14	350	Cow or calf elk valid on private land
35	6	Sep. 15	Sep. 30	Oct. 15	Dec. 31		Cow or calf elk valid off national forest
35	9			Sep. 1	Sep. 30	75	Any elk, archery only
36	GEN	Sep. 15	Sep. 30	Oct. 15	Nov. 5		Antlered elk
36	4	Sep. 15	Sep. 30	Oct. 15	Dec. 31	300	Antlerless elk
36	6			Oct. 1	Oct. 14	250	Cow or calf valid off national forest north of Rock Creek
36	6	Sep. 15	Sep. 30	Oct. 15	Nov. 5		Cow or calf valid in the entire area
36	9			Sep. 1	Sep. 30	50	Any elk, archery only
37	GEN	Sep. 15	Sep. 30	Oct. 10	Oct. 31		Any elk
37	GEN			Nov. 1	Nov. 15		Antlerless elk
37	6	Sep. 15	Sep. 30	Oct. 1	Dec. 31	500	Cow or calf
37	9			Sep. 1	Sep. 30	150	Any elk, archery only
38	1			Oct. 10	Oct. 31	400	Any elk
38	1			Nov. 1	Nov. 15		Antlerless elk
38	4			Oct. 1	Nov. 15	550	Antlerless elk
38	9			Sep. 1	Sep. 30	250	Any elk, archery only
39	1			Oct. 10	Nov. 4	200	Any elk
39	1			Nov. 5	Nov. 30		Antlerless elk
39	4			Oct. 1	Nov. 30	150	Antlerless elk
39	6			Oct. 1	Nov. 4	75	Cow or calf valid off national forest
39	6			Nov. 5	Nov. 30		Cow or calf valid in the entire area
39	9			Sep. 1	Sep. 30	75	Any elk, archery only

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
40	1			Oct. 15	Nov. 4	225	Any elk
40	1			Nov. 5	Nov. 30		Antlerless elk
40	4			Oct. 15	Nov. 30	125	Antlerless elk
40	5			Oct. 1	Oct. 10	125	Antlerless elk
40	5			Oct. 15	Nov. 30		Antlerless elk
40	6			Sep. 1	Nov. 4	100	Cow or calf valid off national forest
40	6			Nov. 5	Nov. 30		Cow or calf valid in the entire area
40	9			Sep. 1	Sep. 30	100	Any elk, archery only

2021 Hunter Satisfaction: 56% Satisfied; 21% Neutral; 23% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation: We are currently ~39% over the established mid-winter trend count objective of 4,350 (± 870) elk. Winter trend counts were stable from 2018-2020 at ~5,600 elk (range=5,575-5,615). This year, we counted 6,062. We observed the largest increase in Hunt Area 39, which could be a function of elk not moving into Montana due to open winter conditions. Managers have implemented a variety of season strategies designed to increase elk harvest over the past two decades. The current season strategies have been the similar since 2018, when we saw record elk harvest. Harvest, under similar season strategies, declined in 2019, 2020 and again in 2021, to the lowest level since 2013. This suggests other factors such as weather and weather related access likely play as important a role in harvest as does license quotas and/or season lengths.

Managers are working with a variety of landowners to develop strategies to increase elk harvest on private lands, especially on the eastside of the Bighorns. At this time, we do not feel a significant increase in license quotas will result in a corresponding meaningful increase in harvest. Adding additional licenses, and corresponding hunters, could actually result in reduced harvest as hunt crowding adversely influences elk distribution and hunter success.

We converted Area 35 Type 1 licenses to antlerless elk after November 5 and extended the season to the end of December in an attempt to increase late season female harvest.

We adjusted the dates for Area 37 General licenses to open October 10 for any elk until October 31, then convert them to antlerless elk until November 15. This change was designed to increase harvest while elk are still on the public lands and before we normally get our first significant winter weather event.

We reduced Area 37 Type 6 licenses from 700 to 500 to reduce hunter crowding on the very limited public lands that might hold elk, especially later in the season, and to reduce landowner fatigue from hunter phone calls.

We moved the opening date for Areas 38 and 39 Type 1 licenses to October 10 to avoid potential impacts from mid-October winter storms that can limit access in much of the hunt area. Type 4

season dates were adjusted to correspond with the Type 1 changes in Area 38, and Type 6 license numbers were increased in Area 39 in an effort to increase harvest.

2.) Management Objective Review: The current management objective is a mid-winter trend count of 4,350 elk and an overall management strategy of trophy management, with recreational management in Hunt Areas 36 and 37. We have also established hunt area trend count sub-objectives: HA 35=400; HA 36=800; HA 37=800; HA 38=1,000; HA 39=500; and HA 40=850. We proposed to maintain the current management objective and strategies.

After internal discussions and conversations with constituents, we determined a change is not currently warranted. We will review this herd unit objective and management strategy again in 2027. If a situation arises warranting a change before then, we will prepare and submit a proposal at that time.

3.) Chronic Wasting Disease Monitoring & Management: This is a Tier 2 surveillance herd next scheduled for priority CWD sampling in 2027. At that time, we will implement protocols to improve sampling across all hunt areas. Through passive sampling during the 2018-2020 seasons, we were able to obtain an adequate desired sample size (n=206) to estimate prevalence (3.4%).

We have not implemented any CWD management actions specific for elk in this herd unit. The Sheridan Region will host a public meeting this fall to share surveillance results and discuss potential management options.

4.) Enhanced Brucellosis Surveillance: We implemented enhanced brucellosis surveillance in this herd unit after a hunter harvested elk tested sero-positive for *Brucella abortus* in 2012. In 2021, we collected 73 usable blood samples from hunter harvested elk to test for brucellosis, with zero positives (Table 2). We have not detected a brucellosis sero-positive elk in the Bighorn Mountains since 2016.

Table 2. Blood samples collected in the North Bighorn Elk Herd Unit during 2021.

Hunt Area	Samples	Sero-positive	Prevalence
35	0	0	0 %
36	8	0	0 %
37	4	0	0 %
38	3	0	0 %
39	39	0	0 %
40	19	0	0 %
Total	**73**	**0**	**0 %**

2021 - JCR Evaluation Form

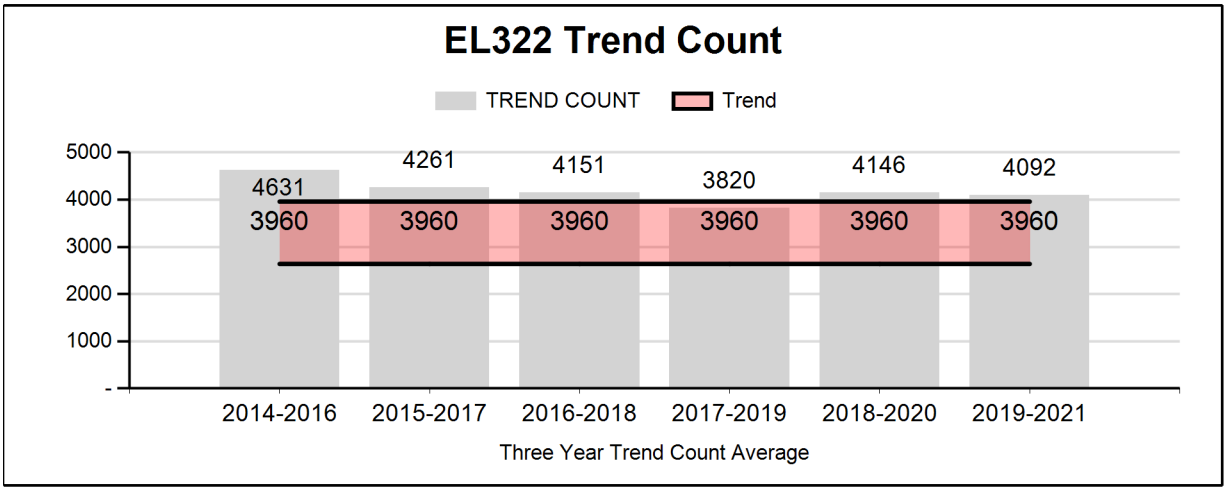
SPECIES: Elk
PERIOD: 6/1/2021 - 5/31/2022
HERD: EL322 - SOUTH BIGHORN
HUNT AREAS: 33-34, 47-49, 120
PREPARED BY: ZACH TURNBULL

	2016 - 2020 Average	2021	2022 Proposed
Trend Count:	4,000	4,731	4,500
Harvest:	1,870	1,383	2,000
Hunters:	3,891	3,852	3,605
Hunter Success:	48%	36%	55 %
Active Licenses:	4,024	3,968	3,656
Active License Success	46%	35%	55 %
Recreation Days:	26,670	30,177	30,000
Days Per Animal:	14.3	21.8	15
Males per 100 Females:	29	61	
Juveniles per 100 Females	30	28	

Trend Based Objective (± 20%)	3,300 (2640 - 3960)
Management Strategy:	Private Land
Percent population is above (+) or (-) objective:	43%
Number of years population has been + or - objective in recent trend:	2

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

	JCR Year	Proposed
Females ≥ 1 year old:	na%	na%
Males ≥ 1 year old:	na%	na%
Juveniles (< 1 year old):	na%	na%



2022 Hunting Seasons
South Bighorn Elk Herd Unit (EL322)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
33	1	Sep. 1	Sep. 30	Oct. 9	Oct. 31	200	Any elk
33	1			Nov. 1	Dec. 31		Antlerless elk
33	4			Aug. 15	Sep. 30	150	Antlerless elk valid on private land east of Buffalo Creek and the Bar C Road (B.L.M. Road 6214)
33	4	Sep. 1	Sep. 30	Oct. 9	Dec. 31		Antlerless elk valid in the entire area
33	6	Sep. 1	Sep. 30	Nov. 1	Dec. 31	300	Cow or calf
34	1	Sep. 1	Sep. 30	Oct. 9	Nov. 15	800	Any elk
34	1			Nov. 16	Dec. 31		Antlerless elk
34	6			Aug. 15	Oct. 8	700	Cow or calf valid on private land on or within one (1) mile of irrigated land.
34	6	Sep. 1	Sep. 30	Oct. 9	Dec. 31		Cow or calf valid off national forest
47	1	Sep. 1	Sep. 30	Oct. 9	Oct. 31	150	Any elk
47	1			Nov. 1	Nov. 30		Antlerless elk
47	6	Sep. 1	Sep. 30	Oct. 9	Nov. 30	50	Cow or calf
48	1	Sep. 1	Sep. 30	Oct. 9	Oct. 31	400	Any elk
48	1			Nov. 7	Dec. 15		Antlerless elk
48	4	Sep. 1	Sep. 30	Oct. 9	Oct. 31	125	Antlerless elk
48	4			Nov. 7	Dec. 15		Antlerless elk
48	6	Sep. 1	Sep. 30	Oct. 9	Oct. 31	700	Cow or calf

48	6			Nov. 7	Dec. 15		Cow or calf
49	1	Sep. 1	Sep. 30	Oct. 9	Oct. 31	350	Any elk
49	1			Nov. 7	Dec. 21		Antlerless elk
49	4	Sep. 1	Sep. 30	Oct. 9	Oct. 31	100	Antlerless elk
49	4			Nov. 7	Dec. 21		Antlerless elk
49	6	Sep. 1	Sep. 14	Sep. 15	Oct. 31	850	Cow or calf
49	6			Nov. 7	Dec. 21		Cow or calf
120	1	Sep. 1	Sep. 30	Oct. 9	Oct. 31	150	Any elk
120	1			Nov. 1	Dec. 15		Antlerless elk
120	4	Sep. 1	Sep. 30	Oct. 9	Dec. 15	100	Antlerless elk
120	6	Sep. 1	Sep. 30	Oct. 9	Dec. 15	100	Cow or calf

2020 Hunter Satisfaction: 54% Satisfied, 21% Neutral, 25% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation: This herd remained above trend count objectives in spite of interchange between many hunt areas and some herd units. While low winter range fidelity complicates hunt area trend data, most hunt areas remain over objective: HA 33(1,244; 1,100 sub-objective); HA 34 (1,152; 1,000 sub-objective); HA 47 (94; 200 sub-objective); HA 48 (1,293; 400 sub-objective); HA 49 (635; 300 sub-objective); HA 120 (313; 300 sub-objective).

Harvest statistics including hunter satisfaction (54%), hunter success (36%) and active license success (35%) were generally the lowest reported in the last decade. Effort was the highest reported in the last decade (21.8 days per harvest), and total harvest the lowest since 2011. These metrics are not surprising, given the drought conditions which persisted for the second consecutive year, and the continued trend of elk residing in protected or private parcels that restrict harvest and management.

We standardized the hunt area 34 opener to coincide with the remainder of the herd unit. The week of October 9th, sees the highest level of harvest in the herd unit. For many years hunters and landowners have requested a standard opener to increase hunting opportunity as elk are redistributed across the herd unit as the season opens. An earlier opening date may also avoid some winter storms and difficult access, as occurred in 2021 opener. Dozens of landowners, outfitters and producers were contacted regarding potential season date changes. Two landowners supported shortening the season, while approximately twenty did not support shortening the season or were indifferent to proposed changes. Over half of the

individuals supported the October 9th opening date, and one strongly opposed it, the remainder were indifferent.

We also received several comments regarding the early 34 type 6 cow/calf season. The season was devised to target elk utilizing low country agricultural lands. Many respondents and Department observations indicate that many were using the season to hunt high elevation private lands. This use may contribute to elk leaving the mountain, and at times may have conflicted with early season archery hunting. As such, limitations were changed to focus on low elevation, privately owned irrigated lands as originally intended. We eliminated the boundary description from limitations as the change should adequately focus harvest in the areas we intend.

Area 47 Type 6 licenses were reduced 50% in 2022. An extremely low success rate of 4.7% in 2021, combined with low trend counts (94; 200 sub-objective), necessitated the change. However, the Type 1 licenses were unchanged and the remaining Type 6 licenses allow for damage concerns to be addressed.

In Hunt Area 48, we increased the Type 4 and 6 quotas slightly to provide some additional hunter opportunity and increased harvest. This hunt area still remains over its winter count sub-objective of 400 elk, and in recent years has increased to a 3-year average of 1,227 elk counted.

No season changes in area 49 were warranted. It appears elk distribution has changed in area 49, which has contributed to fewer elk being available to hunters. Since 2017, hunter success on Type 6 licenses has declined from 74% to 30% success, whereas hunter effort increased from 8.0 days to 20.2 days/harvest.

Elk area 120 Type 1 license success has remained at above 60% since 2015, with the highest success reported in 2018 (79%). Success for the Type 1 license in 2021 was 62%. We increased Type 1 licenses to provide more opportunity. Type 4 and 6 harvest success has remained over 50% since 2016. We increased cow/calf licenses (Type 4; 100, Type 6; 100) to account for high success in a hunt area/herd unit that is over objective.

2.) Management Objective Review: No changes were made to the herd unit objectives. In the majority of the herd unit, we have not identified any need to change herd unit objectives. We continue to look for harvest opportunities in an area with complicated land ownership boundaries and changing elk behavior while working to improve our trend count methods. However, we have identified a concerning trend in the northeast corner of the herd unit. There is considerable interchange between wintering groups of elk in the northern portion of hunt area 34 and the southern portion of hunt area 35. Hunt area 35 is in the North Bighorns elk herd unit, which has complicated the annual counting and reporting of our mid-winter trend counts since 2017. Elk distribution and seasonal movement throughout the herd unit can vary greatly. We have met with landowners in the area of concern to discuss potential management solutions for both herd unit designation, and an increasing elk population. Landowner participation has varied. We have identified some potential options that should be considered and we expect this list to expand as a result of our forthcoming landowner meetings:

1. Move hunt area 35 from the North Bighorn herd unit to the South Bighorn herd unit
2. Move the hunt area 34/35 boundary to the south
3. Assess merits of Limited Quota vs. General license types
4. Explore opportunities to increase access and harvest on private lands
5. Assess methods to redistribute elk from areas where harvest is limited
6. Assess season dates and license numbers on harvest

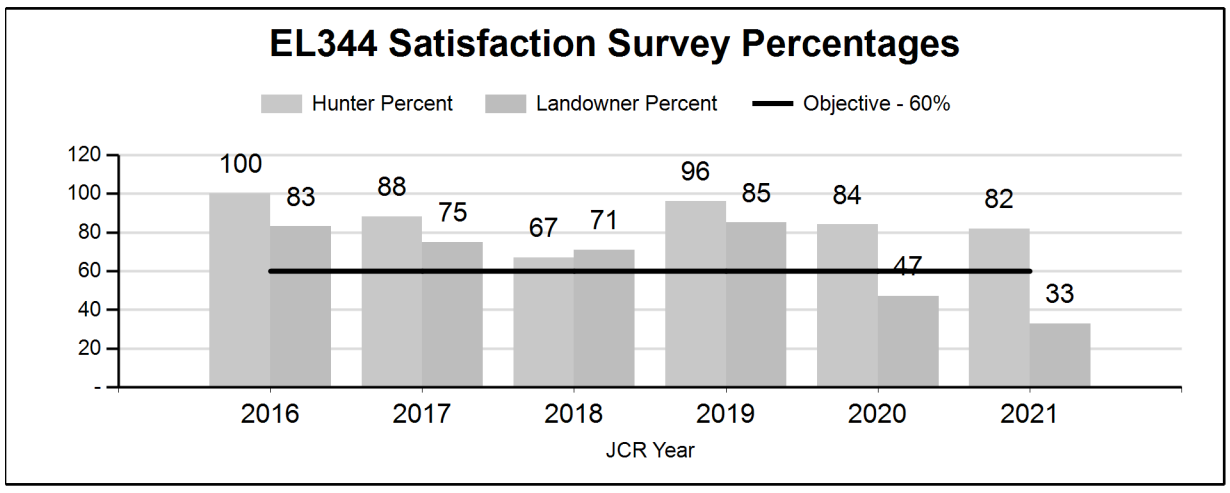
3.) Chronic Wasting Disease Management: This is a Tier 2 surveillance herd and will be targeted for CWD sampling beginning in 2022. CWD has been detected in hunt areas 34 and 48. Preliminary data in HA 34, while lacking significance, indicates an increasing prevalence of CWD within elk. Additional efforts will be made in HA 34 starting in 2022, as elk CWD prevalence data may be intrinsically beneficial when analyzing Upper Powder River deer project data.

2021 - JCR Evaluation Form

SPECIES: Elk
PERIOD: 6/1/2021 - 5/31/2022
HERD: EL344 - ROCHELLE HILLS
HUNT AREAS: 113, 123
PREPARED BY: ERIKA PECKHAM

	2016 - 2020 Average	2021	2022 Proposed
Hunter Satisfaction Percent	86%	82%	60%
Landowner Satisfaction Percent	70%	33%	60%
Harvest:	109	197	250
Hunters:	126	281	350
Hunter Success:	87%	70%	71 %
Active Licenses:	132	299	325
Active License Success:	83%	66%	77 %
Recreation Days:	528	1,611	1,800
Days Per Animal:	4.8	8.2	7.2
Males per 100 Females:	42	0	
Juveniles per 100 Females	40	0	

Satisfaction Based Objective	60%
Management Strategy:	Private Land
Percent population is above (+) or (-) objective:	-2%
Number of years population has been + or - objective in recent trend:	1



2022 HUNTING SEASONS
ROCHELLE HILLS ELK HERD (EL344)

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
113	2	Sept. 1	Sept. 30	Nov. 5	Nov. 30	100	Antlered elk five (5) points or less on either antler or antlerless elk
113	4	Sept. 1	Sept. 30	Nov. 5	Nov. 30	100	Antlerless elk
123	2			Sept. 1	Nov. 30	50	Antlered elk five (5) points or less on either antler or antlerless elk
123	4			Sep. 1	Nov. 30	75	Antlerless elk
123	6			Sep. 1	Nov. 30	75	Cow or calf

2021 Hunter Satisfaction: 82% Satisfied, 12% Neutral, 6% Dissatisfied

2022 Management Summary

1.) Hunting Season Evaluation: Hunt Area 123 is a predominantly private access hunt. The season structure is coordinated on an annual basis with participating landowners. Elk numbers in this hunt area remain high, and typically, landowner satisfaction is also high. Although landowners indicated that they were overall satisfied, there was concern about the increasing number of elk and that the bull ratio was becoming too high. To address these concerns, the rifle season was extended significantly and a Type 2 license was added with an antler point restriction (APR). This APR was designed to harvest younger age class and smaller bulls and to bring the bull ratio down. With the substantially extended rifle season and additional bull tags, it is hoped that an increase in harvest will occur.

The majority of dissatisfied landowners reside within Hunt Area 113 and there is overall concern that there are too many elk in this hunt area. This has been a concern that has grown gradually over the last few years. All 7 attendees present at a meeting in February of 2022 expressed dissatisfaction at the high number of elk. Hunt Area 113 has a fair amount of public land and has historically rotated with no hunting, cows only, and cows and bulls in a given year. Although 2022 was scheduled to be a closed season, it was determined that tolerance for elk was low. The addition of a Type 2 license aimed to harvest younger age class bulls and Type 4 licenses will target the elk density issue. The issuance of these licenses will allow private landowners to

manage elk and will also provide the hunting public opportunity on the public lands in this Hunt Area.

This herd has a satisfaction objective, with the goal of having at least 60% hunter and 60% landowner satisfaction. The 2021 harvest data illustrates an 82% hunter satisfaction, well above the requisite 60%. Conversely, this is the second year that the landowner satisfaction has not met the 60% threshold, coming in at 33%. As outlined above, the current season structure will address the concerns of each hunt area.

2.) Objective Review: This herd was due for an objective review in 2022. The Herd Unit Objective and Management Strategies were presented at the landowner and public season setting meeting. The Objective is a Satisfaction Objective with a Private Land Management Strategy. Based on the manager's proposal and landowner feedback, there was no proposed change to the Objective or Management Strategy.

2021 - JCR Evaluation Form

SPECIES: Moose
HERD: MO313 - BIGHORN
HUNT AREAS: 1, 34, 42

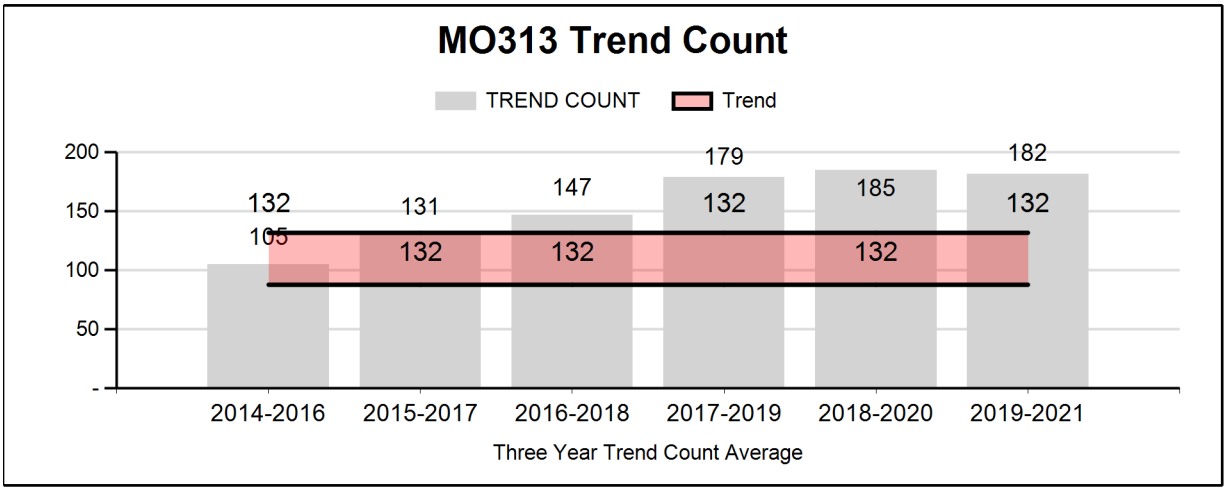
PERIOD: 6/1/2021 - 5/31/2022
PREPARED BY: TIM THOMAS

	2016 - 2020 Average	2021	2022 Proposed
Trend Count:	165	160	155
Harvest:	20	40	36
Hunters:	22	44	40
Hunter Success:	91%	91%	90%
Active Licenses:	22	44	40
Active License Success	91%	91%	90%
Recreation Days:	220	454	400
Days Per Animal:	11	11.4	11.1
Males per 100 Females:	81	107	
Juveniles per 100 Females	51	53	

Trend Based Objective (± 20%)	110 (88 - 132)
Management Strategy:	Special
Percent population is above (+) or (-) objective:	45%
Number of years population has been + or - objective in recent trend:	4

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:	20%	18%
Juveniles (< 1 year old):	1%	1%



2022 HUNTING SEASONS
BIGHORN MOOSE HERD (MO313)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
1	1	Sep. 1	Sep. 30	Oct. 1	Oct. 31	5	Any moose, except cow moose with calf at side
	4	Sep. 1	Sep. 30	Oct. 1	Oct. 31	5	Antlerless moose, except cow moose with calf at side
34	1	Sep. 1	Sep. 30	Oct. 1	Oct. 31	10	Any moose, except cow moose with calf at side
	4	Sep. 1	Sep. 30	Oct. 1	Oct. 31	5	Antlerless moose, except cow moose with calf at side
42	1	Sep. 1	Sep. 30	Oct. 1	Oct. 31	10	Any moose, except cow moose with calf at side
	4	Sep. 1	Sep. 30	Oct. 1	Oct. 31	5	Antlerless moose, except cow moose with calf at side

2021 Management Summary

1.) Hunting Season Evaluation: We manage this herd on a Trend Count objective of 110 moose (± 20%) based on a 3-year running average. We have also established sub-objectives for each hunt area to represent desired distribution of moose. In 2021, we observed 160 moose (Area 1 = 77; Area 34 = 39; Area 42 = 44), resulting in 3-year running average of 182 moose (Area 1 = 89; Area 34 = 46; Area 42 = 47). Over the past five years, we have observed more moose in each hunt area then desired.

In response to the increased number of moose observed across the herd unit since 2017, we added Type 4 licenses valid for antlerless moose, with five licenses in each hunt area, starting with the 2020 season. We harvested 10 adult female moose and 2 calves on these licenses. We continued the Type 4 licenses at the same level for 2021. Managers are confident this limited female harvest is appropriate, desired and sustainable to keep moose populations at acceptable levels.

All Wyoming moose herds are managed for a high bull to cow ratio (i.e. 50-70 bulls:100 cows), preferably with a diverse age structure. In Area 1, managers generally observed lower than desired bull:cow ratios, averaging 40 bulls:100 cows over the past five years. As such, we reduced Type 1 licenses from 10 to 5 to improve the observed bull:cow ratio. In Area 34, we observed an average of 85 bulls:100 cows over the past five years, although sample sizes were small. In Area 42,

managers observed higher than desired bull:cow ratios during the past five years, averaging 114 bulls:100 cows.

We consistently observed higher cow:calf ratios in Area 34 compared to Area 1. Over the past 5 years, we averaged 41 calves:100 cows in Area 1 compared to 56 calves:100 cows in Area 34. Its difficult to determine how much influence the lower bull:cow ratio in Area 1 contributes to the difference in observed production, but it is thought to play a role.

Hunters, on average, have been harvesting mature bulls during the past three years. Approximately 65% of the harvested males that were aged (n=57) have been five years or older based on the 3-year running average, above the desired 40% threshold. The median age of harvested bulls was 5 years old for the 3-year running average, above the desired minimum (≥ 4 years old). The youngest bulls are coming from Area 34 (n=17; 3 year μ=4.3 years old); the oldest bulls are coming from Area 42 (n=19; 3 year μ=6.8 years old); and medium aged bulls from Area 1 (n=21; 3 year μ=6 years old). These data suggest we have maintained an adequate age structure in this population.

2.) Management Objective Review: This herd is scheduled for its next 5-year herd unit review in 2025.

3) Research: We initiated a research project in 2017 looking at moose movements and season habitat use. Collars started dropping off in March 2020 and continued through 2021. A master's thesis for this project should be completed by the end of 2022.

The University of Wyoming initiated a research project in January 2020 looking at the use of fecal DNA for a modified mark/recapture density estimation technique. Fecal samples have been collected over the past two winters. Analysis to identify individual animals will occur during the summer of 2022. The results of this study may inform managers how current survey techniques and management objectives relate to an independent population estimate.

TABLE I

ANTELOPE

PRIVATE VS. PUBLIC LAND HARVEST CHARACTERISTICS*

BY HUNT AREA

UNWEIGHTED

2021

AREA	TYPE	ACTIVE LICENSES	HARVEST WITH LICENSE: HARVEST LAND LOCATION: PRIVATE LAND	PUBLIC LAND	DO NOT KNOW
1. Crook	Limited 1	33	63.6%	36.4%	0.0%
	D/F 6	19	15.8%	84.2%	0.0%
Total		52	46.2%	53.8%	0.0%
3. Keyhole	Limited 1	31	77.4%	22.6%	0.0%
	D/F 6	13	53.8%	46.2%	0.0%
Total		44	70.5%	29.5%	0.0%
17. Gillette	Limited 1	38	55.3%	44.7%	0.0%
	D/F 6	28	46.4%	53.6%	0.0%
Total		66	51.5%	48.5%	0.0%
19. Rozet	Limited 1	39	64.1%	35.9%	0.0%
	D/F 7	17	88.2%	11.8%	0.0%
Total		56	71.4%	28.6%	0.0%
20. Upper Powder River	Limited 1	32	71.9%	28.1%	0.0%
	D/F 6	23	52.2%	47.8%	0.0%
Total		55	63.6%	36.4%	0.0%
21. Middle Fork	Limited 1	34	26.5%	73.5%	0.0%
	D/F 6	25	12.0%	88.0%	0.0%
Total		59	20.3%	79.7%	0.0%
22. Crazy Woman	Limited 1	42	40.5%	59.5%	0.0%
	D/F 6	30	33.3%	66.7%	0.0%
Total		72	37.5%	62.5%	0.0%
23. Pumpkin Buttes	Limited 1	31	38.7%	58.1%	3.2%
	Limited 2	46	97.8%	2.2%	0.0%
	D/F 6	38	23.7%	76.3%	0.0%
	D/F 7	34	88.2%	8.8%	2.9%
Total		149	64.4%	34.2%	1.3%
24. Thunder Basin	Limited 1	31	35.5%	61.3%	3.2%
	Limited 2	34	97.1%	0.0%	2.9%
	D/F 6	16	68.8%	31.3%	0.0%
	D/F 7	25	100.0%	0.0%	0.0%
Total		106	75.5%	22.6%	1.9%
102. Buffalo	Limited 1	29	51.7%	44.8%	3.4%
	D/F 6	31	48.4%	51.6%	0.0%
Total		60	50.0%	48.3%	1.7%
113. Salt Creek	Limited 1	34	26.5%	70.6%	2.9%
	Limited 2	24	50.0%	45.8%	4.2%
	D/F 6	27	18.5%	81.5%	0.0%
Total		85	30.6%	67.1%	2.4%
Grand Total		804	54.1%	45.0%	0.9%

* Survey question: "Was your harvest on private or public land?"

TABLE II

ANTELOPE

GUIDED OR OUTFITTED HUNT CHARACTERISTICS

BY HUNT AREA
UNWEIGHTED

AREA	TYPE	HARVEST WITH LICENSE			NO HARVEST WITH LICENSE		
		ACTIVE LICENSES	HUNT WAS GUIDED/OUTFITTED YES	NO	ACTIVE LICENSES	HUNT WAS GUIDED/OUTFITTED YES	NO
1. Crook	Limited 1	33	54.5%	45.5%	5	0.0%	100.0%
	D/F 6	19	0.0%	100.0%	11	0.0%	100.0%
	Total	52	34.6%	65.4%	16	0.0%	100.0%
3. Keyhole	Limited 1	31	25.8%	74.2%	5	0.0%	100.0%
	D/F 6	13	0.0%	100.0%	1	0.0%	100.0%
	Total	44	18.2%	81.8%	6	0.0%	100.0%
17. Gillette	Limited 1	38	36.8%	63.2%	12	0.0%	100.0%
	D/F 6	28	0.0%	100.0%	11	0.0%	100.0%
	Total	66	21.2%	78.8%	23	0.0%	100.0%
19. Rozet	Limited 1	39	15.4%	84.6%	10	10.0%	90.0%
	D/F 7	17	0.0%	100.0%	5	0.0%	100.0%
	Total	56	10.7%	89.3%	15	6.7%	93.3%
20. Upper Powder River	Limited 1	32	18.8%	81.3%	20	5.0%	95.0%
	D/F 6	23	13.0%	87.0%	24	0.0%	100.0%
	Total	55	16.4%	83.6%	44	2.3%	97.7%
21. Middle Fork	Limited 1	34	14.7%	85.3%	24	4.2%	95.8%
	D/F 6	25	0.0%	100.0%	21	0.0%	100.0%
	Total	59	8.5%	91.5%	45	2.2%	97.8%
22. Crazy Woman	Limited 1	42	33.3%	66.7%	11	0.0%	100.0%
	D/F 6	30	3.3%	96.7%	23	4.3%	95.7%
	Total	72	20.8%	79.2%	34	2.9%	97.1%
23. Pumpkin Buttes	Limited 1	31	12.9%	87.1%	7	0.0%	100.0%
	Limited 2	46	28.3%	71.7%	4	25.0%	75.0%
	D/F 6	38	7.9%	92.1%	3	0.0%	100.0%
	D/F 7	34	8.8%	91.2%	9	0.0%	100.0%
	Total	149	15.4%	84.6%	23	4.3%	95.7%
24. Thunder Basin	Limited 1	31	25.8%	74.2%	10	0.0%	100.0%
	Limited 2	34	44.1%	55.9%	6	50.0%	50.0%
	D/F 6	16	6.3%	93.8%	6	0.0%	100.0%
	D/F 7	25	16.0%	84.0%	2	100.0%	0.0%
	Total	106	26.4%	73.6%	24	20.8%	79.2%
102. Buffalo	Limited 1	29	41.4%	58.6%	10	10.0%	90.0%
	D/F 6	31	3.2%	96.8%	12	0.0%	100.0%
	Total	60	21.7%	78.3%	22	4.5%	95.5%
113. Salt Creek	Limited 1	34	14.7%	85.3%	7	14.3%	85.7%
	Limited 2	24	37.5%	62.5%	15	13.3%	86.7%
	D/F 6	27	0.0%	100.0%	15	6.7%	93.3%
	Total	85	16.5%	83.5%	37	10.8%	89.2%
Grand Total		804	19.0%	81.0%	289	5.2%	94.8%

* Survey question: "Was your hunt guided or outfitted?"

TABLE III

ANTELOPE

PRIVATE VS. PUBLIC LAND HUNT CHARACTERISTICS*

BY HUNT AREA
UNWEIGHTED

AREA	TYPE	HARVEST WITH LICENSE					NO HARVEST WITH LICENSE				
		ACTIVE LICENSES	MOSTLY / ALL PRIVATE	MOSTLY / ALL PUBLIC	EVEN MIX	DO NOT KNOW	ACTIVE LICENSES	MOSTLY / ALL PRIVATE	MOSTLY / ALL PUBLIC	EVEN MIX	DO NOT KNOW
1. Crook	Limited 1	33	63.6%	36.4%	0.0%	0.0%	5	20.0%	80.0%	0.0%	0.0%
	D/F 6	19	15.8%	84.2%	0.0%	0.0%	11	27.3%	72.7%	0.0%	0.0%
	Total	52	46.2%	53.8%	0.0%	0.0%	16	25.0%	75.0%	0.0%	0.0%
3. Keyhole	Limited 1	31	61.3%	22.6%	16.1%	0.0%	5	40.0%	60.0%	0.0%	0.0%
	D/F 6	13	53.8%	38.5%	7.7%	0.0%	1	0.0%	0.0%	100.0%	0.0%
	Total	44	59.1%	27.3%	13.6%	0.0%	6	33.3%	50.0%	16.7%	0.0%
17. Gillette	Limited 1	38	50.0%	42.1%	7.9%	0.0%	12	0.0%	91.7%	8.3%	0.0%
	D/F 6	28	32.1%	53.6%	14.3%	0.0%	11	18.2%	63.6%	18.2%	0.0%
	Total	66	42.4%	47.0%	10.6%	0.0%	23	8.7%	78.3%	13.0%	0.0%
19. Rozet	Limited 1	39	51.3%	38.5%	10.3%	0.0%	10	40.0%	50.0%	10.0%	0.0%
	D/F 7	17	70.6%	11.8%	17.6%	0.0%	5	60.0%	0.0%	40.0%	0.0%
	Total	56	57.1%	30.4%	12.5%	0.0%	15	46.7%	33.3%	20.0%	0.0%
20. Upper Powder River	Limited 1	32	65.6%	31.3%	3.1%	0.0%	20	20.0%	75.0%	5.0%	0.0%
	D/F 6	23	30.4%	47.8%	21.7%	0.0%	24	4.2%	87.5%	8.3%	0.0%
	Total	55	50.9%	38.2%	10.9%	0.0%	44	11.4%	81.8%	6.8%	0.0%
21. Middle Fork	Limited 1	34	23.5%	67.6%	8.8%	0.0%	24	0.0%	95.8%	4.2%	0.0%
	D/F 6	25	4.0%	84.0%	12.0%	0.0%	21	14.3%	81.0%	4.8%	0.0%
	Total	59	15.3%	74.6%	10.2%	0.0%	45	6.7%	88.9%	4.4%	0.0%
22. Crazy Woman	Limited 1	42	33.3%	59.5%	4.8%	2.4%	11	18.2%	81.8%	0.0%	0.0%
	D/F 6	30	30.0%	70.0%	0.0%	0.0%	23	8.7%	87.0%	4.3%	0.0%
	Total	72	31.9%	63.9%	2.8%	1.4%	34	11.8%	85.3%	2.9%	0.0%
23. Pumpkin Buttes	Limited 1	31	29.0%	54.8%	12.9%	3.2%	7	14.3%	42.9%	28.6%	14.3%
	Limited 2	46	95.7%	0.0%	2.2%	2.2%	4	100.0%	0.0%	0.0%	0.0%
	D/F 6	38	26.3%	71.1%	2.6%	0.0%	3	0.0%	100.0%	0.0%	0.0%
	D/F 7	34	88.2%	8.8%	0.0%	2.9%	9	44.4%	44.4%	0.0%	11.1%
	Total	149	62.4%	31.5%	4.0%	2.0%	23	39.1%	43.5%	8.7%	8.7%
24. Thunder Basin	Limited 1	31	32.3%	64.5%	0.0%	3.2%	10	0.0%	80.0%	20.0%	0.0%
	Limited 2	34	94.1%	0.0%	2.9%	2.9%	6	100.0%	0.0%	0.0%	0.0%
	D/F 6	16	56.3%	37.5%	6.3%	0.0%	6	16.7%	66.7%	16.7%	0.0%
	D/F 7	25	100.0%	0.0%	0.0%	0.0%	2	50.0%	0.0%	50.0%	0.0%
	Total	106	71.7%	24.5%	1.9%	1.9%	24	33.3%	50.0%	16.7%	0.0%
102. Buffalo	Limited 1	29	48.3%	34.5%	13.8%	3.4%	10	20.0%	80.0%	0.0%	0.0%
	D/F 6	31	41.9%	38.7%	19.4%	0.0%	12	0.0%	91.7%	8.3%	0.0%
	Total	60	45.0%	36.7%	16.7%	1.7%	22	9.1%	86.4%	4.5%	0.0%
113. Salt Creek	Limited 1	34	17.6%	70.6%	8.8%	2.9%	7	14.3%	71.4%	14.3%	0.0%
	Limited 2	24	41.7%	41.7%	16.7%	0.0%	15	13.3%	73.3%	13.3%	0.0%
	D/F 6	27	3.7%	70.4%	25.9%	0.0%	15	0.0%	100.0%	0.0%	0.0%
	Total	85	20.0%	62.4%	16.5%	1.2%	37	8.1%	83.8%	8.1%	0.0%
Grand Total		804	47.6%	43.2%	8.2%	1.0%	289	17.0%	74.4%	8.0%	0.7%

* Survey question: "Was most hunting done on private land, public land, or an even mix of private and public land?"

TABLE I

MULE DEER

PRIVATE VS. PUBLIC LAND HARVEST CHARACTERISTICS*

BY HUNT AREA

UNWEIGHTED

2021

AREA	TYPE	ACTIVE LICENSES	HARVEST WITH LICENSE: HARVEST LAND LOCATION: PRIVATE LAND	PUBLIC LAND	DO NOT KNOW
1. Crook	D/F Type 7	9	88.9%	11.1%	0.0%
	General	87	55.2%	44.8%	0.0%
	Total	96	58.3%	41.7%	0.0%
3. Keyhole	D/F Type 7	0	0.0%	0.0%	0.0%
	General	36	80.6%	19.4%	0.0%
	Total	36	80.6%	19.4%	0.0%
17. Northwest Gillette	D/F Type 7	9	100.0%	0.0%	0.0%
	General	107	61.7%	38.3%	0.0%
	Total	116	64.7%	35.3%	0.0%
18. Campbell	D/F Type 7	13	92.3%	7.7%	0.0%
	General	68	52.9%	42.6%	4.4%
	Total	81	59.3%	37.0%	3.7%
19. Pumpkin Buttes	D/F Type 7	10	90.0%	10.0%	0.0%
	General	56	53.6%	42.9%	3.6%
	Total	66	59.1%	37.9%	3.0%
21. Thunder Basin	D/F Type 7	5	100.0%	0.0%	0.0%
	General	19	73.7%	26.3%	0.0%
	Total	24	79.2%	20.8%	0.0%
27. Buffalo	General	17	11.8%	88.2%	0.0%
	Total	17	11.8%	88.2%	0.0%
29. Johnson	General	27	48.1%	48.1%	3.7%
	Total	27	48.1%	48.1%	3.7%
30. Upper Powder River	General	15	60.0%	40.0%	0.0%
	Total	15	60.0%	40.0%	0.0%
31. Salt Creek	General	2	50.0%	50.0%	0.0%
	Total	2	50.0%	50.0%	0.0%
32. Beartrap Creek	General	1	0.0%	100.0%	0.0%
	Total	1	0.0%	100.0%	0.0%
33. Red Fork	General	41	31.7%	65.9%	2.4%
	Total	41	31.7%	65.9%	2.4%
163. Middle Fork	General	13	0.0%	100.0%	0.0%
	Total	13	0.0%	100.0%	0.0%
169. Tisdale Mountain	General	11	18.2%	81.8%	0.0%
	Total	11	18.2%	81.8%	0.0%
Grand Total		546	56.0%	42.7%	1.3%

* Survey question: "Was your harvest on private or public land?"

TABLE II

MULE DEER

GUIDED OR OUTFITTED HUNT CHARACTERISTICS

BY HUNT AREA
UNWEIGHTED

AREA	TYPE	HARVEST WITH LICENSE			NO HARVEST WITH LICENSE		
		ACTIVE LICENSES	HUNT WAS GUIDED/OUTFITTED YES	NO	ACTIVE LICENSES	HUNT WAS GUIDED/OUTFITTED YES	NO
1. Crook	D/F Type 7	9	0.0%	100.0%	5	0.0%	100.0%
	General	87	10.3%	89.7%	123	3.3%	96.7%
	Total	96	9.4%	90.6%	128	3.1%	96.9%
3. Keyhole	D/F Type 7	0	0.0%	0.0%	0	0.0%	0.0%
	General	36	16.7%	83.3%	28	14.3%	85.7%
	Total	36	16.7%	83.3%	28	14.3%	85.7%
17. Northwest Gillette	D/F Type 7	9	0.0%	100.0%	2	0.0%	100.0%
	General	107	29.9%	70.1%	77	6.5%	93.5%
	Total	116	27.6%	72.4%	79	6.3%	93.7%
18. Campbell	D/F Type 7	13	0.0%	100.0%	7	0.0%	100.0%
	General	68	33.8%	66.2%	53	9.4%	90.6%
	Total	81	28.4%	71.6%	60	8.3%	91.7%
19. Pumpkin Buttes	D/F Type 7	10	10.0%	90.0%	1	0.0%	100.0%
	General	56	25.0%	75.0%	34	5.9%	94.1%
	Total	66	22.7%	77.3%	35	5.7%	94.3%
21. Thunder Basin	D/F Type 7	5	0.0%	100.0%	8	0.0%	100.0%
	General	19	31.6%	68.4%	20	0.0%	100.0%
	Total	24	25.0%	75.0%	28	0.0%	100.0%
27. Buffalo	General	17	5.9%	94.1%	31	3.2%	96.8%
	Total	17	5.9%	94.1%	31	3.2%	96.8%
29. Johnson	General	27	22.2%	77.8%	24	4.2%	95.8%
	Total	27	22.2%	77.8%	24	4.2%	95.8%
30. Upper Powder River	General	15	13.3%	86.7%	17	0.0%	100.0%
	Total	15	13.3%	86.7%	17	0.0%	100.0%
31. Salt Creek	General	2	0.0%	100.0%	6	0.0%	100.0%
	Total	2	0.0%	100.0%	6	0.0%	100.0%
32. Beartrap Creek	General	1	0.0%	100.0%	3	0.0%	100.0%
	Total	1	0.0%	100.0%	3	0.0%	100.0%
33. Red Fork	General	41	4.9%	95.1%	45	2.2%	97.8%
	Total	41	4.9%	95.1%	45	2.2%	97.8%
163. Middle Fork	General	13	0.0%	100.0%	22	0.0%	100.0%
	Total	13	0.0%	100.0%	22	0.0%	100.0%
169. Tisdale Mountain	General	11	9.1%	90.9%	12	0.0%	100.0%
	Total	11	9.1%	90.9%	12	0.0%	100.0%
Grand Total		546	18.9%	81.1%	518	4.4%	95.6%

* Survey question: "Was your hunt guided or outfitted?"

TABLE III

MULE DEER

PRIVATE VS. PUBLIC LAND HUNT CHARACTERISTICS*

BY HUNT AREA
UNWEIGHTED

AREA	TYPE	HARVEST WITH LICENSE					NO HARVEST WITH LICENSE				
		ACTIVE LICENSES	MOSTLY / ALL PRIVATE	MOSTLY / ALL PUBLIC	EVEN MIX	DO NOT KNOW	ACTIVE LICENSES	MOSTLY / ALL PRIVATE	MOSTLY / ALL PUBLIC	EVEN MIX	DO NOT KNOW
1. Crook	D/F Type 7	9	88.9%	11.1%	0.0%	0.0%	5	60.0%	20.0%	20.0%	0.0%
	General	87	47.1%	46.0%	6.9%	0.0%	123	35.0%	56.9%	8.1%	0.0%
	Total	96	51.0%	42.7%	6.3%	0.0%	128	35.9%	55.5%	8.6%	0.0%
3. Keyhole	D/F Type 7	0	0.0%	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%
	General	36	72.2%	22.2%	5.6%	0.0%	28	42.9%	46.4%	10.7%	0.0%
	Total	36	72.2%	22.2%	5.6%	0.0%	28	42.9%	46.4%	10.7%	0.0%
17. Northwest Gillette	D/F Type 7	9	100.0%	0.0%	0.0%	0.0%	2	50.0%	0.0%	50.0%	0.0%
	General	107	55.1%	37.4%	7.5%	0.0%	77	27.3%	59.7%	13.0%	0.0%
	Total	116	58.6%	34.5%	6.9%	0.0%	79	27.8%	58.2%	13.9%	0.0%
18. Campbell	D/F Type 7	13	84.6%	7.7%	7.7%	0.0%	7	85.7%	14.3%	0.0%	0.0%
	General	68	50.0%	44.1%	5.9%	0.0%	53	26.4%	67.9%	5.7%	0.0%
	Total	81	55.6%	38.3%	6.2%	0.0%	60	33.3%	61.7%	5.0%	0.0%
19. Pumpkin Buttes	D/F Type 7	10	80.0%	10.0%	0.0%	10.0%	1	100.0%	0.0%	0.0%	0.0%
	General	56	46.4%	44.6%	8.9%	0.0%	34	32.4%	52.9%	14.7%	0.0%
	Total	66	51.5%	39.4%	7.6%	1.5%	35	34.3%	51.4%	14.3%	0.0%
21. Thunder Basin	D/F Type 7	5	100.0%	0.0%	0.0%	0.0%	8	62.5%	12.5%	25.0%	0.0%
	General	19	73.7%	21.1%	5.3%	0.0%	20	20.0%	75.0%	5.0%	0.0%
	Total	24	79.2%	16.7%	4.2%	0.0%	28	32.1%	57.1%	10.7%	0.0%
27. Buffalo	General	17	5.9%	88.2%	5.9%	0.0%	31	9.7%	74.2%	16.1%	0.0%
	Total	17	5.9%	88.2%	5.9%	0.0%	31	9.7%	74.2%	16.1%	0.0%
29. Johnson	General	27	48.1%	44.4%	3.7%	3.7%	24	20.8%	66.7%	12.5%	0.0%
	Total	27	48.1%	44.4%	3.7%	3.7%	24	20.8%	66.7%	12.5%	0.0%
30. Upper Powder River	General	15	53.3%	40.0%	6.7%	0.0%	17	11.8%	76.5%	11.8%	0.0%
	Total	15	53.3%	40.0%	6.7%	0.0%	17	11.8%	76.5%	11.8%	0.0%
31. Salt Creek	General	2	50.0%	50.0%	0.0%	0.0%	6	0.0%	83.3%	16.7%	0.0%
	Total	2	50.0%	50.0%	0.0%	0.0%	6	0.0%	83.3%	16.7%	0.0%
32. Beartrap Creek	General	1	0.0%	100.0%	0.0%	0.0%	3	33.3%	66.7%	0.0%	0.0%
	Total	1	0.0%	100.0%	0.0%	0.0%	3	33.3%	66.7%	0.0%	0.0%
33. Red Fork	General	41	22.0%	63.4%	12.2%	2.4%	45	17.8%	71.1%	11.1%	0.0%
	Total	41	22.0%	63.4%	12.2%	2.4%	45	17.8%	71.1%	11.1%	0.0%
163. Middle Fork	General	13	7.7%	92.3%	0.0%	0.0%	22	9.1%	86.4%	4.5%	0.0%
	Total	13	7.7%	92.3%	0.0%	0.0%	22	9.1%	86.4%	4.5%	0.0%
169. Tisdale Mountain	General	11	9.1%	81.8%	9.1%	0.0%	12	0.0%	91.7%	8.3%	0.0%
	Total	11	9.1%	81.8%	9.1%	0.0%	12	0.0%	91.7%	8.3%	0.0%
Grand Total		546	50.4%	42.5%	6.6%	0.5%	518	27.4%	62.2%	10.4%	0.0%

* Survey question: "Was most hunting done on private land, public land, or an even mix of private and public land?"

TABLE I

WHITE-TAILED DEER

PRIVATE VS. PUBLIC LAND HARVEST CHARACTERISTICS*

BY HUNT AREA

UNWEIGHTED

2021

AREA	TYPE	ACTIVE LICENSES	HARVEST WITH LICENSE: HARVEST LAND LOCATION: PRIVATE LAND	PUBLIC LAND	DO NOT KNOW
1. Crook	D/F Type 7	18	100.0%	0.0%	0.0%
	General	133	78.2%	21.8%	0.0%
	Total	151	80.8%	19.2%	0.0%
3. Keyhole	D/F Type 7	0	0.0%	0.0%	0.0%
	General	32	71.9%	28.1%	0.0%
	Total	32	71.9%	28.1%	0.0%
17. Northwest Gillette	D/F Type 7	0	0.0%	0.0%	0.0%
	D/F Type 8	9	100.0%	0.0%	0.0%
	General	16	93.8%	6.3%	0.0%
	Total	25	96.0%	4.0%	0.0%
18. Campbell	D/F Type 7	2	100.0%	0.0%	0.0%
	D/F Type 8	11	100.0%	0.0%	0.0%
	General	16	75.0%	25.0%	0.0%
	Total	29	86.2%	13.8%	0.0%
19. Pumpkin Buttes	D/F Type 7	0	0.0%	0.0%	0.0%
	D/F Type 8	2	100.0%	0.0%	0.0%
	General	4	50.0%	50.0%	0.0%
	Total	6	66.7%	33.3%	0.0%
21. Thunder Basin	D/F Type 7	5	100.0%	0.0%	0.0%
	D/F Type 8	2	100.0%	0.0%	0.0%
	General	2	50.0%	50.0%	0.0%
	Total	9	88.9%	11.1%	0.0%
27. Buffalo	D/F Type 8	15	66.7%	26.7%	6.7%
	General	62	64.5%	35.5%	0.0%
	Total	77	64.9%	33.8%	1.3%
29. Johnson	D/F Type 8	18	100.0%	0.0%	0.0%
	General	19	89.5%	10.5%	0.0%
	Total	37	94.6%	5.4%	0.0%
30. Upper Powder River	D/F Type 8	11	45.5%	54.5%	0.0%
	General	17	58.8%	41.2%	0.0%
	Total	28	53.6%	46.4%	0.0%
31. Salt Creek	General	1	100.0%	0.0%	0.0%
	Total	1	100.0%	0.0%	0.0%
32. Beartrap Creek	D/F Type 8	8	87.5%	12.5%	0.0%
	General	1	100.0%	0.0%	0.0%
	Total	9	88.9%	11.1%	0.0%
33. Red Fork	D/F Type 8	12	75.0%	25.0%	0.0%
	General	11	81.8%	18.2%	0.0%
	Total	23	78.3%	21.7%	0.0%
163. Middle Fork	D/F Type 8	0	0.0%	0.0%	0.0%
	General	0	0.0%	0.0%	0.0%
	Total	0	0.0%	0.0%	0.0%
169. Tisdale Mountain	General	1	100.0%	0.0%	0.0%
	Total	1	100.0%	0.0%	0.0%
Grand Total		428	78.0%	21.7%	0.2%

* Survey question: "Was your harvest on private or public land?"

TABLE II

WHITE-TAILED DEER

GUIDED OR OUTFITTED HUNT CHARACTERISTICS

BY HUNT AREA
UNWEIGHTED

AREA	TYPE	HARVEST WITH LICENSE			NO HARVEST WITH LICENSE		
		ACTIVE LICENSES	HUNT WAS GUIDED/OUTFITTED YES	NO	ACTIVE LICENSES	HUNT WAS GUIDED/OUTFITTED YES	NO
1. Crook	D/F Type 7	18	11.1%	88.9%	8	12.5%	87.5%
	General	133	15.8%	84.2%	131	6.1%	93.9%
	Total	151	15.2%	84.8%	139	6.5%	93.5%
3. Keyhole	D/F Type 7	0	0.0%	0.0%	0	0.0%	0.0%
	General	32	12.5%	87.5%	31	6.5%	93.5%
	Total	32	12.5%	87.5%	31	6.5%	93.5%
17. Northwest Gillette	D/F Type 7				1	0.0%	100.0%
	D/F Type 8	9	11.1%	88.9%	18	0.0%	100.0%
	General	16	43.8%	56.3%	38	0.0%	100.0%
	Total	25	32.0%	68.0%	57	0.0%	100.0%
18. Campbell	D/F Type 7	2	0.0%	100.0%	5	0.0%	100.0%
	D/F Type 8	11	27.3%	72.7%	4	0.0%	100.0%
	General	16	31.3%	68.8%	23	4.3%	95.7%
	Total	29	27.6%	72.4%	32	3.1%	96.9%
19. Pumpkin Buttes	D/F Type 7	0	0.0%	0.0%	0	0.0%	0.0%
	D/F Type 8	2	0.0%	100.0%	5	0.0%	100.0%
	General	4	25.0%	75.0%	8	12.5%	87.5%
	Total	6	16.7%	83.3%	13	7.7%	92.3%
21. Thunder Basin	D/F Type 7	5	20.0%	80.0%	1	0.0%	100.0%
	D/F Type 8	2	0.0%	100.0%	2	0.0%	100.0%
	General	2	0.0%	100.0%	3	0.0%	100.0%
	Total	9	11.1%	88.9%	6	0.0%	100.0%
27. Buffalo	D/F Type 8	15	0.0%	100.0%	9	0.0%	100.0%
	General	62	4.8%	95.2%	34	2.9%	97.1%
	Total	77	3.9%	96.1%	43	2.3%	97.7%
29. Johnson	D/F Type 8	18	11.1%	88.9%	16	0.0%	100.0%
	General	19	26.3%	73.7%	12	8.3%	91.7%
	Total	37	18.9%	81.1%	28	3.6%	96.4%
30. Upper Powder River	D/F Type 8	11	0.0%	100.0%	24	4.2%	95.8%
	General	17	0.0%	100.0%	10	0.0%	100.0%
	Total	28	0.0%	100.0%	34	2.9%	97.1%
31. Salt Creek	General	1	0.0%	100.0%	0	0.0%	0.0%
	Total	1	0.0%	100.0%	0	0.0%	0.0%
32. Beartrap Creek	D/F Type 8	8	12.5%	87.5%	5	0.0%	100.0%
	General	1	0.0%	100.0%	0	0.0%	0.0%
	Total	9	11.1%	88.9%	5	0.0%	100.0%
33. Red Fork	D/F Type 8	12	16.7%	83.3%	16	0.0%	100.0%
	General	11	9.1%	90.9%	22	0.0%	100.0%
	Total	23	13.0%	87.0%	38	0.0%	100.0%
163. Middle Fork	D/F Type 8	0	0.0%	0.0%	0	0.0%	0.0%
	General	0	0.0%	0.0%	3	0.0%	100.0%
	Total	0	0.0%	0.0%	3	0.0%	100.0%
169. Tisdale Mountain	General	1	0.0%	100.0%	2	0.0%	100.0%
	Total	1	0.0%	100.0%	2	0.0%	100.0%
Grand Total		428	13.8%	86.2%	431	3.7%	96.3%

* Survey question: "Was your hunt guided or outfitted?"

TABLE III

WHITE-TAILED DEER

PRIVATE VS. PUBLIC LAND HUNT CHARACTERISTICS*

BY HUNT AREA
UNWEIGHTED

AREA	TYPE	HARVEST WITH LICENSE					NO HARVEST WITH LICENSE				
		ACTIVE LICENSES	MOSTLY / ALL PRIVATE	MOSTLY / ALL PUBLIC	EVEN MIX	DO NOT KNOW	ACTIVE LICENSES	MOSTLY / ALL PRIVATE	MOSTLY / ALL PUBLIC	EVEN MIX	DO NOT KNOW
1. Crook	D/F Type 7	18	100.0%	0.0%	0.0%	0.0%	8	75.0%	25.0%	0.0%	0.0%
	General	133	73.7%	22.6%	3.8%	0.0%	131	41.2%	49.6%	8.4%	0.8%
	Total	151	76.8%	19.9%	3.3%	0.0%	139	43.2%	48.2%	7.9%	0.7%
3. Keyhole	D/F Type 7	0	0.0%	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%
	General	32	68.8%	25.0%	3.1%	3.1%	31	25.8%	64.5%	9.7%	0.0%
	Total	32	68.8%	25.0%	3.1%	3.1%	31	25.8%	64.5%	9.7%	0.0%
17. Northwest Gillette	D/F Type 7						1	0.0%	0.0%	100.0%	0.0%
	D/F Type 8	9	77.8%	0.0%	22.2%	0.0%	18	38.9%	44.4%	16.7%	0.0%
	General	16	68.8%	6.3%	25.0%	0.0%	38	23.7%	60.5%	15.8%	0.0%
	Total	25	72.0%	4.0%	24.0%	0.0%	57	28.1%	54.4%	17.5%	0.0%
18. Campbell	D/F Type 7	2	100.0%	0.0%	0.0%	0.0%	5	100.0%	0.0%	0.0%	0.0%
	D/F Type 8	11	100.0%	0.0%	0.0%	0.0%	4	75.0%	25.0%	0.0%	0.0%
	General	16	75.0%	25.0%	0.0%	0.0%	23	30.4%	65.2%	4.3%	0.0%
	Total	29	86.2%	13.8%	0.0%	0.0%	32	46.9%	50.0%	3.1%	0.0%
19. Pumpkin Buttes	D/F Type 7	0	0.0%	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%
	D/F Type 8	2	50.0%	50.0%	0.0%	0.0%	5	0.0%	80.0%	0.0%	20.0%
	General	4	50.0%	50.0%	0.0%	0.0%	8	25.0%	62.5%	12.5%	0.0%
	Total	6	50.0%	50.0%	0.0%	0.0%	13	15.4%	69.2%	7.7%	7.7%
21. Thunder Basin	D/F Type 7	5	100.0%	0.0%	0.0%	0.0%	1	0.0%	0.0%	0.0%	100.0%
	D/F Type 8	2	100.0%	0.0%	0.0%	0.0%	2	100.0%	0.0%	0.0%	0.0%
	General	2	50.0%	50.0%	0.0%	0.0%	3	0.0%	66.7%	33.3%	0.0%
	Total	9	88.9%	11.1%	0.0%	0.0%	6	33.3%	33.3%	16.7%	16.7%
27. Buffalo	D/F Type 8	15	60.0%	26.7%	6.7%	6.7%	9	11.1%	88.9%	0.0%	0.0%
	General	62	53.2%	33.9%	12.9%	0.0%	34	20.6%	58.8%	20.6%	0.0%
	Total	77	54.5%	32.5%	11.7%	1.3%	43	18.6%	65.1%	16.3%	0.0%
29. Johnson	D/F Type 8	18	100.0%	0.0%	0.0%	0.0%	16	31.3%	68.8%	0.0%	0.0%
	General	19	89.5%	10.5%	0.0%	0.0%	12	0.0%	91.7%	8.3%	0.0%
	Total	37	94.6%	5.4%	0.0%	0.0%	28	17.9%	78.6%	3.6%	0.0%
30. Upper Powder River	D/F Type 8	11	36.4%	54.5%	9.1%	0.0%	24	20.8%	79.2%	0.0%	0.0%
	General	17	52.9%	41.2%	5.9%	0.0%	10	10.0%	70.0%	20.0%	0.0%
	Total	28	46.4%	46.4%	7.1%	0.0%	34	17.6%	76.5%	5.9%	0.0%
31. Salt Creek	General	1	0.0%	0.0%	100.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%
	Total	1	0.0%	0.0%	100.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%
32. Beartrap Creek	D/F Type 8	8	87.5%	12.5%	0.0%	0.0%	5	20.0%	40.0%	40.0%	0.0%
	General	1	100.0%	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%
	Total	9	88.9%	11.1%	0.0%	0.0%	5	20.0%	40.0%	40.0%	0.0%
33. Red Fork	D/F Type 8	12	75.0%	25.0%	0.0%	0.0%	16	18.8%	81.3%	0.0%	0.0%
	General	11	72.7%	18.2%	9.1%	0.0%	22	13.6%	77.3%	9.1%	0.0%
	Total	23	73.9%	21.7%	4.3%	0.0%	38	15.8%	78.9%	5.3%	0.0%
163. Middle Fork	D/F Type 8	0	0.0%	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%	0.0%
	General	0	0.0%	0.0%	0.0%	0.0%	3	0.0%	100.0%	0.0%	0.0%
	Total	0	0.0%	0.0%	0.0%	0.0%	3	0.0%	100.0%	0.0%	0.0%
169. Tisdale Mountain	General	1	100.0%	0.0%	0.0%	0.0%	2	0.0%	100.0%	0.0%	0.0%
	Total	1	100.0%	0.0%	0.0%	0.0%	2	0.0%	100.0%	0.0%	0.0%
Grand Total		428	72.0%	21.7%	5.8%	0.5%	431	29.9%	59.9%	9.5%	0.7%

* Survey question: "Was most hunting done on private land, public land, or an even mix of private and public land?"

TABLE I

ELK

PRIVATE VS. PUBLIC LAND HARVEST CHARACTERISTICS*

BY HUNT AREA

UNWEIGHTED

2021

AREA	TYPE	ACTIVE LICENSES	HARVEST WITH LICENSE: HARVEST LAND LOCATION: PRIVATE LAND	PUBLIC LAND	DO NOT KNOW
33. Middle Fork	Limited 1	11	54.5%	45.5%	0.0%
	Limited 4	11	72.7%	27.3%	0.0%
	Limited 6	3	66.7%	33.3%	0.0%
Total		25	64.0%	36.0%	0.0%
34. Upper Powder River	Limited 1	13	69.2%	30.8%	0.0%
	Limited 6	11	54.5%	45.5%	0.0%
Total		24	62.5%	37.5%	0.0%
35. Hunter Mesa	Limited 1	10	30.0%	70.0%	0.0%
	Limited 4	6	0.0%	100.0%	0.0%
	Limited 6	12	33.3%	66.7%	0.0%
	Limited 9	7	14.3%	85.7%	0.0%
Total		35	22.9%	77.1%	0.0%
Grand Total		84	46.4%	53.6%	0.0%

* Survey question: "Was your harvest on private or public land?"

TABLE II

ELK

GUIDED OR OUTFITTED HUNT CHARACTERISTICS

BY HUNT AREA
UNWEIGHTED

AREA	TYPE	HARVEST WITH LICENSE			NO HARVEST WITH LICENSE		
		ACTIVE LICENSES	HUNT WAS GUIDED/OUTFITTED* YES	NO	ACTIVE LICENSES	HUNT WAS GUIDED/OUTFITTED* YES	NO
33. Middle Fork	Limited 1	11	45.5%	54.5%	21	4.8%	95.2%
	Limited 4	11	72.7%	27.3%	11	36.4%	63.6%
	Limited 6	3	66.7%	33.3%	27	11.1%	88.9%
	Total	25	60.0%	40.0%	59	13.6%	86.4%
34. Upper Powder River	Limited 1	13	53.8%	46.2%	23	17.4%	82.6%
	Limited 6	11	9.1%	90.9%	33	18.2%	81.8%
	Total	24	33.3%	66.7%	56	17.9%	82.1%
35. Hunter Mesa	Limited 1	10	0.0%	100.0%	15	0.0%	100.0%
	Limited 4	6	0.0%	100.0%	29	3.4%	96.6%
	Limited 6	12	0.0%	100.0%	26	3.8%	96.2%
	Limited 9	7	0.0%	100.0%	26	0.0%	100.0%
	Total	35	0.0%	100.0%	96	2.1%	97.9%
Grand Total		84	27.4%	72.6%	211	9.5%	90.5%

* Survey question: "Was your hunt guided or outfitted?"

TABLE III

ELK

PRIVATE VS. PUBLIC LAND HUNT CHARACTERISTICS*

BY HUNT AREA
UNWEIGHTED

AREA	TYPE	HARVEST WITH LICENSE					NO HARVEST WITH LICENSE				
		ACTIVE LICENSES	MOSTLY / ALL PRIVATE	MOSTLY / ALL PUBLIC	EVEN MIX	DO NOT KNOW	ACTIVE LICENSES	MOSTLY / ALL PRIVATE	MOSTLY / ALL PUBLIC	EVEN MIX	DO NOT KNOW
33. Middle Fork	Limited 1	11	54.5%	45.5%	0.0%	0.0%	21	14.3%	71.4%	14.3%	0.0%
	Limited 4	11	72.7%	18.2%	9.1%	0.0%	11	45.5%	36.4%	18.2%	0.0%
	Limited 6	3	66.7%	33.3%	0.0%	0.0%	27	14.8%	77.8%	7.4%	0.0%
	Total	25	64.0%	32.0%	4.0%	0.0%	59	20.3%	67.8%	11.9%	0.0%
34. Upper Powder River	Limited 1	13	69.2%	30.8%	0.0%	0.0%	23	13.0%	60.9%	26.1%	0.0%
	Limited 6	11	45.5%	36.4%	18.2%	0.0%	33	42.4%	48.5%	9.1%	0.0%
	Total	24	58.3%	33.3%	8.3%	0.0%	56	30.4%	53.6%	16.1%	0.0%
35. Hunter Mesa	Limited 1	10	40.0%	60.0%	0.0%	0.0%	15	6.7%	93.3%	0.0%	0.0%
	Limited 4	6	0.0%	100.0%	0.0%	0.0%	29	3.4%	89.7%	6.9%	0.0%
	Limited 6	12	33.3%	66.7%	0.0%	0.0%	26	11.5%	84.6%	3.8%	0.0%
	Limited 9	7	14.3%	85.7%	0.0%	0.0%	26	0.0%	100.0%	0.0%	0.0%
	Total	35	25.7%	74.3%	0.0%	0.0%	96	5.2%	91.7%	3.1%	0.0%
Grand Total		84	46.4%	50.0%	3.6%	0.0%	211	16.1%	74.9%	9.0%	0.0%

* Survey question: "Was most hunting done on private land, public land, or an even mix of private and public land?"