GREEN RIVER REGION
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Antelope

Mule Deer

Elk

Moose

2020 - JCR Evaluation Form

SPECIES: Pronghorn

PERIOD: 6/1/2020 - 5/31/2021

HERD: PR401 - SUBLETTE

HUNT AREAS: 85-93, 96, 101, 107

PREPARED BY: PATRICK BURKE

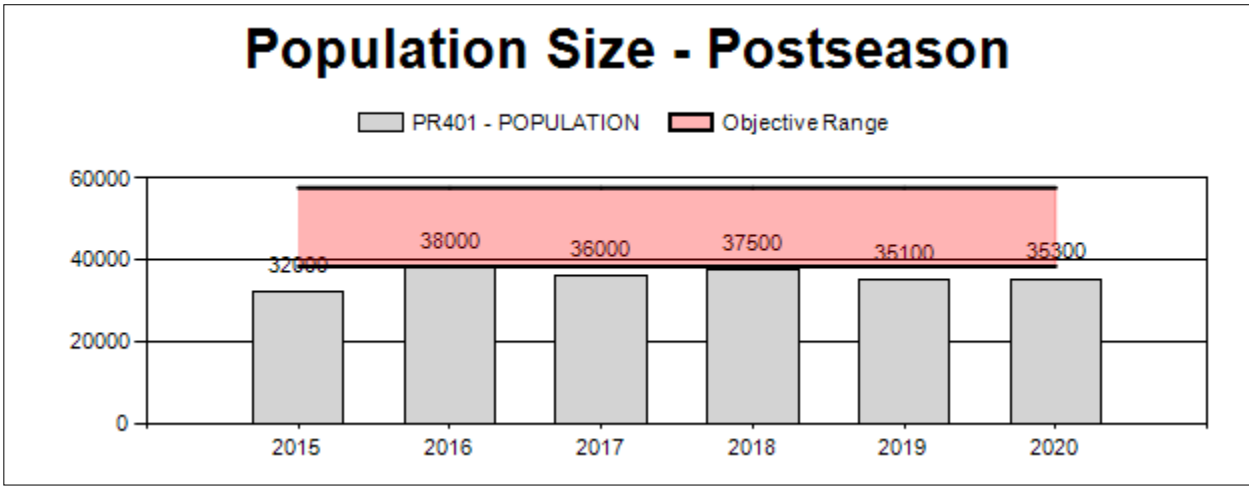
	2015 - 2019 Average	2020	2021 Proposed
Population:	35,720	35,300	35,200
Harvest:	3,009	3,072	3,200
Hunters:	3,089	3,072	3,850
Hunter Success:	97%	100%	83 %
Active Licenses:	3,490	3,433	3,400
Active License Success:	86%	89%	94 %
Recreation Days:	10,183	10,090	10,000
Days Per Animal:	3.4	3.3	3.1
Males per 100 Females	55	52	
Juveniles per 100 Females	60	59	

Population Objective (± 20%) : 48000 (38400 - 57600)

Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	-26.5%
Number of years population has been + or - objective in recent trend:	10
Model Date:	2/16/2021

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

	JCR Year	Proposed
Females ≥ 1 year old:	6%	7%
Males ≥ 1 year old:	20%	23%
Total:	7%	9%
Proposed change in post-season population:	3%	-.3%



2021 Hunting Seasons
Sublette Pronghorn Herd (PR401)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
85	1	Aug. 15	Sept. 9	Sept. 10	Oct. 31	20	Any antelope
86	1	Aug. 15	Sept. 9	Sept. 10	Oct. 31	50	Any antelope
86	6	Aug. 15	Sept. 9	Sept. 10	Oct. 31	25	Doe or fawn
87	1	Aug. 15	Sept. 9	Sept. 10	Oct. 31	175	Any antelope
87	2	Aug. 15	Sept. 9	Sept. 25	Oct. 31	125	Any antelope
87	6	Aug. 15	Sept. 9	Sept. 10	Oct. 31	100	Doe or fawn
87	7	Aug. 15	Sept. 9	Sept. 25	Oct. 31	100	Doe or fawn
88	1	Aug. 15	Sept. 9	Sept. 10	Oct. 31	275	Any antelope
88	6	Aug. 15	Sept. 9	Oct. 1	Oct. 31	300	Doe or fawn
89	1	Aug. 15	Sept. 9	Sept. 10	Oct. 31	175	Any antelope
89	2	Aug. 15	Sept. 9	Oct. 10	Oct. 31	125	Any antelope
89	6	Aug. 15	Sept. 9	Oct. 1	Oct. 31	325	Doe or fawn
89	6			Nov. 1	Nov. 15		Doe or fawn valid south of Middle Piney Creek and south of Wyoming Highway 351
89	7	Aug. 15	Aug. 31	Sept. 1	Nov. 15	75	Doe or fawn valid south of Middle Piney Creek and south of Wyoming Highway 351, and valid on private land

							within the entire hunt area
90	1	Aug. 15	Sept. 9	Sept. 10	Oct. 31	150	Any antelope
90	6	Aug. 15	Sept. 9	Sept. 10	Oct. 31	50	Doe or fawn
90	8	Aug. 15	Sept. 9	Aug. 15	Sept. 9	50	Doe or fawn valid on private land
91	1	Aug. 15	Sept. 9	Sept. 10	Oct. 31	300	Any antelope
91	6	Aug. 15	Sept. 9	Sept. 10	Oct. 31	75	Doe or fawn
91	7			Aug. 15	Oct. 31	75	Doe or fawn valid on private land and Bureau of Reclamation land within Sweetwater County
92	1	Aug. 15	Sept. 9	Sept. 10	Oct. 31	250	Any antelope
92	7			Aug. 15	Nov. 30	150	Doe or fawn valid within the Farson-Eden Irrigation Project
93	1	Aug. 15	Sept. 9	Sept. 10	Oct. 31	400	Any antelope
93	6	Aug. 15	Sept. 9	Sept. 10	Oct. 31	25	Doe or fawn
93	7	Aug. 15	Sept. 9	Oct. 1	Nov. 30	100	Doe or fawn valid on private irrigated land
96	1	Aug. 15	Sept. 9	Sept. 10	Oct. 31	75	Any antelope
96	7			Aug. 15	Nov. 30	100	Doe or fawn valid within the Farson-Eden Irrigation Project or west of the Blue Rim (Sweetwater County Road 5) and Old Stauffer Roads (Sweetwater County

							Road 7) and south of the OCI Entrance Road (Sweetwater County Road 6) and east of the Green River; also valid in that portion of Area 101 within the Farson-Eden Irrigation Project
101	1	Aug. 15	Sept. 9	Sept. 10	Oct. 31	150	Any antelope
107	1	Aug. 15	Sept. 9	Sept. 10	Oct. 22	100	Any antelope
107	0	Aug. 15	Sept. 9	Aug. 20	Sept. 9	50	Any antelope, muzzleloading firearms and handguns only

2020 Hunter Satisfaction: 91.3% Satisfied, 7.2% Neutral, 1.5% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation: The 2021 season structure included several changes from the 2020 season, most notably several hunt areas saw increases in the number of Type 1 licenses offered, while a few hunt areas shifted some Type 6 licenses to Type 1 licenses. In an effort to bring harvest rates up to 25% of the pre-season buck population estimate, Type 1 licenses were increased in HAs 91, 92, 96, and 101 for the 2021 hunting season.

Pre-season classification surveys conducted in the Sublette herd in August 2020 resulted in a total of 12,004 pronghorn being classified across the herd unit; and resulted in observed ratios of 61 fawns, and 54 bucks per 100 does. The 2021 hunting season should result in the harvest of approximately 3,200 pronghorn with 1,950 bucks, 1,185 does, and 75 fawns projected to be harvested; which compares to the 2020 harvest of 3,072 total pronghorn, which was made up of 2,057 bucks, 1,185 does, and 75 fawns. This level of harvest should result in the herd remaining fairly stable at approximately 35,000 pronghorn, which is roughly 26% below its objective of 48,000 pronghorn. Lower levels of female harvest along with favorable weather conditions for improved fawn recruitment will be needed to help this population grow back to its post-season population objective.

2020 - JCR Evaluation Form

SPECIES: Pronghorn | PERIOD: 6/1/2020 - 5/31/2021

HERD: PR411 - UINTA-CEDAR MOUNTAIN

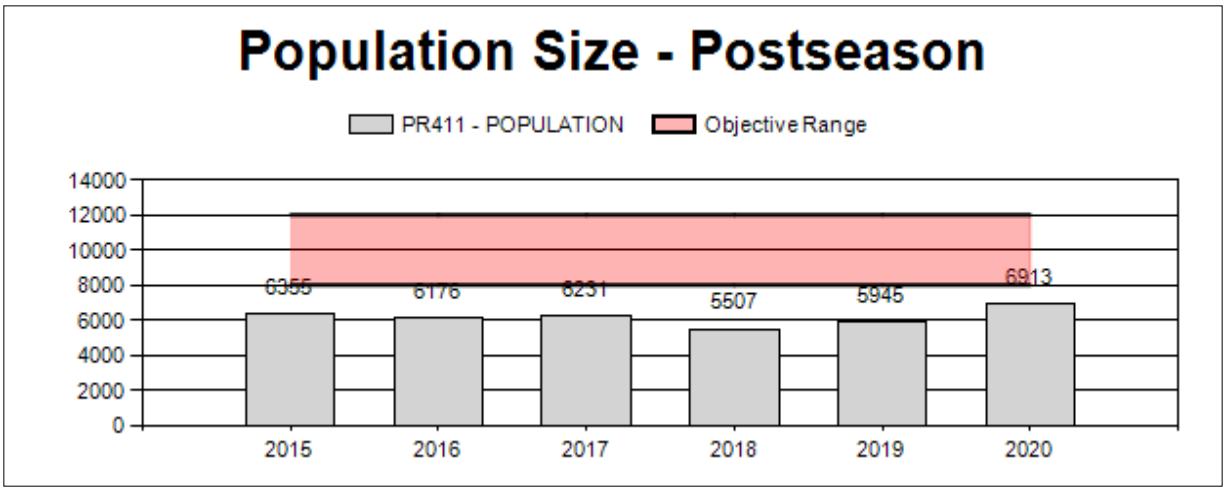
HUNT AREAS: 95, 99 | PREPARED BY: JEFF SHORT

	2015 - 2019 Average	2020	2021 Proposed
Population:	6,043	6,913	6,666
Harvest:	868	704	600
Hunters:	931	796	700
Hunter Success:	93%	88%	88 %
Active Licenses:	1,034	867	850
Active License Success:	84%	81%	82 %
Recreation Days:	3,618	3,604	3,500
Days Per Animal:	4.2	5.1	5
Males per 100 Females	58	59	
Juveniles per 100 Females	47	46	

Population Objective (± 20%) :	10000 (8000 - 12000)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	-30.9%
Number of years population has been + or - objective in recent trend:	6
Model Date:	02/20/2021

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

	JCR Year	Proposed
Females ≥ 1 year old:	4.2%	5.1%
Males ≥ 1 year old:	26.8%	29.1%
Total:	9.2%	10.0%
Proposed change in post-season population:	4.6%	-3.5%



2021 HUNTING SEASONS

Uinta-Cedar Mountain Herd Unit (PR411)

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
95	1	Aug. 15	Sept. 9	Sep. 10	Oct. 31	325	Any antelope
95	7			Aug. 15	Oct. 31	75	Doe or fawn valid on irrigated land
99	1	Aug. 15	Sept. 9	Sep. 10	Oct. 31	150	Any antelope
99	2			Aug. 15	Nov. 30	75	Any antelope valid north and west of Wyoming Highway 410 and west of Uinta County Road 271
99	6	Aug. 15	Sept. 9	Sep. 10	Oct. 31	25	Doe or fawn
99	7			Aug. 15	Nov. 30	50	Doe or fawn valid north and west of Wyoming Highway 410 and west of Uinta County Road 271
99	8			Aug. 15	Oct. 31	50	Doe or fawn valid on irrigated land within the Henrys Fork and Sage Creek Drainages
99	0			Sep. 1	Oct. 31	25	Any antelope, muzzle-loading firearms only

2020 Hunter Satisfaction: 79.9% Satisfied, 12.1% Neutral, 7.9% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation:

Increasingly conservative seasons continue to be warranted in this herd. Historical harvest pressure to alleviate damage, coupled with dry summers and difficult winters have resulted in reduced pronghorn numbers in this herd. We are currently well below objective. Where possible, we are continuing to moderate harvest for 2021. We will still maintain harvest pressure on antelope causing damage on private irrigated lands but this will be lower than what was offered historically due to much lower landowner complaints and lower numbers of antelope in those areas.

Area 95 is the least productive area in the herd, but tends to produce the largest bucks and is a favorite of local pronghorn hunters. We offer Hunt Area 95 type 7 (irrigated land only) licenses solely to alleviate damage issues on key parcels. We will maintain this pressure on antelope causing damage to private irrigated lands.

Area 99 is historically much more productive and has more private landowner complaints. In Hunt Area 99, we propose to reduce type 1 and 2 licenses to account for low yearling buck:doe ratios observed since 2017 and less private land available to hunters south of Evanston. We will continue to provide low doe/fawn harvest in the public land portions of area 99 to help that population segment rebound. We will continue to offer a type 7 doe/fawn hunt in a portion of Area 99 to target specific private land complaints on the west side of the hunt area. We will decrease those permits in 2021 to address hunter crowding and reduced antelope numbers. We also have a type

2 hunt that correspond with the type 7 that offers opportunity to harvest bucks in the same area. We also propose to reduce those to address hunter crowding and overall reduced antelope numbers.

We provide additional doe/fawn licenses (Type 8) in Area 99 to address damage issues in the eastern portion of the area on irrigated lands. Doe/fawn license reductions should help us in our efforts to move this population toward objective. Reductions in any antelope licenses should maintain or improve buck:doe ratios.

2.) Winter Severity: We have had 3 severe winters in this herd in the last 4 years (2016-17, 2018-19, and 2019-20). Weather related impacts to pronghorn are less in this area than they are for mule deer. Pronghorn in this herd generally have the ability to migrate to lower elevation flats during severe winters, but this is increasingly challenging. We have had several large scale mortality events involving motor vehicles during the past few years. Movements of pronghorn in this area have become more difficult as human development and disturbance impedes movement corridors and annual migration. The winter of 2020-21 has been very mild as of Late February. This should help this population rebound.

3.) Line Transect Surveys: Population estimates with the Line Transect survey technique are very important for providing adequate data to model antelope herd populations. Without performing these surveys periodically, it is unlikely that the population models can perform reliably. We have not had the budget to conduct line transect surveys in this herd since 2014. This makes our current model estimates less reliable.

2020 - JCR Evaluation Form

SPECIES: Pronghorn

PERIOD: 6/1/2020 - 5/31/2021

HERD: PR412 - SOUTH ROCK SPRINGS

HUNT AREAS: 59, 112

PREPARED BY: PATRICK BURKE

	2015 - 2019 Average	2020	2021 Proposed
Population:	6,720	5,550	5,300
Harvest:	392	293	290
Hunters:	420	357	360
Hunter Success:	93%	82%	81 %
Active Licenses:	440	370	350
Active License Success:	89%	79%	83 %
Recreation Days:	1,381	1,497	1,500
Days Per Animal:	3.5	5.1	5.2
Males per 100 Females	47	39	
Juveniles per 100 Females	43	52	

Population Objective (± 20%) : 6500 (5200 - 7800)

Management Strategy: Recreational

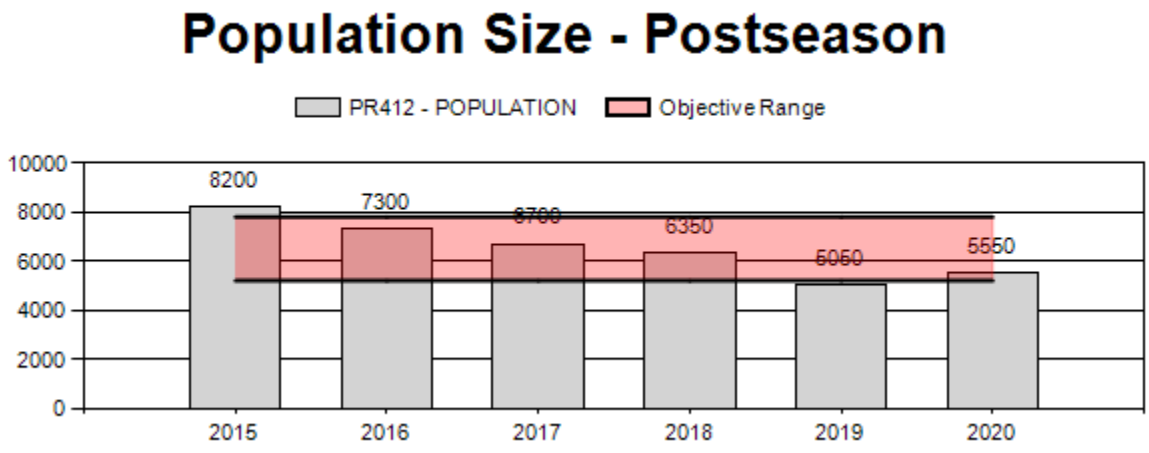
Percent population is above (+) or below (-) objective: -14.6%

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

Model Date: 2/19/2021

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

	JCR Year	Proposed
Females ≥ 1 year old:	2%	1.3%
Males ≥ 1 year old:	27%	28%
Total:	7%	9%
Proposed change in post-season population:	-8%	-10%



2021 Hunting Seasons
South Rocks Springs Pronghorn Herd (PR412)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
59	1	Aug. 15	Sept. 19	Sept. 20	Oct. 31	250	Any antelope
59	6	Aug. 15	Sept. 19	Sept. 20	Oct. 31	25	Doe or fawn
112	1	Aug. 15	Sept. 19	Sept. 20	Oct. 31	100	Any antelope
112	6	Aug. 15	Sept. 19	Sept. 20	Oct. 31	25	Doe or fawn

2020 Hunter Satisfaction: 85.7% Satisfied, 11.4% Neutral, 2.9% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation: The 2021 hunting season for the South Rock Springs pronghorn herd maintained the same season structure and license issuance levels that existed in the herd in 2020. Following extremely low fawn ratios observed in 2019, which caused the population estimate to dip below its objective range, doe harvest was reduced significantly in 2020 in order to help the population recover. That reduction in doe harvest, along with much improved fawn ratios observed during the 2020 pre-season classification surveys did allow this population to recover somewhat, and allowed the population estimate to grow back into the low end of its objective range. The modeled post-season population estimate for the South Rock Springs pronghorn population was approximately 5,500 animals, which is 14% below its population objective of 6,500 pronghorn. A deviation in modeled pre-season buck ratios from observed ratios however, suggest that the model may be slightly under estimating the population size. Because of this, the decision was made to keep license issuance rates at their current levels in order to allow this herd to continue to grow without being overly restrictive on hunter opportunity. The fact that the model may be underestimating the true population size suggests that leaving a few doe licenses available in the herd unit was probably still appropriate and would have a negligible impact on the potential for population growth in this herd. Given the projected harvest and fawn recruitment rates, the model predicts that this herd should still be at the lower end of its objective range after the 2021 season.

2020 - JCR Evaluation Form

SPECIES: Pronghorn
PERIOD: 6/1/2020 - 5/31/2021

HERD: PR414 - BITTER CREEK

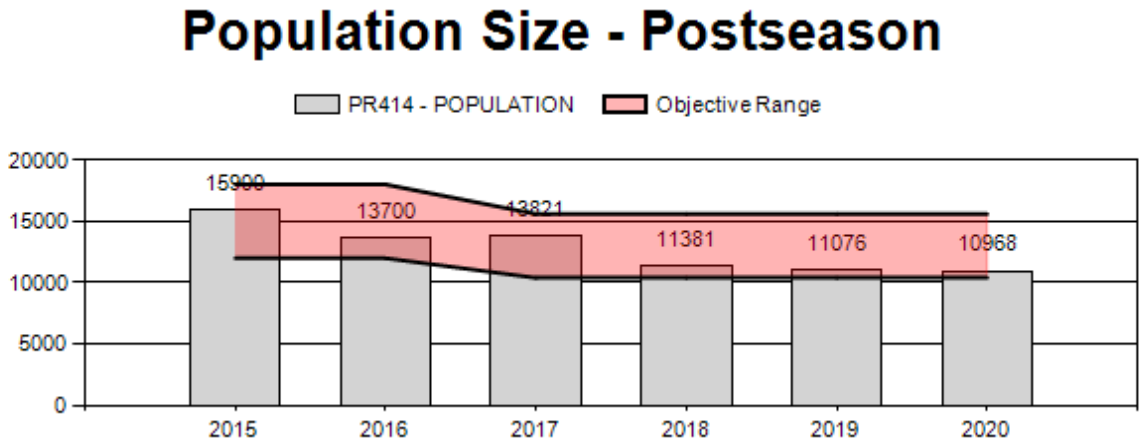
HUNT AREAS: 57-58
PREPARED BY: PHILIP DAMM

	2015 - 2019 Average	2020	2021 Proposed
Population:	13,176	10,968	11,000
Harvest:	458	437	470
Hunters:	475	526	540
Hunter Success:	96%	83%	87%
Active Licenses:	512	545	550
Active License Success:	89%	80%	85 %
Recreation Days:	1,748	2,010	1,800
Days Per Animal:	3.8	4.6	3.8
Males per 100 Females	58	53	
Juveniles per 100 Females	39	46	

Population Objective (± 20%):	13000 (10400 - 15600)
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	-15.6%
Number of years population has been + or - objective in recent trend:	0
Model Date:	2/19/2021

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:	14%	14%
Total:	4%	4%
Proposed change in post-season population:	-1%	0%



2021 Hunting Seasons
Bitter Creek Pronghorn Herd Unit (PR414)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
57	1	Aug. 15	Sep. 19	Sep. 20	Oct. 31	400	Any antelope
57	2	Aug. 15	Sep. 19	Sep. 20	Oct. 31	25	Any antelope valid west of Sweetwater County Road 23S and BLM Road 3310, and north and east of BLM Roads 4411 and 4409.
57	6	Aug. 15	Sep. 19	Sep. 20	Oct. 31	50	Doe or fawn
57	7	Aug. 15	Aug. 31	Sep. 1	Oct. 31	25	Doe or fawn valid on private land within one (1) mile of Carbon County Road 603.
58	1	Aug. 15	Sep. 19	Sep. 20	Oct. 31	100	Any antelope

2020 Hunter Satisfaction: 89% Satisfied, 8% Neutral, 3% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation: Hunters in 2020 experienced more difficulty finding larger horned bucks, as expected, due in part to probable over-winter mortality in older age classes. Additionally, the higher severity during the winter of 2019-20 began in late October, meaning it affected horn growth negatively nearly the entire growth period. Hunters in HA58 seemed to have had more difficultly than in HA57, as buck ratios and probably overall buck numbers were lower in that HA. Harvest success declined for the 2020 hunt, as a direct result of hunters not finding the quality of buck they have come to expect from this herd. Though, the 110 bucks aged using cementum annuli combined for both HAs for an average age of harvest of 5.1. In addition, only 3 of the aged bucks were less than 3.5 years old. Horn quality should improve for the 2021 hunting season, as temperatures were above average and snowfall was below average during winter 2020-21.

The Bitter Creek pronghorn herd was modeled within the objective range since its establishment at 13,000 in 2015; although, it was at the low end from 2018-2020. Though the winter of 2020-21 was below average for winter severity, the herd experienced two above average winters just prior, along with extreme drought in 2018 and 2020, which resulted in relatively lower fawn productivity and recruitment and likely lower overall adult survival. Fawn productivity was higher in 2020 than the previous 2 years, but similar to longer term averages and lower than needed for population growth. Annual weather patterns, and thus limitations in availability and quality/quantity of habitat, have been driving this population for the last 3 years, not harvest.

Buck ratios were below objective, on average, at 53 bucks per 100 does; however, disparity was apparent between the hunt areas. Buck ratios in western portions of the herd (HA58) were lower

at 39 than the eastern portions (HA57) at 59. Fawn ratios, unusually, were slightly higher in HA58 at 54 compared to HA57 at 42; although, samples size in HA58 was fairly low. Past years of very low fawn productivity combined with lower buck ratios in HA58 led to the continued lower relative license allocation for that HA. Still no doe/fawn licenses were allocated for this hunt area. Relatively lower numbers of doe/fawn license in HA57 were again proposed due to the population being at the bottom of the range. However, any antelope type licenses in HA57 were proposed to be consistent in number due to the continued higher buck ratio in HA57. Although the average proportion of bucks harvested over the last three years was only 13%, and fewer than 15% of bucks were proposed for harvest in 2021, the buck ratio objective for this herd (minimum of 60) was not being met. Therefore, managers did not propose increases to those Type 1 or 2 licenses. In addition, a line-transect estimate to ground population models had not occurred since 2014, which limited managers' confidence in population estimates and their derivatives.

2020 - JCR Evaluation Form

SPECIES: Pronghorn | PERIOD: 6/1/2020 - 5/31/2021

HERD: PR419 - CARTER LEASE

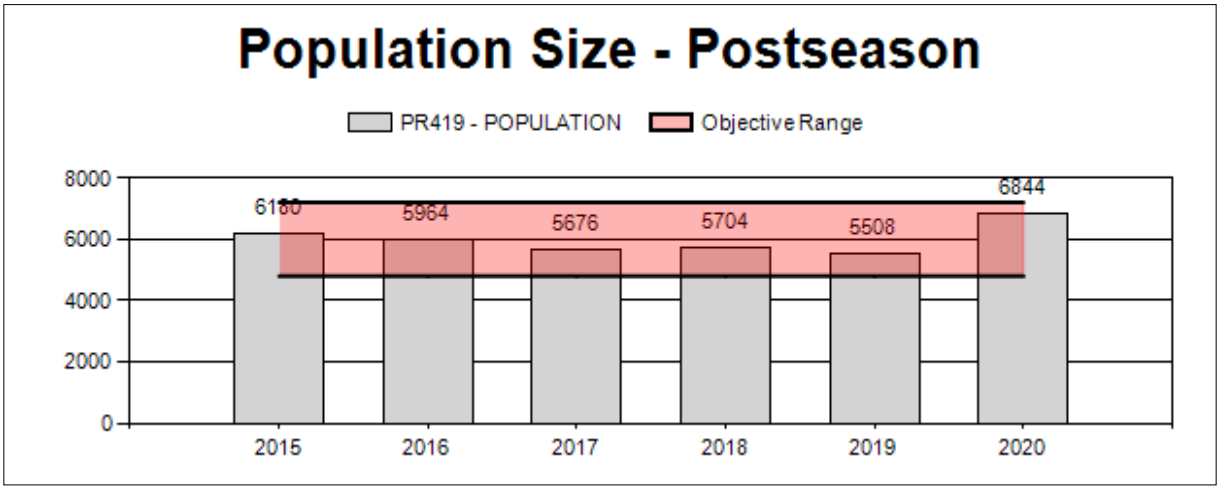
HUNT AREAS: 94, 98, 100 | PREPARED BY: JEFF SHORT

	2015 - 2019 Average	2020	2021 Proposed
Population:	5,806	6,844	6,597
Harvest:	1,414	1,187	1,000
Hunters:	1,487	1,386	1,200
Hunter Success:	95%	86%	86 %
Active Licenses:	1,679	1,519	1,600
Active License Success:	84%	78%	75 %
Recreation Days:	5,448	5,196	5,200
Days Per Animal:	3.9	4.4	4.3
Males per 100 Females	56	54	
Juveniles per 100 Females	61	55	

Population Objective (± 20%) :	6000 (4800 - 7200)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	14%
Number of years population has been + or - objective in recent trend:	1
Model Date:	02/23/2020

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

	JCR Year	Proposed
Females ≥ 1 year old:	5.5%	8.1%
Males ≥ 1 year old:	21.1%	23.8%
Total:	9.0%	11.0%
Proposed change in post-season population:	12.6%	-4.2%



2021 HUNTING SEASONS

Carter Lease Herd Unit (PR419)

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
94	1	Aug. 15	Sept. 9	Sep. 10	Oct. 31	500	Any antelope
94	6	Aug. 15	Sept. 9	Sep. 10	Oct. 31	100	Doe or fawn
94	7			Aug. 15	Oct. 31	200	Doe or fawn valid on or within one (1) mile of irrigated land
98	1	Aug. 15	Sept. 9	Sep. 10	Oct. 31	100	Any antelope
98	6	Aug. 15	Sept. 9	Sep. 10	Oct. 31	100	Doe or fawn
98	7	Aug. 15	Sept. 9	Nov. 1	Nov. 30	50	Doe or fawn valid within the Smiths Fork drainage
100	1	Aug. 15	Sept. 9	Sep. 10	Oct. 31	300	Any antelope
100	6	Aug. 15	Sept. 9	Sep. 10	Oct. 31	200	Doe or fawn

2020 Hunter Satisfaction: 76.7% Satisfied, 12.5% Neutral, 10.8% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation: In this herd unit, we are typically able to provide a significant amount of hunting opportunity. In hunt area 94, we propose to maintain the same numbers of licenses to maintain hunter opportunity and keep the population stable. According to the model, we are within the population objective range in Hunt Area 94.

In hunt areas 98 and 100, we strive to maintain relatively low antelope densities. This is an effort to reduce browse competition for wintering mule deer. The area is a primary winter range for the Wyoming Range mule deer herd. We hunt antelope very aggressively in these hunt areas to try to keep numbers low. We are seeing reduced hunter success on most license types in those hunt areas so we are proposing reductions to improve success and maintain hunter satisfaction.

The minimum male harvest goal of 25% has been met in this herd for several years. We provide a high amount of opportunity in this herd unit with both type 1 and type 6 hunts. Unfortunately, there is an outlier in the 2020 male harvest % data. This is due to an unrealistically high model estimate in 2020. (See the Population Modeling section below for more information on problems with this model.) The projected 2021 male harvest is at 24% even with an unreliably high model estimate.

2.) Winter Severity: We have had three severe winters in this herd in the last four years (2016-17, 2018-19, and 2019-20). Typically, pronghorn are less affected by winter conditions than deer due to their ability and willingness to move to areas of more moderate conditions. Pronghorn in the eastern part of this herd generally have the ability to migrate to lower elevation flats during severe winters, but this is increasingly challenging. These crucial winter range movements become more difficult as human development and disturbance impedes those migration routes. Fencing

and highways are particularly problematic especially in the western part of this population during winter.

3.) Line Transect Surveys: Population estimates with the Line Transect survey technique are very important for providing adequate data to model antelope herd populations. Without performing these surveys periodically, it is unlikely that the population models can perform reliably. We have not had the budget to conduct line transect surveys in this herd since 2013. This makes our current model estimates questionable.

4.) Population Modeling: We are unable to explain the unexpected growth shown in the model for 2020. This population has not likely grown at all following the winter of 2019/20. Field observations indicate that antelope numbers are down considerably. We have very low confidence in this model since we have not had the budget to fly a Line Transect Survey since 2014. A total Herd Unit model is not feasible here. This is due to much different population parameters in Hunt Areas 98 and 100 compared to Hunt Area 94. Additionally, the line transect survey method does not fit well with the terrain and animal densities found in hunt areas 98 and 100. For these reasons, we only fly line transect surveys and model the population in Hunt Area 94. The Hunt Area 94 population model is used for JCR reporting. Herd unit population estimates are reported as the model plus 1,000 animals to account for the populations we are unable to model in HA 98 and 100. In the future it will be imperative that we obtain a reliable line transect population estimate periodically to check the status of the herd and anchor the model.

2020 - JCR Evaluation Form

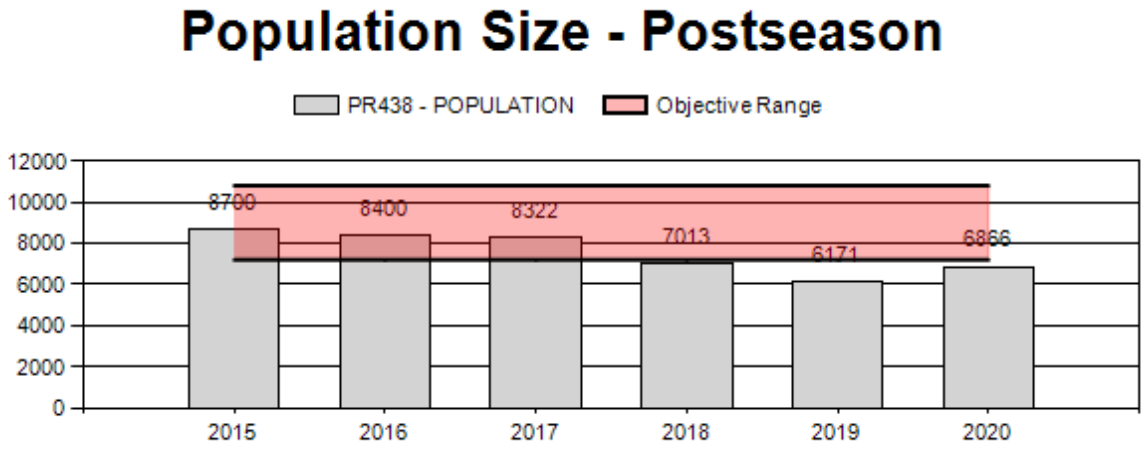
SPECIES: Pronghorn
PERIOD: 6/1/2020 - 5/31/2021
HERD: PR438 - BAGGS
HUNT AREAS: 53, 55
PREPARED BY: PHILIP DAMM

	2015 - 2019 Average	2020	2021 Proposed
Population:	7,721	6,866	7,153
Harvest:	551	286	365
Hunters:	524	293	375
Hunter Success:	105%	98%	97 %
Active Licenses:	615	306	380
Active License Success:	90%	93%	96 %
Recreation Days:	1,529	912	1,000
Days Per Animal:	2.8	3.2	2.7
Males per 100 Females	59	65	
Juveniles per 100 Females	52	57	

Population Objective (± 20%) :	9000 (7200 - 10800)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	-23.7%
Number of years population has been + or - objective in recent trend:	2
Model Date:	2/19/2021

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:	13%	17%
Total:	4%	5%
Proposed change in post-season population:	11%	4%



2021 Hunting Seasons
Baggs Pronghorn Herd Unit (PR438)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
53	1	Aug. 15	Sep. 19	Sep. 20	Oct. 31	200	Any antelope
53	6	Aug. 15	Sep. 19	Sep. 20	Oct. 31	25	Doe or fawn
53	7	Aug. 15	Aug. 31	Sep. 1	Oct. 31	25	Doe or fawn valid on private land
55	1	Aug. 15	Sep. 19	Sep. 20	Oct. 31	125	Any antelope

2020 Hunter Satisfaction: 83% Satisfied, 13% Neutral, 4% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation: Hunters in 2020 experienced more difficulty finding larger horned bucks, as expected, due in part to probable over-winter mortality in older age classes. Additionally, the higher severity during the winter of 2019-20 began in late October, meaning it affected horn growth negatively nearly the entire growth period. Hunters in HA55 seemed to have had even more difficultly than in HA53, as overall buck numbers were likely lower in that HA, and as indicated by lower overall satisfaction. Although, of the 26 buck harvest checks in 2020, 100% were at least 3.5 years old. Horn quality should improve for the 2021 hunting season, as temperatures were above average and snowfall was below average during winter 2020-21.

The Baggs pronghorn herd was modeled below the objective range and has been for three consecutive years. In addition, managers' subjective estimates for 2020 were lower than model estimates, regardless of constraints applied. Though not a great index to population numbers, managers' classification sample was about a third of average in HA55 and average in HA53, which perhaps indicated HA55 bore more of the brunt of the population decline. Though the winter of 2020-21 was below average winter severity, the herd experienced two above average winters just prior, along with extreme drought in 2018, which resulted in relatively lower fawn productivity and recruitment and likely lower overall adult survival. Fawn productivity was higher in 2020 than the previous 4 years, but similar to longer term averages. This higher productivity and more minimal over-winter mortality drove the modest model estimate increase this year. Annual weather patterns, and thus limitations in availability and quality/quantity of habitat, have been driving this population for the last 3-4 years, not harvest.

As a result of these issues, decreases to all license types were proposed for the 2020 hunting season, and those decreases were generally continued for 2021. However, due to higher buck ratios in HA53, managers were pressured to increase those Type 1 licenses, despite the political unpopularity and public sentiment towards increases. The average percent of bucks harvested over the last three years was 17%. Even with the increase, the proportion of bucks to be harvested in 2021 still would not equal 25% for a recreationally managed herd. A line-transect estimate to ground population models had not occurred since 2012, which limited managers' confidence in population estimates and their derivatives (an L-T for this herd was planned to be flown in June

2021). Managers believed total populations were closer to 5,000; and, as such, the projected number of bucks harvested for 2021 would be closer to 23%. Finally, the HA53 Type 7 private land only license allocation was decreased from 50 to 25 as a result of fewer issues with damage on private property.

2020 - JCR Evaluation Form

SPECIES: Mule Deer | PERIOD: 6/1/2020 - 5/31/2021

HERD: MD423 - UINTA

HUNT AREAS: 132-133, 168 | PREPARED BY: JEFF SHORT

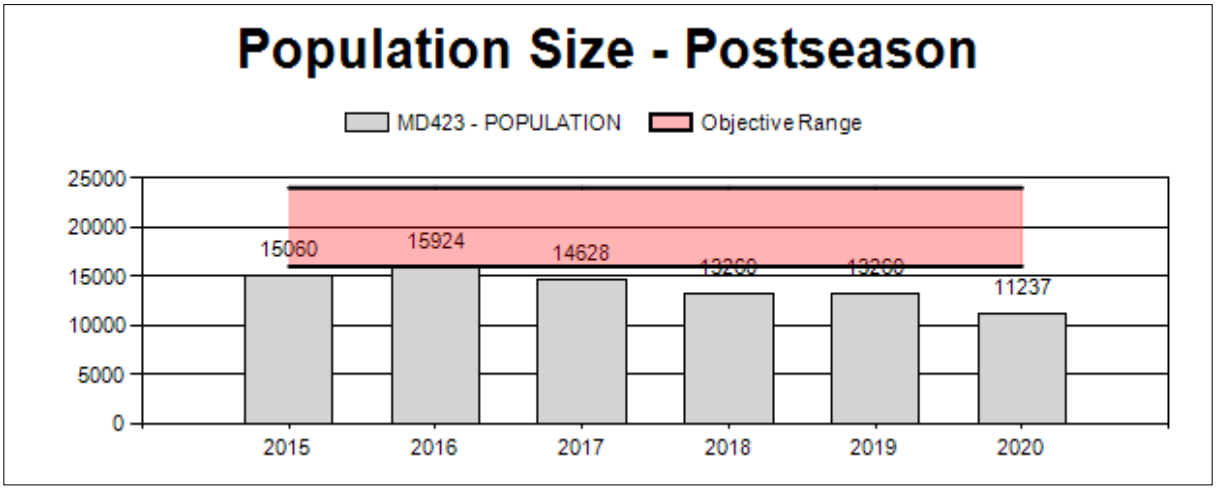
	2015 - 2019 Average	2020	2021 Proposed
Population:	14,426	11,237	11,084
Harvest:	988	429	500
Hunters:	2,331	1,793	1,700
Hunter Success:	42%	24%	29 %
Active Licenses:	2,347	1,799	1,700
Active License Success:	42%	24%	29 %
Recreation Days:	11,785	10,345	10,000
Days Per Animal:	11.9	24.1	20
Males per 100 Females	28	20	
Juveniles per 100 Females	57	60	

Population Objective (± 20%) : 20000 (16000 - 24000)

Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	-43.8%
Number of years population has been + or - objective in recent trend:	24
Model Date:	02/20/2021

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

	JCR Year	Proposed
Females ≥ 1 year old:	1.0%	1.0%
Males ≥ 1 year old:	20%	18%
Total:	3.7%	3.8%
Proposed change in post-season population:	-9.4%	-1.3%



2021 HUNTING SEASONS

Uinta Mule Deer Herd Unit (MD423)

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
132	Gen	Sept. 1	Sept. 30	Oct. 1	Oct. 11		Antlered mule deer four (4) points or more on either antler or any white-tailed deer
132, 133, 168	7	Sept. 1	Sept. 30	Oct. 1	Oct. 11	25	Doe or fawn valid on irrigated land
133	Gen	Sept. 1	Sept. 30	Oct. 1	Oct. 11		Antlered mule deer four (4) points or more on either antler or any white-tailed deer
168	Gen	Sept. 1	Sept. 30	Oct. 1	Oct. 11		Antlered mule deer four (4) points or more on either antler or any white-tailed deer

2021 Region K nonresident quota: 250 licenses

2020 Hunter Satisfaction: 32.1% Satisfied, 51.3% Neutral, 46.0% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation: Due to public requests, we typically try to offer a season that includes 2 weekends with 14 days of general deer hunting opportunity. We recognize this season is very conservative and the population is not limited by this level of hunting. Continuing to offer this type of hunting opportunity in light of having lower deer survival during recent winters is still biologically appropriate. Changes in hunting seasons will not resurrect deer that died in past winters. This type of season will also not limit future growth of the herd. However, due to low deer numbers there is a push from the public for us to have a season length shorter than 14 days. This a social issue rather than a biologic one. In response to that, we reduced the season from 14 days to 11 days in 2020 and propose to continue this in 2021 as deer populations have not yet rebounded. This season will still offer two weekends of hunting opportunity in 2021 and end on the Monday holiday of Columbus day,

In addition to low deer numbers we are now below our buck:doe ratio objective in the herd unit at 19.53:100. This is a result of very poor fawn survival in 3 out of 4 winters from 2016 to 2020. This is shown in very poor yearling buck:doe ratios in those years following the bad winters. We propose to get more conservative with buck harvest to boost buck numbers and quickly get back within the objective range. Under our current 3-point restriction, we are seeing a number of yearling 3-point deer being harvested. A more restrictive 4-point season is proposed to protect all yearling bucks to recruit them into the population. Once we get the buck:doe ratio back within objective we need to remove the point restriction to avoid any negative genetic influences and to provide more hunter harvest opportunity. Barring a negative weather event, we should be back to objective within a year or two and should remove the restriction at that time. Antlerless hunting in this herd is restricted to a handful of Type 7 licenses and youth hunting, neither of which results in a female harvest level of any biological significance.

We have also proposed another reduction to the nonresident license allocation for Region K. There is a history in this herd of significant public complaints about nonresident hunter numbers. It is very close to Utah and most nonresident hunters come from the Salt Lake City area. When they hunt here, they come repeatedly throughout the season. They often bring large family groups and leave their camps for the entire deer season. This is unpopular with local hunters. In recent years several private ranches that allowed public hunting through the WGFD PLPW program have become leased by outfitters. This has reduced the amount of land we have for hunters to recreate in the herd unit. This, along with the low buck:doe ratio and severe impacts to the deer herd from recent bad winters led us to recommend reducing the nonresident quota.

2.) Chronic Wasting Disease Management: This is a Tier 2 surveillance herd, and was prioritized for CWD sampling beginning in 2019 and will likely continue through 2021. To date, we have collected 152 samples during this focal period. There were 88 usable samples collected from mule deer in 2019 and 64 in 2020. No positives have been found. Final prevalence data will be reported when this focal surveillance period is complete. Historically, the herd has had two positive test results from targeted samples both taken within the city limits of Green River.

3.) Winter Severity: This herd commonly experiences difficult winter conditions for deer survival. Winter ranges are at high elevations and severe winters can be very detrimental to deer populations. This usually occurs once every three to five years. Prior to the 2016/17 winter, conditions were mild for five straight winters in this herd unit creating a situation where fawn and adult survival was high and populations were able to grow even with relatively low fawn production. The winter of 2016/17 was severe in most areas and the population in the western part of the herd unit declined drastically due to it. A mild winter followed in 2017/18. This helped the herd rebound slightly but in 2018/19 we had another very difficult winter. Then in the winter of 2019/20 we again had very tough winter conditions. Mortality surveys at the LeRoy winter range complex in spring showed high fawn and adult doe mortality over this period. It was also verified in very poor yearling buck:doe ratios in the years following the bad winters. This was very harmful to the population to have three tough winters in the span of four years. In reviewing JCR data, I cannot find a time with three bad deer survival winters over four years. This has been an unprecedented impact to deer numbers and buck recruitment in this herd.

4.) Antler Point Restrictions: Antler point restrictions have been used in Hunt Area 132 since 2007, and a 3-point or more antler restriction has been in place in the entire herd unit since 2014. This has been at the request of a segment of the public. Other members of the public oppose the restriction. The use of antler point restrictions for limited periods can be warranted when an area is below the buck:doe ratio objective or in areas where buck security cover and fawn productivity is lacking. However, many portions of this herd unit do not typically require this type of management based on historically observed buck ratios. Once weather conditions improve for deer survival and we get the buck:doe ratio back within objective we need to remove the point restrictions to avoid potential negative genetic influences and to provide more hunter harvest opportunity.

5.) Modeling: The model predicts a post-season population of around 11,237 mule deer in 2020. This is a decrease in the modeled population from prior levels. This reduction is substantiated by Hunter comments, winter mortality surveys, ratio data and field observations. This supporting information gives us some confidence in model results. However, the reduction modeled from pre-2016 levels is not totally realistic considering the severity of winter mortality observed on the western winter ranges where the vast majority of the deer herd winters. The reduction should have been greater than what is modeled.

2020 - JCR Evaluation Form

SPECIES: Mule Deer

PERIOD: 6/1/2020 - 5/31/2021

HERD: MD424 - SOUTH ROCK SPRINGS

HUNT AREAS: 101-102

PREPARED BY: PATRICK BURKE

	2015 - 2019 Average	2020	2021 Proposed
Population:	4,235	2,850	2,800
Harvest:	186	189	185
Hunters:	236	211	215
Hunter Success:	79%	90%	86 %
Active Licenses:	236	211	215
Active License Success:	79%	90%	86 %
Recreation Days:	1,446	1,269	1,300
Days Per Animal:	7.8	6.7	7.0
Males per 100 Females	40	23	
Juveniles per 100 Females	44	46	

Population Objective (± 20%) : 8500 (6800 - 10200)

Management Strategy: Special

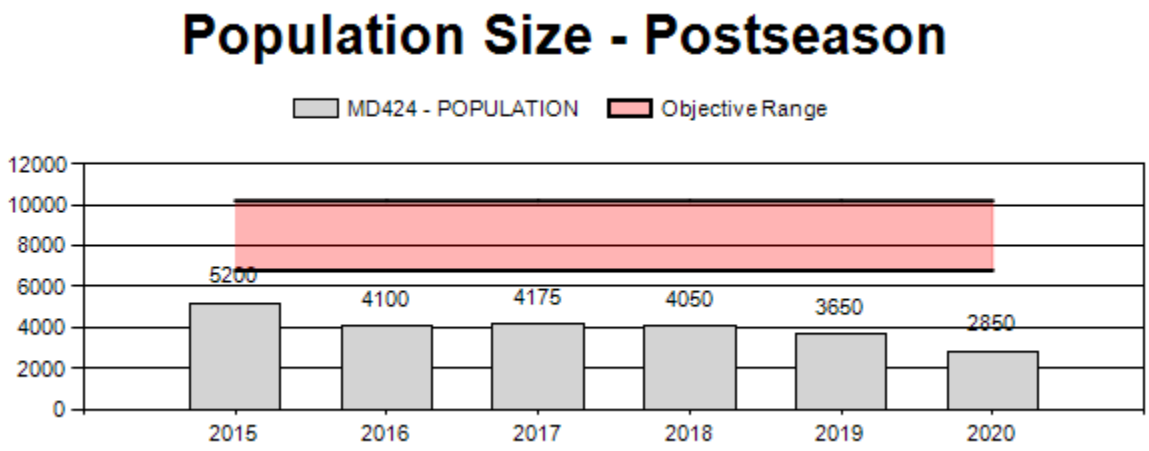
Percent population is above (+) or below (-) objective: -66.5%

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

Model Date: 2/17/2021

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

	JCR Year	Proposed
Females ≥ 1 year old:	0%	0%
Males ≥ 1 year old:	25%	30%
Total:	6%	6%
Proposed change in post-season population:	-1%	-1%



2021 Hunting Seasons
South Rock Springs Mule Deer (MD424)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
101	1	Sept. 1	Sept. 30	Oct. 15	Oct. 31	25	Antlered deer
102	1	Sept. 1	Sept. 30	Oct. 15	Oct. 31	200	Any deer

2020 Hunter Satisfaction: 79.8% Satisfied, 14.3% Neutral, 6.0% Dissatisfied

2020 Management Summary

1.) Hunting Season Evaluation: The 2021 hunting season for the South Rock Springs mule deer herd maintained the conservative season that this herd unit had in 2020. This reduction in the number of licenses offered starting in 2020 and continuing into 2021, was due to the extremely low fawn production and survival observed during 4 of the past 5 years. The observed fawn ratios in 2016, 2018, and 2019 were all significantly below the normal fawn ratio for this population, which will result in the pool of bucks hunters typically select for being reduced beginning in 2020, and continuing for several years. Buck fawns born during the first year that low fawn ratios were observed would be becoming 5 year-olds in 2021, a known age class that is selected for based on hunter submitted tooth samples. The average age of hunter harvest bucks, based on voluntary tooth submissions in 2020, was 5.1 years old.

Observed buck ratios following the 2020 hunting season declined significantly from what was observed in 2019. However, this reduction in the observed buck ratio, which went from being well within the special management range at 38 bucks per 100 does, to well below it with 23 bucks per 100 does seen during the December flights in 2020; was probably a result of sampling bias rather that representing an actual on the ground change to the degree observed. Much of this change may be attributable to the fact that, because of where does and fawns were wintering in 2020, many more deer were observed during the 2020 classification flight than had been seen in many years. In fact, more deer were classified in the South Rock Springs herd unit in 2020 than had been seen since 2009, and the 2020 sample size was over 1,200 deer more than what was classified in 2019.

Currently, the time-specific juvenile model that has been used for this herd estimates the population size to be just over 2,850 deer with a declining trend after the 2020 season. This model has been showing the herd to be in steep decline for several years, and while low fawn ratios and poor adult survival suggest that this herd is indeed decreasing, the modeled estimate of 2,850 deer is probably unrealistically low. Seeing as how over 1,400 deer were classified in 2020, this models is almost certainly underestimating the true population size of this herd. Therefore, this population estimate should be viewed with skepticism, and other herd unit metrics such as classification sample size, hunter success, average age of harvest bucks, along with others provide more useful information in determining the appropriate hunting season structure that just the modeled population estimate.

2.) Chronic Wasting Disease Monitoring & Management: This is a Tier 3 surveillance herd. To date, no meaningful CWD prevalence data is available within this herd unit and no CWD management actions have occurred. This herd has not been prioritized for CWD surveillance because of the herd's small size and low number of licenses issued in the herd unit, it would not be possible to obtain an adequate number of samples in the herd to determine CWD prevalence.

2020 - JCR Evaluation Form

SPECIES: Mule Deer
PERIOD: 6/1/2020 - 5/31/2021

HERD: MD427 - BAGGS

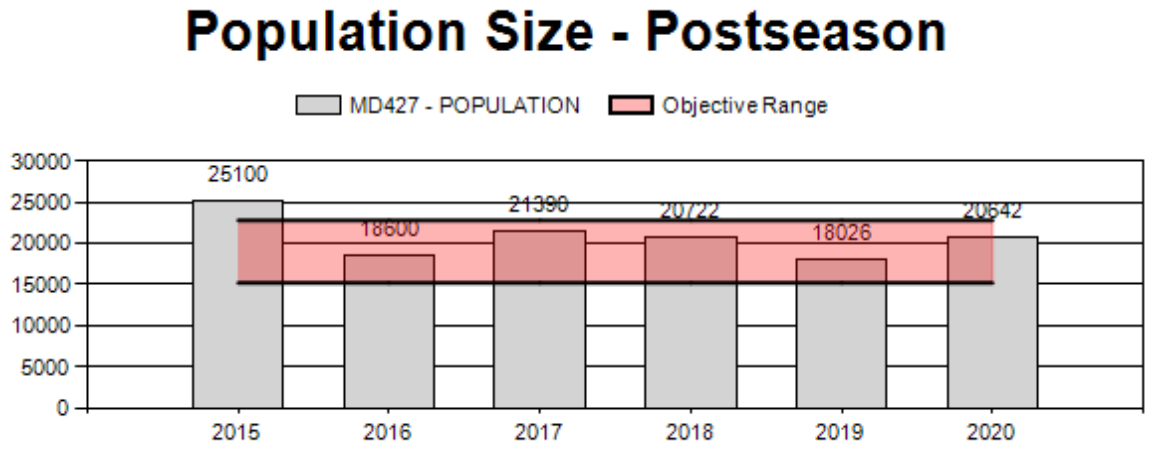
HUNT AREAS: 82, 84, 100
PREPARED BY: PHILIP DAMM

	2015 - 2019 Average	2020	2021 Proposed
Population:	20,768	20,642	24,977
Harvest:	1,815	1,639	1,000
Hunters:	3,116	3,447	1,800
Hunter Success:	58%	48%	56%
Active Licenses:	3,204	3,548	1,900
Active License Success:	57%	46%	53%
Recreation Days:	14,750	18,954	10,000
Days Per Animal:	8.1	11.6	10
Males per 100 Females	28	25	
Juveniles per 100 Females	59	74	

Population Objective (± 20%) :	19000 (15200 - 22800)
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	9%
Number of years population has been + or - objective in recent trend:	0
Model Date:	02/28/2021

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

	JCR Year	Proposed
Females ≥ 1 year old:	2%	1%
Males ≥ 1 year old:	37%	21%
Total:	7%	4%
Proposed change in post-season population:	8%	21%



2021 Hunting Seasons
Baggs Mule Deer Herd Unit (MD427)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
82	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 12		Antlered mule deer four (4) points or more on either antler or any white-tailed deer
82	Gen youth only	Sep. 1	Sep. 30	Oct. 1	Oct. 14		Any deer; youth only
82	6	Sep. 1	Sep. 30	Oct. 1	Oct. 20	25	Doe or fawn
82	7	Sep. 1	Sep. 30	Oct. 1	Oct. 20	25	Doe or fawn valid south of Wyoming Highway 70 or east of Carbon County Road 503 and south of Carbon County Roads 752 and 754 (Savery Stock Drive)
82, 100	8	Sep. 1	Sep. 30	Nov. 1	Jan. 15	75	Doe or fawn white-tailed deer valid on private land
84	1	Sep. 1	Sep. 30	Oct. 1	Oct. 14	50	Antlered mule deer or any white-tailed deer
100	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 6		Antlered mule deer four (4) points or more on either antler or any white-tailed deer
100	Gen youth only	Sep. 1	Sep. 30	Oct. 1	Oct. 8		Any deer; youth only

2021 Region W nonresident quota: 750 licenses

2020 Hunter Satisfaction: 49.6% Satisfied, 18.3% Neutral, 32.2% Dissatisfied

2021 Management Summary1.) Hunting Season Evaluation: The Baggs mule deer herd was modeled at objective in 2020 and had been for five consecutive years. Buck harvest decreased in 2020 (1,402) and was lower than the previous 5-year average (1,601). This decrease was a result of fewer hunters and lower success in general hunt areas, which probably stemmed from lower mature buck numbers and warmer/dryer weather. HA84 hunters continued good success and were on average more satisfied than general season hunters; although, mature bucks were also more difficult to find there. Harvest success (48%) mirrored the decrease in hunter satisfaction, which were both below 5-year averages (around 60%). Not surprisingly, effort increased by about 3 days in 2020 over the 5-year average.

Public concern for the herd due to winter severity in 2018-19 and 2019-20 persisted into 2020. Though, the winter of 2020-21 was above average for temperatures and below average for snow depths, likely foretelling well above average over-winter survival. High (74) fawn ratios during December 2020 classification flights combined with the easy winter indicated a high number of yearlings would be recruited to the buck population for 2021. The buck ratio observed in the December 2020 classification flight (25) was lower than the five-year average (28). Proportions of Class II and III bucks were also lower than longer term, but similar to 2019. Hunter, landowner, and outfitter comments generally indicated they observed a reduction in the numbers of mature (Class II and III) bucks, which followed the decreases observed by managers during December classifications. However, comments heard throughout the season were disparate in terms of overall population size and status but many indicated they observed good numbers of does and fawns. The lower Class II/III ratios over the last couple years were primarily caused by adult bucks becoming vulnerable to harvest in 2018 due to two early-October snowstorms, not winter severity in the years following. However, lower post-winter fawn recruitment into the buck population did play some role as well.

Given that the Baggs herd is managed for special management buck ratios in conjunction with heavy pressure to provide opportunity for general season hunters, managers proposed some modifications to the 2021 hunt. These modifications included a 4-point antler restriction (APR) for HAs 82 and 100, and a reduction in the number of non-resident Region W licenses. The season duration (12 days) was proposed to be maintained to include 2 weekends to still provide ample general license opportunity. Though not a perfect solution, APRs have been used in this herd in the past to increase buck ratios by relieving pressure on yearlings and other younger bucks. However, the downside to the APR was realized in 2018 when early migrations led to high harvest of mature bucks, or "high grading" the buck population. Weather issues aside, if left in regulation too long, APRs tend to result in degrading overall antler quality anyway. In past years (N=4) when the APR was implemented, resident hunters were reduced on average by about 25%. In the meantime, the non-resident Region W license allocation remained constant; although, participation decreased by about 7%. To compensate for that disparity, managers are proposing a 17% reduction in Region W licenses from 900 to 750. Of note, the large majority of Region W non-resident hunters have chosen to participate in the HA82 season; only about 3% participated in the HA131 season, while 10% participated in the HA100 season. Finally, the additional 2 days of youth-only hunting in both HAs 82 and 100 provided great opportunity at a diminutive cost to moving the herd toward its buck ratio objective. Managers receive nothing but affirming and extremely grateful comments in respect to this portion of the season.

The HA84 Type 1 license was proposed to be maintained at 50 (and not increased) due to lower relative numbers of Class II and III harvested bucks. The proportion of Class III's in the HA84 harvest decreased significantly from 2018 (15%) to 2020 (7%). Though the Baggs herd produced fawns at a higher rate in 2020 than it had since 2012 (and since 1997 prior to 2012) and the population was modeled well within objective and increasing, hunters and landowners generally perceived lower overall populations. This perception was likely confounded with lower numbers of bucks, particularly of older age classes. However, to alleviate public concerns, managers were pressured to decrease both Type 6 and 7 licenses to 25 each. The Type 8 whitetail-deer doe/fawn license allocation was increased from 50 to 75 due to decreased success on that license type, but continued demand for damage management on private lands.

2.) Mule Deer Initiative Habitat Information: Managers for the Baggs herd concluded their first 5-year analysis of Rapid Habitat Assessments (RHAs) in 2019, which can be found in that year's JCR. Assessment results from 2020-2024 will be able to be compared to this analysis to determine the trajectory of Baggs herd habitats. Six RHAs were completed in 2020 for the Baggs herd for a total of 275 acres assessed; 4 aspen and 2 rangeland RHAs were completed.

Precipitation was below average during the 2020 growing season, with many lower elevation water sources drying out prior to the hunting seasons. Additional weather and habitat information can be found in Appendix A. Managers noticed some bucks harvested from drier areas of the herd displayed evidence of chronic EHD in the form of sloughing hooves, though no specimens were confirmed and mortalities in the field were not observed.

3.) Chronic Wasting Disease Monitoring & Management: The Baggs Mule Deer Herd is a Tier 1 surveillance herd and was prioritized for CWD sampling in 2023. This herd was not sampled for a CWD prevalence estimate in 2020; but, mule deer prevalence was estimated in 2018 at 8.4% with 22 positives out of a sample of 263. This estimate was similar to or perhaps slightly higher than the pooled estimate from 2014-2017. Positive harvested mule deer have originated from nearly all portions of the unit where deer occur during hunting seasons. To date, no meaningful CWD management actions have occurred in this herd unit.

Appendix A

Weather

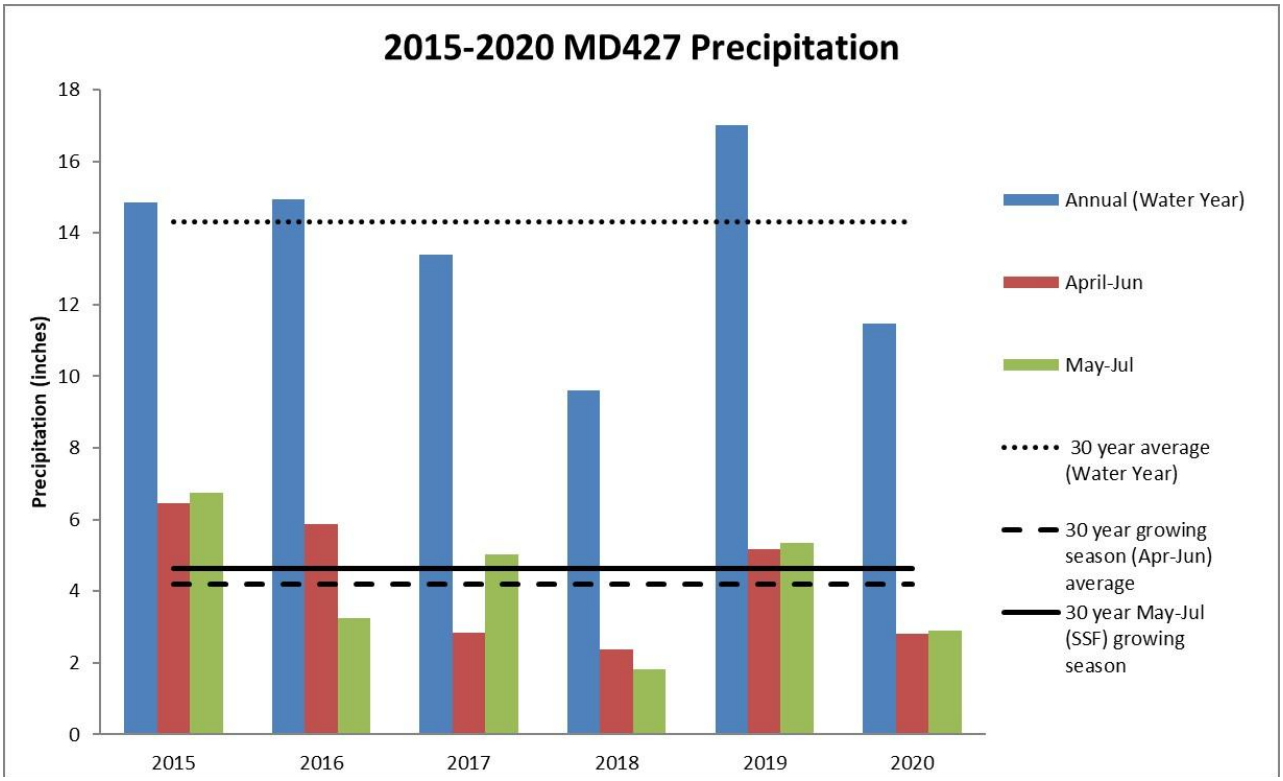


Figure 1. Parameter-Elevation Relationships on Independent Slopes Model (PRISM) estimate of annual and growing season precipitation from 2015-2020 for the Baggs mule deer herd unit in Carbon County, Wyoming.

Precipitation

We used Parameter-Elevation Relationships on Independent Slopes Model (PRISM) to estimate annual and growing season precipitation (PRISM Climate Group, Oregon State University, http://prism.oregonstate.edu, created 4 Feb 2004). Using PRISM, we calculated climate-elevation regressions for each Digital Elevation Model grid cell (4 km resolution) for the Baggs mule deer herd unit. Within the 6-year review period of 2015-2020, annual precipitation exceeded the 30-year average in 3 of the 6 years (Figure 1). The largest deficit in annual and growing season precipitation occurred in 2018, followed by 2020. Across the entire herd unit, precipitation from October 2019 through September 2020 (water year) was below the 30-year average.

In addition to a 20% deficit in annual precipitation in 2020, moisture events in the critical growing months for herbaceous and woody vegetation were also below normal. Precipitation falling during April-July is essential for growth at high elevations in this herd unit. Lack of summer precipitation in 2020 led to earlier senescence of herbaceous forages across all seasonal ranges.

Winter Severity

The 2019-2020 winter began early with significant snow hitting the higher elevations in mid-

October. These early snows likely pushed deer into transition and winter ranges earlier than usual, which is consistent with past Baggs mule deer collar data showing early movement into Colorado. SNOTEL sites on the west side of the Sierra Madres reported average to above average snowpack during the 2019-2020 winter. Currently, SNOTEL sites at higher elevations in the Baggs mule deer herd unit report snow water equivalent (SWE) values ranging from 80%-95% of average, while sites at lower elevations report SWE values ranging from 74%-81% of average.

Significant Events

The WGFD, Little Snake River Conservation District, and BLM continued to implement habitat projects across the herd unit, including highway and range fencing, juniper encroachment, cheatgrass, and sagebrush thinning projects. There were no large wildfires within the herd unit in 2020. However, the Snake wildfire, which burned in 2016, continues to recover and provide good early successional habitat for mule deer.

Habitat Monitoring

In 2015, Department personnel initiated the Rapid Habitat Assessment (RHA) methodology to survey important mule deer habitats. This method strives to capture large-scale habitat quality metrics to better understand how the habitat is providing for the current population of mule deer. The overall result of this effort is to provide a standardized habitat component for discussions about how mule deer objectives should or should not be adjusted based on the general concept of carrying capacity. The Baggs Mule deer herd review was completed in 2020 and the past five years of RHA data were summarized to help inform the objective review process.

In 2020, WGFD personnel surveyed six RHAs in the Baggs herd unit, totaling 274.71 acres. Fewer RHAs were done this year as personnel were stretched over a larger area than in previous years. For the Baggs mule deer herd unit, WGFD personnel completed two rangeland assessments (125.68 acres) and four aspen assessments (149.03 acres). These data will provide population managers and the public with documentation of the current state of mule deer habitat conditions in Baggs.

2020 - JCR Evaluation Form

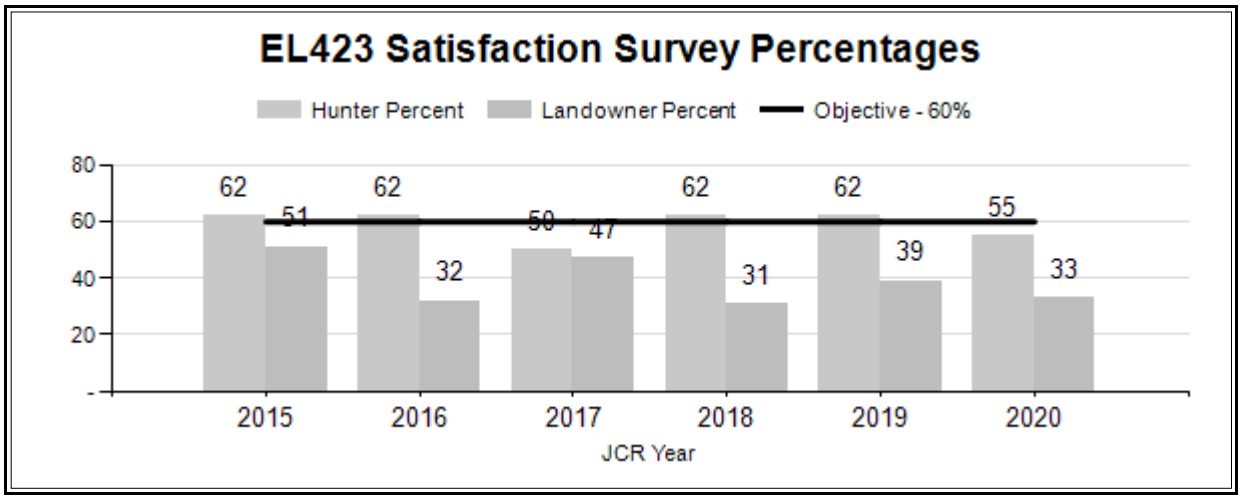
SPECIES: Elk
PERIOD: 6/1/2020 - 5/31/2021

HERD: EL423 - UINTA

HUNT AREAS: 106-107
PREPARED BY: JEFF SHORT

	2015 - 2019 Average	2020	2021 Proposed
Hunter Satisfaction Percent	60%	55%	60%
Landowner Satisfaction Percent	40%	33%	60%
Harvest:	618	537	600
Hunters:	1,666	1,634	1,600
Hunter Success:	37%	33%	38 %
Active Licenses:	1,746	1,697	1,700
Active License Success:	35%	32%	35 %
Recreation Days:	11,349	13,126	13,000
Days Per Animal:	18.4	24.4	21.7
Males per 100 Females:	0	0	
Juveniles per 100 Females	0	0	

Satisfaction Based Objective	60%
Management Strategy:	Recreational
Percent population is above (+) or (-) objective:	-16%
Number of years population has been + or - objective in recent trend:	6



2021 HUNTING SEASON

Uinta Herd Unit (EL423)

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
106	Gen	Sept. 1	Sept. 30	Oct. 15	Oct. 31		Any elk
106	Gen			Nov. 1	Nov. 14		Antlerless elk
106	1	Sept. 1	Sept. 30	Nov. 15	Jan. 31	50	Any elk valid west of the Black's Fork River or north of Wyoming Highway 410; also valid in Area 105 west of the Bear River
106	4	Sept. 1	Sept. 30	Oct. 15	Dec. 31	100	Antlerless elk
106	4			Jan. 1	Jan. 31		Antlerless elk valid on private land or west of the Black's Fork River or north of Wyoming Highway 410
106	7			Aug. 15	Jan. 31	300	Cow or calf valid on private land or west of the Black's Fork River or north of Wyoming Highway 410
107	Gen	Sept. 1	Sept. 30	Oct. 15	Oct. 31		Any elk
107	Gen			Nov. 1	Nov. 14		Antlerless elk
107	4	Sept. 1	Sept. 30	Oct. 15	Dec. 31	150	Antlerless elk
107	4			Jan. 1	Jan. 31		Antlerless elk valid off national forest within the Henry's Fork River drainage
107	7			Aug. 15	Aug. 31	50	Cow or calf valid in Sweetwater County
107	7	Sept. 1	Sept. 30	Dec. 15	Jan. 31		Cow or calf valid off national forest within the Henry's Fork River drainage

2020 Hunter Satisfaction: 55.4% Satisfied, 25.6% Neutral, 18.9% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation: In the sixth year of a satisfaction based objective, we are not meeting the hunter satisfaction objective or the landowner satisfaction objective. Hunter satisfaction is correlated to hunter harvest success, which correlates to weather conditions affecting migration and elk vulnerability in the fall. Even though landowner satisfaction is below objective, the landowner survey shows 92% of landowners are either satisfied with the current season structure or would like us to be more conservative. We are meeting the secondary objective with 96% of the bull harvest being branch-antlered bulls. We have no proposed changes for 2021.

Hunters would like to see more elk in accessible public land areas in HA 106 and 107, so late antlerless hunts are designed to avoid these areas. For 2021 we will continue liberal hunt timing and license allocation to maximize elk harvest and target elk causing damage problems. It appears that these season structures are reducing this elk herd. The August 15 – 31 portion of the area 106 and 107 type 7 hunts is to address specific damage issues on private lands.

The HA 107 antlerless licenses are used to maintain pressure on elk on the Wyoming side of the state boundary during a hunt on the Utah side. Damage complaints on the HA 107 side of the herd unit are typically low even during severe winters. However, ranchers will complain about elk numbers. We will maintain license quotas in 2021 to address those complaints.

The Area 106 Type 1 hunt is shown as having above 60% hunter success in the guidelines table. However, that number only represents success in 2020. Over the last ten years, the hunt has averaged 57% success. Hunter success is influenced yearly by winter severity. The hunt is in addition to general season hunts in September, October and November so significant elk hunting opportunity is currently offered. This hunt is in place to help deal with late damage where Utah elk are migrating into Wyoming and damaging stored hay. The area is mostly private land and hunters have very limited places to hunt.

2) Chronic Wasting Disease Management: This is not a tiered surveillance herd. To date, no meaningful CWD prevalence data is available within this herd unit and no CWD management actions have occurred. This herd has not been prioritized for CWD surveillance.

3.) Aerial Counts: Elk surveys are flown in conjunction with Utah DWR, most recently in January of 2019. Utah funds the surveys and we participate. No classification data is available with the way Utah conducts their surveys. The count numbers in Wyoming vary drastically with flight funds and weather conditions. High count numbers are typically the result of severe winter weather and higher numbers of elk migration into Wyoming. The 2019 count showed a decrease in elk numbers. This is likely correct since both Utah and Wyoming have been running liberal hunting seasons to increase cow elk harvest.

4.) Damage Concerns: This is an interstate herd shared with Utah. There are elk that summer in Wyoming but many elk that summer in the Uinta Mountains in Utah come to Wyoming to winter. Limited public land winter range is an issue for this herd. With winter range in short supply, conflict with agriculture producers becomes an issue. Damage complaints occur on bad winters. Summer damage also occurs on crops in limited areas. Significant efforts have been made by field personnel to alleviate these problems. The strategy in this herd unit has been to minimize elk damage problems through harvest and hunting season structure.

2020 - JCR Evaluation Form

SPECIES: Elk

PERIOD: 6/1/2020 - 5/31/2021

HERD: EL424 - SOUTH ROCK SPRINGS

HUNT AREAS: 30-32

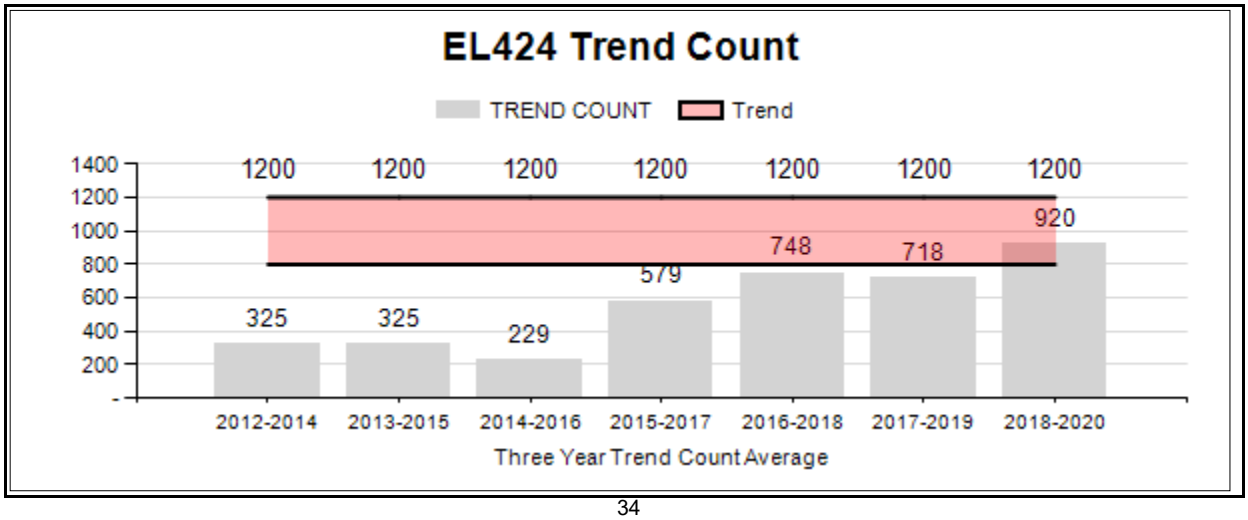
PREPARED BY: PATRICK BURKE

	2015 - 2019 Average	2020	2021 Proposed
Trend Count:	710	920	1,000
Harvest:	277	289	275
Hunters:	395	438	450
Hunter Success:	70%	66%	61%
Active Licenses:	395	438	450
Active License Success	70%	66%	61 %
Recreation Days:	3,118	3,549	3,500
Days Per Animal:	11.3	12.3	12.7
Males per 100 Females:	38	24	
Juveniles per 100 Females	41	43	

Trend Based Objective (± 20%)	1,000 (800 - 1200)
Management Strategy:	Special
Percent population is above (+) or (-) objective:	-8%
Number of years population has been + or - objective in recent trend:	1

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

	JCR Year	Proposed
Females ≥ 1 year old:	NA%	NA%
Males ≥ 1 year old:	NA%	NA%
Juveniles (< 1 year old):	NA%	NA%
Total:	NA%	NA%
Proposed change in post-season population:	NA%	NA%



2021 Hunting Seasons
South Rock Springs Elk Herd (EL424)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
30	1	Sept. 1	Sept. 30	Oct. 1	Oct. 31	50	Any elk
30	4	Sept. 1	Sept. 30	Oct. 8	Nov. 15	50	Antlerless elk
31	1	Sept. 1	Sept. 30	Oct. 1	Oct. 31	75	Any elk
31	4	Sept. 1	Sept. 30	Oct. 8	Nov. 15	150	Antlerless elk
32	1	Sept. 1	Sept. 30	Oct. 1	Oct. 31	50	Any elk
32	4	Sept. 1	Sept. 30	Oct. 8	Nov. 15	50	Antlerless elk
32	9			Sept. 1	Sept. 30	25	Antlerless elk, archery only

2020 Hunter Satisfaction: 77.9% Satisfied, 14.7% Neutral, 7.4% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation: The 2021 hunting season had the same license levels and season structure that was present in the herd unit in 2020. The 2021 season also left in place the staggered opening dates for the Type 1 and Type 4 licenses. This season structure reduces competition between Type 1 licenses, which are typically targeting bull elk, and are some of the most sought after licenses in the state; and the Type 4 antlerless licenses which are significantly easier to draw than the Type 1 licenses and are often drawn by hunters multiple years in a row.

As no dedicated mid-winter trend count flight was conducted in 2020, the number of elk classified during the December classification flight was used as a surrogate trend count number. A total of 1,654 elk were classified during that December flight. The number of elk observed during the 2020 post-season classification flight was significantly higher than what is typically seen during these flights. The number of elk seen during post-season classification flights vary significantly from year to year, but are generally around 600 to 800 elk classified each year. The increase in the number of elk observed in 2020 can be attributed to a large group of 600 elk that was encountered in HA32 within 200 yards of the Utah state line. This group of elk residing in the tristate region regularly moves between Colorado, Utah, and Wyoming, and was a large part of the reason that a mid-winter trend count objective was chose for this herd, as these elk are only sometimes in the state and are rarely in the state during hunting season. Given the number of elk seen in 2020, the three year trend count average for this herd moved to 920 elk, which is close to its objective of 1,000 elk. It is important to note that the three year trend count average for this herd has been increasing since the 2014-2016 average. This increase can be attributed to an increased sampling effort and more regular flights, rather than an increase in the actual number of elk on the ground.

The bull to cow ratio observed in this herd in 2019 was 30 bulls per 100 cows, and the classifications conducted in 2020 resulted in a bull ratio of 24 bulls per 100 cows. Since the South Rock Springs elk herd is designated a special management herd, the target bull ratio range for this herd is 30 to 40 bulls per 100 cows post hunting season. The bull ratios observed in this herd during the past two years have been at the very minimum or below this range. Also of note is that while hunter success rates remained good in 2020 there was an increase in the increase in the number of days it takes an average hunter to harvest an elk in this herd unit during the last couple of years. In 2020, it took the average Type 1 license holder in HA31 over 18 days to harvest an elk. Because of how sought after licenses in the South Rock Springs elk herd are, hunters are willing to put in significant effort to make sure that they harvest an elk, as many hunters had waited many years to draw one of these coveted licenses. This data point of it requiring increased effort to harvest an elk in this area, coincides with hunter complaints received by field personnel about hunters having a harder time locating elk, and concerns over bull quality. Based on hunter submitted tooth samples, the average age of harvested bulls in 2020 was 5.7 years old. While this is an improvement over 2019's average of 5.2 years old, it is still below the average age typically reported for this herd.

The below objective bull ratios, increased effort, age of harvested bulls, and hunter complaints suggest that Type 1 licenses in this herd should not be increased. Given the open nature of the landscape where this elk herd lives, and the publics willingness to put in as much effort as it takes to harvest an elk when they draw a license in this area; a goal of only 60% harvest success is probably not realistic for this herd unit, and would probably not be accepted by the public for this special management herd.

2.) Chronic Wasting Disease Monitoring & Management: This is a Tier 3 surveillance herd. To date, no meaningful CWD prevalence data is available within this herd unit and no CWD management actions have occurred. This herd has not been prioritized for CWD surveillance because of the relatively small size of this herd obtaining the necessary sample size to accurately determine prevalence would be unlikely.

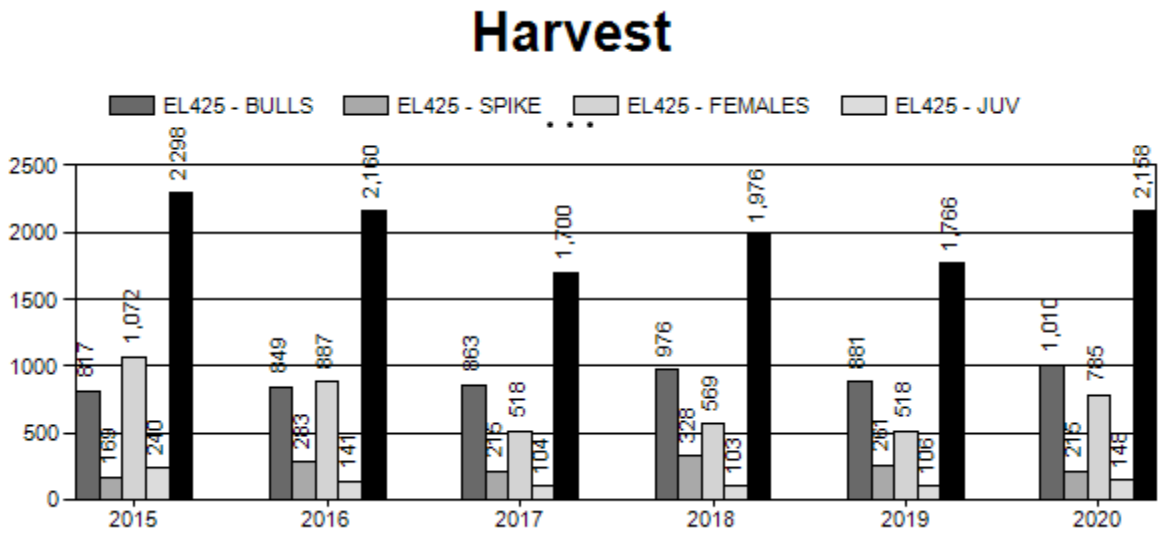
2020 - JCR Evaluation Form

SPECIES: Elk
HERD: EL425 - SIERRA MADRE
HUNT AREAS: 13, 15, 21, 108, 130

PERIOD: 6/1/2020 - 5/31/2021
PREPARED BY: PHILIP DAMM

	2015 - 2019 Average	2020	2021 Proposed
Trend Count:	NA	NA	5,000
Harvest:	1,980	2,158	1,950
Hunters:	5,409	5,589	5,100
Hunter Success:	37%	39%	38 %
Active Licenses:	5,665	5,849	5,600
Active License Success	35%	37%	35 %
Recreation Days:	39,499	42,267	38,000
Days Per Animal:	19.9	19.6	19.5
Males per 100 Females:	34	31	
Juveniles per 100 Females	40	48	

Trend Based Objective (± 20%):	5,000 (4000 - 6000)
Management Strategy:	Recreational
Percent population is above (+) or (-) objective:	NA
Number of years population has been + or - objective in recent trend:	0



2021 Hunting Seasons
Sierra Madre Elk Herd Unit (EL425)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
13	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Any elk
13	6	Sep. 1	Sep. 30	Oct. 1	Nov. 14	100	Cow or calf
13	6			Nov. 15	Dec. 31		Cow or calf valid off National Forest
15	Gen	Sep. 1	Sep. 30	Oct. 15	Oct. 31		Any elk
15	6	Sep. 1	Sep. 30	Oct. 1	Nov. 14	100	Cow or calf
15	6			Nov. 15	Dec. 31		Cow or calf valid off National Forest
12, 13, 15, 110	7			Aug. 15	Jan. 31	225	Cow or calf valid on private land
21	Gen youth only	Sep. 1	Sep. 30	Oct. 13	Oct. 31		Any elk; youth only
21	Gen			Oct. 15	Oct. 19		Antlered elk
21	Gen	Sep. 1	Sep. 30	Oct. 20	Oct. 31		Any elk
21	6	Sep. 1	Sep. 30	Oct. 15	Nov. 15	250	Cow or calf
21	7			Aug. 15	Dec. 31	25	Cow or calf valid on private land
108	1	Sep. 1	Sep. 30	Oct. 11	Oct. 31	75	Any elk
108	1	Sep. 1	Sep. 30	Nov. 1	Jan. 31		Antlerless elk
108	4	Sep. 1	Sep. 30	Oct. 11	Jan. 31	50	Antlerless elk
108	6	Sep. 1	Sep. 30	Oct. 11	Dec. 31	200	Cow or calf
108	6	Sep. 1	Sep. 30	Jan. 1	Jan. 31		Cow or calf valid west of the Twentymile Road (Carbon County Rd 605 N)
130	Gen	Sep. 1	Sep. 30	Oct. 1	Oct. 23		Any elk

2020 Hunter Satisfaction: 61% Satisfied, 21% Neutral, 18% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation: The mid-winter trend count objective for Sierra Madre Elk Herd (SMEH) was unable to be assessed in February 2021 due to flight budget constraints. Therefore, managers only reviewed hunter comments, harvest statistics, and anecdotal information collected through winter to assess seasons for 2021. Overall success for the herd increased very slightly in 2020, and the numbers of both cow/calf and general season hunters increased. These increases resulted in an increase in bull and cow harvest in 2020, apparently mostly due to additional harvest (cows and bulls) during general seasons, particularly for HAs 13 and 15. Managers attributed these general season increases at least in part to large fires in the Snowy Range that redistributed hunters into this herd. Managers also saw a slight increase in the proportion of branch antlered bulls relative to spikes in the general season harvest. In general for the herd, harvest trends were similar to the last several years when similar season structures were implemented. A relatively small sample of elk were classified during the winter 2020-21. Even with the small sample, the bull ratio was a reasonable 31, and the calf ratio was 48.

With consistent harvest data, good bull-cow and calf-cow ratios maintained as of mid-winter 2018 and the small classification sample this year, and no significant mortalities (other than harvest) having occurred, the population was probably stable to slightly increasing. The only significant changes proposed for the 2021 hunting season were an extension of the Type 6 season in HAs 13 and 15 off National Forest lands to the end of December. The purpose of this change was to address continued damage issues on private lands.

Although Type 1 license success in HA108 was higher than 60% at 69%, managers did not propose an increase to that license type. Six percent of these successful hunters harvested antlerless elk in the extended winter season. Overall, antlered success for the Type 1 hunters was only 62%. Success for Type 1 hunters has ranged from 54 to 87% in the past 10 years, which often coincided with varying weather conditions. The vast majority of this hunt area is unavailable to most hunters due to the checker-boarded land ownership pattern and limited to no private land access. Most public land opportunity occurs on ~35 square miles of BLM, state, and WGFD lands in the southeast corner of the HA, or on a few sections of BLM/state lands intersected by the Bridger Pass and Miller Hill Roads. Concentration of hunters on the limited public lands has led to crowding issues when license quotas exceeded 75, with incidents of trespass a becoming a regular issue for law enforcement. Finally, due to the limited publicly available area, elk can be dispersed into inaccessible areas with only modest hunting pressure.

2.) Chronic Wasting Disease Monitoring & Management: The SMEH is a Tier 2 surveillance herd that was prioritized for CWD sampling in 2021. This herd was not sampled for a prevalence estimate in 2020, though the disease was present and likely below 5%. The adjacent Snowy Range Elk Herd's prevalence was 1.3% in 2019. Mule deer prevalence in 2019 for the overlapped Baggs and Platte Valley Herds was 8.4% and 8.9%, respectively. To date, no meaningful CWD management actions have occurred in this herd unit.

2020 - JCR Evaluation Form

SPECIES: Elk | PERIOD: 6/1/2020 - 5/31/2021

HERD: EL426 - STEAMBOAT

HUNT AREAS: 100 | PREPARED BY: PATRICK BURKE

	2015 - 2019 Average	2020	2021 Proposed
Population:	1,804	2,000	1,200
Harvest:	428	623	915
Hunters:	527	801	1,100
Hunter Success:	81%	78%	83 %
Active Licenses:	542	812	1,100
Active License Success:	79%	77%	83 %
Recreation Days:	2,118	3,727	6,500
Days Per Animal:	4.9	6.0	7.1
Males per 100 Females	55	52	
Juveniles per 100 Females	39	45	

Population Objective (± 20%) : 1200 (960 - 1440)

Management Strategy: Special

Percent population is above (+) or below (-) objective: 67%

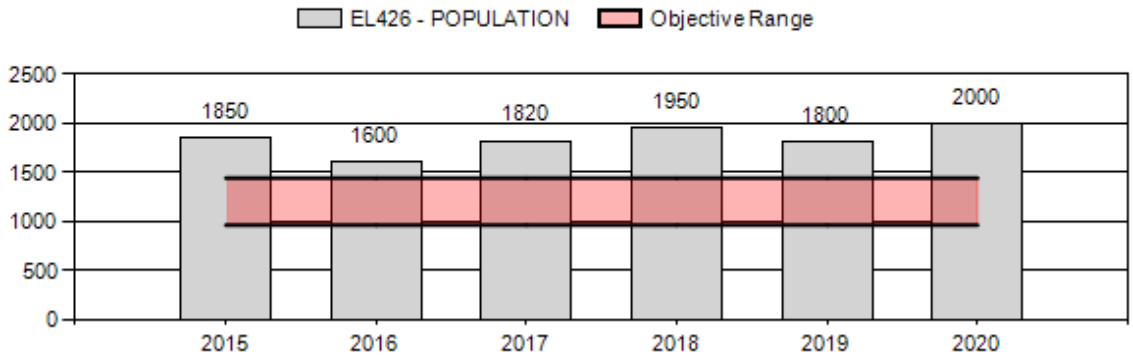
Number of years population has been + or - objective in recent trend: 6

Model Date: 2/18/2021

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

	JCR Year	Proposed
Females ≥ 1 year old:	44%	46%
Males ≥ 1 year old:	32%	79%
Total:	33%	46%
Proposed change in post-season population:	-33%	-57%

Population Size - Postseason



2021 Hunting Seasons
Steamboat Elk Herd (EL426)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
100	1	Sept. 1	Sept. 30	Oct. 8	Oct. 31	300	Any elk
100	2			Aug. 15	Jan. 31	25	Any elk valid within the Farson-Eden Irrigation Project
100	4	Sept. 1	Sept. 30	Oct. 15	Nov. 7	300	Antlerless elk
100	5	Sept. 1	Sept. 30	Nov. 8	Dec. 31	300	Antlerless elk
100	6	Sept. 1	Sept. 30	Oct. 15	Nov. 30	100	Cow or calf valid east of Sweetwater County Road 19, south of Sweetwater County Road 82, east of Sweetwater County Road 21, and south of Sweetwater County Road 20
100	7	Sept. 1	Sept. 30	Oct. 1	Oct. 31	100	Cow of calf valid east of U.S. Highway 191, south of Sweetwater County Road 17, and Sweetwater County Road 15, and west of Sweetwater County Road 19

2020 Hunter Satisfaction: 76.9% Satisfied, 15.8% Neutral, 7.3% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation: The 2021 hunting season for the Steamboat elk herd included significant changes to almost every license type offered in the herd unit. Some of these changes were implemented to increase harvest, while others were targeted at reducing regulation complexity.

The largest change to the 2021 HA100 season was an increase in the number of Type 1, Type 4, and Type 5 licenses, bringing the total number of licenses issued for the hunt area to 1,125 licenses. This increase in the number of licenses issued in 2021 was due to the fact that this herd continues to be above its population objective of 1,200 elk. The classification flight conducted in December 2020, resulted in a total of 1,668 elk being counted. The number of elk observed in 2020 was similar to what has been observed in the herd unit since 2015, when an unknown number of elk moved into the area. Despite drastically increased license numbers over the last five years, the number of elk counted each December has remained relatively unchanged. The inability of these higher license issuance rates to reduce this population from this higher level back towards its objective necessitated adding even more licenses to the herd unit in order to achieve the additional elk harvest needed.

The net increase across all license types for this herd unit in 2021 was 250 licenses. The type 8 license was removed since that damage situation appears to have been resolved. There was also a change to the early season that targeted elk in the Farson area. This early season was effective at getting hunters in the field, which did displace elk from the agricultural fields, but was not as effective at actually getting a significant number of those elk harvested. In 2021, the change was made from allowing the Type 1 license holders to hunt early in the Farson area, to moving the Type 2 licenses from being valid for spike elk in the whole area to being valid for any elk only in the Farson/Eden Irrigation Project area.

During the December classification flight, 444 total bulls were classified, those 444 bulls represent a bull to cow ratio of 52 bulls per 100 cows, which is above the special management guidelines of 30 to 40 bulls per 100 cows post-season. Because of this, the Type 1 licenses were increased to help reduce the bull to cow ratio, and to provide some increased opportunity for the public. It is important to note that a significant proportion of the post-season bull population is made up of yearling bulls. In fact, almost one third of the bull segment of the herd is made up of spike bulls, as no spikes are harvested on Type 1 licenses. Directing all of the harvest pressure toward only the branch antlered segment of the population may shift the age structure of the male segment of the herd drastically towards yearling males, which may not be acceptable to the public.

Assuming that harvest rates remain consistent with what has been observed in the past, the 2021 season should harvest over 900 elk. This level of harvest should move this population significantly closer to its objective. However, there is a possibility that putting too many hunters in the field at once, could reduce harvest success rates; as there have already been hunter complaints about too many other hunters in the field have made the cow hunting in particular difficult. It is important to note however, that even with the increased license levels in 2021 that success rates for this herd will continue to be above 60%. Given the extremely open nature of the landscape that this herd lives in, this elk herd will always exhibit harvest statistics more commonly observed in pronghorn herds than what is typically seen in elk herds. Since this elk population lives in open sagebrush country with no real refuge areas, elk are extremely visible and vulnerable to harvest.

2020 - JCR Evaluation Form

SPECIES: Elk PERIOD: 6/1/2020 - 5/31/2021

HERD: EL428 - WEST GREEN RIVER

HUNT AREAS: 102-105 PREPARED BY: JEFF SHORT

	2015 - 2019 Average	2020	2021 Proposed
Population:	3,813	2,990	2,985
Harvest:	1,049	1,548	1,500
Hunters:	3,344	4,119	4,000
Hunter Success:	31%	38%	38 %
Active Licenses:	3,481	4,400	4,400
Active License Success:	30%	35%	34 %
Recreation Days:	21,964	29,938	28,000
Days Per Animal:	20.9	19.3	18.7
Males per 100 Females	26	0	
Juveniles per 100 Females	32	0	

Population Objective (± 20%) : 3100 (2480 - 3720)

Management Strategy: Recreational

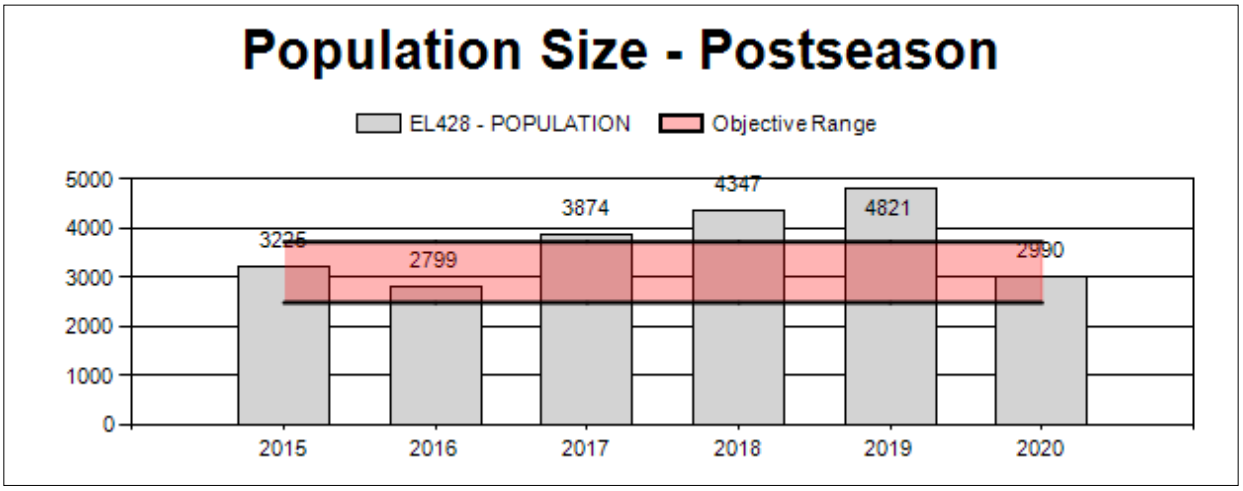
Percent population is above (+) or below (-) objective: -3.5%

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

Model Date: 02/20/2021

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

	JCR Year	Proposed
Females ≥ 1 year old:	16.0%	7.5%
Males ≥ 1 year old:	na	na
Total:	33.0%	19.7%
Proposed change in post-season population:	-12.9%	0%



2021 HUNTING SEASON

West Green River Herd Unit (EL428)

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
102	Gen	Sept. 1	Sept. 30	Oct. 15	Oct. 24		Any elk
102	Gen			Oct. 25	Oct. 31		Antlerless elk
102	6	Sept. 1	Sept. 30	Oct. 15	Nov. 30	200	Cow or calf
102	7	Sept. 1	Sept. 30	Dec. 15	Jan. 31	100	Cow or calf
103	Gen	Sept. 1	Sept. 30	Oct. 15	Oct. 24		Any elk
103	Gen			Oct. 25	Oct. 31		Antlerless elk
103	6			Aug. 15	Aug. 31	150	Cow or calf valid on or within one-quarter (1/4) mile of irrigated land
103	6	Sept. 1	Sept. 30	Oct. 15	Oct. 31		Cow or calf
103	6			Dec. 15	Jan. 31		Cow or calf
104	Gen	Sept. 1	Sept. 30	Oct. 15	Oct. 24		Any elk
104	Gen			Oct. 25	Oct. 31		Antlerless elk
104	6	Sept. 1	Sept. 30	Oct. 15	Nov. 30	300	Cow or calf, also valid in Area 105 in Lincoln County
104	7			Aug. 15	Aug. 31	150	Cow or calf valid on or within one-quarter (1/4) mile of irrigated land
104	7	Sept. 1	Sept. 30	Dec. 15	Dec. 31		Cow or calf, also valid in Area 105 in Lincoln County
104	7			Jan. 1	Jan. 31		Cow or calf valid west of U.S. Highway 30 and east of Lincoln County Road 207 or east of Rock Creek within the Twin Creek drainage
105	Gen	Sept. 1	Sept. 30	Oct. 1	Oct. 31		Any elk

2020 Hunter Satisfaction: 61.4% Satisfied, 22.1% Neutral, 16.5% Dissatisfied

2021 Management Summary

1.) Hunting Season Evaluation: For 2021 season setting, we have no changes proposed for West Green River elk. Following an elk sightability survey in January of 2020 we devised a harvest strategy to get the herd to objective over a 3 year period. We are on year two of that strategy. We have Type 7 licenses valid in August to address Elk damage in Hunt Areas 103 and 104. These licenses are only good on or within ¼ mile of irrigated lands. Considerable numbers of elk have been wintering close to Highway 30 in Nugget Canyon. Several groups of elk have crossed into Hunt Area 105. There is concern that more elk may get pushed across the highway during late season hunts. We do not want large numbers of elk in Hunt Area 105 due to potential competition on extensive mule deer winter ranges and lack of support for elk with private landowners in the

area. To address this we allow segments of 104 type 6 and type 7 seasons to also be valid in the northern portion (within Lincoln County) of Hunt area 105.

In Hunt Area 105 we open the either sex general season on October 1st. This allows general hunting during the second half of the rut and provides a long season of 31 days. This season overlaps the general deer hunt allowing combination hunts. This intentionally puts more hunting pressure on elk in the area to address landowner complaints and increasing elk numbers there.

2.) Chronic Wasting Disease Management: This is a Tier 2 surveillance herd, and was prioritized for CWD sampling beginning in 2020. It is difficult to get samples from elk in this herd as many are quartered or deboned in the field. To date, we have collected 101 samples during the focal period. No positives have been found. Final prevalence data will be reported when this focal surveillance period is complete. Historically, the herd has had no positive test results.

3.) Fossil Butte National Monument: In recent years, the number of elk moving onto Fossil Butte National Monument (FBNM) during the fall has increased, and is estimated to be around 600-800 animals. Radio collar data suggests a significant number of animals move onto the Monument in early September, immediately after the opener of the archery season. As with most lands administered by the National Park Service, FBNM is closed to hunting. As the number of elk on FBNM has increased, it has become increasingly difficult to manage this herd to objective while providing huntable numbers of elk for sportsmen.

4.) Sightability: Elk aerial surveys are scheduled to be conducted every three years in the West Green River Elk Herd. Classification data is also collected during these flights. All known occupied elk winter range is flown in Hunt Areas 102, 103 and 104. Some small parts of Area 105 are flown but not all of Area 105 is flown due to the large geographic area and very low elk densities. The survey was most recently flown in January 2020. Total numbers of elk observed were 4,647. The Idaho sightability model was used to estimate a total population for the area flown. That estimate was 4,721 elk with a standard error of 21.12. Good coverage of occupied elk winter habitat was achieved in the survey. However, there are some peripheral habitats that were not flown due to budget constraints. For population modeling we have added 100 animals to the estimate and enlarged the SE to account for those areas. This is a very low sightability correction. On these surveys a low sightability correction factor is normal and is produced due to large groups of elk in high snow cover and open environments. This creates survey conditions where very few elk are missed during helicopter surveys.

5.) Population Modeling Issues: The population model no longer functions in this herd unit. The model cannot reconcile data on the current population level, bull:cow ratios and bull harvest. We do not know if this is a data issue or a model issue but it has been the case for over 6 years, and the model is currently unable to track observed numbers. There are many elk herd units in Wyoming where spreadsheet models are not functioning. We rely largely on the aerial survey population estimates for population management in the West Green River herd unit.

6.) Comingling with Livestock: Conflict with agriculture producers can be an issue for this elk herd. Damage complaints occur during bad winters, but are less common during "normal" winters. Unfortunately, three of the past four winters have been worse than average in regards to snowfall and temperatures. Elk comingling with livestock during winter is relatively uncommon, and only in limited areas, but is considered an issue. Past problems have typically been dealt with successfully if the Department was notified. The area is in the brucellosis surveillance area, despite the fact that there is extremely low brucellosis prevalence, and has never had a positive brucellosis test in elk near wintering livestock. Regardless, brucellosis concerns occur among livestock producers throughout the herd unit, especially in the areas near Cokeville (Areas 103 and 104).

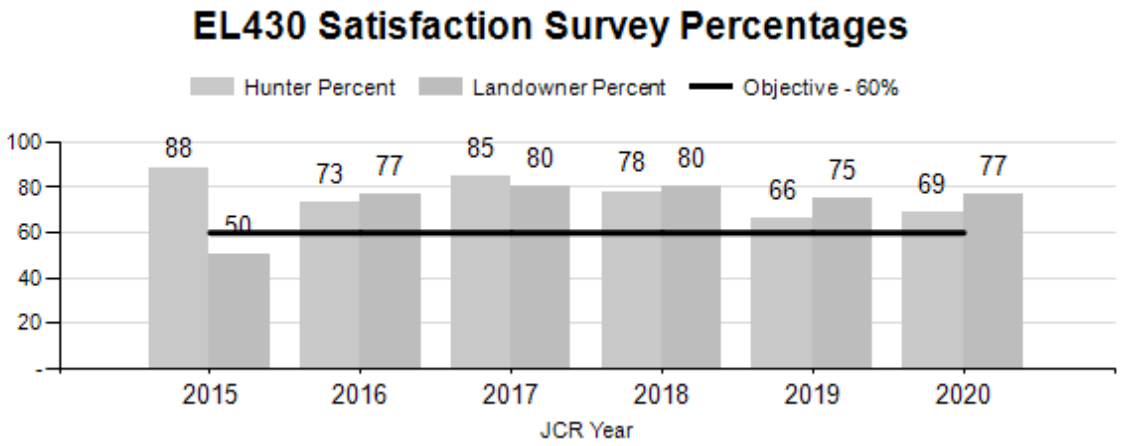
2020 - JCR Evaluation Form

SPECIES: Elk
HERD: EL430 - PETITION
HUNT AREAS: 124

PERIOD: 6/1/2020 - 5/31/2021
PREPARED BY: PHILIP DAMM

	2015 - 2019 Average	2020	2021 Proposed
Hunter Satisfaction Percent	77%	69%	70%
Landowner Satisfaction Percent	72%	77%	80%
Harvest:	126	91	90
Hunters:	187	190	150
Hunter Success:	67%	48%	60%
Active Licenses:	187	190	150
Active License Success:	67%	48%	60 %
Recreation Days:	1,331	1,526	1,300
Days Per Animal:	10.6	16.8	14.4
Males per 100 Females:	0	0	
Juveniles per 100 Females	0	0	

Satisfaction Based Objective	60%
Management Strategy:	Recreational
Percent population is above (+) or (-) objective:	13%
Number of years population has been + or - objective in recent trend:	0



2021 Hunting Seasons
Petition Elk Herd Unit (EL430)

Hunt Area	Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
124	1	Sep. 1	Sep. 30	Oct. 15	Nov. 30	60	Any elk
124	4	Sep. 1	Sep. 30	Oct. 15	Nov. 30	100	Antlerless elk
124	4			Dec. 1	Dec. 31		Antlerless elk valid east of Sweetwater County Road 19, and north and east of BLM Roads 4409 and 4411, and west of BLM Road 3310 and Sweetwater County Road 23S

2020 Hunter Satisfaction (Obj.=60%): 69% Satisfied, 15% Neutral, 16% Dissatisfied
2020 Landowner Satisfaction (Obj.=60%): 77% At Desired Levels, 0% Above, 23% Below
2020 3-year Average Age of Bull Elk Harvested: 6.5

2021 Management Summary

1.) Hunting Season Evaluation: Landowner satisfaction, hunter satisfaction, and average age of bull elk harvested (established 2013) all indicated management objectives were being met. As always, changes in numbers and distribution of elk were not estimable due to the size of and relatively low elk density across the herd unit. Landowners who were not satisfied thought populations were too low, though landowner reports and observations indicated relatively high elk numbers along the Little Snake River where much of the private land occurs. Hunter satisfaction increased slightly over 2019, which correlates with an increase in Type 1 success at 82%, which correlates well with the 10-year average of 85%. Although other objectives were being met, Type 4 license hunters in the last two seasons have had more difficulty finding cows to harvest. Type 4 license success hit a 10-year low in 2020 at 36% compared to a 10-year average of 61%. This rate may not sound low for Wyoming elk hunting, but elk in this herd are generally more susceptible to harvest due to mostly open habitat types. Type 4 license effort also increased in 2020 to a 10-year high of 17.7 days to harvest compared to a 10-year average of 10.7. Finally, the proportion of juveniles in the 2020 harvest was 18%, while the 10-year average was 9%.

Absolute averages for age of harvested bull elk continued to be problematic; however, relative ages over time were still assessed for season setting. Low sample sizes were observed, but biased sample sizes were the main concern. Little to no participation by landowner license holders within the herd unit likely artificially decreased averages, as information garnered on these harvested bulls indicated they were of older age classes. Low participation was also observed in hunters that harvested young bulls due to lack of interest in the age, which would have the opposite effect of the landowner licenses. The average age of bulls harvested in this herd for 2020 was 6.0, while the running 3-year average used for the objective was 6.5. These ages indicated phenomenal

existing opportunity to harvest mature bulls in Petition, which continued to only be managed recreationally. Anecdotal observations indicated the likelihood of high bull ratios in the unit, with the potential existing for some untapped opportunity.

Feral horse HMAs across the unit continued to be significantly above AMLs, and horse numbers outside of HMAs, particularly around the Flat Tops, were abhorrent as well. These feral horses affected elk distribution and populations through exclusion from water and other resources and habitat degradation.

Given the low success and higher proportion of juvenile harvest on the Type 4 licenses, the difficulty that hunters had finding cows, and elk redistribution to areas of private land along the Little Snake River with little to no public access, we proposed to reduce Type 4 licenses from 150 to 100 for 2021. Over the last couple years, managers were inclined to believe that while river bottom elk numbers may have been increasing, the numbers of cow elk actually available for harvest in the remainder of HA124 may have been decreasing. Due to continued high success on Type 1 licenses, maintenance of high average ages of harvest, and apparent high bull ratios, managers proposed a 20% increase to Type 1 licenses from 50 to 60 for 2021. This increase would lead to the highest Type 1 allocation in this herd's history. Managers agreed that achieving a 60% success for Type 1's in this herd would never be palatable to the public, but they would continue in future years to assess the ability to provide continued additional opportunity.

2020 - JCR Evaluation Form

SPECIES: Moose | PERIOD: 6/1/2020 - 5/31/2021

HERD: MO415 - UINTA

HUNT AREAS: 27, 35, 44, 901-902 | PREPARED BY: JEFF SHORT

	2015 - 2019 Average	2020	2021 Proposed
Population:		N/A	N/A
Harvest:	17	20	20
Hunters:	18	21	20
Hunter Success:	94%	95%	100 %
Active Licenses:	18	21	20
Active License Success:	94%	95%	100 %
Recreation Days:	158	316	300
Days Per Animal:	9.3	15.8	15

Limited Opportunity Objective:

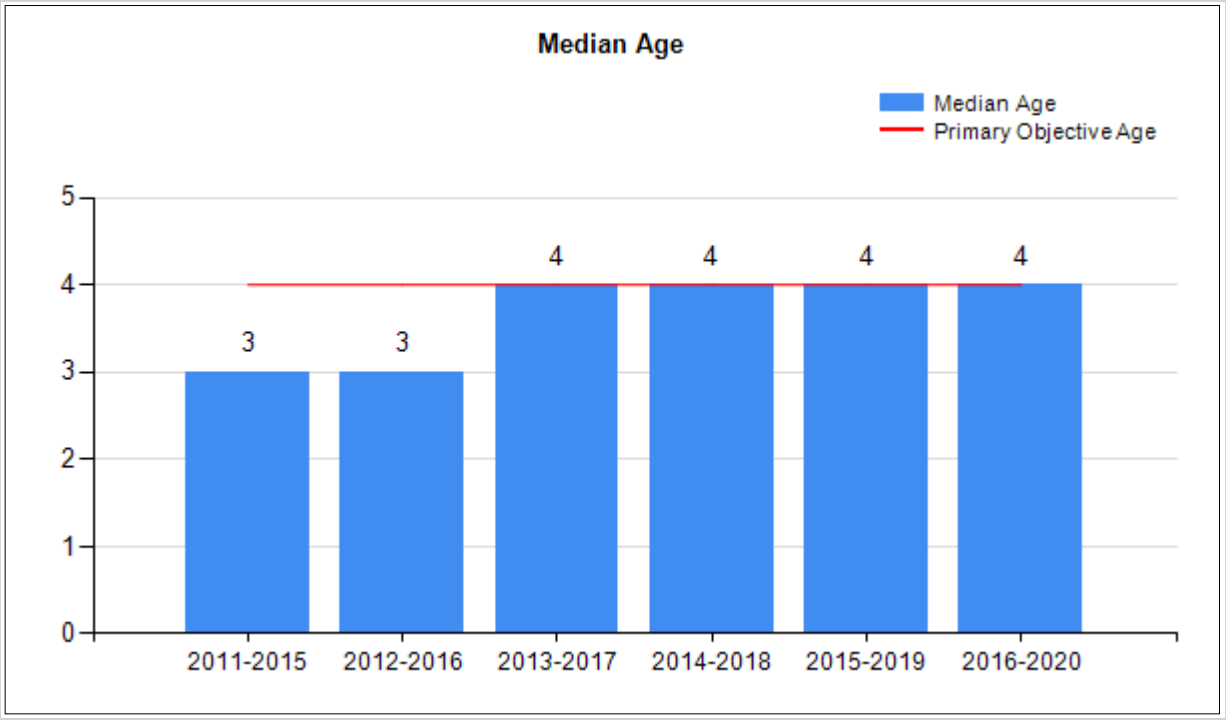
5-year median age of > 4 years for harvested moose

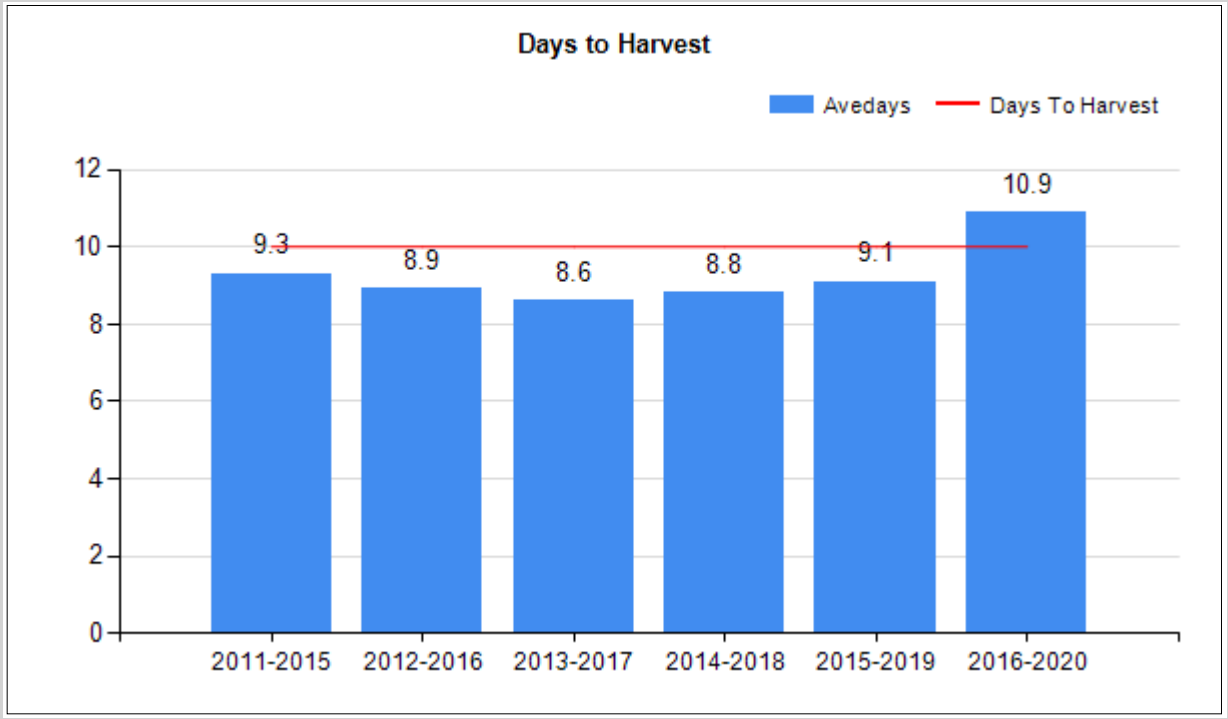
5-year average of <= 10 days/animal to harvest

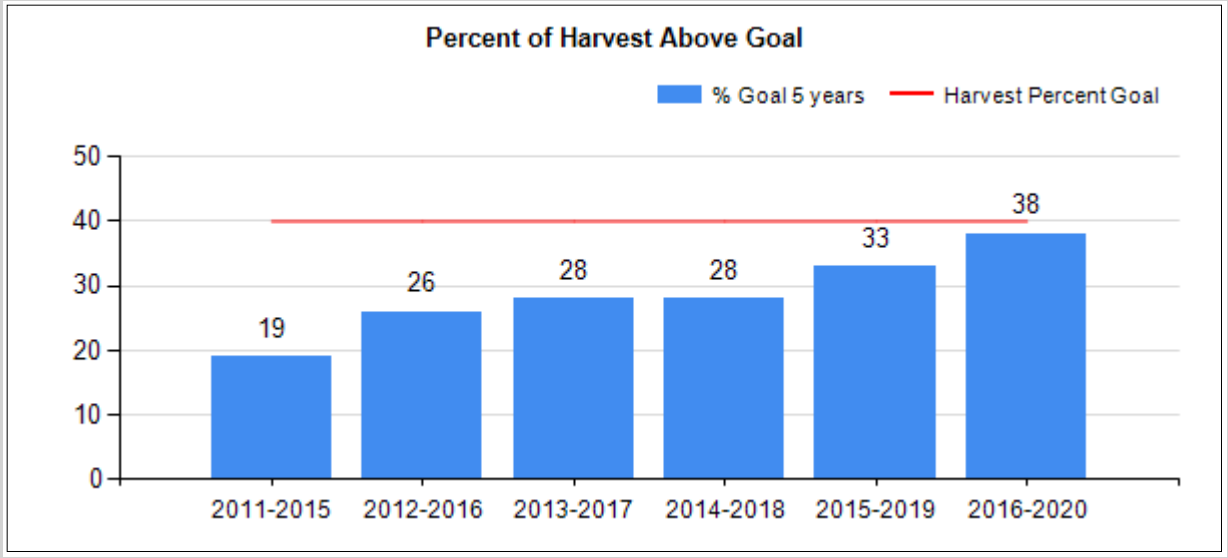
Secondary Objective:

5-year average of 40% of harvested moose are > 5 years of age

Management Strategy: Special




Days to Harvest
Avedays
Days To Harvest
12
10
8
6
4
2
0
9.3
8.9
8.6
8.8
9.1
10.9
2011-2015
2012-2016
2013-2017
2014-2018
2015-2019
2016-2020


Percent of Harvest Above Goal
% Goal 5 years
Harvest Percent Goal
50
40
30
20
10
0
19
26
28
28
33
38
2011-2015
2012-2016
2013-2017
2014-2018
2015-2019
2016-2020

2021 HUNTING SEASONS

Uinta Moose Herd Unit (MO415)

Hunt Area	Hunt Type	Archery Dates		Season Dates		Quota	Limitations
		Opens	Closes	Opens	Closes		
27	1	Sept. 1	Sept. 30	Oct. 1	Nov. 20	15	Antlered moose
35	1	Sept. 1	Sept. 30	Oct. 1	Nov. 20	5	Antlered moose

2020 Hunter Satisfaction: NA

2021 Management Summary

1.) Hunting Season Evaluation: The Uinta Moose Herd has a limited opportunity type objective. The objective is based on harvest data and has two parts. The primary objective is to have a median age of Harvest ≥ 4 years and have an average days per harvest of ≤ 10 days. The secondary objective is to have 40% of the male harvest ≥ 5 years of age. For these we use 5 year average timelines for better sample sizes.

Based on recent harvest data, we believe we can offer the same opportunity for hunters as the previous year. We are above objective for the median age of harvest. In recent years we have had several retired hunters spending many days hunting and passing up bulls. This has put our average days to harvest data out of objective but does not appear to indicate it is difficult to find moose to harvest. If anything, it appears that the hunt is improving and hunters are getting more selective. We are trending toward objective for the secondary objective criteria of percent of harvested moose that are greater than five years of age. Average age of harvest and antler spread in 2020 were good at 4.2 years and 37.5 inches.

Hunt Area 44 is hunted in conjunction with Hunt Area 33. The hunt is listed as 33,44 and in the Lincoln Moose Herd document. The hunt is a Type 1 and good for any moose, except cow moose with calf at side. It will offer 3 licenses (2 residents, 1 nonresident). No antlerless harvest will be allowed in the rest of herd unit. This is an effort to allow maximum growth of the herd. However, hunting is not likely to be the limiting factor for this herd.

2020 - JCR Evaluation Form

SPECIES: Moose | PERIOD: 6/1/2020 - 5/31/2021

HERD: MO417 - LINCOLN

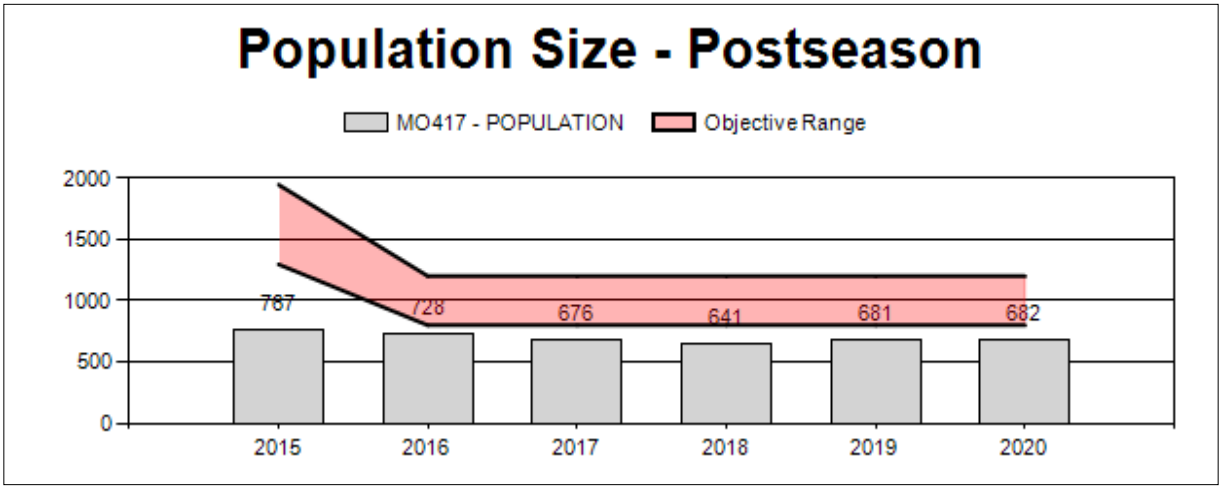
HUNT AREAS: 26, 33, 36, 40 | PREPARED BY: JEFF SHORT

	2015 - 2019 Average	2020	2021 Proposed
Population:	699	682	593
Harvest:	41	51	50
Hunters:	43	51	50
Hunter Success:	95%	100%	100 %
Active Licenses:	43	51	50
Active License Success:	95%	100%	100 %
Recreation Days:	323	319	320
Days Per Animal:	7.9	6.3	6.4
Males per 100 Females	51	0	
Juveniles per 100 Females	38	0	

Population Objective (± 20%) :	1000 (800 - 1200)
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	-31.8%
Number of years population has been + or - objective in recent trend:	5
Model Date:	02/20/2021

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

	JCR Year	Proposed
Females ≥ 1 year old:	0%	0%
Males ≥ 1 year old:	23.3%	28.6%
Total:	6.3%	7.4%
Proposed change in post-season population:	-.4.0%	-15.7%



2021 HUNTING SEASONS

Lincoln Moose Herd Unit (MO417)

Hunt	Hunt	Archery Dates		Season Dates			
Area	Type	Opens	Closes	Opens	Closes	Quota	Limitations
26	1	Sept. 1	Sept. 30	Oct. 1	Oct. 31	39	Antlered moose; (32 residents, 7 nonresidents)
33,44	1	Sept. 1	Sept. 30	Oct. 1	Oct. 31	3	Any moose, except cow moose with calf at side; (2 residents, 1 nonresident)
33	4	Sept. 1	Sept. 30	Oct. 1	Oct. 31	2	Antlerless moose, except cow moose with calf at side; (2 residents)
36	1	Sept. 1	Sept. 30	Oct. 1	Oct. 31	5	Antlered moose
40	1	Sept. 1	Sept. 30	Oct. 1	Oct. 31	3	Antlered moose; (3 residents)
40	4	Sept. 1	Sept. 30	Oct. 1	Oct. 31	3	Antlerless moose, except cow moose with calf at side; (2 residents, 1 nonresident)

2020 Hunter Satisfaction: NA

2021 Management Summary

1.) Hunting Season Evaluation: Harvest data is collected on a voluntary check basis for moose. The data collected includes tooth age and antler spread data. As the check is voluntary, data is not complete. Harvest data from 33, 36 and 40 does not provide much information given low sample size. Harvest from Area 26 results in a better sample size due to higher license numbers. In 26, tooth age data suggests an average age of harvest of 3.54 years old for 2020. Average antler spread was 37.38 for 2020.

Harvest opportunity has been much more limited in this herd unit over the past 10 years. In the late 2000s we dramatically reduced the number of licenses due to a population crash related to habitat issues and the parasite *Elaeophora schneiderii*. Since then, populations have stabilized and started to grow slowly. Hunts have very good success rates. Hunt Area 26 is considered a very good quality moose hunt with potential for trophy animals. Area 26 has ample public access and a variety of places to hunt moose. Hunts in areas 33, 36 and 40 are considered good hunts with good success rates but require more time to find low numbers of moose spread out over large areas. Public access can be more challenging in these areas but access to moose hunting is available. Those areas are not typically considered trophy areas but mature animals do exist and are harvested occasionally.

In Hunt Areas 33, 36 and 40 we will keep the same number of license as last year. We have a type 4 hunt in Areas 33 and 40 to address problem moose and overall moose numbers on agricultural lands. Hunt Area 33 has a very limited amount of moose habitat. Moose habitat primarily occurs within cottonwood and willow habitats associated with the Green River, including Seedskadee National Wildlife Refuge. Area 33 is hunted in conjunction with Area 44 for the type 1 hunt.

2.) Management Objective: The objective and management strategy were last revised in 2016. After internal review in 2021 we will maintain this herd at the current objective and management strategy. We evaluated and considered population status and a change is not warranted at this time. We will review this herd objective again in 2026.

3.) Sightability/Modeling: Moose aerial population estimation surveys are scheduled to be conducted every three years in Hunt Area 26 concurrent with West Green River Elk surveys. Classification data is also collected during these flights. Areas 33, 36 and 40 are not flown due to the large geographic area and very low moose densities. The joint elk and moose survey was last flown in January 2020. Total numbers of moose seen were 404. The Idaho sightability model was used to estimate a total population for the area flown. That estimate was 547 moose with a standard error of 6.63. Good coverage of occupied moose winter habitat was achieved in the survey. However, there are some peripheral habitats that were not flown due to budget constraints. For population modeling we have added 50 animals to the estimate and enlarged the SE to account for those areas.

There is a functioning model for moose in this herd unit. This is the only functioning moose population model in the state. It only functions due to the availability of sightability based population estimates. However, it infers only to the core population in Hunt area 26. That portion of the herd resides in classic high quality moose habitat. The other hunt areas in the herd unit have very low numbers of moose and scattered low density moose occupancy. Across those three hunt areas we estimate there are approximately 120 moose. Total herd unit estimates in the JCR are reported as model estimates plus 120 animals to account for the overall objective.