

2016 - JCR Evaluation Form

SPECIES: Elk
 HERD: EL104 - HOBACK
 HUNT AREAS: 86-87

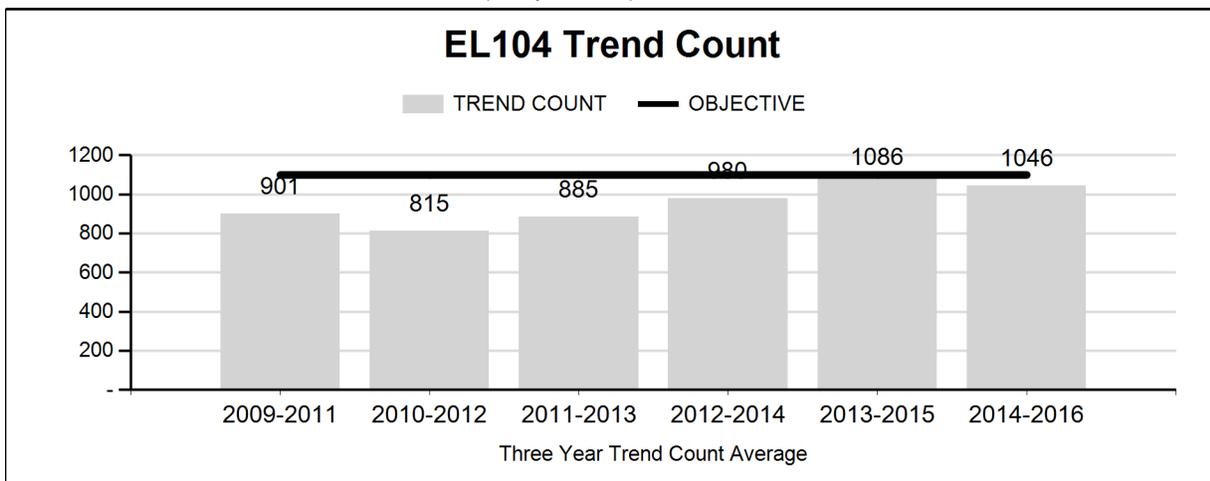
PERIOD: 6/1/2016 - 5/31/2017
 PREPARED BY: DEAN CLAUSE

	<u>2011 - 2015 Average</u>	<u>2016</u>	<u>2017 Proposed</u>
Trend Count:	973	928	1,000
Harvest:	208	283	200
Hunters:	750	804	740
Hunter Success:	28%	35%	27%
Active Licenses:	755	816	740
Active License Success	28%	35%	27%
Recreation Days:	5,192	5,235	5,100
Days Per Animal:	25.0	18.5	25.5
Males per 100 Females:	17	16	
Juveniles per 100 Females	31	28	

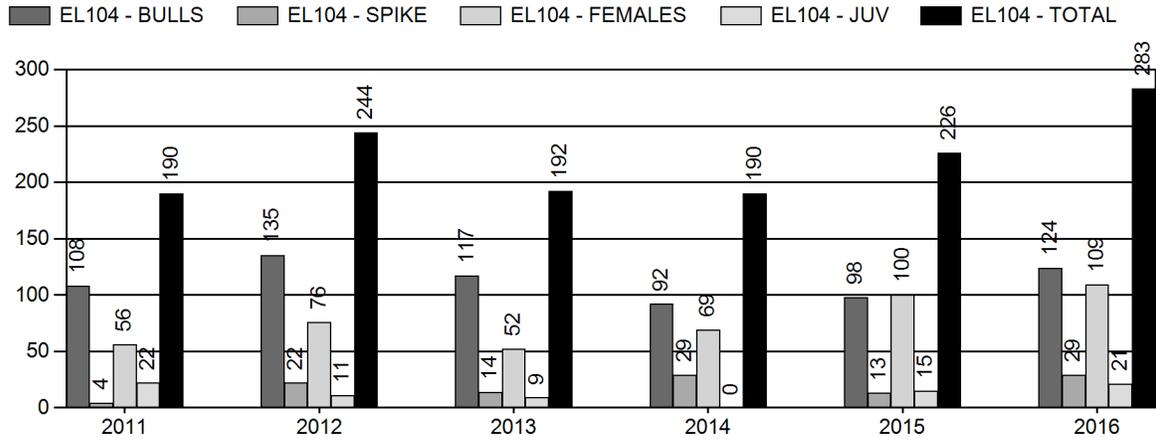
Trend Based Objective ($\pm 20\%$) 1,100 (880 - 1320)
 Management Strategy: Recreational
 Percent population is above (+) or (-) objective: -15.6%
 Number of years population has been + or - objective in recent trend: 0

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

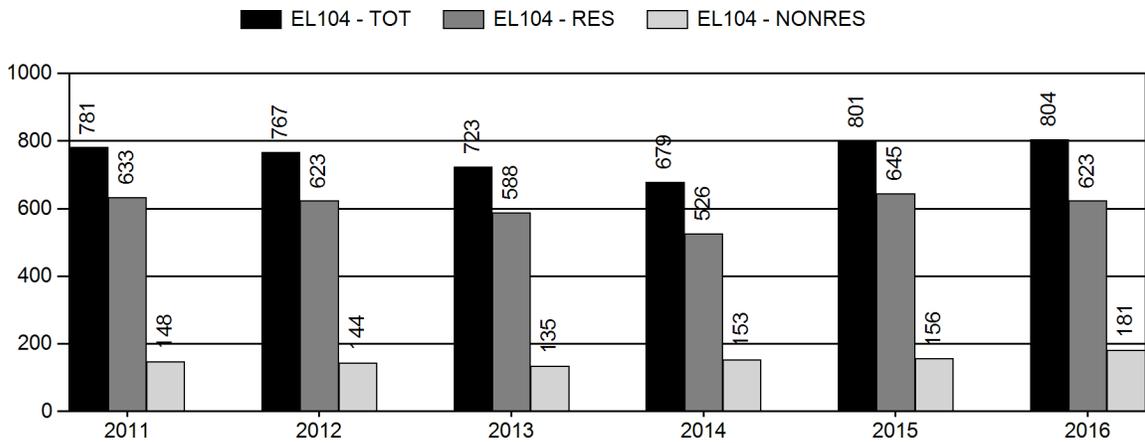
	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	0%	0%
Males ≥ 1 year old:	0%	0%
Juveniles (< 1 year old):	0%	0%



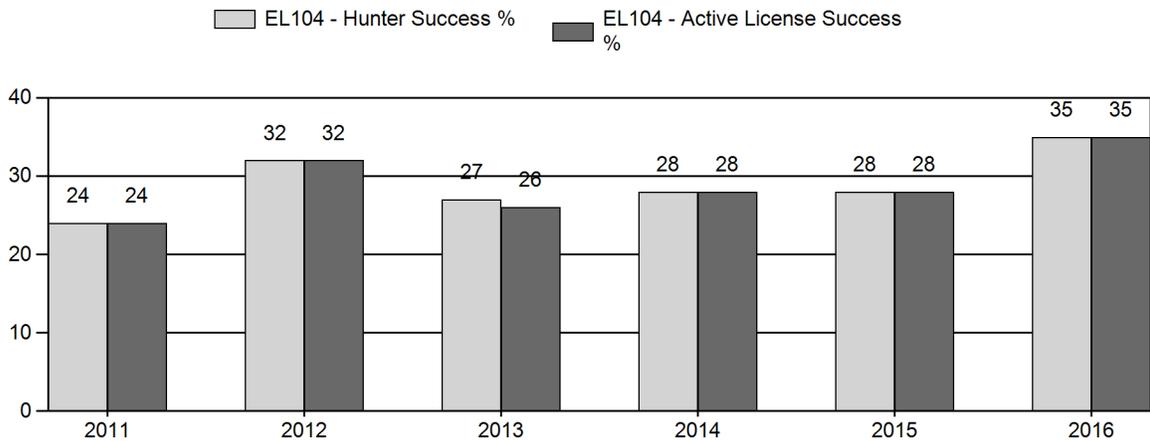
Harvest



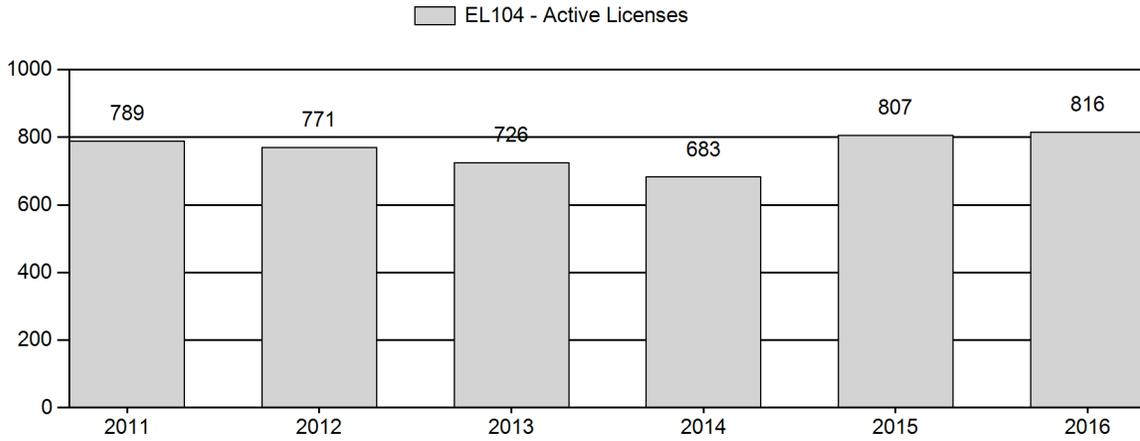
Number of Hunters



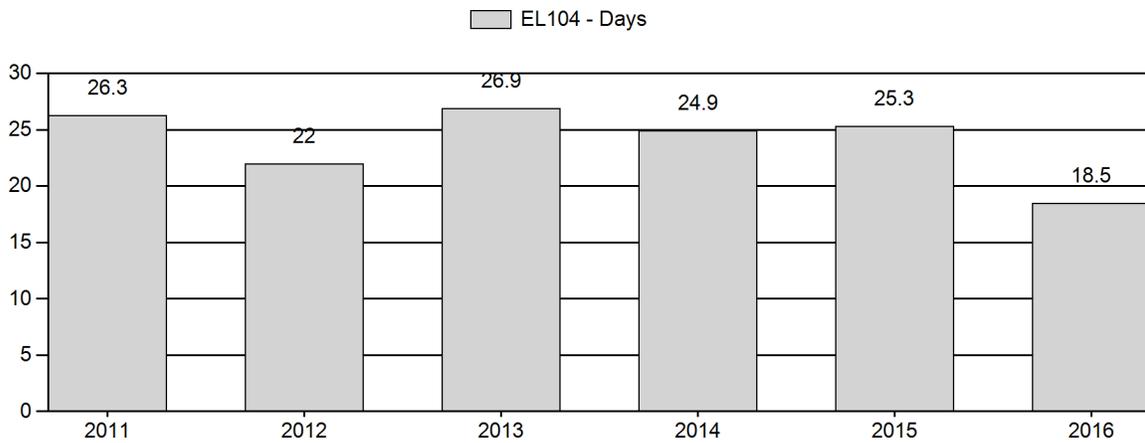
Harvest Success



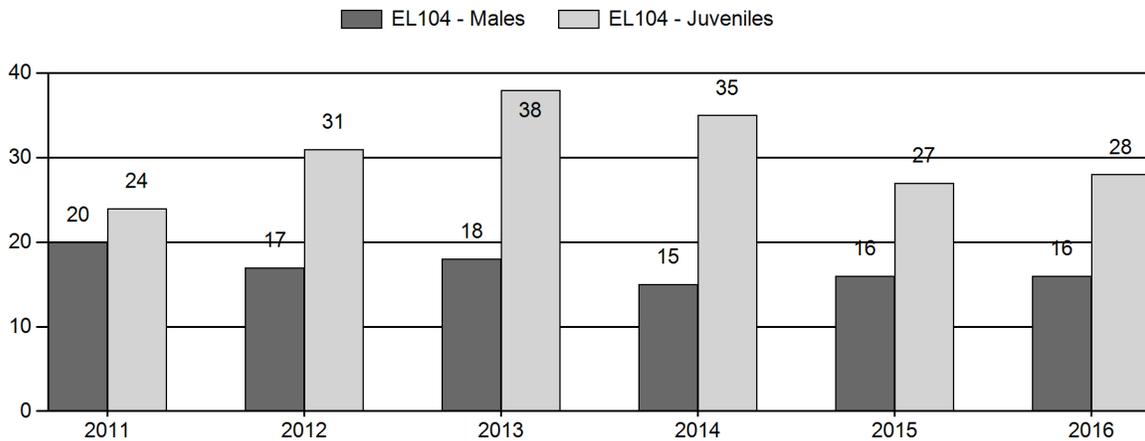
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2011 - 2016 Postseason Classification Summary

for Elk Herd EL104 - HOBACK

Year	Post Pop	MALES				FEMALES		JUVENILES		Tot CIs	Cls Obj	Males to 100 Females				Young to		
		Ylg	Adult	Total	%	Total	%	Total	%			Ylg	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2011	823	45	69	114	14%	573	70%	135	16%	822	204	8	12	20	±0	24	±0	20
2012	0	20	70	90	11%	533	68%	164	21%	787	264	4	13	17	±0	31	±0	26
2013	0	55	54	109	11%	617	64%	235	24%	961	349	9	9	18	±0	38	±0	32
2014	0	42	62	104	10%	689	66%	244	24%	1,037	325	6	9	15	±0	35	±0	31
2015	0	39	64	103	11%	640	70%	173	19%	916	291	6	10	16	±0	27	±0	23
2016	0	33	71	104	11%	642	69%	182	20%	928	251	5	11	16	±0	28	±0	24

2017 Seasons – Hoback Elk Herd Unit (EL104)

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
86		Sep. 26	Oct. 31		General	Any elk
86		Nov. 1	Nov. 5		General	Antlerless elk
87		Oct. 15	Oct. 31		General	Any elk valid south of U.S. Highway 191
87		Oct. 15	Oct. 21		General	Any elk valid north of U.S. Highway 191
87		Oct. 22	Oct. 31		General	Antlered elk valid north of U.S. Highway 191
87		Nov. 1	Nov. 5		General	Antlerless elk valid south of U.S. Highway 191
87	6	Dec. 1	Jan. 31	75	Limited quota	Cow or calf valid south and east of Dell Creek, north and east of U.S. Highway 191, and west of the North Fork of Fisherman Creek
Archery Seasons						
86		Sept. 1	Sept. 25			Refer to Section 2 of this Chapter
87		Sept. 1	Sept. 30			Refer to Section 2 of this Chapter

Summary of Changes in License Numbers

Area	Type	Changes from 2016
		No Changes
Herd Unit Total		No Changes

Management Evaluation

Current Mid-Winter Trend Count Management Objective: 1,100

Management Strategy: Recreational

2016 Trend Count: 928

Most Recent 3-year Running Average Trend Count: 1,046

The Hoback Herd Unit encompasses approximately 341 square miles of occupied elk habitat almost entirely within Sublette County. Hunt Areas 86 (Monument Ridge) and 87 (Raspberry Ridge) make up the Hoback Herd Unit. This herd unit is managed under a mid-winter trend objective of 1,100 ($\pm 20\%$) with a herd estimate derived from a 3-year trend count average on feedgrounds and native range combined. This herd is managed under “recreational” management.

Herd Unit Issues

Managers believe a very high proportion (>90%) of elk are typically counted in this herd unit and are located on feedgrounds during the winter. This is an extremely “leaky” herd unit and as a result, a population model has not been successfully developed. Elk are annually documented moving into and out of this herd unit resulting in annual winter trend counts that can vary from year to year. In addition, the Dell Creek feedground has struggled to maintain elk numbers near the winter quota of 400 elk. Low elk numbers at Dell Creek feedground can partially be attributed to the close proximity of this feedground to the Fall Creek herd unit where more liberal elk harvest strategies occur. Elk depredation on private land haystacks and cattle feed lines north of Hwy 191 continue to be a problem in most winters.

Weather

Elk in this herd unit experience the coldest winter temperatures compared to all other herd units in western Wyoming. These climatic conditions likely result in higher feedground dependence by elk, even on low snow years. Heavy snow loads typically make native forage unavailable on most winters.

Habitat

Diverse spring, summer and fall habitats from low elevation willow bottoms and sagebrush/grasslands, to aspen and mixed conifer, to high elevation tall forb, white-bark pine, and alpine habitat make this herd unit rich for a wide array of wildlife. Due to the heavy snow accumulations and cold temperatures during winter, over 90% of the elk rely on supplemental feeding (feedgrounds) within this herd unit. Therefore winter and other seasonal habitats do not limit population growth in this herd.

Field Data

The 2016 postseason trend count of 928 elk observed on Department-operated elk feedgrounds and native winter ranges showed a decrease from the past three year period, but an increase compared to the low trend counts from 2010-2012 (Table 1). Very few elk (n=9) were counted away from established feedgrounds in Areas 86 and 87, which is typical for this herd unit due to deep snow conditions. Snow conditions were above normal this past winter (2016-17) and over 99% of the documented elk numbers were from feedground locations.

Table 1. Herd Composition Counts in the Hoback Herd Unit, 2007-2016

Location	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Dell Creek F.G.	311	345	298	228	205	171	242	294	330	314
McNeel F.G.	591	687	701	596	613	544	706	728	693	605
N.W.R.	38	23	44	13	4	72	99	85	81	9
Herd Unit Total	940	1055	1043	837	822	787	1047	1107	1104	928

The 2016 postseason ratios of 16 bulls:100 cows:28 calves, shows a similar bull ratio calf ratio compared to the 5-year average bull:cow:calf ratios of 17:100:31. The 2016 bull:cow ratio is at the low end for the management goals for this herd unit.

Harvest Data

Additional antlerless harvest opportunities were available in 2008 through 2011 in Area 86 and the southern portions of Area 87, and then re-instated back into the 2015 and 2016 seasons. Liberal seasons were designed to help reduce elk numbers from surrounding herd units, as many of these animals move into the Hoback during the spring/summer/fall period. The 2016 harvest survey indicated a total harvest of approximately 283 elk (153 bulls and 130 cows/calves). This is an increase over the 2015 harvest and likely due to higher antlerless harvest in Area 86 and the south portion of Area 87. The 2016 hunter success was 35% and days/harvest was 18, much improved over the 5-year average of 28% success and 25 days/harvest.

Population

Starting in 2012, a mid-winter trend count was used to manage this herd unit instead of hand-derived population model estimates. This is an extremely “leaky” herd unit and as a result, a functional computer simulation model has never been developed. The post hunt population trend objective for this herd is 1,100 elk ($\pm 20\%$). The 2014-2016 mid-winter 3-year trend count average is 1046 elk, which is right at the management goal for this herd objective.

Management Summary

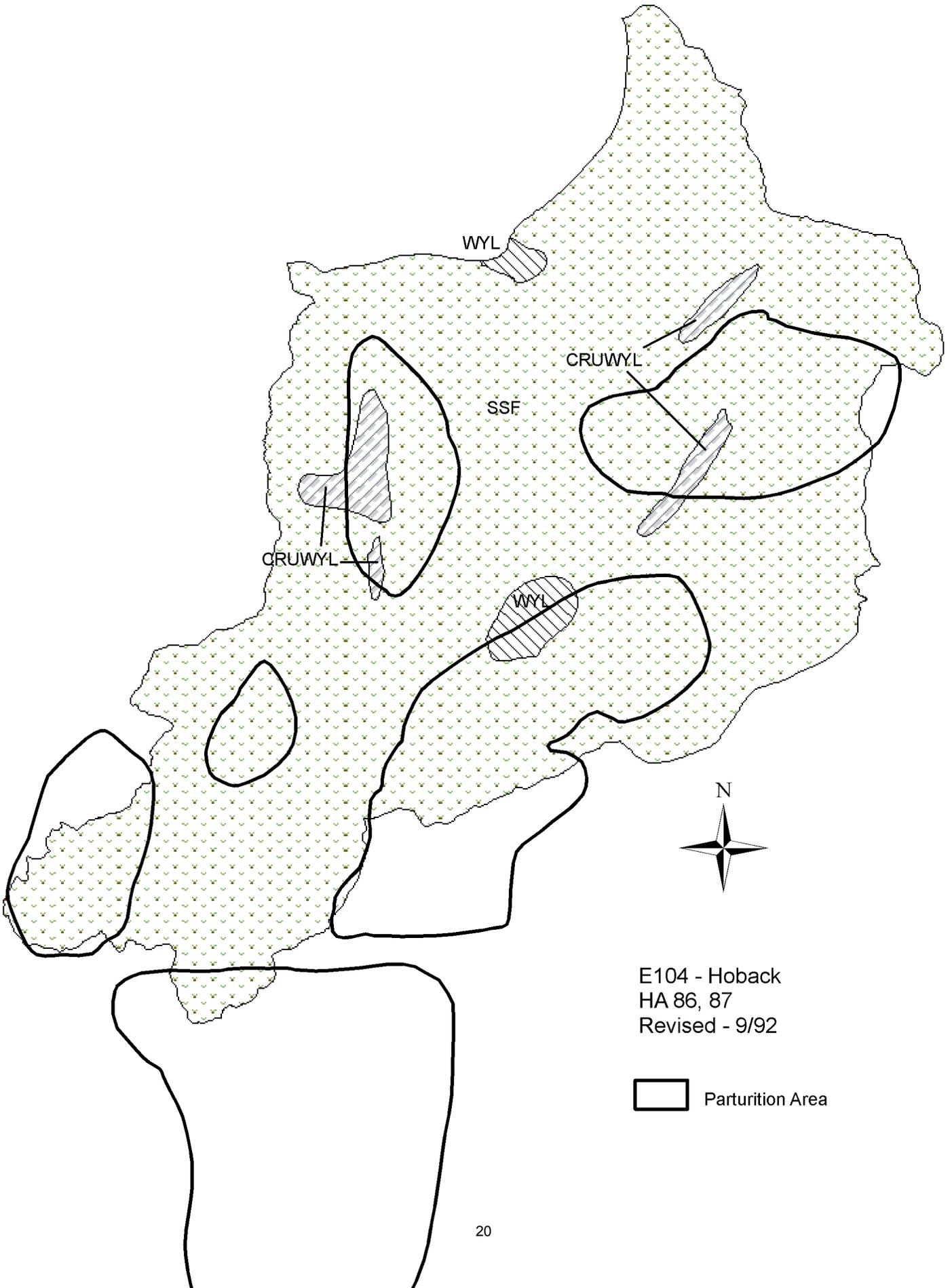
The Hoback Herd Unit is extremely “leaky” in regards to elk moving in and out of the herd on a seasonal basis. Fluctuations of up to 200+ animals between annual winter counts are common. Radio collared (GPS) elk and harvest data from elk tagged at Franz (located in the Piney herd unit), McNeel, and Dell Creek feedgrounds have documented animal movements between herd units. Ear tag data has documented 29% to 43% harvest outside the herd unit where those elk were tagged. Radio collared elk movements outside the herd units from where the animals was collared are as follows; McNeel at 0%, Dell Creek at 63%, and Franz at 89%.

Since 2008, hunting seasons were designed to increase harvest on antlerless within the Hoback herd unit as well as surrounding herd units. In 2012 seasons were changed to reduce female harvest in response to low elk numbers during the winter of 2011-2012. Additional harvest opportunities were provided in 2015 and 2016 as elk numbers approached objective levels. Currently, adequate bull:cow:calf ratios are being maintained. The most recent mid-winter 3-year trend average was 1,046 elk, placing the population at the objective of 1,100 elk for this herd. Elk numbers have continued to increase at the Dell Creek Feedground since female harvest opportunities have been shortened in recent years in the north portion of Area 87. Mortalities estimated near 100+ elk were documented on or near feedgrounds within this herd unit during

the 2015-16 winter due to wolf depredations, contributing to the lower elk numbers documented this past winter 2016-17. If wolf caused mortalities continue in upcoming years, as experienced in 2015-16, hunter harvest opportunities may need to be reduced to maintain population objectives in this herd unit.

The 2017 hunting seasons for this herd unit will provide a similar season for bull harvest and a slightly shorter season for female and calf harvest in most of the herd unit compared to 2016. The general license season north of U.S. Highway 191 in Area 87 will be one week (Oct. 15 – Oct 21) of “any” elk hunting followed by one week (Oct. 22 – Oct. 31) of “antlered” elk. The general license season for Area 87 south of U.S. Highway 191 is “any” elk from Oct. 15 – Oct. 31 followed by a Nov. 1 – Nov. 5 season for antlerless elk. A total of 75 limited quota Type 6 (cow/calf) licenses will again be available in a portion of Area 87, valid from Dec. 1 – Jan. 31, in an effort to reduce damage to privately stored hay crops.

The 2017 season in Area 86 offers general license, “any” elk hunting from September 26 through October 31, with additional harvest opportunities for antlerless elk available from Nov. 1 – Nov. 5. The 2017 hunting seasons are projected to harvest approximately 220 elk (120 bulls, 100 cows/calves).



E104 - Hoback
HA 86, 87
Revised - 9/92

 Partition Area

2016 - JCR Evaluation Form

SPECIES: Elk
 HERD: EL106 - PINEY
 HUNT AREAS: 92, 94

PERIOD: 6/1/2016 - 5/31/2017
 PREPARED BY: GARY FRALICK

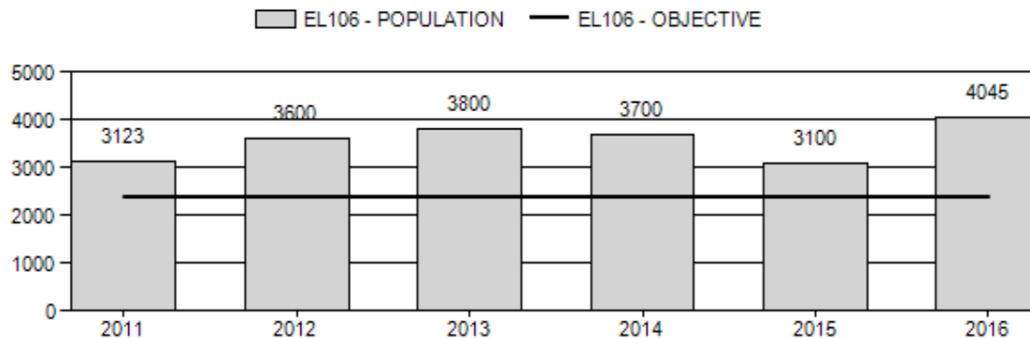
	<u>2011 - 2015 Average</u>	<u>2016</u>	<u>2017 Proposed</u>
Population:	3,465	4,045	3,500
Harvest:	1,000	945	1,128
Hunters:	3,279	3,074	3,132
Hunter Success:	30%	31%	36%
Active Licenses:	3,432	3,259	3,132
Active License Success:	29%	29%	36%
Recreation Days:	28,268	23,784	25,386
Days Per Animal:	28.3	25.2	22.5
Males per 100 Females	37	41	
Juveniles per 100 Females	33	34	

Population Objective ($\pm 20\%$): 2400 (1920 - 2880)
 Management Strategy: Recreational
 Percent population is above (+) or below (-) objective: 69%
 Number of years population has been + or - objective in recent trend: 70
 Model Date: 3/17/2017

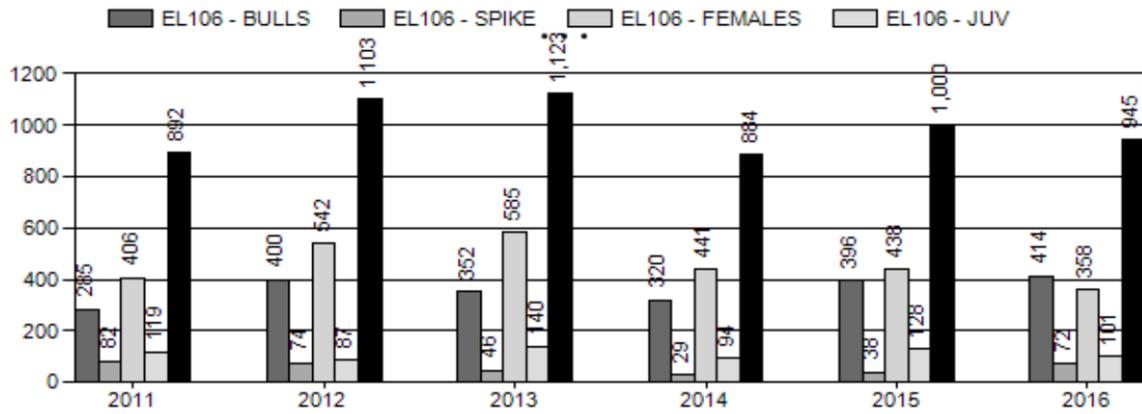
Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	15%	21%
Males ≥ 1 year old:	33%	34%
Total:	20%	24%
Proposed change in post-season population:	-7%	-12%

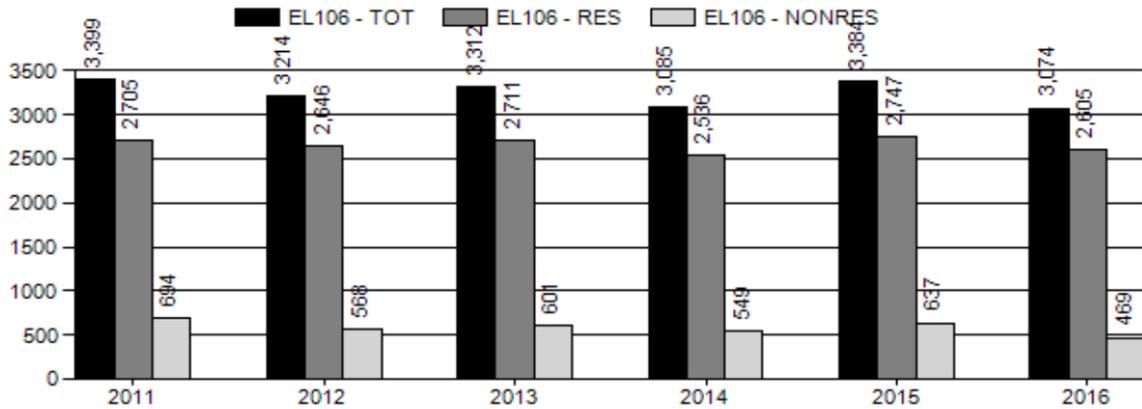
Population Size - Postseason



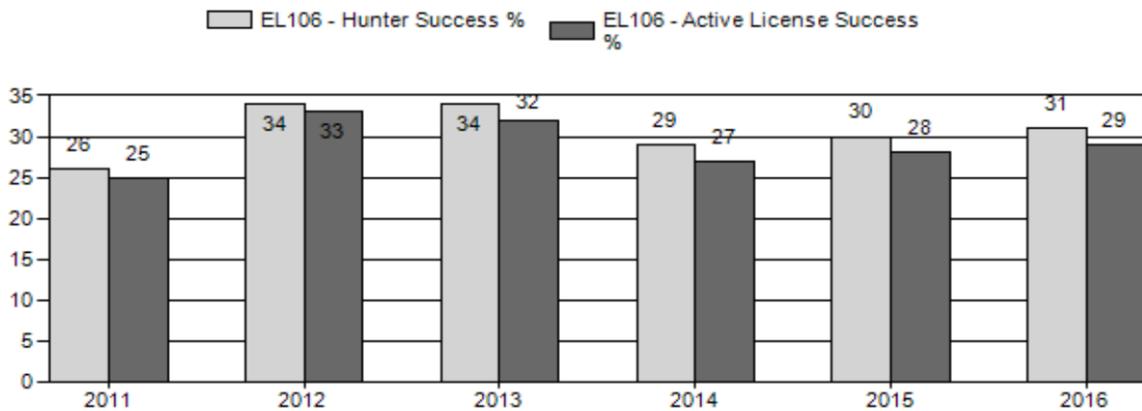
Harvest



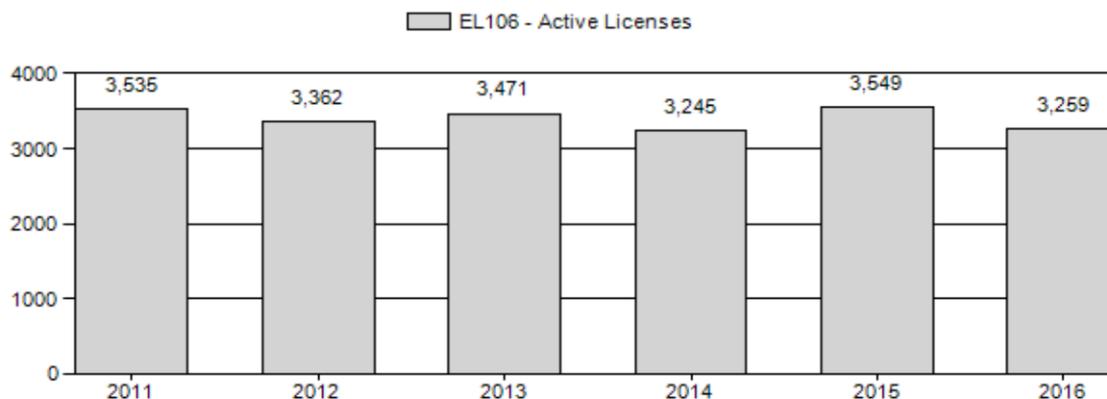
Number of Hunters



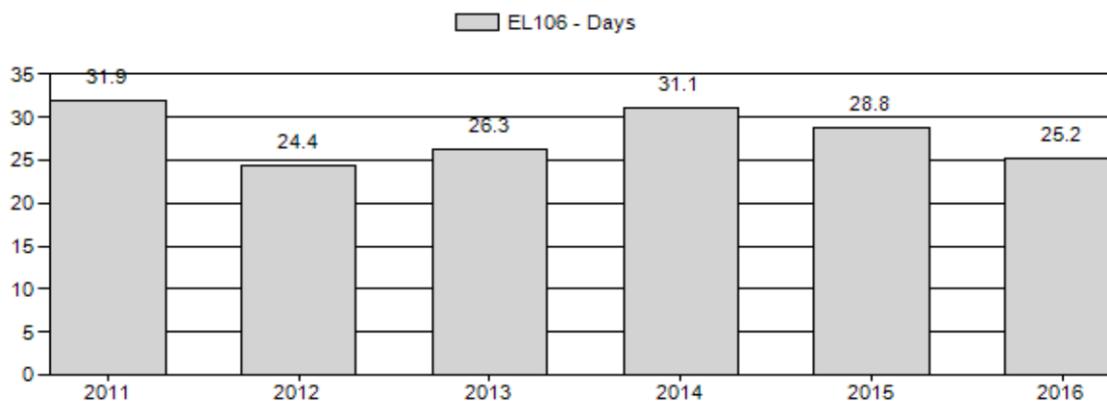
Harvest Success



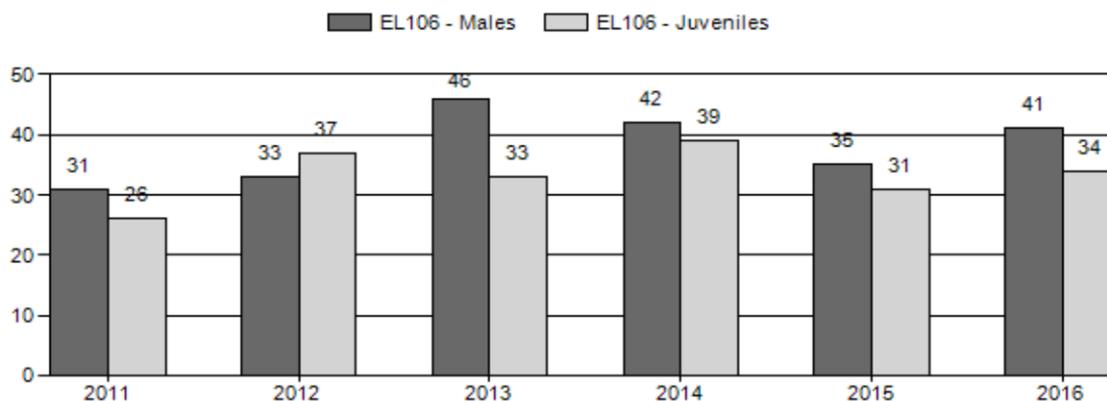
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2011 - 2016 Postseason Classification Summary

for Elk Herd EL106 - PINEY

Year	Post Pop	MALES				FEMALES		JUVENILES		Tot Cls Cls Obj	Males to 100 Females				Young to			
		Ylg	Adult	Total	%	Total %	Total %	%	Ylng		Adult	Total	Int	Conf	100 Fem	Conf Int	100 Adult	
2011	3,123	217	302	519	20%	1,660	64%	425	16%	2,604	369	13	18	31	± 1	26	± 1	20
2012	3,600	261	306	567	19%	1,705	59%	639	22%	2,911	454	15	18	33	± 1	37	± 1	28
2013	3,800	240	380	620	26%	1,337	56%	443	18%	2,400	613	18	28	46	± 2	33	± 1	23
2014	3,700	157	458	615	23%	1,476	55%	579	22%	2,670	595	11	31	42	± 1	39	± 1	28
2015	3,100	152	297	449	21%	1,273	60%	396	19%	2,118	524	12	23	35	± 1	31	± 1	23
2016	4,000	229	431	660	23%	1,600	57%	551	20%	2,811	0	14	27	41	± 1	34	± 1	24

2017 HUNTING SEASONS
PINEY ELK HERD UNIT (EL106)

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
92		Oct. 15	Oct. 31		General	Any elk
		Nov. 1	Nov. 12		General	Antlerless elk
	6	Oct. 1	Nov. 23	400	Limited quota	Cow or calf
	6	Nov. 24	Jan. 31			Cow or calf valid north of Wyoming Highway 354 and Sublette County Road 112, east of Sublette County Road 115, and south of South Beaver Creek
94		Oct. 15	Oct. 31		General	Any elk
		Nov. 1	Nov. 12		General	Antlerless elk
	6	Oct. 1	Oct. 31	400	Limited quota	Cow or calf
	6	Nov. 1	Nov. 23		Limited quota	Cow or calf valid north of Middle Piney Creek
	7	Nov. 1	Nov. 30	100	Limited quota	Cow or calf valid north of Middle Piney Creek
92, 94		Sep. 1	Sep. 30			Archery only Refer to Section 2 of this Chapter

SUMMARY OF PROPOSED CHANGES BY LICENSE NUMBER

Area	License Type	Quota Change from 2016
92	Type 6	+100
94	Type 6	+100
Herd Unit Total	Type 6	+ 200 licenses

Management Evaluation

Current Postseason Population Management Objective: 2,400

Management Strategy: Recreational

2016 Postseason Population Estimate: ~4,000

2017 Proposed Postseason Population Estimate: ~3,500

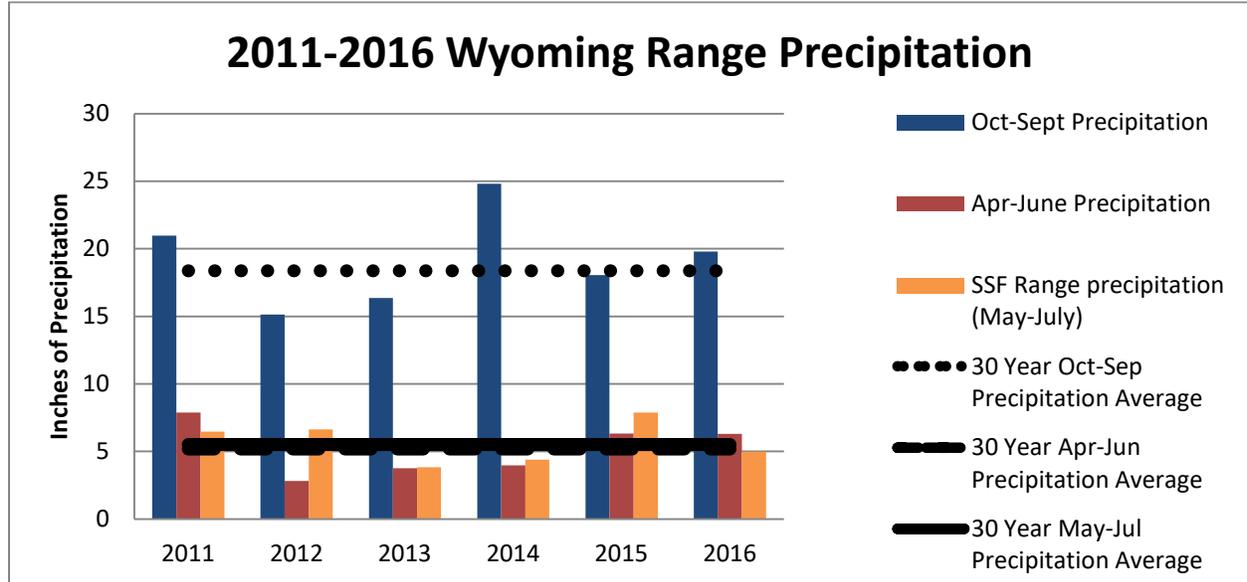
The population objective for Piney elk herd is 2400 elk. The management strategy is recreational management. The objective and management strategy was revised in 2011. The current population estimate is 4000 elk.

Herd Unit Issues

Since 2005 sustained population reduction has been difficult to achieve. Hunting opportunities are the most liberal in western Wyoming. Management strategies have emphasized hunter opportunity by promoting antlerless elk harvest with November hunting seasons and issuance of limited quota cow/calf only licenses.

While both hunt areas continue to support winter elk numbers at or above Commission-established feedground quotas, Area 94, and specifically the Bench Corral feedground supports the highest increase in elk. Hunting seasons over the last 10 years have continually targeted elk that spend the winter on the Bench Corral feedground. By focusing hunting pressure in Hunt Area 94, north of Middle Piney Creek, the desired result of reducing elk numbers on this feedground to levels closer to 700 or 800 have been unattainable.

Weather



Precipitation

Overall precipitation from October 2015 through September 2016 was slightly above average when averaged across the entire herd unit. The general characteristics included a relatively dry winter followed by average spring precipitation. Fortunately, growing season (April through June) precipitation was above average which resulted in good vegetation production across all ranges.

Winter Severity

The 2016-2017 winter has been extreme with below average temperatures and above average snow on winter ranges. Snow crusting has also resulted from temperature extremes creating difficult foraging conditions. The mule deer fawn and adult mortality will likely be very high when change in ration classifications are conducted in spring 2017. This extreme winter follows three winters of mild conditions resulting in good over-winter survival for fawns and adults. High elevation mountain ranges have received above average snow levels. The Snow Water Equivalent of the Upper Green River Basin has registered 192%, the Upper Bear River Basin has registered 169%, and the Lower Green River Basin has registered 161% compared to the 1981-2010 median as of February 27, 2017.

Weather conditions during the 2016 were ideal for forage production beginning in early spring and continuing through fall. By late summer the moisture regime had changed frequent precipitation scenario that persisted into the fall hunting season. Drought conditions in the early portion of the summer abated by late fall as persistent snow storms began to deposit snowpack in the Wyoming and Salt Mountain Ranges. By mid winter snow conditions on winter ranges had changed significantly. Little to no snow had accumulated on core winter ranges. These conditions persisted throughout the remainder of the winter. By late winter 2016 snowpack in western Wyoming watersheds were estimated to be significantly above normal. For additional

weather and precipitation data please visit the following websites:

<http://www.ncdc.noaa.gov/temp-and-precip/time-series> and

<http://www.ncdc.noaa.gov/oa/climate/research/prelim/drought/pdiimage.html>.

Habitat

Winter range browse plants have been measured each spring and fall to assess production and utilization since the late 1990s. Growing conditions improved in 2016 on winter ranges because of moisture regimes in early spring and throughout the growing seasons. Improved growing conditions were due to spring and summer rains which have a different effect on shrubs than winter snowpack due to rates of infiltration. Leader production on Wyoming big sagebrush and black sagebrush were the species most notably improved compared to the 2013 leader growth. However, average leader growth was still less than a half inch for Wyoming big sagebrush sites and less than two inches for mountain shrubs. For additional site specific information, please refer to the 2015 Annual Report Strategic Habitat Plan Accomplishments, for the Pinedale Region habitat improvement project summaries (<http://wgfd.wyo.gov/web2011/wildlife-1000708.aspx>).

Field Data

Population reduction has been difficult to achieve. Management strategies have emphasized the harvest of antlerless elk with November hunting seasons and issuance of limited quota cow/calf licenses. Hunt Area 94, and specifically the Bench Corral feedground, has supported the highest increase in elk throughout the herd unit. Consequently, hunting opportunities, especially for antlerless elk in Area 94 where trend counts continue to remain high, have continued to be liberal in order to affect the desired population reduction. Limited quota Type 6 cow/calf licenses have focused harvest on the antlerless segment of the population since these license holders typically account for at least 35% of the antlerless harvest in the herd unit. Limited quota Type 7 cow/calf licenses have been designed to harvest elk that migrate to the Bench Corral feedground.

Elk numbers on feedgrounds in Area 92 have generally been near the desired Commission-established quota over the last 6 years (Appendix A). As a result hunting structure has been designed to maintain elk numbers near these quotas by implementing general license any elk hunting in October and extending unused general licenses into November for antlerless elk only. In addition, the issuance of limited quota type 6 cow or calf only licenses have proven to be supported and popular with the hunting public.

Harvest Data

Hunter success was estimated at 30% in 2015 and 2016, respectively. A total of 1000 elk were taken in 2015. During the current year, 934 elk were estimated to have been harvested. The slight difference in harvest levels between 2015 and 2016 was insufficient to affect the desired population reduction. There were somewhat similar numbers of antlered elk harvested between years in 2015 (N=434 bulls) and 2016 (N=477 bulls), which did not significantly affect a decrease in the annual bull: cow ratio in the posthunting 2016 population.

Despite some of the most liberal elk hunting seasons in western Wyoming the number of cow elk harvested over the last 3-years exhibited a decrease in the 2016 harvest. During the three period from 2014-2016, an estimated 441 elk, 438 elk, and 361 antlerless elk were taken during those three years, respectively. In 2014, a total of 94 calves were taken, while in 2015 an estimated 128 calf elk were harvested by hunters in this herd. An estimated 97 calves were harvested in 2016. .

General license hunters accounted for 59% and 76% of the total elk harvest, in 2015 and 2016, respectively. General licenses were successful in harvesting 64% and 52% of the total number of antlerless elk taken in the 2015 and 2016 hunting seasons, respectively. Limited quota Type 6 and 7 license holders accounted for 36% and 48% of the total antlerless elk harvest in 2015 and 2016, respectively. The majority of the antlerless harvest occurs in late October and through November, and affirms the management strategy to promote antlerless harvest when elk are more likely to be present at lower elevation and accessible to hunters. Antlerless harvest over the last 5 years has not resulted in the desired downturn in the total number of elk counted during the annual trend count. However, antlerless hunting is an essential component of the elk management strategy and will continue to manage the reproductive segment of the population and emphasize cow harvest with limited quota licenses holders during the months of October and November.

Population

The population trend is decreasing, but only slightly. The “Constant Juvenile and Adult Survival – CJ,CA Model” spreadsheet model was chosen for the post season population estimate. This model provides the best model alignment with low AICc value of 444 and fit of 453. This model also tracks reasonably with observed bull:cow ratios, bull harvest percentages, and annual population dynamics.

Management Summary

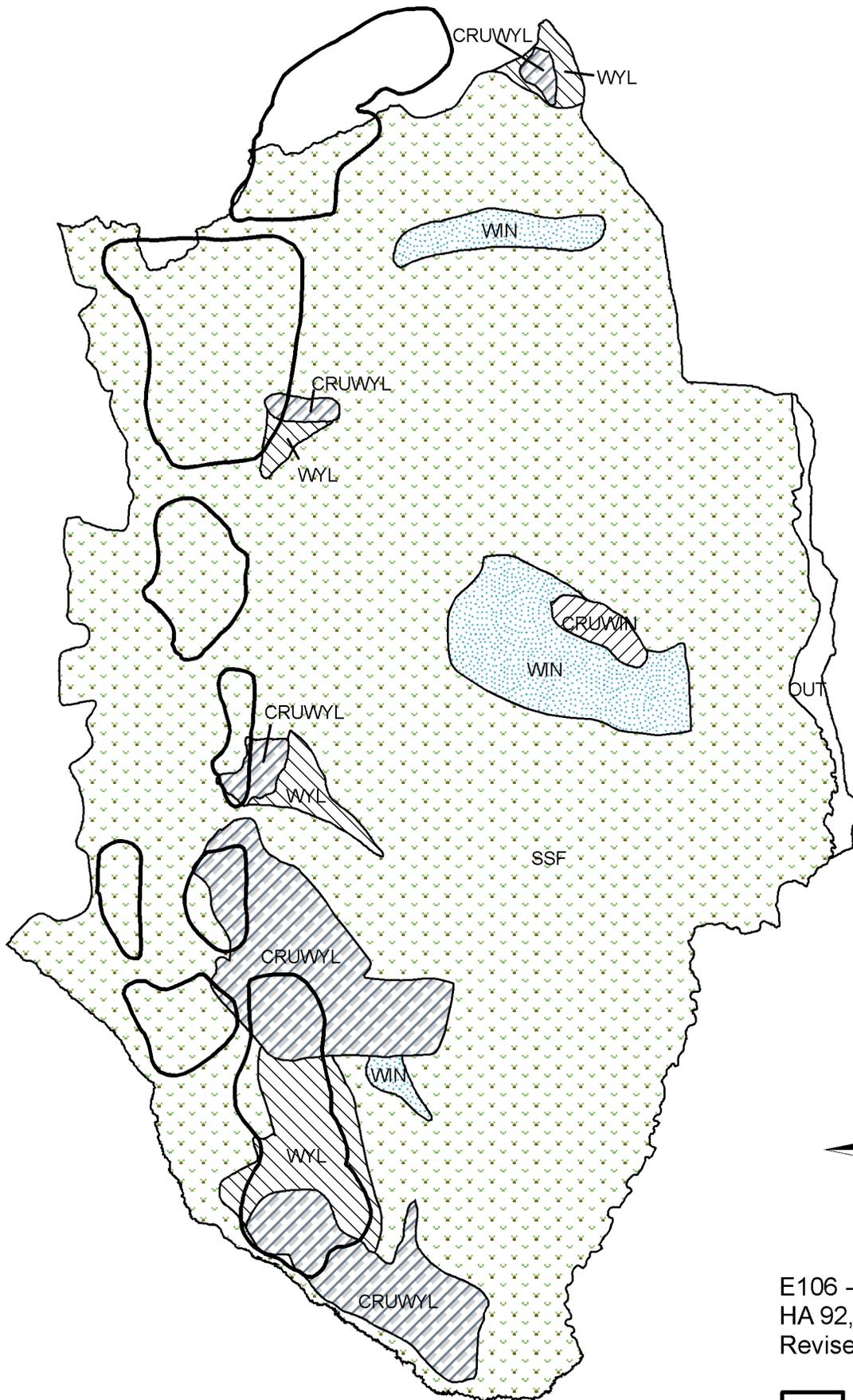
The 2017 hunting seasons are designed to reduce the Piney elk toward the objective of 2400 elk, but at a slightly lower rate. The emphasis to harvest adult female elk in both hunt areas will continue for the 9th consecutive year by opening the limited quota antlerless elk hunting on October 1. The number of days for the November portion of the general antlerless elk hunting season will be from November 1 to November 12. This season structure will allow general license hunter to maximize the November segment of the hunt to harvest elk that have moved to lower, more accessible areas. The number of Type 6 will be increased in 2017 to account for the higher number of elk counted during the 2016 trend count, and increasing above the trend count objective of 2400 elk. As a result, the number of limited quota Type 6 licenses available since 2016 will decrease from 600 to 800 additional cow/calf licenses. A total of 400 Type 6 licenses will be issued in Hunt Areas 92 and 94, respectively. The number of Type 7 licenses will remain at 100 licenses.

A substantial change first initiated in 2014, and implemented in 2015 and 2016, that focuses harvest on antlerless elk north of Middle Piney Creek, will be continued in 2017. Limited quota

Type 7 cow/calf only licenses will be valid north of Middle Piney Creek from November 1 – 30. This hunt is designed to focus harvest on that segment of the population that spends the winter on the Bench Corral feedground. For the 5th consecutive year, hunters will be permitted to harvest up to three elk in this herd. An additional harvest strategy is proposed for 2017 that will focus harvest on elk north of Middle Piney Creek in Area 94 by allowing Area 94 Type 6 hunters to hunt in this restricted portion of the area from November 1 – November 23.

The 2017 hunting seasons are projected to harvest approximately 1130 elk. The 2017 posthunt trend should result in an approximate count of 2900 elk.

Appendix A. Piney Elk Herd, posthunt herd composition data, 2011-2016.										
2011	Adult Males	Yrlng Males	Total Males	Cows	Calves	Total	Ratio:100 Females			
							Adult Males	Yrlng Males	Total Males	Calves
92 JFG	64	69	133	443	170	746				
92 FFG	113	25	138	197	63	398				
92 NR	29	2	31	1	1	33				
94 FFG	6	8	14	138	51	203				
94 NPF	0	0	0	0	0	0				
94 BCFG	78	110	188	881	140(100)	1309				
94 NR	12	3	15	N/A	N/A(203)	218				
TOTAL	302	217	519	1660	425(303)	2907	18	13	31	26
2012										
92 JFG	14	61	75	391	228	694				
92 FFG	885	41	126	218	79	423				
92 NR	71	2	73	0	0	73				
94 FFG	30	25	55	137	47	239				
94 NPF	0	0	0	0	0	0				
94 BCFG	65	121	186	959	284	1429				
94 NR	41	11	52	0	1(14)	67				
TOTAL	306	261	567	1705	639(14)	2925	18	15	33	37
2013										
92 JFG	35	61	96	493	173	762				
92 FFG	106	40	146	138	47	331				
92 NR	55	9	64	2	0(27)	93				
94 FFG	NA	NA	NA	NA	65(226)	291				
94 NPF	0	0	0	0	0	0				
94 BCFG	113	118	231	703	156	1090				
94 NR	71	12	83	1	2(110)	196				
TOTAL	380	240	620	1337	443(363)	2763	28	18	46	33
2014										
92 JFG	51	20	71	257	83	411				
92 FFG	40	20	60	NA	NA(415)	475				
92 NR	77	9	86	5	0(27)	118				
94 FFG	29	18	47	237	87	371				
94 NPF	0	0	0	0	0	0				
94 BCFG	207	84	291	NA	75(1034)	1400				
94 NR	54	6	60	22	4(250)	336				
TOTAL	458	157	615	521	249(1726)	3111	NA	NA	NA	NA
2015										
92 JFG	44	22	66	319	172	557				
92 FFG	22	7	29	136	25	190				
92 NR	41	0	41	1	1	43				
94 FFG	40	37	77	266	76	419				
94 NPF	0	0	0	0	0	0				
94 BCFG	147	73	220	488	100	808				
94 NR	43	13	56	63	22(30)	276				
TOTAL	337	152	489	1273	396(135)	2293	26	12	38	31
2016										
92 JFG	43	58	101	438	124	663				
92 FFG	119	40	159	271	88	518				
92 NR	13	1	14	0	1	15				
94 FFG	22	30	52	285	73	410				
94 NPF	0	0	0	0	0	0				
94 BCFG	211	88	299	599	262	1160				
94 NR	23	12	35	7	3(200)	245				
TOTAL	431	229	660	1600	551(200)	3011	27	14	41	34



E106 - Piney
 HA 92, 94
 Revised - 12/88

 Parturition Area

2016 - JCR Evaluation Form

SPECIES: Elk

PERIOD: 6/1/2016 - 5/31/2017

HERD: EL107 - UPPER GREEN RIVER

HUNT AREAS: 93, 95-96

PREPARED BY: DEAN CLAUSE

	<u>2011 - 2015 Average</u>	<u>2016</u>	<u>2017 Proposed</u>
Trend Count:	2,731	3,079	2,900
Harvest:	419	454	500
Hunters:	1,208	1,312	1,400
Hunter Success:	35%	35%	36%
Active Licenses:	1,297	1,414	1,400
Active License Success	32%	32%	36%
Recreation Days:	10,483	10,646	10,800
Days Per Animal:	25.0	23.4	21.6
Males per 100 Females:	27	34	
Juveniles per 100 Females	33	33	

Trend Based Objective (± 20%) 2,500 (2000 - 3000)

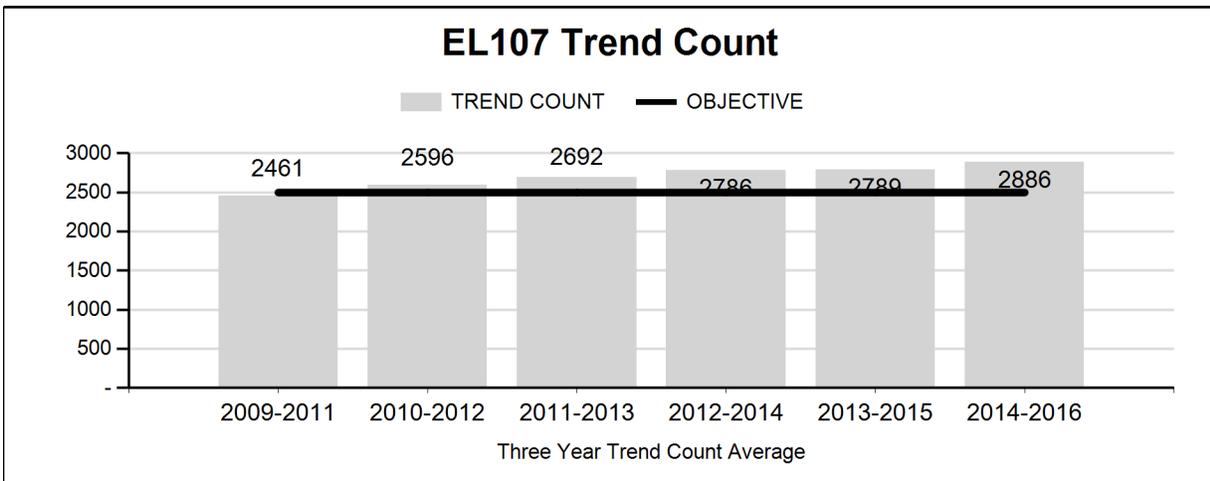
Management Strategy: Recreational

Percent population is above (+) or (-) objective: 23%

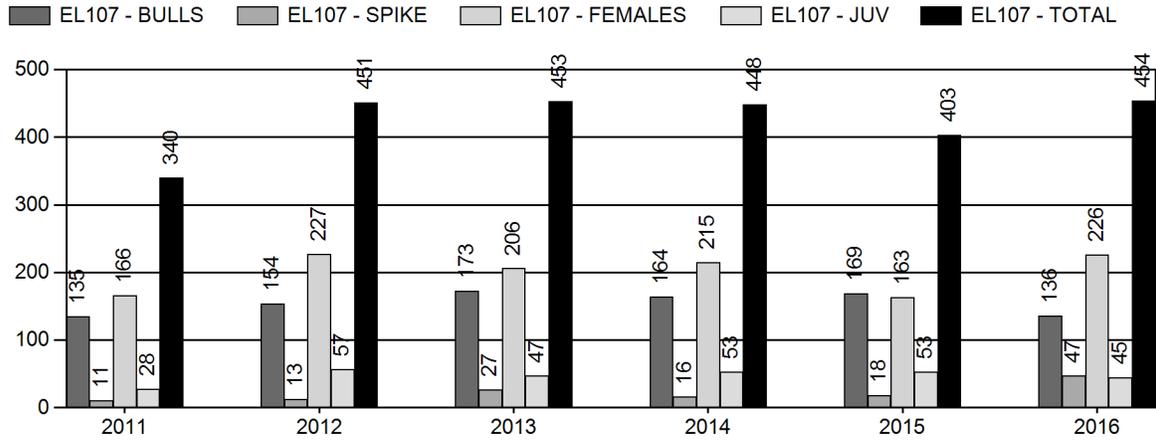
Number of years population has been + or - objective in recent trend: 1

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

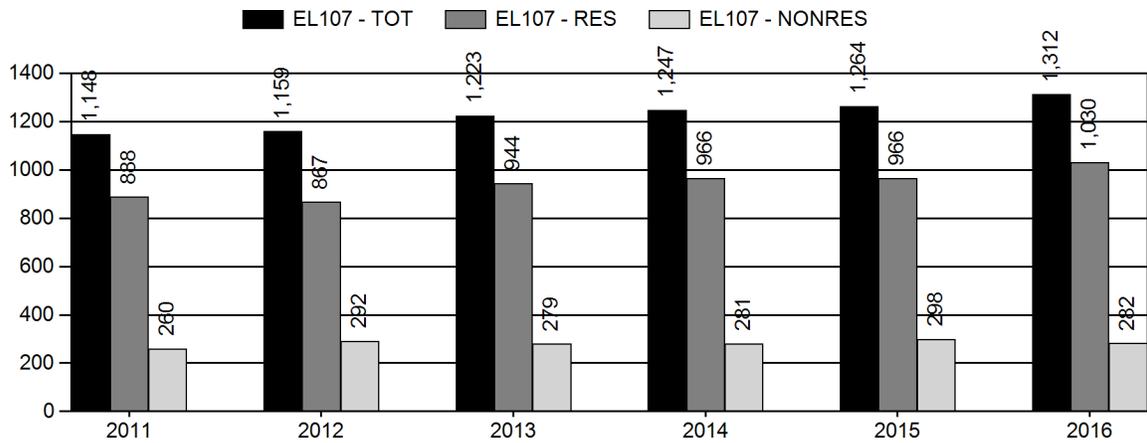
	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	0%	0%
Males ≥ 1 year old:	0%	0%
Juveniles (< 1 year old):	0%	0%



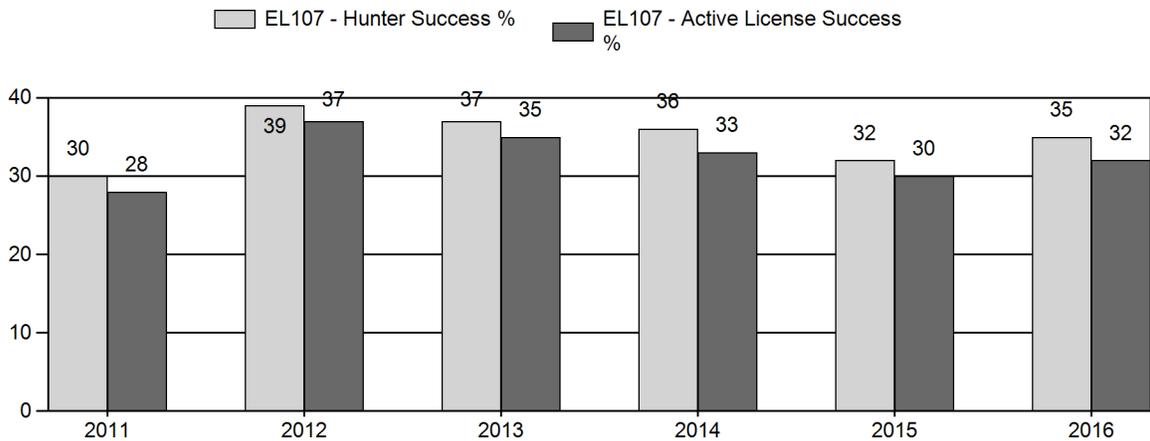
Harvest



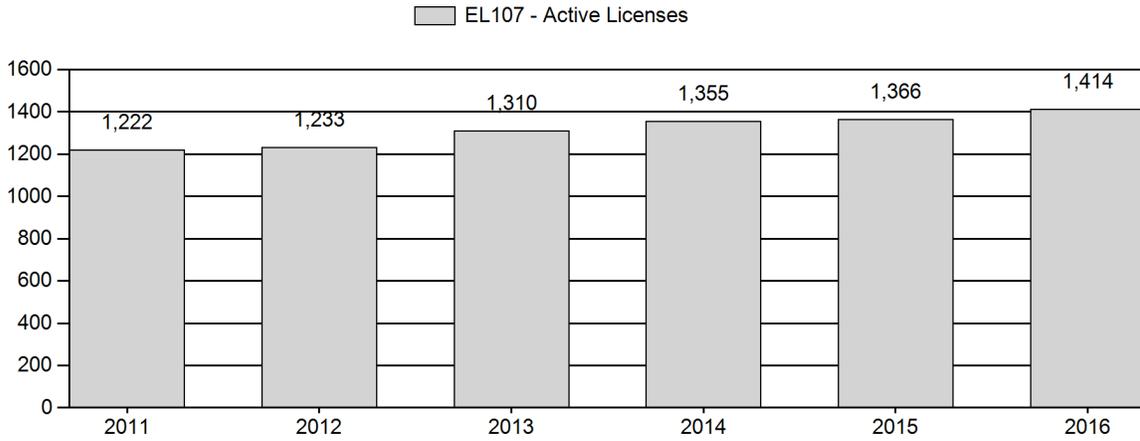
Number of Hunters



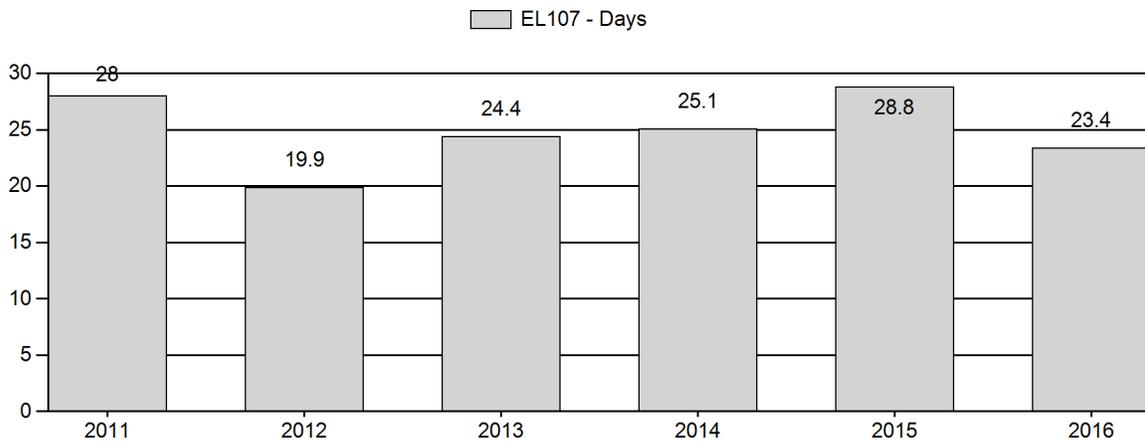
Harvest Success



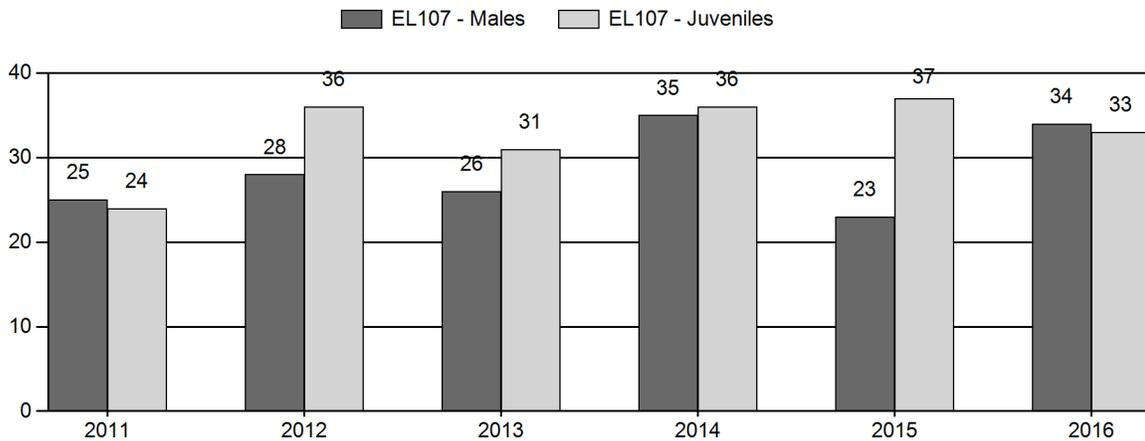
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2011 - 2016 Postseason Classification Summary

for Elk Herd EL107 - UPPER GREEN RIVER

Year	Post Pop	MALES				FEMALES		JUVENILES		Tot CIs	Cls Obj	Males to 100 Females				Young to		
		Ylg	Adult	Total	%	Total	%	Total	%			Yng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2011	2,621	159	270	429	17%	1,736	67%	417	16%	2,582	274	9	16	25	±0	24	±0	19
2012	0	180	278	458	17%	1,649	61%	599	22%	2,706	441	11	17	28	±0	36	±0	28
2013	0	208	254	462	17%	1,777	64%	548	20%	2,787	364	12	14	26	±0	31	±0	24
2014	0	155	425	580	20%	1,676	58%	610	21%	2,866	478	9	25	35	±0	36	±0	27
2015	0	86	292	378	14%	1,649	63%	611	23%	2,638	401	5	18	23	±0	37	±0	30
2016	0	235	389	624	20%	1,840	60%	615	20%	3,079	406	13	21	34	±0	33	±0	25

2017 Seasons – Upper Green River Elk Herd Unit (E107)

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
93	1	Oct. 1	Oct. 31	175	Limited quota	Any elk
93	1	Nov. 1	Nov. 20			Antlerless elk
93	6	Oct. 1	Nov. 20	275	Limited quota	Cow or calf
95	1	Oct. 15	Nov. 5	200	Limited quota	Any elk
95	2	Oct. 1	Nov. 5	30	Limited quota	Any elk valid within the Green River drainage upstream from the outlet of Lower Green River Lake, including that portion east and south of Mill Creek
95	4	Oct. 15	Nov. 5	150	Limited quota	Antlerless elk
95	5	Oct. 1	Oct. 14	25	Limited quota	Antlerless elk valid within the Green River drainage upstream from the outlet of Lower Green River Lake, including that portion east and south of Mill Creek
95	5	Oct. 15	Nov. 5			Antlerless elk valid in the entire area
95	6	Oct. 15	Nov. 5	75	Limited quota	Cow or calf
96		Oct. 15	Oct. 31		General	Any elk
96	1	Oct. 1	Oct. 31	200	Limited quota	Any elk
96	1	Nov. 1	Nov. 30			Antlerless elk

96	6	Oct. 1	Nov. 30	275	Limited quota	Cow or calf
96	7	Dec. 1	Jan. 31	30	Limited quota	Cow or calf valid west of the elk fence and south of New Fork Lakes Road
Archery Seasons						
93, 95, 96		Sept. 1	Sept. 30			Refer to Section 2 of this Chapter

Summary of Changes in License Numbers

Area	Type	Changes from 2016
93	6	+25
96	6	+75
Herd Unit Total	6	+100

Management Evaluation

Current Mid-Winter Trend Count Management Objective: 2,500

Management Strategy: Recreational

2016 Trend Count: 3,079

Most Recent 3-year Running Average Trend Count: 2,886

The Green River Herd Unit encompasses approximately 837 square miles of occupied elk habitat, almost entirely within Sublette County. Hunt Area 93 (Waterdog Lakes), Area 95 (Green River), and Area 96 (New Fork) make up the Green River Herd Unit. This herd unit is managed under a mid-winter trend objective of 2,500 ($\pm 20\%$) with a herd estimate derived from 3-year trend count average on feedgrounds and native range combined. This herd is managed under “recreational” management, with a management objective for a bull: 100 cow ratio of 15 to 29 bulls:100 cows.

Herd Unit Issues

Managers believe a very high proportion (>90 %) of elk are typically counted in this herd unit and are located on feedgrounds during most winters. This is an extremely “leaky” herd unit and as a result, a population model has not been successfully developed. Large carnivores (wolves and grizzly bears) have reduced hunter participation in the northern portion of this herd unit, and are likely impacting elk productivity/survival. Lack of public access on private lands in Area 93 is limiting harvest and compromising female harvest goals within this herd.

Weather

Three elk feedgrounds (Green River Lakes, Black Butte, and Soda Lake) are located within this herd unit to winter animals that otherwise would not be able survive the harsh winter conditions. Heavy snow loads typically make most native forage unavailable on most winters.

Habitat

Roughly 43 square miles of native winter range have been identified in this herd unit in the upper Green River drainage near Pinyon Ridge and Osborn Mountain where recent trends documenting fewer elk. Since over 90% of the elk rely on supplemental feeding (feedgrounds) within this herd unit, winter and other seasonal habitats do not limit population growth in this herd.

Field Data

The 2016 trend count was 3,079 elk, showing an increase compared to 2015. Documented elk trends have been fairly consistent since 2012, with an overall increasing trend in the past 10 years (Table 1). Snow conditions were above normal throughout this herd unit during the 2016-17 winter, resulting in higher feedground counts and very few elk located on native winter range. Winter conditions, habitat conditions, wolf activity, and timing of classification surveys have resulted in fluctuating trend count data on all three feedgrounds and native winter ranges in past years (Table 1).

Table 1. Trend Counts in the Upper Green River Herd Unit, 2007-2016.

<u>Location</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Green River Lakes F.G	615	591	0	606	532	572	627	630	675	667
Black Butte F.G	815	1072	959	405	751	847	475	477	750	904
Soda Lake F.G.	714	650	0	1417	1144	1103	1492	1663	1017	1478
<u>N.W.R.</u>	<u>220</u>	<u>268</u>	<u>1344</u>	<u>71</u>	<u>155</u>	<u>184</u>	<u>193</u>	<u>96</u>	<u>271</u>	<u>30</u>
Herd Unit Total	2364	2581	2303	2499	2582	2706	2787	2866	2713	3079

Composition counts during 2016 revealed a bull:cow:calf ratio of 34:100:33. This 2016 documented bull:cow ratio was higher and the calf:cow ratio was the same compared to the 5-year average of 27:100:33. The higher bull:cow ratio in 2016 is most likely attributed to a higher proportion of bulls wintering on feedgrounds due to above average snow accumulations and below average temperatures. Good calf productivity/survival in 2015 resulted in improved yearling bull ratios, contributing to the higher overall bull ratio in 2016. The 2016 bull:cow ratio of 34:100 is above the recreational management goals for this herd, while the 5-year average of 27:100 is within this goal.

Harvest Data

The 2016 harvest report indicated total elk harvest of approximately 450 elk (180 bulls and 270 cows/calves), slightly higher than the 2015 harvest of 400 (190 bulls and 210 cows/calves). During 2016, 32% of the hunters were successful in harvesting an elk, same as the past 5-year average. The 2016 hunter effort of 23 days/harvest was slightly lower than the 5-year average of 25 days/harvest. License quotas and seasons in 2014-2016, along with total harvest rates, have remained similar during these three years.

Population

Since 2012 a mid-winter trend count has been utilized to manage this herd unit instead of hand-derived population model estimates. This is an extremely “leaky” herd unit and as a result, a functional computer simulation model has never been developed. The mid-winter trend objective for this herd is 2,500 elk ($\pm 20\%$). The 2014-2016 3-year trend average is 2,886 elk, which is within this herd objective.

Disease

During late winter (March –April) in 2014 and 2015 calf loss has occurred on or near the Soda Lake feedground due to disease and wolf predation. Investigations concluded the presence of *Fusobacterium necrophorum* from many of the carcasses, the bacterium responsible for foot rot and necrotic stomatitis in elk. Foot rot is a term used for infection of the bacteria when it enters cuts and other openings around the hooves; necrotic stomatitis is the descriptive term for infection of the same bacteria in the mouth. This infectious disease is not uncommon to feedgrounds in west central Wyoming, with occasional outbreaks documented when certain winter and spring conditions increase the prevalence of the disease. Conditions with above average snowfall and above average temperatures create wet conditions causing the bacteria to thrive resulting in infections to elk. Freeze and thaw cycles during these winter conditions cause crusted snow and jagged ice, resulting in a higher than normal abrasions and opportunities for bacterial infections. The weakened condition of elk with this disease also makes animals more susceptible to predation as several wolf documented elk mortalities were recorded. Elk (mainly calves) losses on the Soda Lake feedground were estimated around a total of 160 elk during the 2014 -2015 feeding season. No elk losses from foot rot or necrotic stomatitis were documented during the 2015-2016 feeding season.

Management Summary

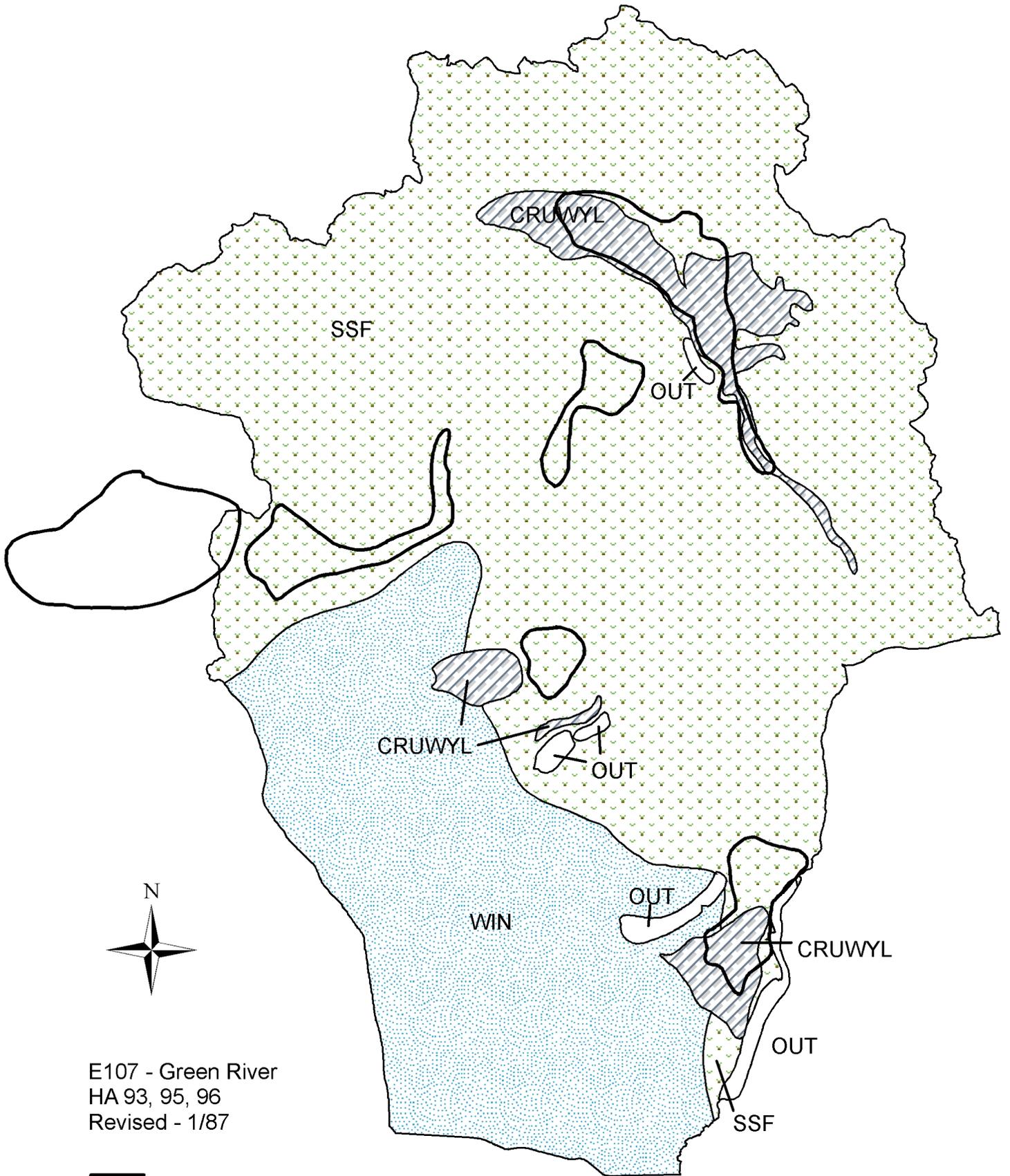
This is an extremely leaky herd unit, and as a result, a functional computer simulation model has not been developed. Overall, the data collected annually in this herd unit has indicated a slow population increase since 2003, but more stable in recent years. The current trend count of 3,079 is slightly above the management objective for this herd unit, although the 3-year trend average is within that objective. The 2009 - 2013 seasons were designed to increase antlerless harvest which has been somewhat successful at achieving that goal. Hunter participation has declined in portions of this herd unit, specifically the northern portions of Areas 93 and 95. Limited access onto or through private lands in portions of Areas 93 and 96 has also compromised harvest goals within this herd unit. Predation from wolves and bears as well as recent disease outbreaks (necrotic stomatitis) has likely helped slow population growth in recent years.

The 2017 seasons for the Upper Green River Herd Unit are designed to maintain past bull harvest and increase antlerless elk harvest in Area 93 and 96. The same October 1 – November 20 seasons with a slight increase in Type 6 limited quotas licenses (175 Type 1 and 275 Type 6) will be available in Area 93.

In Area 95, the season length (October 15 – November 5) and limited quota licenses (200 Type 1, 30 Type 2, 150 Type 4, 25 Type 5, and 75 Type 6) will remain the same in 2017.

The 2017 General season in Area 96 will remain same with an October 15 – 31 “any” elk season. Limited quotas licenses will remain the same for Type 1 (n=200), while Type 6 licenses will increase by 75 (n=275). The Area 96 season will be lengthened by 10 days running to the end of November (October 1 to November 30) for limited quota license holders to provide additional antlerless harvest opportunities. The Type 7 licenses (n=30) remain the same for 2017, only valid in that portion of Area 96 west of the elk fence and south of New Fork Lake Road from December 1 – January 31, to address damage and livestock co-mingling on private lands.

A projected harvest of 550 elk (200 bulls, 350 cows/calves) for 2017 should result in a post season trend count of approximately 2,900 elk.



E107 - Green River
 HA 93, 95, 96
 Revised - 1/87

 Parturition Area

2016 - JCR Evaluation Form

SPECIES: Elk
 HERD: EL108 - PINEDALE
 HUNT AREAS: 97-98

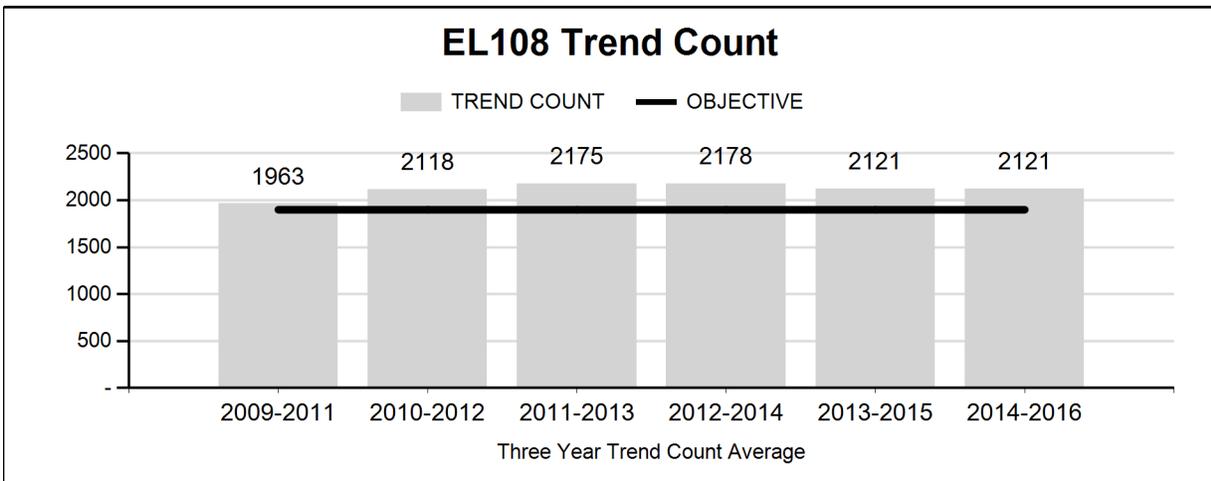
PERIOD: 6/1/2016 - 5/31/2017
 PREPARED BY: DEAN CLAUSE

	<u>2011 - 2015 Average</u>	<u>2016</u>	<u>2017 Proposed</u>
Trend Count:	2,151	2,133	2,000
Harvest:	508	638	700
Hunters:	1,473	1,660	1,750
Hunter Success:	34%	38%	40%
Active Licenses:	1,540	1,732	1,750
Active License Success	33%	37%	40%
Recreation Days:	10,491	11,303	11,300
Days Per Animal:	20.7	17.7	16.1
Males per 100 Females:	22	26	
Juveniles per 100 Females	29	29	

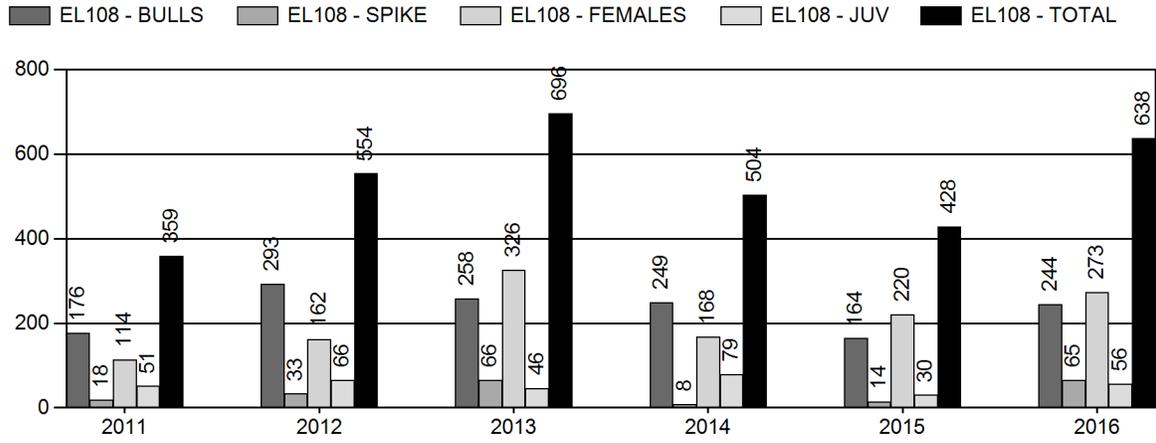
Trend Based Objective (± 20%) 1,900 (1520 - 2280)
 Management Strategy: Recreational
 Percent population is above (+) or (-) objective: 12%
 Number of years population has been + or - objective in recent trend: 0

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

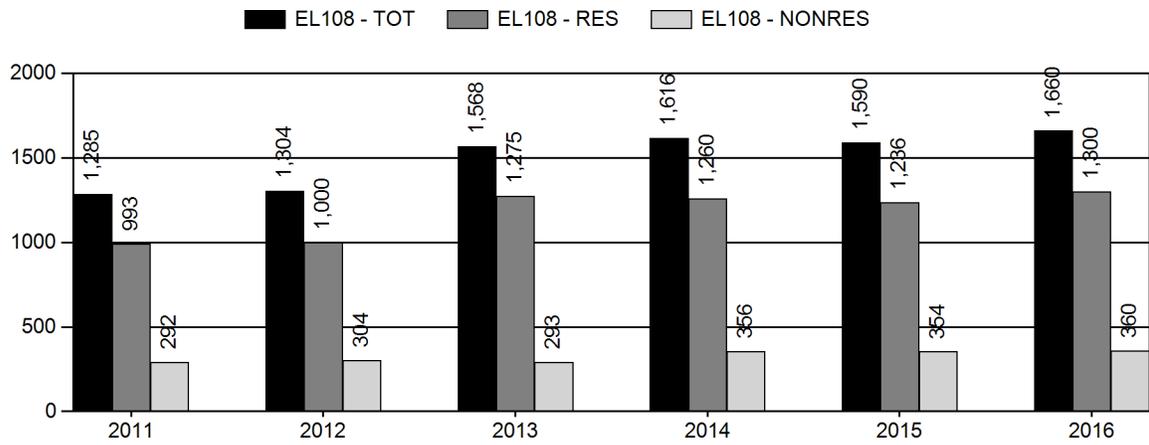
	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	0%	0%
Males ≥ 1 year old:	0%	0%
Juveniles (< 1 year old):	0%	0%



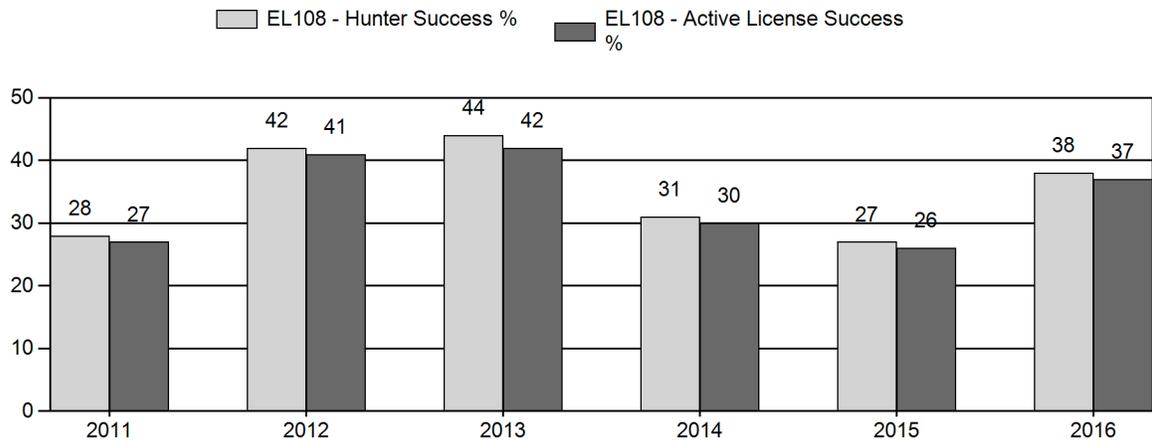
Harvest



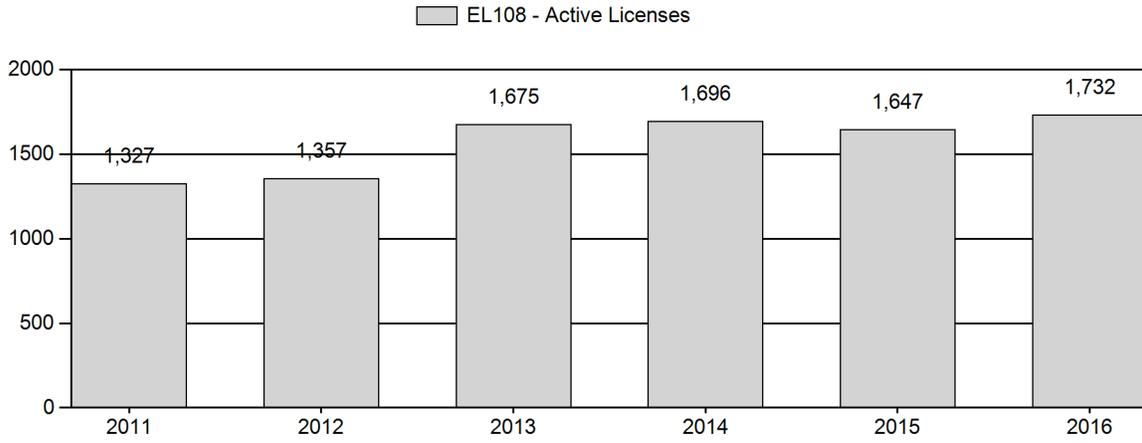
Number of Hunters



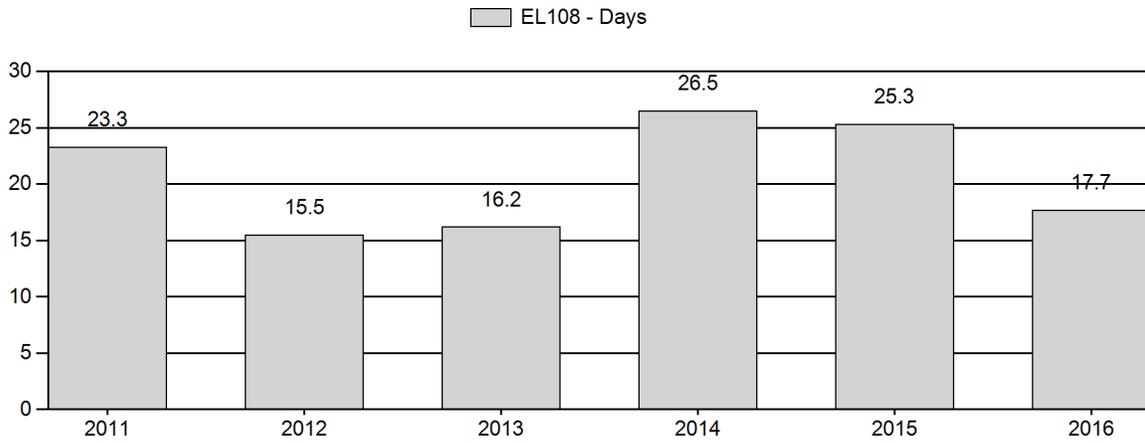
Harvest Success



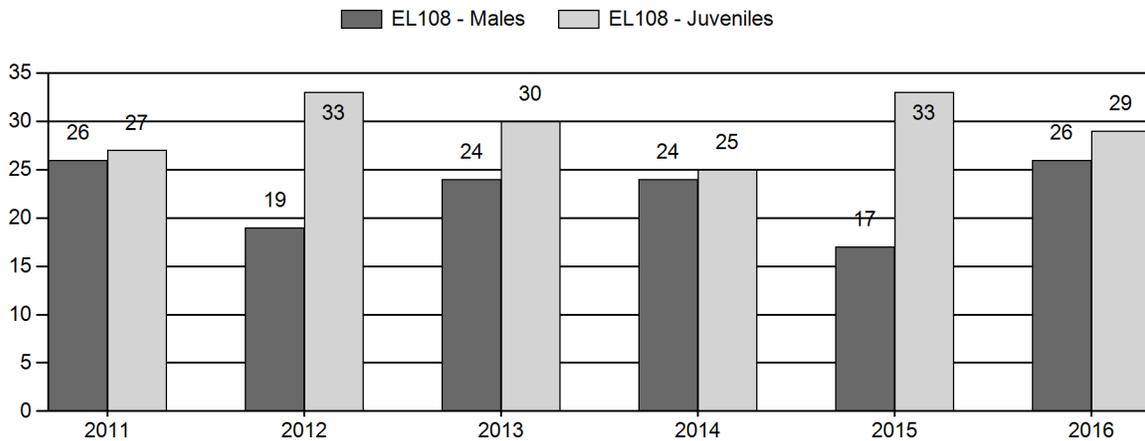
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2011 - 2016 Postseason Classification Summary

for Elk Herd EL108 - PINEDALE

Year	Post Pop	MALES				FEMALES		JUVENILES		Tot Cls	Cls Obj	Males to 100 Females				Young to		
		Ylg	Adult	Total	%	Total	%	Total	%			Yng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2011	2,168	144	219	363	17%	1,401	66%	374	17%	2,138	296	10	16	26	± 0	27	± 0	21
2012	0	120	149	269	13%	1,404	66%	457	21%	2,130	368	9	11	19	± 0	33	± 0	27
2013	0	158	174	332	16%	1,383	65%	418	20%	2,133	334	11	13	24	± 0	30	± 0	24
2014	0	133	207	340	16%	1,429	67%	356	17%	2,125	260	9	14	24	± 0	25	± 0	20
2015	0	77	165	242	12%	1,386	67%	453	22%	2,081	333	6	12	17	± 0	33	± 0	28
2016	0	159	199	358	17%	1,375	64%	400	19%	2,133	335	12	14	26	± 0	29	± 0	23

2017 Seasons – Pinedale Elk Herd Unit (EL108)

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
97		Oct. 1	Oct. 15		General	Any elk
97		Oct. 16	Nov. 12			Antlerless elk
97	1	Sep. 20	Oct. 31	225	Limited quota	Any elk
97	1	Nov. 1	Nov. 20			Antlerless elk
97	6	Sep. 20	Nov. 20	175	Limited quota	Cow or calf elk
98		Oct. 1	Oct. 15		General	Any elk
98		Oct. 16	Nov. 12			Antlerless elk
98	1	Sep. 20	Oct. 31	350	Limited quota	Any elk
98	1	Nov. 1	Nov. 20			Antlerless elk
98	1	Nov. 21	Jan. 31			Antlerless elk valid between Scab Creek and the East Fork River drainage, excluding Irish Canyon Creek and Muddy Creek Drainages
98	4	Sep. 20	Nov. 20	75	Limited quota	Antlerless elk
98	4	Nov. 21	Jan. 31			Antlerless elk valid between Scab Creek and the East Fork River drainage, excluding Irish Canyon Creek and Muddy Creek Drainages
98	6	Sep. 20	Nov. 20	300	Limited quota	Cow or calf elk
98	6	Nov. 21	Jan. 31			Antlerless elk valid between Scab Creek and the East Fork River drainage, excluding Irish Canyon Creek and Muddy Creek Drainages

Archery Seasons						
97,98		Sep. 1	Sep. 19			Refer to Section 2 of this Chapter

Summary of Changes in License Numbers

Area	Type	Changes from 2016
97	6	+50
Herd Unit Total	6	+50

Management Evaluation

Current Mid-Winter Trend Count Management Objective: 1,900

Management Strategy: Recreational

2016 Trend Count: 2,133

Most Recent 3-year Running Average Trend Count: 2121

The Pinedale Herd Unit encompasses approximately 2,474 square miles of which only 522 square miles are considered occupied elk habitat. Only a small portion of this herd unit is located in Sweetwater County, while the majority lies in Sublette County. Hunt Area 97 (Pinedale) and Area 98 (Boulder) make up the Pinedale Herd Unit. This herd unit is managed under a mid-winter trend objective of 1,900 ($\pm 20\%$) with the herd estimate derived from the 3-year trend count of elk on feedgrounds and native ranges combined. This herd is managed under “recreational” management.

Herd Unit Issues

Managers believe a very high proportion (>90%) of elk are typically counted in this herd unit and are located on feedgrounds during the winter. Well over half of the Forest Service lands are designated as Wilderness (Bridger Wilderness) where access is limited to foot or horseback travel. The remaining Forest Service lands outside wilderness have moderate vehicle and trail access. Hunting opportunities for self-guided non-resident sportsmen is limited because non-residents are required by law to have a licensed guide or outfitter while hunting in designated wilderness areas. Lack of public access on private lands in Area 98 along Scab and Silver Creeks provides a “refuge” for elk, limiting antlerless harvest and compromising the ability to achieve harvest goals.

Weather

Three elk feedgrounds (Fall Creek, Scab Creek, and Muddy Creek) are located within this herd unit to winter animals that otherwise would not be able survive the harsh winter conditions. Feedgrounds also reduce depredation to stored hay and reduce risk of disease transmission to livestock (primarily brucellosis).

Habitat

Roughly 32 square miles of crucial native winter range have been identified in this herd unit, wintering approximately 100-150 elk. Since over 90% of the elk rely on supplemental feeding (feedgrounds) within this herd unit, winter and other seasonal habitats do not limit population growth in this herd.

Field Data

The 2016 elk trend count of 2,133 was similar to trend counts during the past 3 years (2013-2015). The 2012 trend count was the highest documented in the past 10 years (Table 1). As with most years, greater than 90% of the trend count came from elk on feedgrounds. Above normal snow levels and lower than normal temperatures experienced during this 2016-17 winter should have resulted in very high elk attendance at feedgrounds and few elk on native ranges, which did occur in Area 97 but not in Area 98. Roughly 200+ elk stayed in the Cottonwood and Pocket Creek areas (Area 98) throughout December of 2016 and January 2017, where a late hunting season was in place to discourage elk and cattle co-mingling. It appeared as snow accumulation increased these elk were somewhat trapped and possibly accustomed to wintering in this area due to the two previous mild winters? Repeated ground efforts to move these elk to adjacent feedgrounds failed and eventually 100 elk were moved to the Muddy Creek feedground with the use of a helicopter.

Table 1. Herd Composition Counts in the Pinedale Elk Herd Unit, 2007-2016

Location	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fall Creek F.G	494	527	0	554	655	675	660	704	656	828
Scab Creek F.G	776	754	600	780	806	912	727	850	668	553
Muddy Creek F.G.	376	510	422	467	557	522	499	488	571	643
<u>N.W.R.</u>	<u>68</u>	<u>154</u>	<u>766</u>	<u>161</u>	<u>120</u>	<u>144</u>	<u>247</u>	<u>106</u>	<u>186</u>	<u>109</u>
Herd Unit Total	1714	1944	1788	1962	2138	2253	2133	2148	2081	2133

Herd composition counts in 2016 documented a bull:cow:calf ratio of 26:100:29. Compared to the previous 5-year average bull:cow:calf ratio of 22:100:29, the bull ratios increased (due to an improved yearling bull ratio) and calf ratios remained the same.

Harvest Data

With the termination of the 5-year Test and Removal Pilot Project after the 2009-10 winter, seasons were modified in 2010 to increase female harvest opportunities. Type 4 and Type 6 licenses were added, and general license hunters were allowed to harvest “any” elk instead of “antlered” elk. Since 2010, seasons have been designed to incrementally increase antlerless harvest, and starting in 2013 bull harvest opportunities have been shortened. The 2016 harvest survey reported approximately 640 total elk taken (310 bulls and 330 cows/calves), an increase from approximately 425 elk taken in 2015 and 500 elk in 2014. Good hunting conditions and favorable weather attributed to the improved harvest of both cows and bulls during 2016. During the 2016 hunting season hunter success was improved at 37% and it took an average of 18 days

to kill an elk, a decrease of 3 days from the past 5-year average. Difficult hunting conditions were experienced in 2014 and 2015, due to warm and mild weather. Early October snow during the 2013 season resulted in much better harvest as days/harvest was 16 and the hunter success rate was 42%.

Population

Starting in 2012, a mid-winter trend count has been utilized to manage this herd unit instead a hand-derived population model estimates. This is a somewhat “leaky” herd unit and as a result, a functional computer simulation model has not been developed, which may also be attributed to high bull harvest annually reported in this herd unit. The mid-winter trend objective for this herd is 1,900 elk ($\pm 20\%$). The 2014-2016 3-year trend average is 2,121 elk, which is within the herd objective.

Management Summary

Trend counts in this herd unit indicate elk declined from 2004-2007, recovered during 2008, stabilized in 2009 and 2010, increased in 2011 and 2012, and then stabilized in 2013 and 2014. The 2015 trend counts indicate a declining elk population, but conditions were especially mild during the 2015-16 winter. In 2016 the trend count increased slightly, but comparable to the past several years. Recent counts indicate bull:cow:calf ratios are adequate, although the bull ratio of can vary significantly based on annual harvest rates due to very liberal bull seasons within this herd unit. The bull harvest annually reported for this herd unit is questionable as managers are confident that >90% elk are counted (classified) and reported bull harvest rates range from 50% to 60% on most years. Documented elk numbers in 2016 are currently within the management objectives. Female harvest rates are very dependent on weather and forage to move elk to lower elevations by late October.

The harvest objectives for the 2017 seasons are the similar to 2016, except a modest increase antlerless elk licenses in Area 97. Limited quota Type 1 licenses in Area 97 will remain at 225 from Sept. 20 – Nov. 20, valid for antlerless elk from Nov 1. – Nov. 20. Type 6 licenses will increase to 175 (+50), valid from Sept. 20 – Nov. 20 for antlerless elk.

In Area 98, the quota for Type 1 licenses will remain at 350 with a Sept. 20 – Nov. 20 season, valid for antlerless elk from Nov 1. – Nov. 20. Limited quota Type 4 licenses will remain at 75 and Type 6 licenses will remain at 300 with a Sept. 20 – Nov. 20 season. Similar to past years, antlerless harvest opportunities will be provided for unused limited quota licenses (Type 1, 4, and 6) from Nov. 21 – Jan 31 between Scab Creek and the East Fork drainage to address damage and cattle co-mingling issues.

General license seasons in both Area 97 and 98 will have a closing date similar to 2016 and align with other general license seasons closure dates within the region. The general license season in both Areas will be Oct.1 – Oct. 15 valid for “any” elk as in past years and Oct. 16 – Nov. 12 for “antlerless” elk.

A predicted harvest of approximately 300 bulls, 350 cow/calves (650 total elk) during 2017 is anticipated with average fall weather. This season should result in a postseason 2017 trend count estimate of approximately 2,000 elk.



E108 - Pinedale
HA 97, 98
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 Parturition Area

