

2015 - JCR Evaluation Form

SPECIES: Elk

PERIOD: 6/1/2015 - 5/31/2016

HERD: EL211 - MEDICINE LODGE

HUNT AREAS: 41, 45

PREPARED BY: LESLIE SCHREIBER

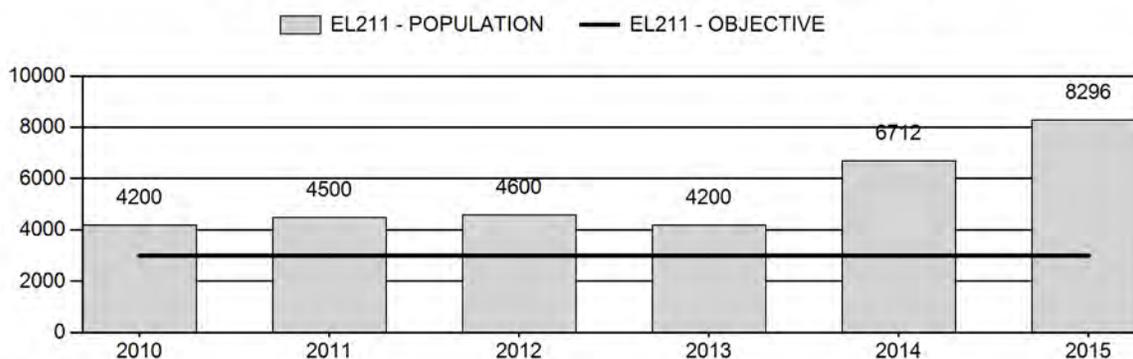
	<u>2010 - 2014 Average</u>	<u>2015</u>	<u>2016 Proposed</u>
Population:	4,842	8,296	8,735
Harvest:	682	697	880
Hunters:	1,707	1,859	2,000
Hunter Success:	40%	37%	44%
Active Licenses:	1,736	1,935	2,000
Active License Success:	39%	36%	44 %
Recreation Days:	13,104	15,538	15,000
Days Per Animal:	19.2	22.3	17.0
Males per 100 Females	25	34	
Juveniles per 100 Females	45	62	

Population Objective (± 20%) :	3000 (2400 - 3600)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	177%
Number of years population has been + or - objective in recent trend:	24
Model Date:	5/10/2016

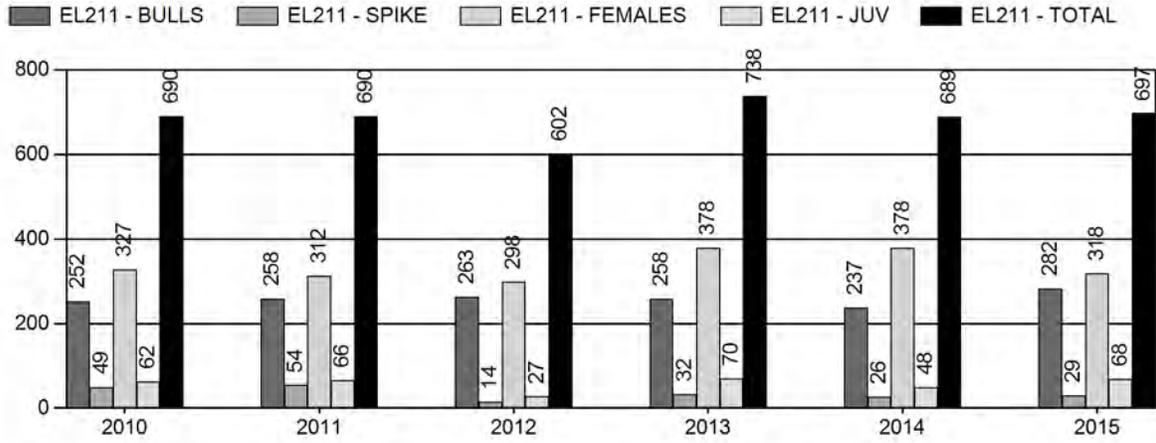
Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	16%	8%
Males ≥ 1 year old:	30%	11%
Juveniles (< 1 year old):	3%	2%
Total:	16%	7%
Proposed change in post-season population:	-3%	+7%

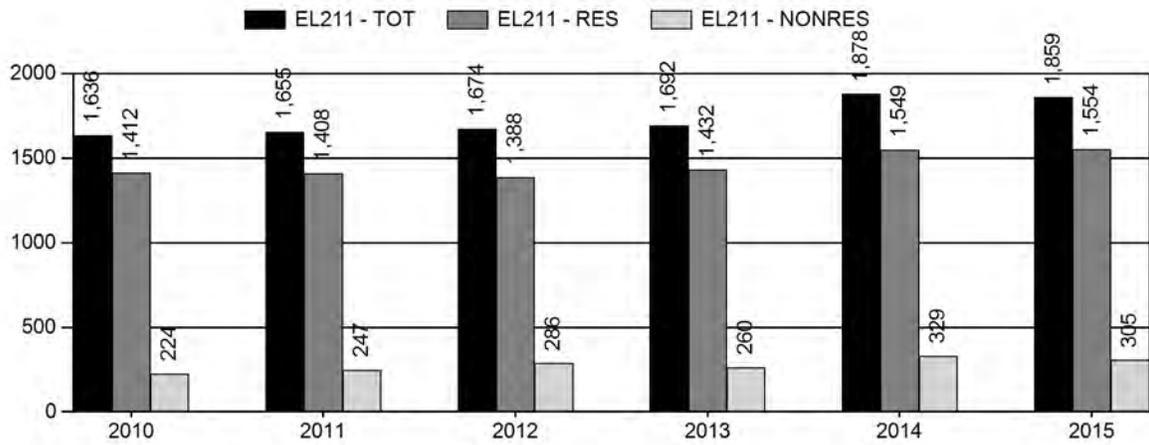
Population Size - Postseason



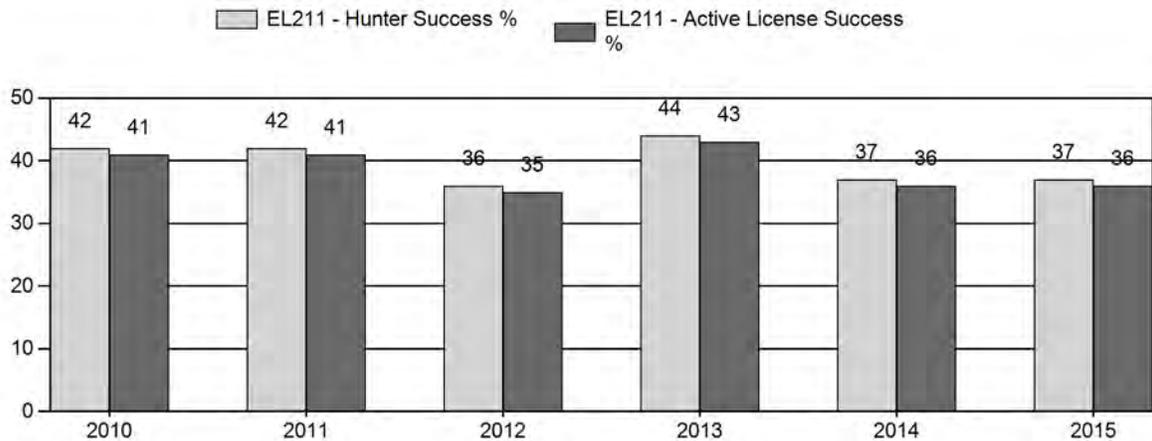
Harvest



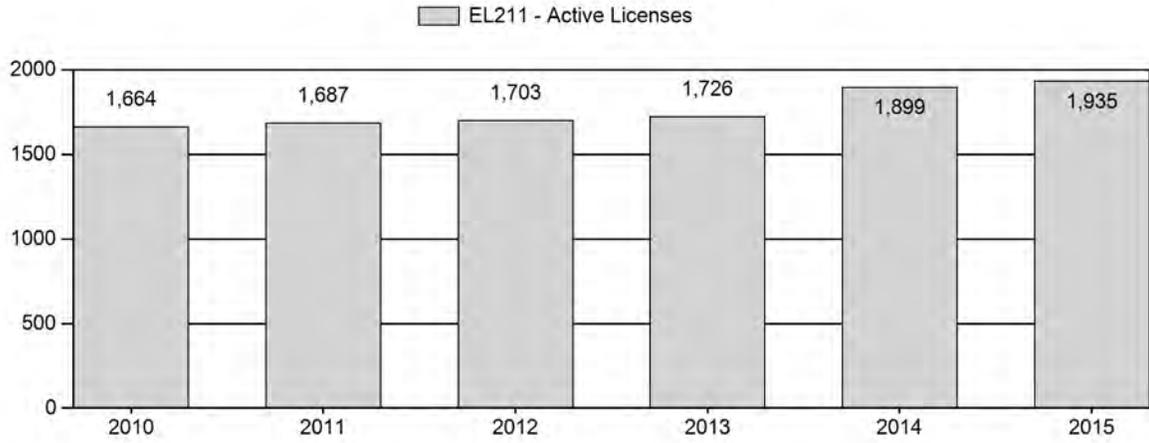
Number of Hunters



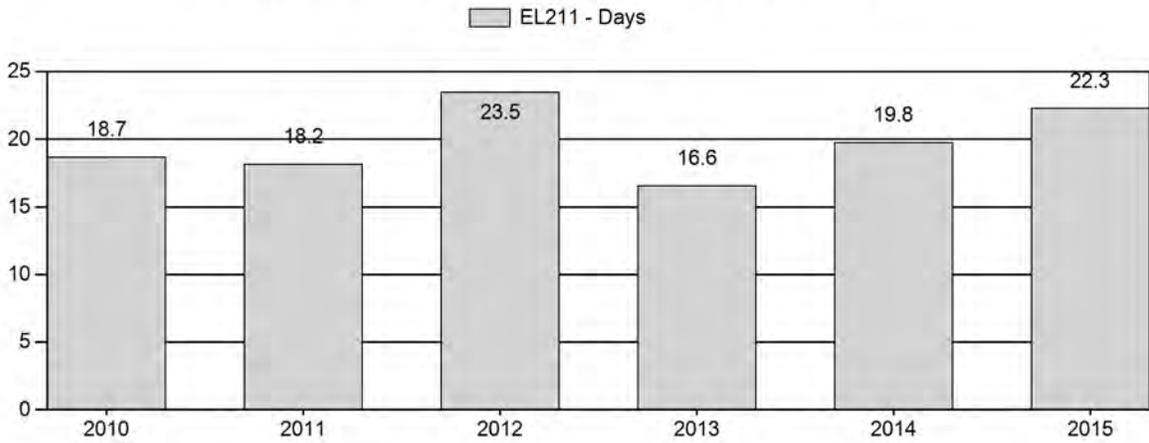
Harvest Success



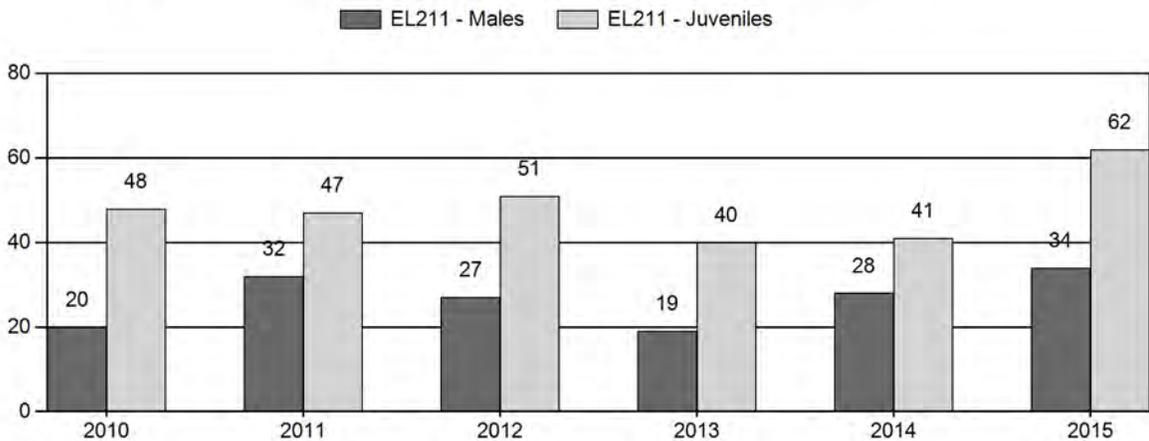
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2010 - 2015 Postseason Classification Summary

for Elk Herd EL211 - MEDICINE LODGE

Year	Post Pop	MALES				FEMALES		JUVENILES				Males to 100 Females				Young to		
		Ylg	Adult	Total	%	Total	%	Total	%	Tot	Cls	YIng	Adult	Total	Conf	100 Fem	Conf Int	100 Adult
										Cls	Obj							
2010	4,200	155	134	289	12%	1,430	60%	684	28%	2,403	506	11	9	20	± 1	48	± 2	40
2011	4,500	245	215	460	18%	1,453	56%	686	26%	2,599	582	17	15	32	± 1	47	± 2	36
2012	4,600	164	177	341	15%	1,251	56%	634	28%	2,226	753	13	14	27	± 2	51	± 2	40
2013	4,200	127	186	313	12%	1,622	63%	641	25%	2,576	614	8	11	19	± 1	40	± 1	33
2014	3,219	200	242	442	17%	1,570	59%	636	24%	2,648	513	13	15	28	± 1	41	± 1	32
2015	4,933	240	364	604	17%	1,771	51%	1,102	32%	3,477	556	14	21	34	± 1	62	± 2	46

**2016 HUNTING SEASONS
MEDICINE LODGE ELK HERD (EL211)**

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
41	1	Oct. 15	Nov. 4	375	Limited quota	Any elk
41	1	Nov. 19	Nov. 27			Antlerless elk
41	1	Dec. 10	Dec. 18			Antlerless elk
41	4	Oct. 1	Nov. 4	400	Limited quota	Antlerless elk
41	4	Nov. 19	Nov. 27			Antlerless elk
41	4	Dec. 10	Dec. 18			Antlerless elk
41	6	Sep. 15	Nov. 4	250	Limited quota	Cow or calf valid off national forest
41	6	Nov. 19	Nov. 27			Cow or calf valid in the entire area
41	6	Dec. 10	Dec. 18			Cow or calf valid in the entire area
41	9	Sep. 1	Sep. 30	125	Limited quota	Any elk, archery only
45	1	Oct. 15	Nov. 4	350	Limited quota	Any elk
45	4	Oct. 15	Nov. 15	225	Limited quota	Antlerless elk
45	5	Oct. 10	Nov. 4	125	Limited quota	Antlerless elk
45	6	Aug. 15	Nov. 30	200	Limited quota	Cow or calf valid off national forest
45	7	Dec. 1	Jan. 15	50	Limited quota	Cow or calf valid on or within one (1) mile of irrigated land
45	9	Sep. 1	Sep. 30	150	Limited quota	Any elk, archery only

Special Archery Season Hunt Areas	Type	Season Dates		Limitations
		Opens	Closes	
41,45	1, 4, 5	Sep. 15	Sep. 30	Valid in the entire area(s)

Hunt Area	License Type	Quota change from 2015
45	4	+25
45	6	+25
45	7	+50
Herd Unit	4	+25
Total	6	+25
	7	+50

Management Evaluation

Current Postseason Population Management Objective: 3,000

Management Strategy: Recreational

2015 Postseason Population Estimate: ~8,300

2016 Proposed Postseason Population Estimate: ~8,700

2015 Hunter Satisfaction: 59% Satisfied, 17% Neutral, 24% Dissatisfied

Herd Unit Issues

Following a marking study in the early 1980s, this herd unit was formed by combining two pre-existing herds, Trapper-Medicine Lodge and Paintrock-Ten Sleep, due to interchange of elk. Due to the interchange of elk discovered in the 1980s marking study, the Trapper-Medicine Lodge and Paintrock-Ten Sleep were combined to form one herd unit. The herd unit continues to be managed with hunting licenses valid for either the northern Hunt Area 41 or the southern Hunt Area 45. The current population objective of 3,000 elk was first adopted in 1983. Formal internal reviews of the population objective and management goals were conducted in 1997, 2001 and 2007. A public herd unit objective review is scheduled for 2016.

Human activities in this herd unit are rarely severe enough to affect elk survival and productivity. Bentonite mining and oil/gas development occur on the west side of the herd unit where habitats are not suitable for elk. Farming occurs near elk habitats and elk often forage on irrigated crops or pastures. Antlerless elk hunting seasons are often driven by landowner complaints. Conversely, some landowners lease hunting to outfitters and allow no public access to hunt cow elk. During the past 10 years, lack of access to large groups of elk on private land has allowed this population to increase. No brucellosis seropositive hunter-harvested elk were detected during the 2015 hunting season. However, 2 seropositive cows were detected in the North Bighorns elk herd (EL321) during a collaring study in February 2016. Education for hunters and field personnel collecting brucellosis blood samples has resulted in more testable samples each year. Between 2011-15, the vet lab tested 77, 68, 141, 156, and 119 samples, respectively, from the Medicine Lodge herd. Management of the Medicine Lodge elk herd is focused on increasing harvest to bring the herd down to objective.

Weather

Climatic factors affect this elk herd more than human-caused factors. Survival and productivity were affected by drought and severe winters, as evident in past low calf:cow ratios. A winter severe enough to affect elk herds in the Bighorn Basin has not occurred since the early 1980s. The winter of 2015 was relatively mild creating unfavorable late-season cow hunting conditions.

Habitat

The herd unit contains approximately 1,500 mi². High-elevation summer ranges are mainly sagebrush-grassland and alpine meadows interspersed with aspen, lodgepole pine, and spruce/fir timber stands. The majority of the summer range is public land managed by the U.S. Forest Service. Steep foothills and drainages that serve as winter and spring ranges are covered with juniper, sagebrush, and grasslands. Winter ranges are mainly public land managed by the Bureau of Land Management, interspersed with private land. The 2 sagebrush transects established in this herd unit, Alkali and Renner, were located outside of areas used extensively by elk in order to monitor mule deer browsing.

Field Data

During the driest years of the most recent extended drought (2001-04), the calf ratio averaged 34 calves:100 cows. In years with “normal” precipitation (2009-14), the calf ratio average 45 calves:100 cows. The calf ratio was 62 calves:100 cows in 2015, the highest observed in the past 25 years. High calf ratios suggest this population can quickly increase if harvest does not keep up with production.

Annual bull ratios can vary depending on if bull groups were located during classification surveys. For example, 19 bulls:100 cows were observed in 2013, then jumped to 28 bulls: 100

cows in 2014, and has again increased to 34 bulls:100 cows in 2015. Annual bull ratios should not be used to annually adjust hunting licenses; rather short-term 3-5 year averages probably give a better indication to trends in the abundance of bulls. Sample sizes for classification surveys were calculated based on calf ratios, not bull ratios. Survey flight time has remained consistent (~4 helicopter hours) so that bull groups could be located.

Management of hunting seasons allowed bull ratios to increase over the past 30 years. The Medicine Lodge elk herd changed from general license hunting to limited quota in 1979 for the northern Hunt Area and 1983 for southern Hunt Area. From 1975 to 1984, an average of 9 bulls:100 cows was observed mostly consisting of yearling bulls. Bull ratios began to increase under limited quota hunting, averaging 13 bulls:100 cows from 1985-1997. Bull ratios are still on the rise averaging 22 bulls:100 cows from 1998-2015, with similar numbers of branch-antlered and yearling bulls.

Harvest Data

By the late 1980s, limited quota hunting was manifesting in increased hunter success and decreased days per harvested animal. Since the change from “antlered elk” to “any elk” Type 1 licenses, those statistics have shown less variability, with hunter success ranging from 35-45% and days per harvest ranging from 15-23 days. The number of antlerless/cow licenses issued can mask harvest rates of bulls when overall herd unit results are analyzed for success and effort. The number of antlerless/cow licenses being issued in the herd unit has increased over the past 15 years due to increasing elk abundance.

More recently, the number of total licenses offered and number of hunters have increased. The number of elk harvested and hunter effort (days/harvested elk) are dependent upon weather and access to elk herds. During the 2015 season, about 1,800 hunters, of which 37% were successful, spent an average of 22 days harvesting 700 elk. These statistics are slightly above the 5-year-average.

Population

This population was monitored using trend surveys until 2008. Classification survey totals were often higher than trend totals, so trend surveys were discontinued. Classification and trend survey totals suggest an increasing population since the early 1990s, except for a decline during extended drought (2000-04). Since 2004, the classification survey totals have been steadily rising. Field personnel agree with those trends.

The spreadsheet model fits to 23 years of data. The time specific juvenile, constant adult, male survival coefficient (TSJ, CA, MSC) model had the lowest AIC score of 269 (CJ/CA=771). However, the TSJ, CA, MSC model is appropriate for herd units that have high natural predation creating differing adult male and adult female survival, which is not the case for this herd unit. The TSJ/CA/MS model estimated this herd 8,300 elk in 2015, indicating this herd has doubled since 2004, which does not match the perception of field personnel. Field personnel believe the herd is increasing, but has not doubled. This model ranks as *poor* and would benefit from sample-based population estimates with standard errors. During the 2016 public review process, a mid-winter trend count objective will be proposed, eliminating the model-based population objective.

Management Summary

Large areas of private land that allow limited to no elk hunting make management of this herd challenging. Elevated antlerless/cow license numbers and extended seasons should enable hunters to harvest cow elk in Hunt Area 45. In Hunt Area 41, seasons open and close to allow elk to come off private land refuges before opening again. Most nonresidents hunt a narrow band of National Forest between wilderness and private land. Hunters have complained about overcrowding on October 15th; therefore, our seasons are designed to spread hunters out over time, since they are spatially limited. By creating an “antlerless” extension for the Type 1 license, those license holders will have the opportunity to return later and harvest a cow when snow pushes the elk to more accessible areas.

2015 - JCR Evaluation Form

SPECIES: Elk

PERIOD: 6/1/2015 - 5/31/2016

HERD: EL214 - GOOSEBERRY

HUNT AREAS: 62-64

PREPARED BY: BART KROGER

	<u>2010 - 2014 Average</u>	<u>2015</u>	<u>2016 Proposed</u>
Trend Count:	2,722	2,590	2,500
Harvest:	775	781	700
Hunters:	1,335	1,532	1,400
Hunter Success:	58%	51%	50 %
Active Licenses:	1,384	1,560	1,450
Active License Success	56%	50%	48 %
Recreation Days:	8,398	10,152	9,000
Days Per Animal:	10.8	13.0	12.9
Males per 100 Females:	20	16	
Juveniles per 100 Females	28	22	

Trend Based Objective (± 20%) 2,000 (1600 - 2400)

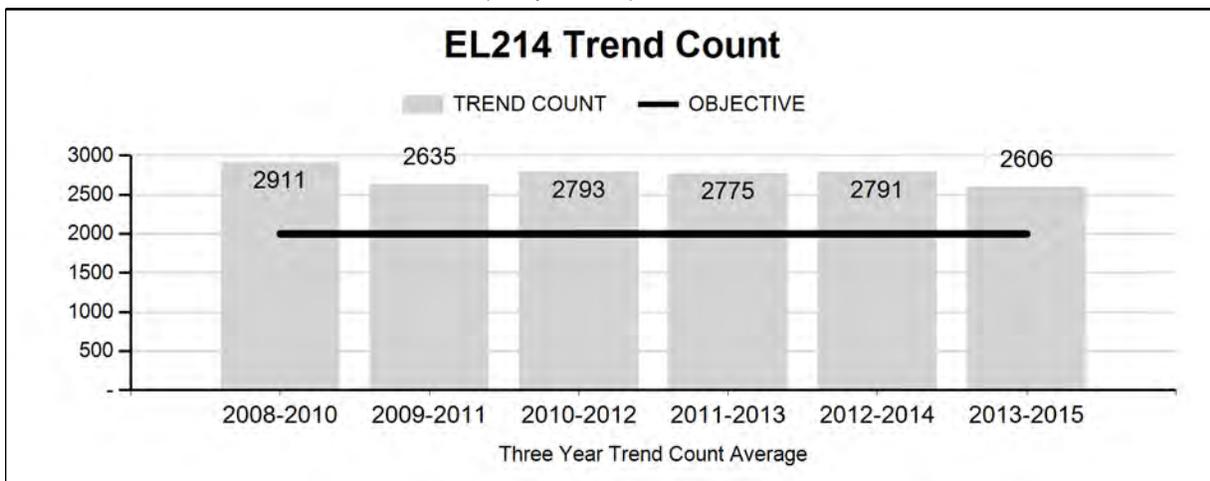
Management Strategy: Special

Percent population is above (+) or (-) objective: 30%

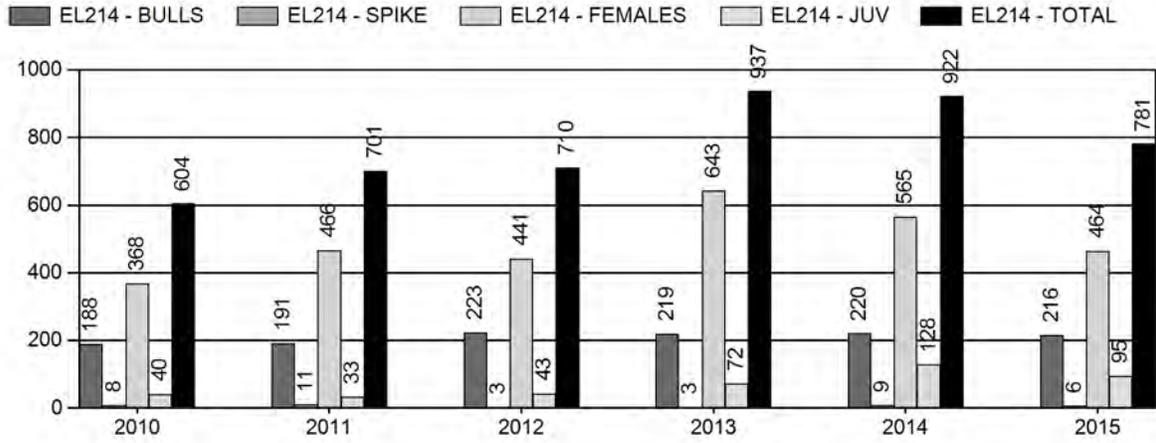
Number of years population has been + or - objective in recent trend: 11

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

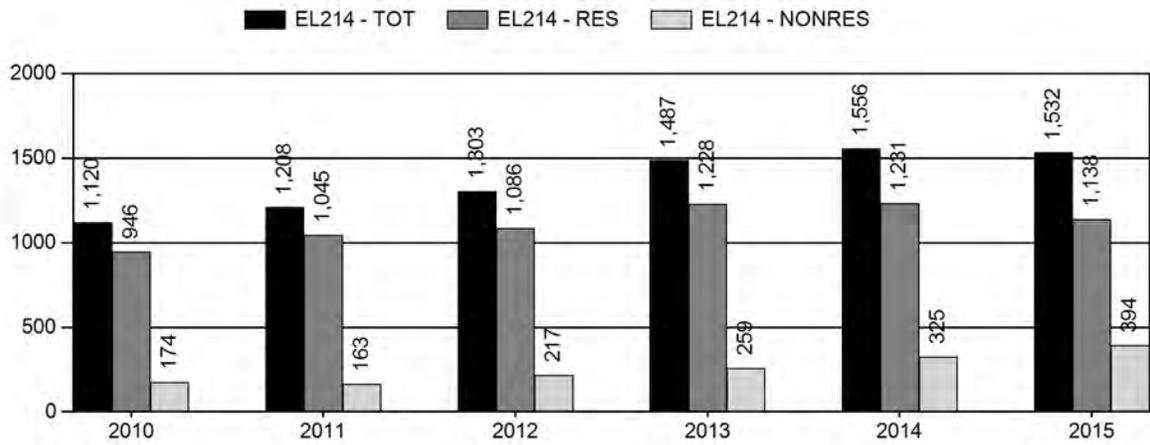
	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	na%	na%
Males ≥ 1 year old:	na%	na%
Juveniles (< 1 year old):	na%	na%



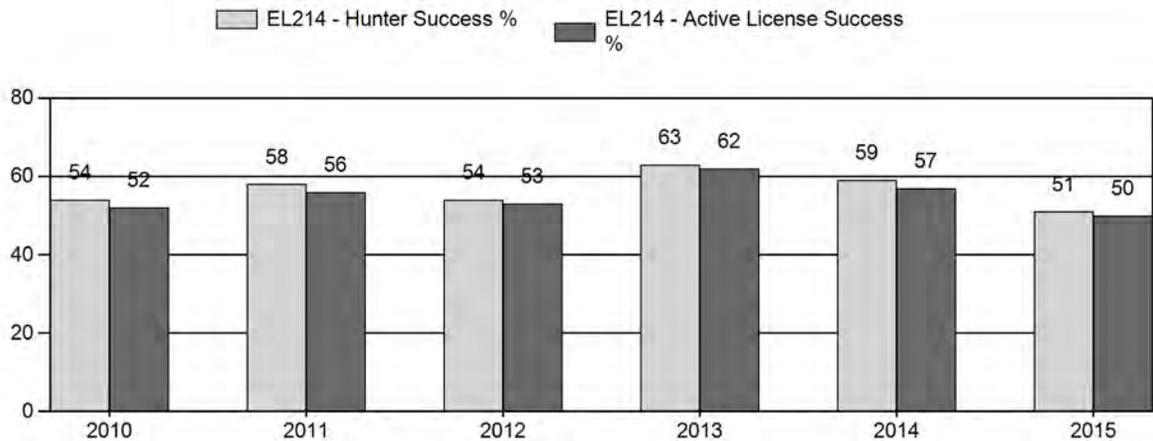
Harvest



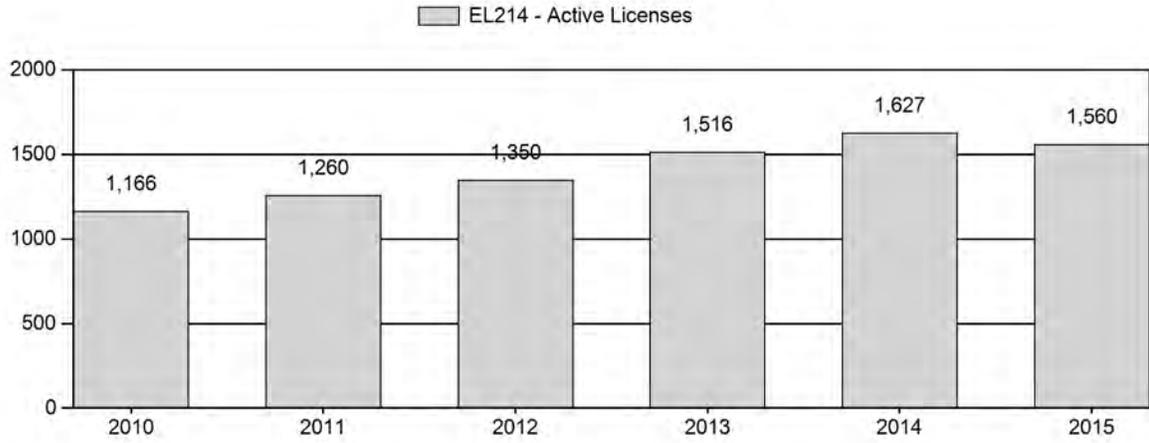
Number of Hunters



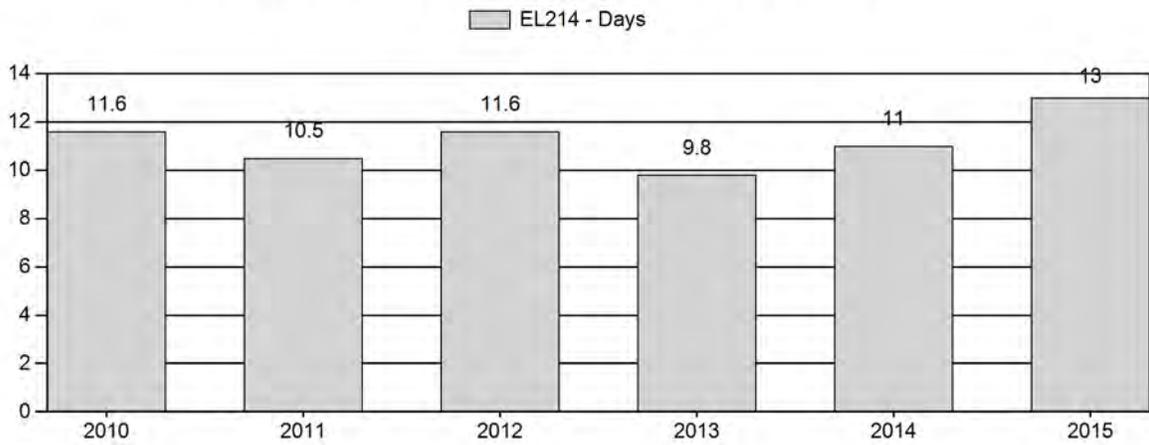
Harvest Success



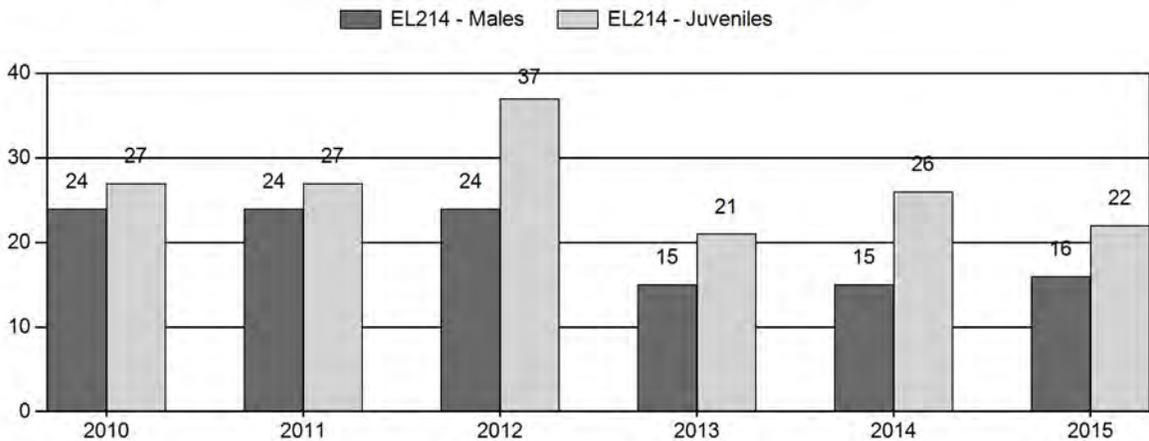
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2010 - 2015 Postseason Classification Summary

for Elk Herd EL214 - GOOSEBERRY

Year	Post Pop	MALES				FEMALES		JUVENILES		Tot Cls	Cls Obj	Males to 100 Females				Young to		
		Ylg	Adult	Total	%	Total	%	Total	%			Ylng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2010	3,900	184	160	344	16%	1,461	67%	388	18%	2,193	315	13	11	24	± 1	27	± 1	21
2011	3,400	187	196	383	16%	1,611	66%	440	18%	2,434	309	12	12	24	± 1	27	± 1	22
2012	0	221	255	476	15%	1,944	62%	724	23%	3,144	468	11	13	24	± 0	37	± 0	30
2013	0	177	127	304	11%	2,022	74%	422	15%	2,748	0	9	6	15	± 0	21	± 0	18
2014	0	138	124	262	11%	1,758	71%	461	19%	2,481	0	8	7	15	± 0	26	± 0	23
2015	0	133	106	239	11%	1,521	73%	330	16%	2,090	0	9	7	16	± 0	22	± 0	19

**2016 HUNTING SEASONS
GOOSEBERRY ELK HERD (EL214)**

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
62	1	Oct. 1	Oct. 21	125	Limited quota	Any elk
62	4	Oct. 1	Oct. 21	75	Limited quota	Antlerless elk
62, 63	5	Oct. 22	Nov. 15	200	Limited quota	Antlerless elk
62, 63	5	Nov. 26	Dec. 21			Antlerless elk
63, 64	1	Oct. 1	Oct. 21	200	Limited quota	Any elk
63, 64	1	Nov. 1	Dec. 21			Antlerless elk
63	4	Oct. 1	Dec. 21	200	Limited quota	Antlerless elk
63	6	Aug. 15	Oct. 31	200	Limited quota	Cow or calf valid off national forest north of Gooseberry Creek
63	6	Nov. 1	Dec. 21			Cow or calf valid off national forest
64	2	Nov. 1	Nov. 15	100	Limited quota	Any elk
64	2	Nov. 16	Dec. 21			Antlerless elk
64	6	Sep. 1	Nov. 14	300	Limited quota	Cow or calf valid within the Cottonwood Creek drainage off national forest; also valid within the Grass Creek Drainage downstream of the Grass Creek/Little Grass Creek confluence
64	6	Nov. 15	Dec. 21			Cow or calf valid in the entire area
64	7	Oct. 15	Dec. 21	300	Limited quota	Cow or calf valid south of and including the Cottonwood Creek drainage

Special Archery Season Hunt Areas	Type	Season Dates		Limitations
		Opens	Closes	
62, 63, 64	All	Sep. 1	Sep. 30	Valid in the entire area(s)

Hunt Area	Type	Quota change from 2015
63	6	-200
64	6	-200
64	7	+200
Total	6 & 7	-200

Management Evaluation

Current Mid-Winter Trend Count Objective: 2,000

Management Strategy: Special

2015 Mid-Winter Count: 2,600

Most Recent 3-year Running Average Trend Count: 2,600

2015 Hunter Satisfaction: 65% satisfied, 20% neutral, 15% dissatisfied

Herd Unit Issues

Hunter access to private lands, potential damage issues, brucellosis and large predator influences will continue to be major issues in managing this elk herd. The herd objective and management strategy were last revised in 2012. Efforts to develop and implement management ideas that result in more harvest and improved hunter success have and will continue to be major concerns with this elk herd. Currently, this herd unit supports three Hunter Management Areas (Pitchfork, Absaroka Front & Owl Creek HMA's), and one large Walk-in-Area. Hunting season structures, particularly antlerless and cow/calf seasons have become very liberal over the past 10 years. License quotas and season lengths have increased dramatically, with most antlerless and cow/calf hunting seasons being 3-4 months long. Because this herd is being managed under special management, Type 1 & 2 seasons are managed conservatively to maintain good bull quality and hunter satisfaction.

Weather

Winter conditions the past 3 years have been mild, with mostly low snowpack and normal temperatures, resulting in good over winter survival. However, the dry summer conditions in 2012 and 2013 appeared to influence elk distribution due to decreased forage production. Because of this, some damage issues on private land were reported. Overall, forage production increased significantly in 2014 and 2015 as a result of increased moisture throughout the year. Fall and winter precipitation in 2014 was well above normal, while 2015 is well below normal throughout this herd unit.

Habitat

Numerous prescribed and wild fires have burned throughout this herd unit over the past 2 decades, particularly in areas 62 and 63. These fires have certainly improved forage quality and quantity for the herd. The Department initiated a 5-year rapid habitat assessment within the Grass Creek drainage of hunt area 64 that will primarily focus on the condition of aspen communities and sagebrush and riparian communities being encroached by conifers. Several aspen stands were assessed during summer 2015 and a 120-acre treatment to remove conifers from aspen will be initiated in 2016. Two permanent shrub transects occur in this herd unit. Utilization continues to be very low on sagebrush in this herd unit, indicating that forage quantity on winter range is not a limiting factor. These data can be found in Appendix B in the Cody Region JCRs.

Field Data

Based on the 3-year average trend count, this elk herd has stayed fairly stable at around 2600 elk. The 2014 and 2015 annual counts have been 2 of the lowest in the last 10 years. If this trend continues, we will be reaching our winter count goal of 2000 ($\pm 20\%$) by 2017 or 2018. Calf ratios have fluctuated in recent years, but on average have remained at about 27:100 cows. Hunt area count goals and trends are also monitored in order to make hunting season adjustments as

needed. Winter count goals for areas 62, 63 and 64 are 600, 600 and 800 elk, respectively. Since 2012, the 3-year average winter counts have been 700 for area 62, 500 for area 63 and 1400 for area 64 (Table 1).

Table 1. Gooseberry Elk Herd Unit and Hunt Area Mid-winter trend counts, 2006-2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	3yr. Avg.	Count Goal
HA 62	710	617	808	641	1203	1063	788	609	565	961	712	600 elk
HA 63	1171	670	556	991	535	961	698	604	463	354	474	600 elk
HA 64	636	1385	1897	1039	1063	410	1658	1535	1453	1275	1421	800 elk
Herd Unit	2517	2672	3261	2671	2801	2434	3144	2748	2481	2590	2606	2000 elk

Harvest Data

Overall, total harvest of elk in this herd unit has increased by 100% since 2009, with 2013, 2014 and 2015 having the highest harvest on record. Hunter success improved in 2013 and 2014, but declined in 2015, likely because of warm dry hunting conditions. Hunter numbers have increased by 50% since 2009. Hunter effort (10-12 days/harvest) has remained mostly stable despite increased hunter numbers. These improving harvest trends along with winter counts also reflect field personnel and landowner perceptions of slightly declining elk densities.

Population

Recent trends for this elk herd appear to be declining given harvest has increased by nearly 100% in recent years. Since 2008, this elk herd has stayed fairly stable at around 2700 elk counted. However, the 2014 and 2015 annual counts were two of the lowest in the last 10 years, thus contributing to the 2015 3-year average count of 2600 elk, which is the lowest since 2008. If this trend continues, we will be reaching our winter count goal of 2000 ($\pm 20\%$) by 2017 or 2018.

Management Summary

Currently for the herd unit, hunter densities, season lengths and landowner tolerance has been maximized. Bull harvest and quality, along with hunter satisfaction remains favorable so there is no need to change any Type 1 or Type 2 seasons or quotas. Season lengths will continue to run until late December in all hunt areas for antlerless elk. Area 62 will experience a closed period of 11 days in late November, similar to area 61. This should allow elk to settle back into the Pitchfork HMA and at lower elevations on National Forest. Since area 63 is below its winter count goal of 600 elk, the Type 6 licenses will be reduced by 200. A slight adjustment to the Type 6 and 7 licenses in area 64 will be made to help distribute hunters, and reduce hunting pressure on the Absaroka Front HMA. With a 2016 projected harvest of about 800 elk, we expect further declines in this population to occur, which should help push this elk herd further toward objective.

2010 - 2015 Trend Count Summary
for Elk Herd EL214 - GOOSEBERRY

Year	Count Dates	Flight Time		Number Counted
		Hours	Minutes	
2010	FEBRUARY 2011	4	35	2,801
2011	JANUARY 2012	4	0	2,434
2012	JANUARY 2013	4	50	3,144
2013	JANUARY 2014	6	40	2,748
2014	JANUARY 2015	5	50	2,481
2015	JANUARY 2016	4	25	2,590

2015 - JCR Evaluation Form

SPECIES: Elk

PERIOD: 6/1/2015 - 5/31/2016

HERD: EL216 - CODY

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

PREPARED BY: DOUG MCWHIRTER

	<u>2010 - 2014 Average</u>	<u>2015</u>	<u>2016 Proposed</u>
Trend Count:	5,622	4,205	4,500
Harvest:	1,540	1,283	1,300
Hunters:	2,911	3,097	2,900
Hunter Success:	53%	41%	45 %
Active Licenses:	3,064	3,235	3,000
Active License Success	50%	40%	43 %
Recreation Days:	18,750	19,986	19,000
Days Per Animal:	12.2	15.6	14.6
Males per 100 Females:	27	31	
Juveniles per 100 Females	29	27	

Trend Based Objective (± 20%) 4,400 (3520 - 5280)

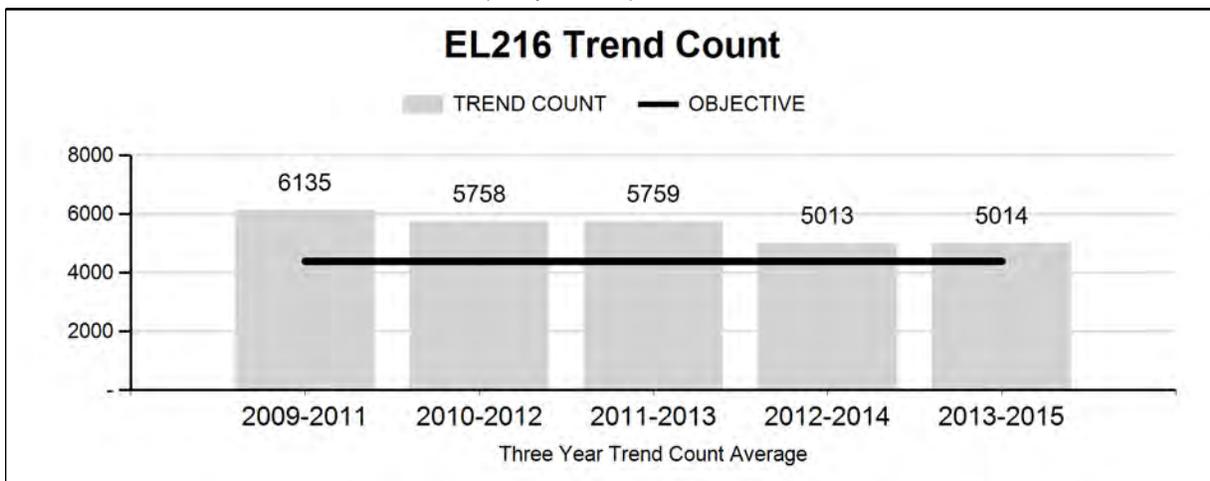
Management Strategy: Special

Percent population is above (+) or (-) objective: -4.4%

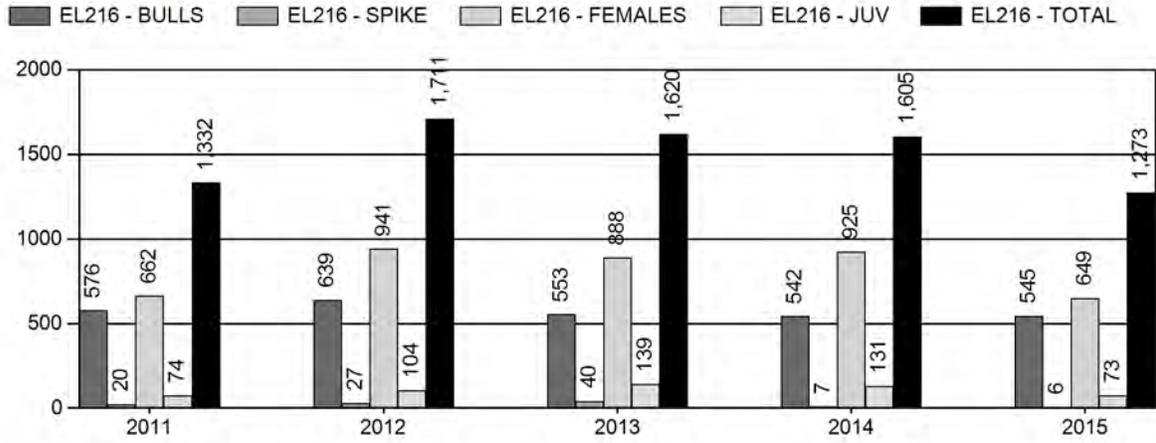
Number of years population has been + or - objective in recent trend: 18

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

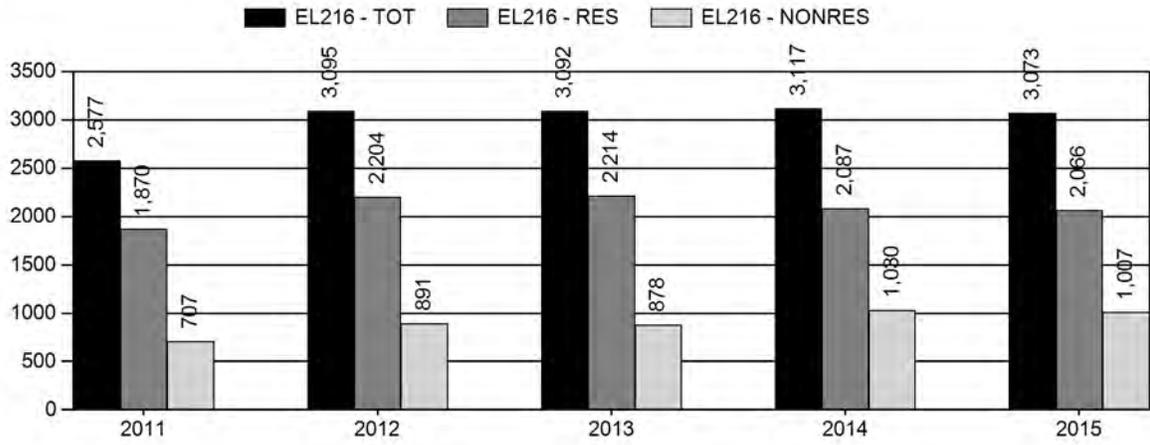
	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	N/A%	N/A%
Males ≥ 1 year old:	N/A%	N/A%
Juveniles (< 1 year old):	N/A%	N/A%



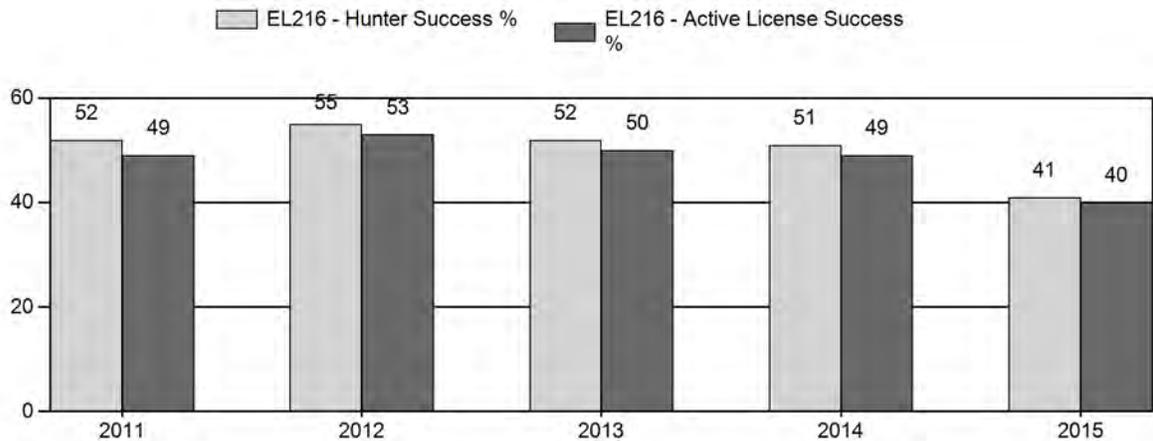
Harvest



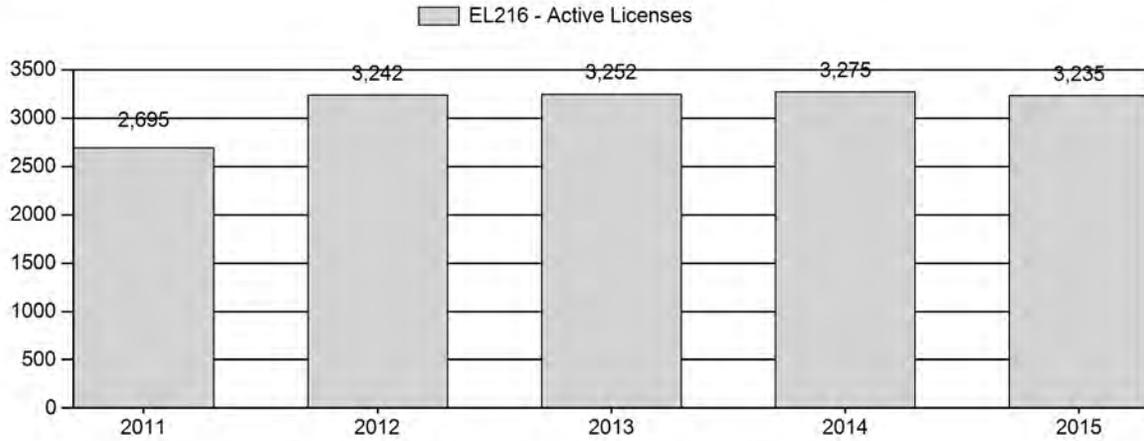
Number of Hunters



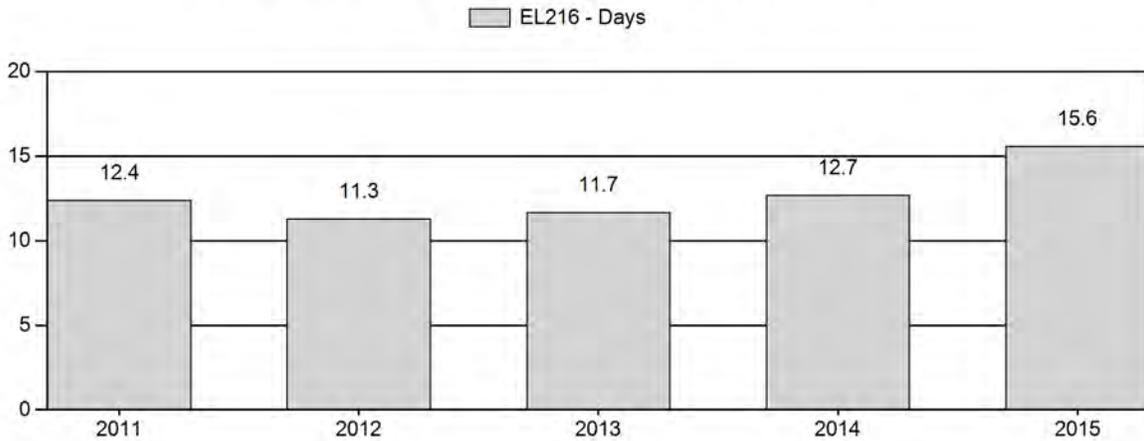
Harvest Success



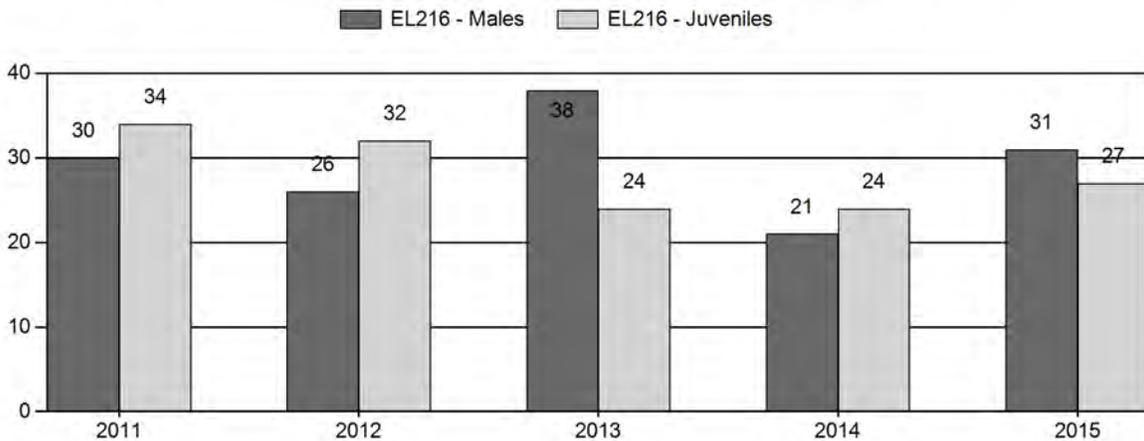
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2010 - 2015 Postseason Classification Summary

for Elk Herd EL216 - CODY

Year	Post Pop	MALES				FEMALES		JUVENILES		Tot Cls	Cls Obj	Males to 100 Females				Young to		
		Ylg	Adult	Total	%	Total	%	Total	%			YIng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2010	8,000	375	335	710	12%	3,878	68%	1,135	20%	5,723	372	10	9	18	± 1	29	± 1	25
2011	8,000	582	755	1,337	18%	4,490	61%	1,519	21%	7,346	370	13	17	30	± 0	34	± 0	26
2012	0	262	397	659	16%	2,561	63%	815	20%	4,035	388	10	16	26	± 0	32	± 0	25
2013	0	333	860	1,193	24%	3,130	62%	740	15%	5,063	377	11	27	38	± 0	24	± 0	17
2014	0	176	155	331	14%	1,604	69%	384	17%	2,319	293	11	10	21	± 0	24	± 0	20
2015	0	209	394	603	20%	1,930	63%	530	17%	3,063	372	11	20	31	± 0	27	± 0	21

**2016 HUNTING SEASONS
CODY ELK HERD (EL216)**

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
55	1	Oct. 1	Oct. 21	50	Limited quota	Any elk
55	9	Sep. 1	Sep. 30	25	Limited quota	Any elk, archery only
56		Oct. 1	Oct. 21		General	Antlered elk
56	1	Nov. 1	Dec. 7	10	Limited quota	Any elk
56	4	Oct. 1	Dec. 21	100	Limited quota	Antlerless elk
56	5	Nov. 1	Dec. 21	50	Limited quota	Antlerless elk valid off national forest
56	6	Nov. 1	Dec. 21	100	Limited quota	Cow or calf
56	9	Sep. 1	Sep. 30	30	Limited quota	Any elk, archery only
58	1	Oct. 1	Nov. 30	35	Limited quota	Any elk
58	4	Oct. 1	Dec. 21	100	Limited quota	Antlerless elk
58	6	Oct. 1	Dec. 21	300	Limited quota	Cow or calf
59		Oct. 1	Oct. 21		General	Any elk
59	1	Nov. 1	Nov. 15	10	Limited quota	Any elk
59	6	Oct. 1	Dec. 21	375	Limited quota	Cow or calf
59	7	Oct. 1	Oct. 31	25	Limited quota	Cow or calf valid within the Washakie Wilderness
59	9	Sep. 1	Sep. 30	25	Limited quota	Any elk, archery only
60		Sep. 20	Oct. 22		General	Any elk
60	9	Sep. 1	Sep. 30	20	Limited quota	Any elk, archery only
61	1	Oct. 1	Oct. 31	150	Limited quota	Any elk valid within the Washakie Wilderness, also valid in that portion of Area 62 within the Washakie Wilderness south of Avalanche Creek
61	2	Oct. 15	Nov. 15	50	Limited quota	Any elk, also valid in Area 66
61	2	Nov. 16	Jan. 15			Any elk valid only in Area 66
61	4	Oct. 15	Nov. 15	50	Limited quota	Antlerless elk
61	6	Sep. 1	Nov. 14	400	Limited quota	Cow or calf valid north of and including the Rawhide Creek drainage
61	6	Nov. 1	Nov. 14			Cow or calf valid within the Washakie Wilderness
61	6	Nov. 26	Dec. 21			Cow or calf valid in the entire area, also valid in Area 66 and that portion of Area 58 within the Dry

						Creek drainage
66		Aug. 15	Oct. 15		General	Any elk
66		Oct. 16	Dec. 21		General	Antlerless elk
66	6	Aug. 15	Jan. 15	350	Limited quota	Cow or calf

Special Archery Season Hunt Areas	Type	Season Dates		Limitations
		Opens	Closes	
55, 56, 58, 59, 61	All	Sep. 1	Sep. 30	Valid in the entire area(s)
60	All	Sep. 1	Sep. 19	Valid in the entire area(s)

Hunt Area	Type	Quota change from 2015
61	4	-50
61	6	-200
66	6	+100
Total	4	-50
	6	-100

Management Evaluation

Current Mid-Winter Trend Count Objective: 4,400

Management Strategy: Special

2015 Mid-Winter Trend Count: 4,205

Most Recent 3-year Running Average Trend Count: 5,014

Herd Unit Issues

Most of the Cody Herd Unit is characterized by migratory elk, but substantial numbers of non-migratory elk are found in all areas. Calf productivity varies across this herd unit, but not as dramatically as that seen in the Clarks Fork Herd Unit. Damage situations do exist where overabundant elk overlap with private lands. Elk in areas with good productivity that reside at least seasonally on mixed ownership require liberal management, while those herd segments with poor productivity require conservative management.

Weather

Conditions during the 2015-2016 winter were relatively mild, although snow cover and colder than normal temperatures persisted from mid-December through mid-January. Conditions moderated and above average temperatures returned during February and early March. Several bouts of snow and cold temperatures returned in late winter, but did not persist. Although annual precipitation was below average, growing season precipitation was near to slightly above average.

Habitat

One herbaceous vegetation transect is monitored on Carter Mountain. Herbaceous production was greater than normal in 2015, perhaps 50% higher than average. As a result of this and the relatively open winter conditions, utilization levels during the 2015-2016 winter were generally lower.

Field Data

Classification surveys in 2015 yielded a herd unit calf:cow ratio of 28:100 (range 21:100 – 42:100), while the most recent 10-year (2005-2014) average calf:cow ratio is 26.2 calves:100 cows (range 15:100 – 34:100). The 2015 surveys produced a yearling bull:cow ratio of 11:100 (range 6:100 – 15:100), while the average yearling bull ratio is 9.6 yearling bulls:100 cows over the 2005-2014 period (range 7:100 - 13:100).

Harvest

A total of 557 bulls were harvested in 2015, which is very similar to the most recent 10-year average (608 bulls, range 525-773). At 726 the antlerless elk harvest was intentionally decreased from the average of nearly 1,100 antlerless elk achieved from 2012-2014.

Population

The Cody Elk Herd Unit to a Mid-Winter Trend Count based population objective. Trend count objectives are based on 3-year running averages on a hunt area/multiple hunt area basis. The Trend Count Objective for Hunt Areas 55 & 56 is 1,150 elk, while the actual trend count average in this area is 1,296. Management efforts will be directed at maintaining elk numbers at this level. The Trend Count Objective for Hunt Areas 58 & 59 is also 1,150 elk, while the actual average trend count is 1,467 elk. Management direction for this area is to continue to reduce elk numbers. The Trend Count Objective for Hunt Area 61 is 2,100 elk, while the actual average trend count here is 2,043 elk. Management direction for this area will be to maintain elk numbers at current levels. Hunt Area 66 has a Trend Count Objective of 0 elk and management efforts here are to minimize elk numbers as much as possible.

In total, the Trend Count Objective for the entire Cody Elk Herd Unit is 4,400 elk, while the average 3-year trend count average is 5,014. Management efforts will continue to reduce elk numbers to meet this objective, with emphasis on Area 66, and to a lesser degree Area 58 and 59.

	Hunt Areas 55/56	Hunt Areas 58/59	Hunt Area 61	Hunt Area 66	Herd Unit Total
Count Goal	1,150	1,150	2,100	0	4,400
2013	1,401	1,726	2,431	168	5,726
2014	1,211	1,580	2,223	96	5,110
2015	1,277	1,096	1,474	358	4,205
3-year Average	1,296	1,467	2,043	207	5,014

2015 - JCR Evaluation Form

SPECIES: Elk

PERIOD: 6/1/2015 - 5/31/2016

HERD: EL217 - CLARKS FORK

HUNT AREAS: 51, 53-54

PREPARED BY: DOUG MCWHIRTER

	<u>2010 - 2014 Average</u>	<u>2015</u>	<u>2016 Proposed</u>
Trend Count:	3,547	3,517	3,600
Harvest:	486	440	450
Hunters:	1,052	956	900
Hunter Success:	46%	46%	50%
Active Licenses:	1,124	999	900
Active License Success	43%	44%	50%
Recreation Days:	8,220	6,389	6,000
Days Per Animal:	16.9	14.5	13.3
Males per 100 Females:	20	12	
Juveniles per 100 Females	24	21	

Trend Based Objective (± 20%) 3,300 (2640 - 3960)

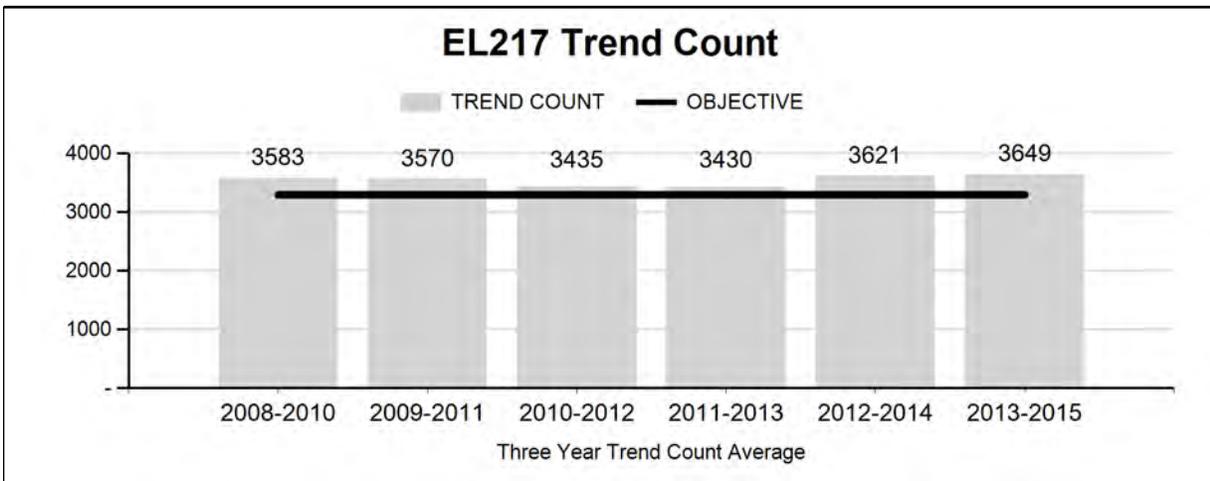
Management Strategy: Special

Percent population is above (+) or (-) objective: 7%

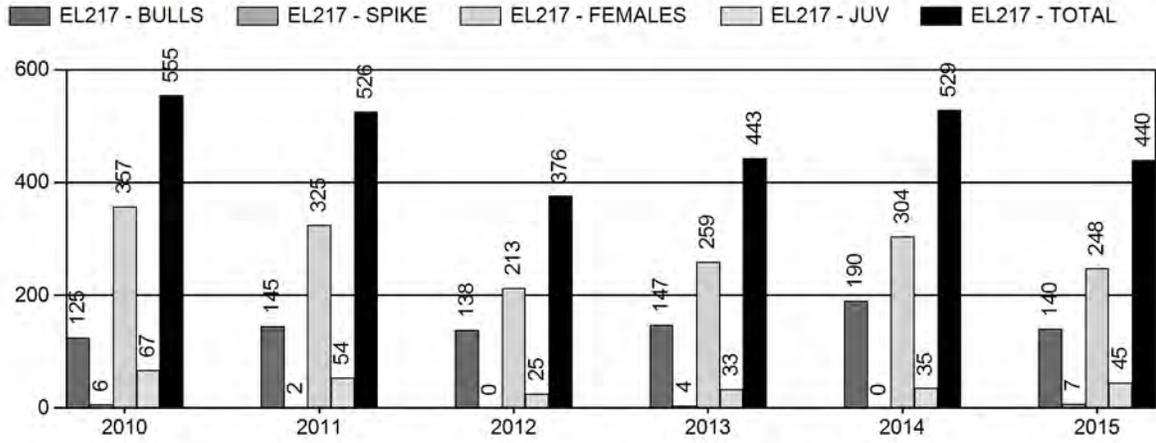
Number of years population has been + or - objective in recent trend: 23

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

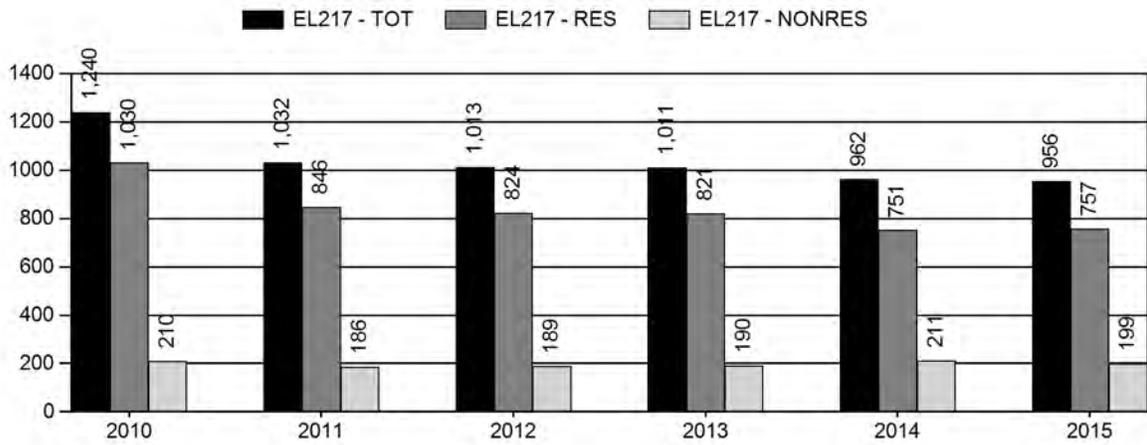
	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	N/A%	N/A%
Males ≥ 1 year old:	N/A%	N/A%
Juveniles (< 1 year old):	N/A%	N/A%



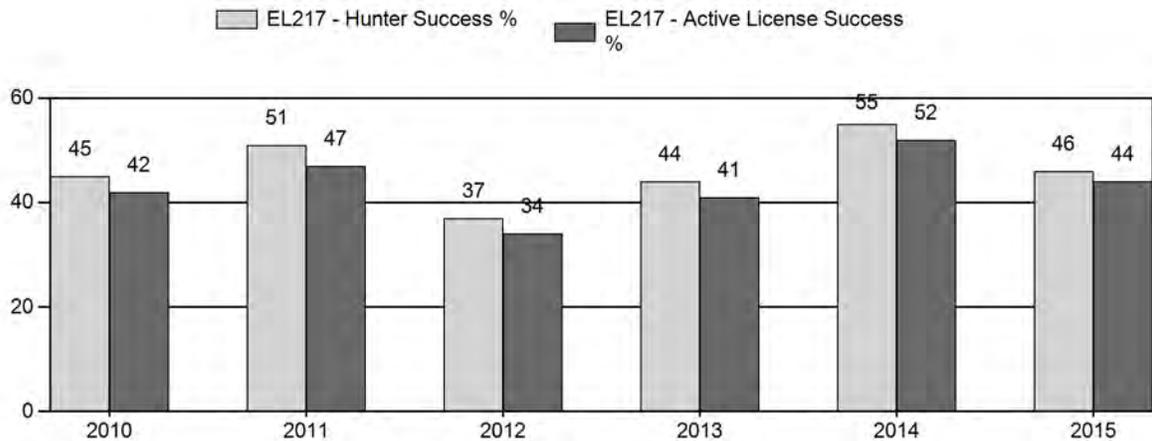
Harvest



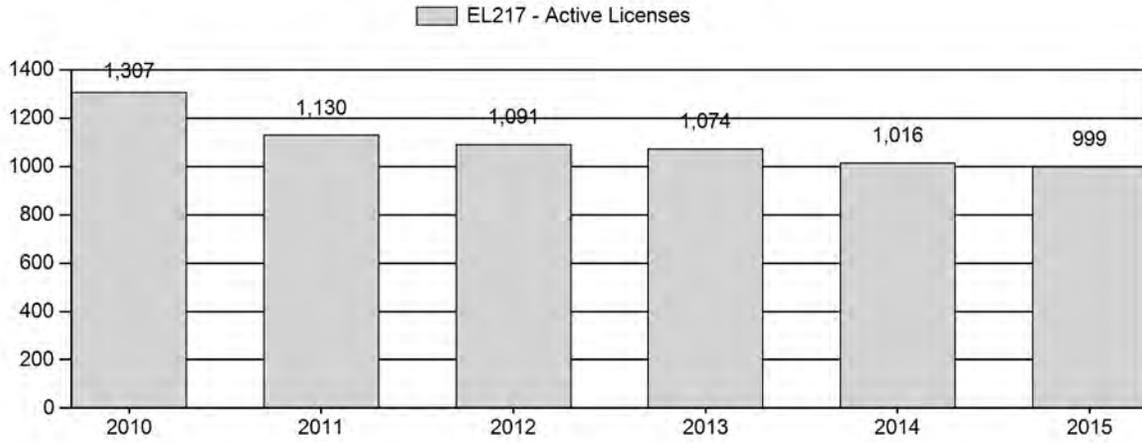
Number of Hunters



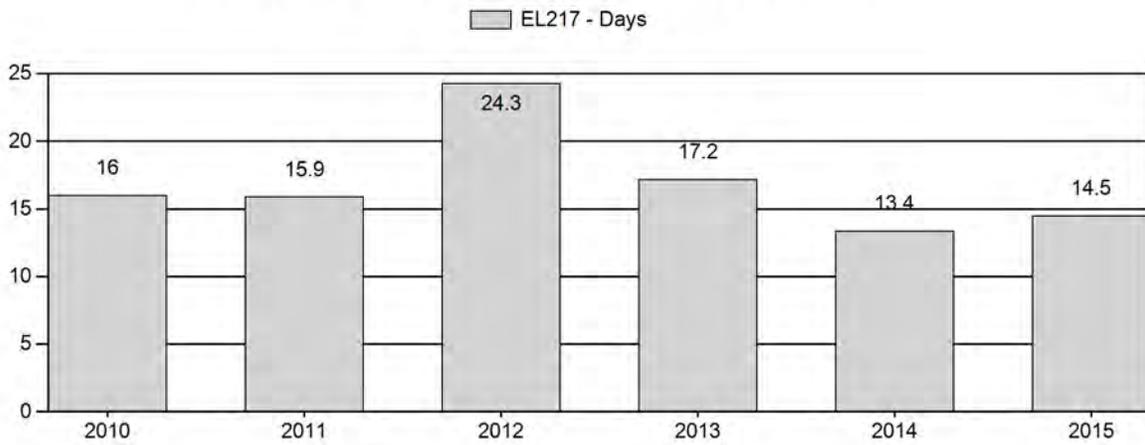
Harvest Success



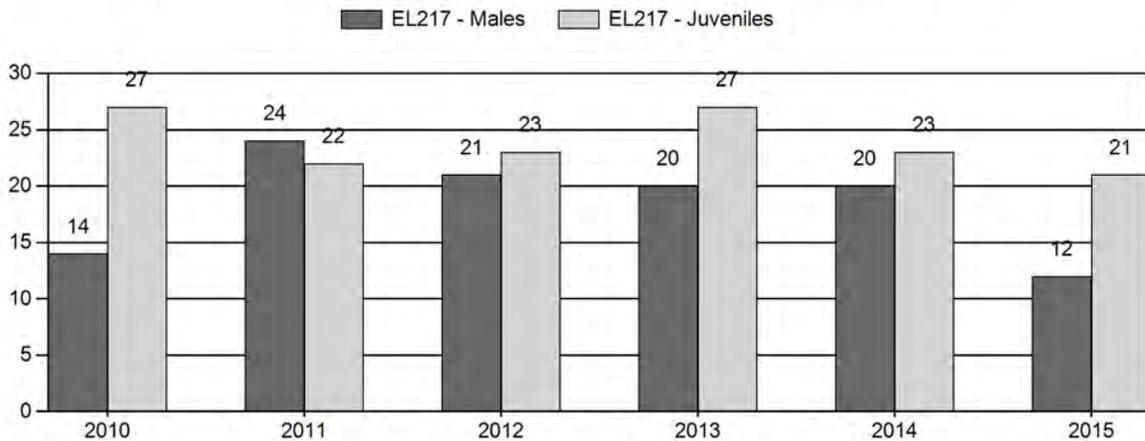
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2010 - 2015 Postseason Classification Summary

for Elk Herd EL217 - CLARKS FORK

Year	Post Pop	MALES				FEMALES		JUVENILES		Tot Cls	Cls Obj	Males to 100 Females				Young to		
		Ylg	Adult	Total	%	Total	%	Total	%			YIng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2010	4,238	153	97	250	10%	1,782	71%	476	19%	2,508	369	9	5	14	± 1	27	± 1	23
2011	3,931	204	376	580	17%	2,379	68%	524	15%	3,483	283	9	16	24	± 0	22	± 0	18
2012	3,896	127	355	482	14%	2,331	69%	541	16%	3,354	287	5	15	21	± 0	23	± 1	19
2013	0	149	307	456	14%	2,252	68%	607	18%	3,315	366	7	14	20	± 0	27	± 0	22
2014	0	188	358	546	14%	2,670	70%	603	16%	3,819	288	7	13	20	± 0	23	± 0	19
2015	0	144	80	224	9%	1,857	75%	397	16%	2,478	366	8	4	12	± 0	21	± 0	19

**2016 HUNTING SEASONS
CLARKS FORK ELK HERD (EL217)**

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
51	1	Oct. 1	Oct. 31	100	Limited quota	Any elk south and west of the Clarks Fork River
51	2	Oct. 1	Oct. 31	40	Limited quota	Any elk north and east of the Clarks Fork River
51	4	Nov. 16	Dec. 15	150	Limited quota	Antlerless elk
51	9	Sep. 1	Sep. 30	70	Limited quota	Any elk, archery only
53	1	Oct. 1	Oct. 31	10	Limited quota	Any elk
53	2	Nov. 1	Nov. 30	75	Limited quota	Any elk valid in the Shoshone River drainage
53	4	Oct. 1	Dec. 15	50	Limited quota	Antlerless elk
53	6	Nov. 1	Dec. 21	200	Limited quota	Cow or calf valid in the North Fork Shoshone River drainage
53	9	Sep. 1	Sep. 30	10	Limited quota	Any elk, archery only
54	1	Oct. 1	Nov. 30	50	Limited quota	Any elk valid south of the Clarks Fork River
54	2	Oct. 1	Oct. 31	25	Limited quota	Any elk valid north of the Clarks Fork River
54	6	Sep. 1	Oct. 31	50	Limited quota	Cow or calf
54	7	Nov. 1	Dec. 21	200	Limited quota	Cow or calf
54	9	Aug. 15	Sep. 30	35	Limited quota	Any elk, archery only

Special Archery Season Hunt Areas	Type	Season Dates		Limitations
		Opens	Closes	
54	All	Sep. 1	Sep. 30	Valid in the entire area(s)

Hunt Area	Type	Quota change from 2015
54	6	-50
54	7	-50
Total	6-7	-100

Management Evaluation

Current Mid-Winter Trend Count Objective: 3,300

Management Strategy: Special

2015 Mid-Winter Trend Count: 3,517

Most Recent 3-year Running Average Trend Count: 3,649

Herd Unit Issues

Much of the Clarks Fork Herd Unit is characterized by migratory elk in the Sunlight Basin and Crandall Areas, while substantial numbers of non-migratory elk are found in along the Absaroka Front and Beartooth Face. Migratory elk exhibit poor productivity, while non-migratory elk have much higher productivity. Consequently, damage situations arise with non-migratory elk and require liberal management, while poor productivity requires conservative management of migratory elk.

To better manage migratory and non-migratory elk and simplify hunting regulations, hunt area boundaries were re-configured in 2014. To encompass migratory elk, the western portion of Area 50 and Area 52 were added to Area 51. Similarly, to encompass non-migratory elk the eastern portion of Area 50, the eastern portion of Area 12, and Area 65 were added to Area 54. To better define the semi-migratory elk in the Rattlesnake Creek, Trout Creek, and Dead Indian Creek drainages, the western portion of Area 121 and the Elk Creek drainage of Area 52 were added to Area 53. This change allows for more direct management of migratory and non-migratory elk and reduces complexity by eliminating 4 hunt areas and 4 license types.

Weather

Conditions during the 2015-2016 winter were relatively mild, although snow cover and colder than normal temperatures persisted from mid-December through mid-January. Conditions moderated and above average temperatures returned during February and early March. Several bouts of snow and cold temperatures returned in late winter, but did not persist. Although annual precipitation was below average, growing season precipitation was near to slightly above average.

Habitat

Herbaceous vegetation transects are monitored on upland vegetation types in Sunlight Basin, both on the Sunlight Wildlife Habitat Management Area (WHMA) and on adjacent US Forest Service lands. Herbaceous production in 2015 was generally above average, with some sites 20%-25% above average. As a result of this and the relatively open winter conditions, utilization levels during the 2015-2016 winter were generally lower.

Field Data

Classification surveys in 2015 yielded calf:cow ratios of 14:100 in Hunt Area 51, 29:100 in Hunt Area 53 and 23:100 in Hunt Area 54. The most recent 10-year (2005-2014) average calf:cow ratio in Hunt Area 51 is 14.6 calves:100 cows (range 11:100 – 20:100), 36.3 calves:100 cows (range 27:100 – 45:100) in Hunt Area 53, and 34.4 calves:100 cows in Hunt Area 54 (range 23:100 – 39:100). Yearling bull:cow ratios in 2015 were 2:100 in Hunt Area 51, 13:100 in Hunt Area 53, and 9:100 in Hunt Area 54. The most recent 10-year (2005-2014) average yearling bull:cow ratios were 4.6 yearling bulls:100 cows in Hunt Area 51 (range 3:100 - 6:100), 8.8

yearling bulls:100 cows in Hunt Area 53 (range 3:100 – 15:100), and 12.1 yearling bulls:100 cows (range 7:100 – 19:100) in Hunt Area 54.

Harvest Data

Bull harvest was 153 in 2015 and has stabilized near 150 (2010-2015 average 152, range 131-192) in this herd unit since conversion to totally limited quota hunting. A total of 297 antlerless elk were harvested in 2015, but remained near the most recent 5-year average (2010-2014) of 337.

Population

Recent winter movement of elk out of Hunt Area 51 and into Hunt Area 54 has complicated efforts to determine trends in each hunt area. However, it is felt that elk numbers remain slightly above management goals in both Hunt Area 51 and Hunt Area 54. Antlerless licenses will be reduced in Hunt Area 54 in 2015 due to a significant loss of public access. Antlered elk seasons in Hunt Area 51 were split into Type 1 and Type 2 to better direct hunting pressure into the primarily Wilderness area south and west of the Clarks Fork River (Type1) and the primarily non-Wilderness area to the north and east of the Clarks Fork River (Type 2). We will continue with the current management structure, which consists of conservative seasons for both antlered and antlerless elk in Hunt Area 51, while continuing to maintain current elk numbers in Hunt Area 53 and reducing elk numbers in Hunt Area 54. The 2015 seasons should result in post-season 2016 population closer to the objective of 3,300 observed elk on winter range.

	Hunt Area 51	Hunt Area 53	Hunt Area 54	Herd Unit Total
Count Goal	1,800	600	900	3,300
2013	1,414*	610	1,348	3,372
2014	1,914	638	1,506	4,058
2015	1,337*	662	1,518	3,517
3-year Average	1,555*	637	1,457	3,649

* Partial counts in 2013 & 2015, suspected movement into HA54 in both years