

2014 - JCR Evaluation Form

SPECIES: Elk

PERIOD: 6/1/2014 - 5/31/2015

HERD: EL635 - WIGGINS FORK

HUNT AREAS: 67-69, 127

PREPARED BY: GREG ANDERSON

	<u>2009 - 2013 Average</u>	<u>2014</u>	<u>2015 Proposed</u>
Trend Count:	6,240	5,528	5,500
Harvest:	936	1,077	950
Hunters:	2,298	2,829	2,600
Hunter Success:	41%	38%	37%
Active Licenses:	2,363	2,928	2,700
Active License Success	40%	37%	35%
Recreation Days:	15,180	20,215	19,000
Days Per Animal:	16.2	18.8	20
Males per 100 Females:	9	20	
Juveniles per 100 Females	25	26	

Trend Based Objective ($\pm 20\%$) 5,500 (4400 - 6600)

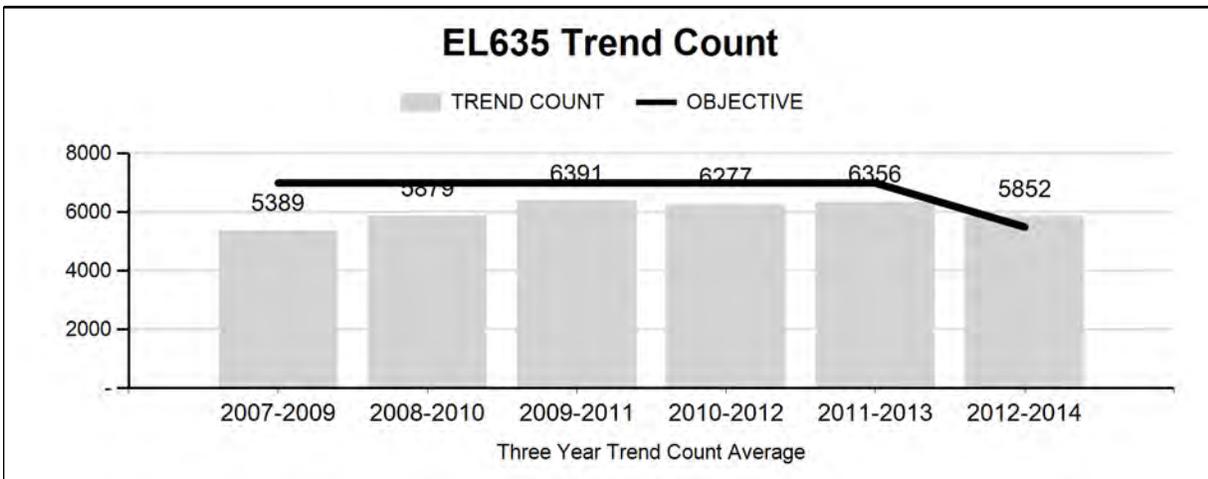
Management Strategy: Recreational

Percent population is above (+) or (-) objective: 1%

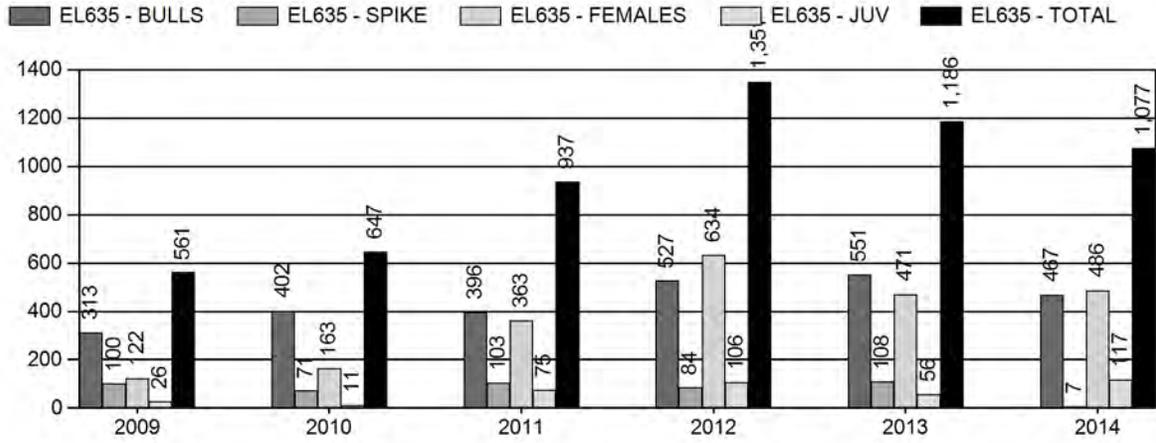
Number of years population has been + or - objective in recent trend: 3

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

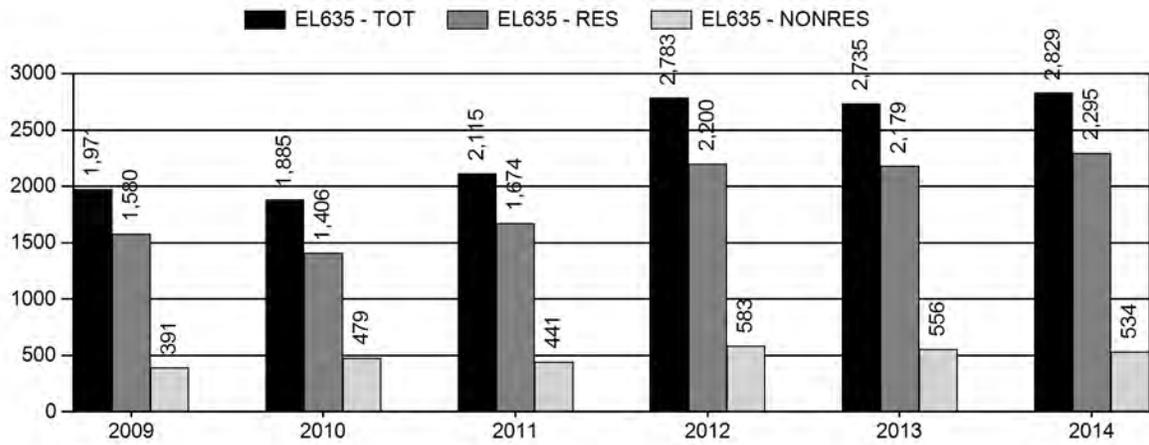
	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	0%	0%
Males ≥ 1 year old:	0%	0%
Juveniles (< 1 year old):	0%	0%



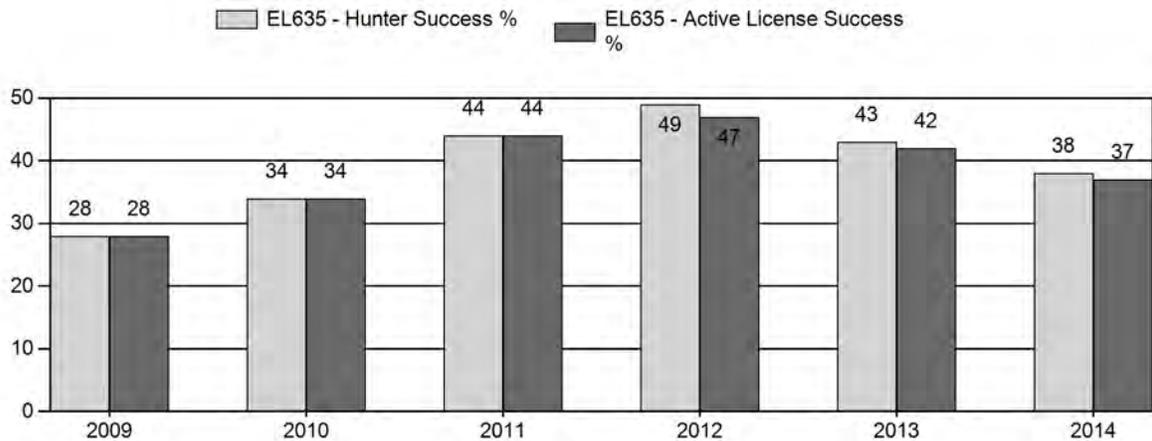
Harvest



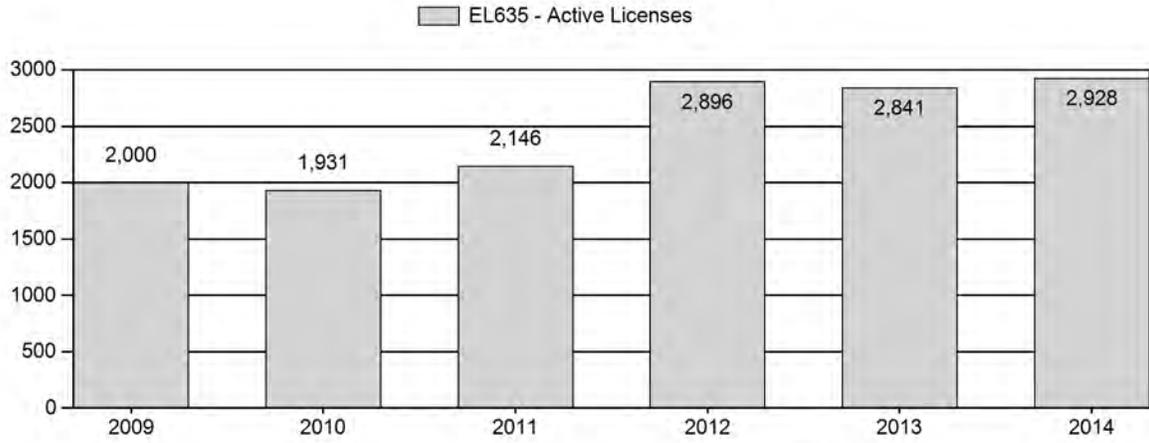
Number of Hunters



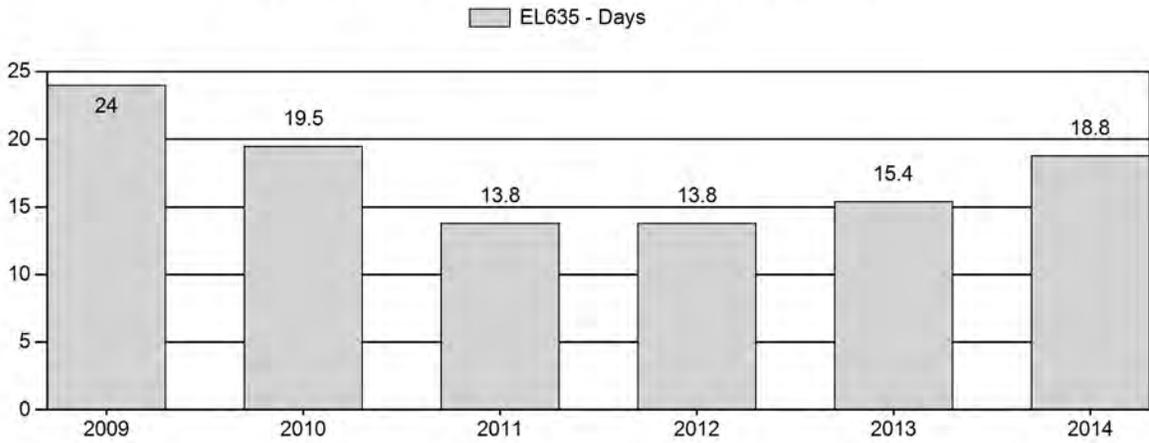
Harvest Success



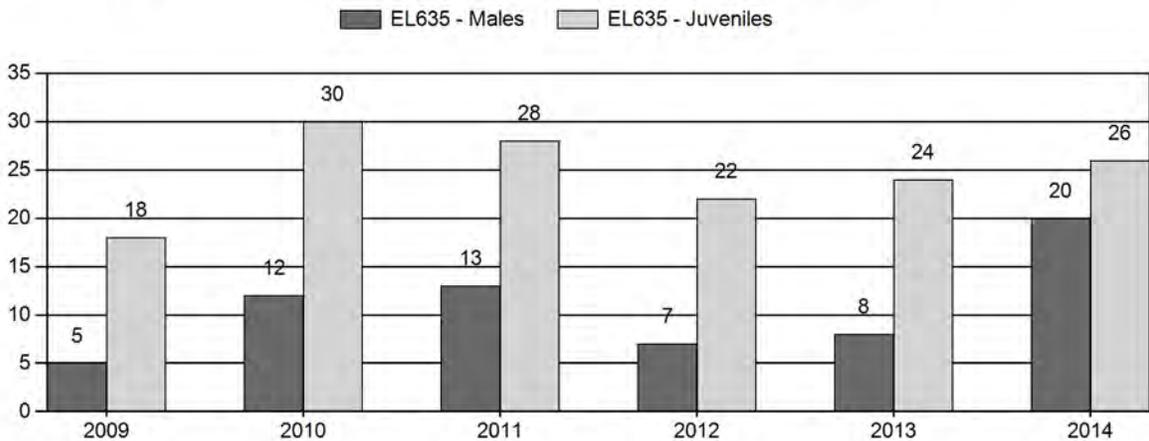
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2009 - 2014 Postseason Classification Summary

for Elk Herd EL635 - WIGGINS 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
2009	7,899	117	13	130	4%	2,524	81%	456	15%	3,110	168	5	1	5	± 0	18	± 1	17
2010	7,777	276	114	390	8%	3,388	71%	1,019	21%	4,797	346	8	3	12	± 0	30	± 1	27
2011	9,083	202	28	230	9%	1,802	71%	498	20%	2,530	321	11	2	13	± 1	28	± 2	25
2012	0	138	22	160	6%	2,143	77%	463	17%	2,766	0	6	1	7	± 0	22	± 0	20
2013	0	135	23	158	6%	1,881	76%	451	18%	2,490	0	7	1	8	± 0	24	± 0	22
2014	0	304	256	560	14%	2,817	69%	720	18%	4,097	0	11	9	20	± 0	26	± 0	21

**2015 HUNTING SEASONS
WIGGINS FORK ELK (EL 635)**

Hunt Area	Type	Season Dates		Quota	Limitations
		Opens	Closes		
67		Oct. 1	Oct. 31		General; antlered elk, spikes excluded
	4	Nov. 1	Dec. 15	200	Limited quota; antlerless elk
	6	Nov. 15	Dec. 15	400	Limited quota; cow or calf valid west of the Wiggins Fork and west of the East Fork downstream from the confluence with the Wiggins Fork
67, 68, 69	9	Sep. 1	Sep. 30	125	Limited quota; any elk, archery only
68		Oct. 1	Oct. 31		General; antlered elk, spikes excluded
	6	Nov. 1	Nov. 30	200	Limited quota; cow or calf
69		Oct. 1	Oct. 31		General; any elk
	6	Oct. 1	Nov. 30	100	Limited quota; cow or calf
127		Oct. 1	Oct. 31		General; any elk
		Nov. 1	Dec. 31		General; antlerless elk
Archery 67, 68, 69		Sep. 15	Sep. 30		General; any elk. Limited quota; refer to section 3 of this chapter
127		Sep. 1	Sep. 30		General; any elk

Hunt Area	Type	Quota change from 2014
67	4	-100
	6	-100
69	6	+25
Total	4	-100
	6	-75

Management Evaluation

Mid-winter trend count objective: 5,500

Management strategy: Recreational 2014

mid-winter trend count: ~5,500

3-Year running average trend count: ~5,800

Management Issues

The Wiggins Fork elk herd is managed based on a winter trend count. The trend count management objective has been in place since 2002. The original, 2002, objective sought to maintain 6,000 to 7,000 wintering elk in the herd. The number of elk was determined by multiplying an annual trend count by a constant sightability factor to calculate a population estimate. Over time, the extra step of calculating an estimate confused the public. In response, the objective was reviewed in 2014 and the Department decided to base a new objective on actual trend count numbers eliminating the use of a sightability factor and population estimate. The new objective set in 2014 is to maintain 5,500 wintering elk in the herd unit with a recreational management strategy. Annual trend counts are conducted each January to assess the population.

The Wiggins Fork elk herd occupies the upper Wind River drainage west of the Wind River Reservation (WRR). There is good documentation elk wintering in the herd unit migrate into a number of other northwest Wyoming elk herd units in the summer and early fall. Given the amount of interchange with neighboring herd units, the number of elk present can vary significantly throughout the hunting season. Seasons structured to reduce the elk population generally need to include antlerless elk harvest after mid-November to allow elk to migrate into the herd unit from neighboring areas.

Habitat/Weather

Herbaceous vegetation production was quite high throughout the herd unit in 2014. Following 2 years of extreme drought, vegetation production increased significantly this year. Production averaged 576 lbs/acre across monitoring sites on elk winter range. This was 63% greater production than the previous 5-year average. Although no vegetation monitoring is conducted at high elevation summer range, it appeared vegetation growth was outstanding on summer and transitional ranges as well. Fall weather was warm and dry through much of the hunting season. The combination of abundant feed and mild, fall weather resulted in elk entering winter in

excellent body condition. Snowfall in December forced elk onto low elevation winter ranges. Continued snow cover and cold temperatures through January pushed elk to even lower elevations than typical. After January, temperatures moderated and snow receded.

Field/Harvest Data/Population

Trend counts to estimate the wintering population are conducted each January/February. Trend count numbers declined from 1997 through 2003. From 2004 through 2007, the population appeared to stabilize. Winter count numbers fluctuated year-to-year but did not indicate any consistent population trends. In 2008, personnel counted a significantly higher number of elk (5,504). This was the highest count since 1998. In 2009 and 2010, personnel again counted a significantly greater number of elk; 6,110 and 6,023 respectively (Fig. 1). In 2011 the trend count increased significantly again to 7,039. Following a liberal season in 2012, the trend count declined to 5,768. The count increased again in 2013 by 500 elk to 6,260 followed by a decline to 5,528 in 2014 (Fig. 1). Overall, the herd has been fairly stable over the past 5 years and is at objective.

The trend count objective includes sub-objective for 3 areas in the herd unit. The sub-objectives were set to recognize reasonably well-defined, spatially segregated elk groups wintering in the area. The sub-groups include the East Fork, Dunoir/Spring Mountain, and South Dubois groups. While there is a significant amount of interchange, elk from the three groups tend to segregate themselves on winter range and utilize different spring/fall migration routes. Since elk in the three sub-groups are subjected to different demographic influences, sub-objectives were set for each of the three groups (Table 1). One of the sub-groups (East Fork) has been below objective for the past decade. Two of the sub-groups (Dunoir/Spring Mtn and South Dubois) have been above objective for the past 7 years. The South Dubois segment has consistently been above objective for the past decade. Liberal seasons on an annual basis provide the opportunity for significantly greater harvest in this herd segment but lack of hunter desire to harvest cow elk in this rugged area precludes greater harvest. Despite the lack of necessary harvest, the population in this segment has remained fairly stable over the past 5 years. In contrast, elk numbers in the Dunoir/Spring Mtn herd segment increased dramatically for a period after 2007. The 2012 and 2013 hunting seasons were designed to reduce cow numbers in this herd segment. The number of elk in this segment did decline over the last several years in response to the liberal cow harvest.

Between 2006 and 2009, recruitment in this herd unit was well below historic levels (Fig. 2). Despite low recruitment between 2006 and 2009, the number of elk counted still increased. In 2010 and 2011 recruitment increased significantly and likely contributed to some of the trend count increase. Since 2012, recruitment increased annually and the calf/cow ratio was 26/100 in 2014. This was slightly higher than the 5 year average of 24/100.

Figure 1. Wiggins Fork Elk trend count

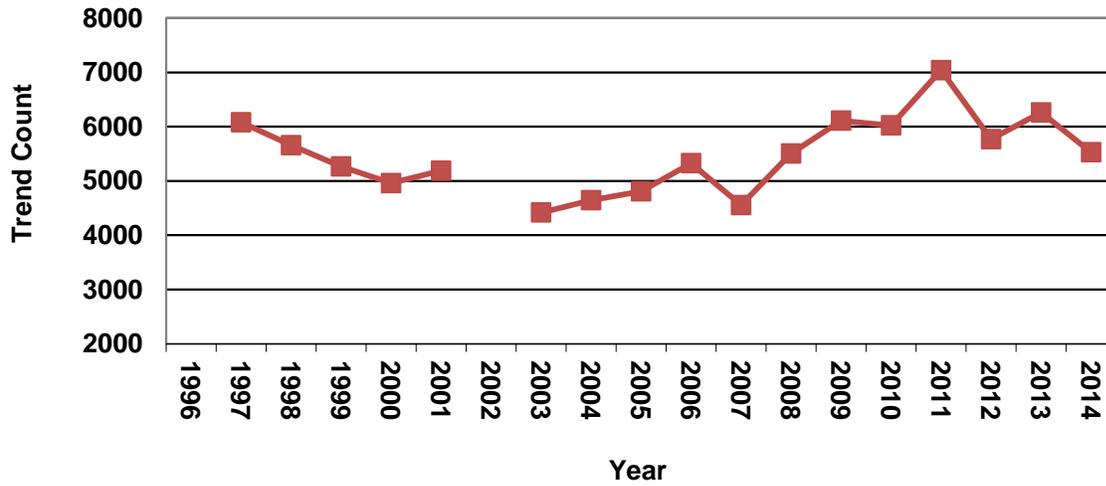
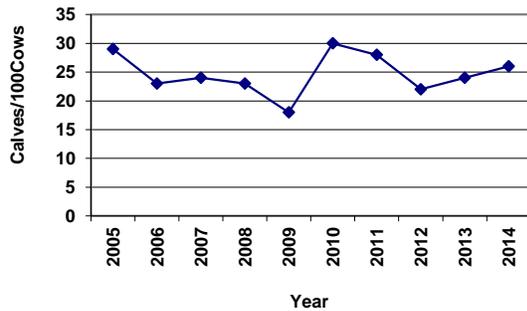


Table 1. Trend count numbers from sub-groups in the Wiggins Fork Elk Herd Unit.

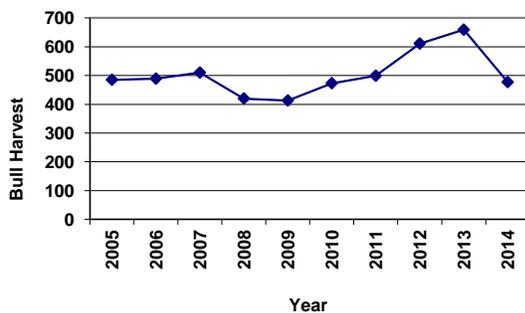
Year	East Fork	Dunoir/Spring Mountain	South Dubois	Wiggins Fork Herd Unit	
	Objective: 2,200 Count	Objective: 2,200 Count	Objective: 1,100 Count	Objective: 5,500 Count	3 Year Average
1998	2154	2457	1046	5657	
1999	2180	2109	977	5266	
2000	1883	2014	1061	4958	5294
2001	2100	1818	1269	5187	5137
2002	nc	nc	nc	nc	5073
2003	1857	1666	895	4418	4803
2004	1832	1601	1211	4644	4531
2005	1669	1807	1331	4807	4623
2006	1623	2297	1406	5326	4926
2007	1478	1634	1441	4553	4895
2008	1294	2620	1590	5504	5128
2009	1457	3186	1467	6110	5389
2010	1930	2704	1389	6023	5879
2011	1765	3680	1594	7039	6391
2012	1834	2580	1354	5768	6277
2013	1713	3022	1525	6260	6356
2014	1620	2551	1357	5528	5852

Figure 2. Ten year recruitment history in the Wiggins Fork Elk Herd.



Unfortunately, bull/cow ratio data for this herd are very unreliable. Classification surveys are conducted on the ground throughout the DAU. Since mature bulls generally winter in timber at the fringes of the winter ranges, the number of bulls seen is quite low and mature bull/cow ratios for the herd are not considered accurate. Despite the lack of classification data, members of the public and Department personnel suspected the bull/cow ratio in the herd declined concurrently with low recruitment in the mid-2000s. Despite this speculation, bull harvest has not declined over the past 10 years (Fig. 3). Over the past 4 years, bull harvest has increased annually. Antlered elk harvest in both 2012 and 2013 was the highest in the past 20 years. The high bull harvest in 2013 is not indicative of any demographic changes in the population. Instead, the high harvest can be directly linked to environmental conditions. Heavy snows in late September forced elk (including bulls) onto winter range where they were extremely vulnerable to harvest throughout the general, October season. Likewise, the significant decline in bull harvest in 2014 is certainly more closely tied to difficult hunting conditions due to hot, dry weather throughout the fall. Thus, the precipitous decline in bull harvest from 2013 to 2014 should not be linked to demographic changes. That said, bull harvest over the past 5 years has generally been high indicating bull numbers in the population are stable.

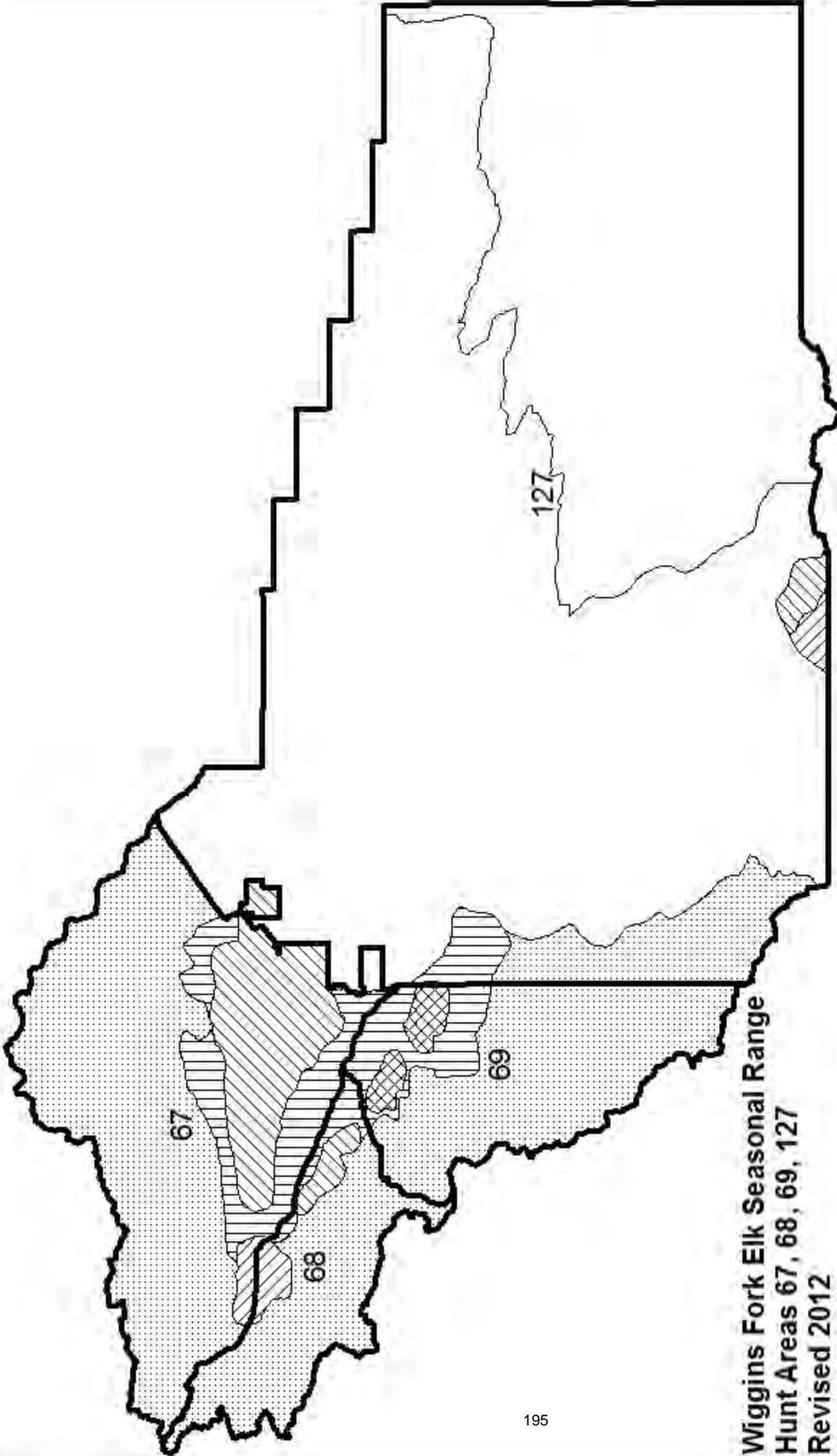
Figure 3. Antlered elk harvest in the Wiggins Fork Elk Herd.



Management Summary

The 2014 trend count indicates the Wiggins Fork elk population is at objective. The population appears to have declined slightly over the past 5 years in response to higher antlerless elk harvest

in the herd unit. Since the population is at objective the number of antlerless elk licenses in the herd unit will be reduced in 2015. Both Type 4 and 6 licenses in hunt area 67 will be reduced by 100 in 2015. License numbers will remain unchanged in hunt area 68 to continue reducing the number of elk wintering in the area. Historically, hunt area 69 has had some form of general hunting available into November. That management strategy appears to have been ineffective at reducing the elk population in difficult to access winter ranges in hunt area 69. In 2015, the hunt area 69 general season will end on October 31. Type 6 licenses will still be valid in the area through the end of November. This new management strategy will be tracked for several years to determine if type 6 license holders have increased success without crowding from general license hunters on easily accessible winter ranges. To compensate for the reduction in general license hunting, hunt area 69 type 6 licenses will be increased by 25.



**Wiggins Fork Elk Seasonal Range
Hunt Areas 67, 68, 69, 127
Revised 2012**

-  CRUWIN
-  CRUWYL
-  OUT
-  SSF
-  WIN
-  WYL

2014 - JCR Evaluation Form

SPECIES: Elk

PERIOD: 6/1/2014 - 5/31/2015

HERD: EL637 - SOUTH WIND RIVER

HUNT AREAS: 25, 27-28, 99

PREPARED BY: STAN HARTER

	<u>2009 - 2013 Average</u>	<u>2014</u>	<u>2015 Proposed</u>
Trend Count:	2,688	2,513	2,600
Harvest:	681	630	600
Hunters:	2,165	2,131	2,100
Hunter Success:	31%	30%	29%
Active Licenses:	2,258	2,157	2,120
Active License Success	30%	29%	28%
Recreation Days:	16,144	16,404	16,000
Days Per Animal:	23.7	26.0	26.7
Males per 100 Females:	28	24	
Juveniles per 100 Females	33	27	

Trend Based Objective (± 20%) 2,600 (2080 - 3120)

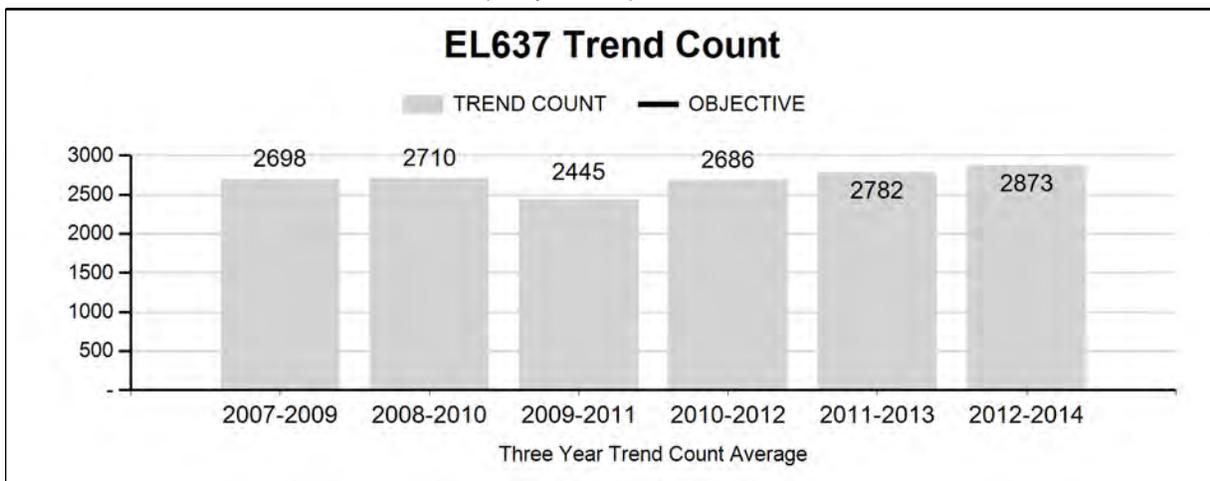
Management Strategy: Recreational

Percent population is above (+) or (-) objective: -3.3%

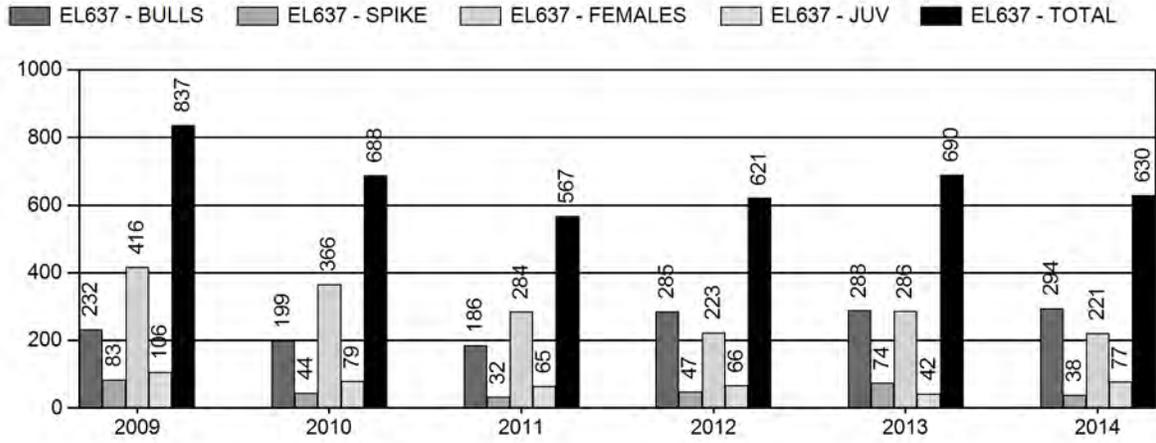
Number of years population has been + or - objective in recent trend: 3

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

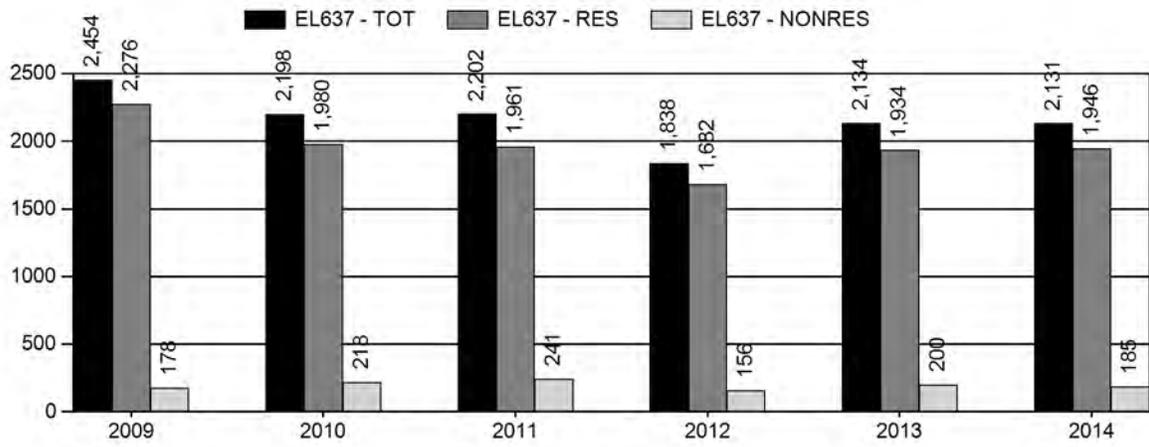
	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	0%	0%
Males ≥ 1 year old:	0%	0%
Juveniles (< 1 year old):	0%	0%



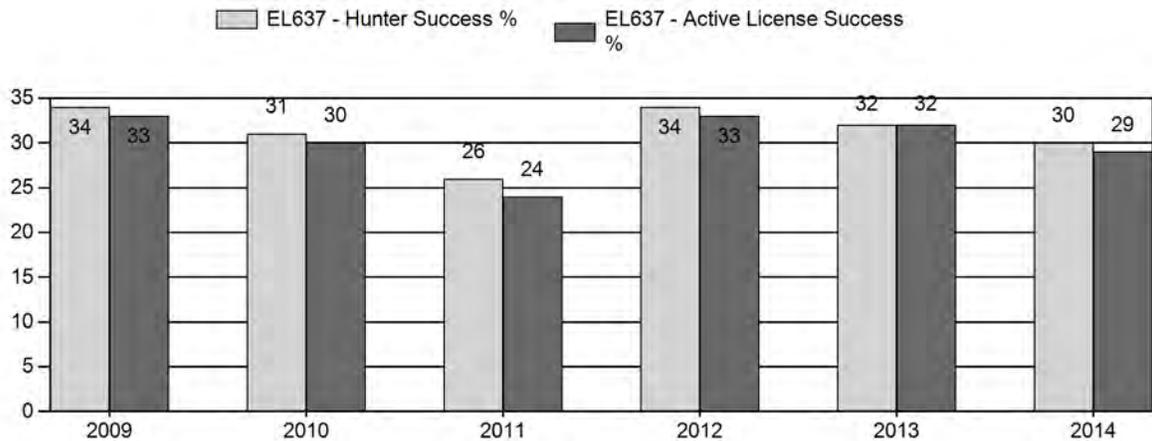
Harvest



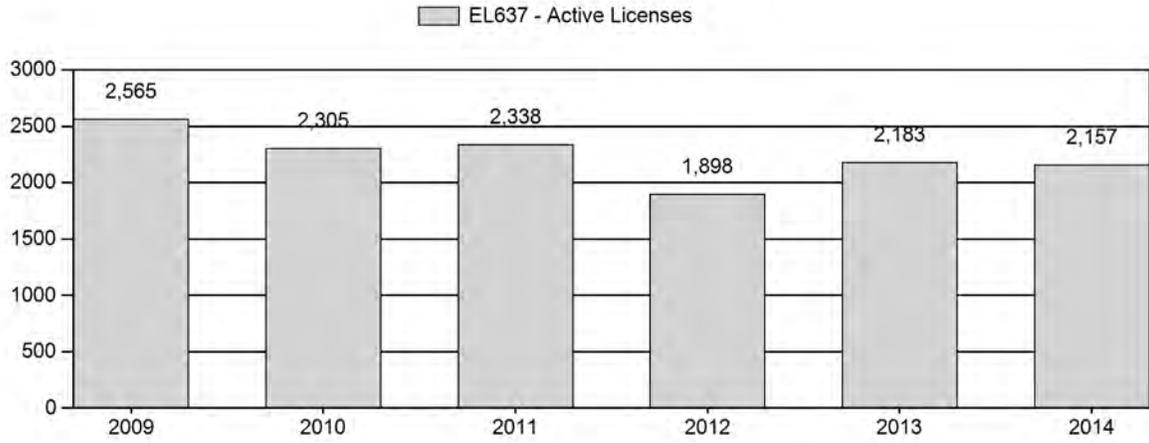
Number of Hunters



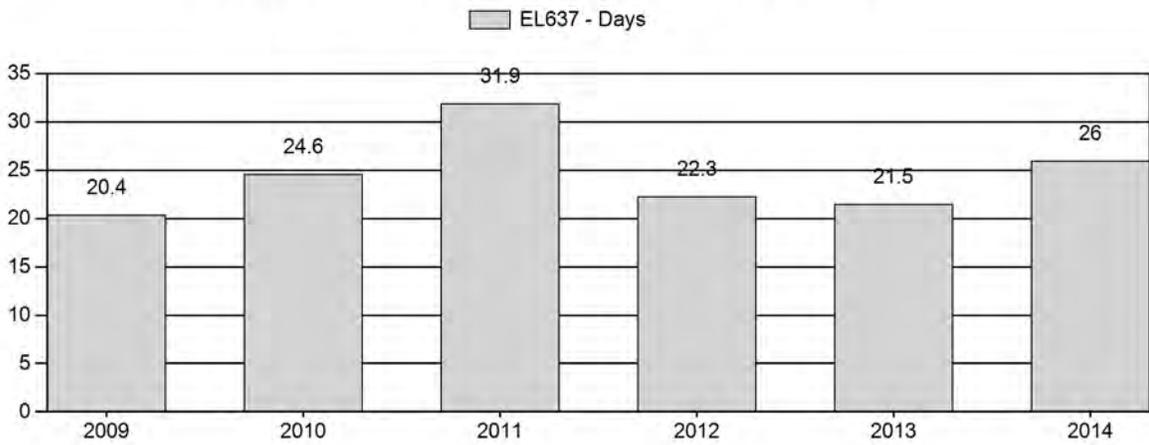
Harvest Success



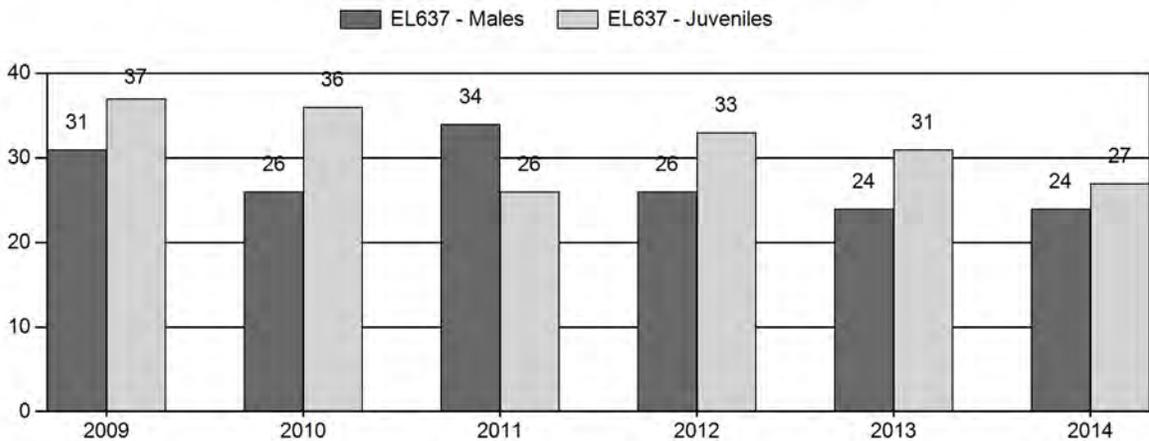
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2009 - 2014 Postseason Classification Summary

for Elk Herd EL637 - SOUTH WIND RIVER

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
2009	0	193	263	456	19%	1,460	60%	537	22%	2,453	491	13	18	31	± 1	37	± 1	28
2010	0	174	231	405	16%	1,554	62%	563	22%	2,522	460	11	15	26	± 1	36	± 1	29
2011	0	179	299	478	21%	1,397	62%	365	16%	2,240	0	13	21	34	± 2	26	± 1	19
2012	0	183	356	539	16%	2,066	63%	691	21%	3,296	0	9	17	26	± 1	33	± 1	27
2013	0	165	228	393	16%	1,623	65%	499	20%	2,515	0	10	14	24	± 0	31	± 0	25
2014	0	149	226	375	16%	1,550	66%	420	18%	2,345	0	10	15	24	± 0	27	± 0	22

2015 HUNTING SEASONS
South Wind River Elk Herd Unit (EL 637)

HUNT AREA	TYPE	Season Dates		Quota	LIMITATIONS
		OPENS	CLOSES		
25, 27	1	Oct. 1 Nov. 1	Oct. 31 Nov. 20	200	Limited quota; any elk Unused Area 25, 27 Type 1 licenses valid for antlerless elk
25	4	Oct. 15	Nov. 20	200	Limited quota; antlerless elk
25	6	Nov. 1	Nov. 20	100	Limited quota; cow or calf
27	4	Oct. 1	Nov. 20	100	Limited quota; antlerless elk
28		Oct. 1	Oct. 9		General license; Any elk
		Oct. 10	Oct. 22		General license; Antlered elk
	4	Nov. 1	Nov. 20	200	Limited quota; antlerless elk
99	1	Oct. 1 Nov. 1	Oct. 31 Nov. 20	175	Limited quota; any elk Unused Area 99 Type 1 licenses valid for antlerless elk
	4	Oct. 1	Nov. 20	200	Limited quota; antlerless elk

Archery

28		Sept. 1	Sept. 30		General License; Any elk Limited quota; Refer to Section 3 of this Chapter
25,27,99		Sept. 1	Sept. 30		Refer to Section 3 of this Chapter

Hunt Area	Type	Quota Change from 2014
99	1	-25
	4	-25
Total EL637		-50

MANAGEMENT EVALUATION

Current Management Objective: Mid-winter Trend Count = 2,600

Management Strategy: Recreation (15 – 29 bulls/100 cows)

2014 Mid-winter Trend Count: 2,513

Most Recent 3-year Running Average Trend Count: 2,873

Herd Unit Issues/Population Model

The management objective for the South Wind River Elk Herd Unit was changed in 2014, and is a mid-winter trend count of 2,600 elk, based on a running 3-year average. All attempts to create a spreadsheet model for South Wind River Elk were unsuccessful. Trend count data vary due to annual changes in snow depth, light and wind conditions during flights, and condition of habitats each winter. A key factor in our ability to detect elk in winter is the extreme variability and extent of winter habitats, which range from mixed aspen/conifer/sagebrush habitats to open sagebrush/grassland habitats. It is likely elk are inhabiting larger areas than currently designated/documentated, with distances travelled subject to changes in weather, competition from other wild and domestic ungulates, hunting pressure, and annual timing of surveys. Plus, elk have been documented crossing hunt area and herd unit boundaries into vast expanses of open sagebrush/grassland habitats making detection difficult. Thus, we use a 3-year running average of the trend counts to avoid abrupt management decisions based solely on a single year's observations. The 2014 trend count/classification survey of 2,513 was lower than expected, as we believe we missed elk groups in Hunt Areas 25 and 27.

Weather/Habitat

Drought conditions were extreme to exceptional for most of 2011-13, beginning with minimal snowfall in winter 2011-12 and continuing with almost no precipitation during spring and summer 2012. In April 2013, a series of several late winter/early spring snow storms produced heavy snow through early May throughout the South Wind River Elk Herd Unit. These storms were extremely helpful in lessening the effects of drought, yet they only helped change the drought status from Extreme to Severe. Drought returned in summer 2013, with only 0.34 and 0.2 inches of precipitation recorded in Lander and Jeffrey City respectively from June 1 to September 1. This inhibited production in herbaceous and shrub species across the South Wind River herd unit, although some improvement over 2012 conditions was noted. Rain and snow returned to the area in September and October 2013, with nearly 300% of "normal" precipitation recorded in Lander and Jeffrey City with warm temperatures between early storms. Although winter 2013-14 had lower than average snowfall, the increase in soil moisture from the fall 2013 precipitation carried over into spring and was followed by good rainfall throughout most of the herd unit over summer 2014, leading to improvement in vegetation condition, especially for grass. Winter 2014-15 was fairly mild, with above average temperatures and slightly below average snowfall/precipitation. Precipitation from April 1 through early May 2015 has been above average in Lander, and ahead of last year's pace. We anticipate habitat conditions will continue to improve as a result. We expect elk survival over winter was good, as the grasses they rely on had exceptional growth in 2014.

Field Data

Classification flights were conducted in mid-January with a Bell Jet Ranger 206 helicopter in Areas 25 and 28. Personnel from the Pinedale Region surveyed Areas 27 and 99 in early-March with a Bell 47 Soloy helicopter. A total of 2,345 elk were classified, with an additional 168 elk observed during a mule deer sightability survey in early-February 2015, bringing the total trend count to 2,513. Elk moved frequently between Areas 25 and 28 in January and February, and approximately 1,200-1,300 elk were observed on the Red Canyon WHMA in late-February, which exceeds the sum of elk observed in that area during the previous flights. We have not seen any large groups in the portion Area 25 south of the Sweetwater River in a few years, despite knowledge of expanding elk numbers there. The observed post-season calf/cow ratio of 27J/100F and bull ratio of 24M/100F were below the previous 5-year average.

Harvest Data

Weather during fall 2014 was quite variable in the South Wind River Herd Unit. Fall weather was moderate with above average temperatures and below average snowfall, until the second week of November when temperatures plunged more than 70 degrees and nearly a foot of snow fell across the herd unit in a 24-hour period. Harvest was below average in 2014, as mild weather conditions kept elk scattered in small groups in many parts of the herd unit. Adult bull harvest increased slightly to 294 bulls in 2014, the highest since 2006. However, cow harvest was about 30% below the previous 5-year average. Based on harvest survey results, total harvest dropped 9% in 2014 to 630 elk. Hunter success rates have remained fairly stable, with the 2014 success rate of 29% being slightly below the 5-year average of 31%. Increases in hunter effort data indicate hunters were less able to find elk compared with the previous 5 years (26.0 days/harvest in 2014 vs. 23.7 days per harvest since 2009).

Management Summary

Public meetings have been held in December each of the past 3 years, in addition to traditional season setting meetings held in March. Several changes to recent hunting seasons were made to increase elk harvest in managing toward the current objective, provide appropriate hunting opportunities, and where deemed appropriate to accommodate public concerns expressed at these meetings regarding hunter crowding. For the past 2 hunting seasons, we dealt with concerns about over-crowding and increased cow harvest. We continued with an antlerless season in Area 27 not tied to Area 25, with 100 Type 4 licenses valid only in Area 27. To increase female harvest in Area 25, we shifted the opening date for Type 6 licenses to November 1 to create a 3rd opening date and reduce crowding for the Type 1 and Type 4 seasons. These changes have been mostly successful and hunter complaints have diminished.

While considering options for future management, there seems to be overall support from hunters and land managers for the current number of elk. This led to adoption of an alternative objective of a mid-winter trend count close to the current number of elk. As such, there is less need for increased cow harvest to maintain this population where it stands. Therefore, for the 2015 seasons, we made only a few changes to the hunting season structure, with reductions of 25 Type 1 and 25 Type 4 licenses in Area 99. The past liberalization of seasons (increased quotas and season length extensions for cows) since 2009 has reduced elk in Area 99, and hunter crowding has increased while success has decreased. This hunt area is relatively small when it comes to occupied elk habitat during the hunting season (forested portions of the hunt area). We've heard increased interest in going back to an Any Elk season for Area 28 General Licenses, but also heard concerns about the potential for attracting too many hunters during that season. Therefore, we decided to reintroduce Any Elk hunting in Area 28 for the first 9 days of October for General License holders, then switching to Antlered only from October 10-22. This will allow us to gauge hunter numbers, increase cow harvest in Area 28 where winter counts have increased over the past several years, and hopefully reduce pressure on bulls which may lead to improved bull quality over time.

In an attempt to better delineate elk movements off the southeastern end of Area 25, we extended the hunt area boundary southerly to encompass the Cyclone Rim area south to the Rocky Crossing Road for the 2015 season (Figure 3). Seasonal ranges will need to be updated to match our understanding of elk use of the extended area.

We expect the 2015 seasons outlined above should result in a harvest of at least 600 elk with a stable cow harvest. If calf recruitment remains near the average, this harvest should stabilize or slightly reduce the population following the 2015 season.

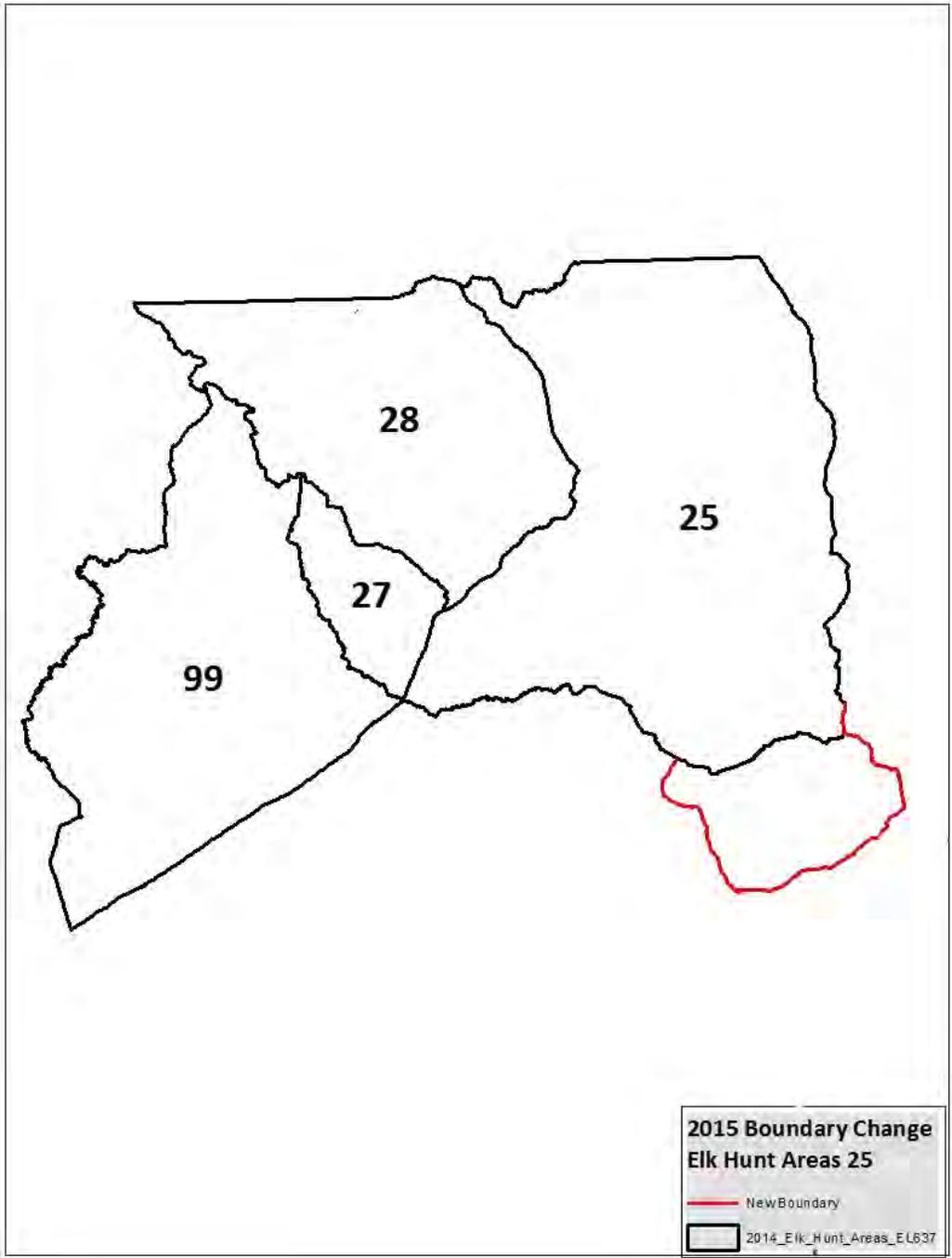
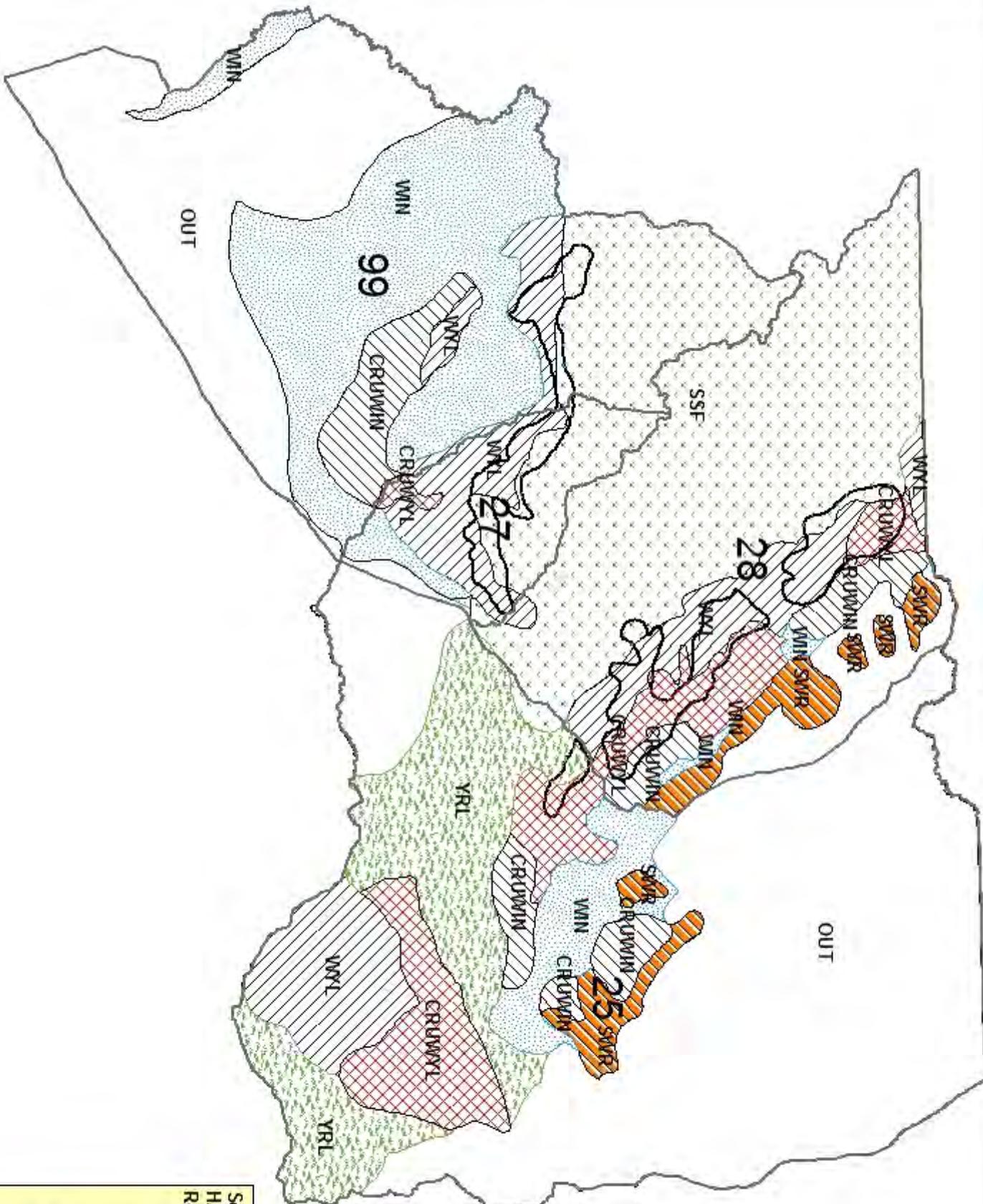


Figure 3. Boundary change effective in 2015 for South Wind River Elk Herd Unit and Elk Hunt Area 25 (red line).



South Wind River Elk (EL637)
 HA 25, 27, 28, 99
 Revised September 2011

Elk Hunt Area Boundaries
 Elk Seasonal Range
RANGE
 CRUWIN
 CRUWYL
 OUT
 SSF
 SWR
 WIN
 WYL
 YRL
 Partition

2014 - JCR Evaluation Form

SPECIES: Elk

PERIOD: 6/1/2014 - 5/31/2015

HERD: EL638 - GREEN MOUNTAIN

HUNT AREAS: 24, 128

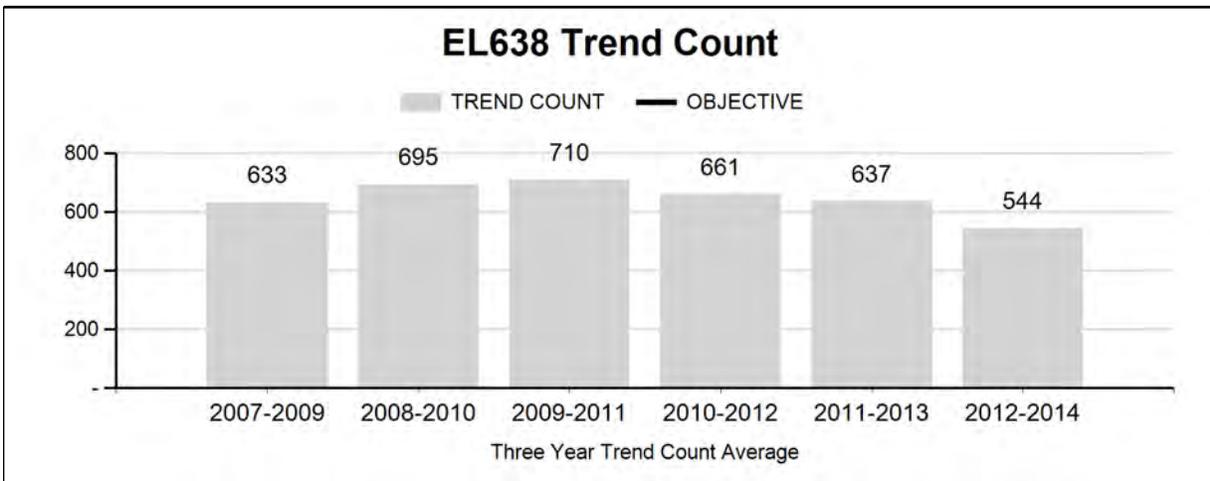
PREPARED BY: STAN HARTER

	<u>2009 - 2013 Average</u>	<u>2014</u>	<u>2015 Proposed</u>
Trend Count:	676	385	500
Harvest:	280	208	225
Hunters:	691	580	525
Hunter Success:	41%	36%	43%
Active Licenses:	697	584	550
Active License Success	40%	36%	41%
Recreation Days:	3,420	3,543	3,500
Days Per Animal:	12.2	17.0	15.6
Males per 100 Females:	40	13	
Juveniles per 100 Females	41	46	

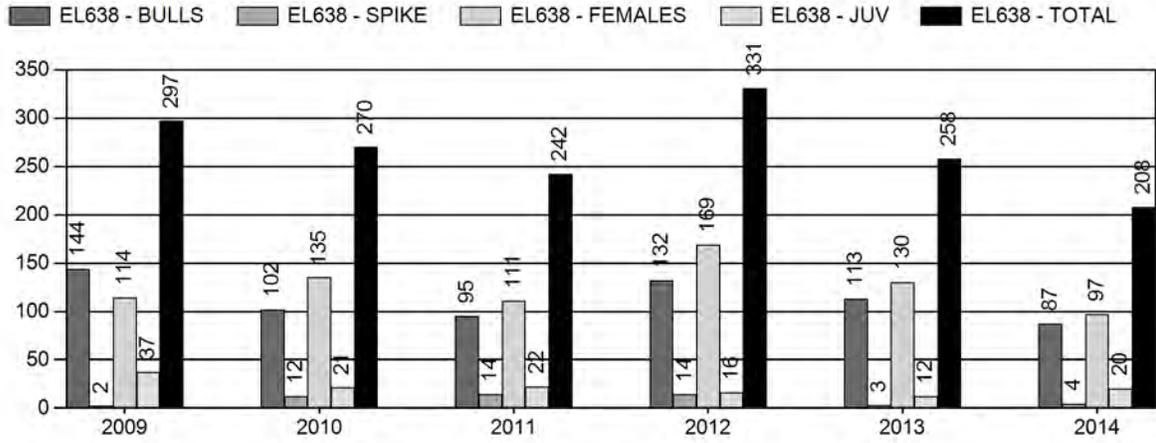
Trend Based Objective (\pm 20%) 500 (400 - 600)
 Management Strategy: Recreational
 Percent population is above (+) or (-) objective: -23%
 Number of years population has been + or - objective in recent trend: 0

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

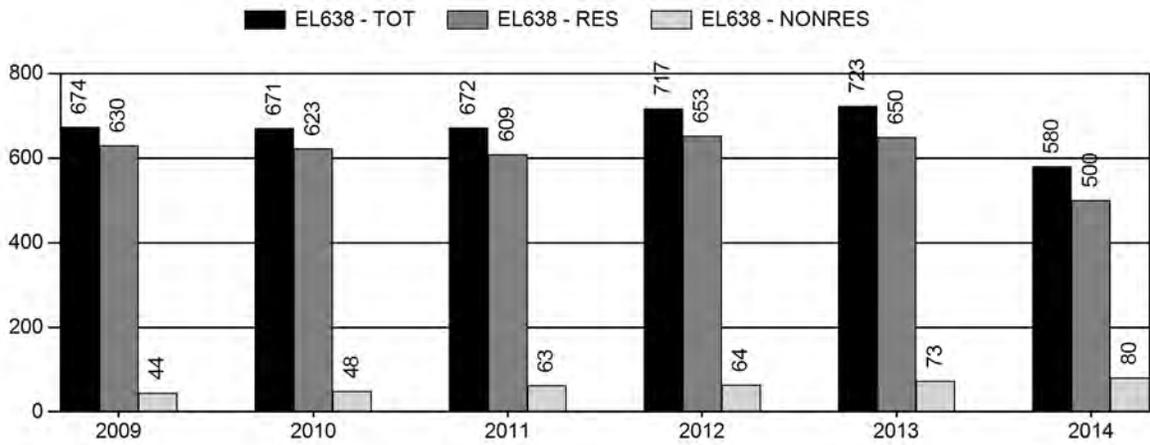
	<u>JCR Year</u>	<u>Proposed</u>
Females \geq 1 year old:	0%	0%
Males \geq 1 year old:	0%	0%
Juveniles (< 1 year old):	0%	0%



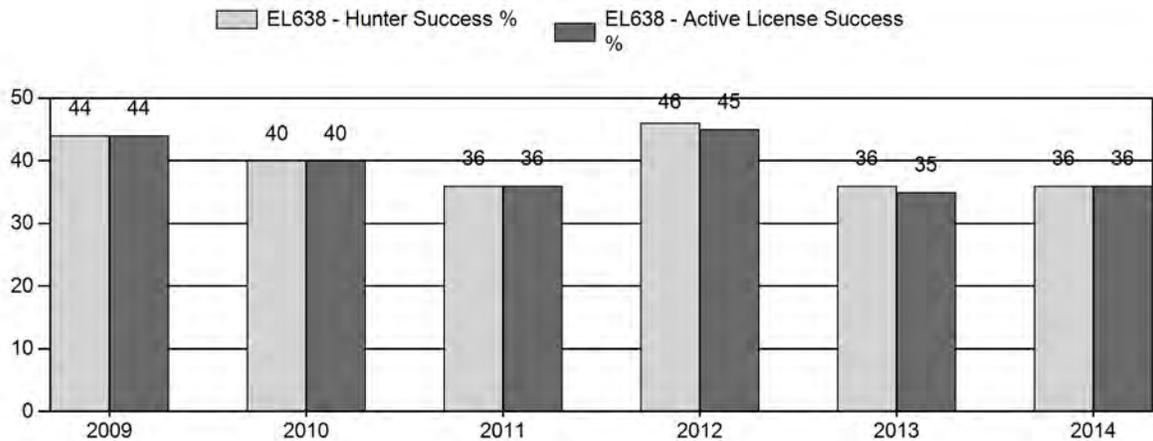
Harvest



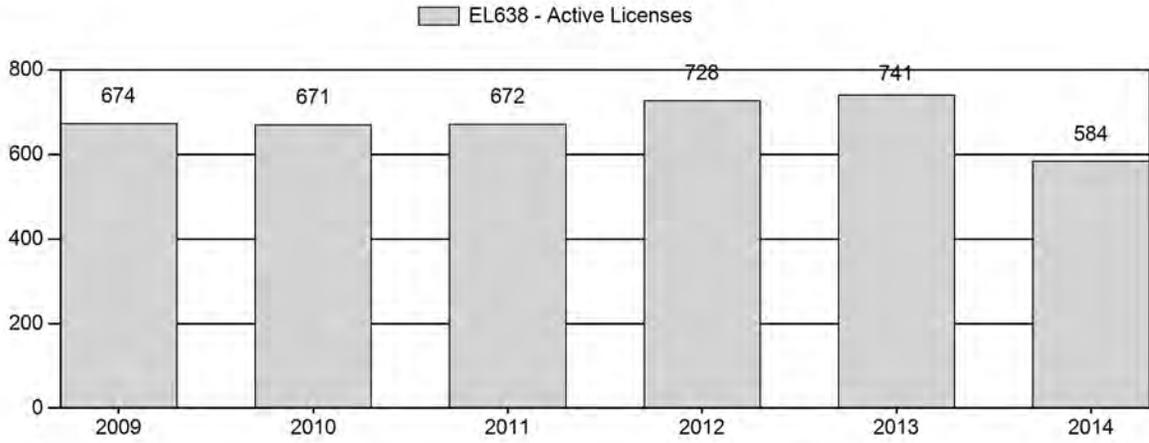
Number of Hunters



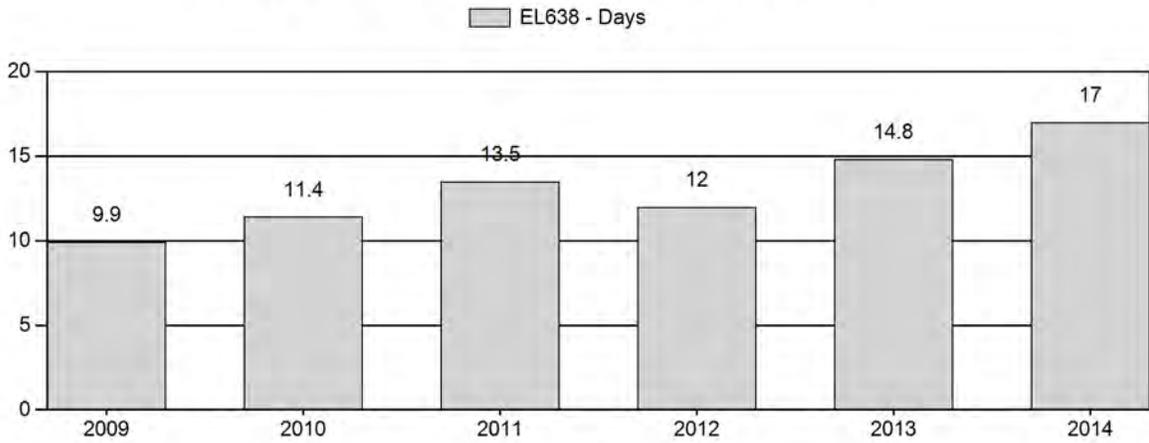
Harvest Success



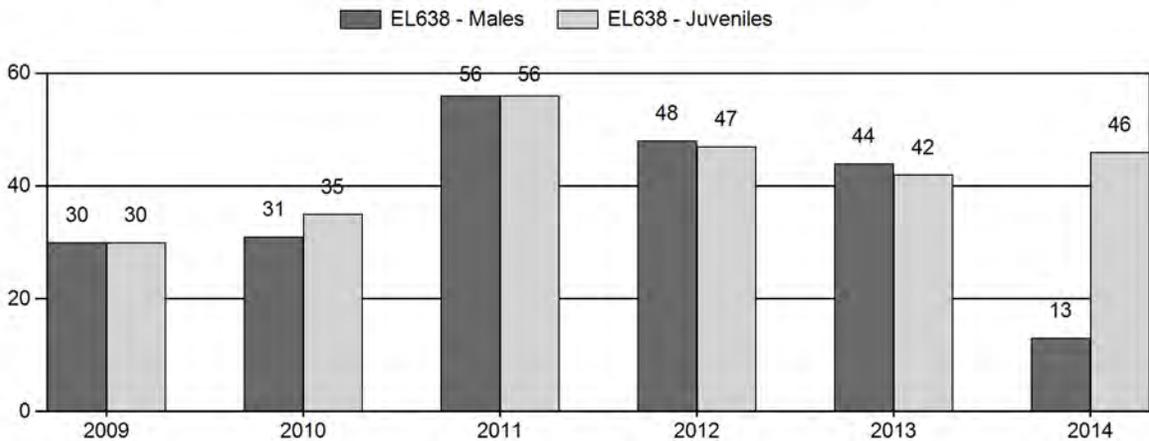
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2009 - 2014 Postseason Classification Summary

for Elk Herd EL638 - GREEN MOUNTAIN

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
2009	0	55	96	151	19%	503	63%	149	19%	803	0	11	19	30	± 0	30	± 0	23
2010	0	61	62	123	18%	401	60%	141	21%	665	0	15	15	31	± 0	35	± 0	27
2011	0	47	127	174	26%	313	47%	176	27%	663	0	15	41	56	± 0	56	± 0	36
2012	0	49	111	160	24%	336	51%	158	24%	654	0	15	33	48	± 0	47	± 0	32
2013	0	41	99	140	24%	319	54%	135	23%	594	0	13	31	44	± 0	42	± 0	29
2014	0	19	12	31	8%	243	63%	111	29%	385	0	8	5	13	± 0	46	± 0	41

**2015 HUNTING SEASONS
Green Mountain Elk Herd Unit (EL 638)**

HUNT AREA	TYPE	Season Dates		Quota	LIMITATIONS
		OPENS	CLOSES		
24	1	Oct. 1	Oct. 14	175	Limited quota; any elk Unused Area 24 Type 1 licenses valid for antlerless elk, also valid in Area 128
		Nov. 1	Nov. 30		
	4	Oct. 1	Oct. 14	50	Limited quota; antlerless elk Unused Area 24 Type 4 licenses, also valid in Area 128
		Nov. 1	Nov. 30		
24, 128	5	Nov. 1	Nov. 30	100	Limited quota; antlerless elk
128		Oct. 1	Oct. 14		General license; antlered elk
Archery 24, 128		Sept. 1	Sept. 30		Refer to Section 3 of this Chapter

Hunt Area	Type	Quota Changes from 2014
24	1	-25
Net Change	1	-25
Total EL638		-25

MANAGEMENT EVALUATION

Current Management Objective: 500 Mid-Winter Trend Count

Management Strategy: Recreation (15 – 29 bulls/100 cows)

2014 Mid-Winter Trend Count: 385

Most Recent 3-year Running Average Trend Count: 544

Herd Unit Issues/Population

The management objective for the Green Mountain Elk Herd Unit was changed in 2014 to a mid-winter trend count of 500 elk, based on a running 3-year average. All attempts to create a spreadsheet model for Green Mountain Elk were unsuccessful. Trend count data vary due to annual changes in snow depth, light and wind conditions during flights, and condition of habitats each winter. A key factor in our ability to detect elk in winter is the extreme variability and extent of winter habitats, which range from mixed aspen/conifer/sagebrush habitats to open sagebrush/grassland habitats. It is likely elk are inhabiting larger areas than currently designated/documented, with distances travelled subject to changes in weather, competition from other wild and domestic ungulates, hunting pressure, and annual timing of surveys. Plus, elk have been documented crossing hunt area and herd unit boundaries into vast expanses of open sagebrush/grassland habitats making detection difficult. Thus, we use a 3-year running average of the trend counts to avoid abrupt management decisions based solely on a single year's observations.

Weather/Habitat

Drought conditions were extreme to exceptional for most of the past two years, beginning with minimal snowfall in winter 2011-12 and continuing with almost no precipitation during spring and summer 2012. In April 2013, a series of several late winter/early spring snow storms produced heavy snow through early May in Jeffrey City, with more at higher elevations such as Green Mountain and Beaver Rim. These storms were extremely helpful in lessening the effects of drought, yet they only helped change the drought status from Extreme to Severe. Drought returned in summer 2013, with only 0.2 inches of precipitation recorded in Jeffrey City from June 1 to September 1. This reduced forage production in herbaceous and browse species across the herd unit, although some improvement over 2012 conditions was noted. Rain and snow returned to the area in September and October 2013, with nearly 300% of normal precipitation recorded in Jeffrey City with warm temperatures between early storms. Although winter 2013-14 had lower than average snowfall, the increase in soil moisture from the fall 2013 precipitation carried over into spring and was followed by good rainfall throughout most of the herd unit over summer 2014, leading to improvement in vegetation condition. Consequently, this led to improved post-season fawn/doe ratios and should result in improved survival over winter 2014-15. Winter 2014-15 was fairly mild, with above average temperatures and slightly below average snowfall/precipitation. Precipitation from April 1 through early May 2015 has been above average in Jeffrey City, and ahead of last year's pace. We anticipate habitat conditions will continue to improve as a result. We expect elk survival over winter was good, as the grasses they rely on had exceptional growth in 2014.

Field Data

The 2014 trend count/classification was conducted in early-December 2014 using a Bell 206 Jet Ranger helicopter while classifying mule deer. This year's flight was conducted with very light snow cover. Tracks of large groups of elk were observed in higher elevation conifer stands on Green Mountain without finding the elk groups. No elk were detected in Hunt Area 128, despite reports of elk there. Therefore, the 2014 trend count of 385 represents a minimum number of elk in the Green Mountain Herd Unit. The 3-year running average trend count of 544 elk (Figure 1) remains about 9% above objective. The resulting post-season calf/cow ratio of 46J/100F is about 12% above the previous 5-year average, while the observed bull/cow ratio of 13M/100F was well below average. With such poor survey conditions, we know we missed some large groups of elk, and likely missed several groups of bulls, making these ratios suspect.

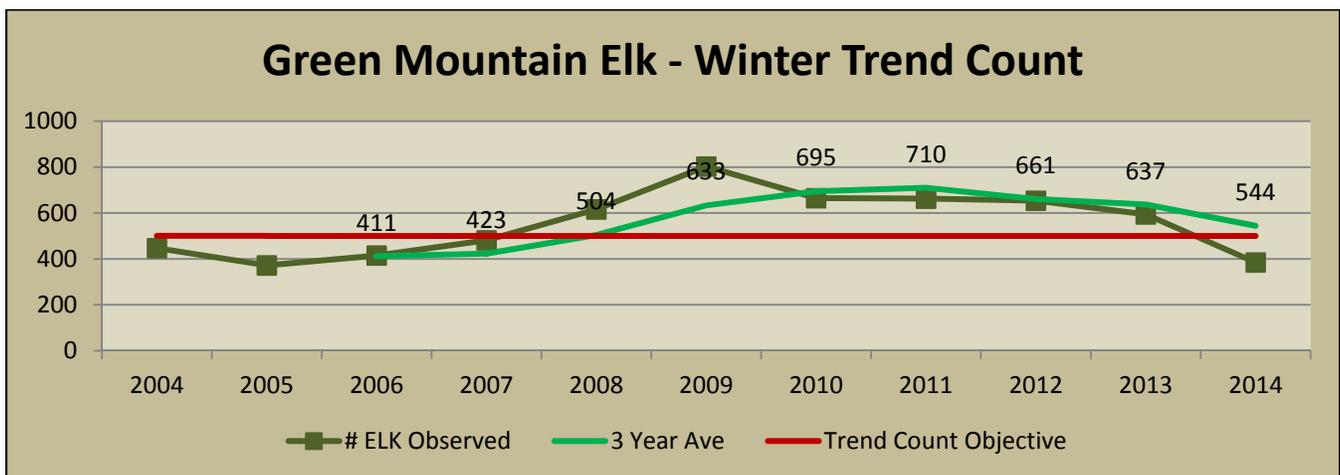


Figure 1. Trend count data for Green Mountain Elk, 2004 – 2014.

Harvest Data

In all, 208 elk were harvested in 2014, 50 less than in 2013. Hunter success increased in Area 24 this year, with 52% for the Type 1 any elk season, 31% and 52% respectively for Type 4 and Type 5 antlerless elk hunters. We made several modifications to the 2014 season structure, including reductions in license numbers in response to hunter crowding concerns and allowing Type 1 and 4 hunters to hunt in November if unsuccessful in October. This reduced crowding concerns overall and likely led to improved hunter success, along with better weather than in 2013. Even with increased hunter success, the number of days/animal harvested again increased in 2014 to 17 days/elk killed, causing concern elk may have left the herd unit during the hunting season.

Management Summary

In response to numerous public complaints regarding hunter crowding and the early cow/calf season, the 2014 hunting seasons were adjusted quite dramatically to maintain or increase harvest, and reduce hunter crowding. In the past 10 years, we had nearly doubled license numbers in Area 24 to increase harvest and manage toward objective. Yet, as illustrated in Figure 2, increasing license numbers did not result in similar increases in harvest.

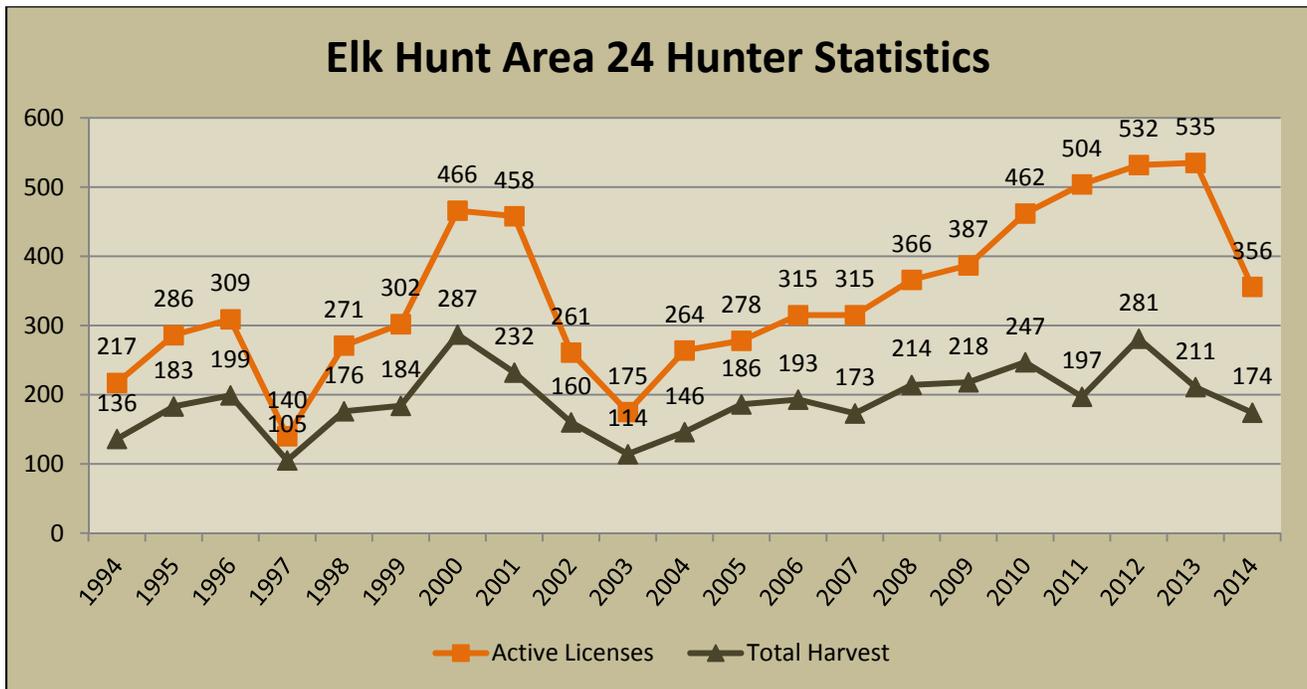


Figure 2. Comparison of elk license numbers and elk harvest trends in Elk Hunt Area 24, 1994-2014.

The 2014 post-season bull/cow ratio of 13M/100F seems quite low and is not believed to be a true representation of the number or proportion of bulls in Area 24. But, to avoid overharvesting bulls in Hunt Area 24 and in response to Type 1 hunter success in 2014 being among the lowest in 10 years, we reduced Type 1 any elk licenses by 25 in 2015. Due to an administrative error prior to the Commission meeting in April, hunters with unused Area 24 Type 1 licenses will be allowed to harvest Any Elk in November 2015 rather than antlerless only as intended. While this could increase bull harvest counter to our intent, we don't believe the increase will be substantial and the 2015 season should maintain bull numbers at or near "recreational" management levels.

To continue to tackle hunter crowding concerns from the public, but still place emphasis on harvesting female elk, we are maintaining the number of Area 24 Type 5 licenses at 100, and allowing Area 24 Type 1 and 4 hunters who are not successful in October to hunt in November in both Hunt Areas 24 and 128. Similarly, some Area 23 (Rattlesnake Elk Herd Unit) hunters will have the ability to hunt in Area 128 from mid-November to mid-December, mostly targeting elk that move off the Rattlesnake Hills into the Gas Hills/Beaver Rim area. Anticipated harvest levels should continue to reduce the population. We are changed the General License season in Hunt Area 128 from Any elk to Antlered in 2015 in response to observed high hunter densities in portions of the hunt area, which prompted some concerns from area landowners, especially in the west half of the hunt area. We are focusing cow harvest in Area 128 with late-season opportunities as described above. In an attempt to better manage elk movements off the southwestern end of Area 24, we extended the hunt area boundary southerly to encompass the Lost Creek area south to the Osborne Road for the 2015 season (Figure 3). Seasonal ranges will need to be updated to match our understanding of elk use of the extended area. The expected 2015 harvest should consist of at least 225 elk, mostly from Area 24, and continue to decrease the population.

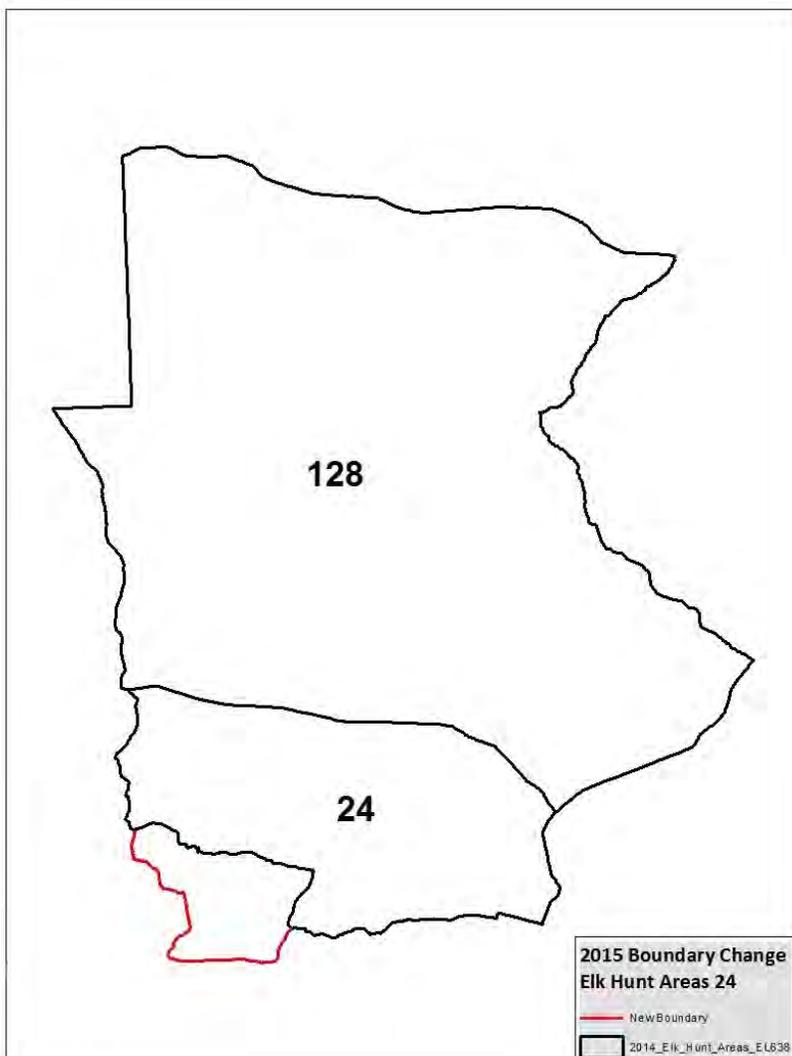
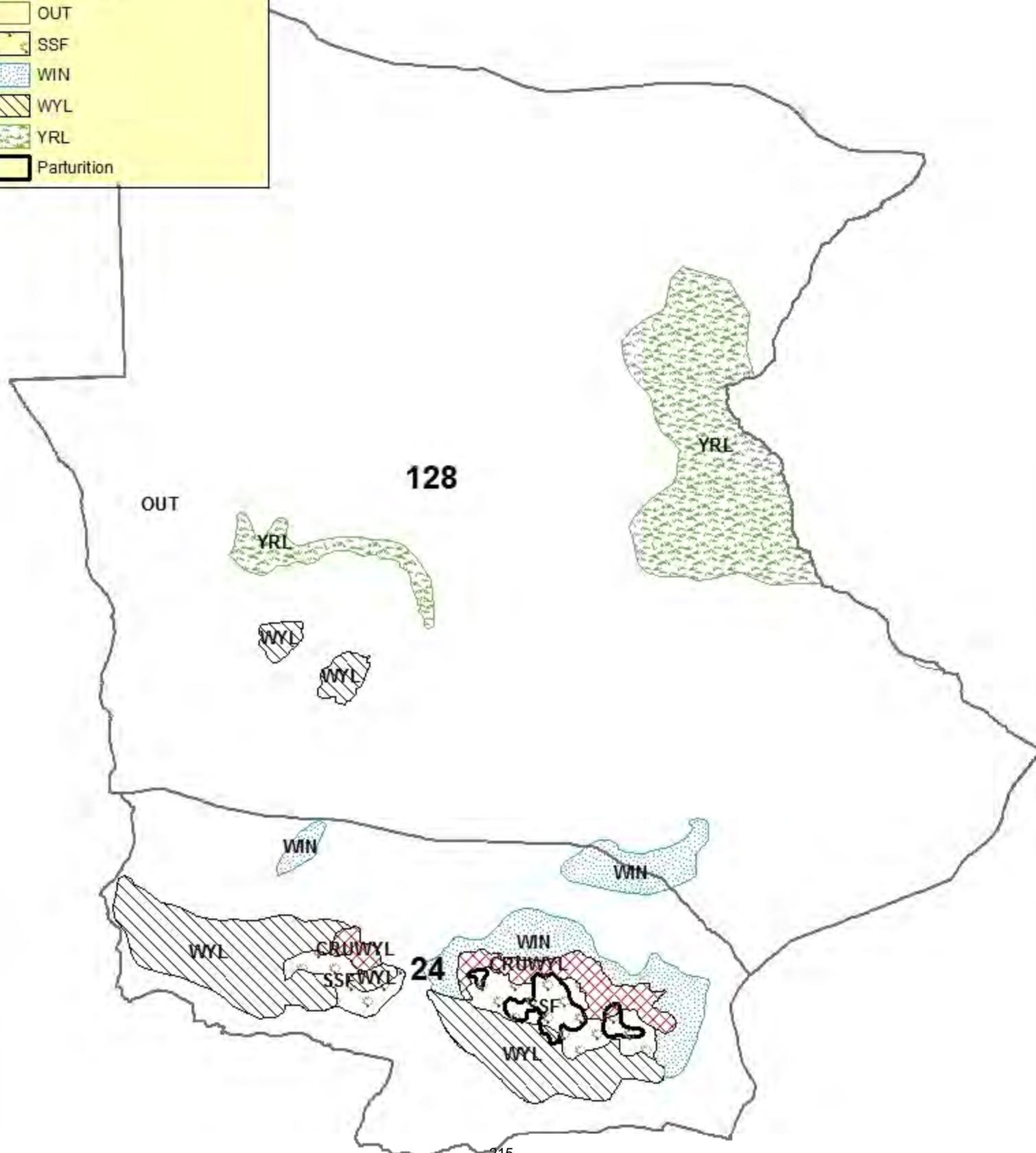


Figure 3. Boundary change effective in 2015 for Green Mountain Elk Herd Unit and Elk Hunt Area 24 (red line).

Green Mountain Elk (EL638)
HA 24, 128
Revised January 2012

 ELK Hunt Area Boundaries
Elk Seasonal Range
RANGE
 CRUWYL
 OUT
 SSF
 WIN
 WYL
 YRL
 Parturition



2014 - JCR Evaluation Form

SPECIES: Elk
 HERD: EL639 - FERRIS
 HUNT AREAS: 22, 111

PERIOD: 6/1/2014 - 5/31/2015
 PREPARED BY: GREG HIATT

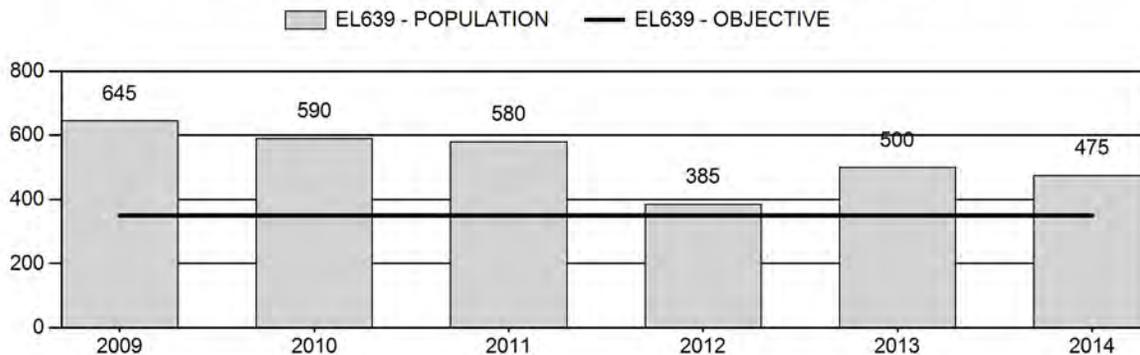
	<u>2009 - 2013 Average</u>	<u>2014</u>	<u>2015 Proposed</u>
Population:	540	475	440
Harvest:	151	96	105
Hunters:	273	188	205
Hunter Success:	55%	51%	51 %
Active Licenses:	282	191	205
Active License Success:	54%	50%	51 %
Recreation Days:	1,878	1,285	1,620
Days Per Animal:	12.4	13.4	15.4
Males per 100 Females	48	87	
Juveniles per 100 Females	36	50	

Population Objective (± 20%) :	350 (280 - 420)
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	36%
Number of years population has been + or - objective in recent trend:	34
Model Date:	None

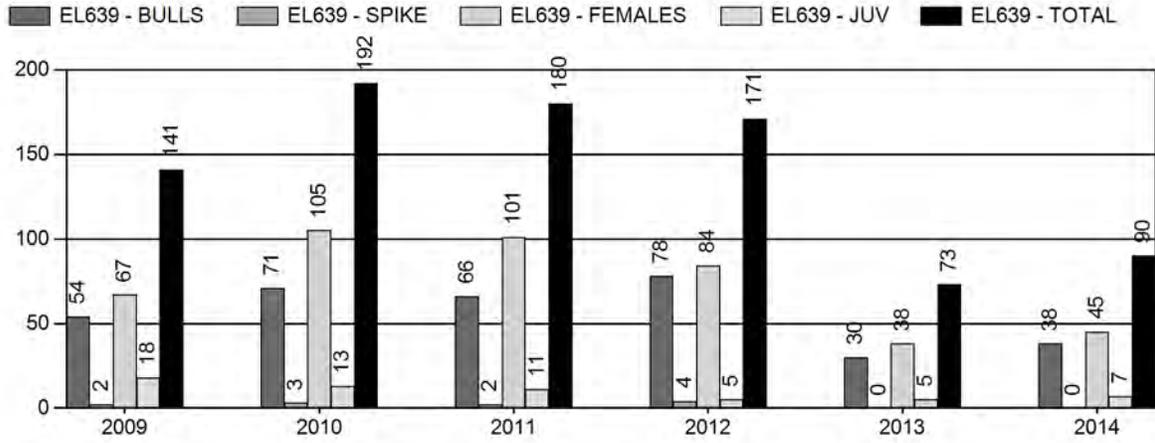
Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	<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%
Total:	0%	0%
Proposed change in post-season population:	-3%	-7%

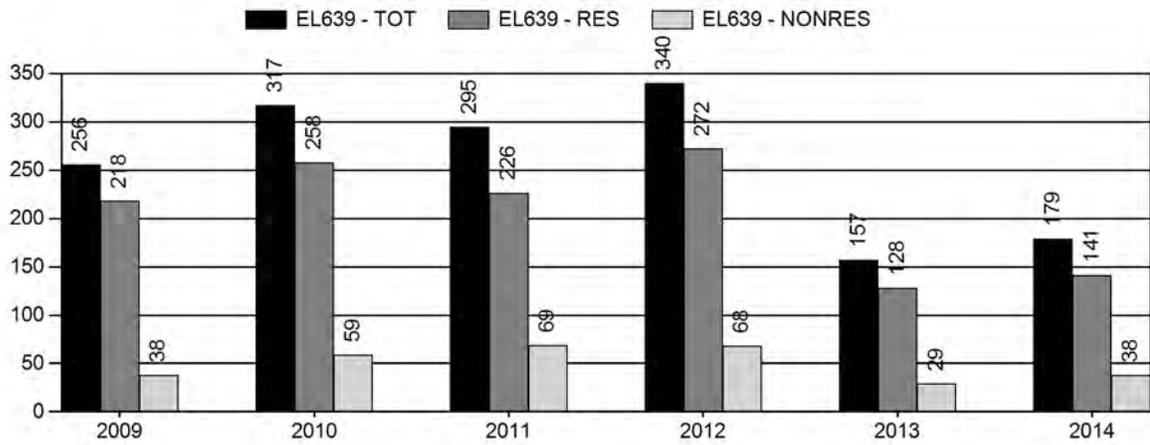
Population Size - Postseason



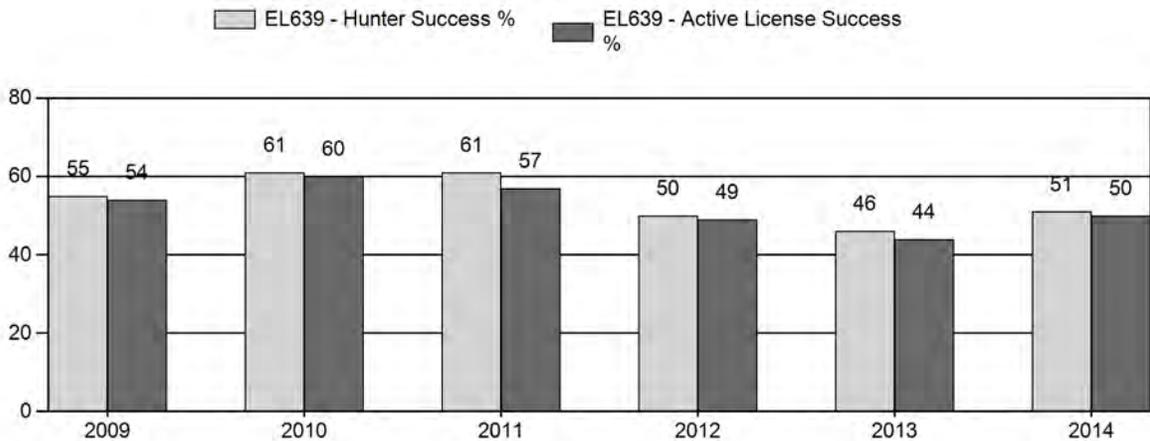
Harvest



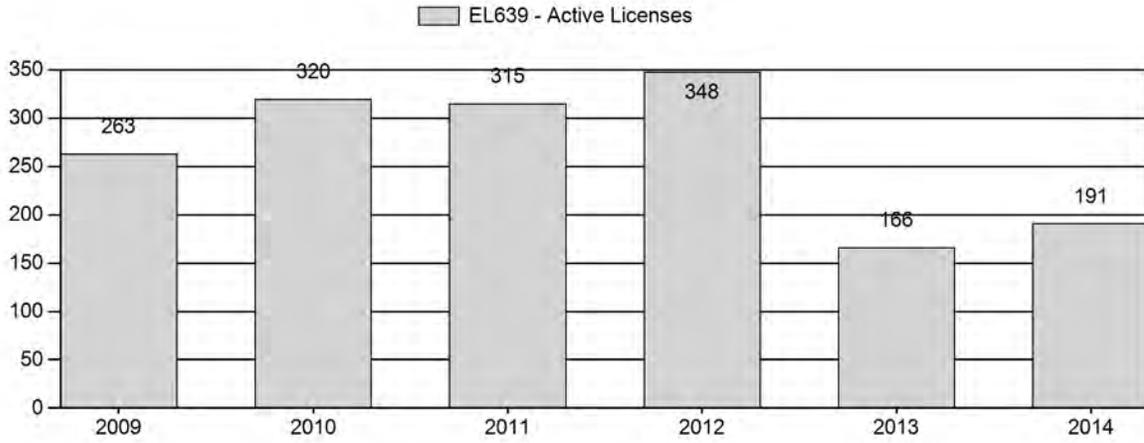
Number of Hunters



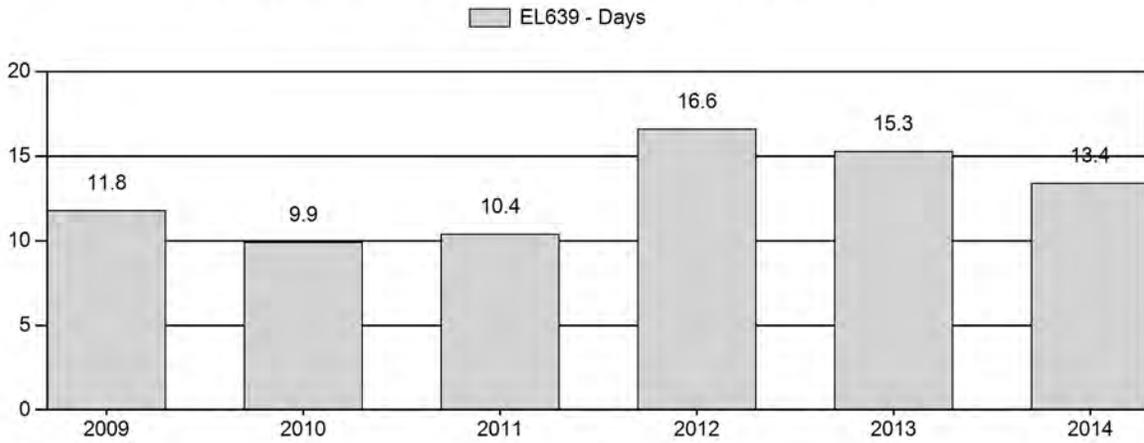
Harvest Success



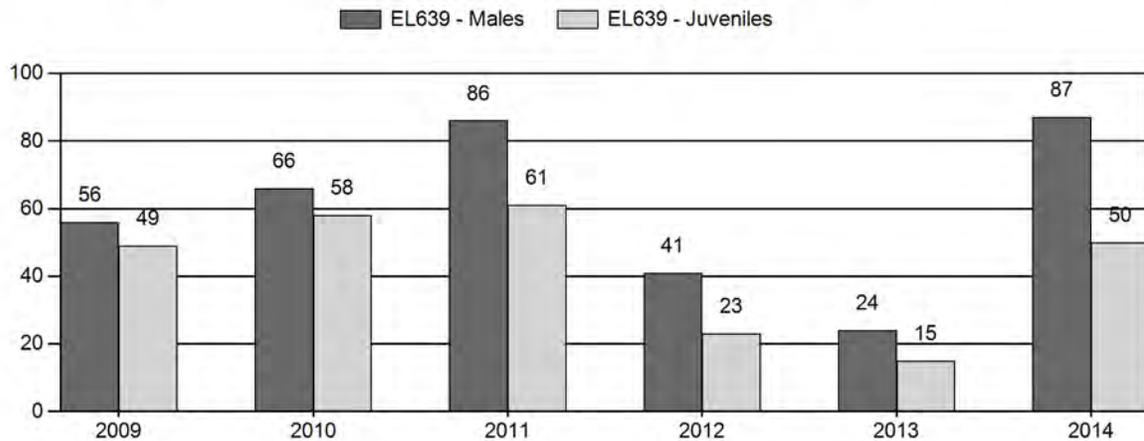
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2009 - 2014 Postseason Classification Summary

for Elk Herd EL639 - FERRIS

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
2009	645	56	116	172	27%	305	49%	150	24%	627	416	18	38	56	± 0	49	± 0	31
2010	590	25	53	78	29%	119	45%	69	26%	266	432	21	45	66	± 9	58	± 8	35
2011	580	23	87	110	35%	128	41%	78	25%	316	474	18	68	86	± 10	61	± 8	33
2012	385	25	50	75	25%	182	61%	42	14%	299	237	14	27	41	± 3	23	± 2	16
2013	500	34	49	83	17%	353	72%	54	11%	490	176	10	14	24	± 1	15	± 0	12
2014	475	39	112	151	37%	174	42%	87	21%	412	400	22	64	87	± 5	50	± 3	27

**2015 HUNTING SEASONS
FERRIS ELK HERD (EL639)**

Hunt Area	Type	Dates of Seasons		Quota	Limitations
		Opens	Closes		
22	1	Oct. 8 Nov. 1	Oct.-31 Jan. 31	40	Limited quota; any elk Unused Area 22 Type 1 licenses valid for antlerless elk
	6	Oct. 8 Nov. 1	Oct. 31 Jan. 31	25	Limited quota; cow or calf valid in the Muddy Creek drainage Unused Area 22 Type 6 licenses valid in the entire area
111	1	Oct. 10	Oct. 31	25	Limited quota; any elk
	4	Oct. 10 Nov. 1	Oct. 31 Jan. 31	25	Limited quota; antlerless elk Unused Area 111 Type 1 and Type 4 licenses valid for antlerless elk in that portion of Area 111 off the Wyoming Game and Fish Commission's Morgan Creek Wildlife Habitat Management Area
	6	Nov. 1	Jan. 31	125	Limited quota; cow or calf valid in that portion of Area 111 off the Wyoming Game and Fish Commission's Morgan Creek Wildlife Habitat Management Area
Archery 22, 111		Sep. 1	Sep. 30		Refer to Section 2 of this Chapter

Hunt Area	Type	Quota change from 2014
22	1	+15
	6	0
111	1	0
	4	0
	6	0
Total	1	+15
	4	0
	6	0

Management Evaluation

Current Management Objective: 350

Management Strategy: Special

2014 Postseason Population Estimate: ~475

2015 Proposed Postseason Population Estimate: ~440

The management objective for the Ferris Elk Herd Unit is a post-season population objective of 350 elk. The management strategy is “special” management, with bull:cow ratios allowed to exceed 30:100 and the proportion of branch-antlered bulls expected to exceed 66 percent of the antlered harvest. The population objective and management strategy were last publicly reviewed in 2012. All affected major landowners strongly endorsed keeping the population objective of 350 elk.

Herd Unit Issues

Access is a major issue with this herd unit. While there are large blocks of accessible, public land, refugia created by several large ranches that are either closed to hunting or greatly limit hunter numbers have prevented harvest from most of the elk in this herd unit, particularly in Area 111. As license quotas are increased to reduce elk numbers to objective, the lack of hunter access to these animals leads to over-harvest of public land areas while still preventing the harvest necessary to reach the population objective.

Weather

Drought conditions in 2012 and 2013 continued into the first half of 2014, with significant precipitation not arriving until the last quarter of July. Precipitation during the following three months produced good vegetative growth, but was probably too late to significantly improve calf survival. Condition of elk going into the winter is expected to have been good. The 2014-15 winter had numerous bitter cold spells, coupled with unusually warm periods, but little significant snowfall until late February. Large numbers of elk were found outside crucial winter ranges during a December classification flight, indicative of a mild winter.

Habitat

While no herbaceous habitat transects are established within this herd unit, herbaceous forage production is expected to have improved in 2014 due to increased precipitation during late summer and fall. Two browse transects have been established in this herd unit, but one was burned by fire in 2012 and the other was not read in 2014.

Over the past several years the Rawlins BLM has implemented prescribed burns in the Seminole and Ferris Mountains, partly to address conifer encroachment while also rejuvenating decadent mountain mahogany and bitterbrush stands. In the summer of 2012, two large wildfires in the Seminole Mountains and the eastern Ferris Mountains burned thousands of acres. These prescribed burns and the recent wildfires should benefit elk as herbaceous forage reclaims burned areas.

The Seminole Fire burned over 3,800 acres in the Seminole Mountains including areas within Morgan Creek WHMA. As in 2012 and 2013, the Rawlins BLM again coordinated and funded aerial application of Plateau® in 2014 to mitigate cheatgrass spread on BLM and WGFD managed areas within the fire perimeter. The wildfire enveloped several previously planned prescribed burns, although not with the desired prescriptions.

Plans for additional prescribed fires in the Seminole Mountains, particularly on the Morgan Creek WHMA, have been accelerated to take advantage of the secure fire breaks provided by the 2012 wildfire.

Field Data

Obtaining reliable classification samples from small populations is difficult because, statistically, the majority of the population must be included in the sample to have any confidence in the resulting ratios. Ratios collected for this herd are further skewed because elk in this herd are not distributed randomly among the winter bands. Missing any of a handful of bachelor bull herds will significantly under-estimate bull:cow ratios. Failure to classify even one of the large cow/calf bands will greatly over-estimate bull:cow ratios, as happened in 2011. Without reliable, consistent herd ratios, spreadsheet modeling for this small herd does not work.

Conditions during a helicopter trend count in December 2014 were good, and all 412 elk counted were also classified, yielding the second largest sample since 2009. Unlike the 2013 survey, elk numbers were nearly evenly split between the two hunt areas in 2014, with 217 being found in Area 22 and 195 in Area 111. More than 70 percent of the antlered elk were found in Area 22, many of these on the south side of the Ferris Mountains, outside normal wintering areas. At least one large cow/calf band reported in Area 111 was not found, suggesting the heavily skewed bull:cow ratios seen in 2011 may have been repeated this year.

Calf production increased to 50:100, well above the record low ratios recorded in 2012 and 2013. Improved precipitation increased calf production in both areas, at 57:100 in Area 22 and 45:100 in Area 111.

Since most bull groups appear to have been located, and at least one cow/calf group was not, the bull:cow ratio from the 2014 classification sample is probably skewed high. The 2014 ratio of 87:100 is well above the minimum for special management, and more than triple the 24:100 ratio recorded in 2013 with a better sample. Bull:cow ratios were similar between the two areas in 2013, but in 2014 Area 111 had 42:100 while Area 22 had an incredible 153:100 bull:cow ratio. Both areas met the special management criterion.

The spike:cow ratio rose to 22:100, the highest in at least nine years, despite record low calf production in 2013. This ratio also differed between the two hunt areas, with Area 22 again having an exceptional 40:100 and Area 111 having only 10:100. Since the two areas had similar calf production in 2013 and essentially no spike harvest, this disparity suggests a large number of antlered elk were wintering in Area 22 that normally would be in Area 111.

Harvest Data

Success for hunters with Type 1 licenses increased in both hunt areas in 2014. The 77 percent success seen for these license types in Area 111 was near normal levels, but Type 1 hunters in Area 22 reported an exceptional 96 percent success. This, coupled with a decline in the average number of days hunted for each elk taken, suggests many of the bulls seen in Area 22 during the classification survey were also there during the hunt. The proportion of antlerless elk taken on Type 1 licenses increased slightly, to 9 percent. The average number of days hunted per elk harvested off this license type declined for both areas, and was the lowest for each in ten years. Like the classification data, these harvest statistics suggest the supply of bulls in this herd has improved, particularly in Area 22.

Beginning in 2010, Type 6 licenses in Area 22 were restricted to the Muddy Creek drainage for the first portion of the 5-week season to address damage concerns on irrigated hayfields. Initial success for hunters with these licenses was high, at 72 percent, but has steadily declined and was only 21 percent in 2013 and 25 percent in 2014. The average number of days hunted per elk harvested on these licenses began at 5 days in 2010 and has steadily risen to 28 days in 2013 and 26 days in 2014. This license strategy has apparently successfully reduced the number of elk found on these irrigated fields in the fall.

To address a problem of inadequate harvests resulting from poor license sales, most of the antlerless licenses in Area 111 were converted into reduced price cow/calf licenses beginning in 2009. To address crowding issues in the Seminole Mountains and to direct harvest to the segments of the herd protected by ranches with limited access during the fall hunt, those cow/calf licenses were not valid on the Morgan Creek WHMA. Success for hunters with these licenses had dropped off each year since, yielding only 39 percent success in 2014, despite the extended season. Hunters able to hunt the entire area with Type 4 antlerless elk had even poorer success, at 32 percent.

Population

Past efforts to model this herd using standardized values for some parameters in POP-II failed, as did recent efforts to employ spreadsheet modeling. As a result, population estimates and harvest recommendations have been based on winter trend counts. In years when counting conditions were not favorable, estimates of herd size are made using the most recent reliable trend count, adding annual calf production and subtracting harvest for each intervening year. Conditions were ideal during the 2013 winter trend count, when 490 elk were found. Snow cover was less ideal in 2014 and only 412 elk were recorded. Based on the past two trend counts, the herd is still well above objective but reduced by 20-35 percent from high numbers seen in 2009. Bands of antlered elk appear to cross the boundary between the two areas frequently, but Area 111 had at least 60 percent of the cows in the 2014 trend count. Most of the surplus elk are still in Area 111 where access is limited, with numbers of cows in Area 22 remaining low.

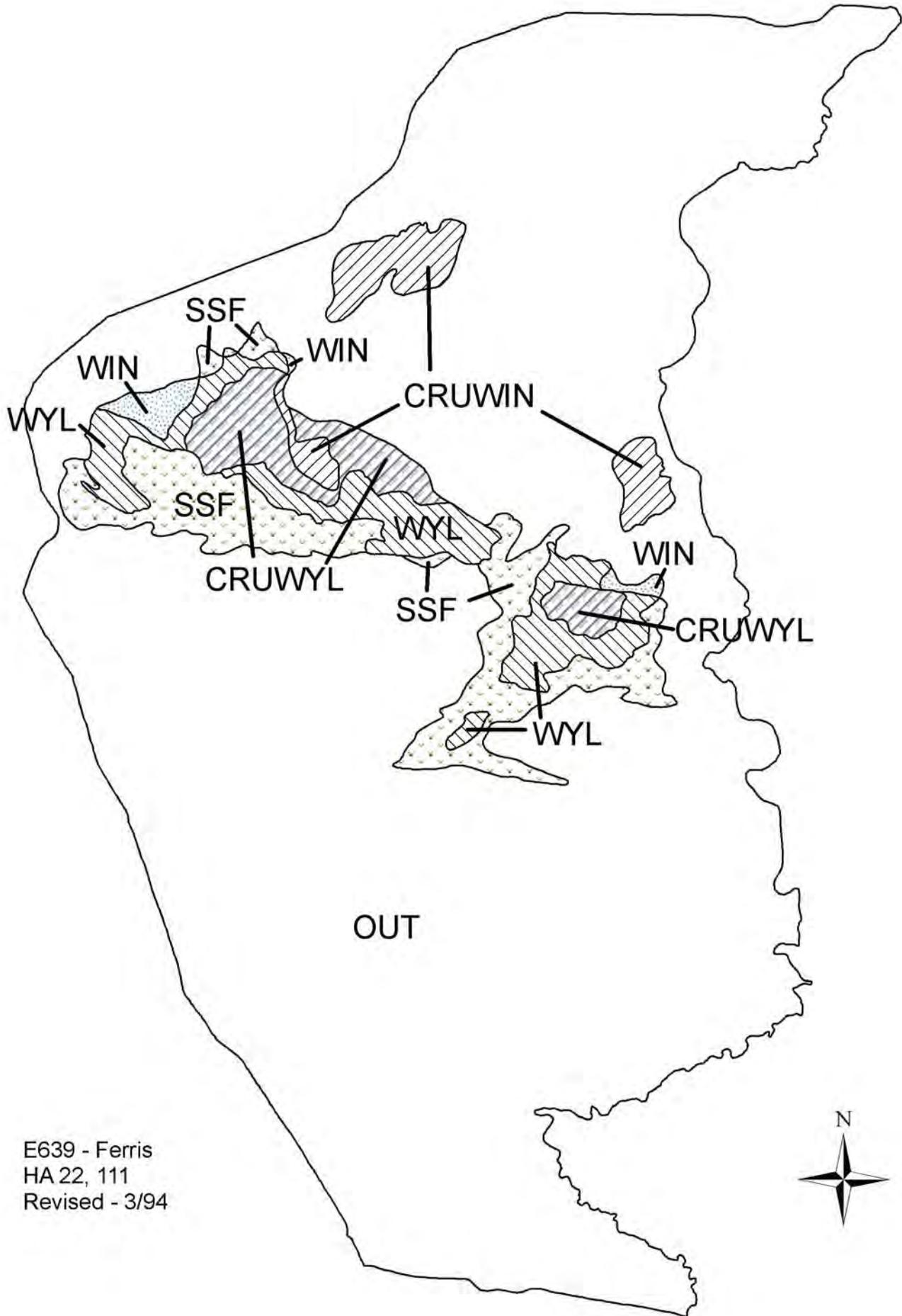
Management Evaluation

License quotas were reduced in 2013 in response to the low 2012 trend count, poor hunter success and low calf production, intended to maintain herd reduction while providing reasonable chances of success for hunters applying for such tags. This was the proper response for Area 22,

but elk numbers were still above objective in Area 111 and quotas for that area were increased by 75 in 2014. While the high bull:cow ratio seen in Area 22 is probably skewed by elk dispersing outside normal wintering areas, hunter success for the Type 1 licenses indicate there was a good supply of bulls in that area. An increase of 15 Type 1 licenses is proposed for that area, with other quotas remaining unchanged to continue reduction of this herd towards objective of 350. Expected harvest from the 2015 seasons would be about 105 elk, with roughly 60 percent being antlerless. About 60 percent of the harvest should come from Area 111. Assuming normal calf production and hunter success, the herd should be reduced to approximately 440 elk in 2015.

Comments from several major landowners indicated they want elk harvested from this herd, but do not want public hunters on their lands. This herd offers an unusual opportunity where large portions of summer/fall habitats are on private lands with limited or no public access, but many winter ranges are on accessible public lands. Hence a strategy was initiated with an emergency regulation in 2012 and continued in 2013 and 2014 to allow hunters to pursue antlerless elk as late as January, where most of the elk are expected to be on public land. The intent is to achieve harvest of the reproductive segment of most of the elk herd, not just the segments which are publicly available in the fall. This same strategy is repeated in the 2015 seasons. Barring changes in access across private lands, elk occupying the Haystack Mountains in checker-boarded lands in Area 111 will continue to be unavailable to most hunters.

All 2015 license types are consistent with the application booklets. Opening dates in both areas are consistent with the application booklets. Closing dates are the same as in the 2014 season. Archery seasons coincide with local deer archery seasons and archery seasons in neighboring elk areas.



2014 - JCR Evaluation Form

SPECIES: Elk

PERIOD: 6/1/2014 - 5/31/2015

HERD: EL643 - SHAMROCK

HUNT AREAS: 118

PREPARED BY: GREG HIATT

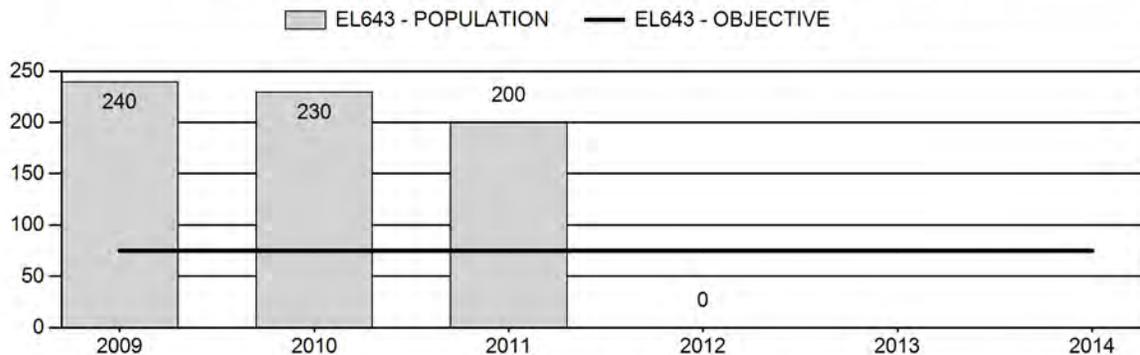
	<u>2009 - 2013 Average</u>	<u>2014</u>	<u>2015 Proposed</u>
Population:	134	N/A	N/A
Harvest:	61	47	40
Hunters:	99	66	70
Hunter Success:	62%	71%	57 %
Active Licenses:	102	72	70
Active License Success:	60%	65%	57 %
Recreation Days:	486	351	350
Days Per Animal:	8.0	7.5	8.8
Males per 100 Females	0	0	
Juveniles per 100 Females	0	0	

Population Objective (± 20%) :	75 (60 - 90)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	N/A%
Number of years population has been + or - objective in recent trend:	0
Model Date:	None

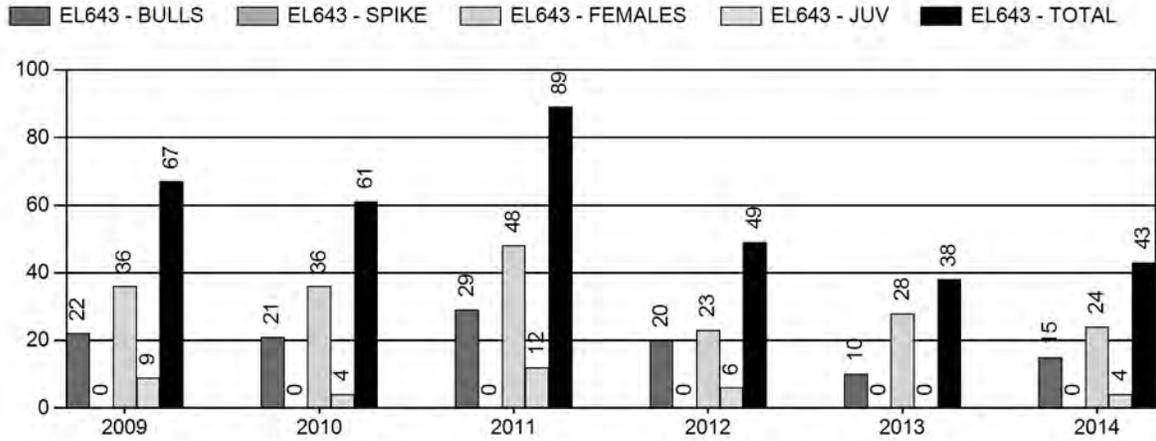
Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	<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%
Total:	0%	0%
Proposed change in post-season population:	0%	0%

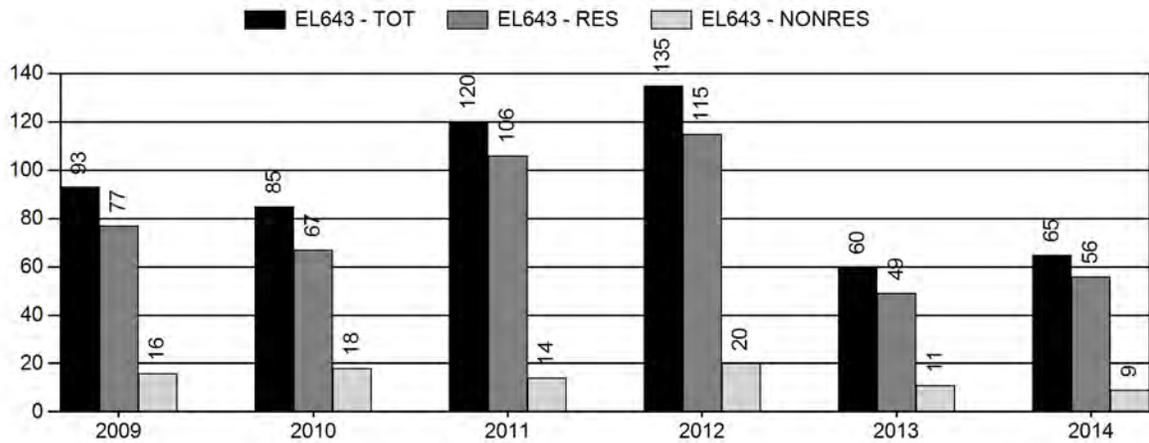
Population Size - Postseason



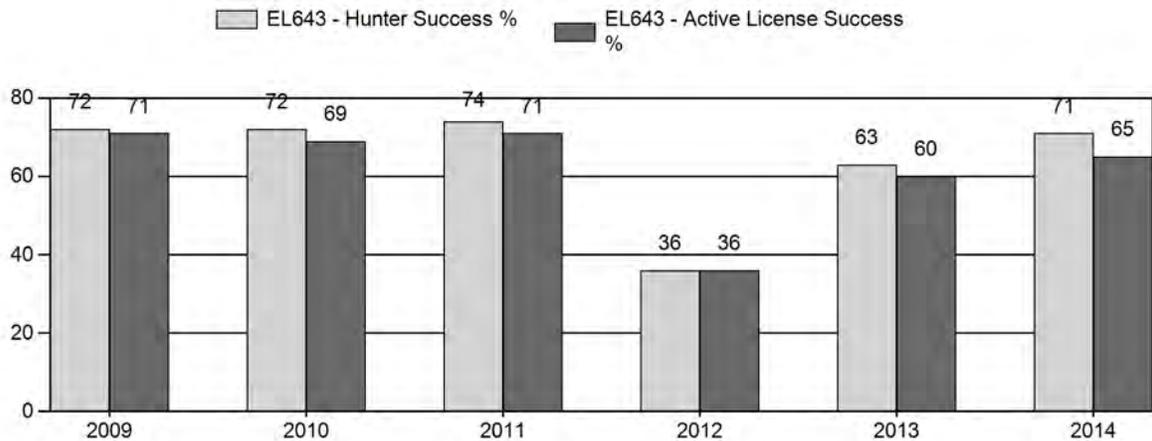
Harvest



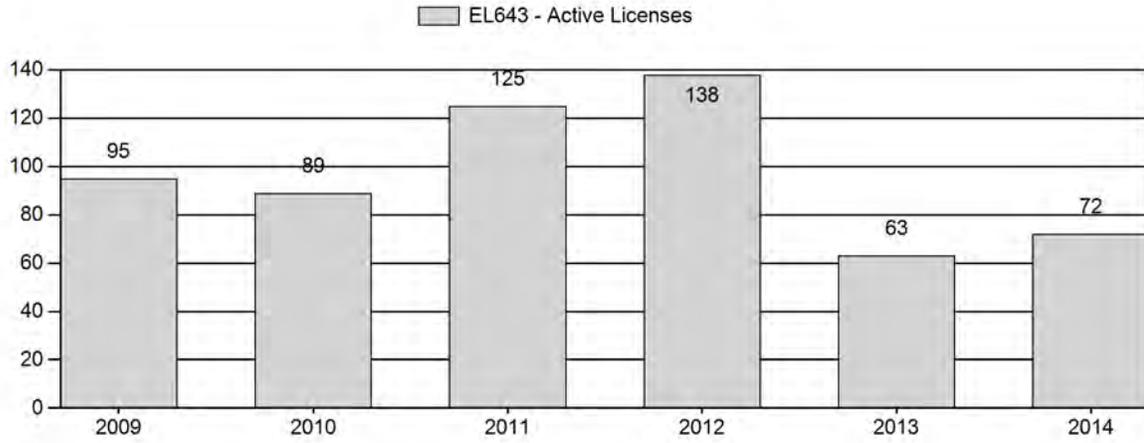
Number of Hunters



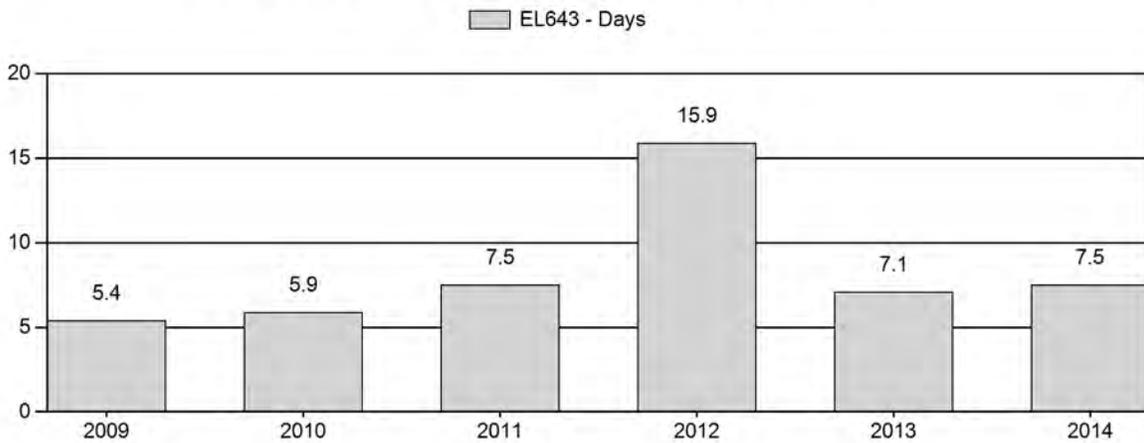
Harvest Success



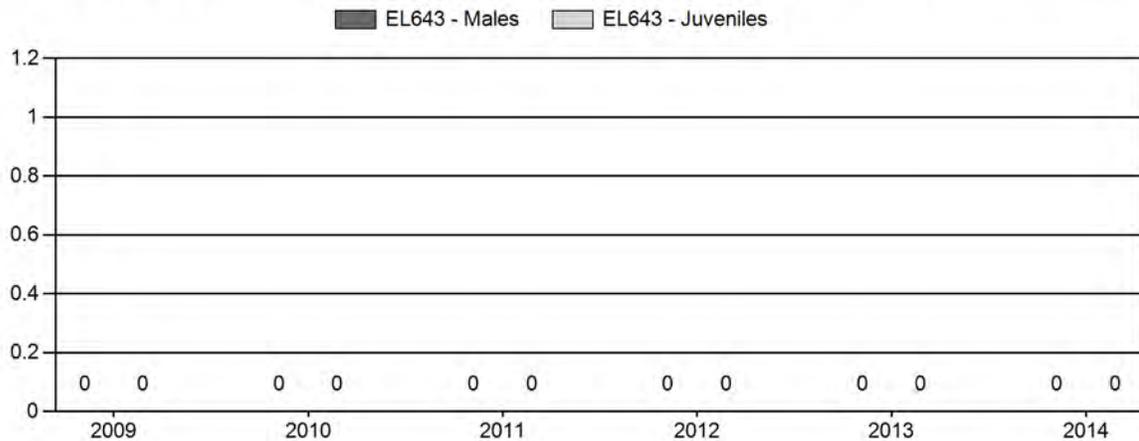
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2009 - 2014 Postseason Classification Summary

for Elk Herd EL643 - SHAMROCK

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
2009	240	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	±0	0	±0	0
2010	230	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	±0	0	±0	0
2011	200	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	±0	0	±0	0
2012	0	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	±0	0	±0	0
2013	0	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	±0	0	±0	0
2014	0	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	±0	0	±0	0

**2015 HUNTING SEASONS
SHAMROCK ELK HERD (EL643)**

Hunt Area	Type	Dates of Seasons		Quota	Limitations
		Opens	Closes		
118	1	Oct. 23	Nov. 12	25	Limited quota; antlered elk
	4	Oct. 23	Nov. 12	25	Limited quota; antlerless elk
	6	Oct. 1	Nov. 30	25	Limited quota; cow or calf valid south of the Mineral X Road (Sweetwater County Road 63 and BLM Road 3206)
Archery					
118		Sep. 1	Sep. 30		Refer to Section 2 of this Chapter

Hunt Area	Type	Quota change from 2014
118	1	0
	4	0
	6	0
Total	1	0
	4 & 6	0

Management Evaluation

Current Management Objective: 75

Management Strategy: Recreation

2014 Postseason Population Estimate: N/A

2015 Proposed Postseason Population Estimate: N/A

The management objective for the Shamrock Elk Herd Unit is a post-season population objective of 75 elk. The management strategy is recreational management. This objective and management strategy were first established in 1984, when elk were found almost exclusively in the southeastern quarter of the herd unit, and were last publicly reviewed in 1994. The objective and management strategy are currently under public review with a change to a landowner and hunter satisfaction objective proposed.

Herd Unit Issues

This herd consists of bands of elk scattered in open sagebrush desert with three main areas of concentration in the southeast, southwest and the northeast corners of the herd unit. Observations have documented movement of bands of elk between these three concentration areas, as well as into Area 100 to the west, producing uncertainty on the actual numbers of elk in the population. Aerial trend counts have been attempted, but often failed to find elk in all three areas simultaneously. Snow cover is rarely adequate for good visibility of elk from an aircraft.

Classification samples have been too small and inconsistent to allow for a reliable herd population model to guide management. As a result, license quotas have been based upon harvest statistics and simple assumptions of annular herd growth and harvest.

These bands of elk are highly mobile, and observations before and during the 2012 hunt suggested a significant number of elk from the southwestern portion of the herd may have moved west into more mesic habitats in the eastern edge of Area 100. This shift into Area 100 was noted again in 2014, but appeared to be due to hunting pressure from cow/calf hunters rather than weather or drought.

A cow elk died of lichen toxicity just a few miles into Area 100 in September of 2012, presumably induced into consuming lichen as a result of extremely poor forage conditions that year. Elk in the southeast corner of this herd also left orange and red urine stains, an indication of lichen consumption, during the 2007-08 winter when elk were dying of lichen toxicity immediately to the south on Red Rim. No incidences of lichen toxicity in elk were noted in 2014, however roughly 150 elk wintering along the border between Areas 118 and 100 were reported to have left orange urine stains during early February.

Weather

Drought conditions in 2012 and 2013 continued into the first half of 2014, with significant precipitation not arriving until the last quarter of July. Precipitation during the following three months produced good vegetative growth, but was probably too late to significantly improve calf survival. Condition of elk going into the winter is expected to have been good. The 2014-15 winter had numerous bitter cold spells, coupled with unusually warm periods, but little significant snowfall until late February.

Habitat

While no herbaceous habitat transects are established within this herd unit, herbaceous forage production is expected to have improved due to increased precipitation in late summer and early fall. Only one shrub transect has been established near this herd unit, on the Chain Lakes WHMA, but was not read in 2014.

Habitat losses to uranium development increased with the opening of the *Ur in situ* uranium mine near the center of the herd unit. It is not in or near crucial elk ranges. Habitat losses to gas development have slowed due to low gas prices and demand for drilling rigs in the Bakken fields.

Field Data

All classification samples for this herd have been statistically inadequate and no posthunt classification data were collected again this year. Dispersal of these elk in small bands across hundreds of square miles of sagebrush makes both aerial and ground classifications prohibitively expensive. Increased precipitation during summer and fall of 2014 improved calf production in neighboring herds and production in this desert herd probably increased as well.

Harvest Data

Hunter success is typically quite high in this herd unit due to the open terrain and limited cover, but was exceptionally poor in 2012 and 2013. Success for bull hunters improved to 58 percent in 2014, but was still below the long term average. Success for Type 4 “antlerless elk” hunters, who could hunt the entire area, declined to 67 percent, but was still within the normal range for this license type. Success for cow/calf hunters, limited to the southern half of the area, was 72 percent, typical for these licenses. This was the second year these hunters were free to hunt the entire south half, rather than just the southeastern corner. Concern was expressed by some bull hunters that early harvest by cow/calf hunters may have harassed significant numbers of elk out of the hunt area into Area 100 prior to the opening of the regular season.

The average number of days hunted per elk harvested remained at normal levels in 2014, for all three license types, after record highs in 2012. While many hunters complained about low elk numbers on opening day, success and effort statistics suggest most were able to find elk to harvest without having to expend many extra days of effort.

Because of improved success, harvest in 2014 was nearly the same as in 2012, despite significantly lower numbers of licenses.

Population

While initially found only in the southeastern portion of the herd unit, over the past 20 years elk have expanded into most portions of Area 118, at least for some seasons of the year. Numbers increased as well, with Department personnel being able to confirm at least 270 elk in this area prior to the 2010 hunting season. Harvests were increased, and the herd was estimated at about 200 elk following the 2011 hunt. Harvest from Type 6 licenses was most effective at reducing elk numbers in the southeast corner where elk use of private lands has been a concern.

Localized movement of elk westward into Area 100 cannot explain the difficulty hunters had finding elk to harvest in the entire area in 2012, nor those restricted to the southeastern corner. Increased harvests in recent years, coupled with what was presumably a poor calf crop in 2012, have likely reduced elk numbers across the herd unit.

Management Evaluation

Expected harvest from the 2015 season would be about 40 elk, with roughly two-thirds being antlerless elk. In previous years, cow/calf licenses were restricted to the southeastern portion of the area to address landowner concerns about elk numbers on private lands close to Rawlins. This strategy was successful, and the restricted area for those Type 6 licenses was expanded to include all of the hunt area south of the Mineral X Road in 2013 and 2014, which will encompass most private lands within the checkerboard. A similar delineation is proposed in 2015.

Opening date in this hunt area has been in the third week of October since it was reopened to hunting in 1992. Recently, there have been years when significant numbers of elk moved west out of the southwestern portion of this herd unit into Area 100 before or during hunting season, reducing harvests. In an attempt to compensate for this movement, the opening date for this area was synchronized with Area 100 in 2011 and 2012, on Oct 15. The attempt failed, with a large

number of elk still moving west in 2012. There simply is not enough hunting pressure in the eastern end of Area 100 to shift elk back into Area 118. Complaints about the earlier opening date were received from nearly every hunter contacted, most being upset about crowding due to the season opener coinciding with that for the deer season. Others commented on the lack of a Department presence in the field on opening day, and subsequent poor hunting behavior (chasing with vehicles, herd shooting) by some participants.

Following hunter complaints about low elk numbers at the beginning of the regular season, the Type 4 licenses were removed from application booklets. With normal success being reported after the end of the season, these licenses are restored to maintain harvest on the reproductive part of the herd. Opening date in 2014 was returned to the traditional third week of October, avoiding overlap with the general license deer hunt in the same area, and the same is proposed for 2015. Closing date of Nov. 12 is the same as in 2013 and 2014. The archery season uses standardized dates and is comparable to those in neighboring areas.

The population objective of 75 elk adopted for this herd unit in 1984 may have been appropriate when elk were only resident in the checkerboard, primarily in the southeast corner near Rawlins. With increased elk numbers in the habitats shared with Area 100 to the west and expansion of the population into mostly public lands north of the Mineral X Road, it may be reasonable to consider a different objective, particularly since collection of adequate data to model the herd is unlikely with current budgetary restraints. To address concerns over elk use on private lands, a commitment to restrain elk numbers within the checkerboard may be beneficial. Realignment herd unit and hunt area boundaries with Area 100 to the west may also improve management of elk in this portion of the Red Desert.

E643 - Shamrock
HA 118
Revised - 5/88

