

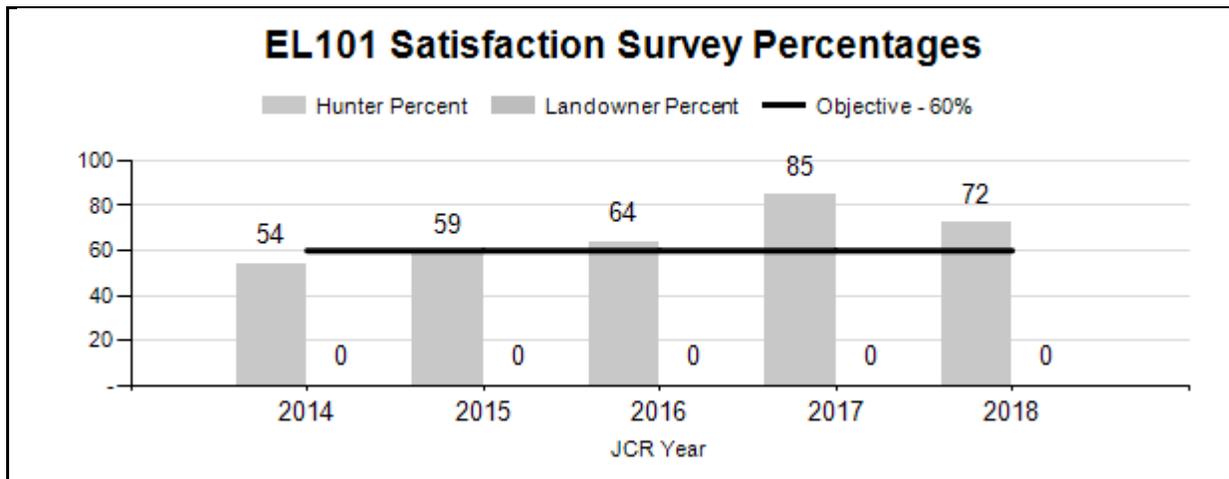
2018 - JCR Evaluation Form

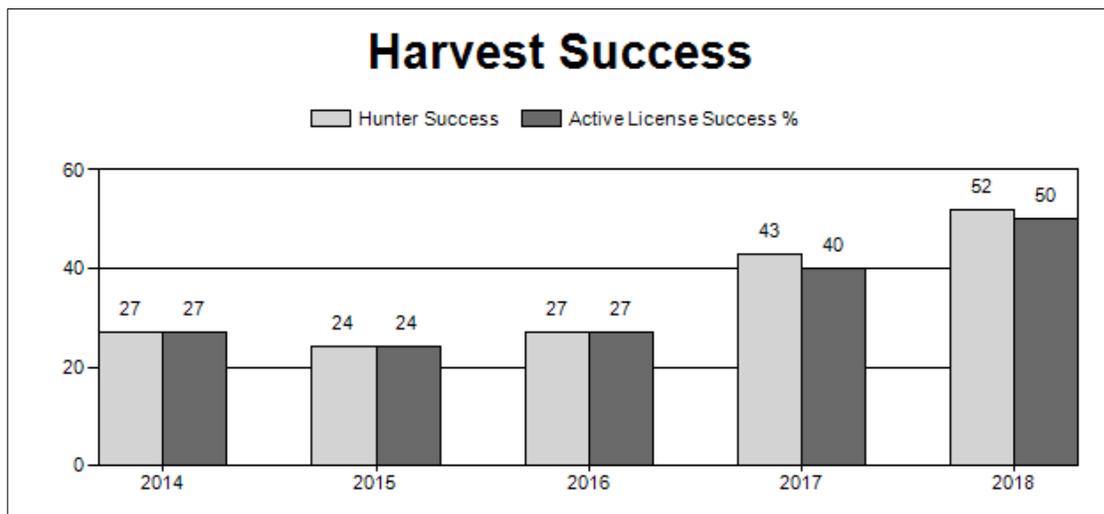
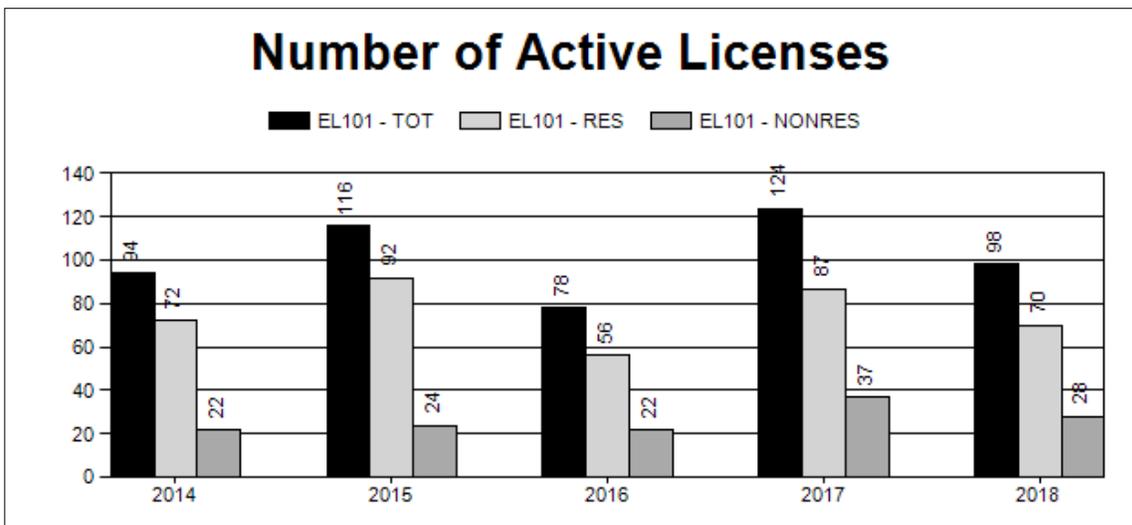
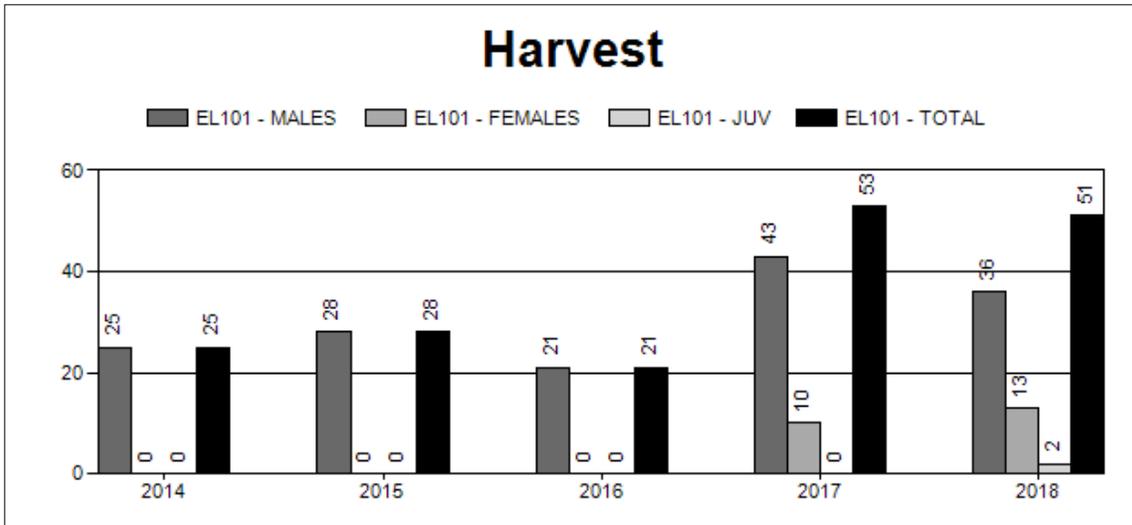
SPECIES: Elk
 HERD: EL101 - TARGHEE
 HUNT AREAS: 73

PERIOD: 6/1/2018 - 5/31/2019
 PREPARED BY: ALYSON COURTEMANCH

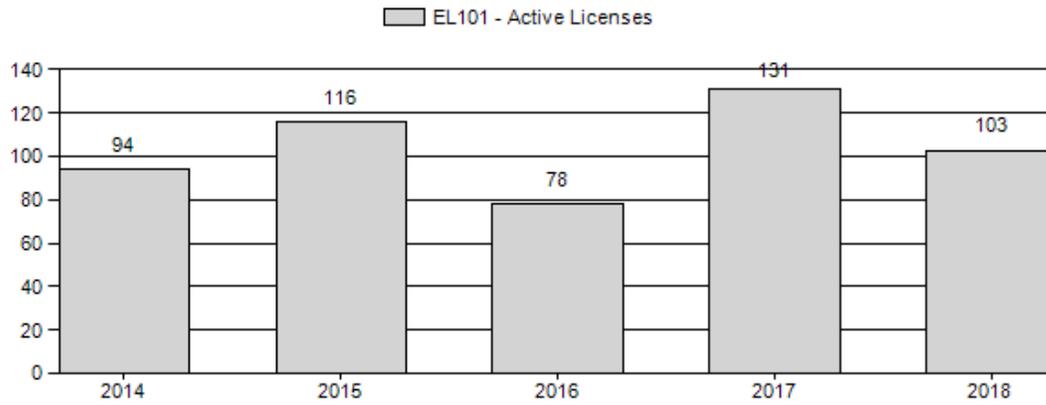
	<u>2013 - 2017 Average</u>	<u>2018</u>	<u>2019 Proposed</u>
Hunter Satisfaction Percent	67%	72%	75%
Landowner Satisfaction Percent	--	--	--
Harvest:	31	51	50
Hunters:	102	98	100
Hunter Success:	30%	52%	50 %
Active Licenses:	104	103	100
Active License Success:	30%	50%	50 %
Recreation Days:	633	600	600
Days Per Animal:	20.4	11.8	12
Males per 100 Females:	--	--	--
Juveniles per 100 Females	--	--	--

Satisfaction Based Objective 60%
 Management Strategy: Recreational
 Percent population is above (+) or (-) objective: N/A%
 Number of years population has been + or - objective in recent trend: 3 years above

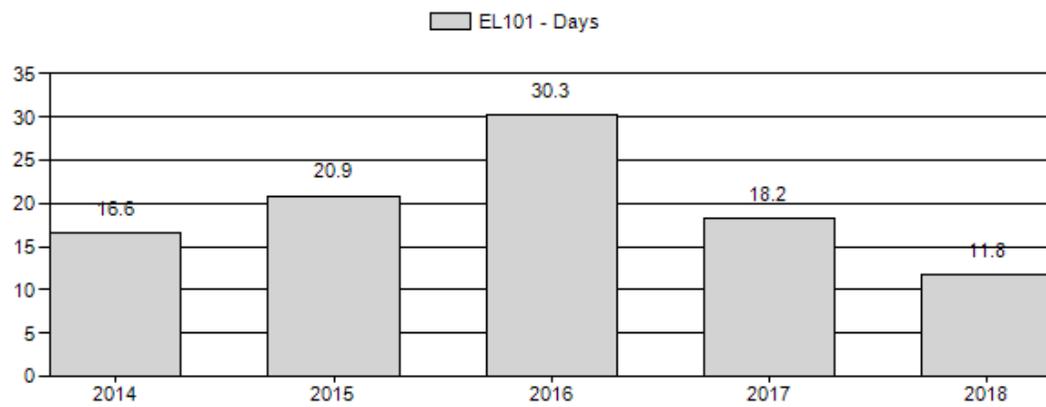




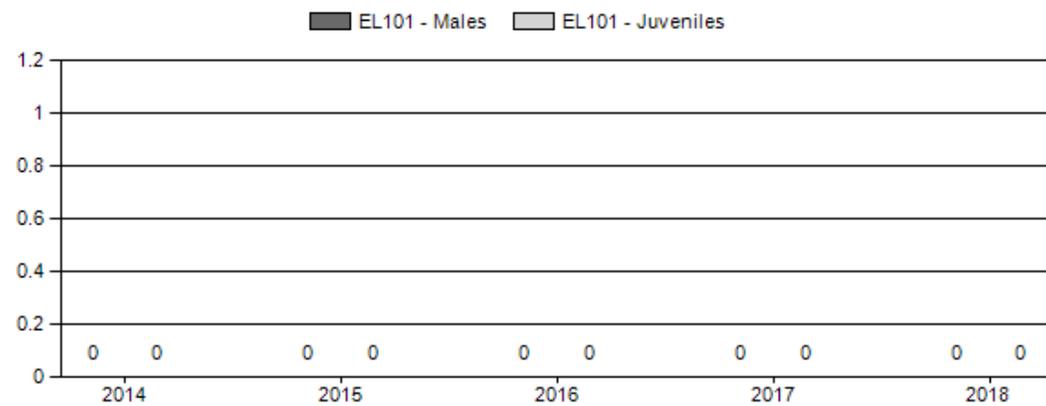
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



**2019 HUNTING SEASONS
TARGHEE ELK HERD (EL101)**

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
73		Sep. 20	Oct. 25		General	Antlered elk, spikes excluded
	6	Aug. 15	Jan. 31	25	Limited quota	Cow or calf valid on private land

Special Archery Seasons

Hunt Area	Type	Dates of Seasons		Limitations
		Opens	Closes	
73	All	Sep. 1	Sep. 19	Valid in the entire area

Management Evaluation

Management Strategy: Recreational

Population Objective Type: Hunter Satisfaction

Primary Objective: Achieve a 3-year average of $\geq 60\%$ of hunters indicating they are “satisfied” or “very satisfied” on the harvest survey.

Secondary Objective: Achieve a 3-year average of $\geq 25\%$ harvest success.

Evaluation: meeting objectives

The Wyoming Game and Fish Department (WGFD) proposed changing the objective for the Targhee Elk Herd from a postseason population objective to a hunter satisfaction objective in 2014. The objective change was needed because the herd is rarely surveyed due to budget priorities elsewhere and spreadsheet models do not appear to adequately simulate observed population trends. In addition, the interstate nature of the herd poses additional challenges to population surveys and management since the majority of elk winter in Idaho. A hunter satisfaction objective was adopted in 2014 after public review, and included primary and secondary objectives (listed above). The region did not adopt a landowner satisfaction objective because the majority of the herd unit is located on public lands during the hunting season.

In 2018, 72% of hunters indicated they were “satisfied” or “very satisfied” with hunting in the Targhee Elk Herd. The average satisfaction for the past 3 years is 74%. Therefore, the herd is meeting the primary objective of an average of $\geq 60\%$ hunter satisfaction over 3 years. In 2018, 52% of hunters were successful in the Targhee Elk Herd. The 3-year average of hunter success is 41%. Therefore, the herd is meeting the secondary objective of an average of $\geq 25\%$ harvest success over 3 years.

Herd Unit Issues

The current objective and management strategy for this herd will be maintained based on internal discussions and conversations with our constituents. Population status was evaluated and it was determined a change is not warranted at this time. These objectives will be reviewed again in 2024; however, if a situation arises that requires immediate change, proposals will be developed and submitted as needed.

Post-season classification surveys are not flown in this herd due to budget constraints and the fact that the majority of the herd winters in Idaho. Many of the historical winter ranges for the Targhee Herd have been converted to agriculture and residential development in Idaho. Winter ranges that remain are primarily low elevation mountain shrub and aspen communities in Wyoming and riparian areas in Idaho along the Teton River. Many of the mountain shrub and aspen communities along the state line are old and decadent and are being encroached by conifers.

Elk causing damage on private lands is beginning to become a concern for some landowners near Alta, Wyoming. Therefore, 25 Type 6 cow/calf licenses were offered beginning in 2018 and will be offered again in 2019 valid for private lands only to help disperse elk off private lands and prevent damage.

Weather

Spring and summer 2018 produced average moisture. Fall and early winter weather was very mild with warm temperatures and little snowfall at high elevations. However, several large snowstorms occurred in February that resulted in the rapid accumulation of a deep snowpack. Please refer to the following web sites for specific weather station data.

<http://www.wrds.uwyo.edu/wrds/nrcs/snowprec/snowprec.html> and
<http://www.ncdc.noaa.gov/oa/climate/research/prelim/drought/pdiimage.html>

Habitat

There are several historical vegetation transects in elk winter and transitional ranges, but these have not been monitored in the past 7 years. Several habitat improvement projects are being planned in this herd unit, including the Hill Creek Prescribed Burn, which is scheduled for completion in 2019. In addition, a habitat treatment in Teton Canyon is currently in the planning stages to improve mountain shrub and aspen communities for elk and other big game with potential for implementation beginning in 2019. The WGFD is assisting Caribou-Targhee National Forest (CTNF) with vegetation monitoring in aspen stands pre and post-treatment. Please refer to the 2018 Annual Report Strategic Habitat Plan Accomplishments for Jackson Region habitat improvement project summaries (<https://wgfd.wyo.gov/Habitat/Habitat-Plans/Strategic-Habitat-Plan-Annual-Reports>).

Field Data

No field data were collected in the Targhee Herd Unit during the 2018 biological year.

Harvest Data

Based on harvest statistics, the availability of elk in the Targhee Herd continues to be a concern. However, the harvest survey indicates that hunters had high success and satisfaction during the 2018

hunting season. The overall number of elk harvested remained low in 2018 (n=51) but doubled from harvest over recent years, which usually ranged from 20-30 elk. Antlerless elk seasons were eliminated in 2010 in this herd unit, however, a Type 6 license valid for cow or calf elk on private lands was added in 2016 to help address damage concerns. Fifteen elk were harvested on this license type in 2018.

Population

This population likely declined following the elimination of the supplemental feeding program in Idaho and liberal hunting seasons to address damage to private lands and comingling with livestock. Data are limited in this population and spreadsheet models developed for this population do not simulate observed trends. Elk winter and transitional ranges in Wyoming are dominated by conifer-encroached aspen stands.

A new research project was started in 2018 on the Targhee Elk Herd to gain information on elk seasonal migration patterns, pregnancy, and survival. Twenty-seven cow elk were collared in February 2018 on winter ranges in Idaho between Ashton and Victor. An additional 5 elk were collared in February 2019. This is a collaborative project between WGFD, Idaho Department of Fish and Game, Yellowstone National Park, and the University of California – Berkeley. Information from this project will help inform future population management and hunting seasons.

Management Summary

Due to the “interstate” nature of this population, managing this herd is difficult. This population spends the summer and early fall in Wyoming and winters along drainages in the foothills of the Teton Range. The WGFD continues to work closely with CTNF to develop habitat improvement projects to benefit elk in Wyoming. Observations of elk along the state line indicate this population remains at a low density even though hunting seasons are conservative.

Elk causing damage on private lands is beginning to become a concern for some landowners near Alta, Wyoming. Therefore, 25 Type 6 cow/calf licenses will be offered again in 2019 valid for private lands only to help disperse elk off private lands and prevent damage.

2018 - JCR Evaluation Form

SPECIES: Elk

PERIOD: 6/1/2018 - 5/31/2019

HERD: EL102 - JACKSON

HUNT AREAS: 70-72, 75, 77-83

PREPARED BY: ALYSON COURTEMANCH

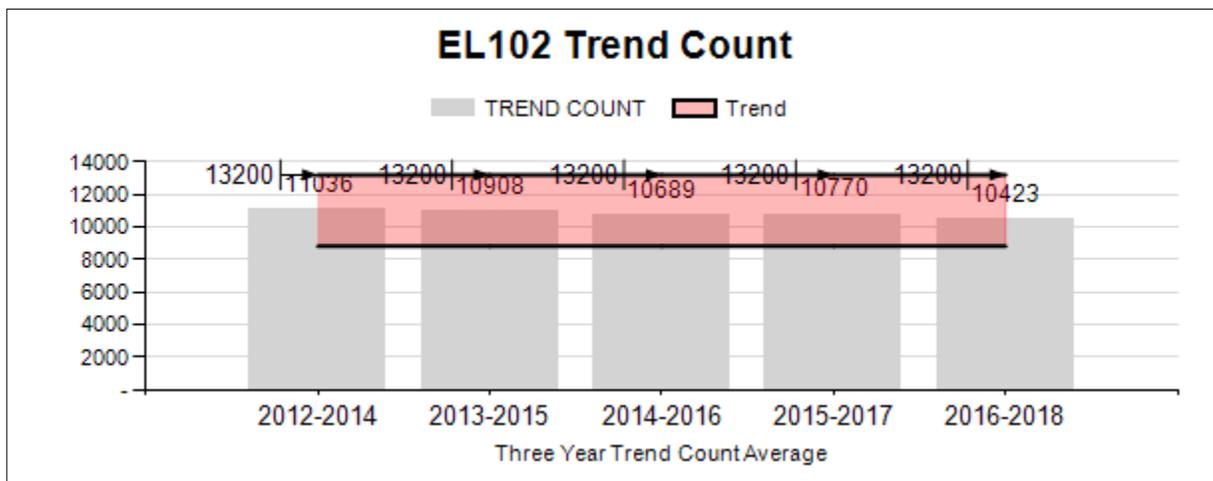
	<u>2013 - 2017 Average</u>	<u>2018</u>	<u>2019 Proposed</u>
Trend Count:	10,873	9,627	11,000
Harvest:	1,425	1,345	1,200
Hunters:	3,118	2,937	3,000
Hunter Success:	46%	46%	40 %
Active Licenses:	3,240	3,114	3,000
Active License Success	44%	43%	40 %
Recreation Days:	20,793	19,231	18,000
Days Per Animal:	14.6	14.3	15
Males per 100 Females:	36	26	
Juveniles per 100 Females	20	21	

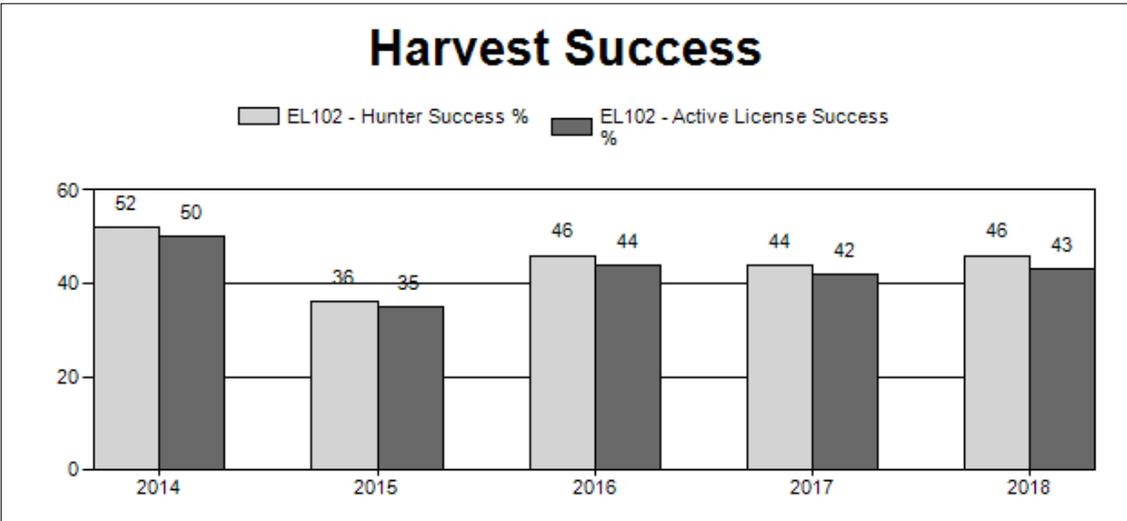
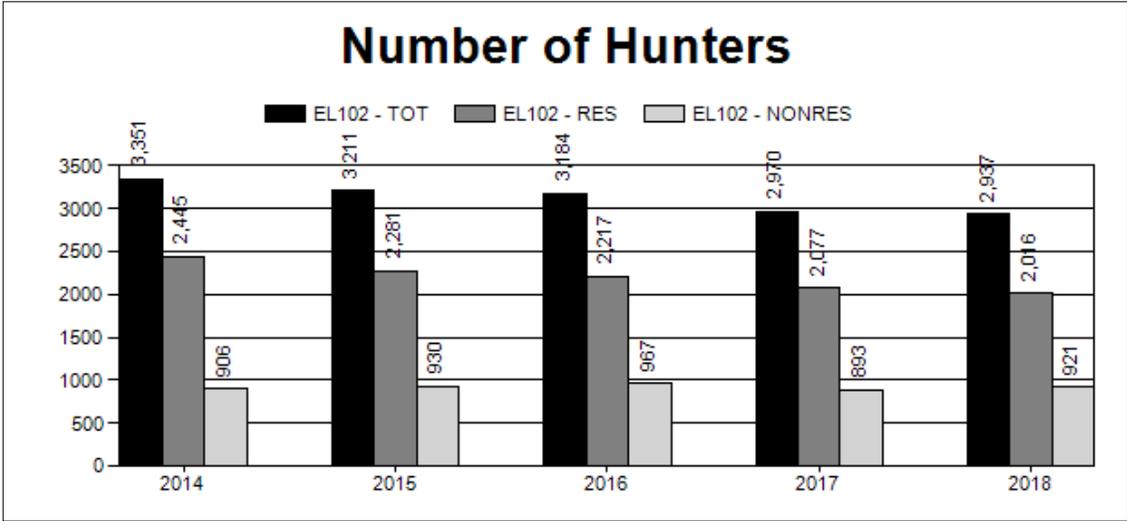
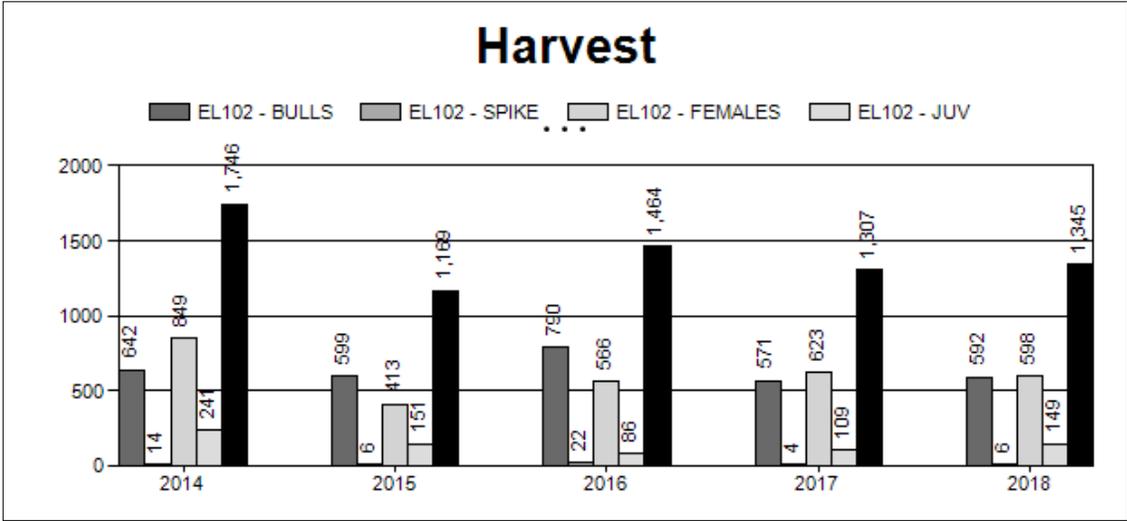
Trend Based Objective ($\pm 20\%$) 11,000 (8800 - 13200)

Management Strategy: Recreational

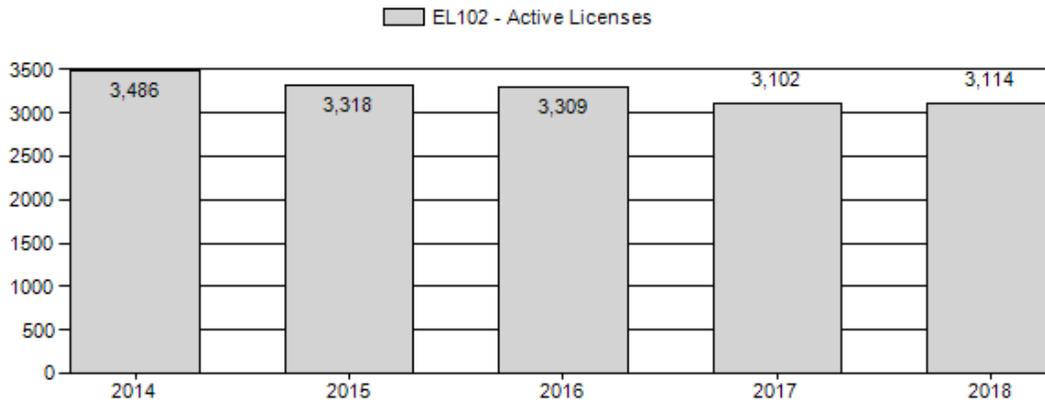
Percent population is above (+) or (-) objective: -12.5%

Number of years population has been + or - objective in recent trend: 0

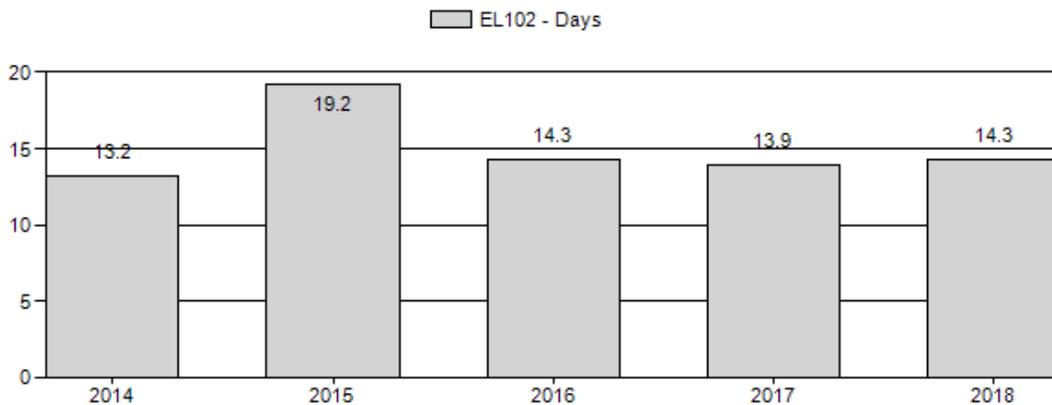




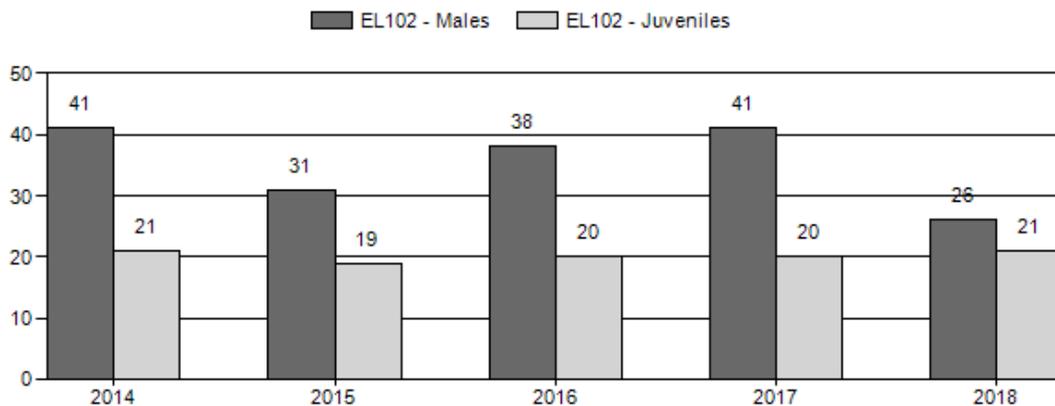
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2014 - 2018 Postseason Classification Summary

for Elk Herd EL102 - JACKSON

Year	Post Pop	MALES				FEMALES		JUVENILES		Tot Cls	Cls Obj	Males to 100 Females				Young to		
		Ylg	Adult	Total	%	Total	%	Total	%			Yng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2014	11,000	679	2,028	2,707	25%	6,570	62%	1,356	13%	10,633	584	10	31	41	±0	21	±0	15
2015	11,200	497	1,703	2,200	21%	7,117	67%	1,351	13%	10,668	387	7	24	31	±0	19	±0	15
2016	10,766	476	1,829	2,402	24%	6,262	63%	1,257	13%	9,921	355	8	29	38	±0	20	±0	15
2017	10,877	363	1,611	1,974	26%	4,760	62%	935	12%	7,669	580	8	34	41	±0	20	±0	14
2018	9,627	464	1,226	1,690	18%	6,517	68%	1,338	14%	9,545	229	7	19	26	±0	21	±0	16

**2019 HUNTING SEASONS
JACKSON ELK HERD (EL102)**

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
70		Sep. 20	Oct. 31		General	Antlered elk, spikes excluded
71		Sep. 20	Oct. 31		General	Antlered elk, spikes excluded
72						Closed
75	4	Nov. 2	Nov. 24	25	Limited quota	Antlerless elk; the Snake River Bottom portion of Area 75 shall be closed, also valid in that portion of Area 81 west of the Shadow Mountain Loop Road (U.S.F.S. Road 30340)
75	4	Nov. 25	Dec. 8			Antlerless elk; the Snake River Bottom and Antelope Flats portions shall be closed
75	6	Nov. 2	Nov. 24	350	Limited quota	Cow or calf; the Snake River Bottom portion of Area 75 shall be closed
75	6	Nov. 25	Dec. 8			Cow or calf; the Snake River Bottom and Antelope Flats portions shall be closed
77		Oct. 12	Oct. 21			General license and unused limited quota licenses, excluding limited quota cow or calf licenses, valid for any elk
77		Oct.22	Nov. 27			General license and unused limited quota licenses; antlerless elk
77		Nov. 28	Nov. 30			National Elk Refuge permits shall be issued only for those in possession of a full price youth elk license, any elk
77		Dec. 1	Dec. 13			General license and unused limited quota licenses, antlerless elk

78		Aug. 15	Oct. 31		General	Antlerless elk valid on private land
78	1	Aug. 15	Sep. 25	75	Limited quota	Any elk valid off national forest
78	1	Sep. 26	Jan. 31			Any elk valid in the entire area
78	2	Aug. 15	Oct. 31	50	Limited quota	Any elk valid on private land
78	6	Aug. 15	Sep. 25	200	Limited quota	Cow or calf valid off national forest
78	6	Sep. 26	Jan. 31			Cow or calf valid in the entire area
79						Closed
80		Sep. 26	Oct. 31		General	Any elk
80	6	Oct. 12	Nov. 10	300	Limited quota	Cow or calf
80	6	Nov. 11	Nov. 30			Cow or calf valid south of the Curtis Canyon and Sheep Creek Roads (U.S.F.S. Road 30440 and 30445)
81		Sep. 26	Oct. 25		General	Antlered elk, spikes excluded
82		Sep. 26	Oct. 25		General	Antlered elk, spikes excluded
82	4	Sep. 10	Oct. 25	25	Limited quota	Antlerless elk
83		Oct. 1	Oct. 25		General	Antlered elk, spikes excluded

Special Archery Seasons

Hunt Area	Type	Season Dates		Limitations
		Opens	Closes	
83	All	Sep. 1	Sep. 30	Valid in the entire area(s)
70, 71	All	Sep. 1	Sep. 19	Valid in the entire area(s)
78, 80-82	All	Sep. 1	Sep. 25	Valid in the entire area(s)

Summary of 2019 License Changes

Hunt Area	Type	Quota change
75	4	-25
	6	-175
78	2	-25
78	6	+25
78	7	-25

82	4	+10
Herd Unit Total	2	-25
	4	-25
	6	-150
	7	-25

Management Evaluation

Current Mid-Winter Trend Count Objective: 11,000 ± 20%

Management Strategy: Recreational

2018 Mid-Winter Trend Count: 9,627

3-Year Running Average: 10,423

Evaluation: At objective

The mid-winter trend count objective for the Jackson Elk Herd is a 3-year running average of 11,000 elk ± 20%. The management strategy is recreational. The objective and management strategy were reviewed by WGFD managers and the public in spring 2016. At that time, WGFD managers proposed changing from a modeled post-season population estimate to a mid-winter trend count objective because spreadsheet population models do not adequately simulate Jackson Elk Herd trends. The Wyoming Game and Fish Commission approved the proposed mid-winter trend count objective of 11,000 elk ± 20% in June 2016.

The current mid-winter trend count is 9,627 elk. This count is relatively low due to more elk widely distributed on native winter ranges than has been typical for this herd, which affected sightability during the survey. The 3-year running average is 10,423. The population is currently at objective.

Herd Unit Issues

Management of this herd is complicated because occupied habitat includes two National Parks and the National Elk Refuge (NER). Complex hunting seasons are typically used to address management concerns for various population segments in this herd. Recent pre-season classification surveys indicate that elk in the southern portion of the herd unit in southern GTNP and private lands near the Snake River reproduce at twice the rate of long-distance migratory elk from the northern herd segments. These different recruitment rates are likely driven by lower predator densities and supplemental forage from agricultural areas and suburban landscapes in the southern herd segments.

In the past, herd management was structured around the following winter distribution targets: 1) a maximum of 5,000 elk on the NER (Bison and Elk Management Plan, 2007), 2) 3,500 elk in the Gros Ventre drainage, and 3) 2,500 elk on other native winter ranges. Achieving these goals has been challenging due to high calf recruitment in southern herd segments, low harvest on private lands, co-mingling issues with livestock, changing elk movement patterns, weather, and

influences from predators. In recent years, elk winter distribution has changed significantly (Fig. 1) and there are few management tools available to achieve the winter distribution goals listed above. Since 2010, there has been a general trend of a larger proportion of the herd wintering on the NER while proportions utilizing other areas such as the Gros Ventre and Buffalo Valley/Spread Creek are decreasing. However, the trend changed this winter when fewer elk utilized the NER and more elk wintered in the Gros Ventre (Fig. 1). There was also a slight increase in the number of elk observed on other winter ranges. Elk GPS-collar data indicate that these recent winter range shifts are largely due to changes in elk behavior and not differential mortality between winter segments. In recognition of the lack of management tools available to achieve these winter distribution goals, these winter range goals were removed during the herd unit objective review process in 2016. However, WGFD managers continue to structure hunting seasons with these herd segments and winter distribution desires in mind.

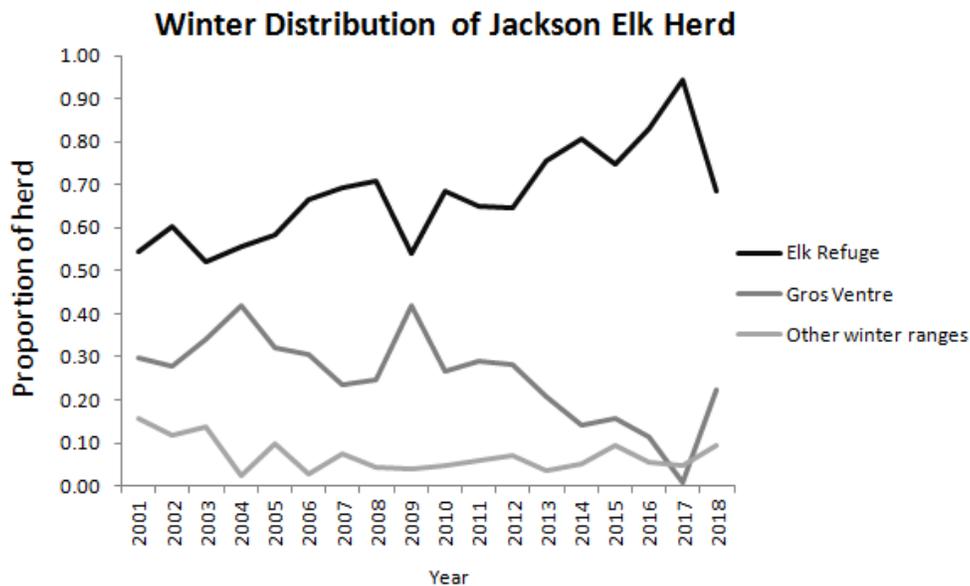


Fig. 1. Proportions of the Jackson Elk Herd wintering on the National Elk Refuge (on and off feed), in the Gros Ventre drainage (on and off feed), and on other winter ranges, 2001-2018.

In fall 2018, a road-killed mule deer buck near Kelly in GTNP tested positive for chronic wasting disease (CWD). This is the first CWD-positive cervid found within the Jackson Elk Herd Unit. Although no elk have tested positive for CWD in the Jackson Elk Herd, this led to increased public concern about CWD and its potential effects within the elk feedground system and on the NER. In 2018, 550 elk samples from the Jackson Herd Unit were analyzed at the Wyoming State Vet Lab for CWD and none tested positive. A statewide CWD stakeholder group is being convened in 2019 and there are plans to form local stakeholder groups within the next 1 - 2 years to address deer and elk management with CWD.

Weather

Spring and summer 2018 produced average moisture. Fall and early winter weather was very mild with warm temperatures and little snowfall at high elevations. However, several large snowstorms occurred in early February that resulted in the rapid accumulation of a deep snowpack. Snowfall totals in February nearly surpassed the local record in Jackson Hole. At the time of the mid-winter survey in February 2019, winter snowpack was reported at 115% of average in the Snake River Basin. Above average snowpack persisted through March and April 2019. In general snow depths were greater in the low elevation valleys in Jackson Hole compared to the Gros Ventre drainage where snow depth was approximately 50% less. Please refer to the following web sites for specific weather station data.

<http://www.wrds.uwyo.edu/wrds/nrcs/snowprec/snowprec.html> and

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

Habitat

There were no significant habitat treatment projects or wildfires in the herd unit this year. Please refer to the 2018 Annual Report Strategic Habitat Plan Accomplishments for Jackson Region habitat improvement project summaries (<https://wgfd.wyo.gov/Habitat/Habitat-Plans/Strategic-Habitat-Plan-Annual-Reports>).

Field Data

Elk supplemental feeding was initiated on the National Elk Refuge on February 6, which is 10 days later than the long term average feeding initiation date of January 27. Postseason classification surveys were conducted February 19 - 23 and February 28 - March 2, 2019. The ground classification on the National Elk Refuge (NER) occurred February 19. A total of 9,627 elk were counted in the herd unit, including 6,517 cows, 1,338 calves, 1,226 adult bulls, 464 spike bulls, and 82 unclassified elk. Herd unit ratios were 21 calves:100 cows, 19 adult bulls:100 cows, and 7 yearling bulls:100 cows. Of these, 6,586 elk (68%) were on the NER, 2,136 elk (22%) were in the Gros Ventre drainage, and 905 elk (10%) were on other native winter ranges. Of the 2,136 elk in the Gros Ventre, the majority were on Patrol Cabin feedground (1,720 elk). Overall, 85% of elk in the herd unit were classified on feed and 15% on native winter ranges.

Elk winter distribution this year was strikingly different than the past two winters. Early, deep snow in winter 2016/2017 resulted in the majority of the herd (8,129 elk) wintering on supplemental feed on the NER. Likewise, the majority of the herd (10,255 elk) wintered on the NER in 2017/2018 despite mild winter conditions that never caused snow or forage conditions to meet criteria for supplemental feeding. That same winter, only 86 elk wintered in the Gros Ventre drainage. Elk distribution changed in winter 2018/2019 with more elk utilizing the Gros Ventre drainage as well as many other winter ranges where elk have not been observed in recent years (Shadow Mountain, upper Spread Creek, Rosie's Ridge, Cache Creek, etc.) (Fig. 2).

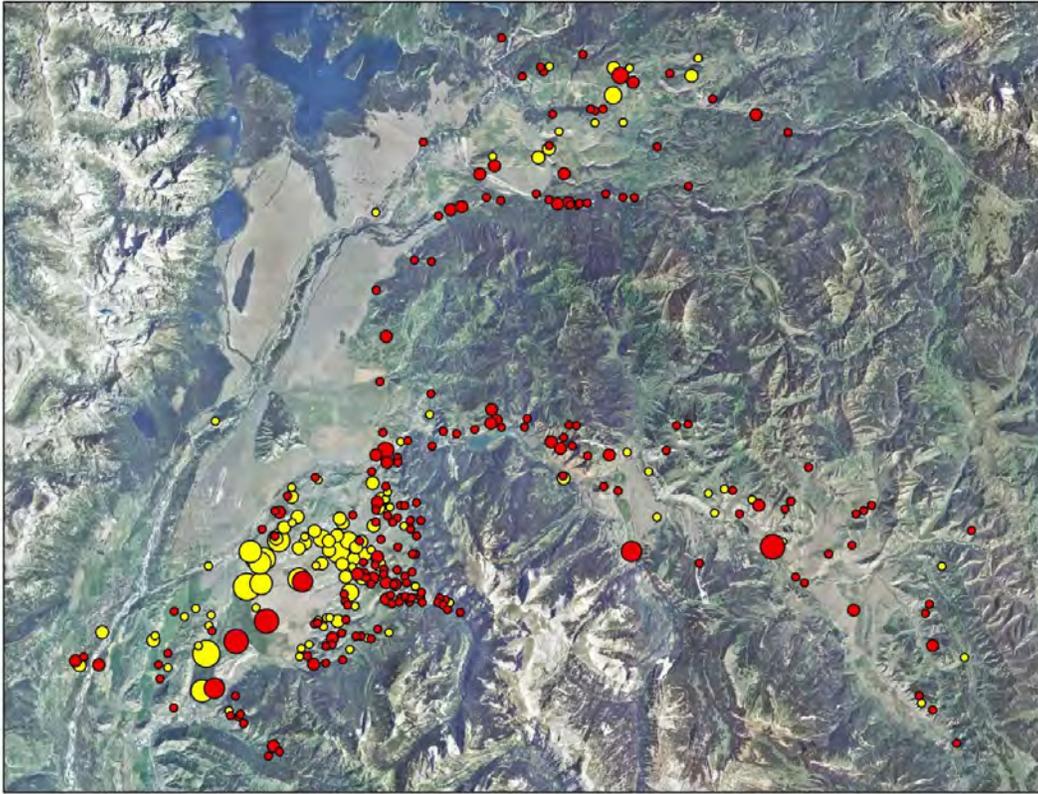


Fig. 2. Elk group distribution in the Jackson Herd Unit during the 2018 mid-winter trend count (red dots) and 2017 mid-winter trend count (yellow dots). The size of the dots corresponds to elk group size.

Gros Ventre

The dynamics of elk wintering in the Gros Ventre drainage have changed substantially in recent years. Significant concern exists about the current status of Gros Ventre elk due to recent declines in winter trend counts (Fig. 3). As recently as 2012, over 3,000 elk wintered in the Gros Ventre. However, that number has been steadily declining and reached as low as 86 elk in winter 2017/2018. However, this trend showed a promising sign this year when 2,136 elk were classified in the Gros Ventre. The calf:cow ratio was 26 calves:100 cows. The adult bull and yearling bull ratios were 7:100 and 5:100, respectively. The low bull and yearling ratios are likely due to wider distribution of elk on native winter ranges, which caused decreased sightability of bull groups during the survey.

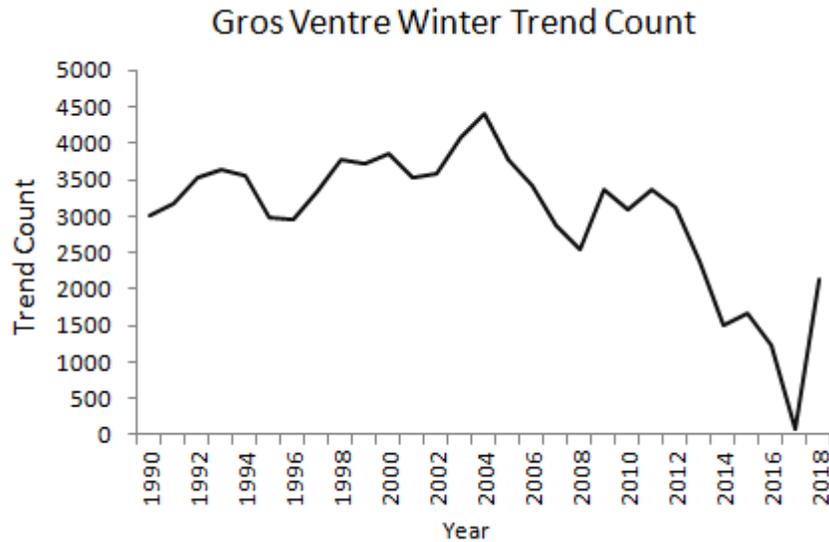


Fig. 3. Total elk numbers in the Gros Ventre drainage (feedgrounds and native winter ranges) from 1990-2018.

Elk GPS-collar data and remote cameras suggest that the declines in the number of elk wintering in the Gros Ventre in recent years have been due to elk shifting their winter ranges versus direct mortality. In spring 2018, approximately 2,100 elk were counted on remote cameras at the Red Hills migrating from the NER to higher elevations in the Gros Ventre. All of the GPS-collared cow elk that vacated the Gros Ventre in winter 2017/2018 returned to their traditional summer ranges. An additional 18 cow elk were collared in the Gros Ventre in fall 2018. During winter 2018/2019, 75% of the collared Gros Ventre elk wintered in the Gros Ventre (on Fish Creek and Patrol Cabin feedgrounds and on native winter range) and 25% of them wintered on the NER. None of these collared cow elk have died. These elk will be monitored for an additional 2 years.

Although the reasons for the winter range shifts in recent years are not yet entirely understood, there is correlative evidence that suggests elk may be avoiding high wolf density in the Gros Ventre. However, snowfall timing and amounts are also likely a contributing factor. Wolf numbers in the Gros Ventre declined during 2018, which may have been one of several factors that caused more elk to stay in the Gros Ventre in winter 2018/2019. Managers have increased monitoring through deploying additional GPS collars, remote cameras on migration routes, spring survey flights, and collaborating with researchers at the University of California at Berkeley on a wolf/elk interaction study.

Harvest Data

A total of 1,345 elk were harvested in the Jackson Elk Herd in 2018. This is similar to last year when 1,307 elk were harvested. The 2018 harvest continued to focus hunting pressure on antlerless elk from southern herd segments, with the majority of harvest occurring in Hunt Area 77 (315 antlerless elk), followed by Hunt Area 75 (233 antlerless elk), and Hunt Area 78 (102 antlerless elk). For the first time, Hunt Area 78 surpassed Hunt Area 80 for antlerless harvest,

which only had 85 cow and calf elk harvested due to mild fall weather. Backcountry hunting was difficult again this year due to mild fall weather conditions and a later elk migration. Total bull harvest for the herd unit was 597, which is similar to the last year's total of 575. The majority of mature bull harvest occurred in the Teton Wilderness in Hunt Areas 70 and 71 (277 bulls) followed by the Gros Ventre Hunt Areas 81, 82, 83 (212 bulls). Eighty-nine bulls were also harvested in Hunt Area 78. Hunter success in the Jackson Herd was 46%.

Total antlerless harvest in 2018 was 747, which is very similar to recent years. Seasons are structured to increase antlerless harvest in southern herd segments that have high calf production rates and contribute to high elk numbers on supplemental feed on the NER. Seasons are structured to achieve cow harvest on southern herd segments while protecting elk from declining northern herd segments.

Population

The 2018 mid-winter trend count was low due to difficult sightability of elk on native winter ranges. A total of 9,627 elk were counted in the herd. The 3-year trend count average is 10,423, therefore the herd is meeting the objective of 11,000 elk +/- 20%. The calf ratio this year was 21 calves:100 cows, which matches the 5-year average of 21 calves:100 cows. Managers are attributing the drop in the bull ratio this year (26:100) due to poor sightability conditions and difficulty of locating bull groups in forested areas. Managers will continue to structure hunting seasons to support calf survival in the long-distance migratory herd segments in the Teton Wilderness and Gros Ventre areas, while focusing harvest pressure on the increasing resident herd segments.

Management Summary

The current hunting season structure continues to result in a stable population trend. Therefore, few changes are planned for 2019. Hunting seasons in 2019 will again focus hunting pressure on southern resident elk that spend the summer along the Snake River corridor and in southern GTNP. To prevent further declines in the Yellowstone and Teton Wilderness long-distance migratory segments, elk hunting seasons in Hunt Areas 70 and 71 will remain the same as last year. In addition, Hunt Area 79 will be closed beginning this year to protect long-distance migrant elk that have lower calf recruitment. No significant changes to Gros Ventre Hunt Areas 81, 82, or 83 are planned at this time, although Type 4 licenses in Hunt Area 82 will be increased from 15 to 25. Due to the lower winter trend count this year, license quotas in Hunt Area 75 will be more conservative this year. Type 4 licenses will be reduced from 50 to 25 and Type 6 from 525 to 350. State Trust Land in Hunt Area 75 will be open for the entire season due to decreased concerns and better information about the Gros Ventre Herd segment. The youth-only hunt period in Hunt Area 77 (NER) will be offered again this year during the Thanksgiving time period. Due to the high demand for permits to access the NER, hunter crowding has become more of an issue in adjacent Hunt Area 80 in recent years. Season changes to Hunt Area 80 in 2018 yielded positive results by reducing hunter crowding. These changes will be retained for the 2019 season. The Hunt Area 78 Type 7 license was removed for 2019 due to issues with wounded elk on private lands.

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2018 - JCR Evaluation Form

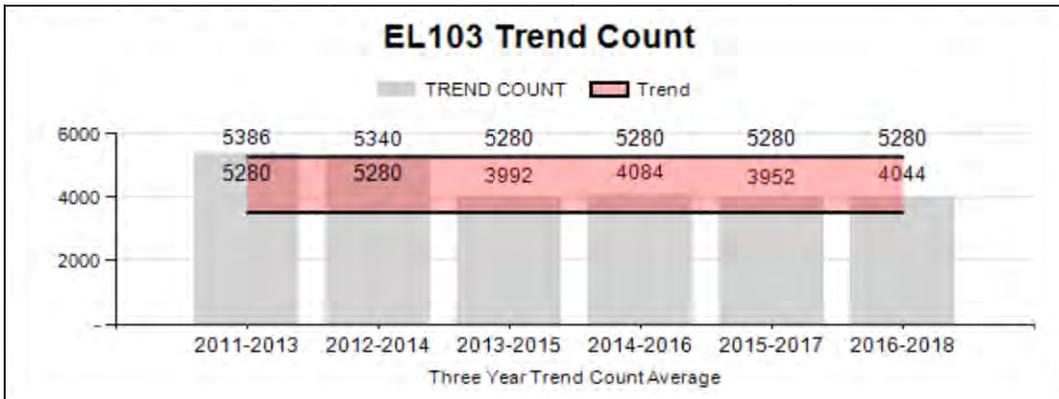
SPECIES: Elk	PERIOD: 6/1/2018 - 5/31/2019
HERD: EL103 - FALL CREEK	
HUNT AREAS: 84-85	PREPARED BY: GARY FRALICK

	<u>2013 - 2017 Average</u>	<u>2018</u>	<u>2019 Proposed</u>
Trend Count:	4,004	4,090	4,100
Harvest:	526	520	530
Hunters:	1,750	1,557	1,650
Hunter Success:	30%	33%	32 %
Active Licenses:	1,804	1,599	1,750
Active License Success	29%	33%	30 %
Recreation Days:	11,376	10,308	10,500
Days Per Animal:	21.6	19.8	19.8
Males per 100 Females:	23	20	
Juveniles per 100 Females	29	29	

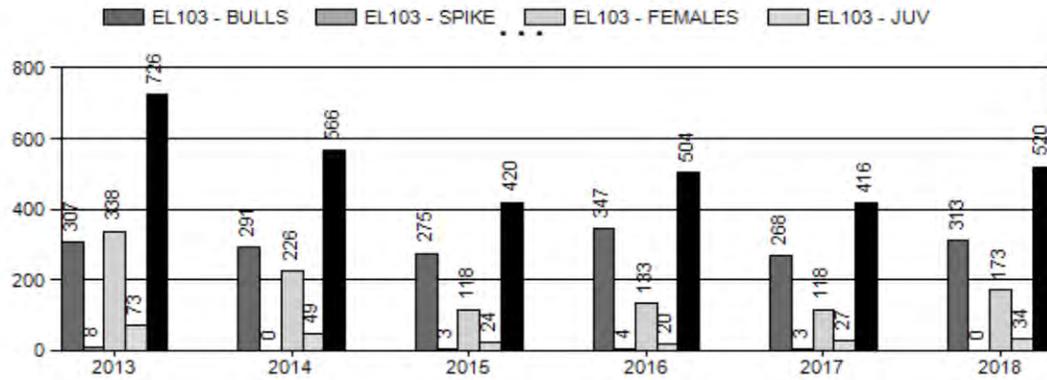
Trend Based Objective (± 20%) 4,400 (3520 - 5280)
 Management Strategy: Recreational
 Percent population is above (+) or (-) objective: -7.0%
 Number of years population has been + or - objective in recent trend: 2

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

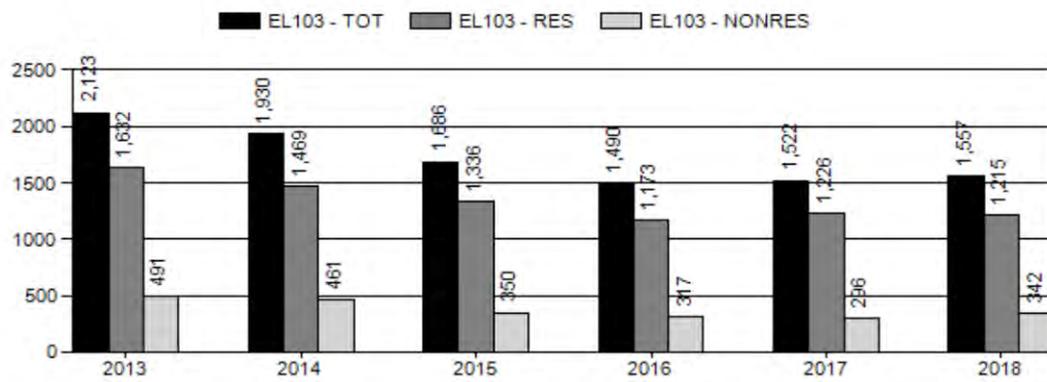
	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	NA%	NA%
Males ≥ 1 year old:	NA%	NA%
Juveniles (< 1 year old):	NA%	NA%
Total:	NA%	NA%
Proposed change in post-season population:	NA%	NA%



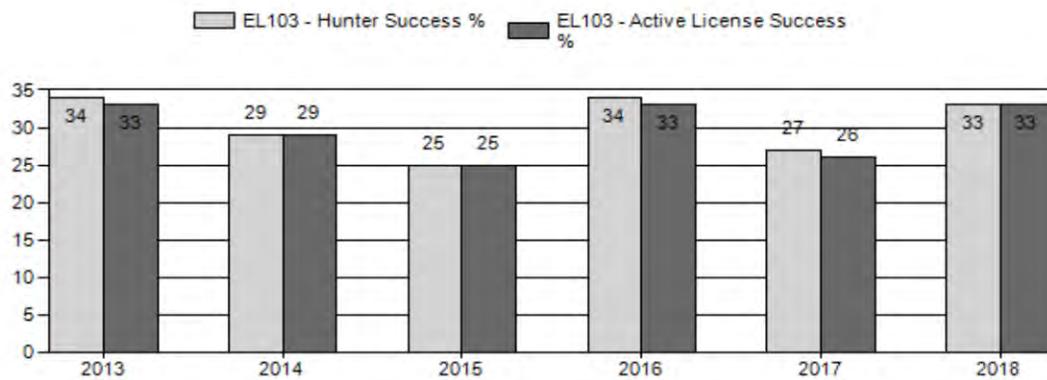
Harvest



Number of Hunters



Harvest Success



2013 - 2018 Postseason Classification Summary

for Elk Herd EL103 - FALL CREEK

Year	Post Pop	MALES				FEMALES		JUVENILES		Tot Cls	Cls Obj	Males to 100 Females				Young to		
		Ylg	Adult	Total	%	Total	%	Total	%			Yng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2013	4,800	318	309	627	16%	2,498	63%	842	21%	3,967	0	13	12	25	± 1	34	± 1	27
2014	4,700	261	441	702	17%	2,692	66%	682	17%	4,076	0	10	16	26	± 1	25	± 1	20
2015	4,500	130	369	499	13%	2,446	66%	768	21%	3,713	0	5	15	20	± 1	31	± 1	26
2016	5,100	273	376	649	16%	2,612	63%	898	22%	4,159	0	10	14	25	± 1	34	± 1	28
2017	0	158	251	409	12%	2,501	72%	547	16%	3,457	0	6	10	16	± 0	22	± 0	19
2018	0	166	370	536	13%	2,719	67%	789	20%	4,044	0	6	14	20	± 0	29	± 0	24

**2019 HUNTING SEASONS
FALL CREEK ELK HERD (EL103)**

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
84		Sep.26	Oct. 13		General	Any elk , spikes excluded
84		Oct. 14	Oct. 31		General	Antlered elk, spikes excluded
84	1	Nov. 1	Jan. 31	20	Limited quota	Any elk valid on private land west of U.S. Highway 191 and north and east of the Snake River starting at the South Park Bridge
84	6	Sep. 26	Nov. 20	50	Limited quota	Cow or calf; that portion of Area 84 east and south of Granite Creek to the Hoback River shall be closed after October 31
84,85	7	Aug. 15	Jan. 31	175	Limited quota	Cow or calf valid on private land in Area 84; also valid in that portion of Area 85 on or within 200 yards of irrigated land north of Fall Creek
85		Sep. 26	Oct. 13		General	Any elk, spikes excluded
85		Oct. 14	Oct. 31		General	Antlered elk, spikes excluded
85	6	Sep. 26	Oct. 31	75	Limited quota	Cow or calf
84, 85		Sep. 1	Sep.25		General	Archery only, Refer to Section 3 of this Chapter

SUMMARY OF PROPOSED CHANGES BY LICENSE NUMBER

Area	License Type	Change from 2018
84	General	Extend any elk closure date from Oct. 9 to Oct. 13
84	Type 6	+25
85	General	Extend any elk closure date from Oct. 9 to Oct. 13
84.85	Type 7	+50, increase area where valid
85	Type 7	+25
Herd Unit Total	Type 6 and 7	+100

Management Evaluation

Current Mid-Winter Trend Count Management Objective: 4,400

Management Strategy: Recreational

2018 Mid-Winter Trend Count: 4,090

Most Recent 3-Year Running Average Trend Count: 4,044

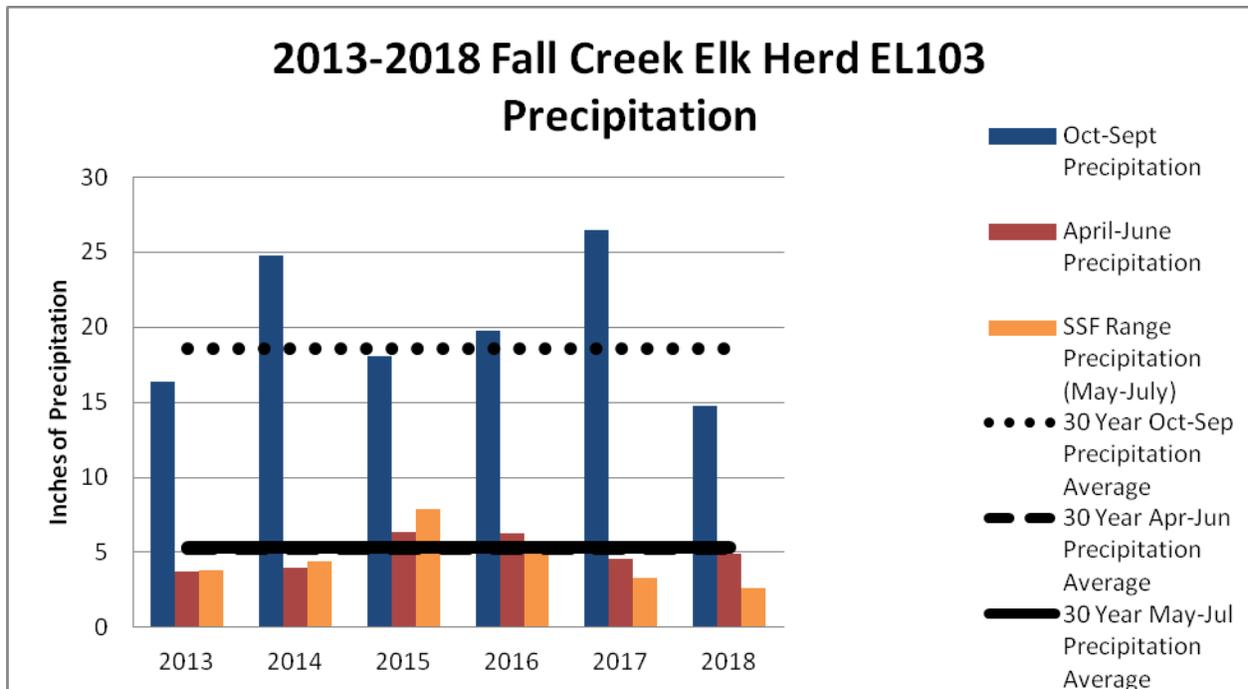
The mid-winter trend count population objective for Fall Creek elk herd is 4400 elk. The management strategy is recreational management. The objective and management strategy were last revised in 2017. The current mid-winter trend count was 4090 elk which is within +/- 20% of the population objective. Low calf productivity and survival and management strategies associated with November hunting seasons that targeted the antlerless segment of the population have stabilized the population within the parameters of the population mid winter trend count objective. The higher trend count this year is due to a generally reduced elk harvest in 2018, and higher percent snow cover on native winter ranges that forced elk to lower, more concentrated winter ranges and onto elk feedgrounds.

Herd Unit Issues

The most substantial herd unit issues continue to be associated with elk numbers inhabiting private property along the Snake River Bottomlands and sustaining calf survival and recruitment. Late season hunts have been implemented over the last 20 years in an effort to encourage elk to move to the South Park feedground thereby minimizing potential conflict. In other areas of the herd unit, low numbers of elk have habituated to areas near or on private lands in close proximity to livestock. Elk have visited these livestock operations in search of forage. There has been a marked reduction in the number of limited quota cow/calf only licenses issued over the last 8 years, which has resulted in reduced hunter opportunity.

The implementation of a general season, spikes excluded season in 2013 has been a concern with some elements of the public voicing opposition to loss of opportunity and recreation. Simultaneously, other segments of the hunting public have supported the restrictive spikes excluded hunting opportunity. Concurrent with reductions in cow/calf only licenses has been reduced number of days for general license, any elk hunting because of fewer elk being counted on trend counts. Calf production and survival has been the primary management issue associated with reduced hunting opportunity.

Weather



Precipitation

By late summer the moisture regime had changed frequent precipitation scenario that persisted into the fall hunting season. Drought conditions in the early portion of the summer abated by late fall as persistent snow storms and rain in September and early October began to deposit snowpack in the Snake River Mountain Range. By mid winter snow conditions on winter ranges had changed significantly. Little to no snow had accumulated on core winter ranges. These conditions persisted throughout the remainder of the winter. By late winter 2018 snowpack in western Wyoming watersheds were estimated to be significantly above 110% of normal. For additional weather and precipitation data please visit the following websites:

<http://www.ncdc.noaa.gov/temp-and-precip/time-series> and
<http://www.ncdc.noaa.gov/oa/climate/research/prelim/drought/pdiimage.html>.

Winter Severity

The 2018-2019 winter started mild but the months of January and February became increasingly tough for wildlife with regard to snow accumulation and cold temperatures on winter ranges. SNOWTEL locations in the high elevations of the Snake River watershed indicated snow water equivalents well above average, and these increased snow levels persisted well into the spring.

Habitat

No habitat data has been collected on elk summer and winter ranges. There are no established vegetation transects in this herd unit. Please refer to the 2018 Annual Report Strategic Habitat Plan Accomplishments for the Jackson Region habitat improvement project summaries (<http://wgfd.wyo.gov/web2011/wildlife-1000708.aspx>).

Field Data

Since 2010, population growth has been suppressed by lower calf survival and recruitment. November antlerless elk hunts have targeted the reproductive segment of the population since 2008. This management strategy has resulted in the desired management objective of reducing the population to within 20% of the population objective.

In general, management over the last eight years has been successful at maintaining bull:cow ratios at or higher than the management goal of 20 bulls:100 cows. Bull:cow ratios in 2014 – 2016 were observed at some of the highest levels (≥ 24 bulls:100 cows) the highest levels in 10 years, and are likely a result of very warm temperatures which encouraged elk to remain at higher, inaccessible elevations, absence of weather during the October portion of the hunting season, and a shorter general license any elk portion of the hunt which likely discouraged hunter participation. However, total bull:cow ratios observed during the 2017 and 2018 trend counts were 16 bulls:100 cows and 15 bulls:100 cows, respectively, which is attributed to the fewer bulls being counted on native winter ranges.

Since 2011 reductions in antlerless elk hunting opportunity have been implemented in response to declining trend counts which were largely management induced. As recently as 2008 and 2009 trend counts documented over 5000 elk in the herd unit, and subsequent management options focused on greater hunter opportunity to affect a decline in elk numbers. Concurrent with a more nuanced management approach since 2012 was an effort to still provide opportunity but a slightly reduced level. Segments of the public voiced support for spikes excluded seasons which were incorporated into the herd unit management strategy in 2013. The prevailing public perception was hunting pressure would increase in this area if spikes excluded seasons were not adopted. The 2018 hunt season was the 6th consecutive year of spikes excluded general license hunting seasons.

Harvest Data

The fewest number of hunters to hunt the fall Creek elk herd in at least 15 years occurred in 2016 and 2017. An estimated 1480 hunters attempted to harvest an elk in 2016, which increased only slightly in 2017 to 1520 hunters. The lower number of elk hunters continued in 2018 when only 1557 hunters pursued elk in this herd unit.

Concurrent with the low hunter numbers was the fifth consecutive year of relatively low elk harvest. A total of 566, 420 and 500 elk were estimated in the 2014 - 2016 harvest, respectively. For comparative purposes, approximately 430 elk and 520 elk were harvested in 2017 and 2018 respectively. Hunter success decreased from 34% in 2016 to 28% in 2017, but exhibited only an insignificant increase to 33% in 2018.

The spikes excluded hunt the last six years has resulted in antlered harvest being focused on the 2+-year old bulls. Since 2012 the number of 2+-year old bulls estimated in the annual harvest has declined as a result of reduced hunter participation and opportunity, more conservative hunting seasons, and decreased calf survival and recruitment in 2014 and 2017. Calf ratios increased from 22 calves:100 cows in 2017 to 29 calves:100 cows in 2018.

Since spikes excluded hunting seasons were first initiated in 2013, the number of 2+-year bulls in the annual harvest has remained relatively unchanged through the 2015 hunting season. During the period from 2013 – 2015, approximately 307 bulls, 291 bulls, and 275 bulls aged 2+-years of age were estimated in the annual harvest, respectively. In 2016 and 2017, the number of 2+-year old bulls in the harvest was reported at 346 bulls and 275 bulls, respectively. In 2018, an estimated 313 adult bulls were recorded in the harvest. For comparative purposes, during the 5-year period from 2008-2012 without the spikes excluded regulation, an average of 337 bulls aged 2+-years of age were reported in the annual harvest.

The reduction in yearling harvest because of the spikes excluded regulation has not resulted in the sustained or desired increase in recruitment of the yearling cohort. From 2013 - 2015 the number of yearling bulls documented in the herd composition surveys has exhibited an annual, incremental decrease (Figure 1). The number (Figure 1) and proportion (Figure 2) of yearling bulls in the current year's postseason trend count declined dramatically in 2017, and did not respond to the conservative management actions that were designed to promulgated yearling recruitment in 2018. In general, yearling bull ratios have exhibited a sustained suppression in comparison to those years in which spike excluded seasons were not in place.

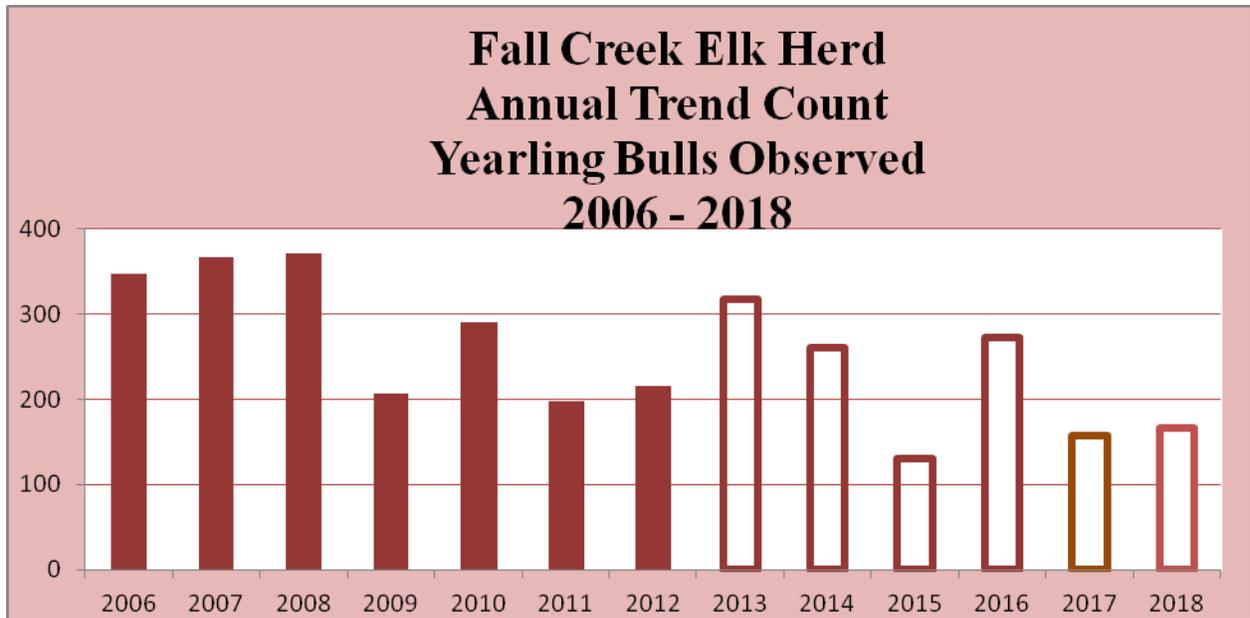


Figure 1. A depiction of the number of yearling bulls counted during the annual trend count during years of general license, any elk hunting seasons (2006-2012) versus general license, any elk spikes excluded hunting seasons (2013-2018).

In 2015, the observed ratio of 5 yearling bulls:100 cows was the lowest yearling bull ratio observed since spikes excluded hunting was first implemented in 2013. Since that time yearling bull ratios have exhibited annual declines from 13 yearlings:100 cows in 2013, to 9, 5, and 10 yearling bulls:100 cows from 2014 - 2016, respectively. A total of 6 yearling bulls:100 cows were observed during the 2017 and 2018 postseason herd unit surveys, respectively.

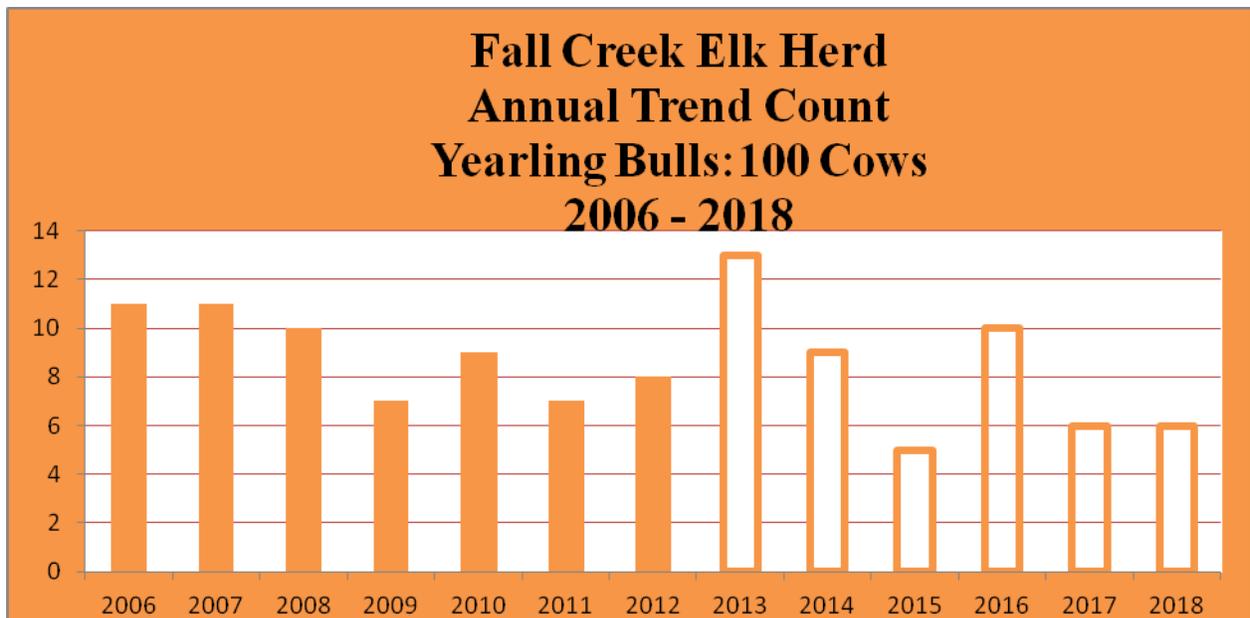


Figure 2. A depiction of the yearling bulls:100 cows ratio observed during the annual trend count during years of general license, any elk hunting seasons (2006-2012) versus general license, any elk spikes excluded hunting seasons (2013-2018).

Population

Management efforts that focused on assessing population performance were based on annual trend counts since 2007. The mid-winter trend count objective was developed and implemented following public review and Commission approval in 2017 to better utilize observed data to estimate population trend and size. The mid-winter trend count provides managers with a more realistic and justifiable assessment of population performance in this elk herd.

Management Summary

The 2019 hunting season is designed to maintain a stable population near the objective. Because of the slightly increased trend count hunting seasons are proposed to offer additional hunter opportunity and recreation. The general any elk spikes excluded hunting season will be continued in Areas 84 and 85.

The proposed hunting season structure will promote any elk hunting, spikes excluded opportunity for 18 days instead of the 14 days offered the previous two years. The portion of the general license any elk season will begin on September 26 and end on October 13. Beginning on October 14 and continuing through October 31, antlered only elk, spikes excluded may be taken with general licenses. In order to provide limited quota license hunters recreation days, the limited quota Type 6 licenses will be increased from 25 licenses to 50 licenses in Hunt Area 84; a total of 50 Type 6 licenses will be maintained in Area 85. This management strategy will not substantially increase overall antlerless harvest, but is designed to provide increased opportunity

to the hunting public and reduce pressure on the antlered segment of the population. It will also maintain the population within 20% of the 3-year mid winter population trend count objective.

In Area 84 the limited quota Type 6 licenses will be valid through November 20. The continuation of the November portion of the hunting season and maintaining the number of Type 6 licenses will be increased to 50 licenses in response to a higher trend count, and the associated opportunity for increased recreation. The number of additional limited quota Type 7 licenses will increase from 125 to 175 licenses in order to address chronic damages and comingling on private lands. The opening date for the Type 7 license will be August 15. This private land hunt will address landowner concerns regarding elk numbers on private property along the Snake River Bottomlands and provide hunters with an extended hunting opportunity to harvest antlerless elk in areas that have been historically prone to chronic elk damage and comingling with livestock.

In Area 85, hunting pressure will focus on providing additional recreation based on more elk counted during the annual trend count. Consequently, the general any elk, spikes excluded season is proposed to close on October 13 instead of October 9, and the number of Type 6 cow/calf licenses will remain at 50 licenses. Population management objectives have been achieved in the Area 85 portion of the herd unit, and therefore the appropriate management response is to initiate season limitations that are designed to provide additional recreation in this segment of the population that spends the winter in Hunt Area 85.

The 2019 hunting seasons are projected to harvest an estimated 530 elk. The projected harvest should result in approximately 4100 elk being counted in the 2019 posthunt trend count.

Appendix B. Fall Creek Elk Herd, posthunt herd composition data, 2013-2018.										
2013	Adult Males	Yrlng Males	Total Males	Cows	Calves	Total	Ratio:100 Females			
							Adult Males	Yrlng Males	Total Males	Calves
84 HCFG	162	110	272	1225	337	1834				
84 CCGF	2	20	22	204	56	282				
84 SPFG	83	97	180	509	210	899				
84 NR	21	13	34	51	45	130				
85 DCFG	38	71	109	498	191	798				
85 NR	3	7	10	11	3(45)	69				
TOTAL	309	318	627	2498	842(45)	4012	12	13	25	34
2014										
84 HCFG	160	48	208	1096	178	1482				
84 CCGF	24	15	39	184	97	320				
84 SPFG	128	107	235	626	202	1063				
84 NR	54	24	78	149	57(3)	287				
85 DCFG	65	52	117	579	119	815				
85 NR	21	15	36	58	29(62)	185				
TOTAL	452	261	713	2692	682	4152	17	9	26	25
2015										
84 HCFG	101	18	119	384	74	577				
84 CCGF	51	21	72	847	242	1161				
84 SPFG	120	46	166	603	214	983				
84 NR	6	5	11	7	19(68)	105				
85 DCFG	76	35	111	569	212	892				
85 NR	6	6	12	36	7(41)	96				
TOTAL	360	130	490	2446	768(109)	3813	15	5	20	31
2016										
84 HCFG	116	76	192	833	281	1306				
84 CCGF	37	46	83	485	118	686				
84 SPFG	117	90	207	647	250	1104				
84 NR	25	3	28	19	9(92)	148				
85 DCFG	72	57	129	627	240	996				
85 NR	9	1	10	1	0(35)	46				
TOTAL	376	273	649	2612	898(127)	4286	14	10	24	34
2017										
84 HCFG	115	52	167	787	148	1102				
84 CCGF	5	12	17	446	47	510				
84 SPFG	73	42	115	609	218	942				
84 NR	24	7	31	64	25(59)	179				
85 DCFG	23	30	53	551	85	689				
85 NR	11	15	26	44	24(240)	334				
TOTAL	251	158	409	2501	547(299)	3756	10	6	16	22
2018										
84 HCFG	78	50	128	927	203	1258				
84 CCGF	11	28	39	512	157	708				
84 SPFG	74	42	116	513	167(50)	846				
84 NR	22	9	31	61	36(110)	238				
85 DCFG	48	29	77	595	201	873				
85 NR	8	8	16	111	25(15)	167				
TOTAL	241	166	407	2719	789(175)	4090	9	6	15	29

2018 - JCR Evaluation Form

SPECIES: Elk
 HERD: EL105 - AFTON
 HUNT AREAS: 88-91

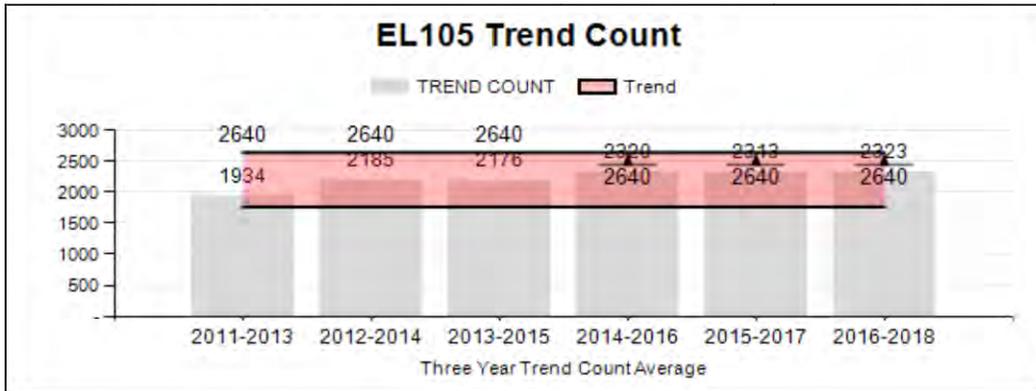
PERIOD: 6/1/2018 - 5/31/2019

PREPARED BY: GARY FRALICK

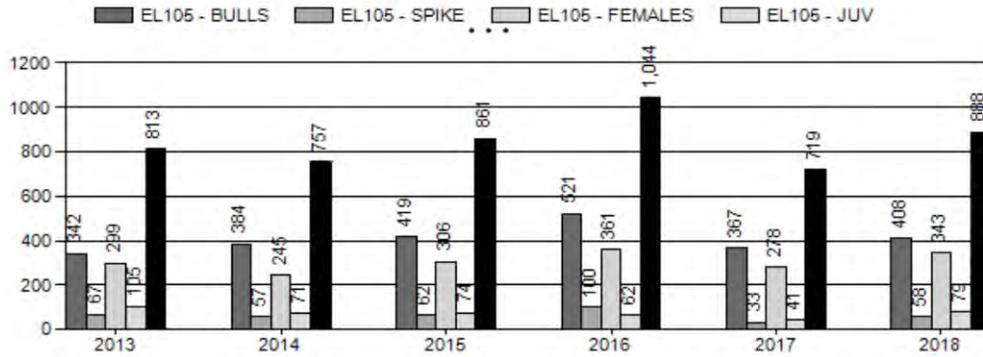
	<u>2013 - 2017 Average</u>	<u>2018</u>	<u>2019 Proposed</u>
Trend Count:	2,326	1,867	2,150
Harvest:	839	888	800
Hunters:	2,591	2,454	2,600
Hunter Success:	32%	36%	31 %
Active Licenses:	2,684	2,573	2,505
Active License Success	31%	35%	32 %
Recreation Days:	17,492	15,892	16,225
Days Per Animal:	20.8	17.9	20.3
Males per 100 Females:	18	16	
Juveniles per 100 Females	35	36	
Trend Based Objective (± 20%)			2,200 (1760 - 2640)
Management Strategy:			Recreational
Percent population is above (+) or (-) objective:			-15.1%
Number of years population has been + or - objective in recent trend:			2

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

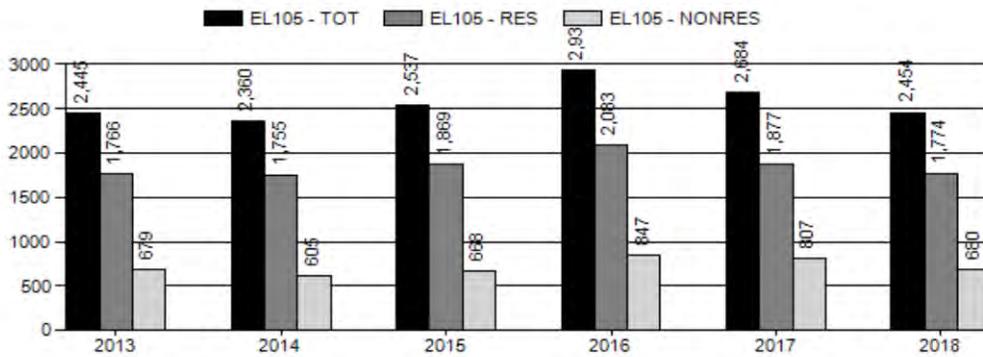
	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	NA%	NA%
Males ≥ 1 year old:	NA%	NA%
Juveniles (< 1 year old):	NA%	NA%
Total:	NA%	NA%
Proposed change in post-season population:	NA%	NA%



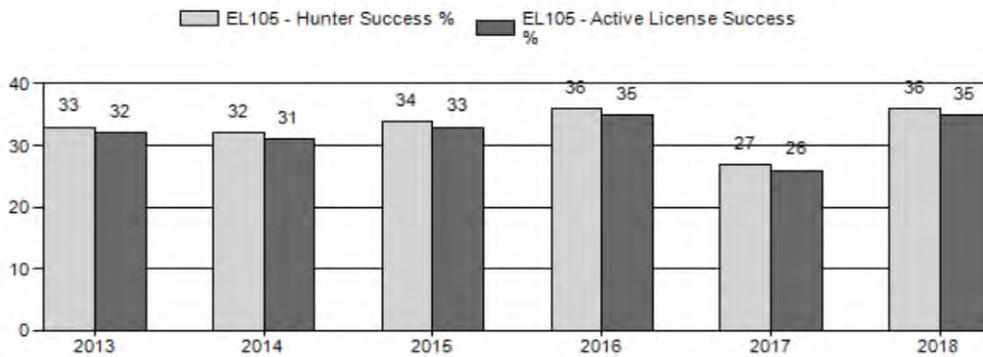
Harvest



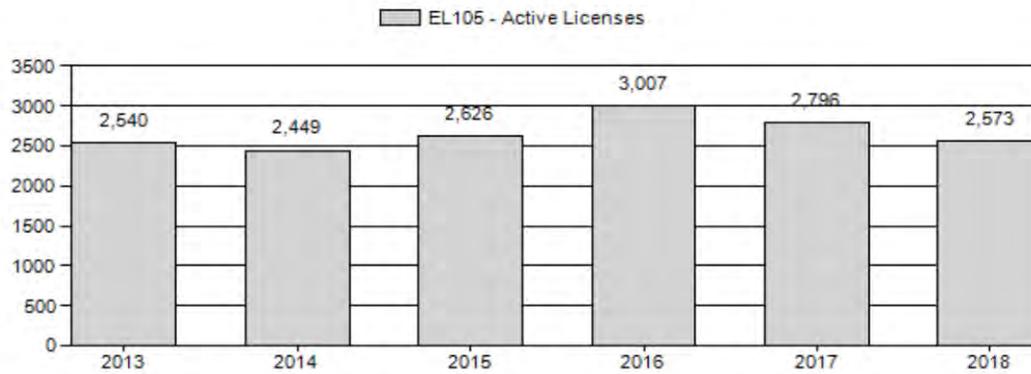
Number of Hunters



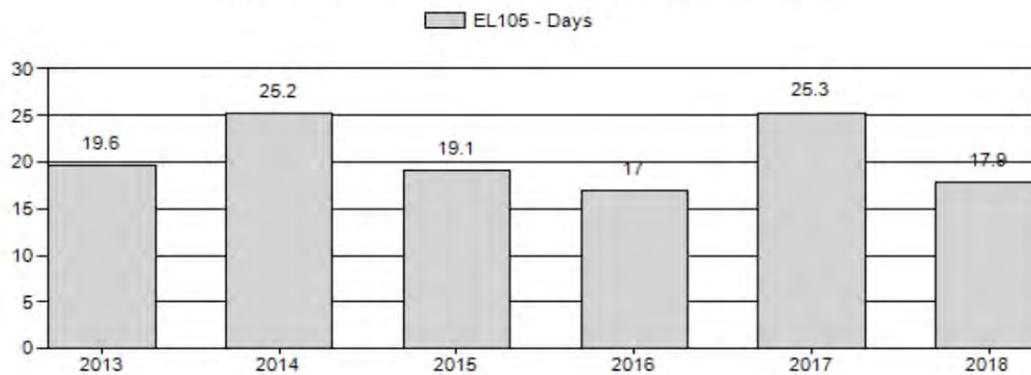
Harvest Success



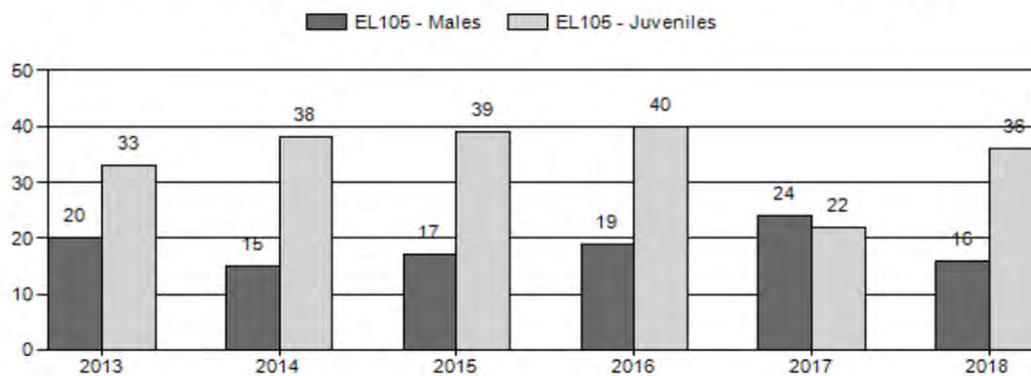
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2013 - 2018 Postseason Classification Summary

for Elk Herd EL105 - AFTON

Year	Post Pop	MALES				FEMALES		JUVENILES		Tot CIs	Cls Obj	Males to 100 Females				Young to		
		Ylg	Adult	Total	%	Total	%	Total	%			Yng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2013	2,400	109	166	275	13%	1,409	66%	461	21%	2,145	0	8	12	20	±1	33	±1	27
2014	0	77	152	229	10%	1,564	66%	592	25%	2,385	0	5	10	15	±0	38	±0	33
2015	0	53	121	174	11%	1,045	64%	411	25%	1,630	0	5	12	17	±0	39	±0	34
2016	0	100	149	249	12%	1,280	63%	511	25%	2,040	0	8	12	19	±0	40	±0	33
2017	0	38	159	197	17%	812	69%	176	15%	1,185	0	5	20	24	±0	22	±0	17
2018	0	57	104	170	11%	1,042	65%	379	24%	1,591	0	5	10	16	±0	36	±0	31

2019 HUNTING SEASONS
AFTON ELK HERD (EL105)

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
88	1	Oct. 1	Oct. 31	40	Limited quota	Any elk
89		Oct. 15	Oct. 17		General	Any elk
		Oct. 18	Oct. 31		General	Antlered Elk
90		Oct. 15	Oct. 31		General	Any elk
		Nov. 1	Nov. 15		General	Antlerless elk
	6	Oct. 15	Nov. 15	250	Limited quota	Cow or calf
91		Oct. 15	Oct. 31		General	Any elk
	1	Oct. 1	Oct. 31	100	Limited quota	Any elk
		Nov. 1	Dec. 31			Antlerless elk
	6	Oct. 1	Dec. 31	175	Limited quota	Cow or calf
		Jan. 1	Jan. 31			Cow or calf valid in the entire area. Archery, muzzleloading firearm or shotgun only in that portion of Area 91 south of Cedar Creek and east of Muddy String Road (Lincoln County Road 117), north of Lost Creek Road (Lincoln County Road 120) and north of Lost Creek, off national forest
88, 89, 90, 91		Sep. 1	Sep. 30			Archery only, Refer to Section 3 of this Chapter

SUMMARY OF CHANGES BY LICENSE NUMBER

Area	License Type	Change from 2018
Herd Unit Total		No Changes

Management Evaluation

Current Mid-Winter Trend Count Management Objective: 2,200

Management Strategy: Recreational

2018 Mid-Winter Trend Count: 1,870

Most Recent 3-Year Running Average Trend Count: 2,300

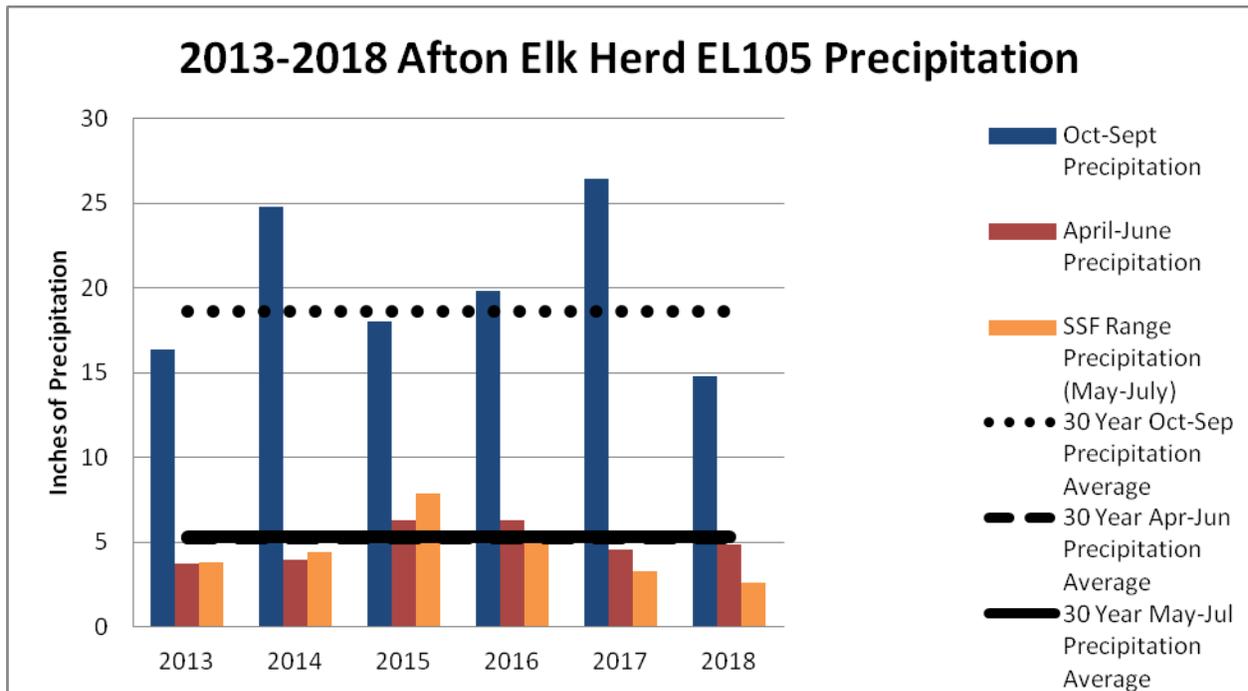
The current mid-winter trend count management objective for Afton elk herd is 2200 elk. The management strategy is recreational management. The objective and management strategy were last reviewed in 2018. The current mid-winter trend count was approximately 1870 elk.

Herd Unit Issues

Management strategies have reflected the diverse issues observed in the four hunt areas over the last 15 years. Each management strategy reflects issues unique and relevant to the individual hunt areas in an effort to be responsive to public sentiment and adhere to objectives essential to herd management. Several issues have emerged over the last 10 years associated with length of the any elk portion of the hunting season in the Lower Greys River (Hunt Area 89) and the presence of elk occupying habitats during winter in close proximity to human development and livestock operations.

Hunting pressure has been maintained in the upper Greys River (Area 90) where elk numbers exceed the Commission-established quota for the Forest Park elk feedground. In the lower Greys River (Area 89) hunting opportunity has been more restricted with shorter overall season length and fewer days to harvest antlerless elk than in Area 90. This strategy is designed to increase overall elk numbers on the Greys River feedground and native winter ranges in Area 89. Based on the current year's trend count, this strategy was successful as elk numbers have decreased on Forest Park feedground and increased on the Greys River feedground and native winter ranges in Area 89. Hunt seasons in the Salt River (Area 91), have maintained elk numbers at desired levels to minimize damage to stored crops and comingling with livestock.

Weather



Precipitation

Overall precipitation from October 2017 through September 2018 was well below average when evaluated across the entire herd unit, over the water year (October through September of the following year). The general characteristics included a very mild and dry winter followed by average spring precipitation. Although growing season (April through June) precipitation was near average due to several significant precipitation events, summer (May-July) precipitation was significantly below average and resulted in less than ideal growing conditions on summer range.

Winter Severity

The 2018-2019 winter started mild but the months of January and February have been increasingly tough for wildlife with regard to snow accumulation and cold temperatures on winter ranges. SNOWTEL locations in the high elevations of the Snake River watershed indicated snow water equivalents well above average, and these increased snow levels persisted well into the spring.

Habitat

No habitat data has been collected on elk summer and winter ranges. There are no established vegetation transects in this herd unit. Please refer to the 2018 Annual Report Strategic Habitat Plan Accomplishments for the Jackson Region habitat improvement project summaries (<http://wgfd.wyo.gov/web2011/wildlife-1000708.aspx>).

Field Data

The Afton elk herd has been managed to maintain the population within +/-20% of the trend objective of 2200 elk. Population trends are relatively stable; however, there have been periodic increases in the total elk counted during the last four years. Hunt seasons have been successful at targeting elk numbers, notably in upper Greys River segment of the population, where rapid and sustained growth has been observed.

Hunting seasons have suppressed population growth in an elk herd where moderate to high calf survival and calf: cow ratios are frequently observed at 38 – 43 calves: 100 cows. Since 2011 bull: cow ratios have been observed at or slightly below the management goal of at least 20 bulls: 100 cows. The observed bull:cow ratio of 24 bulls:100 cows in 2017 was the highest proportion of bulls observed in postseason surveys in at least 10 years. However, the observed ratio dropped in 2018 to 15 bulls:100 cows largely due to the inability to survey all native winter ranges effectively during aerial surveys.

Over the last four years the number of elk documented on native winter ranges has increased to levels not observed in at least 20 years, especially in Greys River. The importance of this native winter range is essential to long-term maintenance of elk that spend the summer and fall in the lower Greys River. During open and relatively snow-free winters, many elk spend the winter on Greys River winter ranges instead of migrating to the Greys River elk feedground at Alpine. This winter range is located in Hunt Area 89 and encompasses the area from Deadman Creek northward to the confluence of Greys River and Snake River. In 2018 the number elk decreased from 625 elk counted in 2017 to 317 elk observed in 2018 in Hunt Area 89.

Harvest Data

Hunters harvested an estimated 888 elk in 2018 which is substantially more than the 713 elk taken in 2017, but less than the 1064 elk harvested in 2016. Hunting conditions have varied considerably over the last five years, and conditions associated with hot dry conditions were some of the more challenging conditions in 2018.

The slight increase in elk harvested in 2018 from 2017 levels reflects more elk available during the current hunt based on a higher 2017 trend count prior to the hunt. It also is symptomatic of a population dynamic in the Afton herd that clearly depicts a lack of a sustained harvest trend between years. While the 5-year average of 2400 hunters did not change significantly in 2018 (N=2500 hunters), the slightly increased elk harvest in the current year is inexplicable in response to sustained hunting pressure over the last 5 years.

Concurrently, there has been no significant variation observed in hunter success over the last four years. Success has varied, though not significantly, from 32% and 34% in 2014 and 2015 respectively, to 36% in 2016. Hunter success in 2017 was estimated at 25%, and 36% in 2018. The number of days hunters needed to harvest an elk has decreased each successive year since 2014. Hunters spent 25 days to harvest an elk in 2014; the amount of effort continued to

decrease to 19 days and 17 days in 2015 and 2016, respectively. However, days/harvest increased in 2017 in response to fewer elk harvested. In 2017, days/elk harvested increased to 25 days. Hunters harvested an elk in approximately 18 days of hunting effort in 2018.

Hunting seasons and the associated harvest observed in the Greys River, Areas 89 and 90 have enabled the current management program to maintain elk numbers near the desired 3-year average trend count objective of 2200 elk. Sufficient opportunity for general license, any and antlerless elk hunts that extend into November has resulted in the maintenance of a stable elk population that is capable of sustaining a reasonably liberal hunting structure over the last 10 years in some areas.

The hunting season in 2019 will focus on harvesting predominately any elk in Area 89 during the first three days of the hunting seasons to compensate for the generally higher trend counts in that area and on the Greys River feedground the last three years. The percentage of antlered elk taken continues to exceed the number and percentage of cow elk in this herd unit. Since 2016 antlered elk comprised approximately 58% of the annual total harvest, while cow elk comprised approximately 42%. In 2017, 56% of all taken were antlered elk. Interestingly, 52% of the total harvest in 2017 was comprised of 2+-year old bulls. In 2018, 52% of the herd unit elk harvest was comprised of antlered elk. During the current hunt 2+-year old bulls tallied 87% of the antlered harvest. The estimated high percentage of 2+-year old bulls taken each year is indicative of generally high calf and yearling recruitment into the adult cohorts.

Population

A concerted effort was attempted to develop a representative spreadsheet model over the last 5 years. Poor alignment of the bull: cow ratios, harvest percentages of males, and population estimates have rendered the development of a representative and accurate spreadsheet model unsuitable.

As a result, the mid-winter trend count management objective was developed and implemented in 2015 to better utilize observed data to estimate population. The mid-winter trend count provides managers with a realistic assessment of population dynamics in this elk herd. Furthermore, the annual trend counts present a depiction of this population's performance where, on average, 65% - 85% of all elk are counted on feedgrounds.

Management Summary

The 2019 hunting season is designed to maintain the mid-winter trend objective. The lower Greys River (HA 89) will close on October 31, which is the same season closing date as in 2018. The general any elk portion of the hunting season in Area 89 will remain October 15 – October 17 in an effort to provide continued hunting recreation and reduce pressure on antlered elk. Antlered elk only hunting will continue on October 18 and close on October 31.

Management will continue to emphasize antlerless elk harvest in Area 90 by allowing general and limited quota type 6 license holders to hunt into November. The Area 90 Type 6 additional

cow or calf licenses will remain at 250 licenses in an effort to increase harvest. The season length for limited quota Type 6 licenses will extend into November as it has since 2006 in an effort to encourage hunters to harvest antlerless elk in an area where the Forest Park feedground quota has met or exceeded the Commission-established quota during most years since 1993.

In Area 91 the number of Type 6 cow or calf only licenses will be maintained at 175 licenses in response to higher elk numbers being observed on native winter ranges in 2016, 2017, and during the current year. The Type 6 licenses will address elk damage concerns along the eastern portion of area 91. Season dates for this license will continue to extend through the end of January.

Based on past harvest statistics, the 2019 hunting seasons will result in a harvest of 800 elk. The proposed 2019 harvest should maintain the population within +/- 20% of the annual three-year trend count average of 2200 elk. The projected 2019 mid-winter trend count is estimated at 2150 elk.

Appendix A. Afton Elk Herd, posthunt herd composition data, 2014-2018.

Year	Adult Males	Yrlng Males	Total Males	Cows	Calves	Total	Ratio:100 Females			
							Adult Males	Yrlng Males	Total Males	Calves
2014										
88 GRFG	59	22	81	570	164	815				
88 NR	0	0	0	3	0	3				
89 NR	6	24	30	329	201(5)	565				
90 FPG	63	18	81	500	172	753				
90 NR	0	0	0	0	0	0				
91 NR	24	13	37	162	55(42)	296				
TOTAL	152	77	229	1564	592(47)	2432	10	5	15	38
2015										
88 GRFG	43	24	67	441	152	660				
88 NR	0	0	0	1	0	1				
89 NR	6	6	12	101	57 (24)	194				
90 FPG	59	18	77	476	188	741				
90 NR	0	0	0	0	0	0				
91 NR	13	5	18	26	14(183)	241				
TOTAL	121	53	174	1045	411(207)	1837	11	5	17	39
2016										
88 GRFG	43	13	56	532	144	732				
88 NR	0	1	1	3	1(5)	10				
89 NR	4	3	7	88	44(52)	191				
90 FPG	61	48	109	507	198	814				
90 NR	0	2	2	2	2(1)	7				
91 NR	41	33	74	148	122((592)	936				
TOTAL	149	100	249	1280	511(650)	2690	11	8	19	40
2017										
88 GRFG	29	7	36	358	82	476				
88 NR	0	0	0	0	0	0				
89 NR	7	4	11	37	15(562)	625				
90 FPG	66	25	91	409	79	579				
90 NR	0	1	1	0	0(8)	9				
91 NR	57	1	58	8	0(658)	724				
TOTAL	159	38	197	812	176(1228)	2413	19	5	24	22
2018										
88 GRFG	18	13	31	378	110	519				
88 NR	0	0	0	0	0	NS				
89 NR	1	12	13	111	85(108)	317				
90 FPG	36	11	47	326	94	467				
90 NR	0	0	0	0	0	NS				
91 NR	49	21	70	227	90(177)	564				
TOTAL	104	57	161	1042	379(285)	1867	10	5	15	36