

2016 - JCR Evaluation Form

SPECIES: Elk

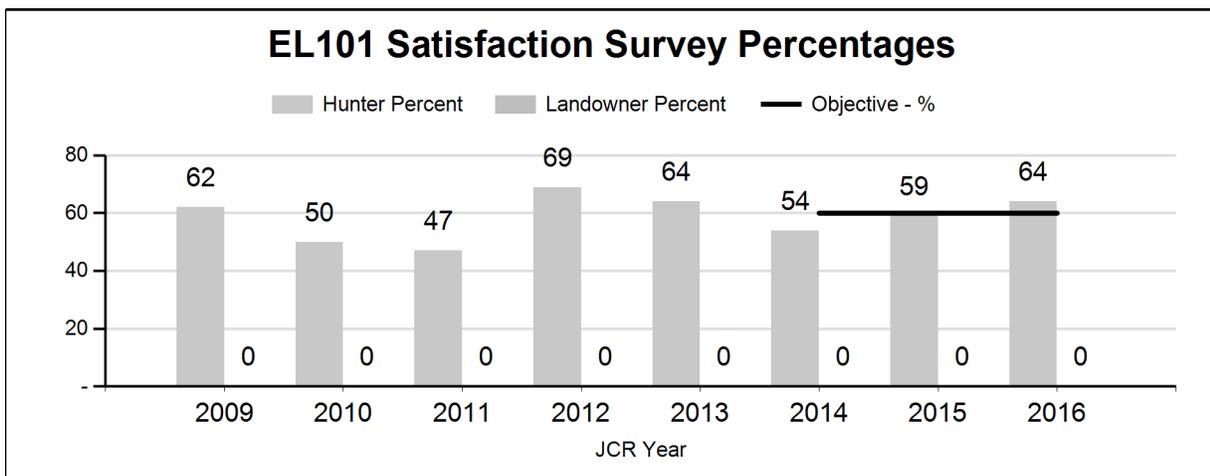
PERIOD: 6/1/2016 - 5/31/2017

HERD: EL101 - TARGHEE

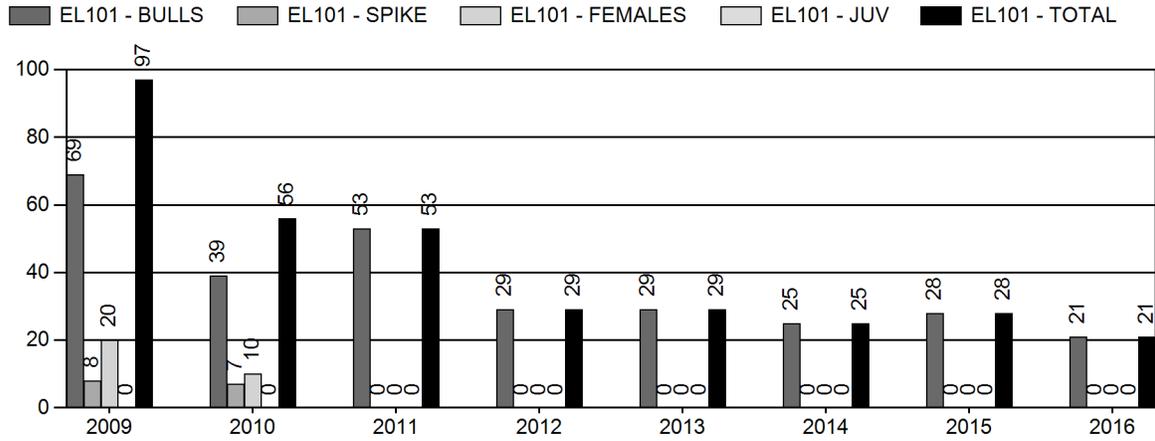
HUNT AREAS: 73, 900

PREPARED BY: ALYSON COURTEMANCH

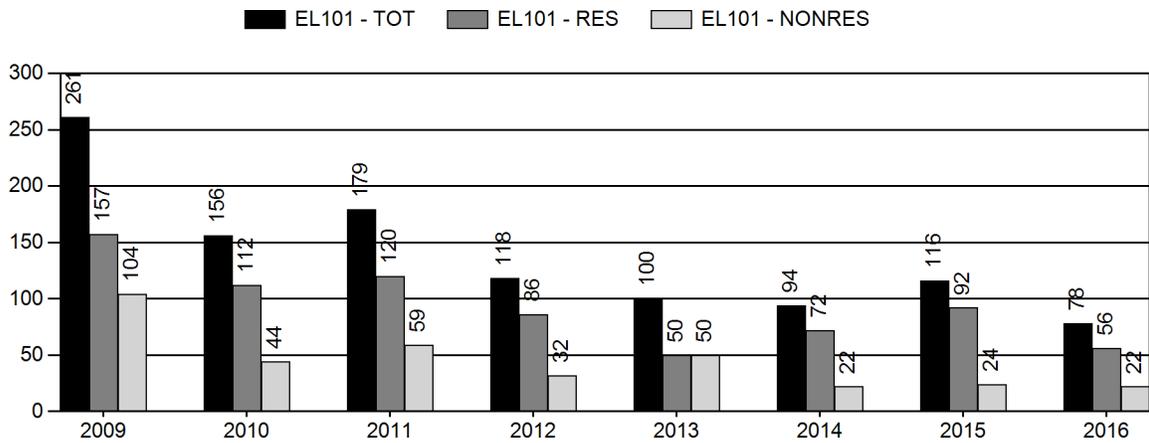
	<u>2011 - 2015 Average</u>	<u>2016</u>	<u>2017 Proposed</u>
Hunter Satisfaction Percent	58%	64%	65%
Landowner Satisfaction Percent	0%	0%	na%
Harvest:	33	21	35
Hunters:	121	78	120
Hunter Success:	27%	27%	29%
Active Licenses:	121	78	120
Active License Success:	27%	27%	29%
Recreation Days:	709	637	375
Days Per Animal:	21.5	30.3	10.7
Males per 100 Females:	0	0	
Juveniles per 100 Females	0	0	
Satisfaction Based Objective			60%
Management Strategy:			Recreational
Percent population is above (+) or (-) objective:			N/A%
Number of years population has been + or - objective in recent trend:			1



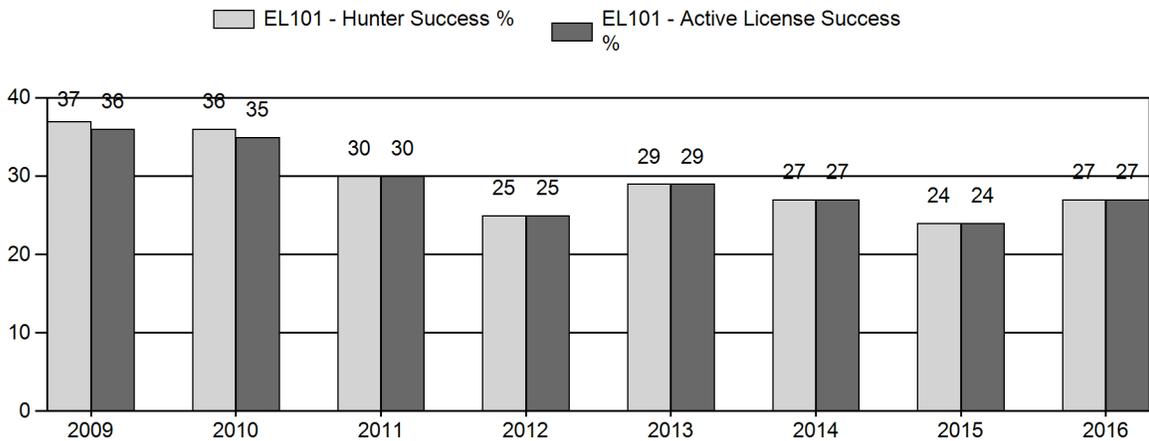
Harvest



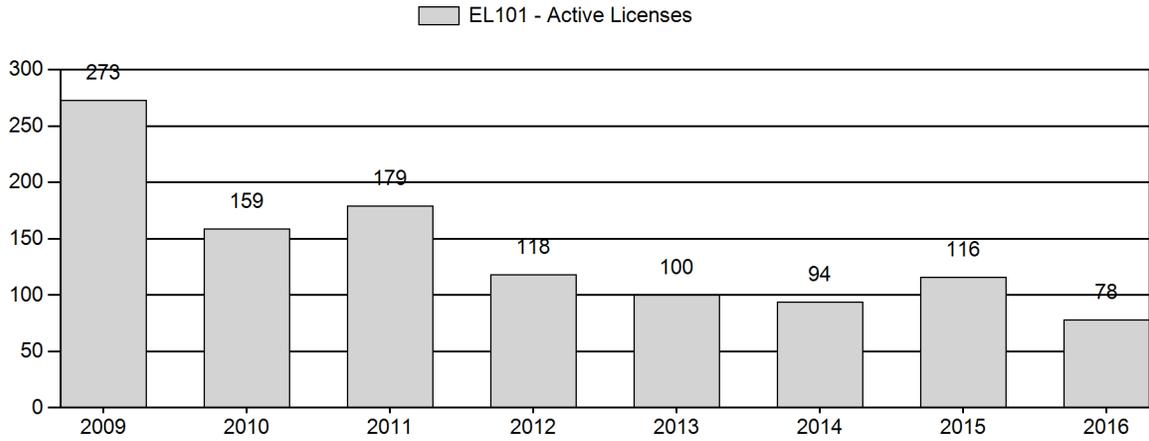
Number of Hunters



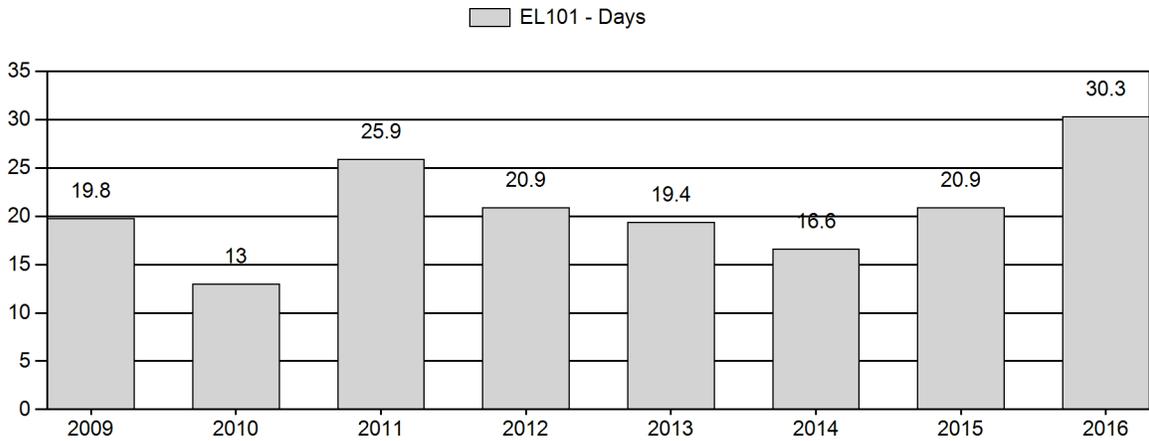
Harvest Success



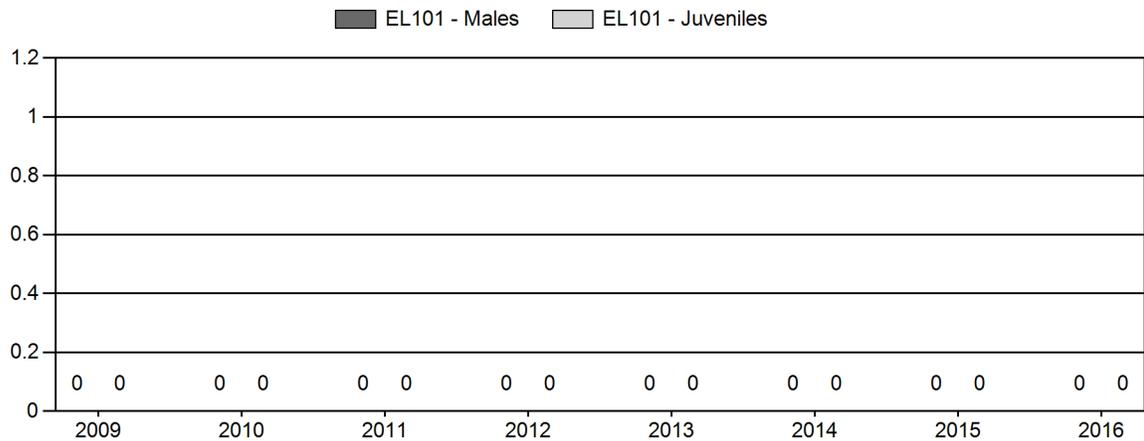
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2017 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
Archery		Sep. 1	Sep.19			Refer to Section 2 of this Chapter

Summary of Changes by License Number

Area	Type	Quota change from 2016
73	6	+25
Herd Unit Total	6	+25

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.

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 2016, 64% of hunters indicated they were “satisfied” or “very satisfied” with hunting in the Targhee Elk Herd (n=22 respondents). The average satisfaction for the past 3 years is 59% (Fig. 1). Therefore, the herd is not meeting the primary objective of an average of $\geq 60\%$ hunter satisfaction over 3 years. In 2016, 27% of hunters were successful in the Targhee Elk Herd (Fig. 2). The 3-year average of hunter success is 26%. Therefore, the herd is meeting the secondary objective of an average of $\geq 25\%$ harvest success over 3 years.

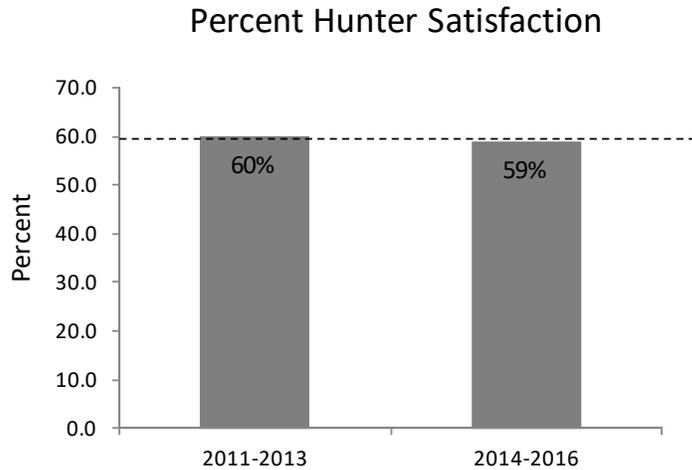


Fig. 1. Three-year averages of percent of hunters indicating they were “satisfied” or “very satisfied” on WGFD’s harvest survey from 2011-2016. The dashed line indicates the objective of $\geq 60\%$.

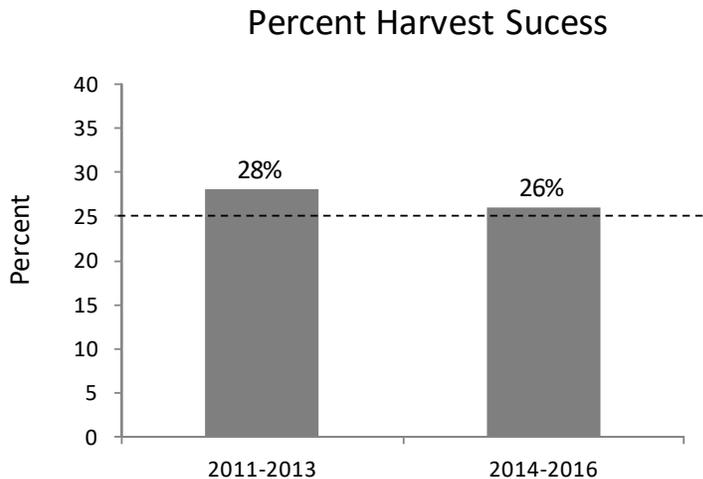


Fig. 2. Harvest success rates in the Targhee Elk Herd for 2011-2016. The dashed line indicates the 3-year average objective of at least 25% harvest success.

Herd Unit Issues

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. However, elk were opportunistically recorded during an aerial survey of the Targhee bighorn sheep herd in March 2015. Only 4 adult bull elk were observed. 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 will be offered in 2017 valid for private lands only to help disperse elk off private lands and prevent damage.

Weather

Summer 2016 was very dry. Precipitation in July was only 50% of average. September and October were rainy, resulting in a late-season flush of forage production. November was relatively warm and mild with no significant snowfall until early December. However, the region received significant snowfall and freeze/thaw events in late December through January, causing severe winter conditions. These conditions caused elk to concentrate at low elevations in high numbers. Several rain events and warmer temperatures in February resulted in slopes melting out in some areas on native winter ranges. At the time of the mid-winter survey in February 2017, winter snowpack was reported at 131% of average in the Snake River Basin. 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 5 years. Several habitat improvement projects are being planned in this herd unit, including the Hill Creek Prescribed Burn, which is scheduled for completion in 2017. In addition, a habitat treatment in Teton Canyon is currently in the planning stages to improve mountain shrub and aspen communities. The WGFD is assisting Caribou-Targhee National Forest (CTNF) with vegetation monitoring in aspen stands pre and post-treatment. Please refer to the 2016 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 2016 biological year.

Harvest Data

Based on harvest statistics, the availability of elk in the Targhee Herd continues to be a concern. The overall number of elk harvested remained low in 2016 (n=22) as did the number of hunters (n=82). Hunters took an average of 30.4 days to harvest in 2016, which suggests that elk are very difficult to find in the hunt area. Antlerless elk seasons were eliminated in 2010 and the season was shortened 6 days in 2012. Hunter satisfaction appears to be improving slightly over the last 3 years. In 2016, hunter satisfaction was 64% and harvest success was 27%.

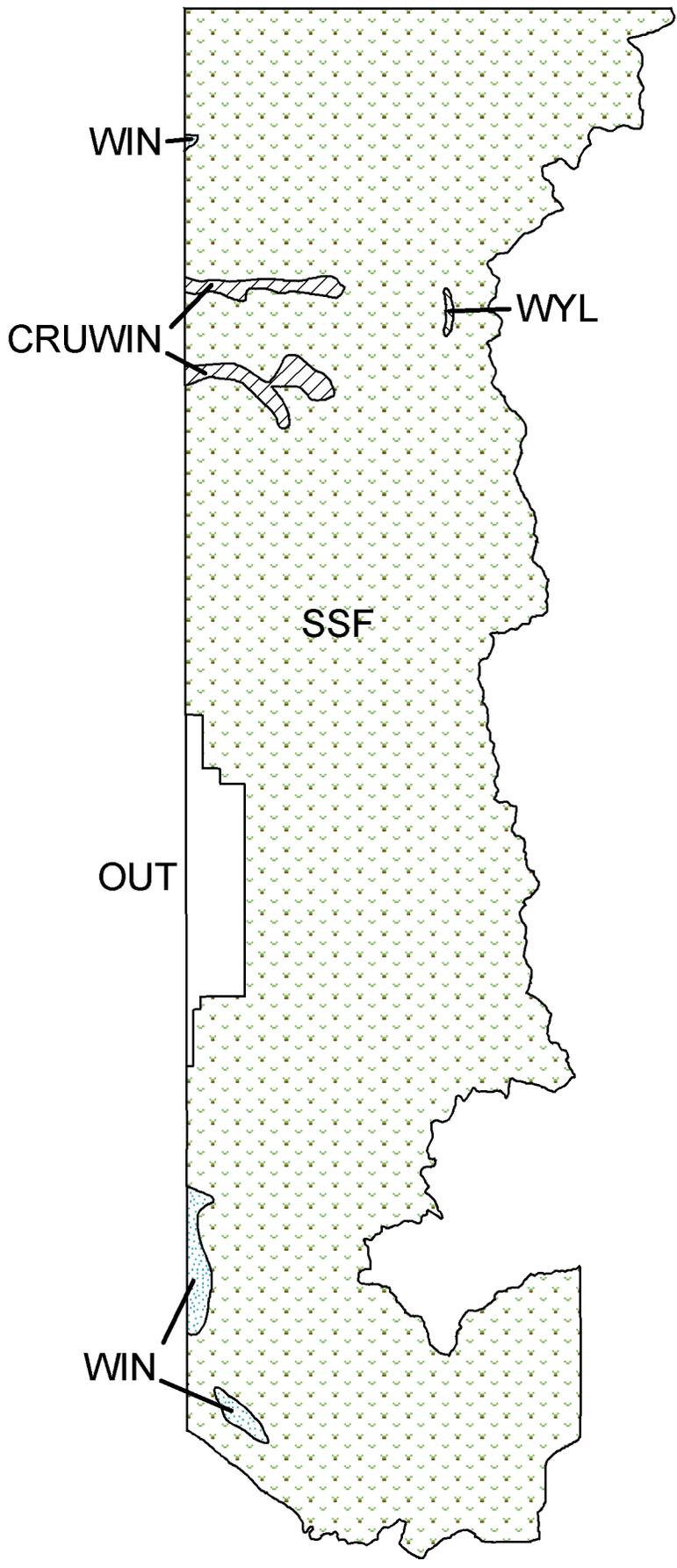
Population

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.

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. In an effort to improve male recruitment in this population a spikes-excluded season was implemented in 2013. However, Idaho currently runs a spikes-only hunting season across the state line. Therefore, spikes that avoid harvest in Wyoming face hunting pressure once they migrate into Idaho.

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 in 2017 valid for private lands only to help disperse elk off private lands and prevent damage.



E101 - Targhee
HA 73
Revised - 7/87



2016 - JCR Evaluation Form

SPECIES: Elk

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

HERD: EL102 - JACKSON

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

PREPARED BY: ALYSON COURTEMANCH

	<u>2011 - 2015 Average</u>	<u>2016</u>	<u>2017 Proposed</u>
Trend Count:	11,059	10,766	11,000
Harvest:	1,310	1,464	1,300
Hunters:	3,012	3,184	3,000
Hunter Success:	43%	46%	43%
Active Licenses:	3,109	3,309	3,000
Active License Success	42%	44%	43%
Recreation Days:	20,867	20,893	20,000
Days Per Animal:	15.9	14.3	15.4
Males per 100 Females:	32	38	
Juveniles per 100 Females	20	20	

Trend Based Objective ($\pm 20\%$)

11,000 (8800 - 13200)

Management Strategy:

Recreational

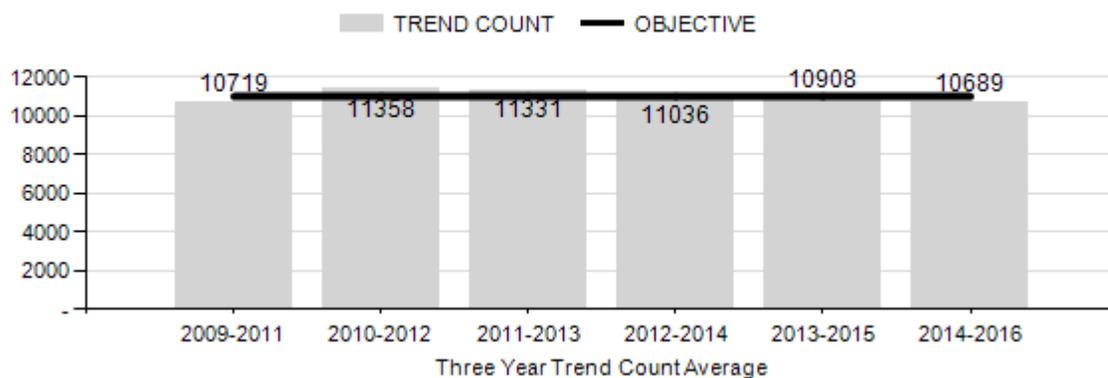
Percent population is above (+) or (-) objective:

-2.1%

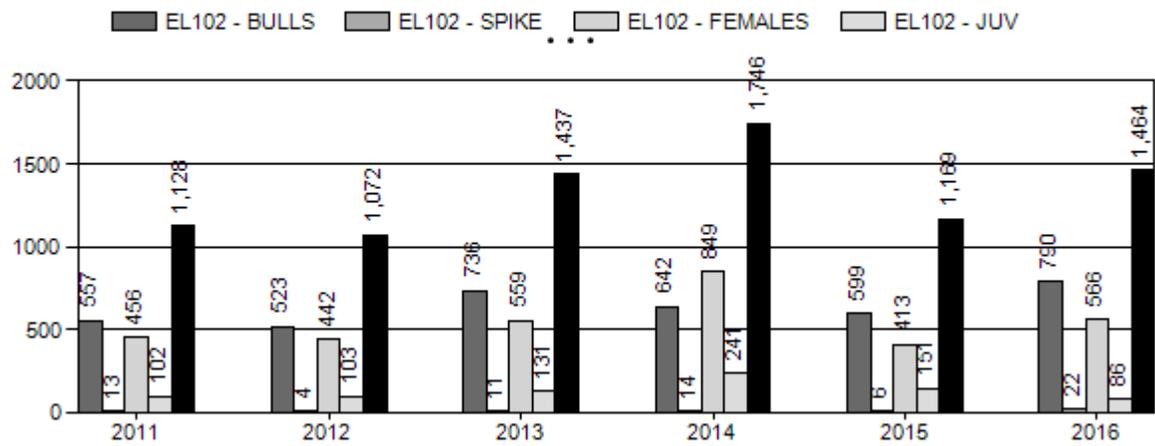
Number of years population has been + or - objective in recent trend:

0

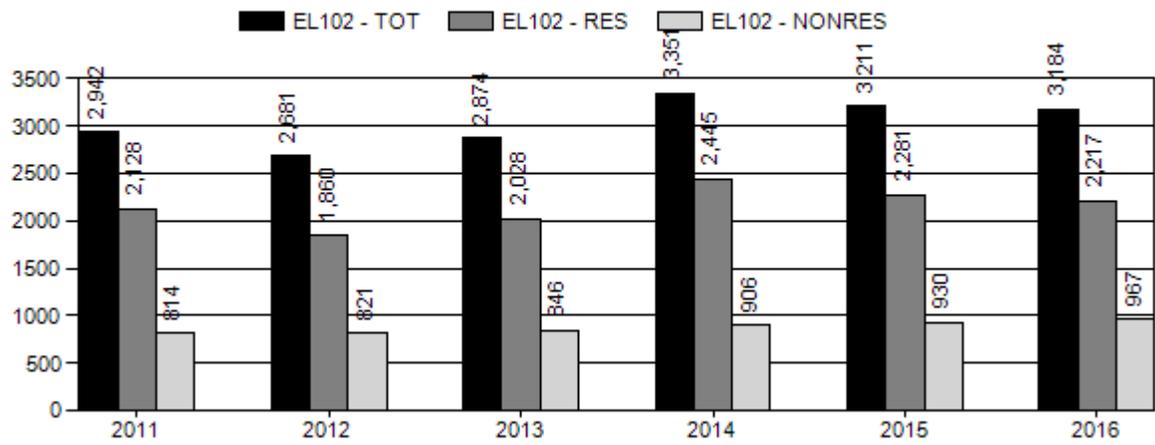
EL102 Trend Count



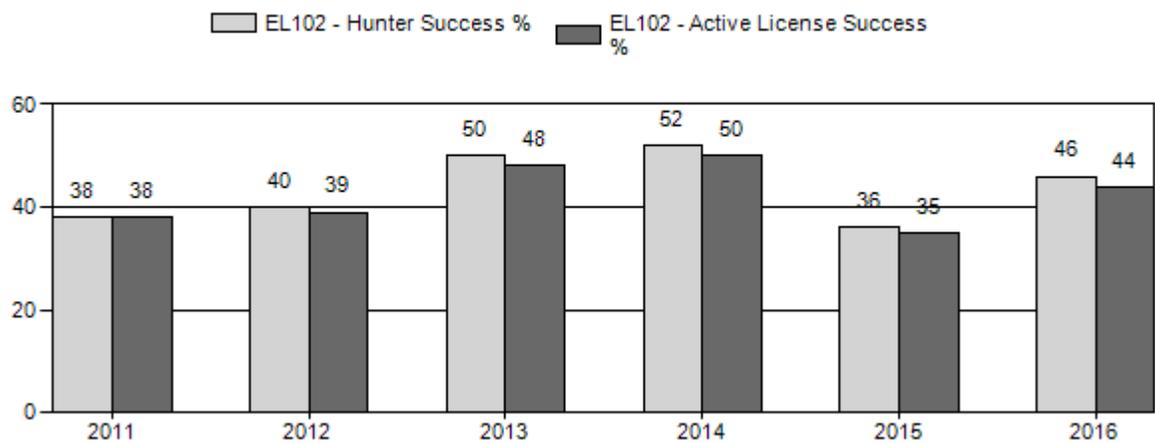
Harvest



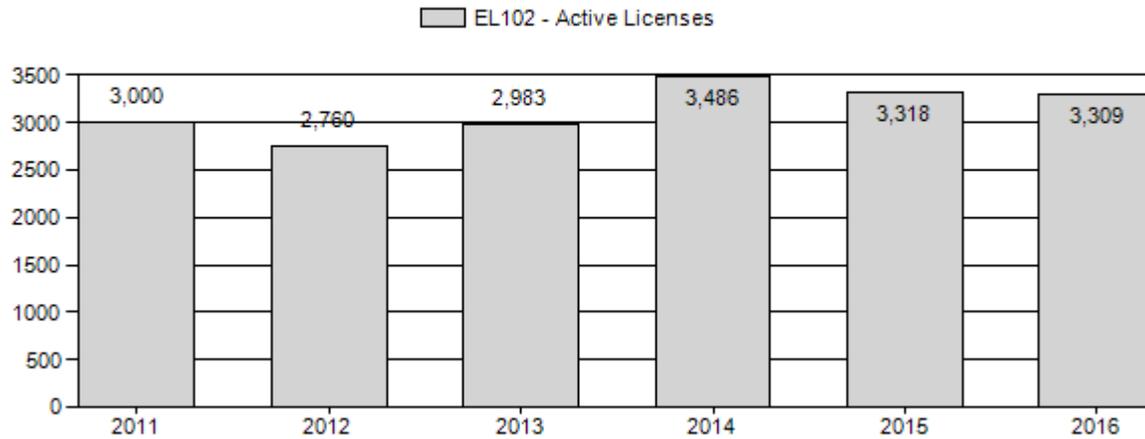
Number of Hunters



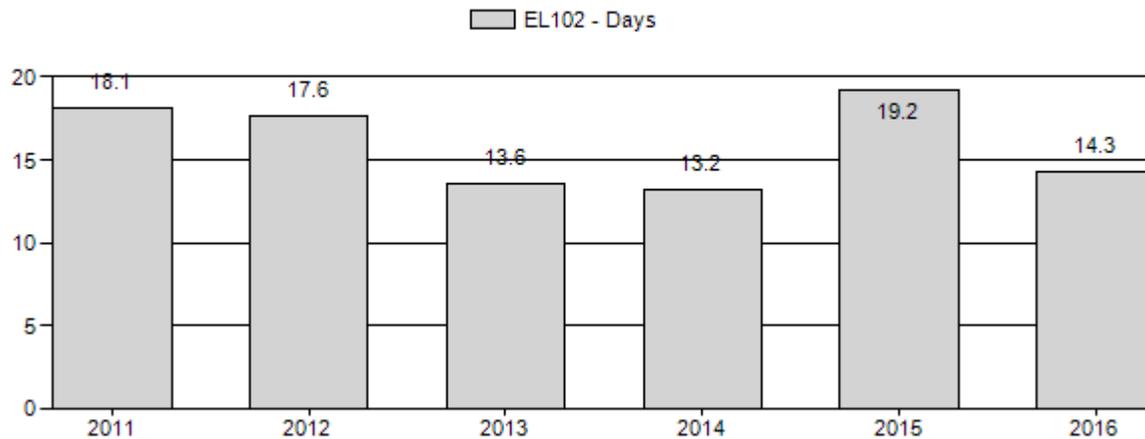
Harvest Success



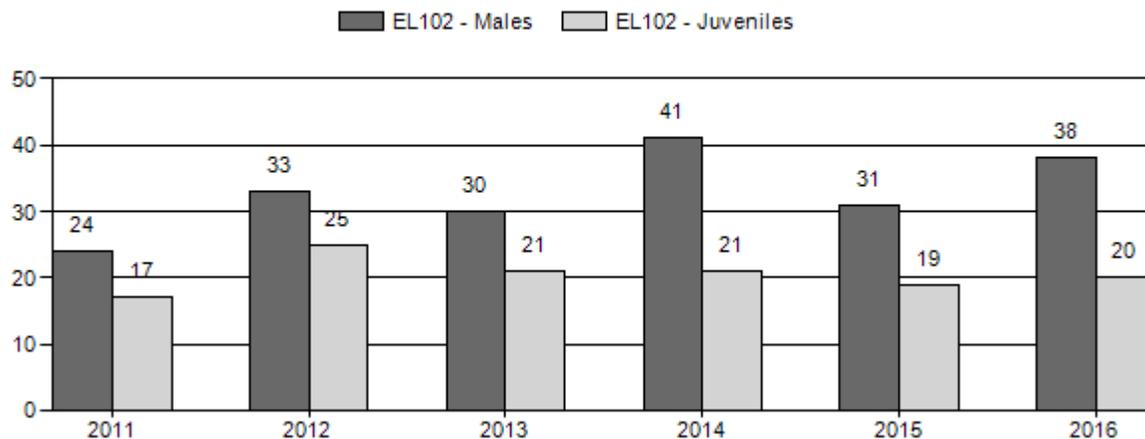
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2011 - 2016 Postseason Classification Summary

for Elk Herd 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
2011	11,982	467	1,519	1,986	17%	8,116	70%	1,417	12%	11,519	269	6	19	24	± 0	17	± 0	14
2012	11,200	601	1,693	2,294	21%	7,027	64%	1,730	16%	11,051	440	9	24	33	± 0	25	± 0	19
2013	11,600	659	1,619	2,278	20%	7,560	66%	1,585	14%	11,423	374	9	21	30	± 0	21	± 0	16
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 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	Oct. 28	Nov. 30	75	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	Oct. 28	Oct. 31			Antlerless elk valid in Area 79
75	4	Dec. 1	Dec. 10			Antlerless elk; the Snake River Bottom and Antelope Flats portion of Area 75 shall be closed
75	6	Oct. 28	Nov. 30	525	Limited quota	Cow or calf; the Snake River Bottom portion of Area 75 shall be closed
75	6	Dec. 1	Dec. 10			Cow or calf; the Snake River Bottom and Antelope Flats portion of Area 75 shall be closed
77		Oct. 14	Oct. 23			General license and unused limited quota licenses; excluding limited quota cow or calf licenses and limited quota archery only licenses, any elk
77		Oct. 24	Nov. 22			General license and unused limited quota licenses; excluding limited quota archery only licenses, antlerless elk only
77		Nov. 23	Nov. 25			National Elk Refuge permits shall be issued only for youths 12 through 17 years of age. General license and unused limited

						quota licenses; excluding limited quota cow or calf licenses and archery only licenses, valid for any elk
77		Nov. 26	Dec. 15			General license and unused limited quota licenses; excluding limited quota archery only licenses, antlerless elk only
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	175	Limited quota	Cow or calf valid off national forest
78	6	Sep. 26	Jan. 31			Cow or calf valid in the entire area
78	7	Aug. 15	Jan. 31	25	Limited quota	Cow or calf archery, muzzle-loading firearm or shotgun only
79		Oct. 28	Oct. 31			Antlerless elk, Area 75 Type 4 licenses valid in Area 79
80		Sep. 26	Oct. 31		General	Any elk
80		Nov. 1	Nov. 12		General	Antlerless elk
80		Nov. 13	Nov. 30		General	Antlerless elk valid south of the Curtis Canyon and Sheep Creek Roads (U.S.F.S. Roads 30440 and 30445)
80	6	Oct. 15	Nov. 12	100	Limited quota	Cow or calf
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 Changes in License Number

Hunt Area	Type	Quota change from 2016
75	4	-50
	6	+25
77		
78	7	-25
	2	+50
Herd Unit Total	2	+50
	4	-50
	6	+25
	7	-25

Management Evaluation

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

Management Strategy: Recreational

2016 Mid-Winter Trend Count: 10,766

3-Year Running Average: 10,689

The mid-winter trend count objective for the Jackson Elk Herd is a 3-year running average of 11,000 elk \pm 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 simulate Jackson Elk Herd trends. The Wyoming Game and Fish Commission approved the proposed mid-winter trend count objective of 11,000 elk \pm 20% in June 2016.

The current mid-winter trend count is 10,766 elk. The 3-year running average is 10,689. Therefore, the population is stable and currently at objective. Low calf productivity from the northern herd segments and liberal antlerless elk hunting seasons on the southern migratory segment have reduced the population to the desired objective.

Herd Unit Issues

Management of this herd is complicated because occupied habitat includes two National Parks and the National Elk Refuge (NER). Complex 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 supplemental feed 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, comingling 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 these targets. The number of elk on native winter ranges has decreased dramatically over the past decade. For example, average number of elk on native winter ranges in the Gros Ventre drainage has decreased by over 50% in the last 10 years. From 2000-2004, an average of 1,160 elk utilized native winter ranges, whereas an average of 538 were found from 2010-2014. From 2000-2004, an average of 864 elk wintered in the Buffalo Valley and Spread Creek, whereas an average of 167 wintered from 2010-2014, an 80% reduction. During that time, the overall population has only decreased by 7%. In recognition of the lack of management tools available to achieve these winter distribution goals, the Gros Ventre and native winter range goals were removed during the herd unit objective review process in 2016.

Weather

Summer 2016 was very dry. Precipitation in July was only 50% of average. September and October were rainy, resulting in a late-season flush of forage production. November was relatively warm and mild with no significant snowfall until early December. However, the region received significant snowfall and freeze/thaw events in late December through January, causing severe winter conditions. These conditions caused elk to concentrate at low elevations in high numbers. Several rain events and warmer temperatures in February resulted in slopes melting out in some areas on native winter ranges. At the time of the mid-winter survey in February 2017, winter snowpack was reported at 131% of average in the Snake River Basin. 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 established aspen transects on elk winter and transitional ranges in the Gros Ventre drainage, Buffalo Valley, and Blackrock areas. These transects have been monitored since the late 1970s. Data was collected on these transects in summers 2012 and 2013. The Red Rock Fire Ungulate Nutrition Project was initiated in 2012 in the Gros Ventre drainage. This is designed to be a long-term project to collect and analyze nutritional and mineral content of vegetation post-wildfire and evaluate the influence of fire severity on plant nutrition for ungulates. This project is scheduled to continue through at least 2017. The lightning-caused Berry Fire started in northern Grand Teton National Park in July 2016 and burned 20,825 acres in the Berry Creek, Owl Creek, Flagg Ranch, and western Teton Wilderness (Hunt area 71) areas. Please refer to the 2016 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

Postseason classification surveys were conducted February 16-22, 2017. The ground classification on the National Elk Refuge (NER) occurred February 21, 2017. Due to bad weather conditions, a recount was conducted on the NER on February 28, 2017. A total of 10,766 elk were counted in the herd unit including 6,359 cows, 1,257 calves, 476 yearling bulls, 1,829 adult bulls, and 845 unclassified elk. The majority of elk were located on feedgrounds (94%; n=10,106), with only 6% on native winter ranges (n=660).

Herd unit ratios were 20 calves:100 cows, 29 adult males:100 cows, and 7 yearling males:100 cows. Approximately 94% of the herd was on supplemental feed during the mid-winter trend count. Eighty-three percent of the herd (8,879 elk) was counted on supplemental feed on the NER, 9% was on Patrol Cabin feedground in the Gros Ventre drainage (970 elk), and 2% was on an emergency feedline in the Buffalo Valley (257 elk). The remaining 6% of the herd (660 elk) was observed on native winter ranges in the Gros Ventre drainage, east of the NER, and Spread Creek area. These winter distribution patterns are mostly driven by the above-average snowpack this winter.

There were 1,589 more elk on supplemental feed on the NER compared to last year and numbers remain well above the 5,000 objective. Ratios on NER supplemental feed were 19 calves:100 cows, 29 mature bulls:100 cows, and 7 yearling bulls:100 cows. Staff at the NER estimated that refuge-wide herbaceous forage production was 14,761 tons in 2016, which is 1.7% above the 1998-2015 average. The forage production on the NER this year was attributed to normal May and June precipitation levels plus irrigation system improvements. Biologists from WGFD and NER monitored available forage and snow conditions on the NER beginning in late December and decided to initiate elk supplemental feeding on January 7, 2017. The average date of feeding initiation on the NER from the past 10 years is January 24. Feeding occurred much earlier this year due to above average snowfall and freeze/thaw events in December and early January. Staff from the NER and WGFD darted and GPS-collared 30 cow elk from the NER in March 2016 and an additional 33 cow elk in February 2017. Collars will provide current movement and summer distribution data for these elk.

Total elk wintering in the Gros Ventre drainage have been generally declining since 2004 (Fig. 2). This is likely a reflection of elk leaving the Gros Ventre and wintering on the NER versus a reduction in elk numbers. Elk movements out of the Gros Ventre are likely driven by early winter snowfall, predation pressure, and learned behavior. Postseason calf:cow ratios in the Gros Ventre have fluctuated in recent years, which is likely due to groups of cow and calf elk leaving the drainage and being classified on the NER. The calf:cow ratio this year was 20 calves:100 cows. WGFD staff darted and GPS-collared 12 cow elk on the Patrol Cabin feedground in winter 2017.

The WGFD hired a contractor to conduct a forward-looking infrared (FLIR) flight to count and classify resident elk in Hunt Area 78 and in July 2016. This survey was conducted in conjunction with a FLIR survey in GTNP. The survey was flown using a fixed-wing aircraft at 2,500 feet above the ground along set transects. A total of 721 elk were counted in the survey area south of Moose, mostly on private lands. Calf ratios were not reliable due to low quality video from the flight, however ground classifications in this area show a summer calf:cow ratio of approximately 50:100. This resident herd segment has high calf production and survival due to

very low predation, high quality forage (irrigated agricultural lands), and relatively low harvest due to diverse private land ownership.

The continued high number of elk utilizing supplemental feed on the NER suggests that current management direction to maintain liberal seasons on antlerless elk from the southern herd segment is needed. At the same time, maintaining a conservative season structure for elk that migrate longer distances from the northern segments of the herd is important. Increasing harvest pressure on elk in southern GTNP, Hunt Area 80, and Hunt Area 78 will help achieve management goals for the herd.

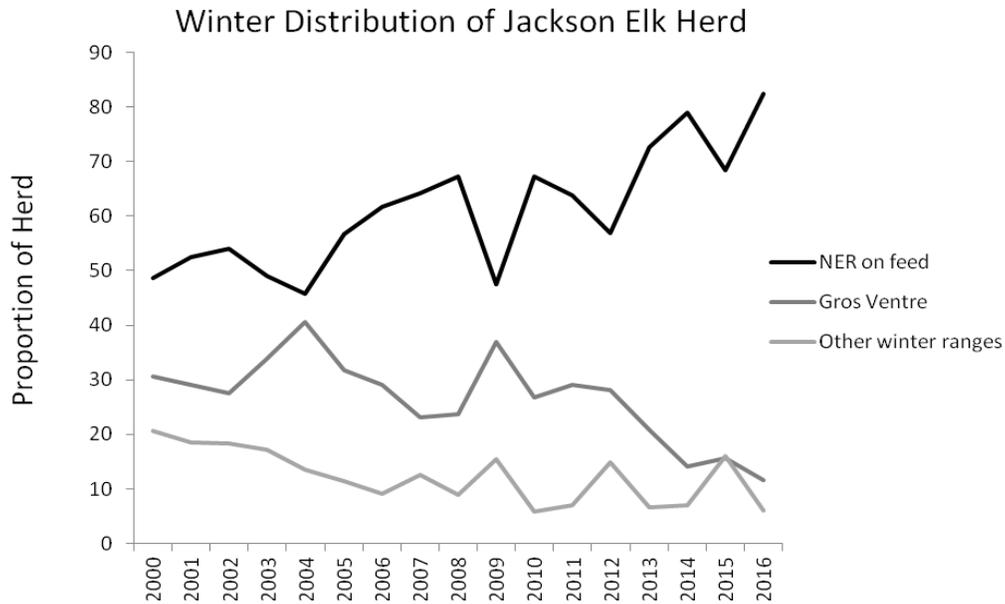


Fig. 1. Proportions of the Jackson Elk Herd wintering on the National Elk Refuge on feed, in the Gros Ventre drainage, and on other winter ranges, 2000-2016.

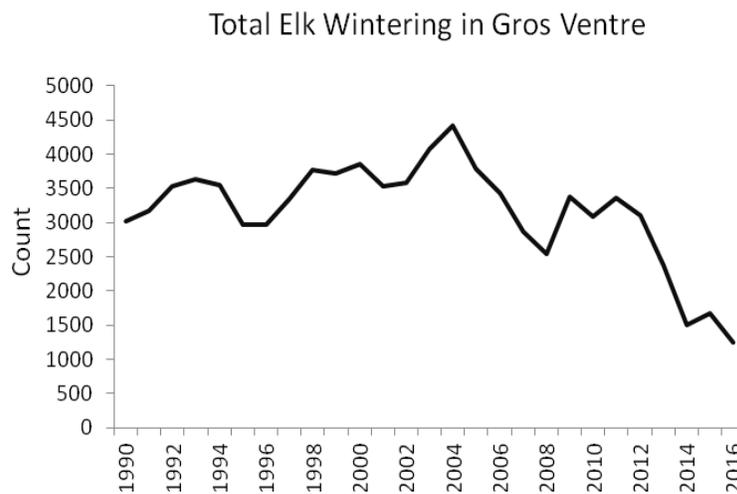


Fig. 2. Total elk numbers in the Gros Ventre drainage (feedgrounds and native winter ranges) from 1990-2016.

Harvest Data

A total of 1,464 elk were harvested in the Jackson Elk Herd in 2016. This is an increase from last year when 1,169 elk were harvested. The 2016 harvest continued to focus hunting pressure on cow elk from southern herd segments, with the majority of cow harvest occurring in Hunt Area 77 (246 cows), followed by Hunt Area 75 (142 cows), and Hunt Area 78 (97 cows). Bull harvest was high this year due to early snowfall in backcountry areas. The majority of mature bull harvest occurred in the Gros Ventre in Hunt Areas 81, 82, and 83 (386 bulls) and the Teton Wilderness in Hunt Area 70 and 71 (342 bulls). This is the highest number of bulls harvested since 2007. However, the post-season mature bull ratio remains relatively high in the herd at 29:100. Hunter success in the Jackson Herd was 46%.

Total cow harvest in 2016 was 566, which is similar to the 5-year average of 543. Recently, seasons have been 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 2016 mid-winter trend count indicates that this population remained stable near the population objective of 11,000. A total of 10,766 elk were counted in the herd, with the majority located on supplemental feed (94%; n=10,106), and only 6% on native winter ranges (n=660). The calf ratio was 20 calves:100 cows, which is similar to the 5-year average of 20.5 calves:100 cows. 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

Hunting seasons in 2017 will again focus hunting pressure on southern resident elk that spend the summer along the Snake River corridor and in southern GTNP. Trend data indicate the Jackson Elk Herd declined from 1996-2009, but has been stable for the past 7 years and within 5% of the population objective. 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 relatively the same as 2016, closing October 31. This closure date is intended to remain the same in the future. This will encourage elk to stage in the Moran area and ensure that hunting pressure will not displace elk off transitional ranges. The northern portion of Area 80 will close November 12 to protect northern migrants while allowing hunters to access those areas where southern, resident elk are likely available to harvest. The rest of Area 80 will close November 30 to coincide with winter range closures on Bridger-Teton National Forest. Hunt Areas 75 and 79 will open a week later on October 28 to coincide with a later migration. Hunt Area 77 will remain open until December 15 to allow for harvest of southern, resident elk as they move through the area. The youth hunt in Hunt Area 77 has traditionally occurred on opening weekend (second weekend of October), but very few elk are present at that time. Therefore, a 3-day youth hunt will begin on Thanksgiving Day in 2017, which should give youth a better opportunity to

harvest an elk. Hunt Area 78 will include a general license season in 2017 for antlerless elk, valid on private land only from August 15 – October 31. There will also be an addition of a Type 2 license this year in Hunt Area 78, which will be valid for any elk on private land from August 15 – October 31. This is aimed to increase elk harvest on private lands and reduce damage.

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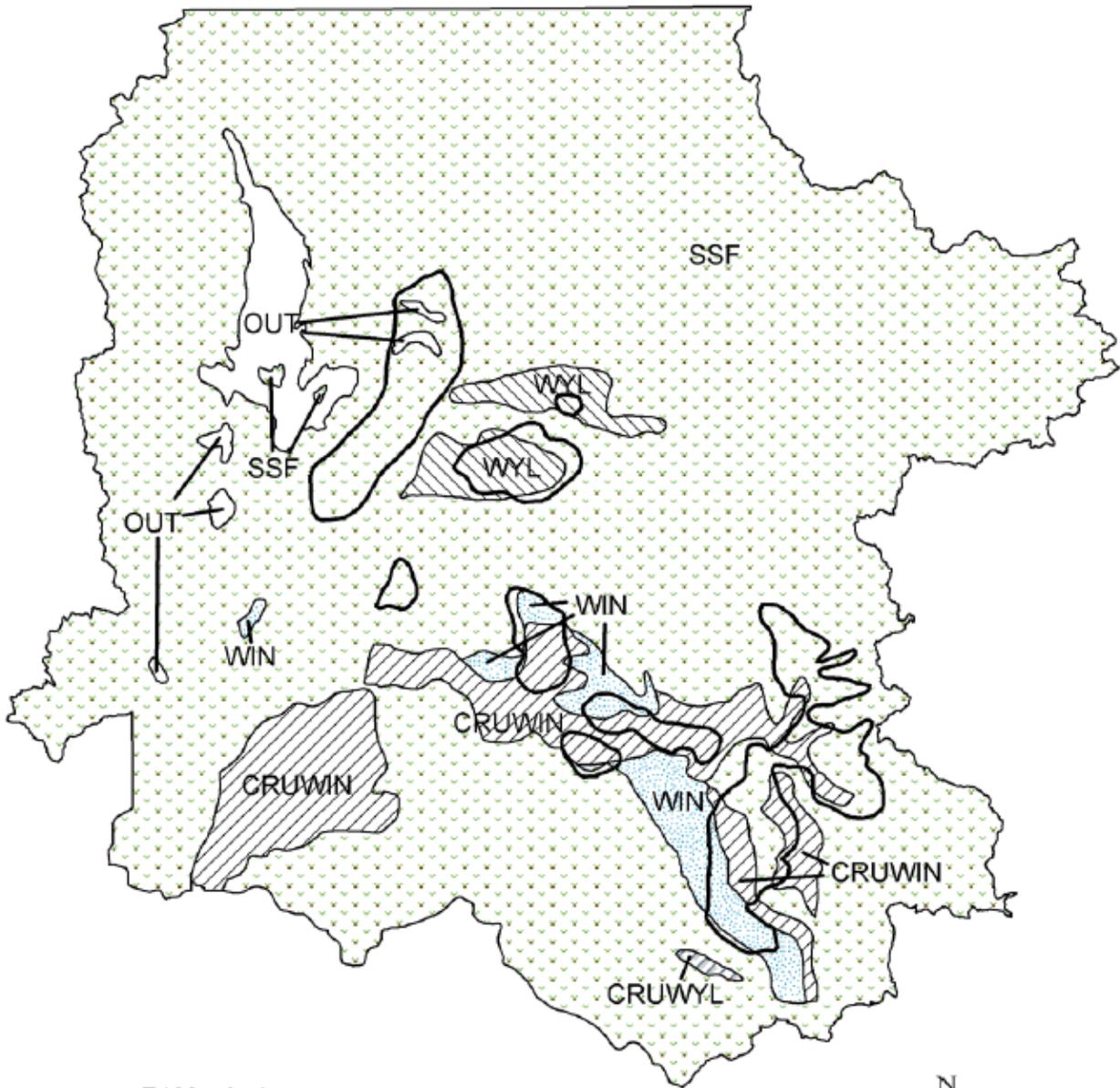
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E102 - Jackson
 HA 70-72, 74-75, 77-83
 Revised - 7/87

 Parturition Area

2016 - JCR Evaluation Form

SPECIES: Elk

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

HERD: EL103 - FALL CREEK

HUNT AREAS: 84-85

PREPARED BY: GARY FRALICK

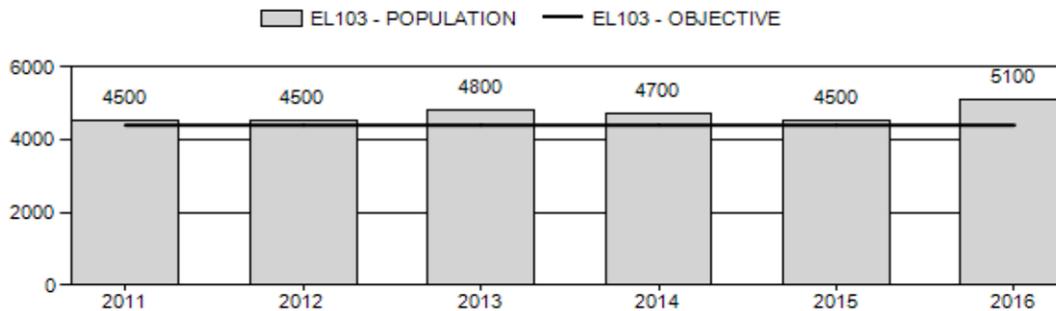
	<u>2011 - 2015 Average</u>	<u>2016</u>	<u>2017 Proposed</u>
Population:	4,600	5,100	5,300
Harvest	683	504	600
Hunters:	2,131	1,490	1,500
Hunter Success:	32%	34%	40%
Active Licenses:	2,215	1,518	1,500
Active License Success:	31%	33%	40%
Recreation Days:	15,415	8,778	9,000
Days Per Animal:	22.6	17.4	15
Males per 100 Females	24	25	
Juveniles per 100 Females	29	34	

Population Objective (\pm 20%) :	4400 (3520 - 5280)
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	16%
Number of years population has been + or - objective in recent trend:	2
Model Date:	3/17/2017

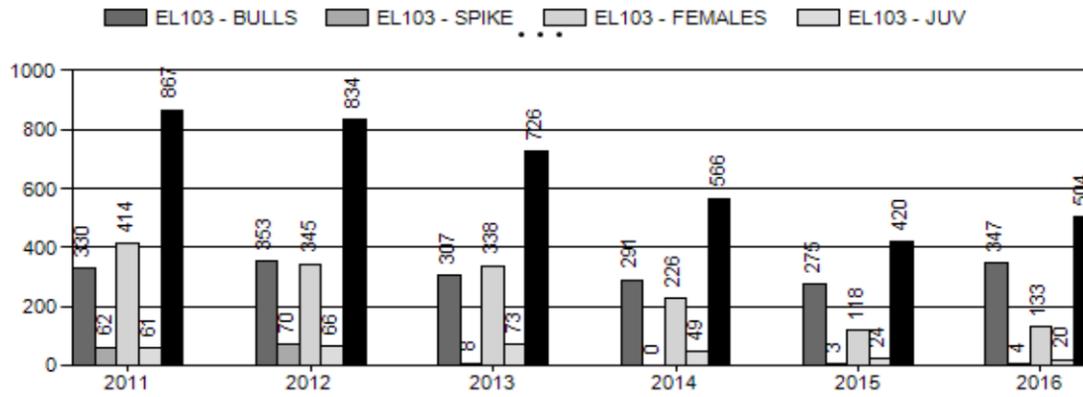
Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	<u>JCR Year</u>	<u>Proposed</u>
Females \geq 1 year old:	4%	5%
Males \geq 1 year old:	30%	26%
Total:	10%	10%
Proposed change in post-season population:	6%	3%

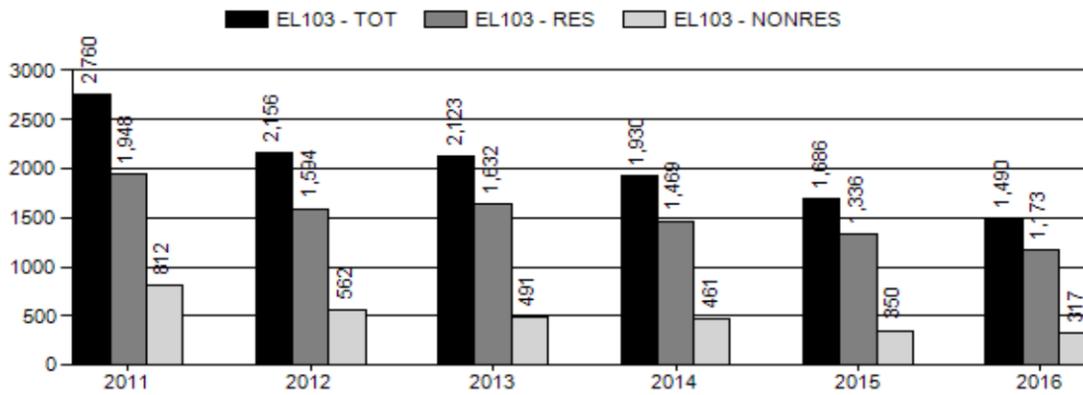
Population Size - Postseason



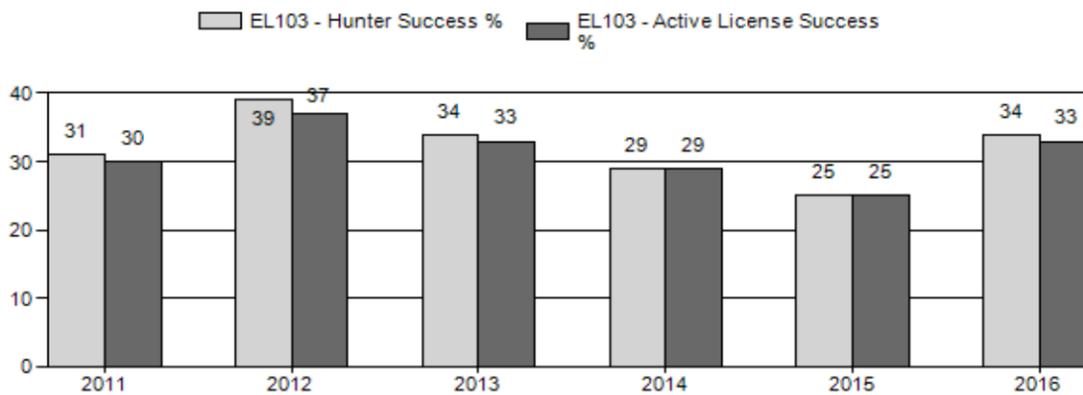
Harvest



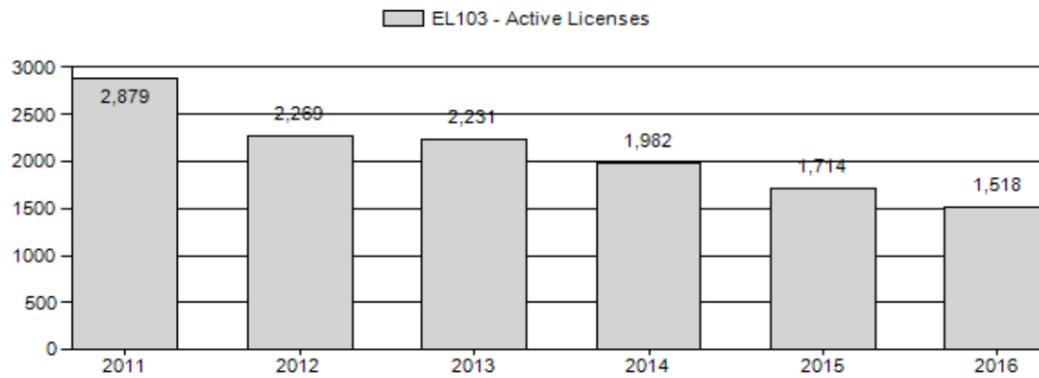
Number of Hunters



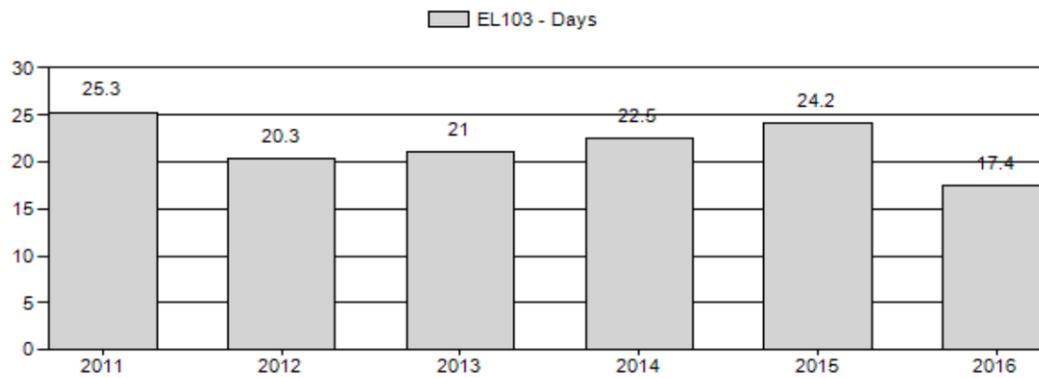
Harvest Success



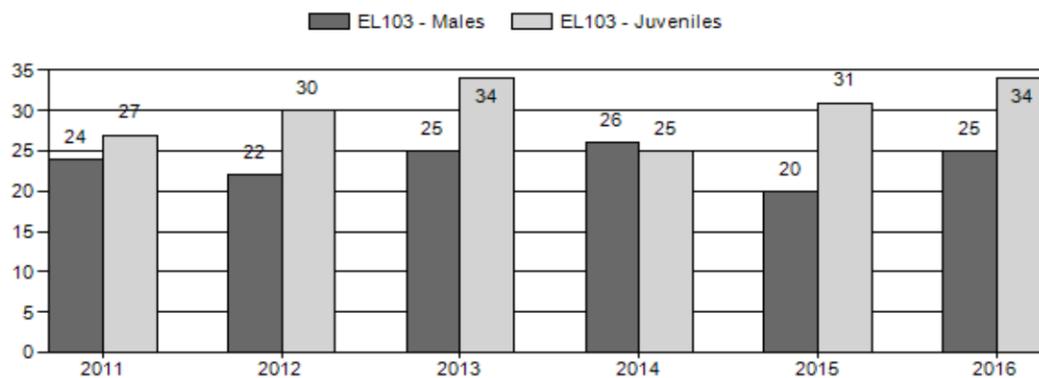
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2011 - 2016 Postseason Classification Summary

for Elk Herd EL103 - FALL CREEK

Year	Post Pop	MALES				FEMALES		JUVENILES		Tot CIs	Cls Obj	Males to 100 Females				Young to		
		Ylg	Adult	Total	%	Total	%	Total	%			Yng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2011	4,500	198	487	685	16%	2,841	66%	766	18%	4,292	317	7	17	25	± 1	27	± 1	22
2012	4,500	215	379	594	15%	2,663	66%	804	20%	4,061	310	8	14	22	± 1	30	± 1	25
2013	4,800	318	309	627	16%	2,498	63%	842	21%	3,967	328	13	12	25	± 1	34	± 1	27
2014	4,700	261	441	702	17%	2,692	66%	682	17%	4,076	303	10	16	26	± 1	25	± 1	20
2015	4,500	130	369	499	17%	2,446	66%	768	21%	3,713	289	5	15	20	± 1	31	± 1	26
2016	0	273	376	649	16%	2,612	63%	898	22%	4,159	2980	10	14	25	± 1	34	± 1	28

**2017 HUNTING SEASONS
FALL CREEK ELK HERD (EL103)**

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
84		Sep.26	Oct. 9		General	Any elk , spikes excluded
84		Oct. 10	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	25	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	6	Nov. 21	Jan. 31			Cow or calf valid on private land west of U.S. Highway 191 and north and east of the Snake River starting at the South Park Bridge access to private land is limited
84	7	Aug. 15	Jan. 31	125	Limited quota	Cow or calf 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	7	Nov. 1	Jan. 31			Cow or calf valid on

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
						private land in that portion of Area 85 north of Butler Creek
85		Sep. 26	Oct. 9		General	Any elk, spikes excluded
85		Oct. 10	Oct. 31		General	Antlered elk, spikes excluded
85	6	Aug. 15	Jan. 31	50	Limited quota	Cow or calf valid on private land in Area 84 west of U.S. Highway 191 and north and east of the Snake River starting at the South Park Bridge
85	6	Sep. 26	Oct. 31			Cow or calf
	6	Nov. 1	Jan. 31			Cow or calf valid on private land north of Butler Creek
84, 85		Sep. 1	Sep. 25			Archery Only, Refer to Section 2 of this Chapter

SUMMARY OF PROPOSED CHANGES BY LICENSE NUMBER

Hunt Area	License Type	Quota Change from 2016
84	Type 7	+50
85	Type 6	+25
Herd Unit Total	Type 6 and 7	+75

Management Evaluation

Current Postseason Population Management Objective: 4,400

Management Strategy: Recreational

2016 Postseason Population Estimate: ~5,100

2017 Proposed Postseason Population Estimate: ~5,300

The 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 2011. The current population estimate of 5100 elk 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 near the population objective.

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. There has been a marked reduction in the number of limited quota cow/calf only licenses issued over the last 5 years, which has resulted in reduced hunter opportunity. Concurrent with reductions in cow/calf only licenses has been reduced number of day 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

Weather conditions during 2016 were ideal for forage production beginning in early spring and continuing through fall. By late summer the moisture regime had changed frequent precipitation scenario that persisted into the fall hunting season. Drought conditions in the early portion of the summer abated by late fall as persistent snow storms began to deposit snowpack in the 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 2017 snowpack in western Wyoming watersheds were estimated to be significantly above normal. For additional weather and precipitation data please visit the following websites: <http://www.ncdc.noaa.gov/temp-and-precip/time-series> and <http://www.ncdc.noaa.gov/oa/climate/research/prelim/drought/pdiimage.html>.

Habitat

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 2016 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. Management over the last six 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 and 2015 were observed at 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 . A total of 25 bulls:100 cows were noted in the current year's trend count (Appendix A).

Since 2011 reductions in antlerless elk hunting opportunity have been implemented in response to declining trend counts. Spikes excluded seasons were incorporated into the herd unit management strategy in 2013 to address public concerns that hunting pressure would increase in this area if spikes excluded seasons were not adopted. The 2017 hunt season will be the fifth 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. An estimated 1480 hunters attempted to harvest an elk in 2016. Concurrent with the lowest number of hunters to hunt in the herd was the third consecutive years of relatively low and static elk harvest. A total of 566 and 420 elk where estimated in the 2014 and 2015 harvest, respectively. Approximately 500 elk were harvested in 2016. Hunter success increased from 25% in 2015 to 34% in 2016.

The spikes excluded hunt the last four 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, more conservative hunting seasons, and decreased calf survival in 2014 and 2015.

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, the number of 2+-year old bulls in the harvest increased to 346 bulls. For comparative purposes, during the 5-year period form 2008-2021, 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 did not result in the desired or sustained increase in recruitment of the yearling cohort. From 2013 - 2015 the number of yearling bulls documented in the trend count has exhibited an annual, incremental decrease (Figure 1). However, following the 2016 hunt an increase was noted in the yearling bull cohort which may be a result of reduced hunter participation.

Hunter numbers have declined in the elk herd over the last three years. During this 3-year period hunter numbers have decreased from 1930 hunters in 2014 to 1680 in 2015. An estimated 1480 hunters pursued elk in the herd unit in 2016. The specific causal relationship associated with the decline in yearling bull numbers in 2014 and 2015 is unknown, however, the presence of necrotic stomatitis on Horse Creek and Camp Creek feedgrounds is believed to have influenced calf survival sufficiently to adversely affect recruitment of yearlings.

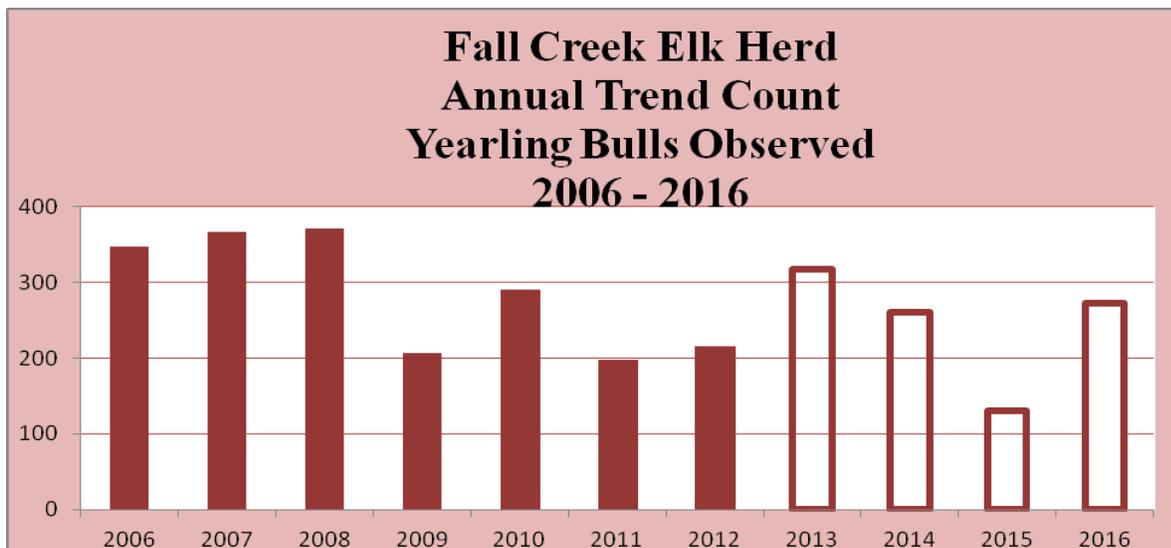


Figure 1. A depiction of the number of yearling bulls counted during the annual trend count during years of general license, any elk hunting seasons (2006-2012) versus general license, any elk spikes excluded hunting seasons (2013-2016).

An explanation for the current year's observed increase in the yearling bull:cow ratio is likely due to higher overwinter survival of calves on feedgrounds. Managers believe necrotic stomatitis influenced calf survival in 2014 and 2015 which resulted in lower calf survival. Concurrent with the general absence of necrotic stomatitis on feedgrounds in 2016 was a substantial reduction in hunting season opportunity that focused on antlerless elk in 2015 and 2016 (Figure 2).

Historically, 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 the yearling bull ratio has exhibited any annual decline from 13 yearlings:100 cows in 2013, to 9 and 5 yearling bulls:100 cows in 2014 and 2015, respectively.

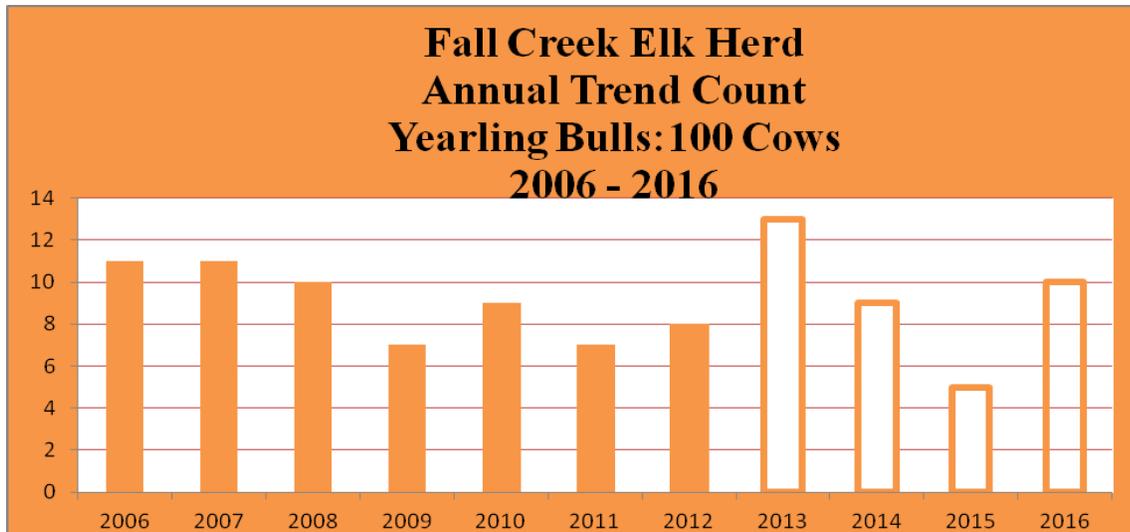


Figure 2. A depiction of the yearling bulls:100 cows ratio observed during the annual trend count during years of general license, any elk hunting seasons (2006-2012) versus general license, any elk spikes excluded hunting seasons (2013-2016).

Population

The population has stabilized within 20% of the objective. The “Time Sensitive Juvenile – Constant Adult Mortality Rate” (TSJ, CA) spreadsheet model was used to derive the post season population estimate. The TSJ, CA model showed the best overall fit compared to the suite of available models (Fit=204, Relative AICc=308). This model tracks bull:cow ratios and , harvest percentages of antlered elk, and population estimates. Model simulations and derived outcomes fit with observed data collected during postseason herd composition and trend surveys.

Management Summary

The 2017 hunting season is designed to maintain a stable population near the objective. The general any elk spikes excluded hunting season will be continued in Areas 84 and 85 because of general public support for this limitation. In addition, a modest increase in the number of elk counted during the current year’s trend count will result in a hunting season structure that will promote any elk hunting opportunity for 14 days. The portion of the general license any elk season will begin on September 26 and end on October 9, which is similar to the 2016 season. Beginning on October 10 and continuing through October 31, antlered only elk may be taken with general licenses. In order to provide limited quota license hunters continued recreation days, the limited quota Type 6 licenses will be maintained at 25 licenses in Hunt Areas 84 and 85, and continue to be valid into November. This management strategy will reduce overall antlerless harvest and maintain the population within 20% of the 3-year mid winter population trend count objective.

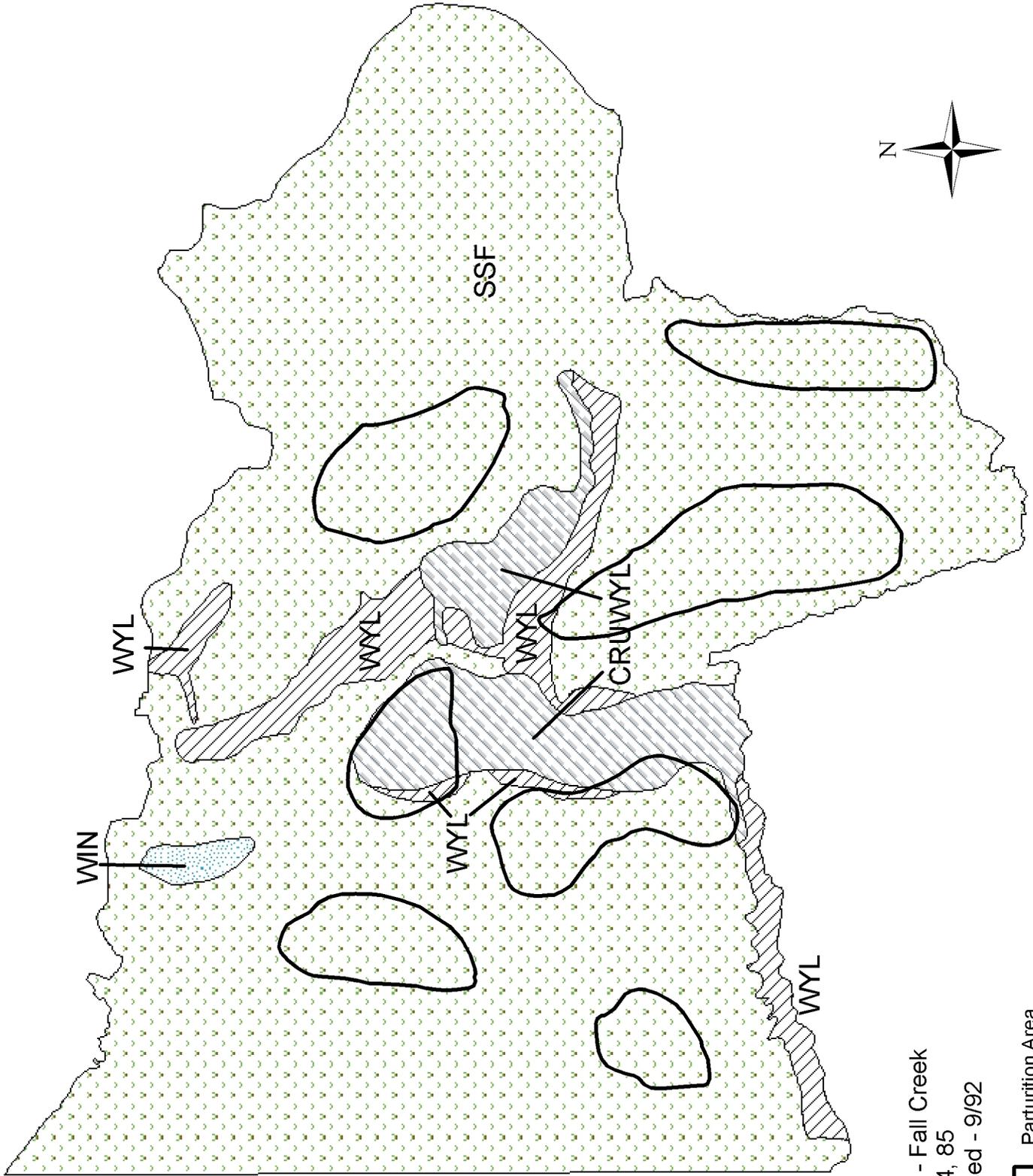
In Area 84 the limited quota Type 6 licenses will be valid through November 20. The continuation of the November portion of the hunting season and maintaining the number of Type 6 licenses issued at 25 is in response to concerns expressed by the public regarding lower elk numbers on these feedgrounds. The number of additional limited quota Type 7 licenses will increase from 75 licenses to 125 licenses in order to address chronic damages and commingling 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 be continue to be substantially reduced on the antlerless segment of the population by marginally increasing the number of Type 6 cow/calf licenses from 25 licenses to 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 stabilize this segment of the population that spends the winter on the Dog Creek feedground.

The 2017 hunting seasons are projected to harvest a total of 600 elk. The projected harvest should result in approximately 5300 elk being counted in the 2017 posthunt trend count.

Appendix A. Fall Creek Elk Herd, posthunt herd composition data, 2011-2016.

2011	Adult Males	YrIng Males	Total Males	Cows	Calves	Total	Ratio:100 Females			
							Adult Males	YrIng Males	Total Males	Calves
84 HCFG	194	59	253	1040	231	1524				
84 CCGF	72	50	122	682	184	988				
84 SPFG	138	49	187	597	186	970				
84 NR	21	11	32	30	52	114				
85 DCFG	54	23	77	466	98	641				
85 NR	8	6	14	26	15	55				
TOTAL	487	198	685	2841	766	4292	17	7	24	27
2012										
84 HCFG	35	26	61	144	54	259				
84 CCGF	168	87	255	1508	461	2224				
84 SPFG	100	52	152	460	130	742				
84 NR	27	26	53	78	40	171				
85 DCFG	44	18	62	410	97	569				
85 NR	5	6	11	63	22	96				
TOTAL	379	215	594	2663	804	4061	14	8	22	30
2013										
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



E103 - Fall Creek
 HA 84, 85
 Revised - 9/92

Parturition Area

2016 - JCR Evaluation Form

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

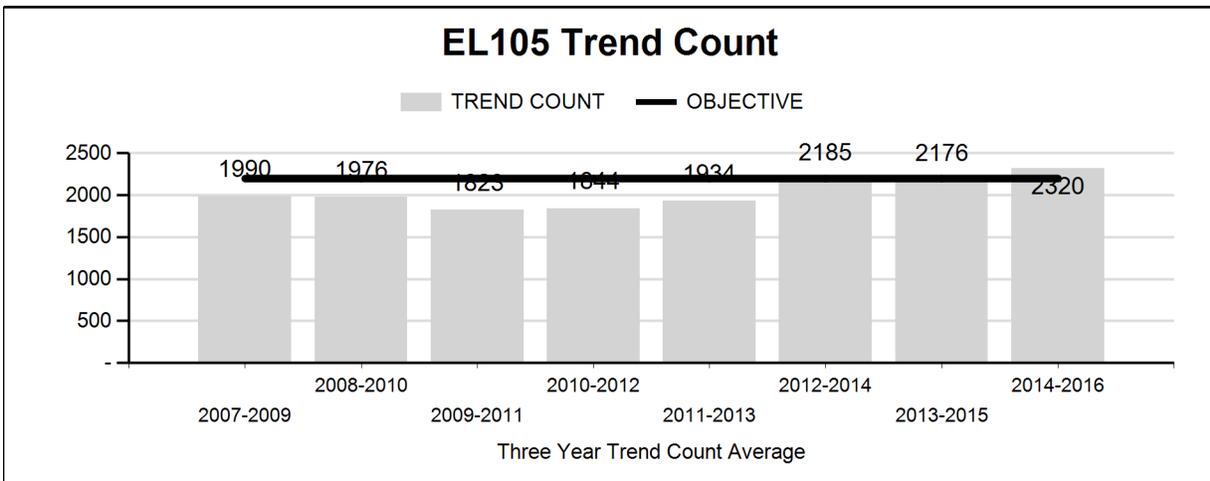
PERIOD: 6/1/2016 - 5/31/2017
 PREPARED BY: GARY FRALICK

	<u>2011 - 2015 Average</u>	<u>2016</u>	<u>2017 Proposed</u>
Trend Count:	2,014	2,690	1,935
Harvest:	751	1,044	976
Hunters:	2,377	2,930	2,869
Hunter Success:	32%	36%	34%
Active Licenses:	2,464	3,007	2,869
Active License Success	30%	35%	34%
Recreation Days:	16,557	17,749	16,854
Days Per Animal:	22.0	17.0	17.3
Males per 100 Females:	18	19	
Juveniles per 100 Females	37	40	

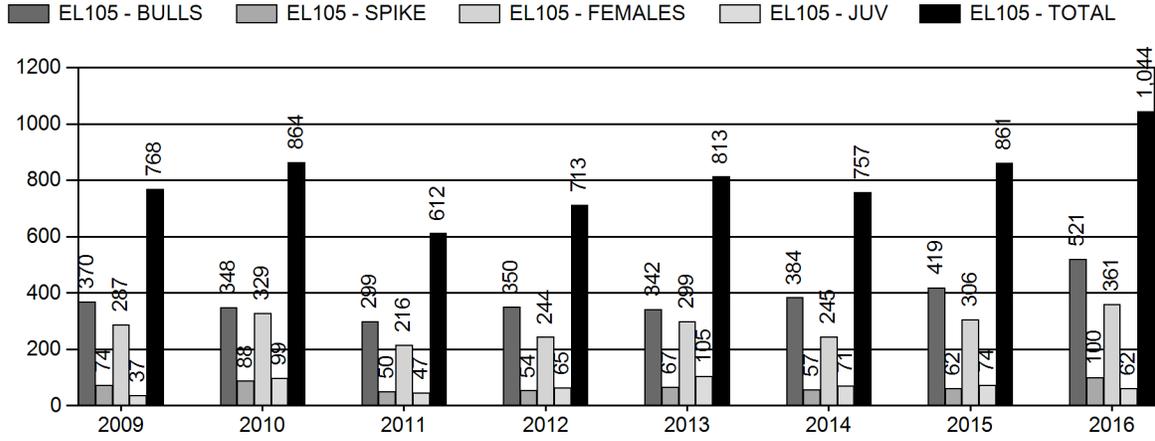
Trend Based Objective (± 20%) 2,200 (1760 - 2640)
 Management Strategy: Recreational
 Percent population is above (+) or (-) objective: 22%
 Number of years population has been + or - objective in recent trend: 1

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

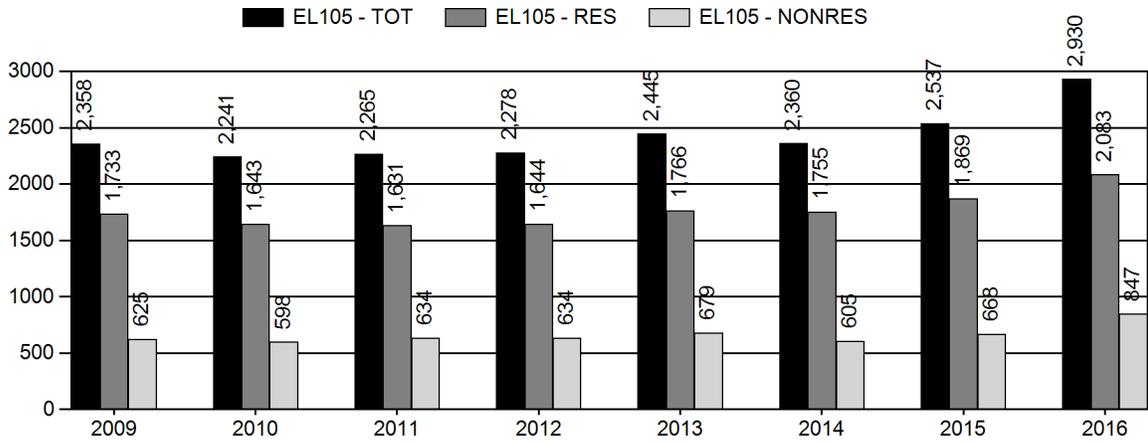
	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	NA%	NA%
Males ≥ 1 year old:	NA%	NA%
Juveniles (< 1 year old):	NA%	NA%



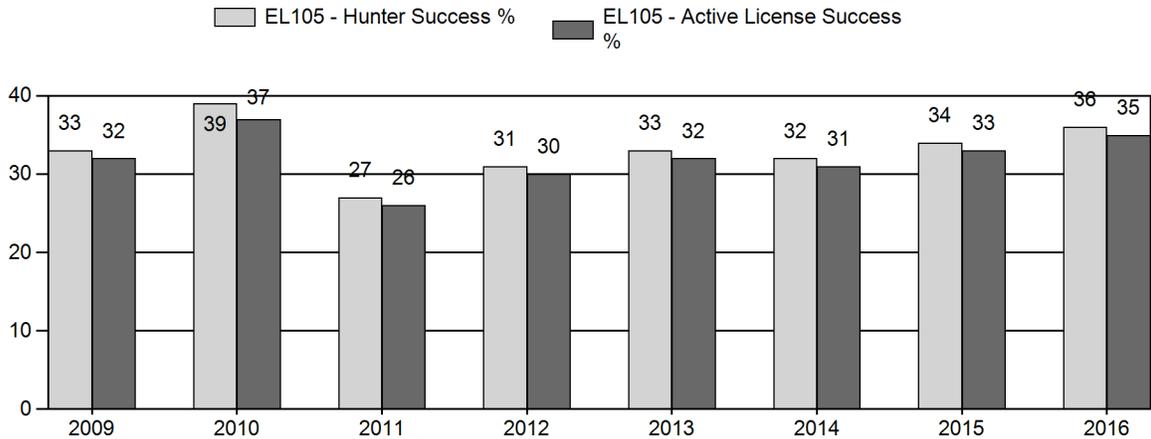
Harvest



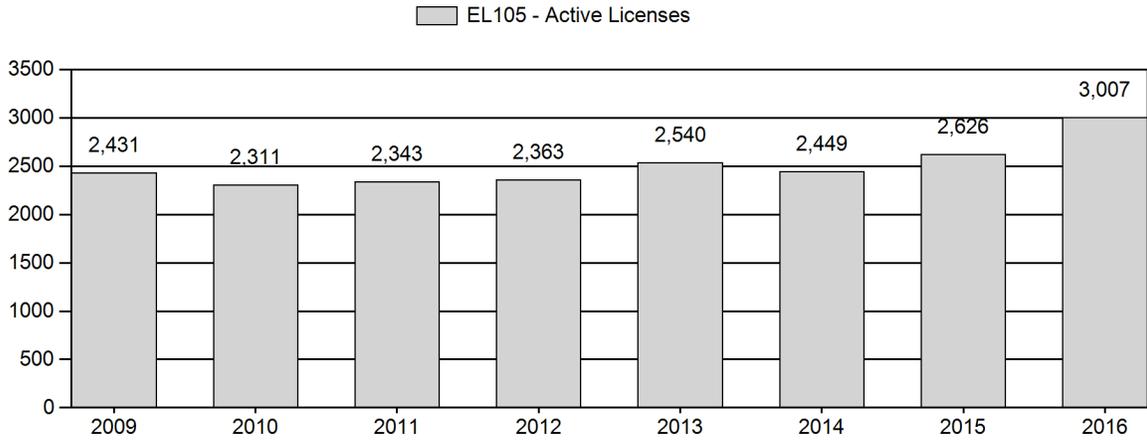
Number of Hunters



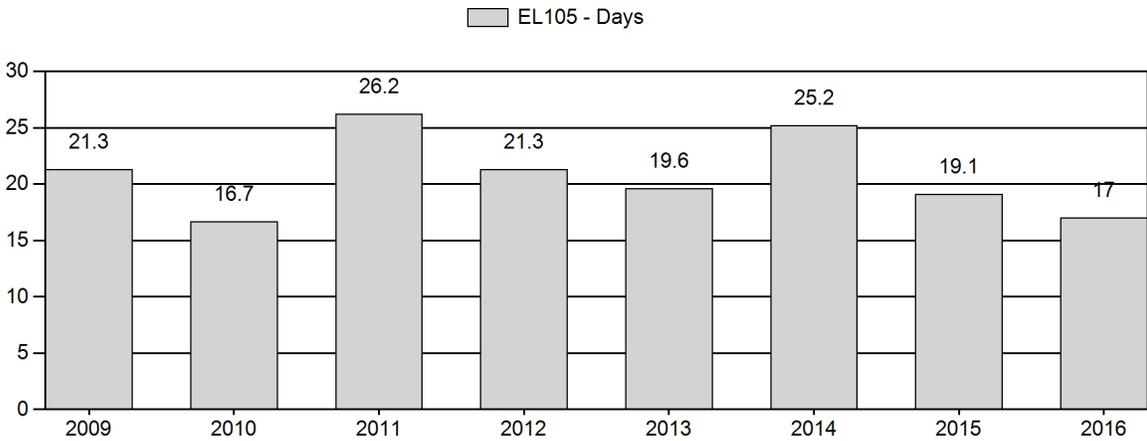
Harvest Success



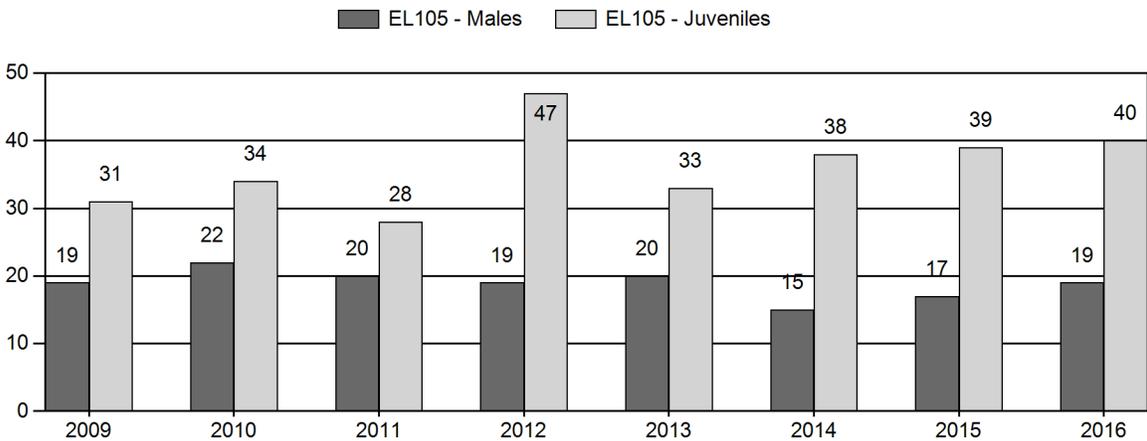
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2011 - 2016 Postseason Classification Summary

for Elk Herd EL105 - AFTON

Year	Post Pop	MALES				FEMALES		JUVENILES		Tot CIs	CIs Obj	Males to 100 Females			Young to			
		Ylg	Adult	Total	%	Total	%	Total	%			Yng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2011	2,098	53	169	222	14%	1,132	68%	322	19%	1,676	267	5	15	20	± 1	28	± 1	24
2012	2,400	60	145	205	11%	1,077	60%	506	28%	1,788	299	6	13	19	± 1	47	± 2	39
2013	2,400	109	166	276	13%	1,409	66%	461	21%	2,145	274	8	12	20	± 1	33	± 1	27
2014	0	77	152	229	10%	1,564	66%	592	25%	2,385	367	5	10	15	± 0	38	± 0	33
2015	0	53	121	174	11%	1,045	64%	411	25%	1,630	419	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 HUNTING SEASONS
AFTON ELK HERD (EL105)**

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
88		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 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 2 of this Chapter

SUMMARY OF CHANGES BY LICENSE NUMBER

Area	License Type	Change from 2016
Herd Unit Total		No Changes

Management Evaluation

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

Management Strategy: Recreational

2016 Mid-Winter Trend Count: 2,700

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

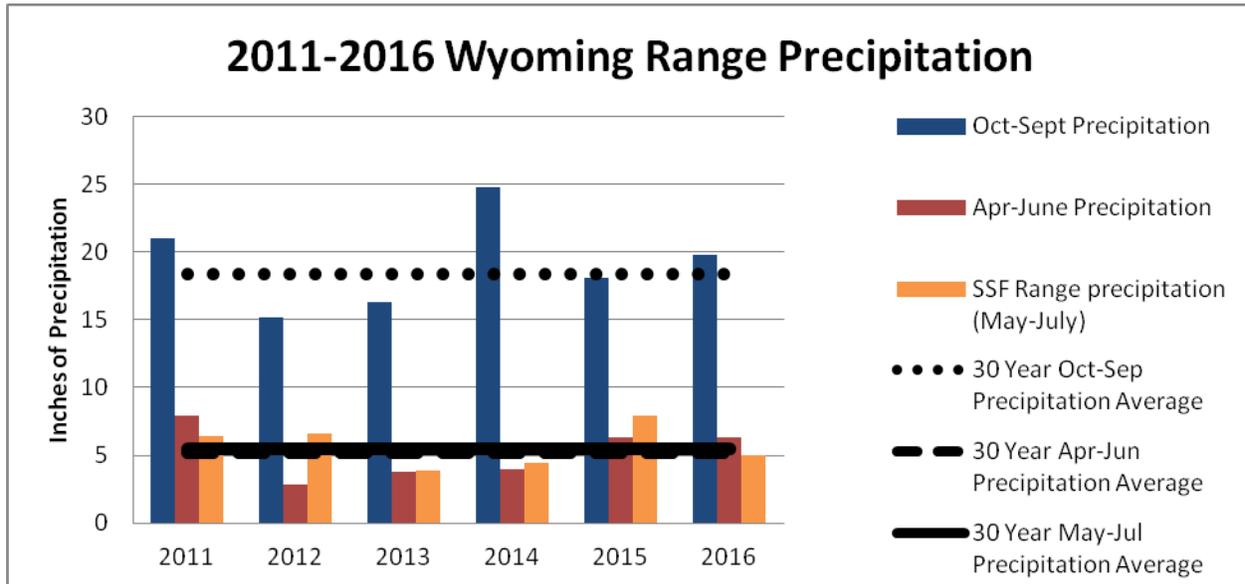
The current mid-winter trend count management objective for Afton elk herd is 2200 elk. The management strategy is recreational management. The objective and management strategy were last revised in 2011. The current mid-winter trend count was approximately 2700 elk.

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.

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



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

Precipitation

Overall precipitation from October 2015 through September 2016 was slightly above average when averaged across the entire herd unit. The general characteristics included a relatively dry winter followed by average spring precipitation. Fortunately, growing season (April through June) precipitation was above average which resulted in good vegetation production across all ranges. By late winter 2016 snowpack in western Wyoming watersheds were estimated to be at or below 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 2016-2017 winter has been extreme with below average temperatures and above average snow on winter ranges. Snow crusting has also resulted from temperature extremes creating difficult foraging conditions. The elk calf mortality will likely be moderate to high when change in ratio classifications is conducted in spring 2017. This extreme winter follows three winters of mild conditions resulting in good over-winter survival for fawns and adults. High elevation

mountain ranges have received above average snow levels. The Snow Water Equivalent of the Upper Green River Basin has registered 192%, the Upper Bear River Basin has registered 169%, and the Lower Green River Basin has registered 161% compared to the 1981-2010 median as of February 27, 2017.

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 2016 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. 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 (Appendix A). Since 2011 bull: cow ratios have been observed at or slightly below the management goal of at least 20 bulls: 100 cows.

Harvest Data

Hunters harvested an estimated 1064 elk in 2016. More elk were harvested in the current year than in 2014 (N=757) and 2015 (N=861). The increase 2016 harvest reflects a general increase in elk numbers in this elk herd the last two years based on posthunt trend count data. Concurrently, there has been no significant variation observed in hunter success over the last three years. Success has varied from 32% and 34% in 2014 and 2015 respectively, to 36% in 2016. The number of days hunters needed to harvest an elk has decreased the last three years. Hunters used 25 days to harvest an elk in 2014, but effort continued to decrease to 19 days in 2015. A total of 17 days were needed to bag an elk in 2016.

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. The hunting season in 2017 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 two 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%.

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. However, on-going efforts to assess population performance were based on annual trend counts conducted since 2007. As a result, the 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, trend counts present a depiction of this population's annual performance, which has averaged approximately 2300 elk over the last three years.

Management Summary

The 2017 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 2015. The general any elk portion of the hunting season in Area 89 will be maintained from October 15 – October 17. Antlered elk only hunting will continue on October 18 and close on October 31. The longer season in Area 89 is in response to the number of elk counted during the 2015 and 2016 winter trend count on native winter ranges in the Greys River watershed.

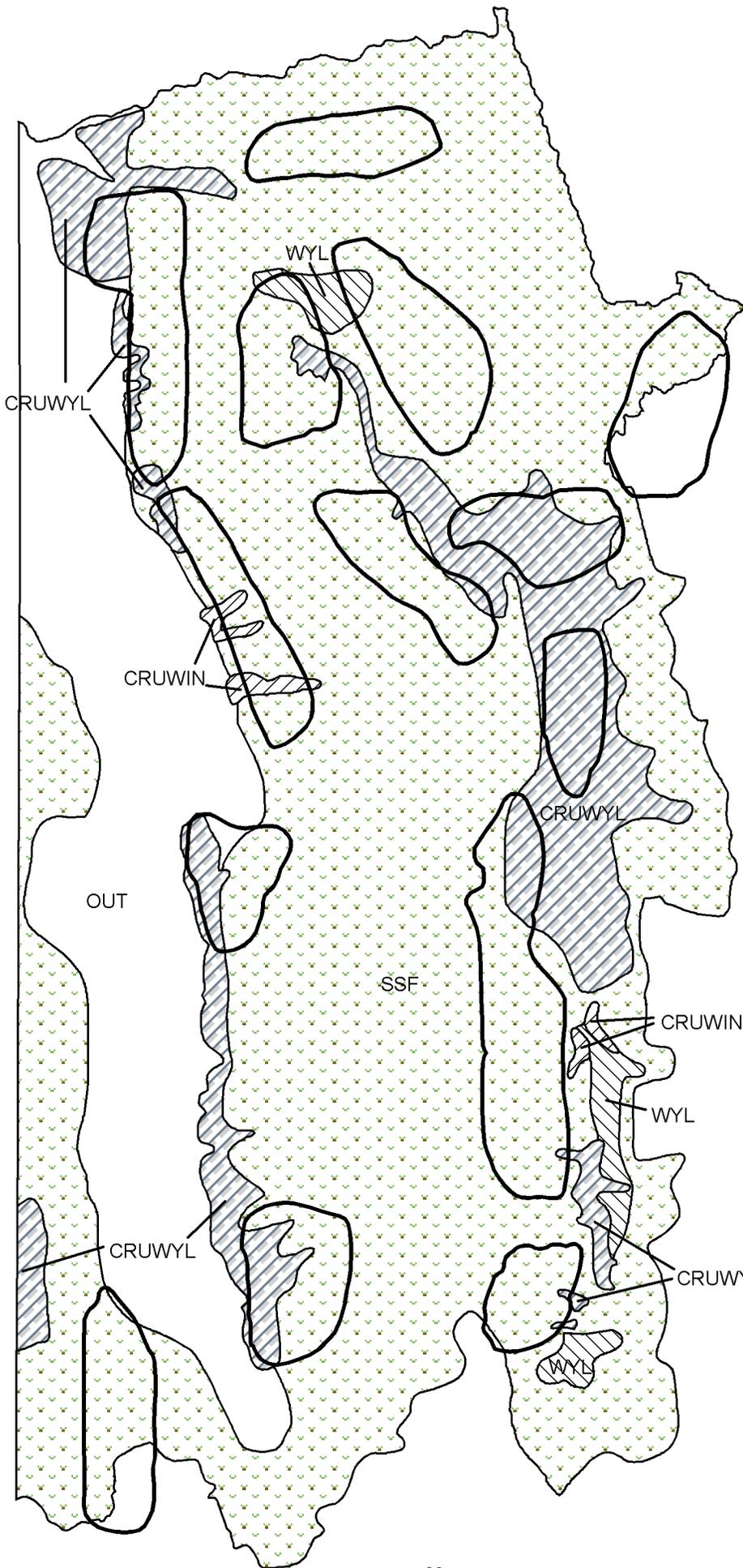
Management will continue to emphasize antlerless elk harvest in Area 90 by enabling general and limited quota type 6 license holders to hunt into November. The Area 90 Type 6 additional cow or calf licenses will remain at 250 licenses in an effort to increase harvest. The season length for limited quota 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 exceeded the Commission-established quota.

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 in 2015 and 2016. 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 2017 hunting seasons will result in a harvest of 970 elk. The 2017 harvest should maintain the population within +/- 20% of the annual three-year trend count average of 2200 following the 2017 hunting season. The projected 2017 mid-winter trend count is 1900 elk.

Appendix A. Afton Elk Herd, posthunt herd composition data, 2012-2016.

Year	Adult Males	Yrlng Males	Total Males	Cows	Calves	Total	Ratio:100 Females			
							Adult Males	Yrlng Males	Total Males	Calves
2012										
88 GRFG	36	20	56	394	150	600				
88 NR	0	0	0	0	0	0				
89 NR	7	6	13	92	85(2)	192				
90 FPG	78	30	108	513	226	847				
90 NR	0	0	0	0	0	0				
91 NR	24	4	28	78	45(74)	225				
TOTAL	145	60	205	1077	506(76)	1864	13	5	19	47
2013										
88 GRFG	37	22	59	443	115	617				
88 NR	0	0	0	0	(25 uncl)	25				
89 NR	5	13	18	213	89	320				
90 FPG	85	49	134	550	176	860				
90 NR	0	0	0	5	4 (1)	10				
91 NR	39	25	64	198	77(89)	428				
TOTAL	166	109	275	1409	461(115)	2260	12	7	19	33
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



E105 - Afton
 HA 88-91
 Revised - 2/87

 Parturition Area