

2015 - JCR Evaluation Form

SPECIES: Bison

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

HERD: BI101 - JACKSON

HUNT AREAS: 2

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	<u>2010 - 2014 Average</u>	<u>2015</u>	<u>2016 Proposed</u>
Trend Count:	821	666	540
Harvest:	221	206	260
Hunters:	267	288	295
Hunter Success:	83%	72%	88%
Active Licenses:	267	288	295
Active License Success	83%	72%	88%
Recreation Days:	1,567	2,111	1,500
Days Per Animal:	7.1	10.2	5.8
Males per 100 Females:	60	93	
Juveniles per 100 Females	47	51	

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

500 (400 - 600)

Management Strategy:

Recreational

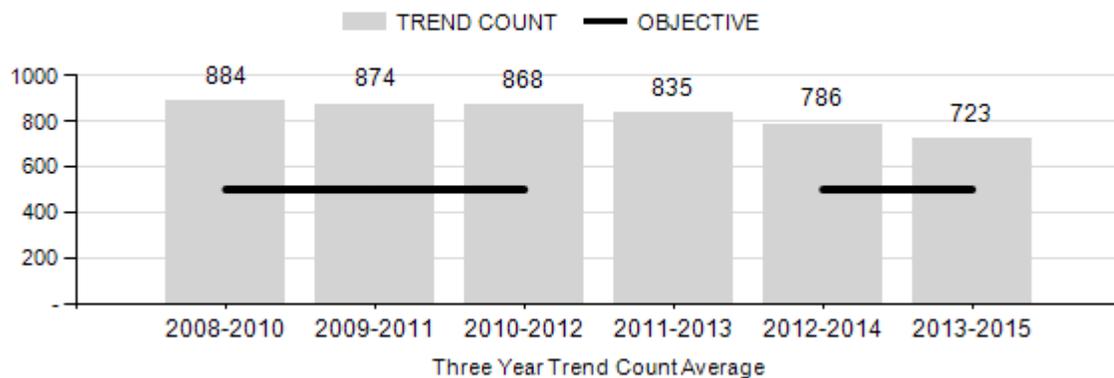
Percent population is above (+) or (-) objective:

33%

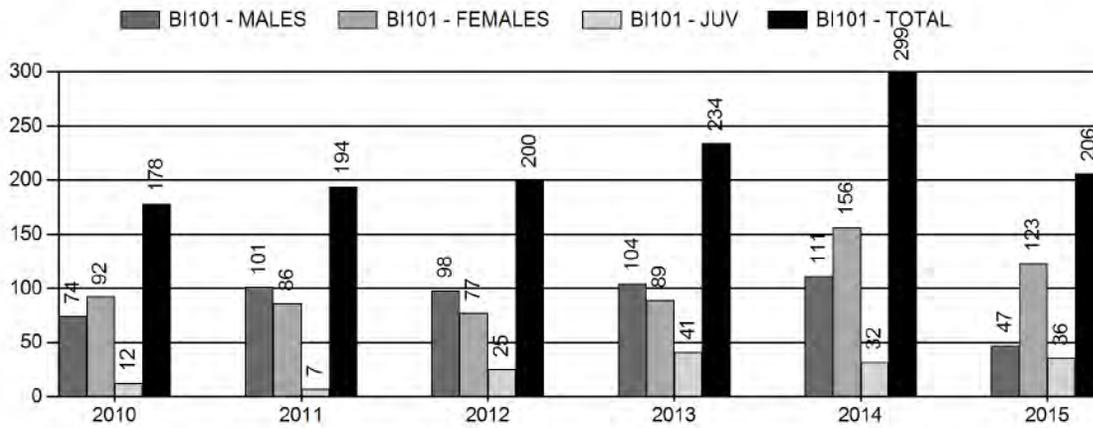
Number of years population has been + or - objective in recent trend:

14

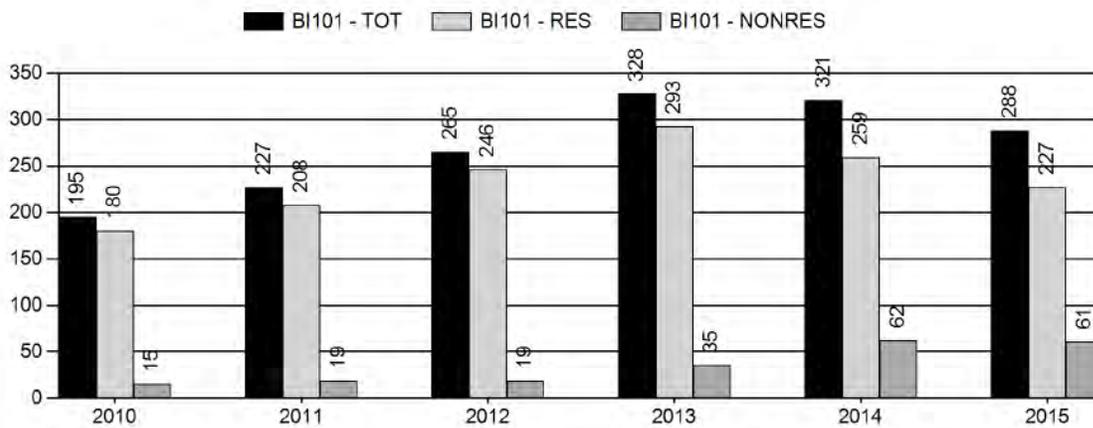
BI101 Trend Count



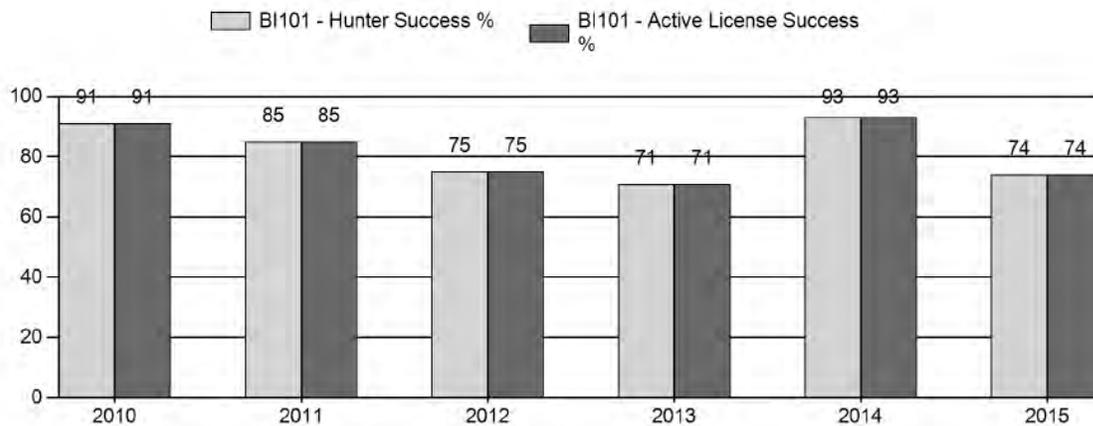
Harvest



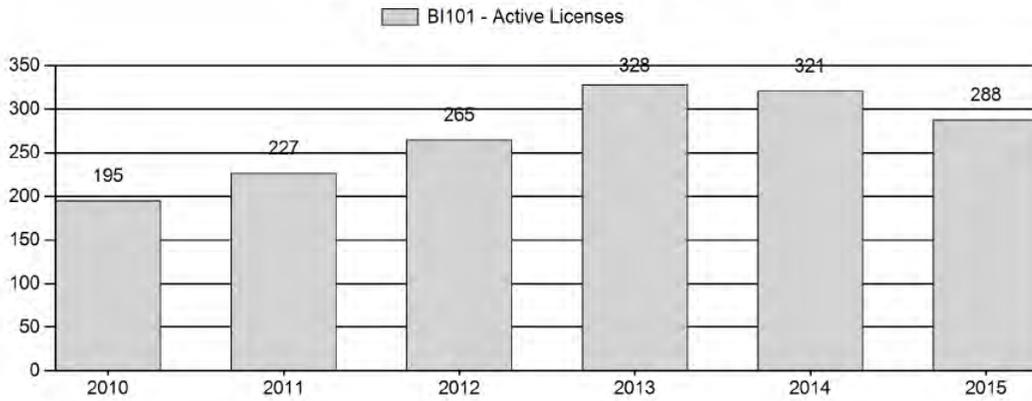
Number of Hunters



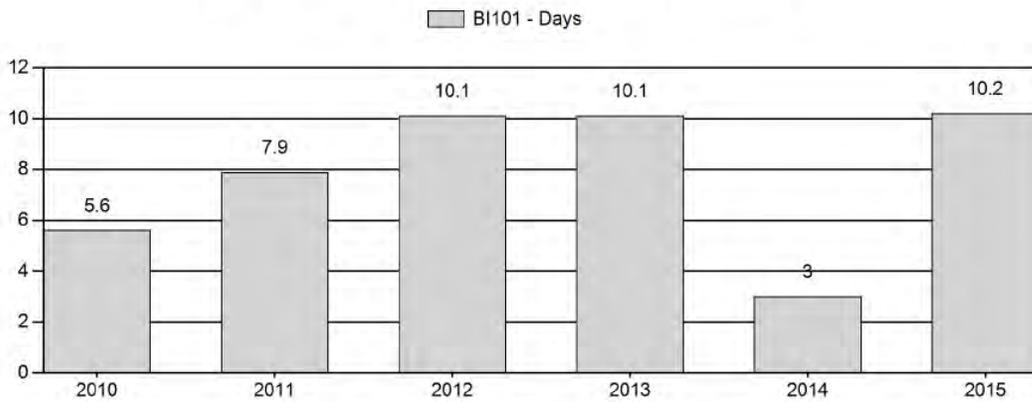
Harvest Success



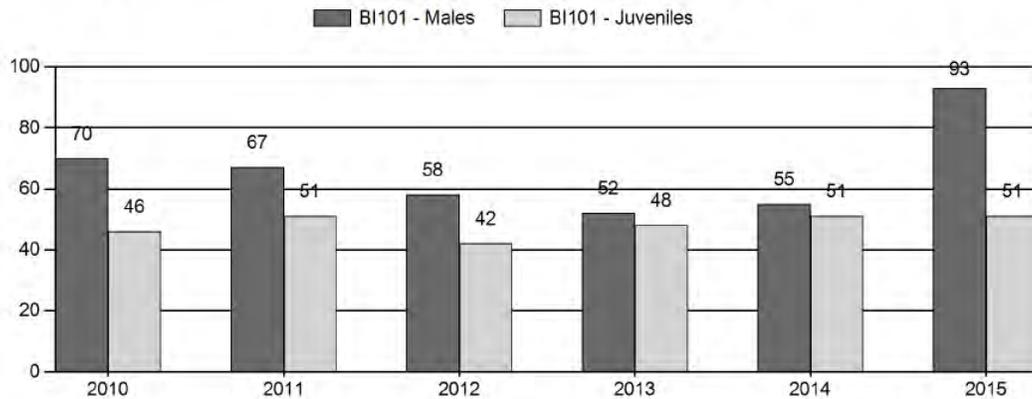
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2010 - 2015 Postseason Classification Summary

for Bison Herd BI101 - JACKSON

Year	Post Pop	MALES				FEMALES		JUVENILES		Tot CIs	CIs Obj	Males to 100 Females				Young to		
		Ylg	Adult	Total	%	Total	%	Total	%			YIng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2010	927	76	218	294	32%	423	46%	193	21%	910	0	18	52	70	± 0	46	± 0	27
2011	887	102	156	258	31%	386	46%	196	23%	840	0	26	40	67	± 2	51	± 1	30
2012	875	73	174	247	29%	429	50%	179	21%	855	0	17	41	58	± 1	42	± 1	26
2013	825	74	131	205	26%	398	50%	191	24%	794	0	19	33	52	± 1	48	± 1	32
2014	691	68	117	185	27%	336	49%	170	25%	691	0	20	35	55	± 0	51	± 0	33
2015	666	42	212	254	38%	273	41%	139	21%	666	0	15	78	93	± 0	51	± 0	26

2016 HUNTING SEASONS JACKSON BISON HERD (BI101)

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
2	1	Aug. 15	Jan. 10	50	Limited quota	Any wild bison; also valid in Area 1 within the Clark's Fork River and Soda Butte Creek drainages. Valid in other portions of Area 1 upon notification and authorization by the Department.
2	1	Jan. 11	Jan. 31			Any wild bison. Limited alternate permits for the National Elk Refuge may be available through the Department's Jackson Regional Office on a first-come first-served basis until the season closes or forage/weather conditions dictate that supplemental feeding is necessary.
2	4	Aug. 15	Jan. 10	245	Limited quota	Any female or calf wild bison; also valid in Area 1 within the Clark's Fork River and Soda Butte Creek drainages. Valid in other portions of Area 1 upon notification and authorization by the Department.
2	4	Jan. 11	Jan. 31			Any female or calf wild bison. Limited alternate permits for the National Elk Refuge may be available through the Department's Jackson Regional Office on a first-come first-served basis until the season closes or forage/weather conditions dictate that supplemental feeding is necessary.
3						CLOSED

Summary of 2016 License Changes

Hunt Area	Type	Quota change from 2015	Other changes from 2015
2	1	+10	-5 days to the regular season. Added 2 weeks to the season on a provisional basis, running through Jan. 31
	4	-20	-5 days to the regular season. Added 2 weeks to the season on a provisional basis, running through Jan. 31

Management Evaluation

Mid-Winter Trend Count Objective: 500

Management Strategy: Recreational

2015 Mid-Winter Trend Count: 666

3-Year Mid-Winter Trend Average (2013-2015): 723

2016 Proposed Mid-Winter Trend Count: 540

The mid-winter trend count objective for the Jackson Bison Herd is 500 bison. The management strategy is recreational and the objective and management strategy were last revised in 2014. The herd objective was publicly reviewed in 2014 and changed to a mid-winter trend count objective of 500 bison. The current trend count is 666 bison. Annual harvest rates have recently reduced the population toward the 500 bison objective. Managers anticipate that with average or above-average harvest success in 2016, the population will be at objective.

Herd Unit Issues

Management of this herd is complicated because occupied habitat includes Grand Teton National Park (GTNP), the National Elk Refuge (NER) and the Bridger-Teton National Forest (BTNF). Bison remain distributed in GTNP during much of the summer and fall and are not available for hunting until they migrate to either BTNF or the NER. Over the past several years, bison have become sensitized to the presence of hunters on the NER and will vacate the open hunt area. Bison hunter numbers are limited on the NER due to concurrent elk hunting seasons and issues with hunter crowding. Permits for the NER are structured in an attempt to provide hunters with a quality hunting experience while moving the bison population toward the mid-winter objective of 500.

Weather

Spring and summer 2015 produced consistent moisture, leading to good forage production. Fall was relatively mild with no significant snowfall until mid-December. These conditions resulted in the majority of bison remaining in GTNP until early January. Bison harvest on the NER was slow until the last 2 weeks of the hunting season. By early February, low elevation slopes were

beginning to melt out. At the time of the mid-winter survey, winter precipitation was reported at 91% of normal in the Snake River Basin. Small groups of bison were observed on native winter range in the Spread Creek area and Snake River Bottom during February helicopter surveys. 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

No habitat data have been collected on bison summer and winter ranges. There are no established vegetation transects in this herd unit. Please refer to the 2015 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

During the mid-winter trend count in February 2016, a total of 618 bison were classified on supplemental feed in the McBride area on the NER and an additional 48 bison were observed on native ranges in the Spread Creek area and Snake River Bottom for a total of 666 bison. Personnel from GTNP and the WGFD classified 212 adult males, 42 yearling males, 273 cows, and 139 calves. Herd unit ratios were 93 bulls:100 cows and 51 calves:100 cows. Trend data indicate that the bison population has stabilized and started to decline with current harvest levels (Fig. 1). The bull ratio steadily declined from 82:100 in 2008 to 55:100 in 2014, likely due to bull harvest. The population is managed to maintain a high bull to cow ratio, therefore managers adjusted licenses in 2015 to harvest fewer bulls and more cows. This resulted in a rapid increase in the bull ratio to 93 bulls:100 cows (Fig. 2).

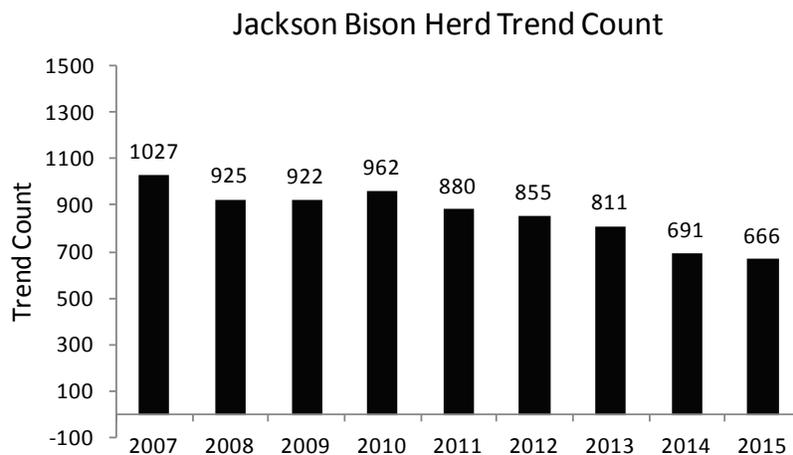


Fig. 1. Mid-winter trend counts of the Jackson Bison Herd, 2007-2015. The mid-winter trend count objective is 500 bison.

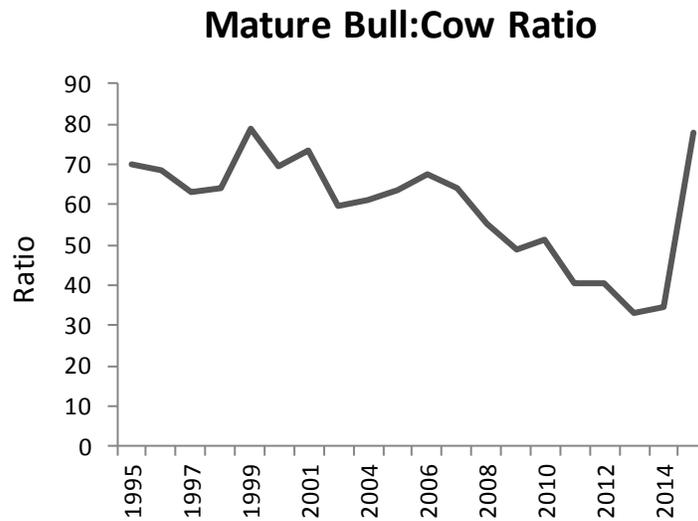


Fig. 2. Annual mature bulls to 100 cows ratios for the Jackson Bison Herd, 1995-2015. Changes to the number of Type 1 licenses in fall 2015 caused a rapid increase in the ratio.

Harvest Data

The sale of bison licenses has improved by requiring hunters to submit payment with their license applications beginning in 2014. During the 2015 hunting season, 288 hunters harvested 47 bulls, 123 cows, and 36 calves, totaling 206 bison. Harvest in 2014 was the highest at 299 bison. Harvest in 2013 was 234 bison and 200 bison were harvested in 2012. In 2015, hunters reported a 74% success rate. In 2015, 8 bulls were accidentally harvested using Type 4 cow/calf licenses. Most of these incidents were due to misidentification by the hunter. In 2015, there were 5 Governor’s Licenses, 1 Super Tag, and 1 Super Tag Trifecta license available for bison that hunted in Area 2.

When the population was high, the annual bison harvest had to exceed 200 animals to move the population toward its mid-winter objective of 500 bison. This is due to the consistently high reproductive rate of the herd; approximately 50 calves:100 cows during postseason classifications. As the population has been reduced toward objective, the reproductive rate remains high but the number of adult females has decreased. This year, approximately 137 calves are expected to be recruited into the population, therefore, harvest needs to exceed 137 animals to further reduce the population in 2016.

Population

The 2015 mid-winter trend count indicates that the population decreased by approximately 25 animals (4% of the population) in 2015. The population peaked at 1,100 animals in 2007, was stabilized by harvest from 2008-2010, and has started to trend downward in recent years. Consistently high calf:cow ratios around 50:100 have made it difficult to reduce the population.

When the population was high, harvest levels needed to exceed 200 bison in order to move the population toward the mid-winter objective of 500 animals. More recently the number of adult cows has been reduced through harvest and approximately 137 calves are expected to be recruited this year. Therefore, harvest levels must exceed 137 animals to reduce the population. Managers reduced bull licenses in 2015 in an effort to increase the bull ratio. The bull ratio responded rapidly and increased to 93 bulls:100 cows in one year. Bull licenses will remain conservative in the short-term to allow younger bulls to mature.

Management Summary

Harvest success was moderate in 2015 (74% success), which resulted in a reduction in the bison population. The population remains 166 animals above objective, or 33%. Hunting seasons will be structured to continue to reduce the population toward objective. The license quota for Type 1 (any wild bison) will be increased slightly to 50 in 2016. The license quota for Type 4 (cow or calf wild bison) will be decreased slightly to 245 in 2016, a reduction of 20 licenses. In addition, 5 Governor's Licenses and 1 Super Tag for bison are expected to hunt in Area 2. The one winner of the Super Tag Trifecta drawing may also choose a bison license, depending on their species preference. Hunter access to the NER will be allowed along the Gros Ventre River from U.S. Highway 191 and at designated parking areas along the Kelly Road in GTNP. Since the number of adult cows has been reduced through harvest, approximately 137 calves are expected to be recruited by fall 2016. Therefore, harvest must exceed 137 animals in 2016 to reduce the population. The season will remain open until January 10. The season will continue to run on a provisional basis from January 11-31 with alternate permits available for the National Elk Refuge until either forage/weather conditions dictate that elk supplemental feeding is necessary or January 31 is reached. This extension of the season by 2 weeks will likely result in increased harvest success and a further reduction in the population. Depending on harvest success, the population is expected to be between 540 and 610 bison at the end of the 2016 season. The bull ratio is expected to be between 110 and 150 bulls:100 cows, although bulls will be skewed to younger age classes.

Bibliography

Berger, J. and S.L. Cain. 1999. Reproductive synchrony in brucellosis-exposed bison in the southern Greater Yellowstone Ecosystem and in noninfected populations. *Conservation Biology* 13:357-366.

National Elk Refuge and Grand Teton National Park. 2007. Final Bison and Elk Management Plan and Environmental Impact Statement for the National Elk Refuge/Grand Teton National Park/John D. Rockefeller, Jr., Memorial Parkway. U.S. Fish and Wildlife Service, Region 6, Denver, CO. 605 pp. <http://www.fws.gov/bisonandelkplan>

Williams, E.S., Thorne, E.T., Anderson, S.L., and J.D. Herriges, Jr. 1993. Brucellosis in free-ranging wild bison (*Bison bison*) from Teton County, Wyoming. *Journal of Wildlife Diseases* 29:118-122.