

## 2014 - JCR Evaluation Form

SPECIES: Bighorn Sheep  
 HERD: BS121 - DARBY MOUNTAIN  
 HUNT AREAS: 24

PERIOD: 6/1/2014 - 5/31/2015  
 PREPARED BY: GARY FRALICK

	<u>2009 - 2013 Average</u>	<u>2014</u>	<u>2015 Proposed</u>
Population:	60	60	60
Harvest:	1	0	0
Hunters:	1	0	0
Hunter Success:	100%	0%	0 %
Active Licenses:	1	0	0
Active License Success:	100%	0%	0 %
Recreation Days:	1	0	0
Days Per Animal:	1	0	0
Males per 100 Females	56	0	
Juveniles per 100 Females	50	0	

Population Objective (± 20%) :	150 (120 - 180)
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	-60%
Number of years population has been + or - objective in recent trend:	23
Model Date:	2/23/2015

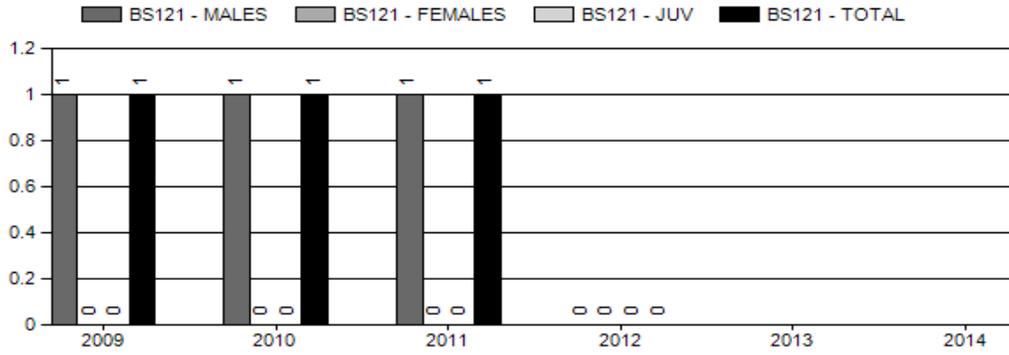
**Proposed harvest rates (percent of pre-season estimate for each sex/age group):**

	<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%

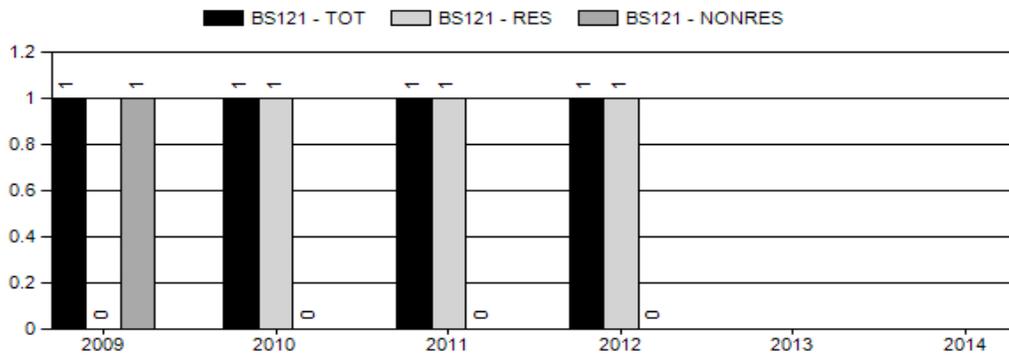
## Population Size - Postseason



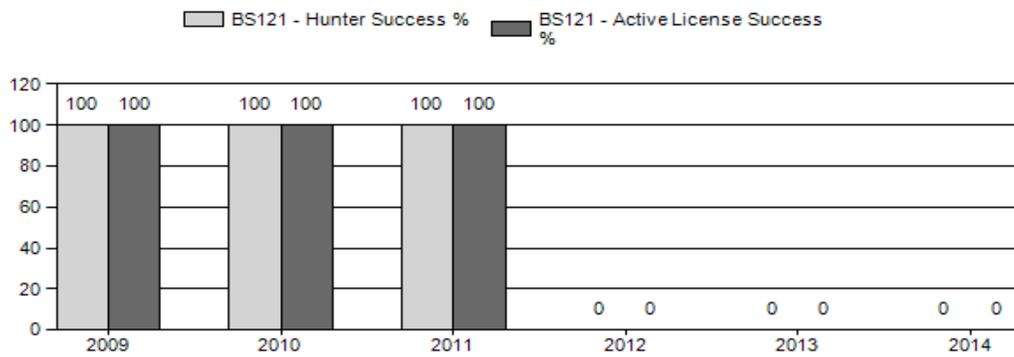
## Harvest



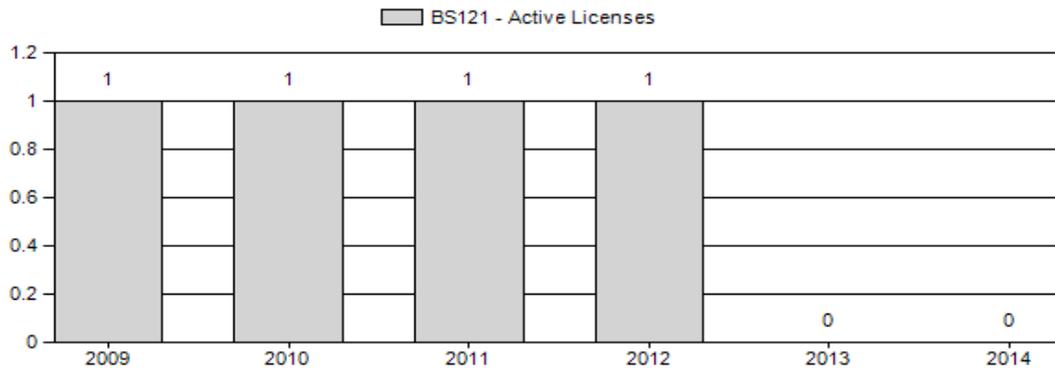
## Number of Hunters



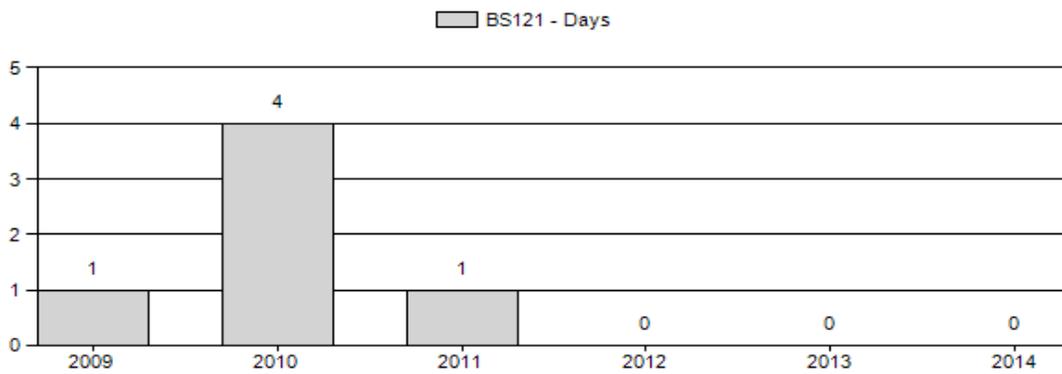
## Harvest Success



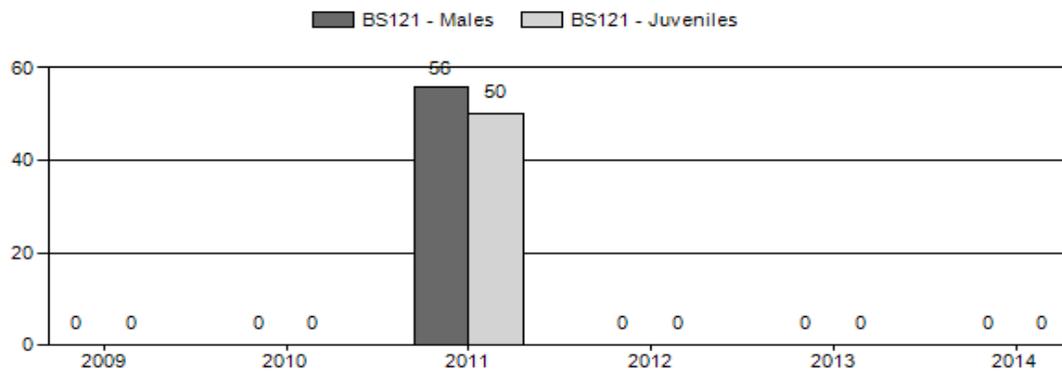
## Active Licenses



## Days per Animal Harvested



## Postseason Animals per 100 Females



**2009 - 2014 Postseason Classification Summary**

for Bighorn Sheep Herd BS121 - DARBY MOUNTAIN

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
2009	60	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	±0	0	±0	0
2010	60	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	±0	0	±0	0
2011	60	2	8	10	27%	18	49%	9	24%	37	0	11	44	56	±17	50	±16	32
2012	60	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	±0	0	±0	0
2013	60	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	±0	0	±0	0
2014	60	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	±0	0	±0	0

**2015 HUNTING SEASON**

**DARBY MOUNTAIN HERD UNIT - BHS121**

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
24						Closed

**Management Evaluation**

**Current Postseason Population Management Objective: 150**

**Management Strategy: Special**

**2014 Postseason Population Estimate: 60**

**2015 Proposed Postseason Population Estimate: 60**

The Darby Mountain bighorn sheep herd population objective is 150 sheep. The objective was established in 1991.

The 2015 bighorn sheep hunting season for Hunt Area 24 is closed. Due to the lack of mature rams, low lamb numbers and poor recruitment of sheep from juvenile to older age classes, the Department will maintain this closure for the immediate future.

**Herd Unit Issues**

In 1981 the Wyoming Game and Fish Department and U.S. Forest Service reintroduced bighorn sheep (*Ovis canadensis*) into the Wyoming Mountain Range, west of Big Piney, Wyoming. The last wild sheep occupied this range in the early 1960s. Competition with domestic sheep and illegal harvest were believed responsible for their extirpation. Prior to the transplant, domestic sheep were removed from allotments on Fish Creek and Darby Mountain, which provided the best historic bighorn sheep habitat. In January 1981, 35 Rocky Mountain sheep were transplanted from the Whiskey Basin Habitat Unit near

Dubois, Wyoming to Fish Creek Mountain. In January 1987, another 25 bighorn sheep were transplanted from Whiskey Basin to the Fish Creek Mountain site. Funding assistance for this relocation effort was provided by the Foundation for North American Wild Sheep (FNAWS).

The estimated herd size in mid-winter 1988 was 110 sheep. However, the actual count on 20 February 1988 was 70 sheep and poor weather prevented completion of the survey. A comprehensive on-ground and aerial survey was conducted from 20 June - 14 July 1988 in approximately a 90 square mile area around Fish Creek Mountain. These surveys resulted in a post-lambing count of a minimum of 124 sheep consisting of 56 ewes, 28 lambs and 40 rams in the herd. In 1988 the first hunt was conducted in Hunt Area 24, based primarily on the results of the previous survey. Four permits were issued with 3/4 curl restrictions and four rams were harvested. The population is estimated to have increased to a maximum of approximately 150 sheep in 1994. The department continued to issue four permits for 3/4 curl rams from 1988 through 1997.

Forage production and availability studies on Fish Creek and Darby Mountain winter ranges, (prior to the 1981 re-introduction) suggested a combined capacity for 150 to 175 sheep in most winters. Other potential wintering sites were identified north and east of Fish Creek Mountain. Since 1981 individuals and small groups of sheep that typically number less than 15 individuals have been observed wintering near Star Hill, above the Middle Piney Creek summer homes, the hydrographic divide between the Greys River and Green River drainages in Box Canyon Creek in Greys River drainage, and the windblown ridge tops in the Straight Creek drainage west of Mount Schidler. Fish Creek Mountain and Darby Mountain continue to support the largest concentrations of wintering sheep.

Most summer observations have occurred within the 90 square mile core area around Fish Creek Mountain. However, since 1994 a few sub legal rams and small ewe-lamb groups have been observed on summer range outside the core area. Summer dispersal of bighorn sheep have been documented along the crest of the Wyoming Mountain Range in the vicinity of the headwaters of South Cottonwood Creek, McDougal Peak, Gunsight Pass, Middle Piney Creek, Straight Creek, North Piney Creek and Roaring Fork drainages as well. This dispersal has resulted in bighorn sheep and domestic sheep mingling on summer ranges in several active sheep allotments.

## **Weather**

Weather conditions during the 2014 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. By late winter 2015 snowpack in western Wyoming watersheds were

estimated to be at or slightly 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**

Winter range browse plants have been measured each spring and fall to assess production and utilization since the late 1990s. Growing conditions improved in 2014 on winter ranges because of moisture regimes in early spring and throughout the growing seasons. Improved growing conditions were due to spring and summer rains which have a different effect on shrubs than winter snowpack due to rates of infiltration. Leader production on Wyoming big sagebrush and black sagebrush were the species most notably improved compared to the 2013 leader growth. However, average leader growth was still less than a half inch for Wyoming big sagebrush sites and less than two inches for mountain shrubs. For additional site specific information, please refer to the 2014 Annual Report Strategic Habitat Plan Accomplishments, for Pinedale Region habitat improvement project summaries ( <http://wgfd.wyo.gov/web2011/wildlife-1000708.aspx>).

## **Field Data**

In February 2012, an aerial survey was conducted along the crest of the Wyoming Range south of Marten Creek to Wyoming Peak, and included Fish Creek and Darby Mountains. A total of 37 sheep were observed. The age/sex classes were noted as follows: 8 adult rams, 2 yearling rams, 18 ewes, and 9 lambs.

In January 2014 an on ground survey was conducted near Fish Creek and Darby Mountains. This survey documented 24 sheep on Fish Creek Mountain. Subsequent fall summer surveys in 2014 documented approximately 10 sheep in Box Canyon, and two (n=2) sub-adult rams in the North Fork of Sheep Creek. A total of 37 sheep were observed during this period. Open, snow-free conditions existed throughout most of the 2014-15 winter. Weather conditions during the current winter precluded a comprehensive aerial survey from being completed.

The most recent comprehensive aerial survey occurred on April 2, 2015. A cooperative agreement between the U.S. Forest Service, Bridger-Teton National Forest and Department enabled sufficient funds to be delegated to conduct an aerial survey prior to the expiration of the agreement on May 1, 2015. A total of 50 bighorn sheep were observed during this survey, which is the highest number of sheep documented in at least 15 years. The distribution of sheep were noted as follows: six sheep in Marten Creek; 10 sheep in Box Canyon; five sheep in Middle Piney Creek; two sheep in Straight Creek; five sheep on Darby Mountain; and, 27 sheep on Fish Creek Mountain. The observed ram:100 ewe ratio was 37 rams:100 ewes. The observed lamb:100 ewe ratio was 57 lambs:100 ewes.

## **Harvest**

One license valid for any ram was issued for this hunt area from 2008 to 2012, respectively. A total of four rams were harvested from 2008 – 2011. In 2012, the one licensed hunter observed very few sheep and could not find a mature ram older than 5 years of age after 15 total days of hunting. The lack of mature rams observed by the hunter is consistent with Department field surveys over the past five years.

## **Population**

The population has stabilized at approximately 60 sheep. Systematic surveys, typically conducted from a helicopter in winter, have resulted in fewer than 60 sheep observed. Summer on-ground surveys conducted in August have identified the Box Canyon and Fish Creek Mountain areas as locations that typically support the highest aggregations of sheep.

## **Management Summary**

The 2015 bighorn sheep hunting season for Hunt Area 24 will be closed. Due to the lack of mature rams, low lamb numbers and poor recruitment of juveniles, the Department will maintain this hunt area closure for the immediate future. The hunting season will be closed until such time that an adequate number of rams can be documented to sustain a hunting season over a period of at least 5 years.