

2016 - JCR Evaluation Form

SPECIES: Mountain Goat

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

HERD: MG201 - BEARTOOTH

HUNT AREAS: 1, 3, 514, 999

PREPARED BY: Doug McWhirter/Tony Mong

	<u>2011 - 2015 Average</u>	<u>2016</u>	<u>2017 Proposed</u>
Population:	255	280	250
Harvest:	17	28	32
Hunters:	18	28	34
Hunter Success:	94%	100%	94%
Active Licenses:	18	28	32
Active License Success:	94%	100%	100%
Recreation Days:	94	106	125
Days Per Animal:	5.5	3.8	3.9
Males per 100 Females	0	0	
Juveniles per 100 Females	36	0	

Population Objective (± 20%) : 175 (140 - 210)

Management Strategy: Special

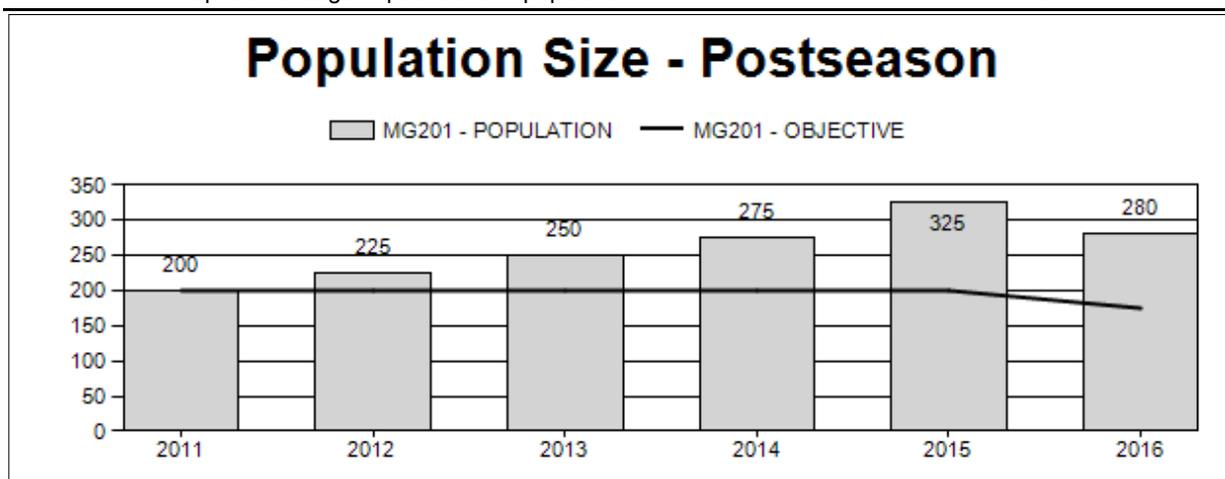
Percent population is above (+) or below (-) objective: 60%

Number of years population has been + or - objective in recent trend: 280

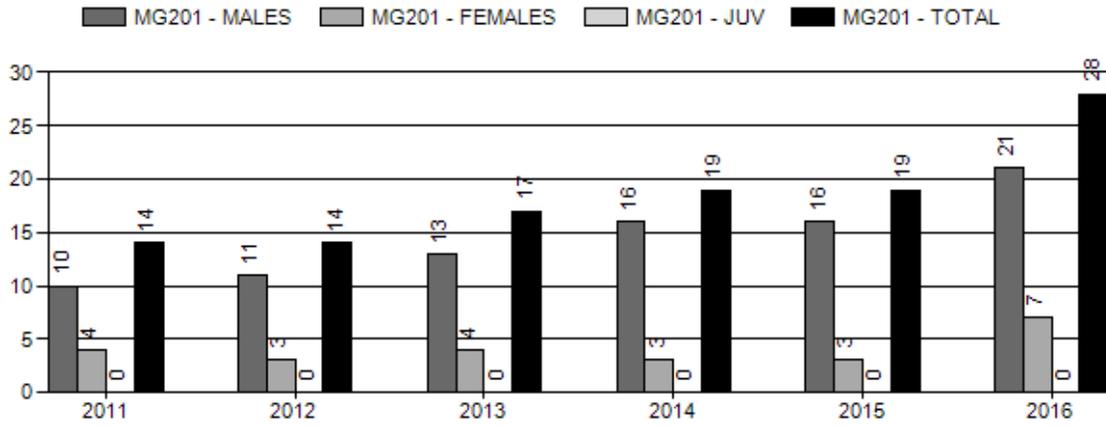
Model Date: 12/12/2016

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

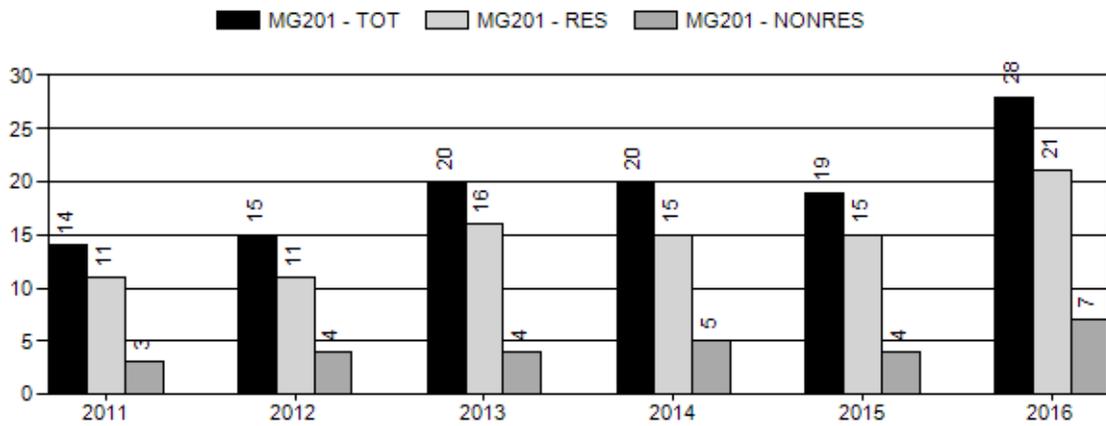
	<u>JCR Year</u>	<u>Proposed</u>
Females ≥ 1 year old:	N/A%	n/a%
Males ≥ 1 year old:	N/A%	n/a%
Total:	N/A%	n/a%
Proposed change in post-season population:	N/A%	n/a%



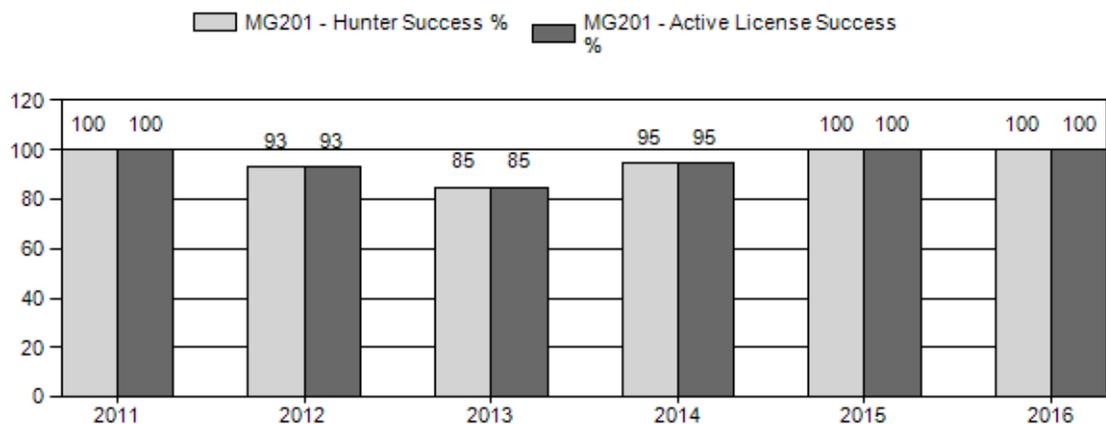
Harvest



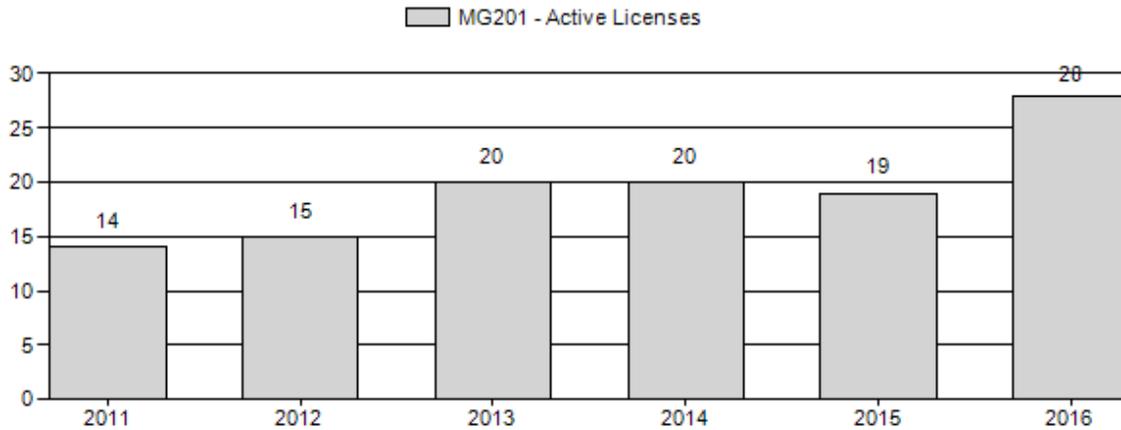
Number of Active Licenses



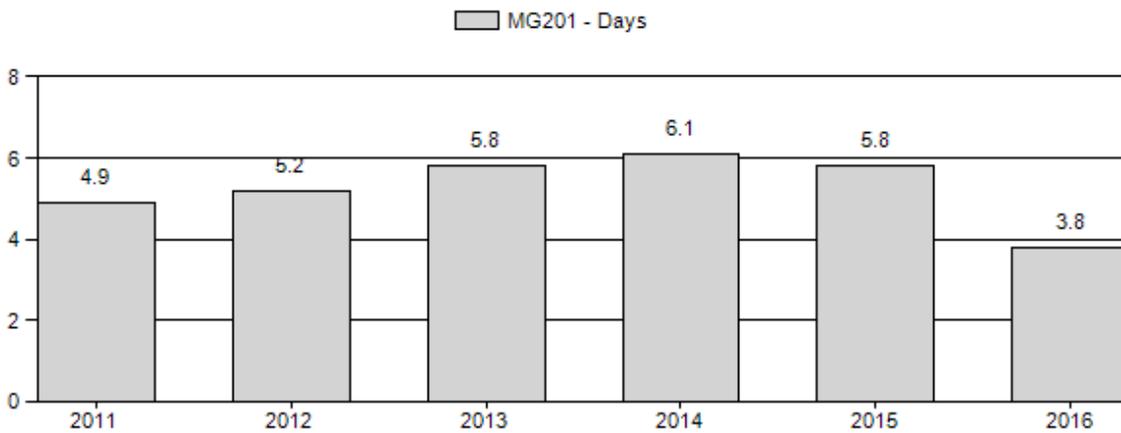
Harvest Success



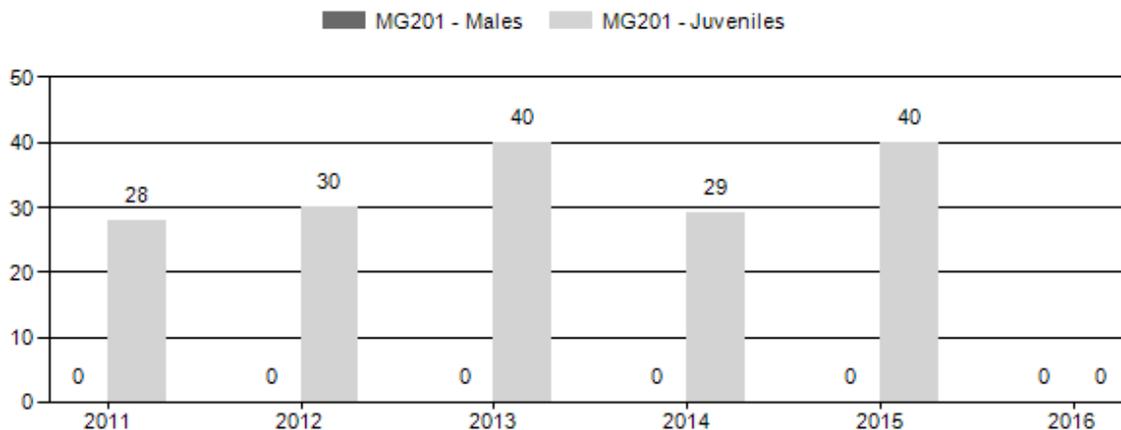
Active Licenses



Days Per Animal Harvested



Preseason Animals per 100 Females



2011 - 2016 Preseason Classification Summary
for Mountain Goat Herd MG201 - BEARTOOTH

Year	Pre Pop	MALES				FEMALES		JUVENILES		Males to 100 Females				Young to				
		Ylg	Adult	Total	%	Total	%	Total	%	Tot	Cls	Ylng	Adult	Total	Conf	100 Fem	Conf Int	100 Adult
										Cls	Obj				Int			
2011	225	0	0	0	0%	76	78%	21	22%	97	179	0	0	0	± 0	28	± 0	28
2012	250	0	0	0	0%	60	77%	18	23%	78	179	0	0	0	± 0	30	± 0	30
2013	275	0	0	0	0%	125	71%	50	29%	175	167	0	0	0	± 0	40	± 0	40
2014	300	0	0	0	0%	56	78%	16	22%	72	155	0	0	0	± 0	29	± 0	29
2015	350	0	0	0	0%	216	71%	87	29%	303	207	0	0	0	± 0	40	± 0	40
2016	300	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	± 0	0	± 0	0

**2017 HUNTING SEASONS
BEARTOOTH MOUNTAIN GOAT HERD (MG201)**

Hunt Area	Type	Season Dates		Quota	License	Limitations
		Opens	Closes			
1	1	Sep. 1	Oct. 31	12	Limited quota	Any mountain goat
3	1	Sep. 1	Oct. 31	12	Limited quota	Any mountain goat
3	2	Oct. 1	Oct. 31	8	Limited quota	Any mountain goat

Special Archery Season Hunt Areas	Season Dates		Limitations
	Opens	Closes	
1, 3	Aug. 15	Aug. 31	Refer to Section 7 of this Chapter

Hunt Area	License Type	Quota change from 2016
3	1	+4
Herd Unit Total	1	+4

Management Evaluation

Current Management Objective: 200

2016 Postseason Population Estimate:

2017 Proposed Postseason Population Estimate:

Herd Unit Issues

Mountain goats were introduced into the Rock Creek drainage of the Beartooth Mountains of Montana, adjacent to the Wyoming border, in 1942. The first hunting season in Wyoming was in 1969. Since then mountain goats populated all available habitat in the Beartooth Mountains of Wyoming, and have colonized portions of the Absaroka Mountains as well, presumably from the Absaroka Mountains in Montana. To accommodate this expansion, Hunt Area 1 was enlarged in 1996 (to include the Sunlight Creek drainage) and again in 2009 (to include the area south to the North Fork of the Shoshone River). In 2011, Hunt Area 3 was carved out of Hunt Area 1 to direct hunting pressure at goats that inhabited the more remote areas of the Absaroka Mountains. In addition, expansion has taken place in Yellowstone National Park, where currently 75-100 goats reside. Hunting of this population of goats also occurs in Montana (Hunt District 514) adjacent to the Wyoming portion of the Beartooth Mountains. Both of these factors (Montana harvest and goats unavailable for harvest in YNP) must be taken into account when managing this herd.

Weather

Weather conditions during the 2016 biological year were characterized by near normal precipitation during the growing season (April-June). Winter conditions; however, were relatively severe in most of the unit, with above average snowfall and colder than normal temperatures. We expect overwinter mortality to be higher than normal.

Habitat

No habitat monitoring data is collected in this herd unit.

Field Data

A preseason classification and trend survey conducted in summer 2015 yielded a total of 303 mountain goats. A total of 102 (34%) of these were seen in Area 1, while 93 (31%) were seen in Area 3. Another 108 were seen in Yellowstone National Park. Goat observations in Hunt Area 3 and in YNP represent the highest recorded goat numbers for these areas. The kid:adult ratio was 40:100, which is higher than the long-term (1986-2013) average of 33.5 kids:100 adults.

Harvest Data

A total of 19 goats were harvested by 19 hunters in Wyoming in 2015, including 16 males and 3 females (100% success). Two licenses were issued in Montana for Hunt Area 514 in 2012, and 1 nanny was taken. Hunter effort for Wyoming goat hunters in 2015 was 5.8 days per goat harvested, which is slightly greater than the average for goat hunters in this area, as the long-term average (1970-2014) average is 4.6 days per goat taken.

The average age of all harvested goats in 2015 was 5.0 years for billies and 5.8 years for nannies, compared to the long-term average of 4.7 years for billies and 4.6 years for nannies since age records were first kept in 1998. The total number of goats seen by hunters in 2015 (average 21.1) was slightly less than the most recent 10-year average of 28.9 goats seen.

Various studies have shown that goat populations are sensitive to female harvest. The 3 nannies killed in 2008 represented 55% of the total Wyoming harvest for Hunt Area 1, which is considered high. In 2009 and 2010, nannies comprised 38.5% and 45.5% of the harvest, respectively. Three of the six highest nanny harvest percentages recorded for this herd unit have been recorded in the last 5 years (2008, 2009, 2010). In 2011 and 2012, the percentage of nannies in the Area 1 harvest was 36.4% and 27.3%, respectively. In 2013, nannies comprised 35% of the total harvest in this herd unit. In 2014 and 2015, this figure dropped to 15.8%.

Population

Due to the difficulty of distinguishing males and females during aerial surveys, mountain goats are classified as either kids or non-kids. Only from close observation can males and yearlings be

determined. Therefore, preseason classification information for this herd unit (although graphed as juveniles:100 females) is actually kids:100 non-kids. Due to the inability to distinguish between males and females, construction and validation of a functional population model is difficult.

Table 1. Management parameters for Hunt Area 1 of the Beartooth Mountain Goat Herd (Wyoming portion only), 1969-2016.

	1969-1979	1980-1992	1993-2010	2011	2012	2013	2014	2015	2016
Hunters	4	8	12	12	11	14	14	11	12
Harvest	3.4	7.3	11.7	11	11	12	14	11	12
Success	84.1%	95.1%	97.7%	100%	100%	86%	100%	100%	100%
Effort	5.4 days	3.7 days	4.5 days	3.5 days	5.2 days	6.9 days	4.6 days	7.5 days	3.3 days
Avg Age	-	-	4.5 years	5.9 years	5.1 years	5.2 years	5.7 years	4.8 years	5.5 years
% Nannies	23.5%	32.9%	32.5%	36.4%	27.3%	41.7%	14.3%	27.3%	41.7%
Trend Counts	19.0	104.7	125.5	-	-	125	-	102	28

Table 2. Management parameters for Hunt Area 3 of the Beartooth Mountain Goat Herd, 2011-2016.

	1969-1979	1980-1992	1993-2010	2011	2012	2013	2014	2015	2016
Hunters				3	4	6	6	8	16
Harvest				3	3	5	5	8	16
Success				100.0%	75%	83%	83%	100%	100%
Effort				9.7 days	5.3 days	3.2 days	10.4 days	3.6 days	4.1 days
Avg Age				3.5 years	4.8 years	4.9 years	4.5 years	5.4 years	4.5 years
% Nannies				0%	0%	20.0%	0%	0%	12.5%
Trend Counts				-	-	34	-	93	87

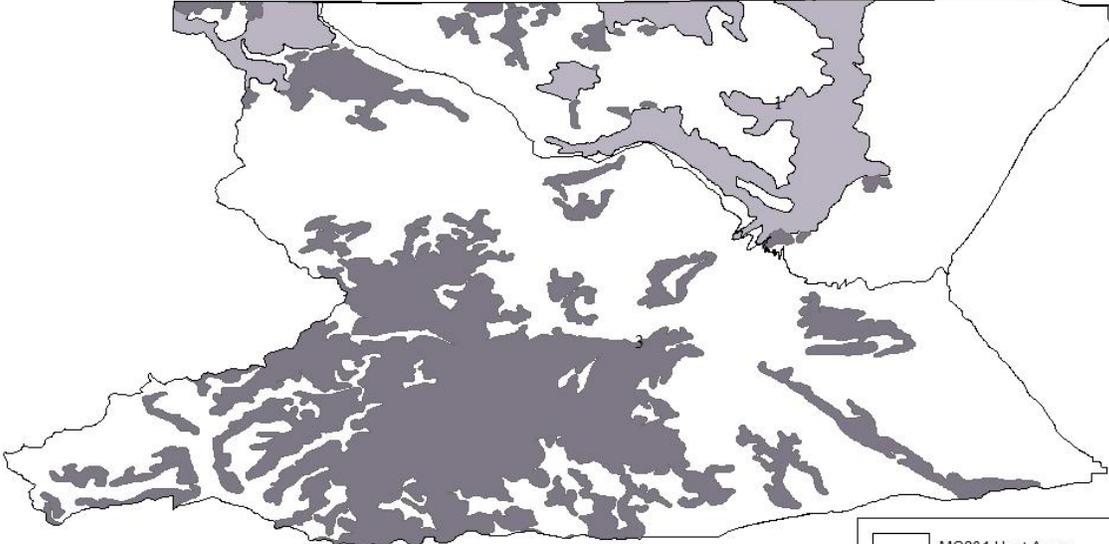
Table 3. Mountain goat trend counts in Yellowstone National Park (Soda Butte creek to Lamar Headwaters), 1998-2016.

	1969-1979	1980-1992	1993-2010	2011	2012	2013	2014	2015	2016
Trend Counts	-	-	13.5	-	-	74	67	108	-

Management Summary

Based on an evaluation of recent trend counts and productivity estimates, the Beartooth Mountain Goat Herd is currently estimated to be above the postseason population objective of 200 goats. Due to concerns over expanding mountain goats on high elevation non-migratory bighorn sheep, it is felt that decreasing mountain goats densities in Hunt Area 3 are warranted. Therefore 12 licenses will be issued in Area 1 and 16 licenses be issued in Area 3 for the 2016 season, which should result in the harvest of approximately 25 goats.

MG201 Rocky Mountain Goat Herd Seasonal Ranges



0 5 10 20 Miles

	MG201 Hunt Areas
Seasonal Ranges	
	Crucial Winter/Yearlong
	Out of Range
	Yearlong

