



Park County Related Hunting and Fishing Spending, 2015

For the Wyoming Wildlife Federation



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WYOMING GEOGRAPHIC INFORMATION SCIENCE CENTER
www.uwo.edu/wygisc (307) 766-2532 wygisc@uwo.edu

Introduction

Expenditures by hunters and anglers make an important contribution to Wyoming's economy. This contribution is particularly important during times of economic downturn in the state's energy sector. The most recent information from the U.S. Fish and Wildlife Service, in its National Survey of Fishing, Hunting, and Wildlife-Associated Recreation report, estimates that 443,000 resident and nonresident hunters and anglers spent 4.8 million days hunting and fishing in Wyoming during 2011 (Table 1). The report also estimates that this recreation activity generates \$683.7 million of spending within the Wyoming economy.

Although the statewide information on hunting and fishing expenditures is important, residents and local officials are also interested in the local economic importance of hunting and fishing expenditures. In response to that interest, this analysis attempts to estimate the spending associated with hunting and fishing specifically for Park County, Wyoming.

Methodology

In order to estimate recreational spending, two types of information are needed. One is the amount of recreation use and the other is per unit expenditures associated with that recreation use. For this analysis recreation use for hunting was based on the hunter day estimates from the Wyoming Game and Fish Department's (WGFD) 2015 Annual Harvest Reports by Hunt Area. Harvest reports were available for the following species: Antelope, Bighorn Sheep, Bison, Black Bear, Deer, Elk, Moose, and Mountain Goat. Because Hunt Area boundaries are based on habitat rather than county boundaries, not all the Hunt Areas found in Park County are located entirely within the borders of Park County. To account for this, a GIS analysis was conducted by the Wyoming Geographic Information Science Center to estimate the percent of each Hunt Area that was located within Park County. This percentage was then used to allocate the proportion of total hunter days for the Hunt Area to Park County. These percentages by hunt area are detailed in the maps at the back of this report. Unfortunately, for fishing there was no data available on fishing days by sub-regions of the state. Because of this, recreation use for fishing was based on the WGFD's 2015 data on fishing licenses sold in Park County.

In order to estimate per unit expenditures for hunting and fishing in this analysis, per unit estimates for Wyoming from the U.S. Fish and Wildlife Service's (USFWS) 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation report were used, after adjusting for inflation to 2015 dollars. Combining the recreational use estimates with the per unit estimates of expenditures resulted in estimates of hunting and fishing spending related to Park County. Since the USFWS expenditure estimates are for all of Wyoming, not just Park County and because the fishing associated with a Wyoming fishing license purchased in Park County can occur throughout the state, it is not possible to say that 100 percent of these expenditure actually occur within the Park County economy. However, based on proximity it does seem likely that a high percentage of these expenditures may in fact occur within the county's economy.

Results

Table 2 summarizes the estimates of Park County related hunting and fishing spending for 2015. Based on the WGFD Hunt Area data it is estimated that there were nearly 62,000 big and trophy game hunting days in Park County in 2015. Based on USFWS expenditure estimates for Wyoming, adjusted to 2015 dollars, of \$90.91 per day for residents and \$579.82 per day for nonresidents, it is estimated that these hunter days generated spending of \$12.7 million. Information on the hunter days by individual species can found in the Appendix tables at the end of this report.

Fishing license sales data indicated that nearly 20,000 fishing licenses were sold in Park County in 2015. Based on USFWS data for average fishing days in Wyoming, it is estimated that these fishing licenses resulted in nearly 123,000 angler-days use in 2015. The expenditures associated with these fishing licenses are estimated at \$10.7 million. This spending estimate was developed by using annual individual expenditures in Wyoming by anglers for annual fishing licenses and daily individual expenditures in Wyoming by anglers for daily fishing licenses. Since USFWS expenditure data only applied to hunters and anglers over 16 years of age and over, youth annual license sales, which are for ages 14-18, were reduced by 50 percent to account for anglers less than 16 years of age. The combined total of hunting and fishing related spending in Park County in 2015 is estimated at \$23.4 million.

Summary and Conclusions

Hunting and fishing are economically important to the Park County economy. It is likely that much of the \$23.4 million of spending by hunters and anglers related to hunting and fishing in Park County occurs within the local economy. These types of economic contributions can become particularly important during times of economic downturn in the state's energy sector. The fact that hunting and fishing are popular with both residents and nonresidents indicates that these recreational activities are important both in terms of economic impacts and quality of life.

Table 1. Hunting and Fishing Spending in Wyoming, 2011

Participation					
	Total	Resident	Nonresident	Resident	Nonresident
	Fishing	Fishing	Fishing	Fishing	Fishing
Total Individuals	303,000	110,000	193,000	36.3%	63.7%
Total Trips	2,902,000	1,510,000	1,392,000	52.0%	48.0%
Total Days	3,123,000	2,009,000	1,114,000	64.3%	35.7%
Average Days	10.3	18.3	5.8		
	Total	Resident	Nonresident	Resident	Nonresident
	Hunting	Hunting	Hunting	Hunting	Hunting
Total Individuals	140,000	76,000	64,000	54.3%	45.7%
Total Trips	1,204,000	978,000	225,000	81.2%	18.7%
Total Days	1,726,000	1,103,000	623,000	63.9%	36.1%
Average Days	12.3	14.5	9.7		
Source: USFWS, 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (Wyoming - Table 3)					
2011 Trip and Equipment Expenditures in Wyoming					
	Total	Resident	Nonresident	Resident	Nonresident
	Fishing	Fishing	Fishing	Fishing	Fishing
Total Amount	\$438,892,000	\$95,365,000	\$343,527,000	21.7%	78.3%
Per Individual	\$1,448.49	\$866.95	\$1,779.93		
Per Trip	\$151.24	\$63.16	\$246.79		
Per Day	\$140.54	\$47.47	\$308.37		
	Total	Resident	Nonresident	Resident	Nonresident
	Hunting	Hunting	Hunting	Hunting	Hunting
Total Amount	\$244,865,000	\$115,763,000	\$129,102,000	47.3%	52.7%
Per Individual	\$3,134.94	\$1,254.80	\$5,367.61		
Per Trip	\$364.53	\$97.51	\$1,526.79		
Per Day	\$254.28	\$86.46	\$551.41		
Source: USFWS, 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (Wyoming - Table 21)					

Table 2. Park County Related Hunting and Fishing Spending, 2015

Big and Trophy Game Hunting				
	Resident	NonResident	Combined	
	Hunter	Hunter	Hunter	
Species	Days (1)	Days (1)	Days (1)	
Antelope	3,262	1,640	4,902	
Bighorn Sheep	862	130	992	
Black Bear	2,794	310	3,104	
Deer	19,821	6,700	26,521	
Elk	20,655	5,670	26,326	
Moose	37	3	40	
Mtn Goat	73	38	111	
Total Hunting Days	47,504	14,491	61,995	
Total Hunting Days	47,504	14,491	61,995	
Spending Per Day (2)	\$90.91	\$579.82	\$205.19	
Total Hunting Spending	\$4,318,828	\$8,402,243	\$12,721,071	
Fishing Licenses Sold in Park County 2015				
	License	Per	Total	Total
Type	Sold (3)	Fisherman	Fishing	Angler
		Spending (2)	Spending	Days (2)
Resident Annual	5,424	\$911.62	\$4,944,623	99,259
Resident Youth Annual	276	\$911.62	\$251,151	5,042
Resident Daily	1,952	\$49.92	\$97,436	1,952
Non-Resident Annual	824	\$1,871.64	\$1,542,232	4,779
Non-Resident Youth Annual	101	\$1,871.64	\$189,036	586
Non-Resident Daily	11,187	\$324.26	\$3,627,482	11,187
Total Fishing Spending	19,764	\$538.97	\$10,651,959	122,805
Combined Hunting & Fishing Spending			\$23,373,030	
(1) Based WGFD Annual Harvest Reports by Hunt Area and percent of Hunt Areas that are in Park County				
(2) Based on USFWS 2011 National Survey of Fishing, Hunting, and Wildlife -Associated Recreation - Wyoming (Adjusted for inflation)				
(3) Adjusted for Youth under 16				

Appendix Table 1. Park County Antelope Hunting, 2015								
				Total	Total	Park	Park	Combined
				Resident	NonRes	Resident	NonRes	Park
Hunt	Total	Park Cnty	Park Cnty	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
77	721,060	140,024	19.4%	436	85	85	17	101
78	602,221	188,929	31.4%	595	188	187	59	246
80	885,877	737,550	83.3%	221	100	184	83	267
81	398,680	398,680	100.0%	576	68	576	68	644
82	342,485	322,310	94.1%	508	260	478	245	723
110	410,007	315,812	77.0%	169	56	130	43	173
Total	3,360,329	2,103,305	62.6%	2,505	757	1,640	515	2,154

Source: Wyoming Game and Fish Department Annual Harvest Reports, 2015

Appendix Table 2. Park County Bighorn Sheep Hunting, 2015								
				Total	Total	Park	Park	Combined
				Resident	NonRes	Resident	NonRes	Park
Hunt	Total	Park Cnty	Park Cnty	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
1	444,420	444,387	100.0%	191	38	191	38	229
2	503,138	503,137	100.0%	145	33	145	33	178
3	442,540	441,947	99.9%	365	37	365	37	401
4	849,681	226,992	26.7%	132	11	35	3	38
5	1,710,254	819,012	47.9%	264	40	126	19	146
Total	3,950,034	2,435,475	61.7%	1,097	159	862	130	992

Source: Wyoming Game and Fish Department Annual Harvest Reports, 2015

Appendix Table 3. Park County Black Bear Hunting, 2015								
				Total	Total	Park	Park	Combined
				Resident	NonRes	Resident	NonRes	Park
Hunt	Total	Park Cnty	Park Cnty	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
25	752,289	751,830	99.9%	1,763	178	1,762	178	1,940
26	838,755	802,500	95.7%	695	111	665	106	771
27	1,054,291	306,638	29.1%	702	15	204	4	209
32	2,622,016	1,468,989	56.0%	290	39	162	22	184
Total	5,267,352	3,329,957	63.2%	3,450	343	2,794	310	3,104

Source: Wyoming Game and Fish Department Annual Harvest Reports, 2015

Appendix Table 4. Park County Deer Hunting, 2015								
				Total	Total	Park	Park	Combined
				Resident	NonRes	Resident	NonRes	Park
Hunt	Total	Park Cnty	Park Cnty	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
105	228,962	228,937	100.0%	1,311	697	1,311	697	2,008
106	317,274	317,265	100.0%	1,572	586	1,572	586	2,158
109	126,305	126,305	100.0%	95	26	95	26	121
110	528,365	528,365	100.0%	972	914	972	914	1,886
111	277,258	277,258	100.0%	2,231	1,290	2,231	1,290	3,521
112	144,991	144,991	100.0%	1,903	1,066	1,903	1,066	2,969
113	254,864	254,864	100.0%	1,575	755	1,575	755	2,330
114	117,039	116,755	99.8%	53	0	53	0	53
115	211,969	175,109	82.6%	187	143	154	118	273
116	238,714	238,714	100.0%	623	253	623	253	876
117	275,403	256,261	93.0%	271	71	252	66	318
118	131,233	57,602	43.9%	72	15	32	7	38
121	297,341	297,317	100.0%	4,276	233	4,276	233	4,509
122	634,644	298,862	47.1%	8,100	649	3,814	306	4,120
125	607,919	88,056	14.5%	504	123	73	18	91
165	212,855	211,704	99.5%	890	368	885	366	1,251
Total	4,605,136	3,618,365	78.6%	24,635	7,189	19,821	6,700	26,521

Source: Wyoming Game and Fish Department Annual Harvest Reports, 2015

Appendix Table 5. Park County Elk Hunting, 2015								
				Total	Total	Park	Park	Combined
				Resident	NonRes	Resident	NonRes	Park
Hunt	Total	Park Cnty	Park Cnty	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
51	366,691	365,503	99.7%	1,909	306	1,903	305	2,208
53	125,671	125,672	100.0%	1,187	258	1,187	258	1,445
54	1,333,909	855,115	64.1%	2,242	487	1,437	312	1,749
55	251,112	251,112	100.0%	414	132	414	132	546
56	302,606	302,605	100.0%	2,382	455	2,382	455	2,837
58	162,964	162,965	100.0%	2,288	639	2,288	639	2,927
59	251,503	251,234	99.9%	2,854	830	2,851	829	3,680
60	211,974	175,119	82.6%	1,275	294	1,053	243	1,296
61	246,788	246,712	100.0%	1,984	1,253	1,983	1,253	3,236
62	163,603	163,588	100.0%	2,149	403	2,149	403	2,552
63	234,569	141,890	60.5%	3,047	1,302	1,843	788	2,631
66	1,225,844	300,294	24.5%	4,754	221	1,165	54	1,219
Total	4,877,233	3,341,809	68.5%	26,485	6,580	20,655	5,670	26,326

Source: Wyoming Game and Fish Department Annual Harvest Reports, 2015

Appendix Table 6. Park County Moose Hunting, 2015								
				Total	Total	Park	Park	Combined
				Resident	NonRes	Resident	NonRes	Park
Hunt	Total	Park Cnty	Park Cnty	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
8	211,969	175,109	82.6%	0	0	0	0	0
9	1,299,199	552,088	42.5%	7	6	3	3	6
11	1,718,293	1,717,972	100.0%	34	0	34	0	34
Total	3,229,461	2,445,169	75.7%	41	6	37	3	40

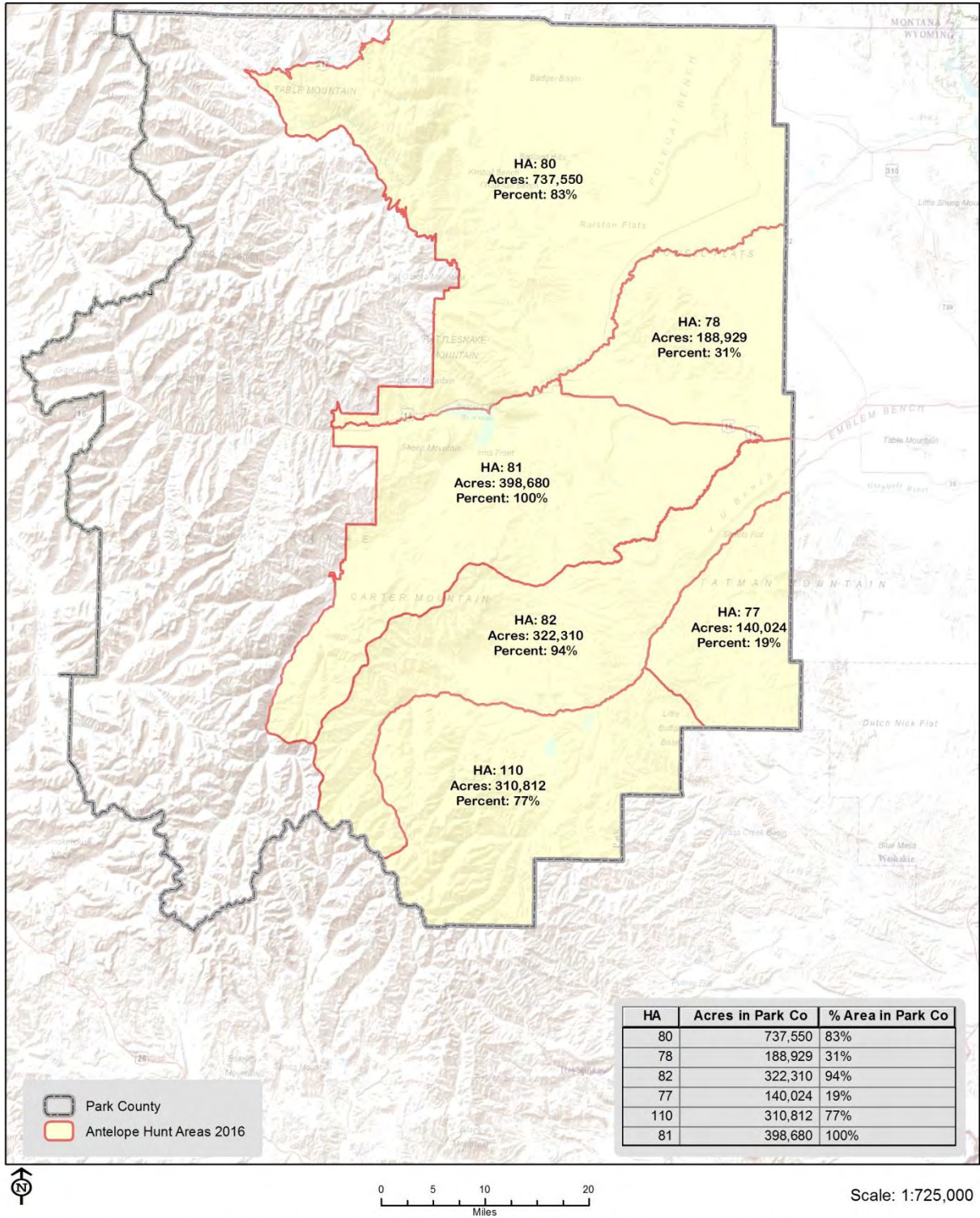
Source: Wyoming Game and Fish Department Annual Harvest Reports, 2015

Appendix Table 7. Park County Mountain Goat Hunting, 2015								
				Total	Total	Park	Park	Combined
				Resident	NonRes	Resident	NonRes	Park
Hunt	Total	Park Cnty	Park Cnty	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
1	287,321	287,321	100.0%	51	31	51	31	82
3	669,018	669,018	100.0%	22	7	22	7	29
Total	956,339	956,339	100.0%	73	38	73	38	111

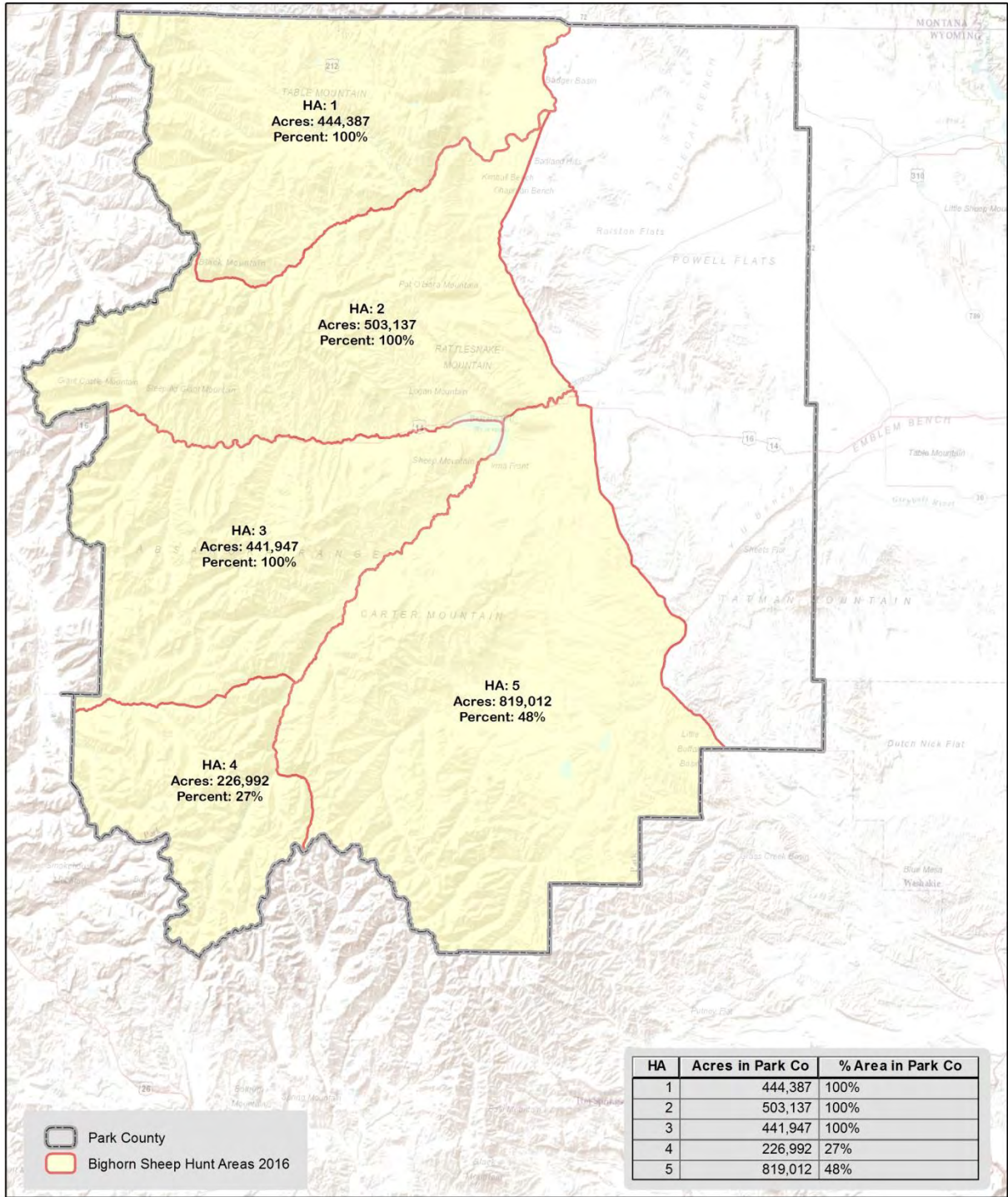
Source: Wyoming Game and Fish Department Annual Harvest Reports, 2015

Appendix Table 8. Fishing Licenses Sold in Park County 2015				
				Park
		Park	Adjustment	County
		County	Youth Under	Over 16
Type	Licenses	Licenses	16	Licenses
Resident Annual	5,424			5,424
Resident Youth Annual	551		50.0%	276
Resident Daily	1,952			1,952
Non-Resident Annual	824			824
Non-Resident Youth Annual	202		50.0%	101
Non-Resident Daily	11,187			11,187
Total	20,140			19,764

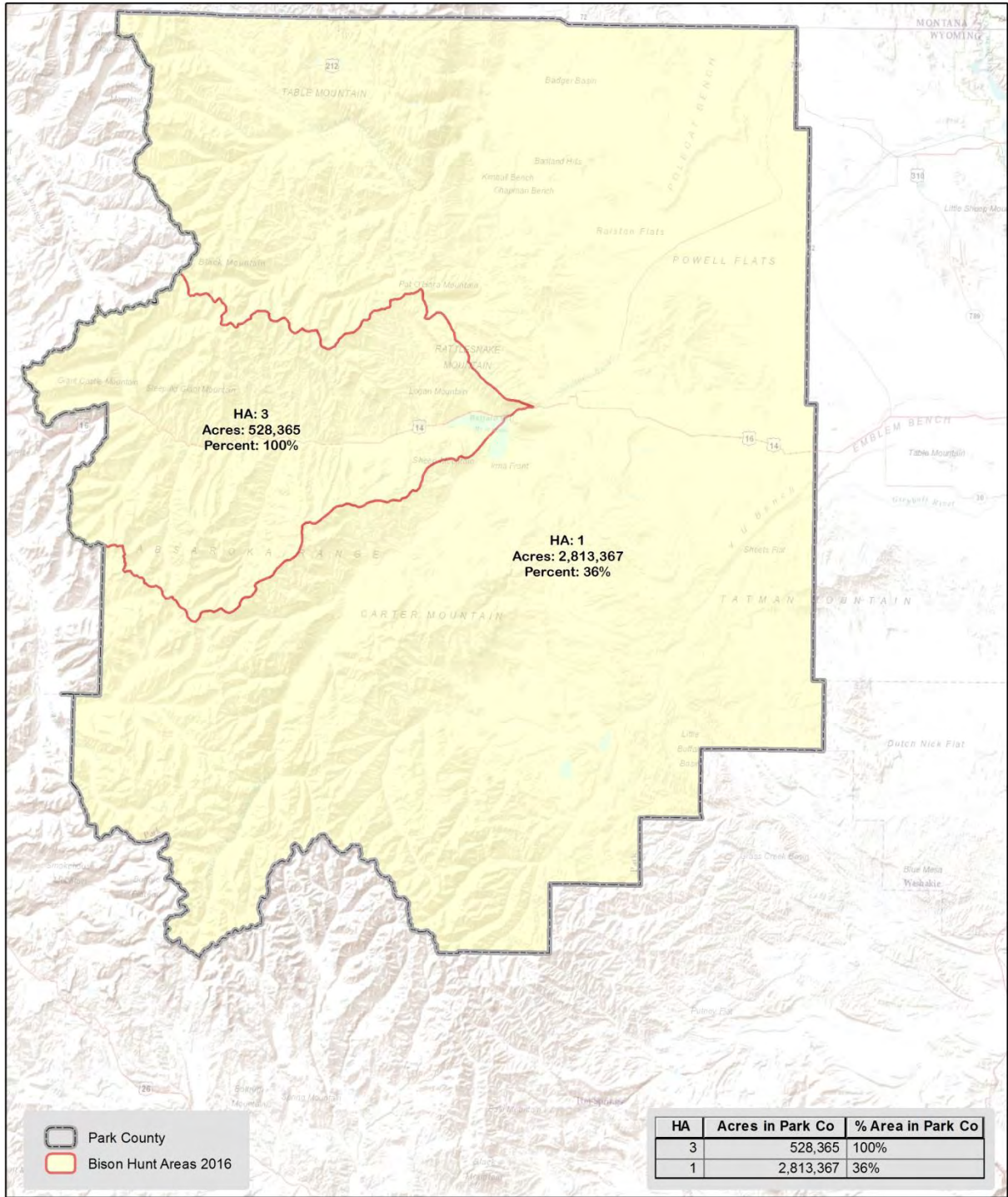
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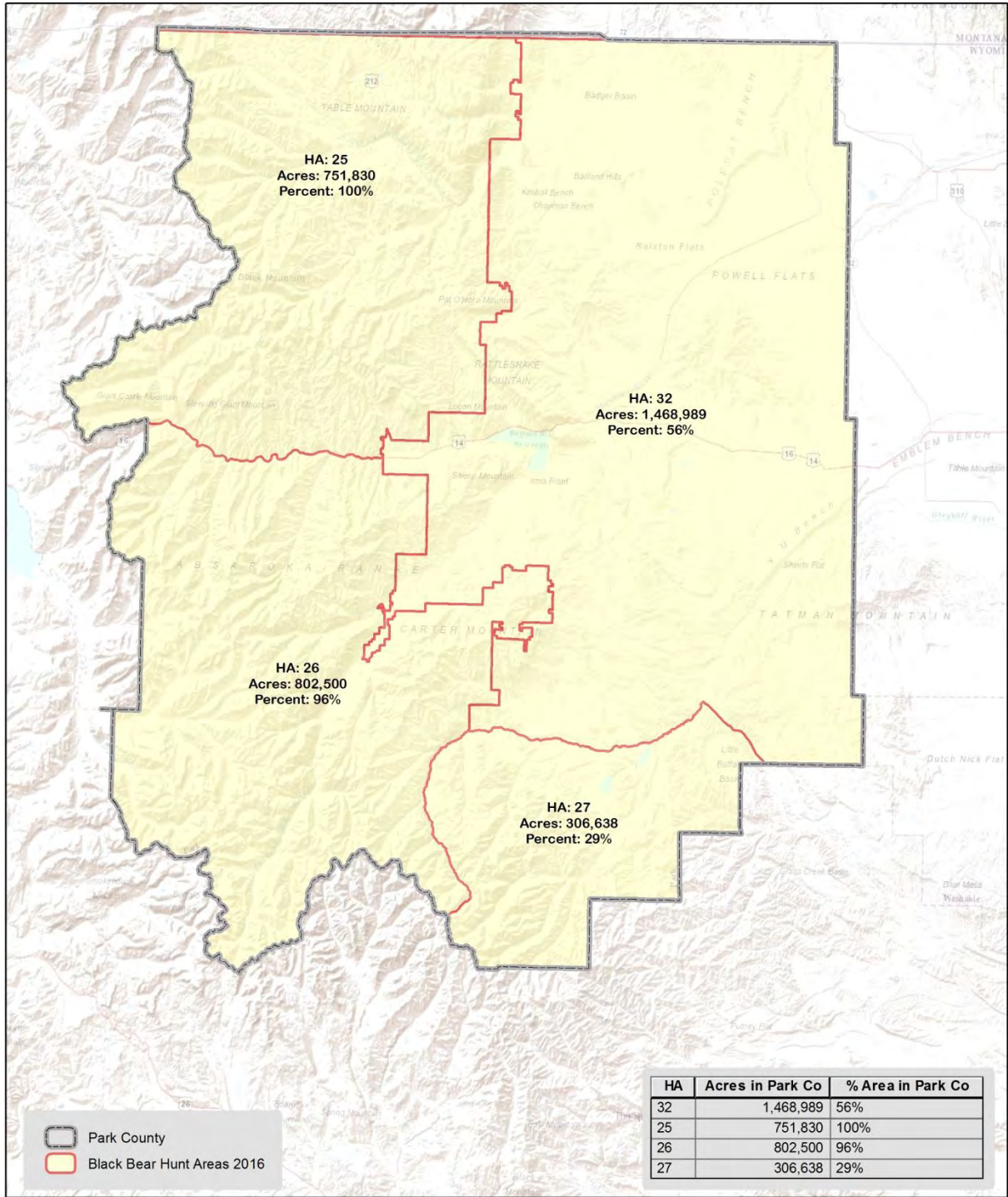
Percentage of 2016 Antelope Hunt Areas (HA) within Park County



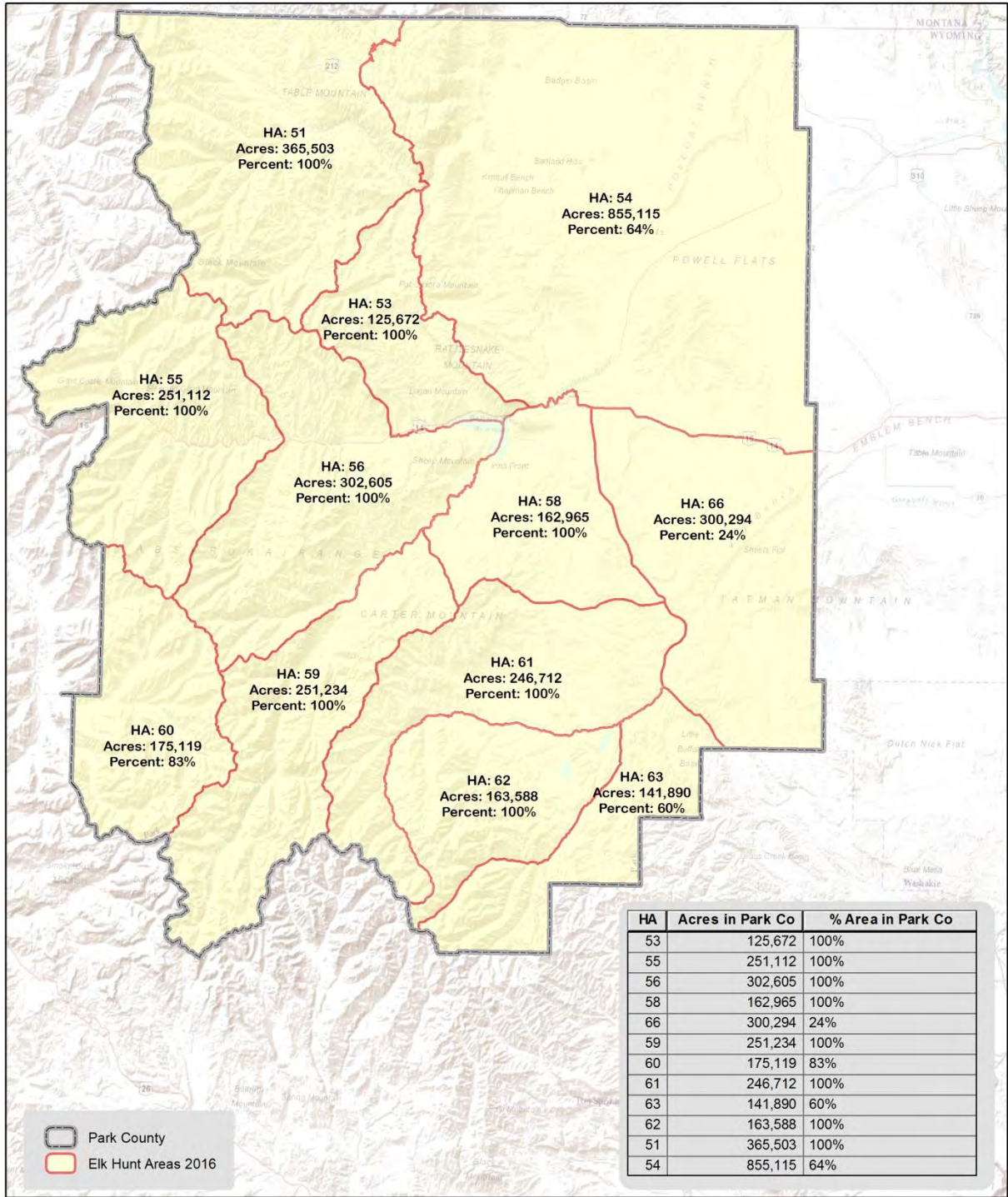
Percentage of 2016 Bighorn Sheep Hunt Areas (HA) within Park County



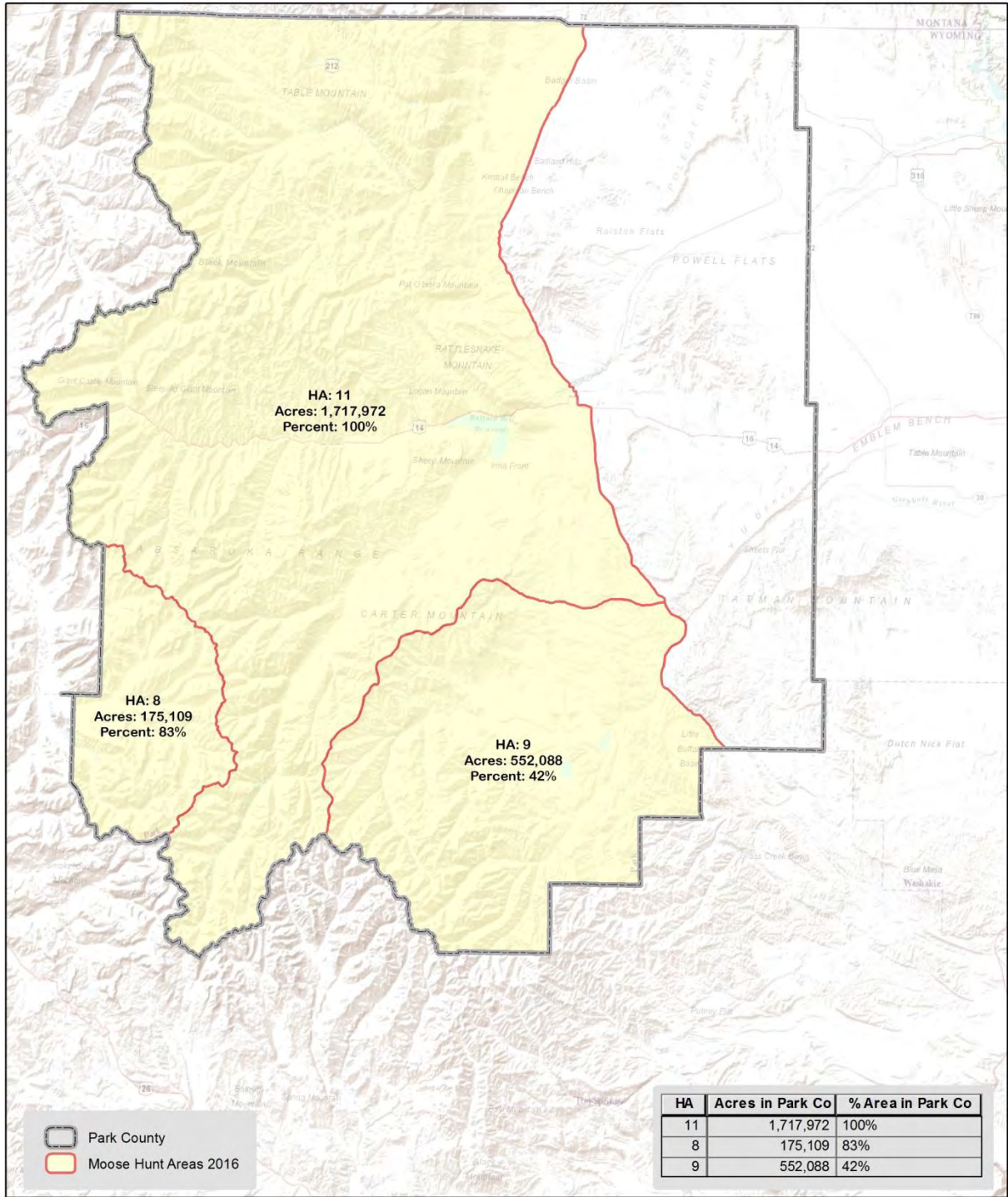
Percentage of 2016 Bison Hunt Areas (HA) within Park County



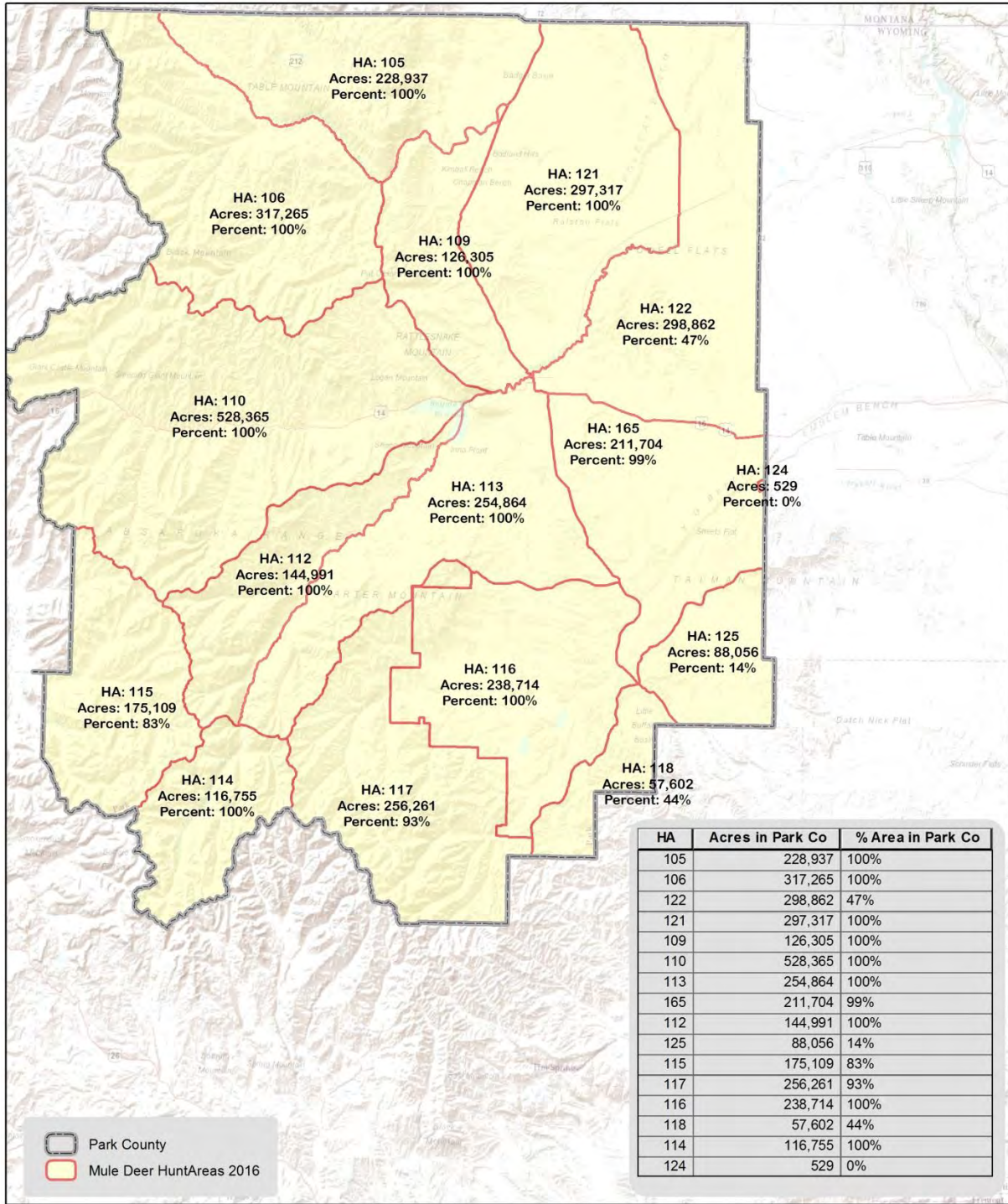
Percentage of 2016 Black Bear Hunt Areas (HA) within Park County



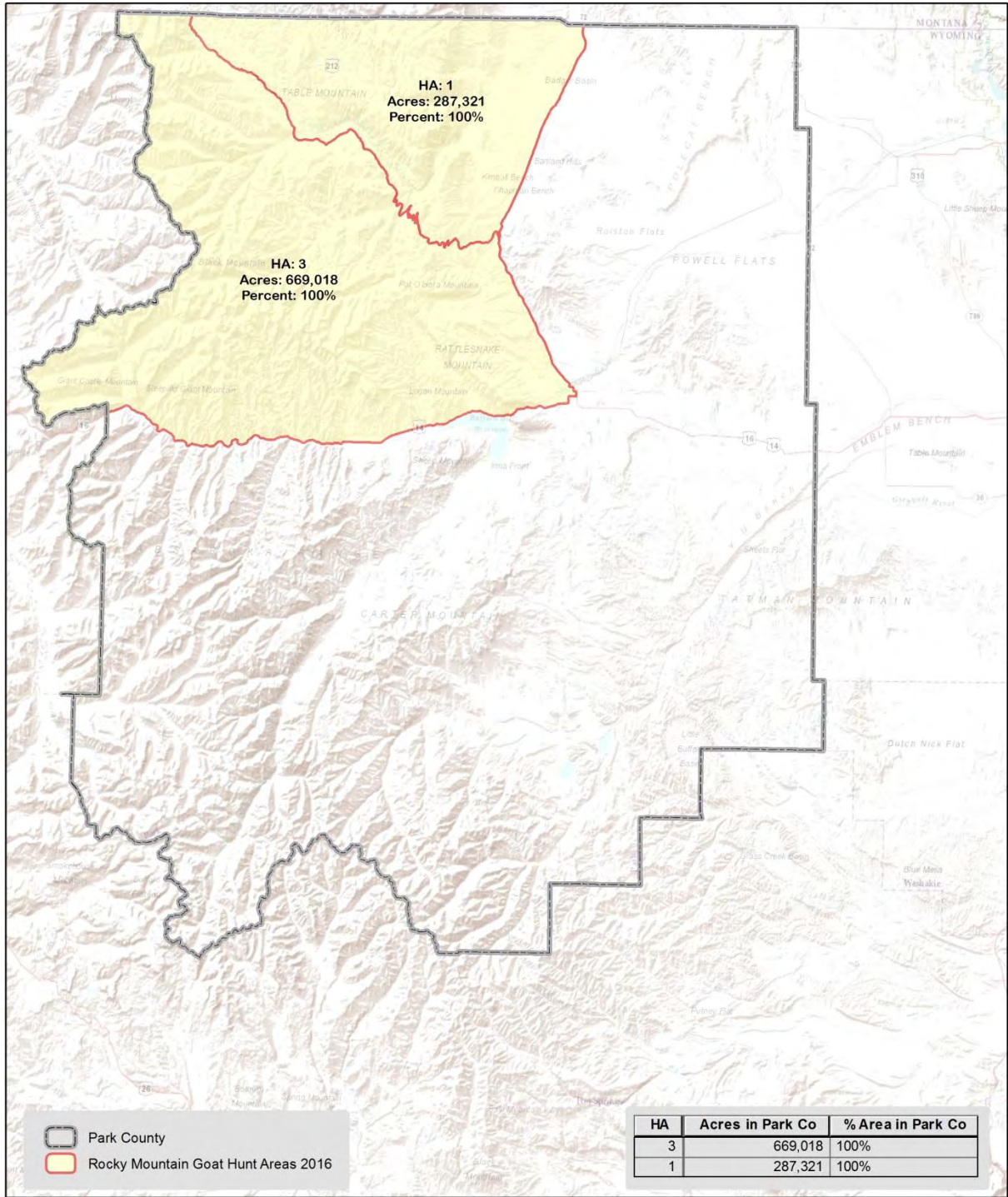
Percentage of 2016 Elk Hunt Areas (HA) within Park County



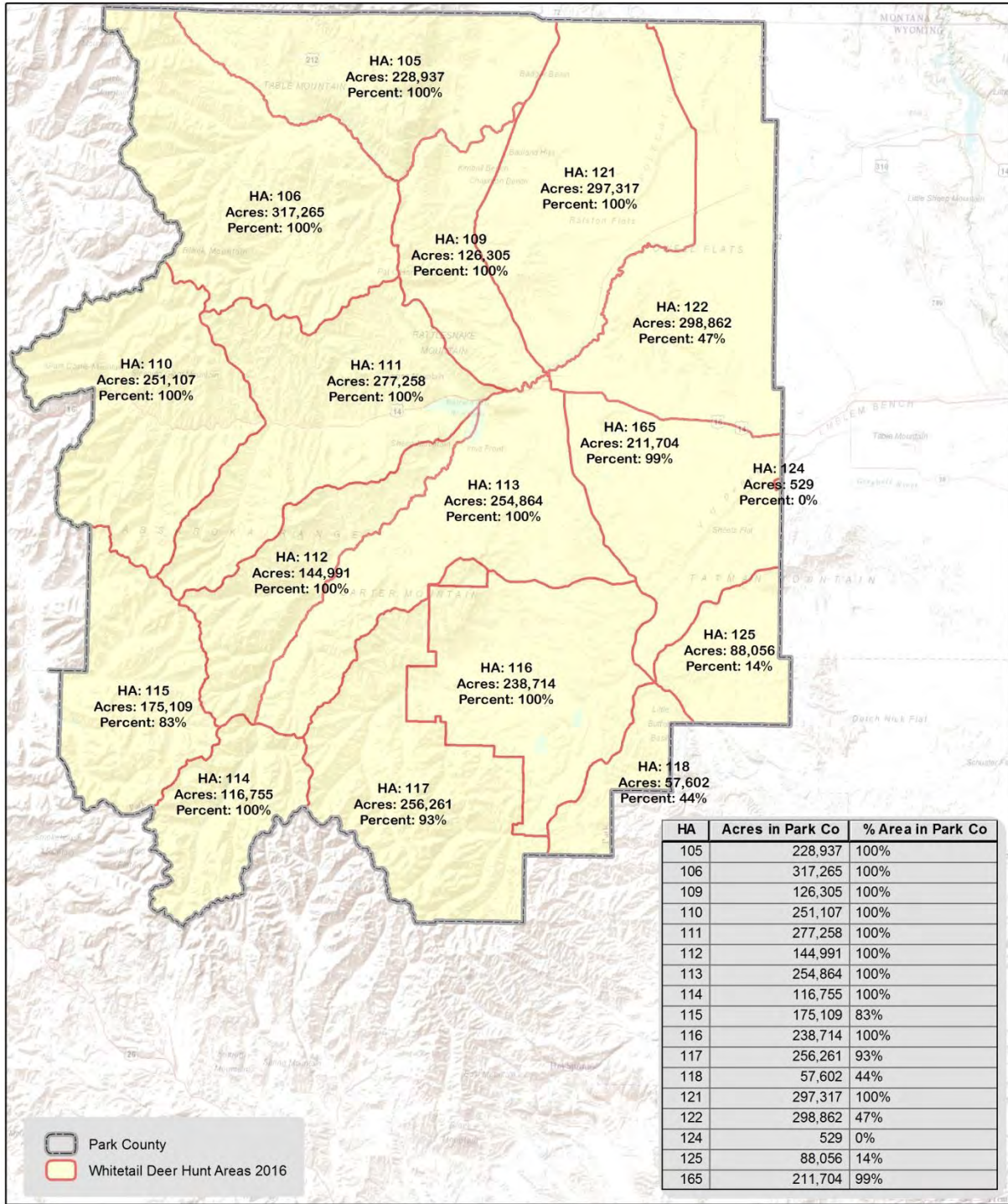
Percentage of 2016 Moose Hunt Areas (HA) within Park County



Percentage of 2016 Mule Deer Hunt Areas (HA) within Park County



Percentage of 2016 Rocky Mountain Goat Hunt Areas (HA) within Park County



Percentage of 2016 Whitetail Deer Hunt Areas (HA) within Park County