



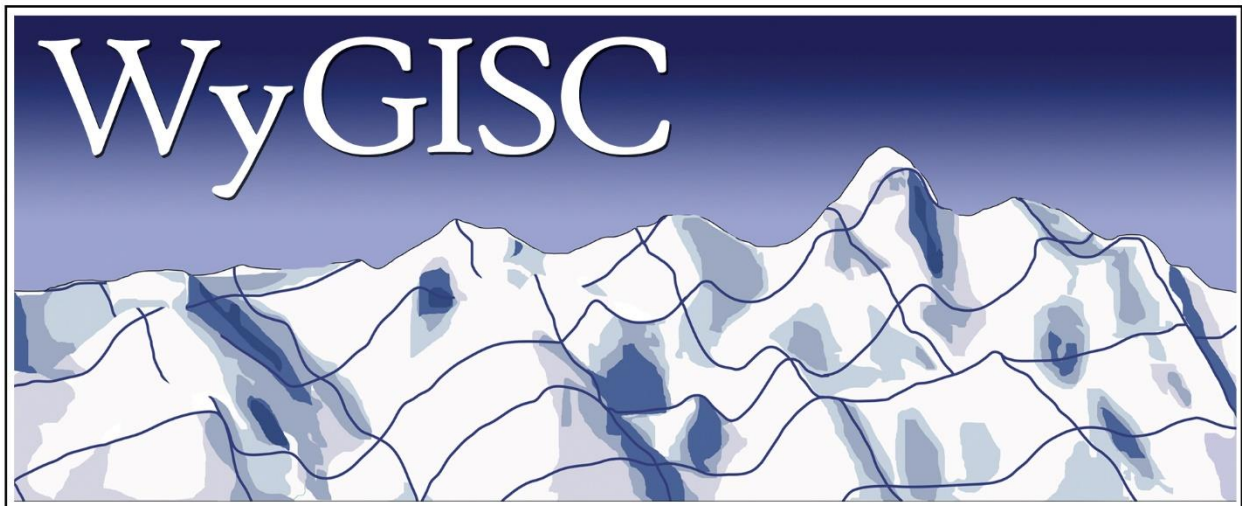
Sublette County Related Hunting and Fishing Spending, 2015

For the Wyoming Wildlife Federation



WYOMING WILDLIFE FEDERATION

WORKING FOR WILDLIFE & SPORTSMEN SINCE 1937



WYOMING GEOGRAPHIC INFORMATION SCIENCE CENTER
www.uwyo.edu/wygisc (307) 766-2532 wygisc@uwyo.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 sectors. The U.S. Fish and Wildlife Service (USFWS), in its National Survey of Fishing, Hunting, and Wildlife-Associated Recreation report, estimates that 443,000 resident and nonresident hunters and anglers participated in 4.8 million days hunting and fishing in Wyoming during 2011 (Table 1). The report also estimates that during 2011 this recreational activity generated \$683.7 million of spending within the Wyoming economy.

Access to both public and private lands is important for hunting and fishing in Wyoming. For hunting, the USFWS report estimates that 49 percent of hunters in Wyoming hunt exclusively on public land, 35 percent hunt on both public and private land, and 16 percent hunt exclusively on private land. Overall, more than one-third of hunters in Wyoming hunt on both public and private lands.

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 this interest, this analysis attempts to estimate the spending associated with hunting and fishing for Sublette County, Wyoming.

Methodology

In order to estimate recreational spending, two types of information are needed. One is the amount of recreational use and the other is per unit expenditures associated with that recreational use. For this analysis recreational use for hunting was based on the hunter-day estimates from the Wyoming Game and Fish Department's 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 Sublette County are located entirely within the borders of the county. To account for this, a GIS analysis was conducted by the Wyoming Geographic Information Science Center at the University of Wyoming to estimate the percent of each Hunt Area that was located within Sublette County. This percentage was then used to allocate the proportion of total hunter days for the Hunt Area in Sublette County. These percentages by hunt area are detailed in the maps at the end of this report. Unfortunately, there was no data available on fishing-days by sub-regions of the state. Because of this, recreational use for fishing was based on the Game and Fish Department's 2015 data on fishing licenses sold in Sublette County.

In order to estimate per unit expenditures for hunting and fishing in this analysis, per unit estimates for Wyoming from the USFWS 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation report were used. These values were adjusted for inflation to 2015 dollars. Combining the recreational use amounts with the per unit of expenditures amounts provided estimates for hunting and fishing spending related to Sublette County. Since the USFWS expenditure estimates are for all of Wyoming,

not just Sublette County and because the fishing associated with the purchase of a Wyoming fishing license in Sublette County can occur throughout the state, it is not possible to assume that 100 percent of these expenditures solely occurred within the Sublette County economy. However, based on proximity it seems more than likely that a high percentage of these expenditures occurred within the county's economy.

Results

Table 2 summarizes the estimates of Sublette County related to hunting and fishing spending for 2015. From Game and Fish Hunt Area data it is estimated that there were nearly 92,000 Big Game and Trophy Game hunting days in Sublette County in 2015. Based on USFWS expenditure estimates for Wyoming, adjusted to 2015 dollars (\$90.91 per day for residents and \$579.82 per day for nonresidents), it is estimated that these hunter-days generated spending of \$15.5 million. Information on the hunter-days by individual species can found in the Appendix tables in this report.

Fishing license sales data indicated that nearly 13,000 fishing licenses were sold in Sublette County in 2015. From USFWS data for average fishing days in Wyoming, it is estimated that the users of these fishing licenses participated in more than 58,000 angler-days in Wyoming. The expenditures associated with these fishing licenses are estimated to be \$6.7 million. This spending estimate was developed by using USFWS annual individual expenditures in Wyoming by anglers for annual fishing licenses and USFWS daily individual expenditures in Wyoming by anglers for daily fishing licenses. Since USFWS expenditure data only applies to hunters and anglers 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. Combined total hunting and fishing related spending related to Sublette County in 2015 is estimated to be \$22.2 million.

Summary and Conclusions

Hunting and fishing are economically important to the Sublette County economy. It is likely that much of the \$22.2 million of spending by hunters and anglers occurs within the Sublette County economy. In addition, those dollars that are spent locally generate secondary impacts in various other support sectors within the local economy. These types of economic contributions become particularly important during times of economic downturn in the state's energy sector. The popularity of hunting and fishing with both residents and nonresidents indicates that these recreational activities are important in terms of both contributions to the local economy and contributions to the residents' quality of life.

Table 1. 2011 Hunting and Fishing Spending in Wyoming					
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. Sublette 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	6,610	2,328	8,937	
Bighorn Sheep	132	25	157	
Bison	792	131	924	
Black Bear	3,738	220	3,958	
Deer	18,172	2,351	20,523	
Elk	46,460	9,401	55,862	
Moose	1,219	225	1,443	
Total Hunting Days	77,122	14,681	91,804	
Total Hunting Days	77,122	14,681	91,804	
Spending Per Day (2)	\$90.91	\$579.82	\$169.10	
Total Hunting Spending	\$7,011,568	\$8,512,586	\$15,524,154	
Fishing Licenses Sold in Sublette County 2015				
Type	License Sold (3)	Per Angler Spending (2)	Total Fishing Spending	Total Angler Days (2)
Resident Annual	2,307	\$911.62	\$2,103,106	42,218
Resident Youth Annual	100	\$911.62	\$91,162	1,830
Resident Daily	484	\$49.92	\$24,159	484
Non-Resident Annual	715	\$1,871.64	\$1,338,223	4,147
Non-Resident Youth Annual	135	\$1,871.64	\$251,736	780
Non-Resident Daily	8,940	\$324.26	\$2,898,873	8,940
Total Fishing Spending	12,681	\$528.94	\$6,707,258	58,399
Combined Hunting & Fishing Spending			\$22,231,412	
(1) Based WGF D Annual Harvest Reports by Hunt Area and percent of Hunt Areas that are in the 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. Sublette County Antelope Hunting, 2015								
				Total	Total	County	County	Combined
				Resident	NonRes	Resident	NonRes	County
Hunt	Total	County	County	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
65	555,197	5,216	0.9%	325	120	3	1	4
84	798,297	4,433	0.6%	597	219	3	1	5
85	495,862	12,681	2.6%	36	2	1	0	1
86	358,947	220,607	61.5%	190	63	117	39	155
87	838,451	832,997	99.3%	1568	333	1,558	331	1,889
88	382,810	370,845	96.9%	1410	244	1,366	236	1,602
89	625,146	573,198	91.7%	1823	985	1,672	903	2,575
90	1,044,370	786,728	75.3%	1273	389	959	293	1,252
91	440,579	337,443	76.6%	1197	678	917	519	1,436
92	861,162	1,866	0.2%	248	124	1	0	1
93	991,703	9,979	1.0%	1338	329	13	3	17
107	195,119	332	0.2%	343	161	1	0	1
Total	7,587,643	3,156,326	41.6%	10,348	3,647	6,610	2,328	8,937

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

Appendix Table 2. Sublette County Bighorn Sheep Hunting, 2015								
				Total	Total	County	County	Combined
				Resident	NonRes	Resident	NonRes	County
Hunt	Total	County	County	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
7	1,065,616	322,027	30.2%	98	60	30	18	48
8	279,409	279,409	100.0%	77	0	77	0	77
10	250,079	62,628	25.0%	42	9	11	2	13
23	207,946	207,637	99.9%	15	5	15	5	20
24	317,017	206,507	65.1%	0	0	0	0	0
Total	2,120,067	1,078,208	50.9%	232	74	132	25	157

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

Appendix Table 3. Sublette County Bison Hunting, 2015								
				Total Resident	Total NonRes	County Resident	County NonRes	Combined County
Hunt Areas	Total Acres	County Acres	County Percent	Hunter Days	Hunter Days	Hunter Days	Hunter Days	Hunter Days
2	7,218,051	3,157,935	43.8%	1,811	300	792	131	924

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

Appendix Table 4. Sublette County Black Bear Hunting, 2015								
				Total Resident	Total NonRes	County Resident	County NonRes	Combined County
Hunt Areas	Total Acres	County Acres	County Percent	Hunter Days	Hunter Days	Hunter Days	Hunter Days	Hunter Days
11	1,122,710	10,184	0.9%	1,252	116	11	1	12
13	703,120	5,546	0.8%	1,078	20	9	0	9
14	631,861	577,222	91.4%	952	16	870	15	884
15	378,240	368,037	97.3%	397	26	386	25	412
16	313,370	1,726	0.6%	799	162	4	1	5
17	205,169	130,450	63.6%	925	149	588	95	683
19	2,071,245	1,957,230	94.5%	1,773	75	1,675	71	1,746
20	439,722	100,161	22.8%	826	52	188	12	200
28	350,443	4,292	1.2%	304	28	4	0	4
29	322,001	1,032	0.3%	626	64	2	0	2
35	28,928,770	2,006	0.0%	876	3	0	0	0
Total	35,466,650	3,157,885	8.9%	9,808	711	3,738	220	3,958

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

Appendix Table 5. Sublette County Deer Hunting, 2015								
				Total	Total	County	County	Combined
				Resident	NonRes	Resident	NonRes	County
Hunt	Total	County	County	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
92	422,478	5,548	1.3%	4,501	329	59	4	63
128	798,297	4,433	0.6%	5,586	829	31	5	36
130	440,579	337,443	76.6%	874	50	669	38	708
131	2,563,120	1,866	0.1%	1,558	91	1	0	1
135	1,539,396	9,979	0.6%	15,163	1,005	98	7	105
138	1,043,099	786,728	75.4%	2,077	100	1,567	75	1,642
139	304,992	304,849	100.0%	1,114	55	1,113	55	1,168
140	208,725	208,725	100.0%	1,496	48	1,496	48	1,544
141	208,591	203,379	97.5%	479	72	467	70	537
142	382,810	370,845	96.9%	4,153	834	4,023	808	4,831
143	625,146	573,198	91.7%	5,982	320	5,485	293	5,778
144	308,746	1,541	0.5%	5,397	1,084	27	5	32
146	103,321	2,788	2.7%	649	32	18	1	18
152	258,224	39,075	15.1%	2,803	1,101	424	167	591
153	74,849	67,920	90.7%	1,203	551	1,092	500	1,592
154	114,994	113,644	98.8%	1,470	228	1,453	225	1,678
155	198,689	9,894	5.0%	856	125	43	6	49
162	116,143	116,044	99.9%	106	43	106	43	149
Total	9,712,198	3,157,899	32.5%	55,467	6,897	18,172	2,351	20,523

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

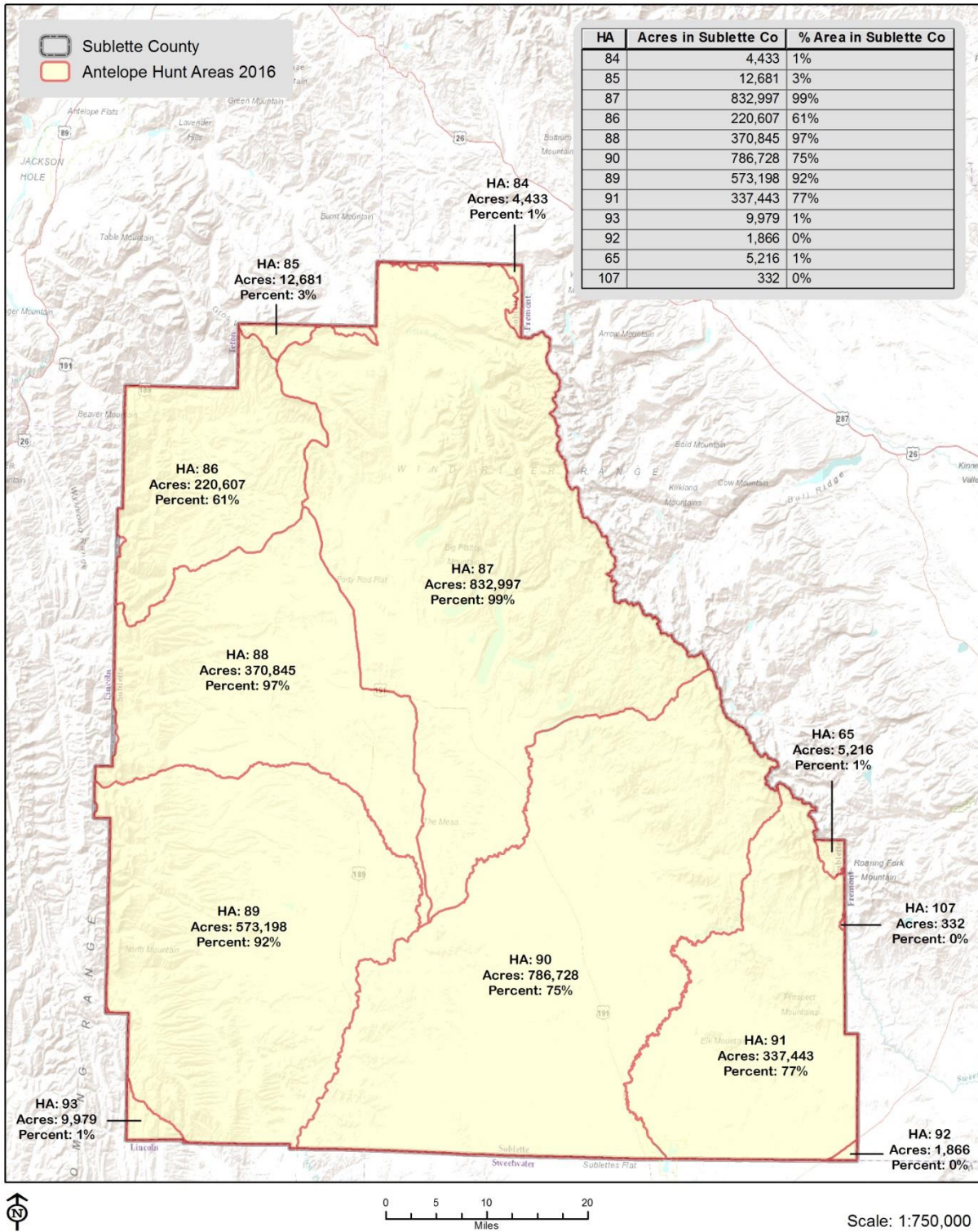
Appendix Table 6. Sublette County Elk Hunting, 2015								
				Total	Total	County	County	Combined
				Resident	NonRes	Resident	NonRes	County
Hunt	Total	County	County	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
27	75,480	332	0.4%	1,523	190	7	1	8
28	347,127	5,216	1.5%	9,198	559	138	8	147
68	138,001	4,307	3.1%	4,447	1,328	139	41	180
82	149,928	9,894	6.6%	1,341	243	88	16	105
83	103,321	2,788	2.7%	1,742	257	47	7	54
84	250,542	39,075	15.6%	4,712	959	735	150	884
86	74,849	67,920	90.7%	1,771	649	1,607	589	2,196
87	114,994	113,644	98.8%	2,919	371	2,885	367	3,251
89	165,471	531	0.3%	4,336	1,599	14	5	19
90	142,290	1,011	0.7%	4,346	1,466	31	10	41
92	382,810	370,845	96.9%	10,851	2,302	10,512	2,230	12,742
93	166,239	166,139	99.9%	2,708	678	2,706	678	3,384
94	625,146	573,198	91.7%	13,480	2,153	12,360	1,974	14,334
95	206,756	201,544	97.5%	2,951	566	2,877	552	3,428
96	160,464	160,464	100.0%	3,941	760	3,941	760	4,701
97	303,150	303,013	100.0%	1,716	1,077	1,715	1,077	2,792
98	1,237,965	788,565	63.7%	7,131	923	4,542	588	5,130
99	440,579	337,443	76.6%	2,630	439	2,014	336	2,351
100	2,389,159	1,866	0.1%	523	90	0	0	0
102	957,788	9,979	1.0%	9,773	1,220	102	13	115
Total	8,432,058	3,157,774	37.4%	92,039	17,829	46,460	9,401	55,862

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

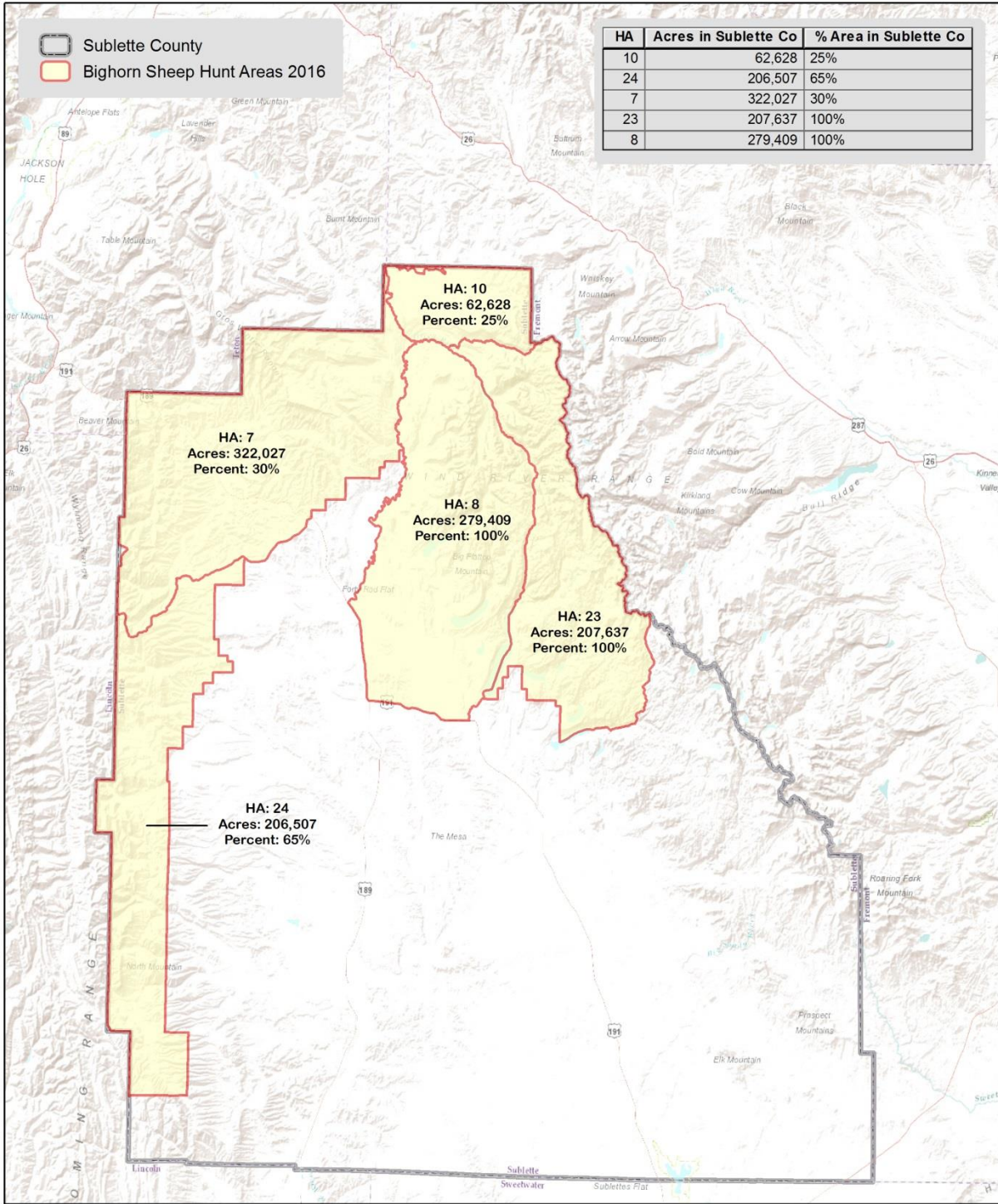
				Total	Total	County	County	Combined
				Resident	NonRes	Resident	NonRes	County
Hunt	Total	County	County	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
2	1,159,888	5,216	0.4%	65	4	0	0	0
3	300,082	299,839	99.9%	82	15	82	15	97
4	498,713	498,713	100.0%	81	30	81	30	111
5	420,934	415,623	98.7%	330	70	326	69	395
6	798,297	4,433	0.6%	48	1	0	0	0
10	205,813	129,453	62.9%	109	14	69	9	77
18	103,321	2,788	2.7%	26	9	1	0	1
21	191,466	15,535	8.1%	87	9	7	1	8
22	77,001	75,651	98.2%	43	36	42	35	78
23	619,651	1,541	0.2%	146	23	0	0	0
24	246,474	205,478	83.4%	221	29	184	24	208
25	960,423	884,523	92.1%	412	35	379	32	412
26	1,130,898	10,477	0.9%	295	51	3	0	3
28	172,478	9,894	5.7%	0	0	0	0	0
30	516,059	337,775	65.5%	67	13	44	9	52
Total	7,401,497	2,896,939	39.1%	2,012	339	1,219	225	1,443

		Adjustment	County
	County	Youth Under	Over 16
Type	Licenses	16	Licenses
Resident Annual	2,307		2,307
Resident Youth Annual	200	50.0%	100
Resident Daily	484		484
Non-Resident Annual	715		715
Non-Resident Youth Annual	269	50.0%	135
Non-Resident Daily	8,940		8,940
Total	12,915		12,681

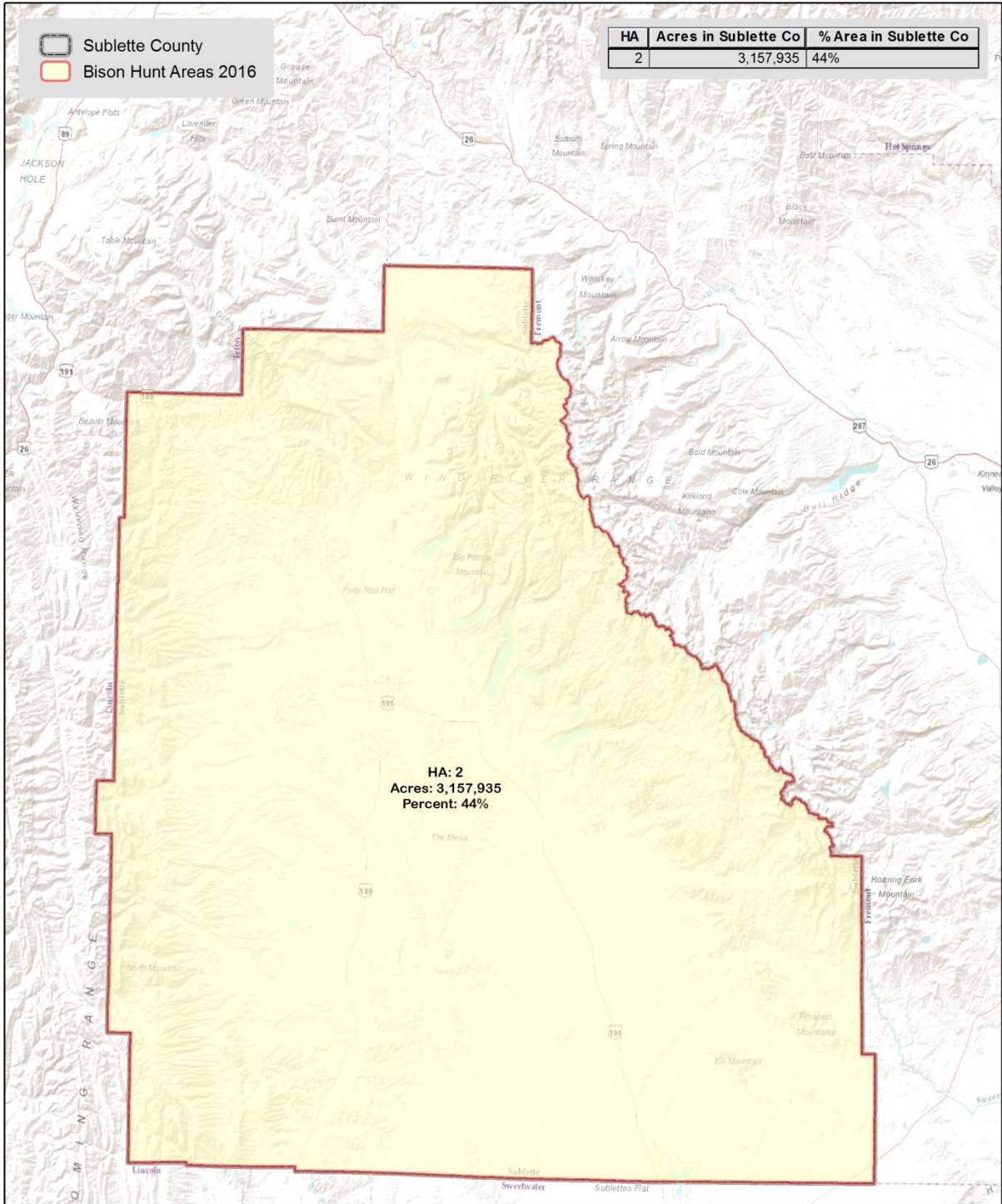
Source: Wyoming Game and Fish Department, 2015



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

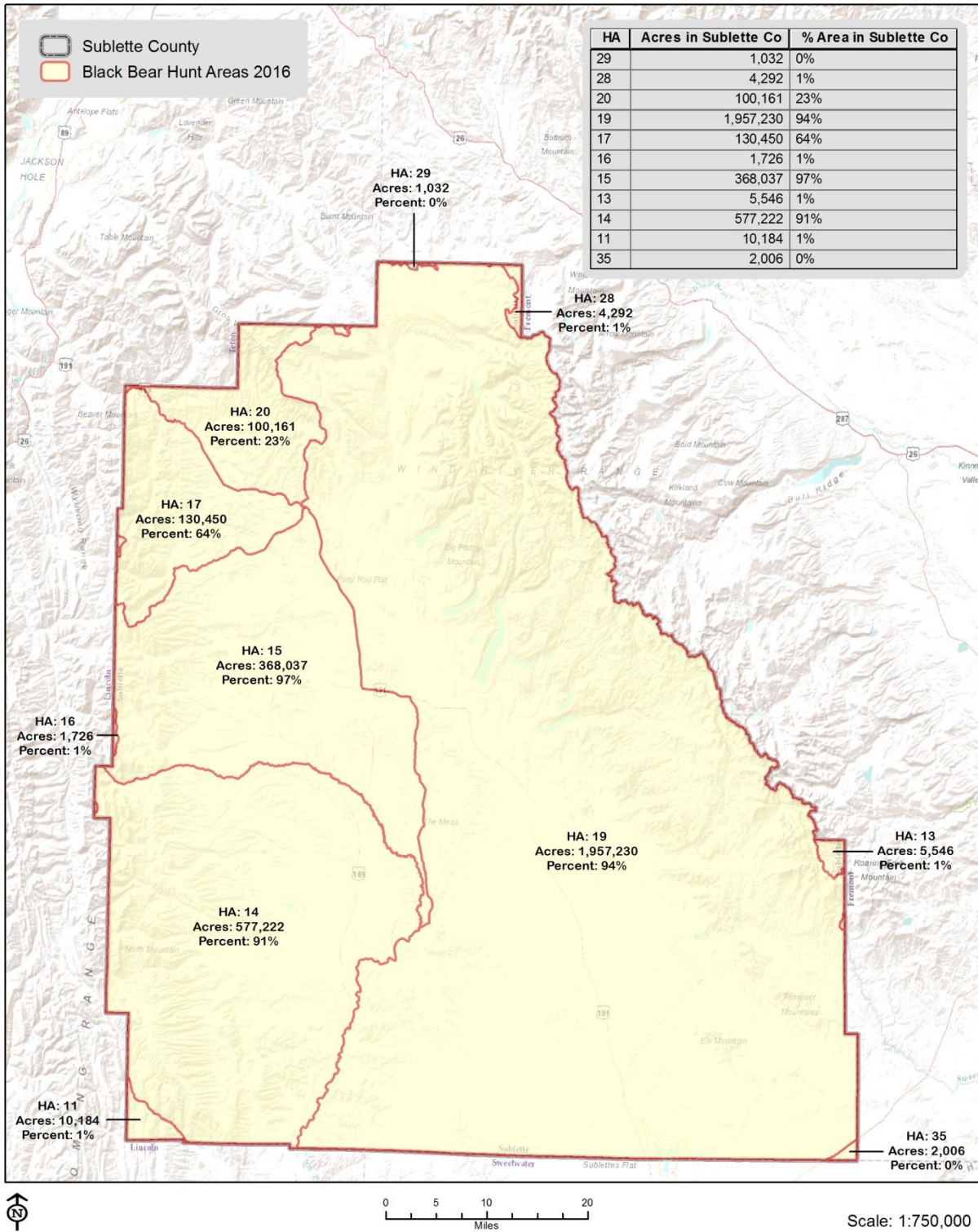


Percentage of 2016 Bighorn Sheep Hunt Areas (HA) within Sublette County

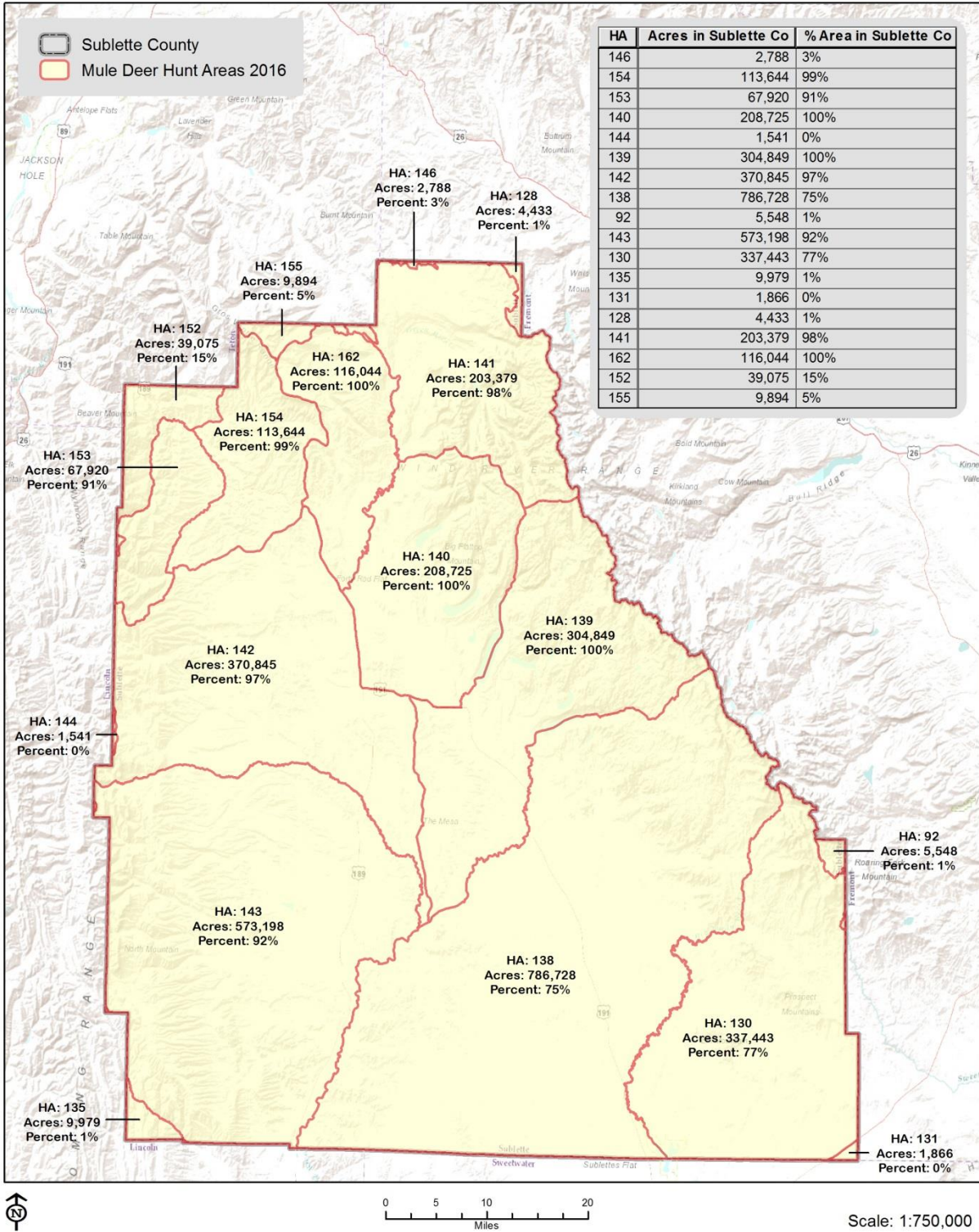


Scale: 1:750,000

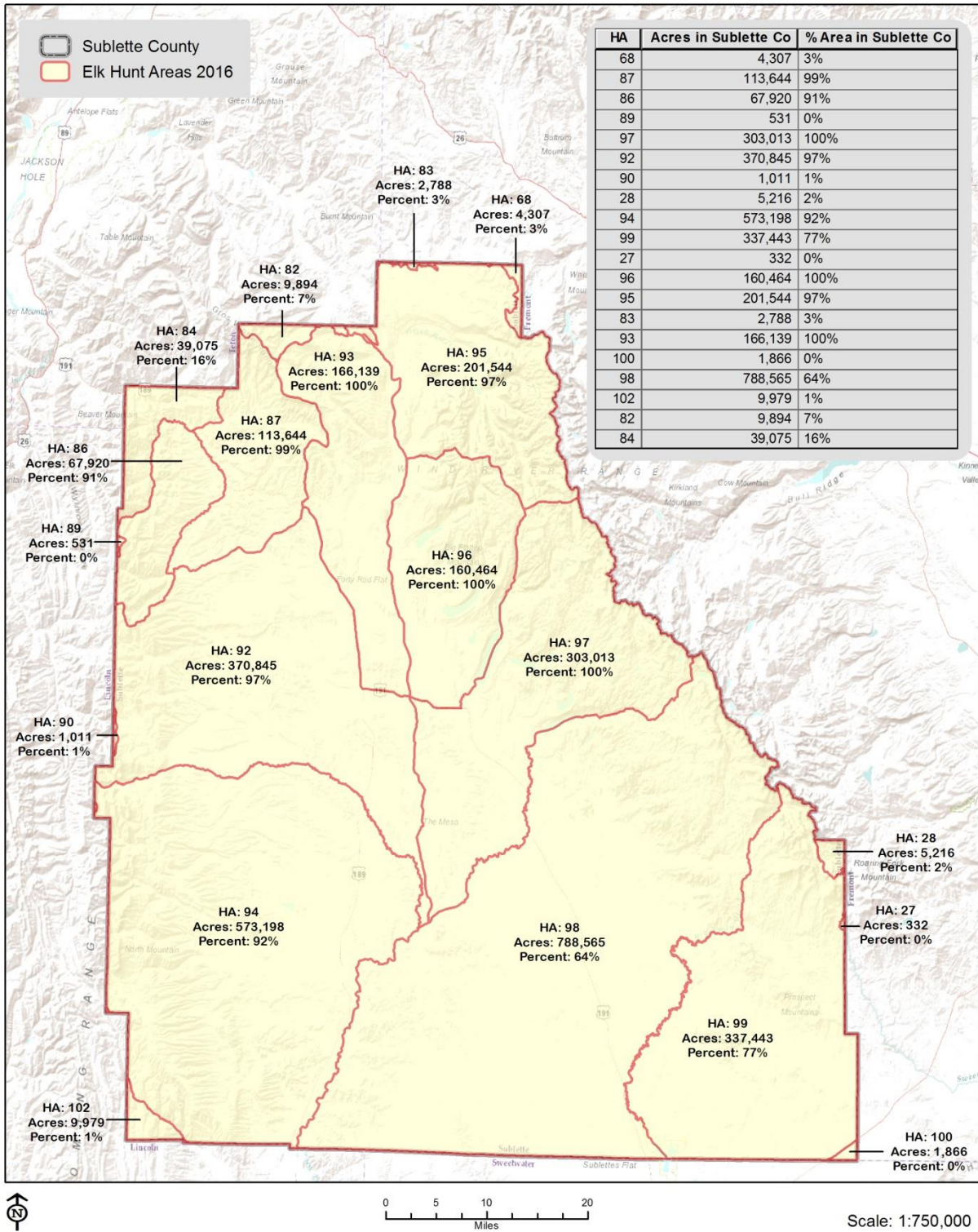
Percentage of 2016 Bison Hunt Areas (HA) within Sublette County



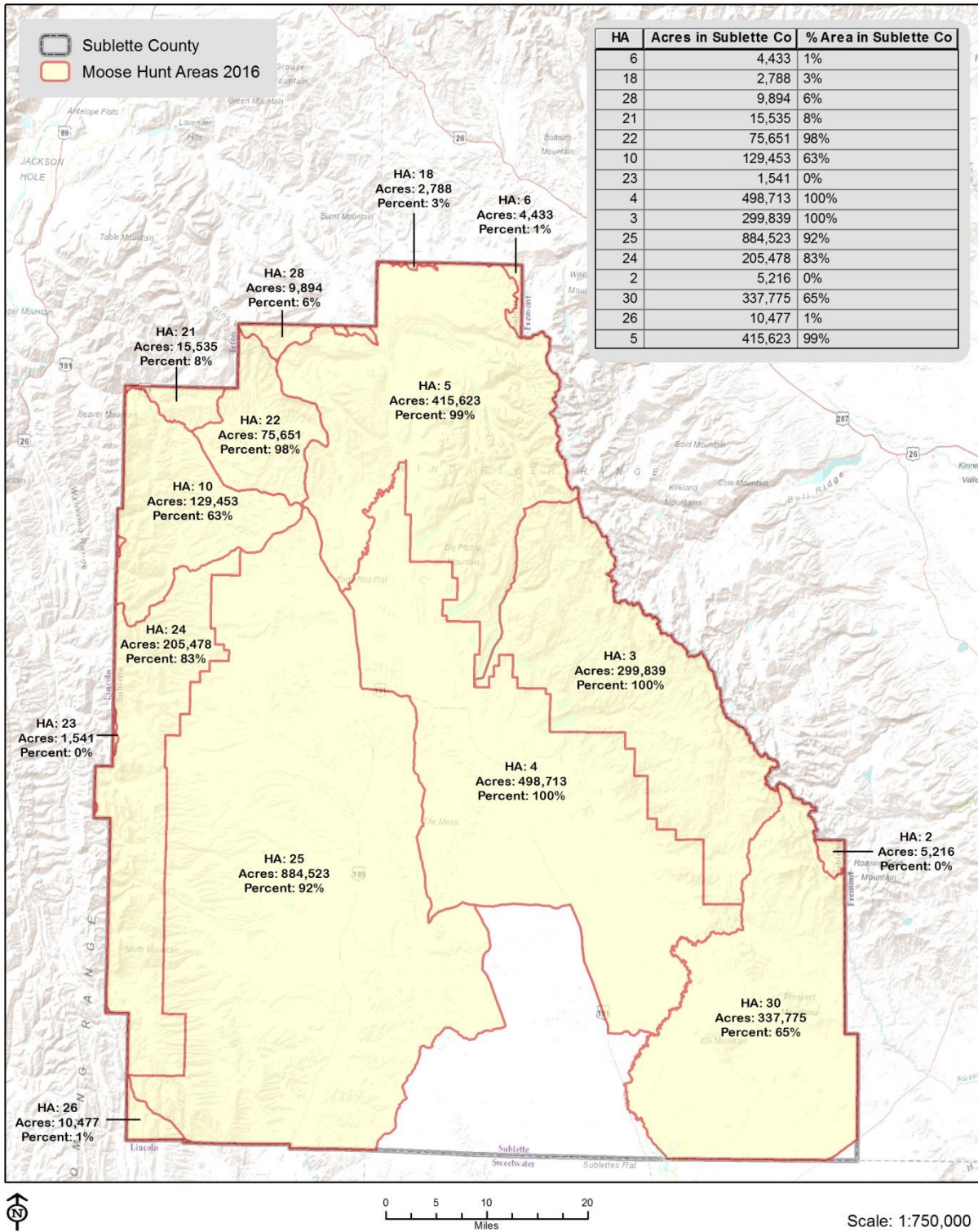
Percentage of 2016 Black Bear Hunt Areas (HA) within Sublette County



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



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



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