



Fremont County Related Hunting and Fishing Spending, 2015

For the Wyoming Wildlife Federation



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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 this recreational activity generates \$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 Fremont 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 & 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 Fremont 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 Fremont County. This percentage was then used to allocate the proportion of total hunter days for the Hunt Area in Fremont 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 WGFD's 2015 data on fishing licenses sold in Fremont 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 of hunting and fishing spending related to Fremont County. Since the USFWS expenditure estimates are for all of Wyoming,

not just Fremont County and because the fishing associated with the purchase of a Wyoming fishing license in Fremont County can occur throughout the state, it is not possible to assume that 100 percent of these expenditures actually occurred within the Fremont 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 Fremont County related to hunting and fishing spending for 2015. From WGFD Hunt Area data it is estimated that there were more than 73,000 Big Game and Trophy Game hunting days in Fremont 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 \$12.3 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 18,000 fishing licenses were sold in Fremont County in 2015. From USFWS data for average fishing days in Wyoming, it is estimated that the users of these fishing licenses participated in 120,000 angler-days in Wyoming. The expenditures associated with these fishing licenses are estimated to be \$10.2 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 Fremont County in 2015 is estimated to be \$22.5 million.

Summary and Conclusions

Hunting and fishing are economically important to the Fremont County economy. It is likely that much of the \$22.5 million of spending by hunters and anglers occurs within the Fremont 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. Fremont 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	5,557	1,839	7,396	
Bighorn Sheep	308	39	347	
Black Bear	2,449	95	2,544	
Deer	19,859	3,468	23,327	
Elk	33,545	6,149	39,694	
Moose	134	10	144	
Total Hunting Days	61,851	11,600	73,451	
Total Hunting Days	61,851	11,600	73,451	
Spending Per Day (2)	\$90.91	\$579.82	\$168.13	
Total Hunting Spending	\$5,623,192	\$6,725,749	\$12,348,942	
Fishing Licenses Sold in Fremont County 2015				
Type	License Sold (3)	Per Angler Spending (2)	Total Fishing Spending	Total Angler Days (2)
Resident Annual	5,321	\$911.62	\$4,850,727	97,374
Resident Youth Annual	255	\$911.62	\$232,007	4,657
Resident Daily	2,302	\$49.92	\$114,906	2,302
Non-Resident Annual	911	\$1,871.64	\$1,705,064	5,284
Non-Resident Youth Annual	231	\$1,871.64	\$431,413	1,337
Non-Resident Daily	8,750	\$324.26	\$2,837,263	8,750
Total Fishing Spending	17,769	\$572.42	\$10,171,381	119,704
Combined Hunting & Fishing Spending			\$22,520,322	
(1) Based WGFD 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. Fremont 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
60	1,029,591	16,777	1.6%	98	37	2	1	2
61	804,234	58,262	7.2%	311	83	23	6	29
64	334,378	270,306	80.8%	208	75	168	61	229
65	555,197	549,981	99.1%	325	120	322	119	441
66	258,491	258,491	100.0%	424	77	424	77	501
67	512,175	512,175	100.0%	602	166	602	166	768
68	516,671	231,435	44.8%	616	386	276	173	449
74	296,099	177,401	59.9%	640	171	383	102	486
75	590,210	403,799	68.4%	1230	246	842	168	1,010
76	332,060	8,999	2.7%	699	155	19	4	23
84	798,297	790,889	99.1%	597	219	591	217	808
85	495,862	23,932	4.8%	36	2	2	0	2
87	838,451	3,193	0.4%	1568	333	6	1	7
91	440,579	38,776	8.8%	1197	678	105	60	165
92	861,162	31,588	3.7%	248	124	9	5	14
97	266,763	266,763	100.0%	1170	443	1,170	443	1,613
106	310,346	310,346	100.0%	140	46	140	46	186
107	195,119	194,787	99.8%	343	161	342	161	503
115	645,440	4,950	0.8%	599	527	5	4	9
117	1,682,549	1,682,118	100.0%	126	26	126	26	152
Total	11,763,675	5,834,966	49.6%	11,177	4,075	5,557	1,839	7,396

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

Appendix Table 2. Fremont 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
4	849,682	246,545	29.0%	132	11	38	3	41
5	1,710,254	144,458	8.4%	264	40	22	3	26
7	1,065,616	23,932	2.2%	98	60	2	1	4
9	161,603	161,503	99.9%	60	5	60	5	65
10	250,079	185,055	74.0%	42	9	31	7	38
22	86,343	86,343	100.0%	6	8	154	20	173
Total	4,123,577	847,835	20.6%	602	133	308	39	347

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

Appendix Table 3. Fremont County Black Bear 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
5	1,876,794	402,166	21.4%	212	0	45	0	45
13	703,120	697,574	99.2%	1,078	20	1,069	20	1,089
19	2,071,245	41,691	2.0%	1,773	75	36	2	37
22	415,835	73,749	17.7%	276	54	49	10	59
23	447,340	446,769	99.9%	723	23	722	23	745
26	838,756	1,088	0.1%	695	111	1	0	1
28	350,443	343,852	98.1%	304	28	298	27	326
29	322,001	25,393	7.9%	626	64	49	5	54
31	1,986,172	1,985,620	100.0%	121	8	121	8	129
35	28,928,770	1,913,481	6.6%	876	3	58	0	58
Total	37,940,475	5,931,381	15.6%	6,684	386	2,449	95	2,544

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

Appendix Table 4. Fremont 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
35	118,579	3,146	2.7%	295	381	8	10	18
36	578,438	402,325	69.6%	794	623	552	433	986
37	243,596	9,547	3.9%	686	109	27	4	31
39	160,066	1,804	1.1%	228	368	3	4	7
90	827,462	707,627	85.5%	291	36	249	31	280
92	422,478	416,930	98.7%	4,501	329	4,442	325	4,767
94	558,632	525,121	94.0%	1,599	284	1,503	267	1,770
96	434,973	347,142	79.8%	1,701	658	1,358	525	1,883
97	581,841	307,871	52.9%	1,092	195	578	103	681
115	211,969	390	0.2%	187	143	0	0	1
128	798,297	790,889	99.1%	5,586	829	5,534	821	6,355
130	440,579	38,776	8.8%	874	50	77	4	81
131	2,563,120	48,365	1.9%	1,558	91	29	2	31
141	208,591	3,050	1.5%	479	72	7	1	8
146	103,321	23,851	23.1%	649	32	150	7	157
148	435,915	73,667	16.9%	1,090	189	184	32	216
157	268,930	268,930	100.0%	2,038	447	2,038	447	2,485
160	258,491	258,491	100.0%	1,142	111	1,142	111	1,253
170	156,626	156,626	100.0%	206	0	206	0	206
171	1,527,240	1,526,809	100.0%	1,773	339	1,772	339	2,111
Total	10,899,143	5,911,358	54.2%	26,769	5,286	19,859	3,468	23,327

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

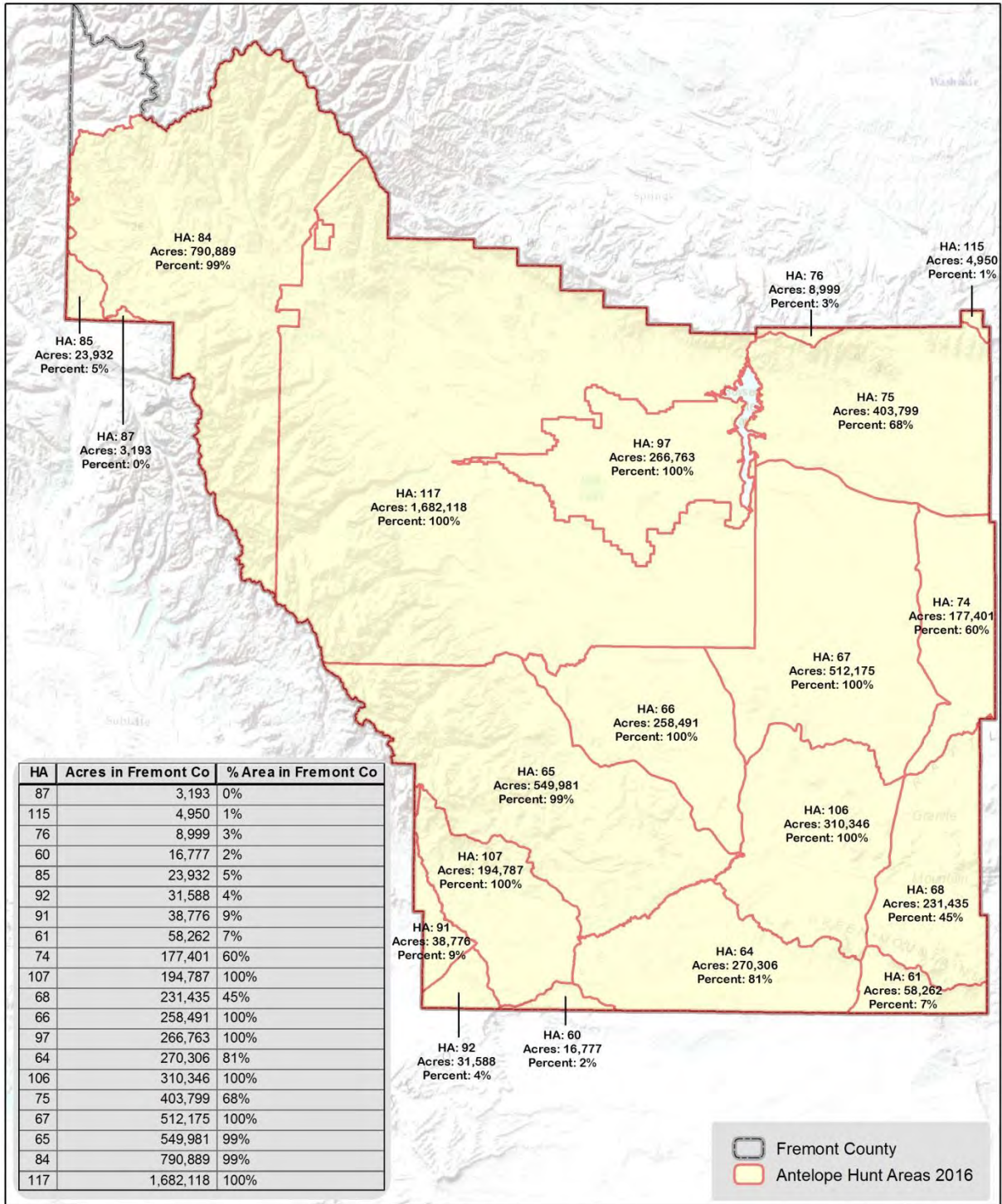
Appendix Table 5. Fremont County Elk Hunting, 2015								
				Total	Total	County	County	Combined
				Resident	NonRes	Resident	NonRes	County
Hunt	Total	County	County	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
24	434,895	347,129	79.8%	2,033	365	1,623	291	1,914
25	776,638	702,590	90.5%	2,566	375	2,321	339	2,661
27	75,480	75,148	99.6%	1,523	190	1,516	189	1,705
28	347,127	341,911	98.5%	9,198	559	9,060	551	9,610
47	446,740	251,971	56.4%	2,432	848	1,372	478	1,850
48	596,078	150,350	25.2%	3,496	809	882	204	1,086
60	211,970	390	0.2%	294	1,275	1	2	3
67	447,776	447,197	99.9%	9,446	2,088	9,434	2,085	11,519
68	138,001	131,298	95.1%	4,447	1,328	4,231	1,263	5,494
69	212,519	212,394	99.9%	860	352	859	352	1,211
70	285,921	73,667	25.8%	1,857	867	478	223	702
83	103,321	23,851	23.1%	1,742	257	402	59	461
95	206,756	3,050	1.5%	2,951	566	44	8	52
99	440,579	38,776	8.8%	2,630	439	231	39	270
100	2,389,159	129,271	5.4%	523	90	28	5	33
127	1,973,893	1,973,461	100.0%	287	57	287	57	344
128	1,409,623	1,015,498	72.0%	1,077	2	776	1	777
Total	10,496,476	5,917,954	56.4%	47,362	10,467	33,545	6,149	39,694

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

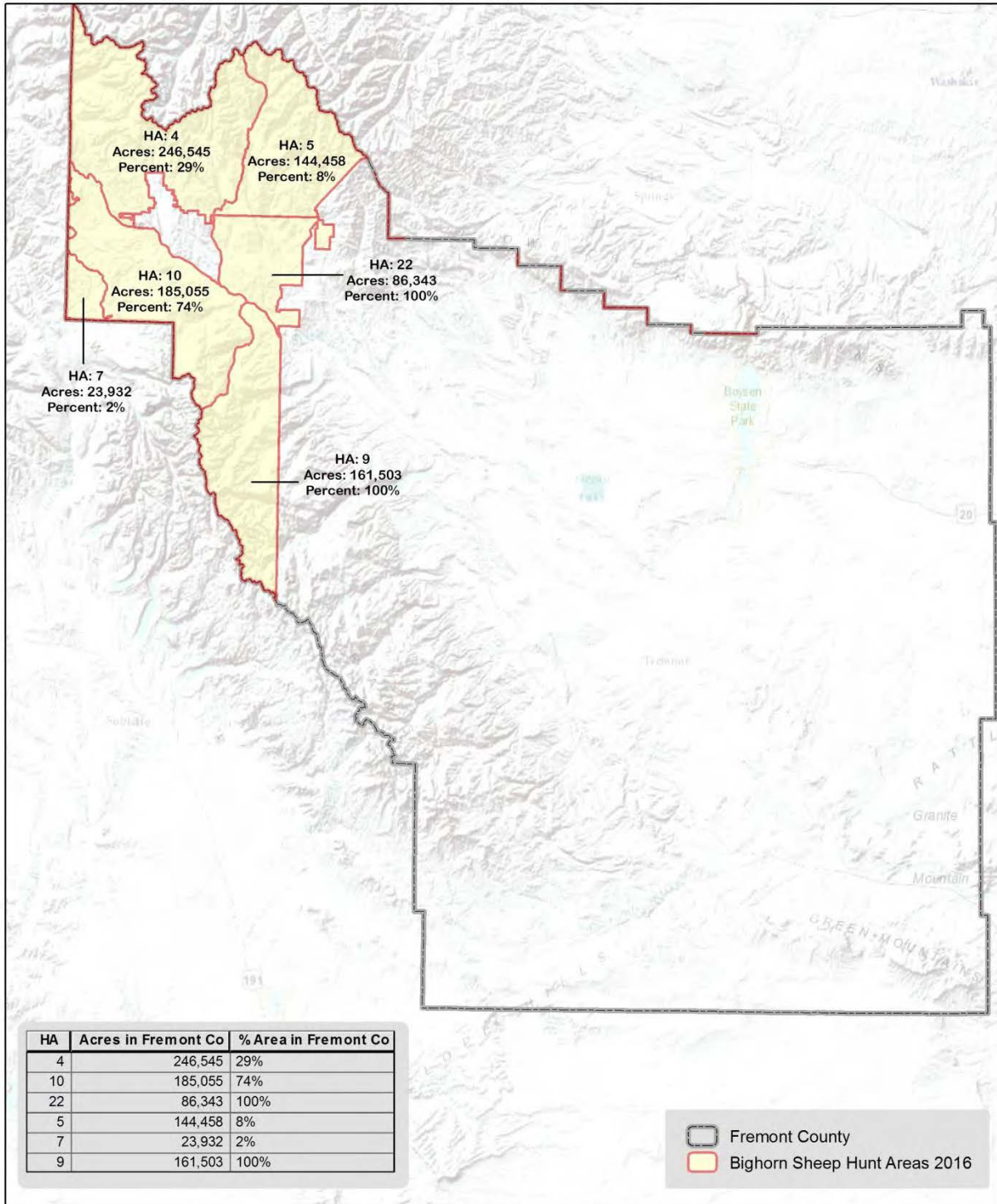
Appendix Table 6. Fremont County Moose Hunting, 2015								
				Total	Total	County	County	Combined
				Resident	NonRes	Resident	NonRes	County
Hunt	Total	County	County	Hunter	Hunter	Hunter	Hunter	Hunter
Areas	Acres	Acres	Percent	Days	Days	Days	Days	Days
2	1,159,888	1,121,160	96.7%	65	4	63	4	67
5	420,934	3,050	0.7%	330	70	2	1	3
6	798,297	790,889	99.1%	48	1	48	1	49
7	137,828	73,486	53.3%	0	0	0	0	0
8	211,969	390	0.2%	0	0	0	0	0
18	103,321	23,851	23.1%	26	9	6	2	8
30	516,059	113,924	22.1%	67	13	15	3	18
Total	3,348,296	2,126,750	63.5%	536	97	134	10	144

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

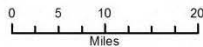
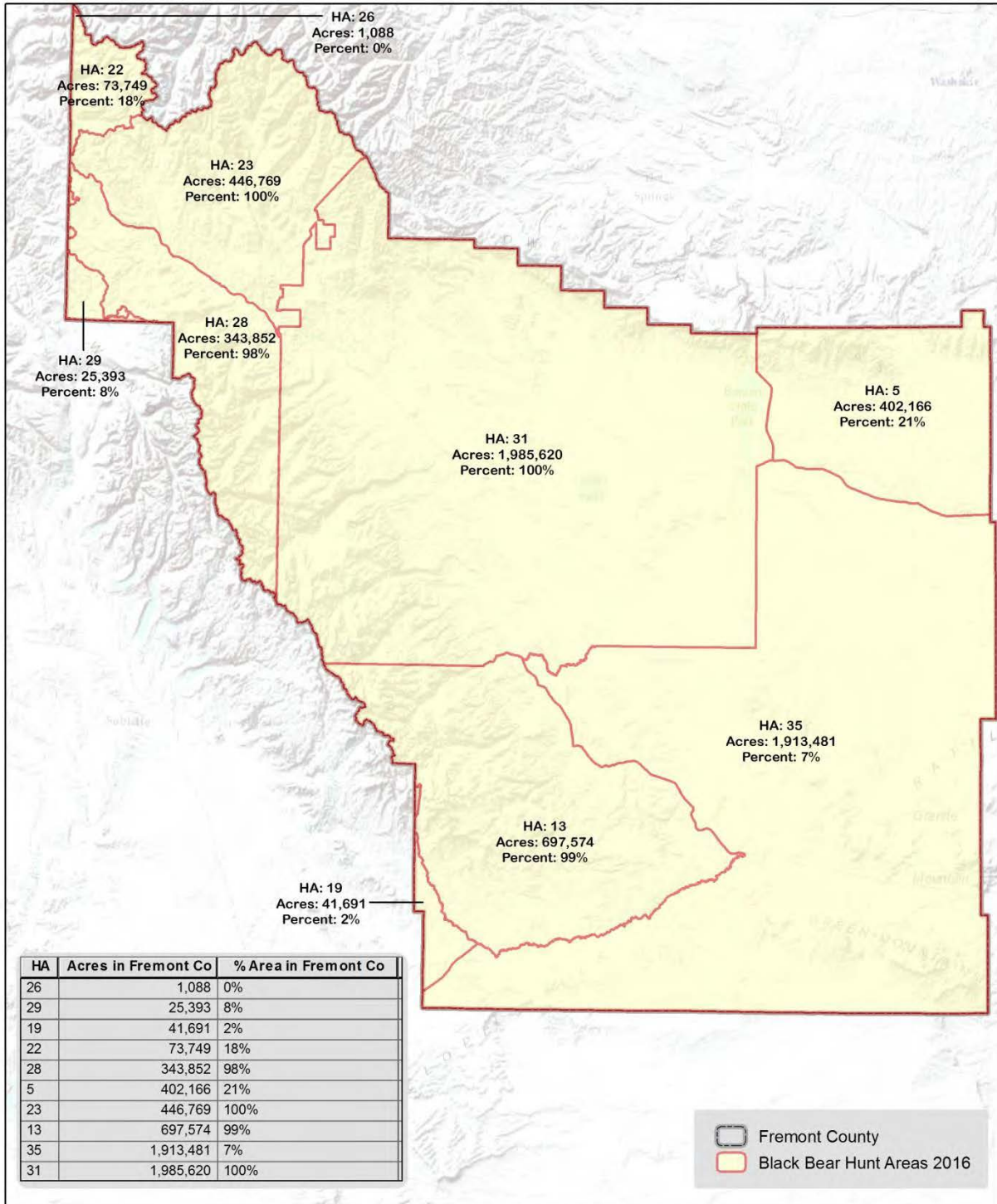
Appendix Table 7. Fishing Licenses Sold in Fremont County 2015			
		Adjustment	County
	County	Youth Under	Over 16
Type	Licenses	16	Licenses
Resident Annual	5,321		5,321
Resident Youth Annual	509	50.0%	255
Resident Daily	2,302		2,302
Non-Resident Annual	911		911
Non-Resident Youth Annual	461	50.0%	231
Non-Resident Daily	8,750		8,750
Total	18,254		17,769
Source: Wyoming Game and Fish Department, 2015			



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

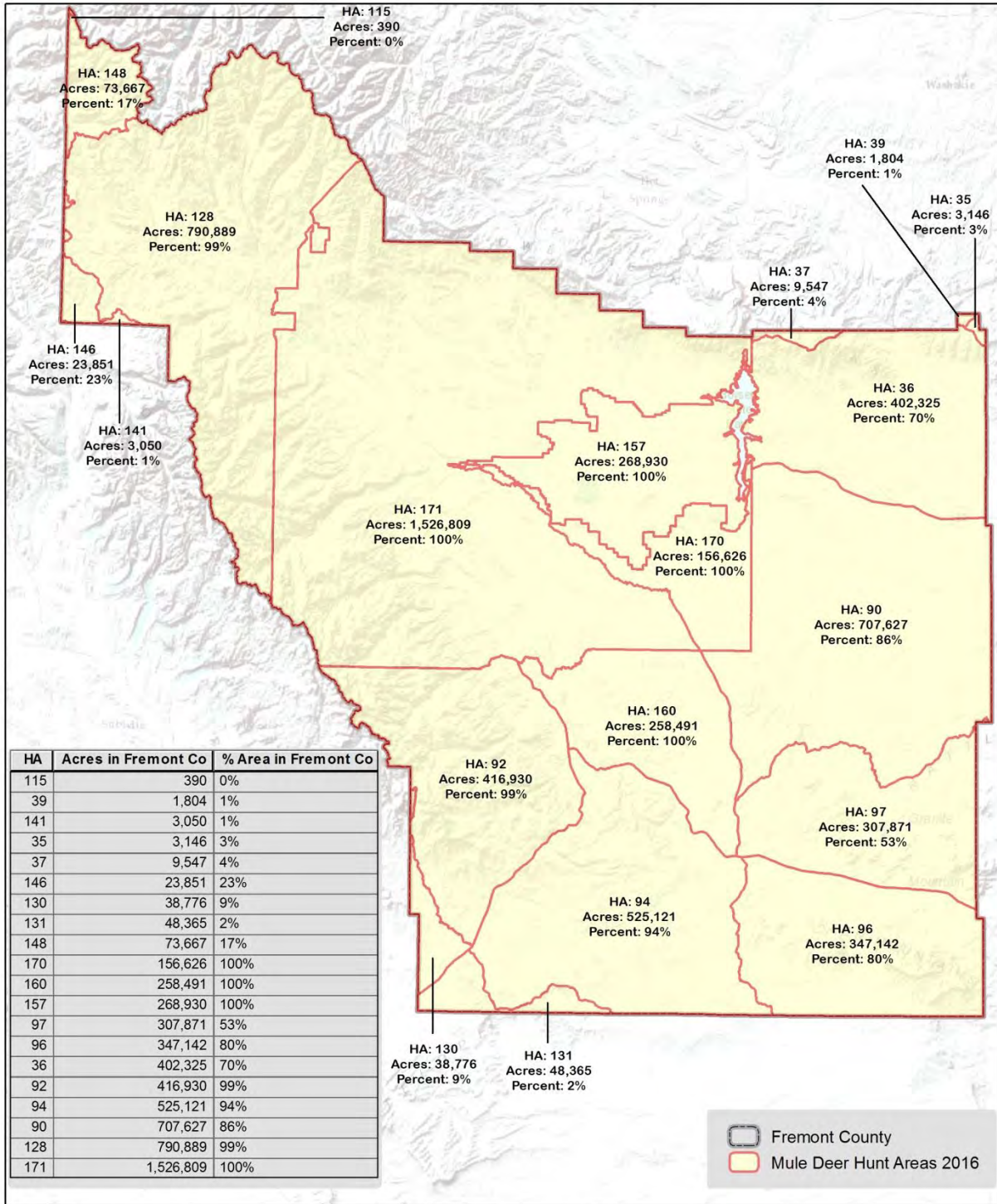


Percentage of 2016 Bighorn Sheep Hunt Areas (HA) within Fremont County

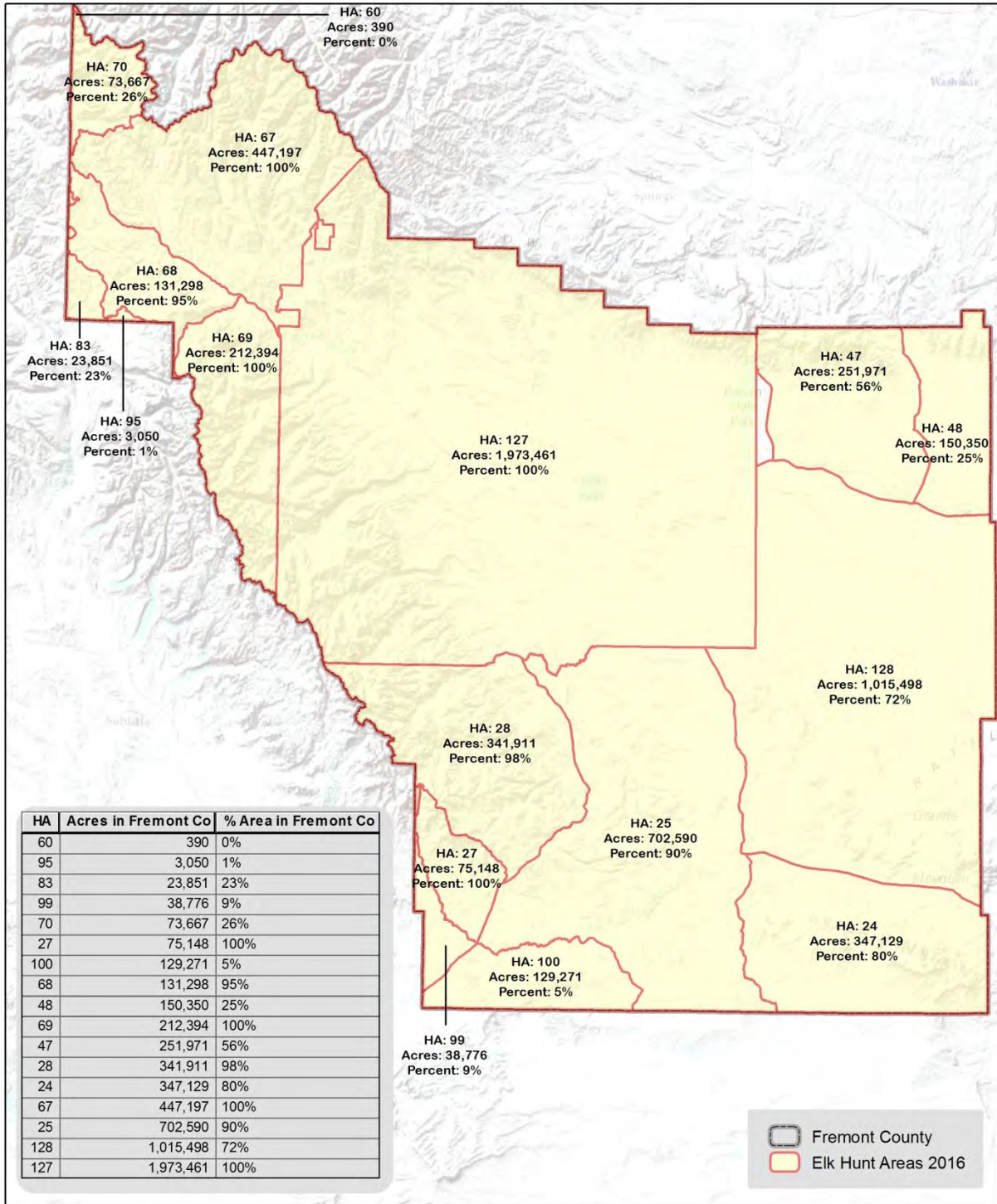


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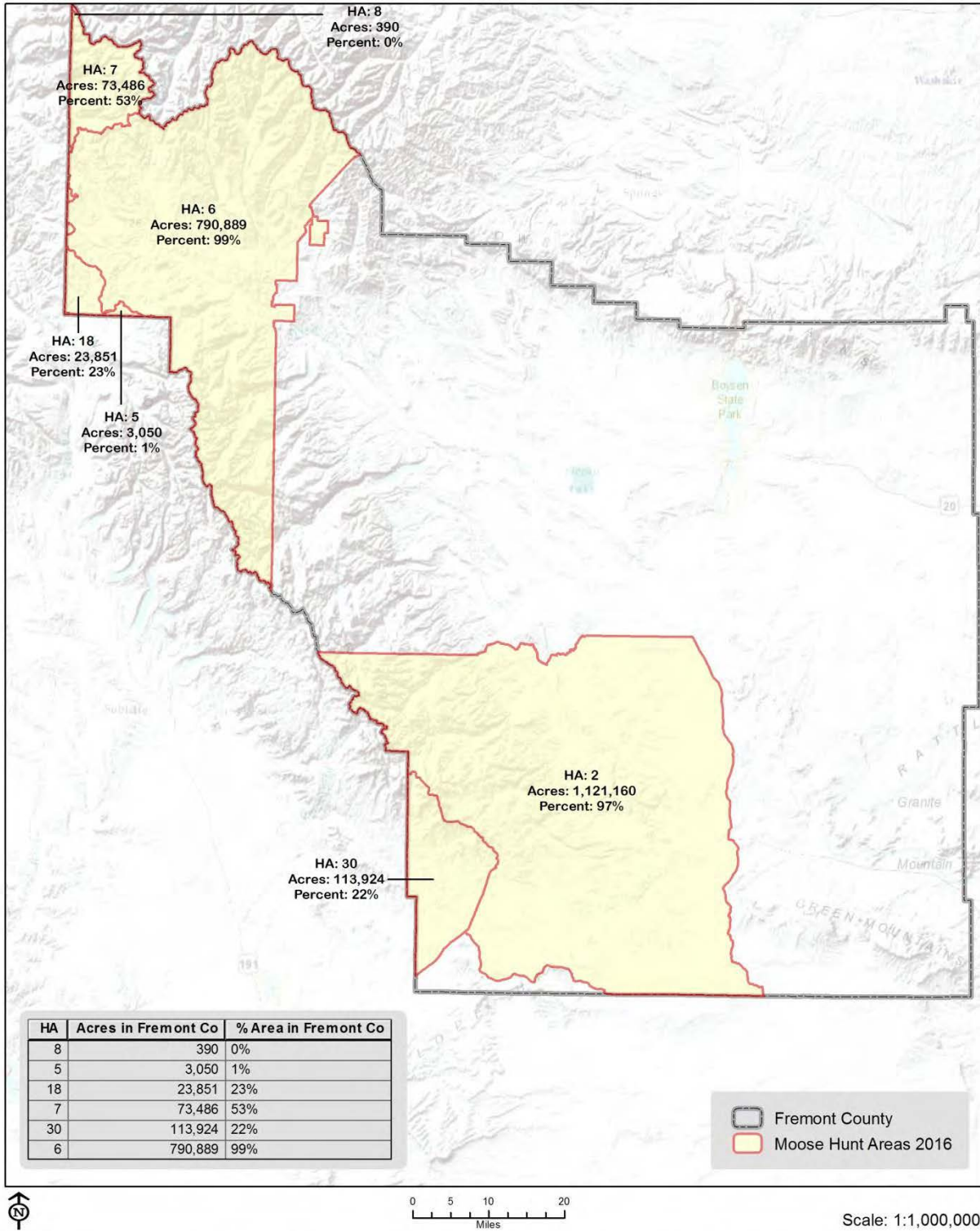
Percentage of 2016 Black Bear Hunt Areas (HA) within Fremont County



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



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



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