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JOB COMPLETION REPORT INVESTIGATIONS PROJECT

STATE OF Wyoming

NAME: Big and Trophy Game and Wild Bison Harvest Surveys

PROJECT N. W-27-R-43

PREPARED BY: Emily Gates, Harvest Survey Coordinator; Gail Sheridan, Harvest Survey Coordinator (Retired); Tim Wooley, Statewide Wildlife and Habitat Management Supervisor; Bob Lanka, Statewide Wildlife and Habitat Management Supervisor (Retired)

PROJECT OBJECTIVE NO. 1 JOB NO. 1

PERIOD COVERED: July 1, 2017 to June 30, 2018

ABSTRACT:

This report contains harvest survey results for the 2017-2018 big and trophy game and wild bison hunting seasons. In general, harvest and hunting activity estimates for all big game (antelope, mule deer, white-tailed deer, elk, moose, bighorn sheep and mountain goat) and trophy game (black bear, gray wolf and mountain lion) were obtained by sampling licensed hunters via emailed and mailed questionnaires. Respondents could reply via a web based survey, call the Harvest Survey Coordinator or return a completed hard copy survey via the USPS. Wild bison results were obtained through mandatory license holder reporting. Bighorn sheep and mountain goat results were obtained through mandatory harvest registration then individual contact for unsuccessful hunters.

OBJECTIVES:

1. To determine the 2017 big and trophy game and wild bison harvest.
2. To determine the number of active hunters, days spent hunting, the number of days required to harvest an animal, and the percent of hunter success during 2017 hunting seasons.

PROCEDURES:

The 2017 antelope, mule deer, white-tailed deer and elk harvest surveys were conducted by Tetra Tech, Inc., through a contract with the Department. A sample pool was created by randomly selecting license holders. Those in the sample pool that offered an email address during the license purchase process were sent a message with a link to the internet site Tetra Tech established for this purpose. Those with only a USPS mailing address were sent a postcard with instructions for accessing the internet site. Those that did not respond online were also sent a hardcopy survey followed, if necessary, with reminder email messages and postcards. In those instances where the required license type sample size was not obtained, Tetra Tech followed up with phone calls to specific license holders in a final attempt to meet sample size requirements. This report contains tables showing useable responses and sample size results.

In general, a stratified systematic random sample was drawn from holders of antelope, deer and elk licenses. Limited quota license holders were stratified by residency, hunt area(s), and license type, or nonresident deer region in which their licenses were valid. Resident general deer and elk license holders were stratified as those who obtained their license through the license draw or by the county in which their licenses were purchased. Nonresident general elk licenses were all issued through the license draw.

Antelope, deer and elk license holder samples adequate to meet survey objectives and contract requirements for accuracy and precision for both resident and nonresident hunters were drawn from license data, and included both general and limited quota license types. Big game harvest estimates were made for each license type valid within a hunt area and for each herd unit within the state. Herd units are populations of animals consisting of one or more hunt areas. Harvest for a herd unit was determined by combining harvest estimates from the appropriate hunt areas and removing duplicate hunters (counting a hunter using two hunt areas within the same herd unit only once). Statewide harvest was determined by combining harvest estimates from all herd units and removing duplicate hunters (those hunting two or more herd units).

Hunters with general licenses are allowed to hunt many areas. Even hunters with limited quota licenses are allowed to hunt more than one area with some license types. As a result, two steps are required to eliminate double or triple counting of hunters and provide accurate estimates of individual hunter numbers. When estimates of the number of hunters per herd unit are made, we count those who hunted more than one hunt area within a herd unit as one hunter. Likewise, for statewide hunter estimates, we considered those who hunted more than one herd unit as only one hunter. Thus, adding hunter numbers for hunt areas, herd units and the entire state would produce three different estimates of hunter numbers. All are accurate, but with a different frame of reference.

Additional questions were asked of hunters in an attempt to determine the method used to take animals, hunter satisfaction and hunter use of the lands enrolled in the Department's Access Yes program.

Surveys for moose, bighorn sheep, mountain goat, wild bison, black bear, gray wolf, and mountain lion were conducted by Department personnel. Survey objectives and methods for these species were similar to those used for big game with the following exceptions. All license holders with a useable address were surveyed. Additionally, harvest figures for bighorn sheep, mountain goat, black bear, gray wolf and mountain lion are counts obtained through mandatory registration requirements for successful hunters of these species rather than extrapolated estimates.

SUMMARY OF BIG AND TROPHY GAME HARVEST
STATEWIDE
2017-2018

Species	Number of Hunters	Days Hunted	Harvest	Hunter Success
Antelope	44940	149211	42294	94.1%
Mule Deer	50264	235366	27134	54.0%
White-Tailed Deer	28584	122032	17956	62.8%
Elk	56505	441933	24535	43.4%
Moose	315	2604	296	94.0%
Bison	111	1183	70	63.1%
Bighorn Sheep	212	1833	175	82.5%
Rocky Mountain Goat	42	276	39	92.9%
Black Bear	4093	25960	467	11.4%
Gray Wolf	2003	13231	44	2.2%
Mountain Lion	1287	12177	282	21.9%

LICENSE HOLDER COMBINATIONS
BY RESIDENCY
2017

License Combinations	Resident	Nonresident
Single Antelope Only	3,822	10,547
Single Deer Only	13,821	12,367
Single Elk Only	13,717	9,967
Multiple Antelope Only	648	4,860
Multiple Deer Only	1,070	1,887
Multiple Elk Only	1,613	218
Antelope and Deer	3,431	4,500
Antelope and Elk	3,610	595
Deer and Elk	19,437	1,111
Antelope Deer Elk	9,826	427
Totals	70,995	46,479

*License combinations for all Big Game license holders (regardless of whether or not they hunted).

Results are based on license downloads received from WGFD, excluding hunters dropped from the survey sampling frame.

HUNTER SATISFACTION

RESIDENT

2017-2018

Question: How satisfied were you with the overall quality of your hunt during the 2017 season?

Species	Number of Responses	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Antelope	3609	46.6%	40.1%	9.4%	2.9%	1.0%
Deer	12156	23.5%	39.4%	20.5%	11.1%	5.5%
Elk	11443	22.8%	37.4%	20.8%	12.9%	6.1%
Black Bear	995	20.3%	36.9%	32.8%	6.6%	3.4%
Gray Wolf	488	10.9%	33.6%	43.4%	8.0%	4.1%
Mountain Lion	292	22.6%	37.3%	33.2%	4.5%	2.4%

HUNTER SATISFACTION NONRESIDENT 2017-2018

Question: How satisfied were you with the overall quality of your hunt during the 2017 season?

Species	Number of Responses	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Antelope	4903	60.9%	29.8%	5.0%	2.8%	1.4%
Deer	5832	44.4%	36.6%	10.5%	5.8%	2.7%
Elk	3489	39.5%	34.1%	13.5%	8.1%	4.8%
Black Bear	249	40.6%	30.5%	18.9%	5.6%	4.4%
Gray Wolf	77	14.3%	26.0%	45.5%	9.1%	5.2%
Mountain Lion	111	39.6%	36.9%	19.8%	2.7%	0.9%