

IDAHO DEPARTMENT OF FISH AND GAME

Virgil Moore, Director

Surveys and Inventories

**Statewide Report
2016 Seasons**



MULE DEER

July 1, 2016 to June 30, 2017

Prepared by:

Wayne Wakkinen.....	Panhandle Region
Clay Hickey	Clearwater Region
Rick Ward	Southwest Region
Regan Berkley.....	McCall Sub-Region
Daryl Meints	Magic Valley Region
Zach Lockyer	Southeast Region
Curtis Hendricks	Upper Snake Region
Greg Painter	Salmon Region
Mike Elmer	Data Coordinator
David Smith	Grants/Contracts Specialist

Compiled and edited by: Daryl R. Meints, Deer and Elk Coordinator

2017
Boise, Idaho

Idaho Department of Fish and Game (Department) adheres to all applicable state and federal laws and regulations related to discrimination on the basis of race, color, national origin, age, gender, disability or veteran's status. If you feel you have been discriminated against in any program, activity, or facility of the Department, or if you desire further information, please write to: Idaho Department of Fish and Game, PO Box 25, Boise, ID 83707 or US Fish and Wildlife Service, Division of Wildlife and Sport Fish Restoration Program, 5275 Leesburg Pike, MS: WSFR, Falls Church, VA 22041-3803, Telephone: (703) 358-2156. This publication will be made available in alternative formats upon request. Please contact the Department for assistance.

Please note that the Department databases containing this information are dynamic. Records are added, deleted, and/or edited on a frequent basis. This information was current as of April 12, 2018. Raw data do not have the benefit of interpretation or synthesis by the Department.

The Department requests that you direct any requests for this information to us rather than forwarding this information to third parties.

TABLE OF CONTENTS

STATEWIDE.....	1
Summary.....	1
Antlerless Harvest.....	2
LOWER SALMON	6
PMU 1 (GMUS 11, 11A, 13, 14, 18).....	6
Management Objectives.....	6
Historical Perspective	6
Habitat Issues	6
Biological Issues	8
Inter-specific Issues	9
Predation Issues	9
Winter Feeding Issues.....	10
Harvest	10
Information Requirements	10
WEISER-MCCALL.....	12
PMU 2 (GMUS 22, 23, 24, 31, 32, 32A).....	12
Management Objectives.....	12
Historical Perspective	12
Habitat Issues	12
Biological Issues	12
Inter-specific Issues	13
Predation Issues	13
Winter Feeding Issues.....	13
Harvest	13
MIDDLE FORK	15
PMU 3 (GMUS 19A, 20A, 25, 26, 27).....	15
Management Objectives.....	15
Historical Perspective	15
Habitat Issues	16
Biological Issues	16
Inter-specific Issues	16

Predation Issues	16
Winter Feeding Issues.....	17
Harvest	17
Information Requirements	17
CENTRAL MOUNTAINS	19
PMU 4 (GMUS 21, 28, 33, 34, 35, 36, 36A, 36B, 49, 50).....	19
Management Objectives.....	19
Historical Perspective	19
Habitat Issues	19
Biological Issues	20
Inter-specific Issues	20
Predation Issues	20
Winter Feeding Issues.....	21
Harvest	21
Information Requirements	21
BOISE RIVER	23
PMU 5 (GMU 39).....	23
Management Objectives.....	23
Historical Perspective	23
Habitat Issues	23
Biological Issues	23
Inter-specific Issues	24
Predation Issues	24
Winter Feeding Issues.....	24
Harvest	24
Information Requirements	25
SMOKY-BENNETT.....	27
PMU 6 (GMUS 43, 44, 45, 48, 52).....	27
Management Objectives.....	27
Historical Perspective	27
Habitat Issues	27
Biological Issues	29
Inter-specific Issues	29

Predation Issues	30
Winter Feeding Issues.....	30
Harvest	30
Information Requirements	30
OWYHEE	32
PMU 7 (GMUS 40, 41, 42, 46, 47).....	32
Management Objectives.....	32
Historical Perspective	32
Habitat Issues	32
Biological Issues	33
Inter-specific Issues	33
Predation Issues	33
Winter Feeding Issues.....	33
Harvest	33
Information Requirements	34
SOUTH HILLS	36
PMU 8 (GMUS 54, 55).....	36
Management Objectives.....	36
Historical Perspective	36
Habitat Issues	36
Biological Issues	37
Inter-specific Issues	37
Predation Issues	38
Winter Feeding Issues.....	38
Harvest	38
Information Requirements	38
BANNOCK.....	40
PMU 9 (GMUS 56, 57, 70, 71, 73, 73A, 74, 75, 77, 78).....	40
Management Objectives.....	40
Historical Perspective	40
Habitat Issues	41
Biological Issues	42
Inter-specific Issues	42

Predation Issues	42
Winter Feeding Issues.....	43
Harvest	43
Information Requirements	43
CARIBOU.....	46
PMU 10 (GMUS 66, 66A, 69, 72, 76).....	46
Management Objectives.....	46
Historical Perspective	46
Habitat Issues	47
Biological Issues	47
Inter-specific Issues	48
Predation Issues	48
Winter Feeding Issues.....	49
Harvest	49
Information Requirements	49
PALISADES	51
PMU 11 (GMUS 64, 65, 67).....	51
Management Objectives.....	51
Historical Perspective	51
Habitat Issues	51
Biological Issues	51
Inter-specific Issues	52
Predation Issues	52
Winter Feeding Issues.....	53
Harvest	53
Information Requirements	53
ISLAND PARK	55
PMU 12 (GMUS 60, 60A, 61, 62, 62A).....	55
Management Objectives.....	55
Historical Perspective	55
Habitat Issues	55
Biological Issues	56
Inter-specific Issues	57

Predation Issues	57
Winter Feeding Issues.....	57
Harvest	57
Information Requirements	57
MOUNTAIN VALLEY	59
PMU 13 (GMUS 21A, 29, 30, 30A, 37, 37A, 51, 58, 59, 59A).....	59
Management Objectives.....	59
Historical Perspective	59
Habitat Issues	59
Biological Issues	60
Inter-specific Issues	60
Predation Issues	60
Winter Feeding Issues.....	61
Harvest	61
Information Requirements	61
SNAKE RIVER	63
PMU 14 (GMUS 38, 52A, 53, 63, 63A, 68, 68A).....	63
Management Objectives.....	63
Historical Perspective	63
Habitat Issues	64
Biological Issues	64
Inter-specific Issues	64
Predation Issues	64
Winter Feeding Issues.....	65
Harvest	65
Information Requirements	65
NORTH IDAHO.....	67
PMU 15 (GMUS 1, 2, 3, 4, 4A, 5, 6, 7, 8, 8A, 9, 10, 10A, 12, 15, 16, 16A, 17, 19, 20).....	67
Management Objectives.....	67
Historical Perspective	67
Habitat Issues	68
Biological Issues	68
Inter-specific Issues	68

Predation Issues	69
Winter Feeding Issues.....	69
Harvest	69
Information Requirements	69
APPENDIX A.....	71

LIST OF FIGURES

Figure 1. Mule Deer Statewide Population Management Units.	4
Figure 2. Mule Deer Analysis Statewide.	5
Figure 3. Lower Salmon Mule Deer PMU Status and Objectives.	11
Figure 4. Weiser-McCall Mule Deer PMU Status and Objectives.	14
Figure 5. Middle Fork Mule Deer PMU Status and Objectives.	18
Figure 6. Central Mountains Mule Deer PMU Status and Objectives.	22
Figure 7. Boise River Mule Deer PMU Status and Objectives.	26
Figure 9. Owyhee Mule Deer PMU Status and Objectives.	35
Figure 10. South Hills Mule Deer PMU Status and Objectives.	39
Figure 11. Bannock Mule Deer PMU Status and Objectives.	45
Figure 12. Caribou Mule Deer PMU Status and Objectives.	50
Figure 13. Palisades Mule Deer PMU Status and Objectives.	54
Figure 14. Island Park Mule Deer PMU Status and Objectives.	58
Figure 15. Mountain Valley Mule Deer PMU Status and Objectives.	62
Figure 16. Snake River Mule Deer PMU Status and Objectives.	66
Figure 16. North Idaho Mule Deer PMU Status and Objectives.	70

STATEWIDE REPORT SURVEYS AND INVENTORY

JOB TITLE: Mule Deer Surveys and Inventories

STUDY NAME: Big Game Population Status, Trends, Use, and Associated Habitat Studies

PERIOD COVERED: July 1, 2016 to June 30, 2017

STATEWIDE

Summary

Mule deer are Idaho's most abundant and most widely distributed big game animal. They provide more recreational opportunity than any other big game species. Mule deer densities are highest south of the Salmon River. North of the Salmon River, white-tailed deer are the dominant deer species, but mule deer populations are scattered throughout northern Idaho where there is suitable habitat.

The 2008-2017 mule deer management plan represents a statewide change in how we monitor mule deer populations. Historically, harvest parameters and periodic GMU-wide surveys were conducted to assess population status. Beginning with this plan, we established a statewide, uniform approach to monitor mule deer populations on an annual basis, thus being more responsive to population changes. The state has been divided into 15 Population Management Units (PMUs) that contain Game Management Units (GMUs) representing similar habitats, discrete mule deer populations, and/or similar management objectives. Periodic complete population estimates, combined with annual data on fawn production, over-winter fawn survival, and adult doe annual survival will allow us to track population status annually. Buck:doe:fawn ratios will continue to be collected annually in 11 of 15 PMUs.

Antlerless harvest thresholds have been established for each of the trend areas (with few exceptions). These thresholds represent trend area population "goals." We recognize mule deer populations are primarily a function of the environment rather than any direct Department action. These threshold values have been established to define optimum populations taking into account habitat potential, winter range conditions, harvest opportunity, and depredation concerns. As mule deer populations rise and fall, we will recommend harvest opportunity consistent with these population thresholds.

In addition to monitoring trend area populations, the Department will monitor harvest and the percentage of 4+ points in the harvest relative to minimum criterion established by the Commission (Fig 1). Prior to 1998, the telephone harvest survey provided information for harvest. Beginning in 1998, a statewide mandatory report card system was implemented. Given adequate compliance, more precise data on harvest and antler point class will be available than in the past. However, voluntary compliance with the harvest reporting requirement has been declining.

Antlerless Harvest

General season antlerless harvest is an option that may allow managers to influence deer numbers and provide added hunting opportunity when population levels are high enough to allow. Determining whether to have antlerless seasons and the length of a season often results in controversy among hunters and between hunters and wildlife managers. To help guide decisions about antlerless harvest, the following decision model was developed. As new data become available and knowledge increases regarding deer population, response to harvest, refinements will occur.

Three variables are considered in this decision model: population level relative to antlerless threshold values listed for each PMU, animal physical condition, and winter severity. Population level is determined by annual aerial surveys of trend areas; animal condition is determined at Department check stations and/or through hunter interviews; and winter severity is determined by a severity index or fawn mortality if radio-collared animals are available. Each variable is given a relative score and then these scores are summed and the maximum season framework can then be determined.

This decision model is not designed to dictate when the Department will offer general antlerless opportunity; rather, it is intended to guide discussion amongst all of Idaho's mule deer enthusiasts. Additionally, depredation decisions and subsequent actions are not intended to be influenced by the decision model.

Table 1. Mule deer hunter participation and harvest during the 2016 harvest season.

Statewide	Hunters	Hunter Days	Total Harvest	Antlered	Antlerless	% Change in Total Harvest from Previous Year
2016	96,728	479,405	37,070	29,331	7,739	-1%

Table 2. Check station efforts and results, and mule deer checked, during the 2016 harvest season.

Statewide	Check Stations	Check Station Days	Hunters Checked*	Total Deer Checked ¹ (MD)	% Change in Total Deer Checked from Previous Year
2016	18	59	12,375	1,465	+11%

*Includes white-tailed deer hunters and harvest.

Table 3. Mule deer population monitoring efforts and results conducted between July 1, 2016 and June 30, 2017.

Zone	GMUs	Total Flight Hours	Total Estimated Mule Deer	% Change in Total Estimated Mule Deer from Previous Survey
2017	19A,20A,25,26,27,54,55,64,65,67	140	28,229	+16%

DECISION MODEL		Variable Score		
Population Level	Below Threshold	At Threshold	Above Threshold	
	-5	5	15	
Animal Condition	Poor	Good		
	0	5		
Winter Severity	Severe, >60% Fawn Mortality	Average, 40-60% Fawn Mortality	Mild, <40% Fawn Mortality	
	-5	5	10	
TOTAL SCORE		SEASON FRAMEWORK		
<10		No Antlerless Harvest		
10		Controlled Harvest		
15		7 Days		
20		14 Days		

DECISION MODEL EXAMPLES:

- 1) Antlerless Harvest Threshold Value = 2000
 Population Survey = 3000 deer observed
 Animal Condition = good
 Winter Severity = avg. 50% fawn mortality
 Total Score = 15 + 5 + 5 = 25
 Maximum Antlerless Framework = 21+ days

- 2) Antlerless Harvest Threshold Value = 2000
 Population Survey = 1500 deer observed
 Animal Condition = poor
 Winter Severity = severe, 75% fawn mortality
 Total Score = -5 + 0 + -5 = -10
 Maximum Antlerless Framework = 0 days

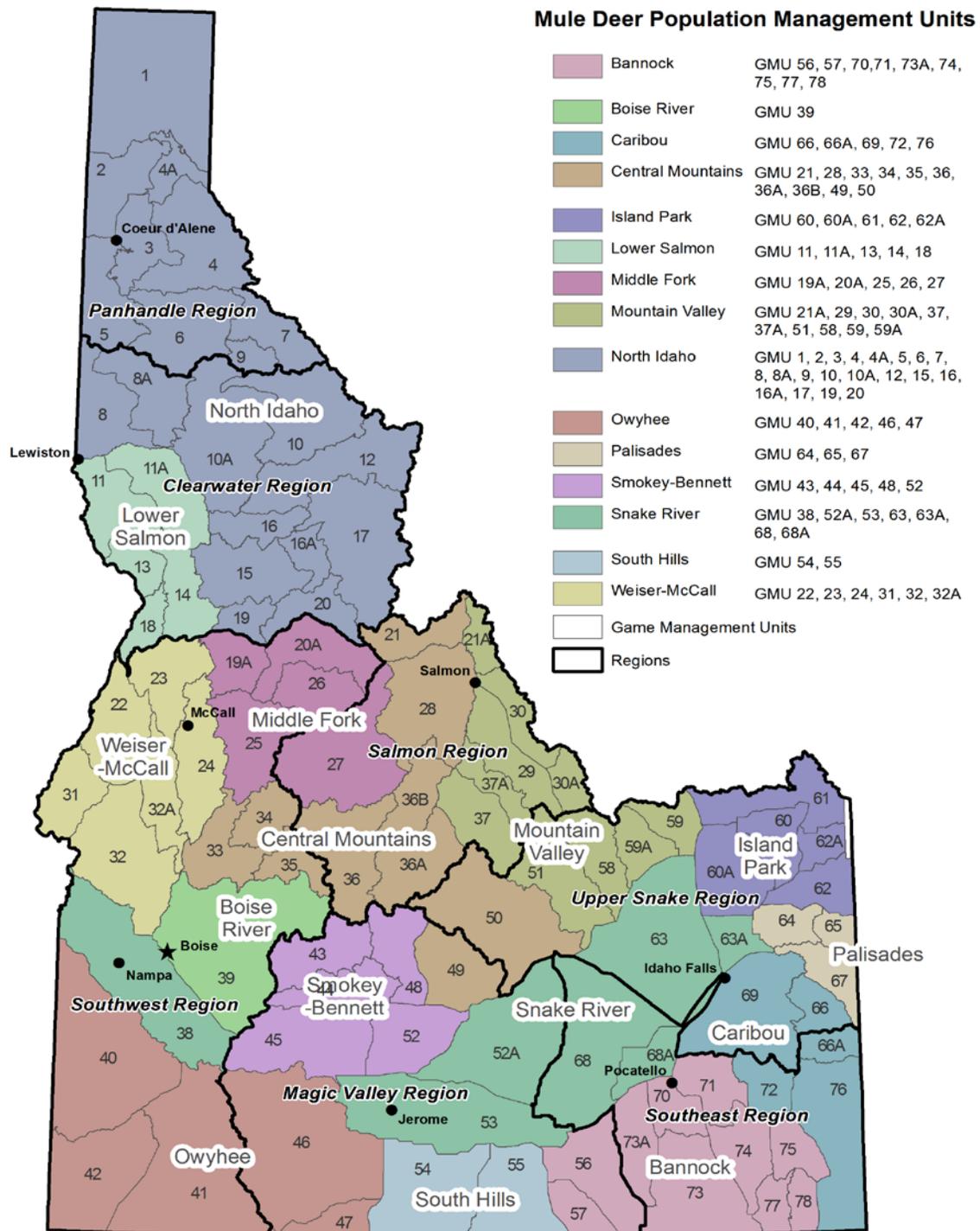


Figure 1. Mule Deer Statewide Population Management Units.

Mule Deer Statewide

Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Increase	Increase
Hunter Days	>350,000	>450,000

Square Miles =	84,437	3-Year Averages	
% Public Land =	69%	Hunters per square mile =	1.26
Major Land Type =	Various	Harvest per square mile =	0.61
		Success Rate =	33%

Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer	245,482	246,705	269,628	280,144	249,903	257,904	281,502	303,197	318,357	331,091

Note: Model estimated population as of January 1.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	60	61	61	55	63	67	71	75	64	
Buck:Doe	15	16	21	24	22	21	20	19	26	
Fawn Survival	0.30	0.52	0.68	0.32	0.63	0.61	0.78	0.83	0.64	0.30
Adult Doe Survival	0.90	0.90	0.95	0.82	0.94	0.95	0.96	0.97	0.93	0.89

Note: Raw Fawn:Doe expressed as fawns per 100 does, Raw Buck:Doe expressed as bucks per 100 does

Raw Fawn Survival = overwinter survival (December - May), Raw Adult Doe Survival = over winter survival (December - May)

Harvest Statistics

	Hunters	Hunter Days	Deer Harvest		
			Antlerless	Antlered	% 4+ Points
2006	87,966	401,479	6,204	21,543	38%
2007	68,527	295,539	6,403	23,151	38%
2008	93,768	454,642	5,492	17,505	38%
2009	90,579	415,999	6,151	17,572	38%
2010	89,590	398,804	6,636	18,534	36%
2011	89,015	402,917	5,776	14,959	36%
2012	85,658	382,851	6,254	18,767	40%
2013	95,761	424,178	5,958	19,922	41%
2014	108,133	471,138	7,597	24,137	40%
2015	114,926	509,041	8,650	29,235	40%
2016	96,728	479,405	7,739	29,331	42%

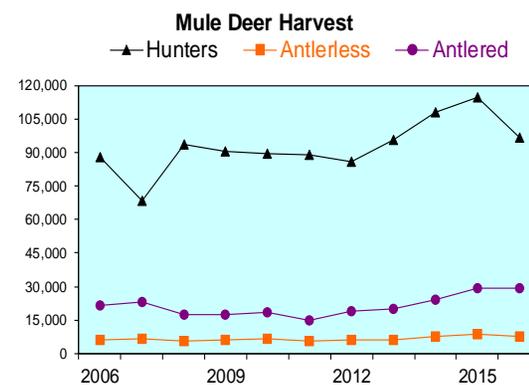
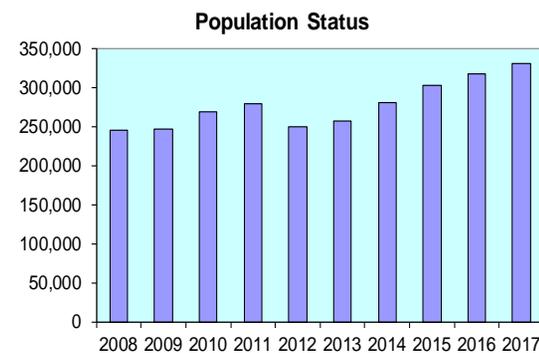


Figure 2. Mule Deer Analysis Statewide.

LOWER SALMON

PMU 1 (GMUs 11, 11A, 13, 14, 18)

Management Objectives

Management objectives for the Lower Salmon (PMU 1, Figure 3) relate to the total number of deer (both a short-term objective and a long-term objective). PMU 1 has not been surveyed (using new survey protocol identified in this plan) to determine total population size since the latest plan was implemented; therefore, these values are yet to be determined. The second objective pertains to the population goal (increase, maintain, or decrease). Both the short-term and long-term objective for PMU 1 are to increase mule deer populations with the exception of GMU 11A where the goal is to decrease population in the short-term object and then maintain. This departure from the rest of the PMU is a continued attempt to address chronic depredations caused largely by mule deer does. The third objective is to provide at least 2,500 hunter days in the short-term, and at least 3,500 long-term. This goal is currently being met with an average of 6,237 hunter days over the last three years (2014-2016). Additionally, an average of 68% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 60% hunter success rate.

Historical Perspective

Mule deer populations in PMU 1 were historically low. Accounts from Lewis and Clark during the 1800s suggested that very few animals were found throughout Clearwater River country. Populations probably did not change much until the large fires of the early 1900s that converted large expanses of unbroken forest into a mosaic of successional vegetation types, and large numbers of domestic livestock altered grass-dominated habitats into greater amounts of shrub cover. Populations probably peaked during the 1930s-1960s as a result of new, high-quality habitat and lack of competition by other ungulates. As elk and white-tailed deer populations increased and habitat changes including succession, development, and loss of key winter ranges occurred, mule deer populations likely decreased. Information derived from estimates made by Department wildlife managers suggests mule deer numbers in this area declined from around 23,000 in 1960 to about 15,000 in 1990.

Historically, white-tailed deer and mule deer were managed as a “single species” with a single general season harvest framework for both species. In 1973, the Department began to offer some species-specific seasons in Clearwater Region. In 1998, the Clearwater Deer Tag was established to address concerns over trespass complaints. This season framework was continued through the 2004 season. Beginning in 2005, the Clearwater Deer Tag was modified slightly and renamed the White-tailed Deer Tag to provide more flexibility for Idaho hunters while maintaining protection against trespass problems. As part of this new approach, restrictions on the Regular Deer Tag were relaxed, allowing it to again be used in the Clearwater Region through 3 November.

Habitat Issues

Habitat productivity varies widely throughout the PMU with steep, dry, river-canyon grasslands having low annual precipitation, to higher elevation forests having good habitat productivity and greater precipitation. Late successional forest cover types have become fragmented within the

area. Various weeds and non-native grasses such as yellow starthistle and cheatgrass have disturbed expansive acreages of grassland cover types in this PMU. Road density is moderate and access is restricted in many areas. This results in medium to low vulnerability of big game to hunters, especially within the Snake River and Salmon River canyons below White Bird.

Historically, sheep and cattle ranchers homesteaded the canyon lands in this PMU, while farmers settled prairie land. Around the turn of the century, northern GMU 11 and the prairie land in GMU 11A was under intensive use for dry-land agriculture, and numerous orchards were planted in the Lewiston area. As settlement increased, the forested portions of the area were intensively logged, especially on private land. The forests were frequently high-graded, and existing forests still show the scars. In addition, intensive-grazing practices degraded many meadow areas and canyons, allowing invasion of noxious weed species, especially in drier areas.

This PMU contains large tracts of both privately and publicly owned lands. GMUs 11 and 11A are mostly private land except for the Craig Mountain Wildlife Management Area (WMA) along the Snake and Salmon rivers. Most of GMU 13 has been under private ownership since settlement and is managed for agriculture and livestock. Historically, sheepherders ran their flocks in the canyons of GMUs 14 and 18, and logging occurred in the forested areas of these GMUs. GMUs 14 and 18 are two-thirds public lands with the remaining private land located at lower elevations along Salmon River. The majority of Hells Canyon Wilderness Area, designated in 1975, is in GMU 18.

Grazing by cattle is gradually decreasing in the PMU due to reductions in U.S. Forest Service (USFS) and Bureau of Land Management (BLM) allotments, along with land ownership shifting from private to public. Several large ranches remain in private ownership with limited access. Available mule deer winter range is being encroached upon by construction of summer homes and resorts along Snake and Salmon rivers.

Landowners registered enough complaints of mule deer causing damage to small grain, legume, and hay crops during the 1980s that a special mule deer season was developed in the Waha and Maloney Creek areas of GMU 11. This season helped reduce damage complaints, and the Maloney Creek portion of the hunt was eliminated in 1997 due to the decline of mule deer in southern GMU 11. This decline was also experienced in agricultural areas of GMUs 11A, 13, 14, 18, and 23. Landowner complaints in GMU 11A relate primarily to damage caused to rapeseed, legumes, bluegrass, and winter wheat. Complaints in GMUs 13, 14, 18, and 23 involve damage to irrigated alfalfa, orchards, standing hay, and stored hay on agricultural land along the Salmon River breaks. Currently, there are only a few depredation concerns involving mule deer in PMU 1. Since 1998, antlerless mule deer have increased in areas surrounding agricultural fields, especially in portions of GMUs 11A and 14.

During 2000, fire burned a large portion of GMU 11 along the Salmon and Snake rivers from Maloney Creek downstream to Dough Creek and all the way to the ridgeline in most places (Maloney Creek Fire). During 2007, much of the Snake River face in GMU 11 was again burned by wildfire (Chimney Creek complex). That same year, wildfires in GMU 13 and 18 also burned large tracts of wildlife habitat primarily on public lands. The southern portion of GMU 11 experienced another large wildfire (Cougar Creek Fire) in August of 2014 caused by a

lightning strike. This fire burned primarily across the canyon grassland habitat in both the Salmon and Snake River drainages. The fire consumed 65,200 acres south of Billy Creek on the Snake River side and south of Eagle Creek on the Salmon River side. These fire alterations on the landscape are continually being analyzed for impacts. Grasses and native vegetation are being replanted and many of the bulldozer lines have recovered. Even so, it will be years before the shrub component fully recovers and decades before conifer regeneration (when and where impacted) provides thermal and hiding cover.

Biological Issues

Poor productivity and declining mature buck numbers as reflected in decreasing fawn:doe:buck ratios, a decrease in total numbers, and a 50% decrease in harvest from the late 1980s to the mid-1990s resulted in concerns for the mule deer herds in these GMUs. In 1992, aerial surveys in GMUs 14 and 18 indicated buck:doe ratios at 7:100 and 13:100, respectively. These concerns led to the implementation of antlered-only controlled hunts beginning in 1998 in GMUs 11, 11A, 13, 14, and 18.

A December 1999 sightability survey in GMU 14 resulted in an estimate of 2,622 mule deer with a buck:doe:fawn ratio of 18:100:50. GMU 14 was resurveyed in December 2004. The survey resulted in an estimate of 2,814 total mule deer with a buck:doe:fawn ratio of 34:100:61.

The composition/trend survey conducted in December 1999 indicated a total population of 1,725 mule deer in the White Bird trend area. This represented a 26% decrease in total numbers from the same sub-GMUs flown during the early 1990s. Subsequent White Bird trend area surveys conducted during the 2001-2002 and 2002-2003 winters indicated a stable population with increasing buck:doe (22:100 average) and fawn:doe (53:100 average) ratios. The survey conducted in 2003-2004 had similar buck:doe (23:100) and fawn:doe (47:100) ratios. However, the total estimate increased by 54% over the 2002-2003 count to 2,654 mule deer. It is likely that this increase can be attributed primarily to a change in deer distribution (due to a significant snowfall event just prior to the survey) rather than an increase in the deer population. The 2005 survey yielded results similar to pre-2004 levels with a total estimate of 1,937 and a buck:doe:fawn ratio of 20:100:63.

In 1990, controlled hunt permit numbers in GMU 11 were reduced significantly. Since then, buck:doe:fawn ratios have improved along with percent four-point bucks and total buck numbers. Due to declines in mule deer populations, GMUs 11A, 13, 14, and 18 were changed from general hunts to controlled hunts in 1998. GMU 11A was surveyed specifically for mule deer for the first time during winter 2003-2004. A total of 1,798 mule deer were estimated with a buck:doe:fawn ratio of 20:100:52.

In December 2008, a total of 21 adult mule deer does were radio-collared in the PMU to evaluate survival rates. A total of 10 were collared in GMU 11, 2 in GMU 13, and 9 were radio-collared GMU 18. As of June 2012, there have been a total of 10 mortalities, 6 in GMU 11, 3 in GMU 18, and 1 in GMU 13, in addition to 1 missing collar in GMU 18.

During the winter of 2009, a species of exotic louse, *Bovicola tibialis*, was documented for the first time in Idaho on a dead mule deer fawn in the city of Riggins. Four city deer sampled later

that spring were found to be affected by the lice and had extensive hair loss (self-inflicted) associated with the lice infestation. In early March of 2012, with the help of Wildlife Services, the Department killed 60 deer in an effort to stop the spread of the louse. Test results showed that more than 90% of the deer were infested with *Bovicola tibialis*. Efforts were then made to treat the remaining deer within city limits. In May of 2012, *Bovicola tibialis* was found at lower densities in other Idaho locations at Salmon, Elk Bend, Emmett, and the Andrus Wildlife Management Area indicating that the louse was not confined to Riggins. Monitoring efforts for the presence of this louse are ongoing.

During February 2013, a composition survey was conducted in GMU's 11, 13, and 18 in conjunction with the Hells Canyon Zone elk sightability survey. Due to the timing of the survey, sex structure was not determined. Total deer observed appear to be increasing since the early 2000's in GMUs 11 and 18, although are decreasing in GMU 13. Interestingly, fawns per 100 adults showed an opposite trend and were increasing in GMU 13, indicating deer populations in GMU 13 may be rebounding. Total deer observed in 2013 (3,477) exceeded total deer observed in 1991 (1,333) by 2,144 deer, suggesting substantial population growth. In addition, fawns per 100 total deer were 45:100, up from 31:100 in 1991. Total deer observed in GMU 13 decreased from 5,347 in 1989 to 2,712 in 2013, although fawns per 100 adults increased from 30:100 to 53:100. Total deer observed and fawns per 100 adults also increased in GMU 18 from 2,056 in 1990 to 2,805 in 2013 while fawns per 100 adults decreased moderately from 56:100 to 46:100. Although these data are not as useful as a complete aerial survey, they do provide insight into current trends of these management units. Additionally, GMU 14 was surveyed in February 2015 in conjunction with an Elk City Zone elk sightability survey. A total of 2,851 mule deer were tallied. This total was comprised of 1,893 unclassified adults and 959 fawns (51 fawns:100 unclassified adults). The 2,851 mule deer counted in 2015 were within 1% of the 2,814 tallied on the next most recent survey (2005) and the mean of 2,831 from the three prior surveys conducted in this GMU (2005, 1999, 1992).

Inter-specific Issues

A decline in cattle grazing and successive years of drought during the late 1980s and early 1990s may have contributed to rangeland shifting from forbs to grasses. Intensive logging has created extensive brushy areas on winter ranges. These shifts in vegetation have resulted in increases in white-tailed deer and elk populations, creating competition with mule deer on both winter and summer ranges.

Predation Issues

Mountain lion harvest has increased slightly in this area during the past several decades and most likely reflects an increase in mountain lion numbers, which may be contributing to lower deer densities. Bear populations and harvest have remained relatively stable in this PMU. The semi-arid climate and sparse timber limit the extent of highly productive bear foods in GMUs 11, 11A, 13, 14, and 18. However, due to extensive old homestead sites in these GMUs, numerous fruit trees and shrubs were planted and remain in the areas today, providing excellent bear foods in autumn. Some of the largest bears in the state annually come from GMU 11. Bears are not thought to have an effect on deer recruitment in this PMU. The addition of wolves will likely have an impact on black bear, mountain lion, and coyote populations. At some level, predation could benefit deer herds to the extent that it reduces elk competition and keeps deer herds below

carrying capacity where they can be more productive. However, excessive levels of predation can also suppress prey populations to undesirable levels. At this point, it is unclear what the net impact of predation will be with the new mix of large predators.

Winter Feeding Issues

Emergency winter feeding of mule deer has not occurred in this PMU in recent history.

Harvest

Total harvest in PMU 1 in 2016 was estimated at 713 mule deer based on mandatory harvest report cards. This represents a 1% decrease in harvest from 2015(721) and is 4% higher than the previous five-year average of 687. Total hunter numbers were estimated at 1,219 for 2016 compared to 1,226 hunters for 2015. An average of 69% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 59% hunter success rate.

Information Requirements

Harvest and aerial survey information for this PMU are limited. Improved estimates are needed for yearly harvest data. Prior to 1994, all harvest data was for mule deer and white-tailed deer combined. Hunter participation data were first split out by deer species pursued in 2005. Data should continue to be separated for both deer species. The initiation of controlled hunts in GMUs 11A, 13, 14, and 18 in 1998 has resulted in improved harvest information and buck numbers. The aerial survey of White Bird trend area was flown during the winters of 2000-2005. This survey has now been discontinued and has been replaced with the statewide mule deer monitoring protocol that calls for a sample of search GMUs to be surveyed for composition each year when possible and a complete population survey approximately every 5 years. Budgetary constraints and re-prioritization of statewide surveys have resulted in a lack of implementation of the recently adopted aerial survey schedule in this PMU to date. However, mule deer were surveyed incidentally during elk sightability surveys in 2014 (GMUs 11, 13, and 18) and 2015 (GMU 14).

Mule Deer Lower Salmon PMU 1 (GMUs 11, 11A, 13, 14, 18)



Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Increase*	Increase*
Hunter Days	>2,500	>3,500

* Except 11A - Decrease-Maintain

Square Miles =	2,788	3-Year Averages	
% Public Land =	37%	Hunters per square mile =	0.43
Major Land Type =	Agriculture/Range	Harvest per square mile =	0.38
		Success Rate =	60%

Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer										

Note: Estimates in red are based on information other than sightability surveys.

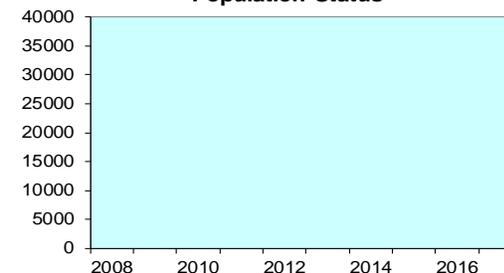
Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	ND									
Buck:Doe	ND									
Fawn Survival	ND									
Adult Doe Survival	ND									

Note: Fawn:Doe expressed as fawns per 100 does, Buck:Doe expressed as bucks per 100 does

Fawn Survival = overwinter fawn survival (December - May), Adult Doe Survival = annual survival (June - May)

Population Status



Harvest Statistics

			Deer Harvest		
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
2006	778	3,294	155	584	71%
2007	790	3,534	167	598	74%
2008	1,224	5,954	184	523	72%
2009	1,219	6,068	169	572	74%
2010	1,134	5,685	126	586	71%
2011	1,226	6,491	167	493	72%
2012	1,161	5,776	174	511	67%
2013	1,203	6,125	116	525	67%
2014	1,187	5,907	144	586	68%
2015	1,226	6,208	189	532	66%
2016	1,219	6,228	180	533	72%

Previous Trend Area Surveys

GMU	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Various	ND	1,662	ND	1,747	1,722	2,645	1,937	ND	ND	ND

Note: ND = no survey data available

Mule Deer Harvest

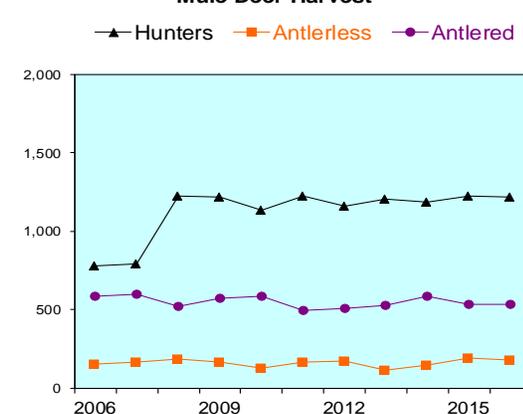


Figure 3. Lower Salmon Mule Deer PMU Status and Objectives.

WEISER-MCCALL

PMU 2 (GMUs 22, 23, 24, 31, 32, 32A)

Management Objectives

Objectives for Weiser-McCall (PMU 2, Figure 4) are to maintain buck harvest above 25% ≥ 4 points in GMUs 23, 24, 31, 32, and 32A and maintain buck:doe ratios from herd composition surveys at or above the statewide minimum of 15 bucks per 100 does. Objectives for GMU 22 are to maintain buck:doe ratios at or above 25 bucks per 100 does and to manage for a “quality” controlled hunt with >40% 4+ bucks in the harvest. Since fall 2008, the general rifle buck harvest in GMU 22 has been restricted to ≤ 2 point bucks to help meet “quality” management objectives.

Historical Perspective

These GMUs represent a significant portion of the mule deer population and mule deer harvest in the Southwest Region. In the late 1800s, deer herds were reduced by extensive meat hunting throughout the area. Hunting was restricted in the early 1900s. The subsequent increase in deer herds led to large winter mortality in some areas, extensive winter feeding programs, and concern for the status of vegetation on deer winter range.

Over one-third of Idaho’s human population lives near these GMUs. These GMUs provide deer hunting opportunity to over 16,000 hunters per year, but that opportunity has to be closely monitored to prevent over-harvest. This is particularly true because much of this PMU is dominated by open sagebrush habitats where deer are highly vulnerable.

Habitat Issues

Habitats in this PMU vary from the sagebrush-grassland winter ranges to the mountain shrub/forest communities of high elevation summer ranges. The majority of mule deer summer on land administered by USFS. Low-elevation winter ranges consist of private, state, and BLM lands. Logging, grazing, and fires have substantially affected the condition of these ranges. Logging activity has increased shrub fields and provided increased forage for mule deer. The effect of fire on summer ranges has been positive, improving forage conditions for deer. Conversely, effects of fire on low-elevation winter ranges have been more negative. In many cases, fires have reduced important shrub species such as bitterbrush and sagebrush that deer are dependent on during winter. However, cooler spring fires maintain these important shrub species. The proliferation of noxious weeds poses a threat to mule deer winter range.

Biological Issues

Population performance in this area is closely associated with winter severity and body condition of deer when entering the winter period. Buck harvest parameters in general any antlered deer seasons tends to vary around the target of 25% 4+ points; in 2016, 33% of antlered animals harvested were 4 points or better. Aerial survey data indicates buck:doe ratios were 19:100 during the winter of 2016-2017. Over-winter fawn survival was 6% during winter 2016-17. The previous 3 winters saw high fawn and doe survival. In GMU 22, the December 2016 buck:doe ratio was 37:100. This contrasts with an observed buck:doe ratio of 10:100 in December 2007,

before general harvest was restricted to ≤ 2 point bucks. Ninety-five percent of the bucks harvested in the GMU 22 2016 controlled hunt were 4+ points

Inter-specific Issues

Elk densities are currently high in the McCall and Weiser Elk Zones. These high elk densities may be limiting the ability of the area to support mule deer. There are some white-tailed deer in GMUs 22, 24, 32, and 32A. White-tailed deer populations do not seem to be expanding their distribution. Intensive livestock grazing is present on much of the range. The extent of competition among species is largely unknown.

Predation Issues

Bobcats, coyotes, mountain lions, black bears and wolves occur throughout the PMU. The impact of these large predators on mule deer is largely unknown.

Winter Feeding Issues

Winter feeding has been fairly uncommon in these GMUs. Winter feeding occurred during the winter of 2016-2017 to alleviate severe mortality. Prior to that, winter feeding last occurred in Weiser and Brownlee Reservoir area during the severe winter of 1992-1993.

Harvest

Total harvest in PMU 2 in 2016 was estimated at 4,506 mule deer based on mandatory harvest report cards. This represents an 8% decrease in harvest from 2015(4,909) and is 14% higher than the previous five-year average of 3,941. Total hunter numbers were estimated at 12,722 for 2016 compared to 16,626 hunters for 2015. An average of 30% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 39% hunter success rate.

Information Requirements

Herd composition surveys will be conducted annually during December. Radio-collared fawns and adult does will provide estimates of annual survival rates. Mule deer population abundance surveys will be conducted every five years, with modeling providing interim population estimates between population surveys. Information on inter-specific competition is needed.

Mule Deer Weiser-McCall PMU 2 (GMUs 22, 23, 24, 31, 32, 32A)



Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	35,000	35,000
Pop. Goal	Maintain	Maintain
Hunter Days	>50,000	>50,000

Square Miles =	5,116	3-Year Averages	
% Public Land =	56%	Hunters per square mile =	2.97
Major Land Type =	Rangeland	Harvest per square mile =	1.44
		Success Rate =	30%

Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer			35,269							

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	70	62	63	49	56	ND	57	58	58	
Buck:Doe	13	18	20	13	15	ND	19	19	19	
Fawn Survival	0.34	0.70	0.49	0.16	0.58	0.47	0.64	0.64	0.51	0.06
Adult Doe Survival	0.78	0.93	0.98	0.65	0.91	0.89	0.87	0.90	0.85	

Note: Raw Fawn:Doe expressed as fawns per 100 does, Raw Buck:Doe expressed as bucks per 100 does

IPM Fawn Survival = overwinter fawn survival (December - May), IPM Adult Doe Survival = annual survival (June - May)

Harvest Statistics

	Deer Harvest				
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
2006	13,321	58,182	1,463	2,805	29%
2007	9,961	40,433	1,410	2,295	32%
2008	12,695	57,977	1,258	2,477	30%
2009	13,462	58,203	1,356	2,907	27%
2010	14,010	58,499	1,705	2,636	29%
2011	13,160	58,373	1,048	1,862	40%
2012	12,938	55,315	1,173	2,554	31%
2013	14,981	64,854	1,033	2,755	31%
2014	16,244	69,059	1,405	2,968	28%
2015	16,626	73,843	1,520	3,389	30%
2016	12,722	62,694	1,196	3,310	33%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
22	ND	ND	4,091	4,318	3,725	3,193	4,295	ND	4,809	ND
31	ND	ND	3,826	4,450	3,732	3,207	3,834	ND	ND	ND
32	ND	ND	ND	ND	ND	ND	11,443	ND	ND	ND

Note: ND = no survey data available

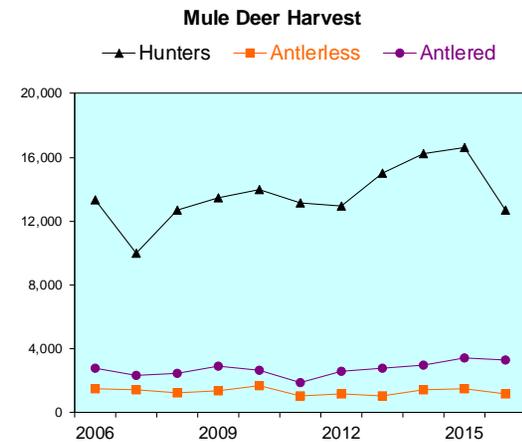
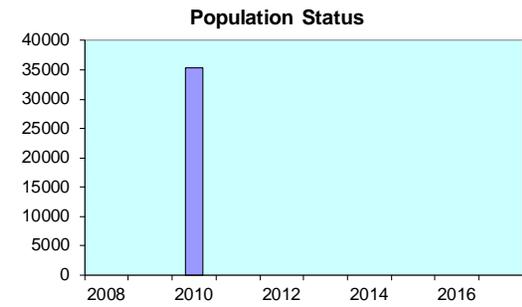


Figure 4. Weiser-McCall Mule Deer PMU Status and Objectives.

MIDDLE FORK

PMU 3 (GMUs 19A, 20A, 25, 26, 27)

Management Objectives

Objectives for Middle Fork (PMU 3, Figure 5) are to maintain >25% 4-points in the buck harvest and maintain buck:doe ratios from herd composition surveys at or above the statewide minimum of 15 bucks per 100 does. In GMU 27, objectives are to maintain >40%, 4-points in the buck harvest and maintain buck:doe ratios from herd composition ratios at or above 25 bucks per 100 does.

Historical Perspective

These GMUs represent the core of Idaho's backcountry; much of the area is designated wilderness. With the rugged, remote terrain and difficult access, management control of deer herds has been difficult at best. The forces of weather, fire, and plant succession have ultimately played a much larger role in deer populations than efforts of wildlife managers. In the late 1800s, human populations reached their peak in the backcountry as gold seekers poured into the area and established mining boom towns. With the miners came year-round big game hunting for meat, followed shortly by intensive livestock grazing. Depleted game herds plus heavy grazing of grass ranges set the stage for a shrub explosion in the early 1900s. At the same time, the mining boom collapsed and deer management emphasized protection from harvest; large "game preserves" were created.

By the 1930s, managers were recognizing that deer herds had grown to levels that were damaging winter ranges. Management emphasis shifted from protection to trying to achieve enough harvest to maintain winter range condition. Seasons were extended from mid-September through November to mid-December. Second and third deer tags were offered in some areas from the 1940s through the 1960s. A mid-September to late November season (Appendix A) has been standard in the backcountry GMUs since the 1950s. However, historically limited access has prevented harvest from being wide spread across the PMU. Even today, much of the deer harvest is localized around access points such as roads and airstrips.

Ultimately, the shrub winter ranges could not be sustained. More controlled livestock grazing and fire suppression allowed grasses and conifers to out-compete shrub seedlings; shrub ranges began to revert to grasslands and forests. As the habitat went, so went the deer; long-term trend counts in GMU 27 showed a steady decline in deer numbers from the 1920s to the mid-1960s. Since that time, the trend in deer numbers and harvest has been relatively flat. For example, 2,900 deer were counted during a 1968 helicopter deer survey of GMU 27. During helicopter elk surveys in GMU 27 in 1995, 1999, 2002, and 2006 staff counted 2,625-2,911 deer incidental to elk counts.

The number of antlered deer harvested in 2015 was approximately 95% greater than the 10-year average. Hunter days continue to meet objectives, but hunter success has hovered around 30% since 2008. There was not a large enough sample size of collared animals for an accurate adult doe survival rate for 2014 and 2015 as only 25 animals were collared with minimal monitoring. But the data suggests relatively high adult doe survival.

Habitat Issues

In much of this PMU habitat ultimately determines deer densities and productivity. In these GMUs where hunter harvest has historically been light, particularly for females, deer herds could be expected to exist much of the time at densities approaching carrying capacity (unless suppressed by predators or temporarily set back by severe winters). Deer herds at or near carrying capacity can be expected to be relatively unproductive, recruiting few fawns, thus few bucks into the population, and these herds can be expected to produce bucks with small antlers. GMU 27 does produce relatively small-antlered bucks for their age, but this has not been definitively tied to deer densities or habitat. Continued shrub-land deterioration, conifer encroachment, and moderate elk populations will probably continue to further erode habitat capacity for deer. Fire may enhance summer ranges and winter ranges in the more moist northern GMUs, but fire is not likely to benefit the more arid southern winter ranges. In the summer of 2000, tens of thousands of acres burned within GMUs 26 and 27. Over time, it will be interesting to verify any correlation to fire and mule deer population performance. Already established in some areas, the spread of noxious weeds such as knapweed, rush skeletonweed, and leafy spurge could ultimately have significant impacts on winter range productivity.

Biological Issues

Very little mule deer aerial survey data has been collected in these GMUs since the 1960s. What data has been collected suggests a fairly stable number of deer since that time. Buck harvests since the mid-1970s in GMU 27 are variable, but indicate no definite upward or downward trend. Similarly, there is no evident trend in percent 4-point bucks in the harvest, which varies annually, but averages approximately 55%. Since large fires in 2000 in the southern portion of the PMU, some outfitters have reported increased deer numbers and antler development. A trend survey was done in GMU 27 in spring 2006 with the estimated number of deer at 2,718. This estimate correlates very well with past surveys. An abundance survey of the entire PMU in February 2011 yielded a population estimate of 10,248 deer, with an estimated 3,750 in the same trend area surveyed in 2006, potentially indicating a large increase in abundance.

For the entire PMU, buck harvest has averaged above 60% 4-points, well above the 25% minimum. Similarly, buck:doe ratios always exceed the 15:100 minimum.

Inter-specific Issues

In portions of this zone, elk densities may be having some impact on the area's capacity to produce deer. White-tailed deer, a potentially strong competitor, are rare south of Salmon River but occur at greater densities in the more northern GMUs. In some limited areas, mountain goats and mule deer may be competing for the same mountain mahogany winter ranges. Bighorn sheep also share some ranges, but generally overlap little with deer. Livestock rangeland grazing, another potential source of competition, is generally a very minor activity in most of these GMUs.

Predation Issues

Black bear densities appear to be low to moderate in the southern GMUs and increasing toward the north. Mountain lion densities are at least moderate and appear to have leveled off or potentially decreased in recent years, probably at least in part due to competition with a robust

wolf population. Coyotes are common and have an unknown impact on deer populations. Bobcats and golden eagles are present, but are not thought to cause significant predation on deer. Wolves reintroduced by USFWS have become well established in these GMUs. The addition of wolves is likely to have an impact on black bear, mountain lion, and coyote populations. At some level, predation could benefit deer herds to the extent that it reduces elk competition and keeps deer herds below carrying capacity where they can be more productive. However, excessive levels of predation can also suppress prey populations to undesirably low levels. At this point, it is unclear what the net impact of predation is with the new mix of large predators.

Winter Feeding Issues

Winter feeding has not occurred in these remote GMUs.

Harvest

Total harvest in PMU 3 in 2016 was estimated at 1,373 mule deer based on mandatory harvest report cards. This represents a 2% increase in harvest from 2015(1,342) and is 65% higher than the previous five-year average of 834. Total hunter numbers were estimated at 3,182 for 2016 compared to 3,356 hunters for 2015. An average of 68% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 42% hunter success rate.

Information Requirements

Impacts of elk on mule deer production and survival are suspected, but unknown. The most productive deer herds are those maintained at a level well below carrying capacity. Better information is needed to identify appropriate deer densities that will maintain optimum productivity and harvest. The potential impact of the new mix of large predators is unknown. Migratory patterns are largely unknown.

Herd composition surveys will be conducted annually during December. Radio-collared fawns and adult does will provide estimates of survival rates annually. Mule deer total population abundance surveys will be conducted approximately every 5 years, with modeling providing interim population estimates between population surveys.

Mule Deer Middle Fork PMU 3 (GMUs 19A, 20A, 25, 26, 27)



Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Increase	Increase
Hunter Days	>7,500	>7,500

Square Miles =	4,246	3-Year Averages	
% Public Land =	99%	Hunters per square mile =	0.70
Major Land Type =	Forest	Harvest per square mile =	0.34
		Success Rate =	42%

Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer				10,248						13357

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	54	64	39	50	38	ND	ND	80	72	
Buck:Doe	25	23	25	27	35	ND	ND	33	27	
Fawn Survival	0.24	ND								
Adult Doe Survival	0.66	0.91	0.96	0.98	0.80	0.94	ND	ND	ND	

Note: Fawn:Doe expressed as fawns per 100 does, Buck:Doe expressed as bucks per 100 does

Fawn Survival = overwinter fawn survival (December - May), Adult Doe Survival = annual survival (June - May)

Harvest Statistics

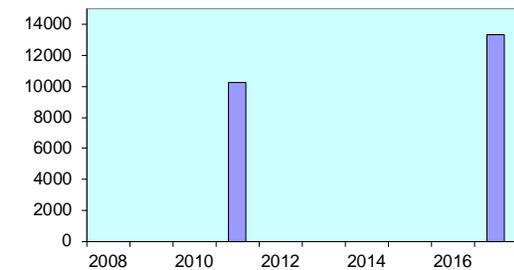
	Deer Harvest				
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
2006	2,383	14,110	33	670	60%
2007	1,336	7,183	40	767	63%
2008	2,292	13,786	37	490	56%
2009	1,952	11,511	16	523	63%
2010	2,142	12,149	30	581	65%
2011	1,917	11,056	30	462	64%
2012	1,931	10,875	24	543	68%
2013	2,112	11,576	45	708	68%
2014	2,364	12,247	76	941	70%
2015	3,356	17,714	86	1,256	68%
2016	3,182	17,492	107	1,266	67%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
27	ND	2,519	2,225	2,468	1,610	2,785	2,154	2,540	2,718	ND

Note: ND = no survey data available

Population Status



Mule Deer Harvest

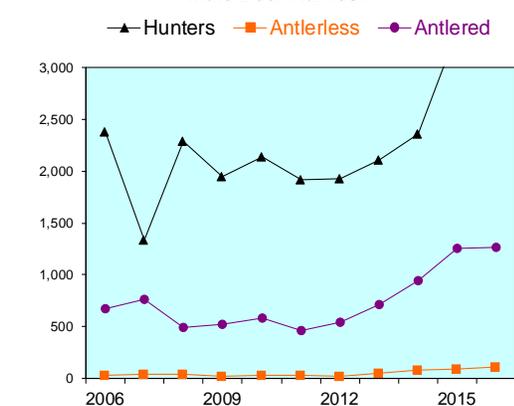


Figure 5. Middle Fork Mule Deer PMU Status and Objectives.

CENTRAL MOUNTAINS

PMU 4 (GMUs 21, 28, 33, 34, 35, 36, 36A, 36B, 49, 50)

Management Objectives

Objectives for Central Mountains (PMU 4, Figure 6) are to maintain ≥ 15 bucks:100 does in post-season surveys and $>25\%$ ≥ 4 -point bucks in the harvest.

Historical Perspective

Mule deer were scarce and harvests low for much of the early part of the twentieth century. From 1917 until the 1940s, parts of GMUs 28 and 36B were designated as no hunting “game preserves”. By the early 1940s, deer herds had expanded to the point that long, either-sex seasons were being offered (early Oct to mid-Nov). This pattern continued into the 1970s, when the antlerless portion of the season began to be shortened and total season length was shortened to include mid-October to mid-November. In 1991, concerns for mature buck escapement led to shifting the deer season earlier so that it ended in October before the rut began. Since 1991, the deer season framework (Appendix A) has been the most conservative these GMUs have seen in at least 50 years. The 2005 hunting season was shifted to 10-31 October in an attempt to establish consistent season framework across the state. However, high fawn mortality during winter 2005-2006 and reduced buck ratios after the 2005 season prompted a reduction in season length after 2005 (10-24 Oct) in the northern GMUs.

Hunter numbers dropped slightly from an average of 11,420 hunters harvesting 2,630 bucks annually during the 1990s to a low of 8,672 hunters harvesting 1,892 bucks in 2012. Hunter numbers have increased steadily since 2012. Buck harvest in 2015 was 3,690; approximately 1,390 more than the previous 10-year average. Increases in hunter numbers and annual harvest will likely remain high if fawn production and overwinter survival continue near current levels.

Habitat Issues

Cattle ranching, livestock grazing, mining, and recreation are dominant human uses of the landscape in PMU 4. Deer depredations on agricultural crops are minor. Intrusion of human development into winter ranges is accelerating. In recent history, disturbance is mostly lacking in this PMU. Disturbance (natural fires or logging) can benefit forage quality for mule deer, especially in areas with over-stocked or even-aged timber stands.

Habitat ultimately determines deer densities and productivity. However, specific limiting factors within the habitat are poorly understood. Deer herds at or near carrying capacity can be expected to be relatively unproductive, recruiting few fawns, thus few bucks into the population; antlers will be relatively small for the age of the buck; and antler drop will occur relatively early in winter. Deer herds in this group of GMUs exhibit all these traits to some degree, but this has not been definitively tied to deer densities or habitat. In some areas, deer winter in mature stands of mountain mahogany that are relatively stagnant and unproductive. Elk may have removed much of the mountain mahogany forage within reach of deer. Forests are slowly encroaching into shrub and grassland communities. Spread of noxious weeds and invasive annual grasses, such as knapweed, leafy spurge, and cheatgrass, could ultimately have significant impacts on winter range productivity.

Biological Issues

A trend area in GMU 21 near North Fork was surveyed most years from December 1990 to 2006 and a similar trend area was surveyed in GMU 36B south of Challis from December 1994 to 2005. Overall trend data indicate increasing populations of deer following the late 90s, and mostly stable populations through the end of trend count surveys in 2007. A total abundance survey was completed in 2011, yielding an estimate of 33,244 for the entire PMU 4.

Fawn production in PMU 4 has been fairly steady from 2008 to present, with an average of 64 fawns per 100 does based on winter flights. The two lowest years were 2008 and 2011, with an average of 57 fawns per 100 does. The highest fawn ratio was in 2014, with 72 fawns per 100 does. The most recent winter of 2016 showed fawn ratios back near average at 62 fawns per 100 does. The buck ratio the last three years has been relatively high, with 31 bucks per 100 does in 2015, the highest observed in the past 10 years.

Winter fawn survival fluctuates between 23% (2017) and 69% (2010). Survival rates are usually high for fawns in good body condition going into winter, and when winter weather conditions are favorable. Adult doe survival was highest (91% and 89%) during the winters of 2014 and 2015. This is most likely due to mild winter conditions both years.

Inter-specific Issues

Parts of GMUs 21 and 36B contain high densities of wintering deer. Current high elk densities may be having some impact on the area's capacity to sustain high densities of deer. This impact may be particularly pronounced during severe winters when deep snow moves elk down onto deer winter ranges. White-tailed deer, a potentially strong competitor, are mostly restricted to private lands along major riparian areas. Pronghorn, bighorn sheep, and mountain goat share some ranges but generally overlap little with mule deer. Livestock rangeland grazing, another potential source of competition, has generally remained constant in recent years.

Predation Issues

Black bear densities appear to be moderate in PMU 4. Mountain lion densities are at least moderate, probably at least in part due to elk densities (elk calves are generally a primary prey for Mountain lions). Coyotes are common and have an unknown impact on deer populations. Bobcats, red fox, and golden eagles also occur in the area but are not thought to account for significant predation on deer. Gray wolves are well established and believed to be relatively stable in this PMU. The addition of wolves will likely have an impact on black bear, mountain lion, and coyote populations. At some level, predation could benefit deer herds to the extent that it reduces elk competition and keeps deer herds below habitat carrying capacity where they can be more productive. However, excessive levels of predation can also suppress prey populations to undesirably low levels. At this point, the net impact of predation with the new mix of large predators is unclear. Over the past 10 years, the number one cause of mortality on mule deer has been malnutrition, which is a result of harsh winter conditions.

Winter Feeding Issues

There is currently no winter feeding conducted in PMU 4. Minor private feeding activities also occur from time to time.

Harvest

Total harvest in PMU 4 in 2016 was estimated at 4,501 mule deer based on mandatory harvest report cards. This represents a 4% increase in harvest from 2015(4,318) and is 53% higher than the previous five-year average of 2,945. Total hunter numbers were estimated at 11,193 for 2016 compared to 12,919 hunters for 2015. An average of 41% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 39% hunter success rate.

Information Requirements

Annual herd composition surveys are conducted in GMUs 21, 28, 33, 35, 36A, 36B, 49, and 50. Survey methodology was changed in 2008 and population estimates for these GMUs were conducted in 2011 (change from sub-sampled trend counts to complete population counts). The most productive deer herds are those maintained at a level well below carrying capacity. Better information is needed to identify appropriate deer densities that will maintain optimum productivity and harvest. Impacts of elk on mule deer production and survival are suspected, but not quantified. Potential impact of the new mix of large predators is unknown.

Mule Deer

Central Mountains PMU 4 (GMUs 21, 28, 33, 34, 35, 36, 36A, 36B, 49, 50)

Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Maintain	Increase
Hunter Days	>50,000	>50,000

Square Miles =	8,145	3-Year Averages	
% Public Land =	91%	Hunters per square mile =	1.48
Major Land Type =	Forest/Rangeland	Harvest per square mile =	0.64
		Success Rate =	34%



Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer				33,477						

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	57	60	62	56	70	ND	72	67	62	
Buck:Doe	20	20	18	21	26	ND	30	31	26	
Fawn Survival	0.35	0.43	0.69	0.46	0.55	0.42	0.47	0.56	0.37	0.23
Adult Doe Survival	0.82	0.80	0.91	0.87	0.82	0.81	0.91	0.89	0.84	

Note: Raw Fawn:Doe expressed as fawns per 100 does, Raw Buck:Doe expressed as bucks per 100 does

IPM Fawn Survival = overwinter fawn survival (December - May), IPM Adult Doe Survival = annual survival (June - May)

Harvest Statistics

	Deer Harvest				
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
2006	11,400	54,025	551	2,820	33%
2007	7,748	33,936	635	2,866	34%
2008	10,906	52,955	666	2,005	34%
2009	9,876	46,447	476	1,777	35%
2010	9,406	42,439	517	1,923	30%
2011	8,866	41,937	359	1,783	36%
2012	8,672	39,291	368	1,892	38%
2013	10,024	45,097	353	2,358	39%
2014	11,948	53,973	554	2,742	39%
2015	12,919	58,431	628	3,690	42%
2016	11,193	56,189	556	3,945	42%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
21	1,226	ND	1,104	1,284	459	1,273	ND	1,218	1,223	1,072
33	2,186	1,971	1,734	ND	ND	ND	1,546	ND	ND	ND
36B	1,840	2,163	1,963	1,568	1,993	2,210	1,721	2,272	2,348	2,344
50	7,063	ND	5,083	5,703	ND	7,983	ND	6,941	ND	ND

Note: ND = no survey data available

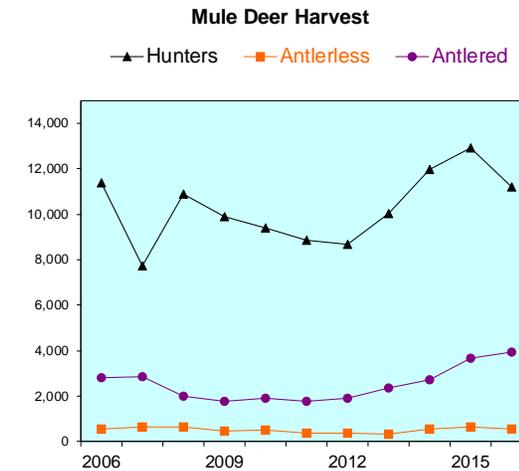
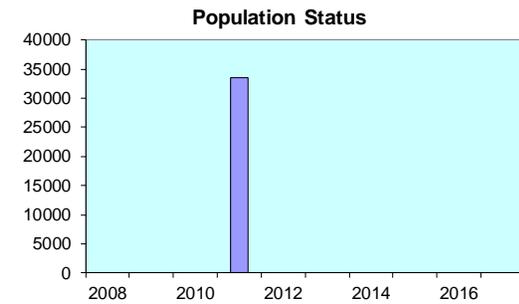


Figure 6. Central Mountains Mule Deer PMU Status and Objectives.

BOISE RIVER

PMU 5 (GMU 39)

Management Objectives

Objectives for Boise River (PMU 5, Figure 7) are to maintain over 30% of the total buck harvest as mature bucks with ≥ 4 points and maintain buck:doe ratios from herd composition surveys above the statewide minimum of 15 bucks per 100 does.

Historical Perspective

This PMU represents one of the major deer PMUs in the State. In the late 1800s, deer herds were reduced by extensive meat hunting throughout the area. Hunting was restricted in the early 1900s. The subsequent increase in deer herds led to large winter mortality and concern for the status of vegetation on deer winter range.

Habitat Issues

Seasonal habitat needed by mule deer encompasses much of the Boise River drainages and tributaries of the Middle Fork Boise River. The majority of mule deer summer on land administered by USFS. Mule deer typically spend summers in forest habitats and move to lower mountain shrub or sagebrush/grass ranges during winter. Logging, grazing, and fires have substantially affected the condition of these ranges. Logging activity has increased shrub fields and provided increased forage for mule deer. The effect of fire on summer ranges has been positive, improving forage conditions for deer. Conversely, effects of fire on low-elevation winter ranges have been more negative. In many cases, fires have reduced important shrub species such as bitterbrush and sagebrush that deer are dependent on during winter. However, cooler spring fires maintain these important shrub species. The proliferation of noxious weeds poses a threat to mule deer winter range.

In the Boise area, expansion of home developments onto mule deer winter range has been a significant problem. This urban development is impacting wintering areas of one-third of the mule deer herd in PMU5. More recently, proposals to develop the Danskin Front may impact an additional one-third to one-half of the mule deer winter range in this PMU.

Biological Issues

Population performance in this area is closely associated with winter severity and body condition of deer when entering the winter period. The percentage of 4+ point bucks was 37% and 41% of the total buck harvest in 2015 and 2016, respectively. Fawn:Doe ratios in 2016 was 45:100, 31% lower than in 2015. Fawn survival between 2013 and 2015 was greater than 60% and doe survival was $\geq 90\%$. There was some concern about carrying capacity due to an increasing population. However, it is difficult to measure carrying capacity as it can change annually. Fawn survival was only 28% during 2016-2017 due to cold, snowy winter, nearly 50% below the 10-year average. A total of 15 fawns:100 does recruited into the spring 2017 population. Sightability surveys were conducted during winter 2010 with a population estimate of $23,039 \pm 1,039$ mule deer. This is down slightly compared to the previous 3 surveys but still well within the population threshold of 20,000 deer to issue antlerless tags. A full population survey is scheduled to be completed during winter 2017-2018.

Fawn monitoring information for the winter of 2015-2016 indicated fawn survival was 53%. It dropped to 28% during 2016-2017. Fawn survival usually fluctuates due to body condition going into winter and winter weather conditions. Adult doe survival was 92% in 2015-2016 within this PMU. During winter 2013, we increased our total sample size to determine overwinter fawn survival from 25 to 50 fawns following the Pony/Elk fires. Twenty-five fawns were captured on Boise River WMA (BRWMA) and 25 fawns at Black's Creek portion of BRWMA in 2014, 2015, 2016, and 2017. The information gathered from the two capture efforts have helped improve our overall knowledge of mule deer migration patterns across GMU 39. The majority of deer captured at Blacks Creek spend their summer in GMU's 43 and 45 along the South Fork Boise River, whereas mule deer captured at BRWMA spend summers between Sunset Lookout and Atlanta.

Inter-specific Issues

Elk densities are relatively high throughout the area. However, they do not appear high enough to limit mule deer numbers as over-winter survival of mule deer fawns has generally been high. Instead, it appears there may be carrying capacity issues as mule deer fawn survival was <50% during the very mild winter of 2007 and only 67% during winter 2011 when the first snow did not fall until late January 2012. More recent information suggests that previous year's summer and fall precipitation affects over-winter fawn survival. Lower fawn survival in 2006-07 and 2010-11 may have been a result of poor body condition due to inadequate late summer and fall forage. Intensive livestock grazing is present on much of the range. Competition among species is largely unknown.

Predation Issues

Bobcats, coyotes, mountain lions, black bears, and wolves occur throughout the PMU. There are ≥ 5 wolf packs in PMU 5. Several years of regulated wolf harvest has reduced the overall wolf population in the PMU. The impact of these large predators on mule deer is largely unknown but under investigation.

Winter Feeding Issues

Winter feeding is relatively uncommon in this PMU. Winter feeding last occurred during winter 1992-1993.

Harvest

Total harvest in PMU 5 in 2016 was estimated at 4,809 mule deer based on mandatory harvest report cards. This represents an 18% increase in harvest from 2015(4,076) and is 75% higher than the previous five-year average of 2,756. Total hunter numbers were estimated at 13,426 for 2016 compared to 14,015 hunters for 2015. An average of 38% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 30% hunter success rate.

Information Requirements

Herd composition counts are conducted annually in GMU 39. Sightability surveys occurred every 2-3 years until 2005. The last survey was during winter 2010, with plans to conduct a full population survey during winter 2017-2018. Information on over-winter fawn survival has been collected since 1998 and annual adult doe survival since 2006. Accurate harvest information, annual herd composition counts (especially buck:doe ratios) and annual doe and fawn survival data will continue to be important information required to effectively manage this deer herd.

Mule Deer Boise River PMU 5 (GMU 39)



Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal		
Hunter Days	>40,000	>40,000

Square Miles =	2,444	3-Year Averages	
% Public Land =	76%	Hunters per square mile =	5.53
Major Land Type =	Forest/Rangeland	Harvest per square mile =	2.47
		Success Rate =	28%

Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer			23,039							

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	51	47	86	76	62	60	64	65	45	
Buck:Doe	12	14	25	17	16	13	19	21	23	
Fawn Survival	0.66	0.68	0.69	0.47	0.60	0.60	0.68	0.65	0.53	0.28
Adult Doe Survival	0.82	0.93	0.86	0.86	0.89	0.92	0.91	0.95	0.92	

Note: Raw Fawn:Doe expressed as fawns per 100 does, Raw Buck:Doe expressed as bucks per 100 does

IPM Fawn Survival = overwinter fawn survival (December - May), IPM Adult Doe Survival = annual survival (June - May)

Harvest Statistics

Year	Hunters	Hunter Days	Deer Harvest		
			Antlerless	Antlered	% 4+ Points
2006	10,712	44,461	1,056	2,174	31%
2007	9,128	37,021	1,269	2,645	33%
2008	11,542	52,147	856	1,197	26%
2009	11,587	49,594	1,146	1,787	29%
2010	11,438	50,612	910	1,526	28%
2011	11,785	52,199	697	1,210	35%
2012	10,660	44,701	968	1,788	38%
2013	11,655	47,780	718	1,649	32%
2014	13,141	51,960	808	1,865	36%
2015	14,015	59,561	1,268	2,808	37%
2016	13,426	56,595	1,195	3,614	41%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
39	22,840	ND	ND	26,058	ND	27,800	ND	26,569	ND	ND

Note: ND = no survey data available

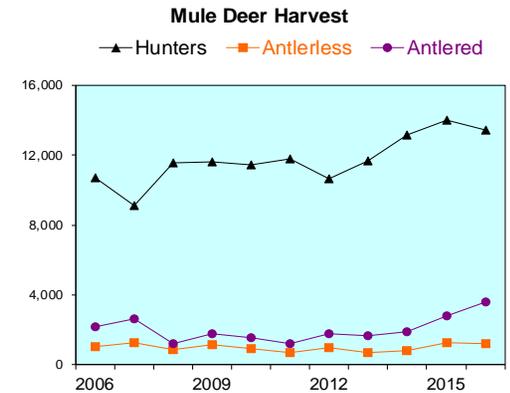
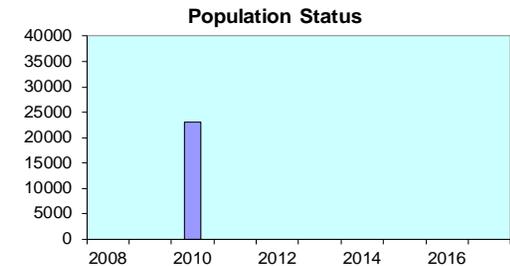


Figure 7. Boise River Mule Deer PMU Status and Objectives.

SMOKY-BENNETT

PMU 6 (GMUs 43, 44, 45, 48, 52)

Management Objectives

Deer populations in Smokey Bennett (PMU 6, Figure 8) will be managed to maintain or exceed 20 bucks per 100 does in the pre-winter population and >45% bucks with four-point or larger antlers in the October harvest.

Historical Perspective

During the late 1800s and early 1900s, mule deer populations in the Smoky-Bennett PMU were reduced to very low levels by unregulated harvest. Miners, market hunters, and other inhabitants of the area relied heavily on deer and elk meat. Mule deer habitat was also greatly altered during this period by excessive livestock use. Dense shrub fields dominated by sagebrush and bitterbrush, replaced plant communities dominated by grasses. This pronounced change in habitat combined with restrictions on deer hunting prompted increases in deer numbers. Hunting seasons were closed or very conservative through 1940. At that time, winter ranges were considered to be over-browsed and in a downward trend, and hunting seasons were designed to reduce deer numbers. Deer numbers remained strong through the 1950s and 1960s. Following a significant decline in numbers during the mid-1970s, deer populations increased again during the late 1980s, a period of prolonged drought conditions and mild winters. During winter 1992-1993, deer populations declined by approximately 50%. Deer had entered the winter in poor physiological condition and high over-winter mortality of fawns and bucks occurred. Since 1993, deer numbers have increased in this area but remain below the population levels of the late 1980s and early 1990s.

Harvest management includes both general (GMUs 43 and 48) and controlled (GMUs 44, 45, and 52) hunting seasons. The controlled hunts are very popular with sportsmen desiring quality bucks, high hunter success, low hunter density, and the opportunity to observe many deer. The Bennett Hills (GMU 45) has had controlled hunting seasons since 1972 and has some of the most highly sought-after mule deer permits in Idaho. After the 1993 population decline, liberal antlerless hunts were maintained in GMUs 43, 44, and 45 to slow deer population growth and allow recovery of deteriorated winter ranges in GMU 45. Prior to 2008, the management objective was to maintain about 8,000 deer in the King Hill trend area. At this population level, which is less than the maximum biological carrying capacity, depredations are minimal, winter range use is appropriate, and reproductive performance is higher than many other southern Idaho deer herds.

The Bennett Front from Bliss Point to Teapot Dome in GMU 45 provides nearly all of the winter range in this PMU. The number of wintering deer using the Picabo Hills and Black Butte Hills in GMU 52 has declined in recent years.

Habitat Issues

This PMU encompasses about 5,487 mi² of which 24% is managed by USFS, 49% by BLM, 5% by Idaho Department of Lands (IDL), and 22% is private land.

Most of GMU 52 and the southern portion of GMU 45 is primarily arid semi-desert dominated by sagebrush-grass. The Mount Bennett Hills in GMU 45 is a low range of mountains or high plateaus consisting of sagebrush-grass and mixed mountain shrub communities with small pockets of aspen and Douglas fir on northern exposures and more mesic sites. GMUs 43, 44, and 48 include the Soldier, Boulder, and Smoky Mountains. Mountain shrub and mountain big sagebrush communities are common on south-facing exposures while northern exposures are timbered.

Grazing by cattle and domestic sheep is the primary land use on public and private lands. Conflicts tend to be localized rather than widespread and include excessive use of forage on winter ranges and riparian area degradation.

Overall habitat security for deer during hunting season is good in GMUs 43 and 48. Seasonal road closures implemented primarily for elk security also benefit mule deer. Cover is relatively open and road densities are higher in GMUs 44, 45, and 52, necessitating controlled hunts to maintain the desired buck age structure.

Motorized access to Bennett Hills winter ranges is presently unregulated and may be affecting deer use of available habitat. Motorized use can displace deer from preferred areas and can cause deer to expend critical energy reserves needed to survive the winter and produce healthy fawns.

Important habitat issues include: 1) Succession, and in some cases heavy livestock use, has caused a general decline in the health of aspen communities. Many stands have become decadent and/or are being replaced by conifers. 2) Winter ranges, primarily in GMUs 45 and 52 are considered to be limiting mule deer in this PMU. Winter ranges are predominately sagebrush-grass and generally do not have a strong bitterbrush component. Much of the winter habitat has been used heavily by deer and livestock for many years and is considered in poor condition in many areas. Medusahead rye has invaded winter ranges following fires and is considered a serious concern to the long-term health of habitat. The prevalence of cheatgrass has also increased in deer winter habitats following fire and/or prolonged heavy grazing pressures that have depleted other understory species. Rehabilitation and protection of these very critical winter ranges will require careful long-term planning that will maintain adequate browse for wintering deer and improve understory vegetation. Conservation easements and/or acquisition of private lands in strategic locations would also help increase or maintain winter carrying capacity for deer. 3) Timber harvest and consequent road-building activities continue in portions of GMU 43. Access management will continue to be an important issue for deer and elk management. Increased access frequently leads to more conservative and restricted hunting season frameworks. 4) Private interests own or control access to important summer and fall habitats in GMUs 44 and 45. This has been a subject of much concern by hunters unable to gain access to areas they wish to hunt. 5) Depredation problems can become acute during severe winters in the King Hill/Bliss areas of GMU 45. Private land used for growing crops and pasturing livestock occurs along the lower perimeter of deer winter range.

In 2011, the Blair Fire burned nearly 40,000 acres of important winter range that supported 5,000-6,000 deer in most winters. Although rehabilitation efforts have been substantial, the

increases in medusahead and cheatgrass are a serious concern for the long-term health of the habitat. Human access to winter ranges was limited to foot traffic only during the first 2 years following the fire to reduce disturbance to deer and protect rehabilitation efforts. Anecdotal reports suggested heavy deer use in the areas closed to motorized access with subsequent abandonment of the areas after they were reopened. In addition, agreements were signed with several nearby farmers to allow deer unlimited access to winter wheat fields.

On Camas Prairie (GMUs 44 and 45), summer depredation problems on growing alfalfa are common during drought years.

Biological Issues

Prior to the decline in deer in 1993, deer populations exceeded winter range carrying capacity and damage to private property was extreme in some years. The short-term management goal has been to maintain deer populations lower than 1988-1992 levels using antlerless harvest. Despite relatively liberal antlerless harvest, the estimated population in the King Hill trend area increased by 80% from 1994 to 1999. From 2000-2007, trend area deer numbers were stable and averaged 7,684 deer. In 2008 the estimated number of deer in the trend area declined to approximately 6,000 and antlerless permits were reduced by 50%. In recent years, harvest management has been designed to slow the rate of growth near the Blair Fire area to benefit recovery of the habitat and maintain the overall health of the deer herd.

Complete aerial surveys of winter ranges in PMU 6 were conducted during 6-14 February 2008 and 6-12 February 2012 to obtain a total mule deer population estimate. The estimated population in 2012 was 13,251; 24% higher than the 2008 estimate of 10,700.

Herd composition survey data suggest a decline in reproductive performance measured in December from 78 fawns:100 does (1973-1992) to 65 fawns:100 does (1993-2012) to 60 fawns:100 does (2012-2016). In December 2016, a ratio of 64 fawns:100 does was observed. Antlerless permits for 2008 hunting seasons were reduced by 48% from 2,500 to 1,300 to allow for herd growth. In 2017 1,250 antlerless permits were authorized in the PMU, in addition to a few either-sex permits and either-sex youth hunts during general seasons.

The observed December 2016 buck to doe ratio was 30 bucks:100 does, above the objective of 20 bucks: 100 does (Figure 7).

Inter-specific Issues

PMU 6 supports a substantial population of elk, in addition to healthy moose, pronghorn, and at higher elevations, mountain goat populations. The relationship between deer and elk is presently unclear, but in 2008 nearly 1,000 elk were observed during the February deer survey and an overlap in winter use areas was noted. Approximately 2,500 elk were observed on an elk sightability survey in January 2015 in Units 45 and 52. On the Bennett Hills Front deer winter ranges, mule deer will maintain management priority over elk if there are competitive concerns during winter. Most of the pronghorn population from the Camas Prairie and northern portion of GMU 52 migrate to Bennett Hills Front winter ranges and co-occupy winter habitat with mule deer. Mule deer and pronghorn will receive equal management consideration on these winter ranges.

Cattle and domestic sheep have imposed the major forage demand in this PMU since the 1870s. Excessive use by cattle and domestic sheep severely damaged soil and vegetation in the late 1800s and early 1900s. Today, livestock use has been reduced to less than 15% of historic use and competitive concerns remain but tend to be more localized.

Predation Issues

Mountain lions, coyotes, black bears, bobcats, and wolves are potential predators on mule deer in the PMU. In recent years, mountain lion populations are believed to have decreased slightly. Coyote numbers are believed to have increased in the past 30 years; however, they are subject to unregulated hunting and periodic control activities by USDA Wildlife Services. Black bear numbers have increased slightly in recent years but densities are considered relatively low. Wolves inhabit the PMU and are subject to frequent control actions because of depredations on domestic sheep. Elk are the major prey item taken by wolves. Wolf predation is not presently considered an important mortality factor in the deer population.

Winter Feeding Issues

Supplemental winter feeding of deer has not occurred in the past few years and is not considered an important issue in this PMU.

Harvest

Total harvest in PMU 6 in 2016 was estimated at 3,462 mule deer based on mandatory harvest report cards. This represents a 14% decrease in harvest from 2015(4,032) and is 13% higher than the previous five-year average of 3,069. Total hunter numbers were estimated at 8,256 for 2016 compared to 9,486 hunters for 2015. An average of 50% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 49% hunter success rate.

Information Requirements

In 2008 new population monitoring protocol was implemented. Instead of annual green-up counts of deer within the King Hill trend area, complete surveys will be conducted every 4-5 years to provide estimates of the total deer population. Samples of radio-collared fawns and does will be monitored annually to provide survival estimates. Pre- winter herd composition surveys will be conducted to monitor fawn production and the buck to doe ratio.

The Bennett Hills Front has some of the highest wintering deer densities in Idaho and winters a high proportion of the mule deer in Magic Valley Region. There is a need for improved monitoring of winter range condition and trend.

Antler shed hunting has become very popular on Bennett Hills winter ranges. There is concern that shed-antler hunters using motorized vehicles to travel cross-country are causing increased energy expenditures by deer during late winter and early spring when energy reserves are lowest.

Mule Deer Smokey Bennett PMU 6 (GMUs 43, 44, 45, 48, 52)



Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Increase	Increase
Hunter Days	>20,000	>20,000

Square Miles =	3,982	3-Year Averages	
% Public Land =	72%	Hunters per square mile =	2.18
Major Land Type =	Rangeland/Forest	Harvest per square mile =	1.56
		Success Rate =	43%

Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer	10,700				13,251					

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	59	58	60	69	63	48	ND	57	64	
Buck:Doe	29	37	22	49	41	35	ND	39	30	
Fawn Survival	0.34	0.56	0.77	0.33	0.73	0.69	0.51	0.70	0.34	0.49
Adult Doe Survival	0.83	0.91	0.86	0.86	0.91	0.93	0.84	0.92	0.88	

Note: Raw Fawn:Doe expressed as fawns per 100 does, Raw Buck:Doe expressed as bucks per 100 does

IPM Fawn Survival = overwinter fawn survival (December - May), IPM Adult Doe Survival = annual survival (June - May)

Harvest Statistics

Year	Hunters	Hunter Days	Deer Harvest		
			Antlerless	Antlered	% 4+ Points
2006	5,494	21,571	1,317	1,439	47%
2007	4,760	17,114	1,250	1,217	46%
2008	5,293	21,758	813	1,289	45%
2009	5,604	22,712	849	1,204	48%
2010	5,751	23,903	898	1,314	50%
2011	6,788	27,219	1,347	1,336	51%
2012	6,104	24,951	1,119	1,428	52%
2013	6,562	26,582	1,072	1,432	50%
2014	8,290	34,982	1,344	2,233	50%
2015	9,486	39,449	1,305	2,727	50%
2016	8,256	38,068	1,121	2,341	50%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
45	6,550	9,165	8,167	8,042	8,195	6,360	7,878	7,206	8,214	7,380

Note: ND = no survey data available

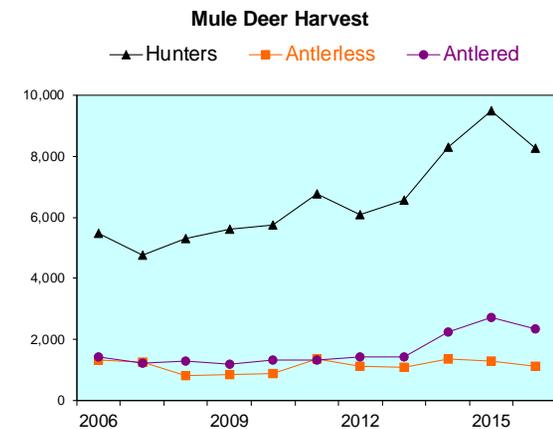
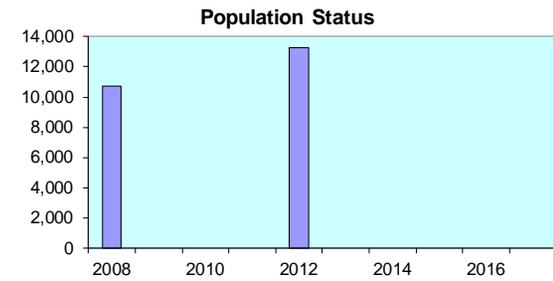


Figure 8. Smokey Bennett Mule Deer PMU Status and Objectives.

OWYHEE

PMU 7 (GMUs 40, 41, 42, 46, 47)

Management Objectives

Post-season buck:doe ratios for Owyhee (PMU 7, Figure 9) will be maintained at a minimum of 25 bucks per 100 does and the percent 4+ points in the harvest will be maintained at no less than 35% in the controlled hunt.

Historical Perspective

GMUs 40, 41, 42, and 47 have traditionally supported substantial deer herds and provided hunting opportunity for southern Idaho hunters. GMU 46 has never supported a large resident deer herd, but nonetheless has provided important general hunting opportunity. During the 1930s and 1940s, deer populations were low and hunting opportunities were very limited in these GMUs. By the 1950s and 1960s, deer numbers had increased to high levels and depredation complaints were common. Deer seasons were liberalized and, in some years, extended to mid-December. Hunters who ventured into Owyhee County could take their pick of “a deer behind every bush.” In 1955, an either-sex deer hunt with a two-deer bag limit was authorized in parts of Area 12 and 5,500 deer were harvested. Liberal hunting seasons continued into the early 1970s when an area-wide decline in deer populations resulted in more conservative hunting seasons. During the 1980s, harvest averaged 1,500 bucks and a few hundred does per year. Since 1991, hunters have been restricted to taking two-point or smaller bucks during the general season in GMUs 40, 41, and 42. GMU 47 has been managed with controlled hunts since 1970, and general antlered-only seasons have been maintained in GMU 46. All 5 GMUs have controlled hunts for any buck in November.

These deer herds use habitat in Oregon, Nevada, and Idaho. An unknown portion of the deer herd in western Owyhee County migrates to Oregon during winter. On the eastern side of Owyhee County, substantial numbers of deer migrate north from Nevada to winter in Idaho. This interstate mixing of deer populations makes evaluation of the status of Idaho’s herd difficult.

Habitat Issues

About 90% of the land area is in public ownership. The BLM manages the majority of the area, and IDL administers smaller segments. It is primarily high-desert habitat dominated by sagebrush-grass and juniper cover types. Isolated mountain ranges and foothill areas include mixed mountain shrub and aspen types.

There have been several major changes in mule deer habitat over the last 30 years. Fires have destroyed large portions of winter ranges in GMUs 40, 41, and 46. Historically burned areas have been reseeded with crested wheatgrass, or have been invaded by cheatgrass and have little browse to support wintering deer. In 2007 the Murphy Complex Fire burned more than 500,000 acres in GMUs 41, 46, and 47 including important winter range. In 2015, the Soda Fire burned 283,000 acres of winter range in GMU 40. Fire rehabilitation efforts were substantial for both fires but deer numbers may decline until the habitat has recovered. In GMU 42, there has been substantial encroachment of juniper into former summer and winter ranges. In several areas

where juniper has replaced more important browse species, the number of wintering deer has been reduced.

Biological Issues

Very little mule deer aerial survey data exists for this PMU. Population estimates are not derived from aerial surveys due to expansive land area, dispersed groups of deer, poorly defined winter range, difficult winter access, and interstate migratory patterns..

Inter-specific Issues

Currently, elk populations are relatively small throughout the year in this PMU but greater numbers of elk are seasonally using parts of this PMU, particularly GMU 41. In February 2017, Nevada Division of Wildlife (NDOW) conducted an aerial survey on the Idaho/Nevada border. A total of 2,120 elk were counted west of the Bruneau River in Idaho; The survey this year extended further north into Idaho than it has in previous years. NDOW counted 1,277 elk east of the Bruneau River. Elk numbers increased substantially in GMUs 46 and 47 following the Murphy Complex Fire and the expansive grasslands that were created. At its present population level, this elk herd does not constitute a significant management concern for mule deer.

Livestock grazing is, and has been, the predominant land use in the area. In the early part of the twentieth century, excessive grazing by livestock combined with fire suppression severely altered plant communities to favor shrubs, and mule deer benefited. Extensive areas have burned during the past several decades, and much of the sagebrush steppe was reseeded to crested wheatgrass or was invaded by cheatgrass. The reestablishment of sagebrush to benefit deer may conflict with livestock grazing interests in some areas. Livestock numbers are currently significantly less than during the early part of the twentieth century, and serious conflicts are localized rather than widespread on winter ranges and critical riparian areas.

Predation Issues

Coyotes, bobcats, and mountain lions are the large predators in this area. There are no wolves or black bears in the area.

Winter Feeding Issues

The remoteness of winter deer herds has limited the demand for and the ability to conduct supplemental winter-feeding. No winter-feeding has occurred for many years in these GMUs. The Department will work with the Regional Winter Feeding Advisory Committee to discourage winter-feeding by the public and to identify any situations where feeding may be appropriate.

Harvest

Total harvest in PMU 7 in 2016 was estimated at 1,948 mule deer based on mandatory harvest report cards. This represents a 17% decrease in harvest from 2015(2,342) and is 1% higher than the previous five-year average of 1,921. Total hunter numbers were estimated at 5,221 for 2016 compared to 6,019 hunters for 2015. An average of 23% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 45% hunter success rate.

Information Requirements

The primary data need for these GMUs is population information. Winter ranges contain a mixture of deer from Oregon/Idaho or Nevada/Idaho. We are currently evaluating alternative survey methods to sightability surveys to hopefully develop population metrics in the future. We will also be initiating two deer studies in GMU 40 to determine spatial and habitat use of does, and harvest vulnerability of bucks.

Mule Deer Owyhee PMU 7 (GMUs 40, 41, 42, 46, 47)



Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Increase	Increase
Hunter Days	>12,000	>17,500

Square Miles =	9,015	3-Year Averages	
% Public Land =	85%	Hunters per square mile =	0.65
Major Land Type =	Desert/Rangeland	Harvest per square mile =	0.30
		Success Rate =	36%

Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer										

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	ND									
Buck:Doe	ND									
Fawn Survival	ND									
Adult Doe Survival	ND									

Note: Fawn:Doe expressed as fawns per 100 does, Buck:Doe expressed as bucks per 100 does

Fawn Survival = overwinter fawn survival (December - May), Adult Doe Survival = annual survival (June - May)

Harvest Statistics

	Deer Harvest				
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
2006	4,442	14,454	259	1,678	19%
2007	3,563	11,948	106	1,442	29%
2008	4,761	17,924	188	1,221	30%
2009	5,033	17,547	242	1,635	22%
2010	5,377	18,754	250	1,698	25%
2011	5,829	20,667	276	1,612	25%
2012	5,354	19,381	223	1,503	28%
2013	6,071	22,418	174	1,416	30%
2014	6,277	22,433	289	1,768	25%
2015	6,019	20,442	316	2,026	23%
2016	5,221	20,265	232	1,716	22%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	ND									

Note: ND = no survey data available

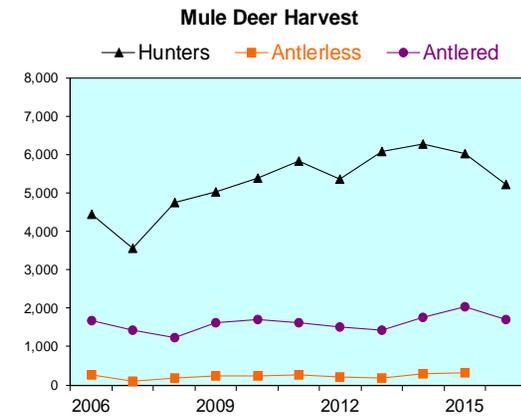
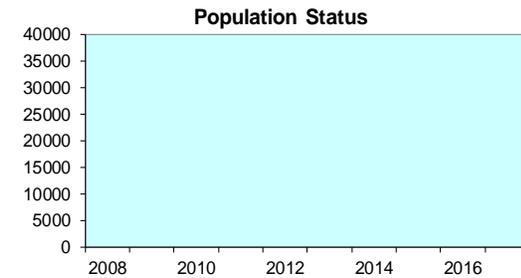


Figure 9. Owyhee Mule Deer PMU Status and Objectives.

SOUTH HILLS

PMU 8 (GMUs 54, 55)

Management Objectives

Deer populations in South Hills (PMU 8, Figure 10) will be managed to maintain or exceed 25 bucks per 100 does in the pre-winter population and >35% bucks with four-point or larger antlers in the October harvest.

Historical Perspective

During the early 1900s, mule deer populations in South Hills PMU were very low, due in part to unregulated harvest. During the late 1800s and early 1900s, heavy use by domestic livestock greatly altered deer habitat. Shrub fields dominated by sagebrush and bitterbrush, replaced plant communities once dominated by grasses. This change in habitat set the stage for dramatic increases in deer numbers. Closed hunting seasons from 1909-1935 and very conservative seasons through 1940 helped allow deer populations to increase. By 1950, deer numbers had reached an estimated 20,000 head in GMU 54 and winter ranges were considered severely over-browsed. Efforts were made to reduce deer populations with both general and controlled season frameworks. Following a significant decline in numbers during the mid-1970s, deer populations increased again during the late 1980s, a period of prolonged drought conditions and mild winters. During winter 1992-1993, deer populations declined by an estimated 35-40%. Deer had entered the winter in poor physiological condition and high over-winter fawn and buck mortality occurred. After the 1993 winter die-off, deer populations in this PMU continued to decline through 1997 and remained relatively stable from 1997-2003. Trend area surveys suggest that deer numbers increased substantially in 2004-2007 compared to 1997-2003 levels.

Since 1970, this PMU has been managed exclusively with controlled firearm seasons. These GMUs are very popular with sportsmen desiring quality, high hunter success, low hunter density, and the opportunity to observe many deer. Following the 1993 population decline, antlerless-only hunts were eliminated. Presently (2017), 380 antlerless permits are available.

Segments of the deer populations exhibit interstate movements. In GMUs 54 and 55, there are migrations south to winter ranges in Nevada and Utah, respectively. Harvest management in Utah and Nevada has been compatible with the Department's management objectives. Important winter ranges in this PMU are: Jim Sage (GMU 55), Willow Creek (GMU 55), Dry Creek (GMU 54), and Sugarloaf (GMU 54).

Habitat Issues

This PMU is characterized by isolated mountain ranges surrounded by farmland and sagebrush-grass semi-desert. At low to mid elevations, juniper woodlands are common with mixed mountain shrub and aspen communities occurring along riparian areas and on some north- and east-facing slopes. At higher elevations, pockets of conifers (lodgepole pine, Douglas fir, and subalpine fir) and aspen occur on north- and east-facing aspects and more mesic sites. Primarily, USFS and BLM manage important summer and winter habitats. When deer populations are high, depredation complaints on growing alfalfa are common in GMU 55.

Important habitat issues include: 1) succession, and in some cases heavy livestock use, has caused a general decline in the health of aspen communities. Many stands have become decadent and/or are being replaced by conifers. Where the vigor and size of aspen communities can be improved, prescribed fire should be considered. 2) quality and quantity of winter habitat is considered to be limiting mule deer in this PMU. During the past 30 years, fire has altered much of the critical habitat in GMU 54. The loss of extensive bitterbrush stands on the Dry Creek, Sugarloaf, and Buckbrush Flat winter ranges is expected to have long-term negative effects on deer populations. While sagebrush is beginning to reestablish on some of these winter ranges, bitterbrush recovery has been slow or nonexistent. In GMU 55, the distribution and density of juniper has increased on some winter ranges, replacing important browse for wintering deer. Management should favor the reestablishment and long-term maintenance of shrubs on winter ranges. Bitterbrush plantings should be undertaken in areas where natural recovery is not evident. In some areas, carefully designed projects to remove junipers by burning or chaining may have long-term benefits for mule deer. 3) due to the open nature of the habitat and high road densities in some areas, habitat security for deer during hunting season is considered moderate, although some high security areas exist in all GMUs. Road densities are considered high in GMU 54 and moderate in GMU 55. Several motorized vehicle area closures have been implemented in GMU 54 to provide additional security habitat and non-motorized hunting opportunity. Additional motorized vehicle restrictions may be recommended to maintain quality-hunting opportunity and desired buck age structures in GMU 54.

There was one depredation complaint west of Oakley involving mule deer during the 2016-2017 reporting period.

Biological Issues

Following the 1993 decline in deer numbers, trend area counts remained relatively low through 2003 and averaged 2,355 deer. Beginning in 2004, populations increased and from 2004-2007 trend area counts averaged 4,036 deer (Figure 9). Trend counts have not been conducted since 2007.

Since 2012, fawn survival ranged from 0.46 in 2017 to 0.61 in 2016. Annual estimated survival of adult does averaged 0.81 from 2012-2016 (Figure 9).

Pre-winter composition data indicate a loss of reproductive performance in these deer herds prior to winter. In GMU 54, from 1974-1992, a pre-winter ratio averaged 83 fawns per 100 does compared to 54 fawns per 100 does from 2008-2016. The buck to doe ratio in the PMU did not meet the objective of 25 bucks per 100 does in 2015, but exceeded it in 2016 (Figure 9).

An aerial survey was conducted in 2008 and estimated 8,903 wintering deer in GMUs 54 and 55. This PMU was surveyed again in 2017 and 10,396 deer were estimated wintering in these GMUs.

Inter-specific Issues

Elk, black bear, and bighorn sheep were eliminated from these GMUs during the late 1800s and early 1900s. Today, a growing elk population exists in GMUs 54 and 55. There are currently (2017) no competitive concerns with deer and elk, but this paradigm may change as elk

populations increase. A small population of California bighorn sheep inhabits the northeast portion of the Sawtooth National Forest in GMU 54 but poses no concern with mule deer management.

Livestock have imposed the major forage demand throughout these GMUs for over a century. Currently, on public lands, livestock management is generally compatible with deer habitat management, although heavy livestock use in some localized areas has negative effects. In the past, conversion of large areas from native sagebrush/grass communities to crested wheatgrass seeding has had negative effects on deer habitat.

Predation Issues

Mountain lions, coyotes, and bobcats are potential predators on mule deer in PMU 8. Mountain lion populations increased markedly in these GMUs, presumably in response to the high deer populations in the late 1980s and early 1990s. Mountain lion harvest doubled, depredations on domestic sheep increased, and the frequency of reported mountain lion observations rose substantially. While the relationship between deer and mountain lions is unclear, mountain lions do not appear to be playing a role in slowing the recovery in deer herds. There are recent indications from mountain lion hunters that mountain lion populations have increased, probably in response to the increased mule deer populations. Coyote numbers are believed to have increased in the past 30 years; however, they are subject to unregulated hunting and periodic control activities by USDA Wildlife Services. The effect, if any, of coyote predation on mule deer population dynamics is unknown, but is not considered a significant threat to mule deer populations under typical weather regimes.

Winter Feeding Issues

Supplemental winter feeding of deer has not occurred in the past few years and is not considered an important issue in this PMU.

Harvest

Total harvest in PMU 8 in 2016 was estimated at 1,278 mule deer based on mandatory harvest report cards. This represents a 2% decrease in harvest from 2015(1,302) and is 6% higher than the previous five-year average of 1,211. Total hunter numbers were estimated at 2,583 for 2016 compared to 2,535 hunters for 2015. An average of 45% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 50% hunter success rate.

Information Requirements

Periodic sightability surveys are needed to provide reliable data for population modeling and to monitor changes in winter distribution.

A better understanding of the relationship between road densities and buck survival during hunting season would improve our ability to make sound decisions about access and harvest management.

Mule Deer South Hills PMU 8 (GMUs 54, 55)



Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Increase	Increase
Hunter Days	>7,500	>10,000

Square Miles =	2,378	3-Year Averages	
% Public Land =	56%	Hunters per square mile =	1.11
Major Land Type =	Rangeland	Harvest per square mile =	0.84
		Success Rate =	49%

Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer		8,903								10,396

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	54	58	60	45	50	47	ND	62	55	
Buck:Doe	16	27	25	27	25	25	ND	17	30	
Fawn Survival	0.39	0.30	0.70	0.34	0.59	0.48	0.49	0.59	0.61	0.46
Adult Doe Survival	0.86	0.80	0.89	0.98	0.78	0.80	0.90	0.78	0.80	

Note: Raw Fawn:Doe expressed as fawns per 100 does, Raw Buck:Doe expressed as bucks per 100 does

IPM Fawn Survival = overwinter fawn survival (December - May), IPM Adult Doe Survival = annual survival (June - May)

Harvest Statistics

	Deer Harvest				
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
2006	1,757	8,366	184	886	48%
2007	2,006	9,600	205	1,058	49%
2008	2,896	14,492	181	933	47%
2009	2,845	14,382	259	870	49%
2010	2,897	13,382	302	904	44%
2011	3,098	14,852	289	821	46%
2012	2,973	13,947	356	863	48%
2013	3,014	14,052	340	809	51%
2014	2,769	12,486	356	920	45%
2015	2,535	11,138	357	945	45%
2016	2,583	12,732	369	909	46%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
54	1,745	1,678	1,217	1,306	1,314	1,133	2,018	2,027	ND	2,735
55	675	796	1,022	935	1,301	927	1,504	2,625	3,073	1,054

Note: ND = no survey data available

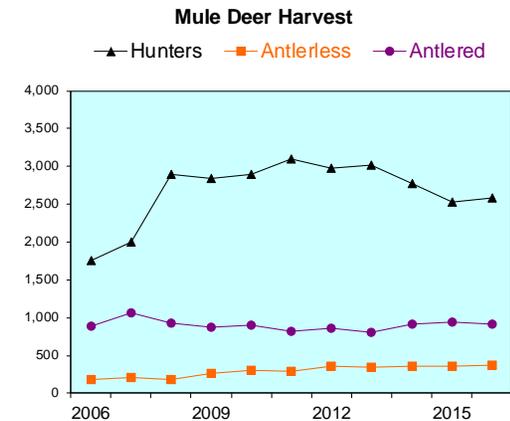
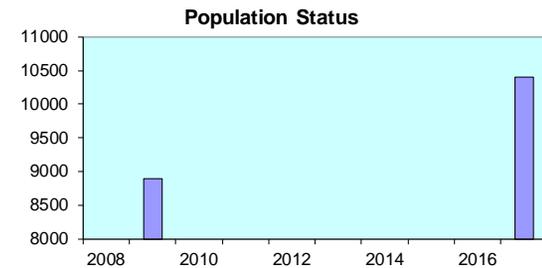


Figure 10. South Hills Mule Deer PMU Status and Objectives.

BANNOCK

PMU 9 (GMUs 56, 57, 70, 71, 73, 73A, 74, 75, 77, 78)

Management Objectives

Objectives for PMU 9 (Figure 11) include maintaining greater than 15 bucks:100 does post-season and a minimum of 40% 4+ points in the harvest.

Historical Perspective

The mule deer population in PMU 9 has fluctuated widely since the mid-1800s. Deer numbers probably declined through the early 1900s, possibly due to unregulated harvest. By 1920, observations of deer were quite rare. Between 1920 and the early 1970s, deer numbers increased dramatically, interrupted briefly by significant winter mortality. Following a significant decline in numbers beginning in 1972, numbers again increased until the late 1980s. The population level attained during this second peak probably did not reach that attained during the 1950s to early 1970s. Overall, mule deer numbers in these GMUs appear to be highly volatile with wide fluctuations over relatively short time periods.

Harvest management during the 1950s and 1960s was designed to maintain or reduce deer numbers in response to what was considered over-browsed winter ranges. Season frameworks in these GMUs (Appendix A) have varied considerably more than elsewhere in southeastern Idaho. General seasons have been the rule, except in GMU 56, which had controlled hunts from 1970-1981. Season lengths have varied from 3 days to 5 weeks. Either-sex opportunity has ranged from none to extra antlerless-only tags available in 1989 and 1990 for GMUs 70, 73, and 73A. Following the winter of 1992-1993, when significant winter mortality occurred, harvest management has been conservative.

Research in the mid-1980s found very low survival of bucks in GMU 73. A two-point only regulation, with short periods of any buck hunting, was enacted there in 1997 after the buck:doe ratio fell below 10:100. Hunter numbers decreased for several years, proportions of older bucks increased somewhat, until harvest of older bucks returned to earlier levels. In 2004, a four-point or greater regulation was enacted in GMUs 70 and 73 in response to public suggestions. The four-point or greater regulation was still in place for GMUs 70 and 73 for the 2007 season and reached a buck:doe ratio of 32:100. However, the four-point restriction was removed in 2008 for GMU 70 and in 2009 for GMU 73 as public support and data did not support continuing with antler restricted season structure. Both GMUs 70 and 73 have remained in controlled hunts with 175 available permits in GMU 70 and unlimited permits available in GMU 73. In GMU 73, concerns from sportsmen of overcrowding were becoming common. In an attempt to alleviate the crowding issue, the Department changed the controlled hunt to a 1st choice only, preventing hunters from applying for this hunt as a second choice. The advantage of this step is that GMU 73 remains unlimited, and hunters who draw the tag are not subject to the wait period in subsequent years.

In 2008, a 200 tag antlered only controlled hunt was placed in GMU 78. In 2014, a controlled antlered only rotating muzzleloader hunt was implemented that was set to rotate between GMUs 68, 73A, and 74 and run from November 16 – November 30. In 2015, three new 5 tag antlered

hunts were added to GMUs 66A, 70, and 73 that run from October 10 – November 30. Additionally, a 40 tag either-sex controlled hunt was added to GMU 73 in 2015 that runs from October 17 – October 31. All of these additions were in response to the objective in the 2008-2017 Mule Deer Management Plan to provide quality hunt opportunities in each region.

Major wintering areas in the Bannock PMU are: Pauline (GMU 70), Lead Draw to Walker Creek (GMU 70), Elkhorn Mountain (GMU 73), Malad Face (GMU 73), Samaria Mountain (GMU 73), Hansel Mountains (GMU 73), Rockland Valley (GMU 73A), Knox Canyon (GMU 73A), Juniper (GMU 56), the Hagler Canyon complex (GMU 56), and Sweetzer Pass (GMU 56), Eightmile (GMU 57), Blackrock Canyon (GMU 71), Portneuf Winter Range (GMU 71), the west facing slopes east of Downey (GMU 74), Hadley Canyon complex (GMU 74), Densmore Creek (GMU 74), and Treasureton (GMU 74), West Bear Lake (GMU 78), Grace Front (GMU 75), and the Oneida Narrows Complex (GMU 77).

Habitat Issues

This PMU represents the least productive habitats in southeastern Idaho. Low productivity habitats combined with variable winter conditions undoubtedly cause mule deer numbers to vary considerably over time. Three main vegetation types predominate: sagebrush-grassland, aspen, and conifer. Other variations of these 3 main types that are important to deer include mixed shrub communities, Utah juniper, and curlleaf mahogany. The current mix of vegetation cover types is a result of intensive grazing by livestock during the early 1900s and ongoing fire suppression efforts. These factors converted what was predominately perennial grass stands into shrublands with depleted or sparse understories. Given that current livestock grazing practices are much more conservative and designed to promote grass, and that the current shrublands are aging, it is believed that the quality of mule deer habitat probably peaked earlier in the twentieth century. The current conversion of aspen to conifer and replacement of mixed shrub and sagebrush communities by juniper probably will reduce habitat suitability for mule deer.

Approximately 41% of the land in PMU 9 is publicly owned. BLM and USFS administer the majority of public land. Fort Hall Indian Reservation makes up approximately 7%, while the remaining 52% is private. Private land is predominately used for rangeland pasture, small grains, and hay production. A substantial amount of private land has been enrolled in the Conservation Reserve Program (CRP). Depredation complaints are generally limited to periods of high deer populations. Predominant land uses of the publicly owned ground include livestock grazing, timber management, and recreation. Of particular concern is the encroachment of human activity, either intense recreational efforts and/or structural developments, in mule deer winter range. Developments from the west side of Pocatello south to Walker Creek in GMU 70 have reduced the potential wintering area for deer. Development along the Portneuf, Hadley Canyon complex, Treasureton, Bear River Valley of GMU 77 and along the West Bear Lake winter range in GMU 78 will undoubtedly reduce the potential for wintering greater numbers of deer.

Open habitat types combined with moderate to high road densities and, in some areas unrestricted ATV travel result in a greater vulnerability of mule deer in this PMU. Use of motorized vehicles for hunting is prohibited in some, but not all GMUs. Other than hunting, motorized travel on the Caribou National Forest within this area is restricted to designated routes

during the snow-free period of the year with the specific purpose of reducing impacts to wildlife habitat and reducing wildlife disturbance.

Biological Issues

Recruitment rates, as evidenced by December/January fawn:doe ratios, have ranged from 50 to 75:100 over the past few winters. It is expected that 66 fawns:100 does is adequate to maintain populations with normal winter mortality, while increased recruitment is necessary for population growth. Conversely, recruitment rates less than 66:100 are generally consistent with stable to declining populations.

The winter of 2016-2017 was severe in portions of the Bannock PMU. Overall, adult doe survival was 89% in the PMU. However, it is likely that doe mortality was higher than this in localized areas (winter conditions in GMU 78 were particularly severe). There were no fawns collared in the PMU during the winter of 2016-2017 but it is expected that survival was lower than average (with survival in some areas being extremely low and others being more moderate). This winter was preceded by several mild winters from 2011-2015 when survival of collared does was quite high and higher than average fawn survival was expected. Preceding these mild winters, the winter of 2010-2011 was also severe and doe survival in the Bannock PMU was 73%.

Inter-specific Issues

Although livestock graze much of the mule deer range in this PMU, interactions of concern are relatively few and tend to be limited to localized areas. Of primary concern are livestock winter feedlot operations that concentrate deer during winter. Of minor concern are a few localized areas (riparian and winter range) of intense livestock pressure.

The current trend of elk occupying mule deer winter range is a potential concern. Some winter range in this PMU do not lend themselves to niche separation by the two species and, therefore, either direct resource competition and/or social intolerance will likely impact mule deer numbers. The Department will seek opportunities to minimize the occupancy by elk in key mule deer winter ranges.

Residential, recreational, and associated development has impacted available deer winter ranges, particularly in GMU 70 and 78. These impacts have likely had direct effects on numbers of deer and will be impossible to mitigate. Continued growth of human populations will necessitate the acknowledgment of impacts to wildlife habitat and populations.

Predation Issues

Major predators of mule deer in this PMU include mountain lions, coyotes, and bobcats. Mountain lion and coyote populations may have increased during the last 30 years. It is unknown specifically what impact these changing predator systems are having on mule deer population dynamics, although a multi-year investigation of the impact of manipulating predator populations indicated small affects.

Winter Feeding Issues

Emergency supplemental feeding of deer occurs periodically; however, these GMUs generally have milder winter conditions than elsewhere in southeastern Idaho. In many cases, emergency feeding is initiated after deer have been attracted to cattle feedlot operations or private citizens began feeding deer early in winter. Both of these circumstances could short-stop deer from reaching more suitable winter range and generally result in high over-winter mortality rates. The Department, working in conjunction with the Winter Feeding Advisory Committee, will discourage livestock operators and other private citizens from encouraging deer use of non-traditional food sources.

Mule deer were provided supplemental winter-feed at a Department-sanctioned, Commission-approved feed site east of Stone (GMU 56) during 12 of 15 winters during 1974-1988. An estimated 500-1,400 deer were fed annually. The feeding was initiated following the construction of Interstate 84 that blocked the traditional migration of deer from GMU 56 to winter ranges on the south end of Black Pine Mountain (GMU 57) and the east end of the Raft River range in Utah. In the early 1950s, it was estimated that more than 4,000 deer from GMU 56 made the migration. During the open winters associated with the prolonged drought of the late 1980s, deer did not concentrate near the state line for several consecutive years, and the feeding operation was permanently closed down. GMU 56 will be managed for the number of deer that can be supported on winter ranges without an annual winter-feeding effort.

Private citizens, with and without Department assistance, have provided supplemental winter feed for approximately 500 deer in several areas in GMU 73 intermittently.

During winter 2010-2011 emergency winter feeding was conducted in GMU 78. We had as many as 12 feed sites in the GMU and were feeding over 2000 deer. Volunteers fed all these deer, but with snow depths exceeding 30 inches it was difficult for deer to move. Doe survival was low at 73% and fawn survival, though not specifically measured, was very low. Although the 2012-2013 winter was mild, one emergency winter feed site was established in GMU 70 in the area of the Charlotte Fire in southeast Pocatello.

Emergency winter feeding was again conducted in the Bannock PMU during the winter of 2016-2017. Volunteers and staff fed deer at 42 sites across the PMU. It was estimated that there were 4,500-5,000 deer being fed.

Harvest

Total harvest in PMU 9 in 2016 was estimated at 4,196 mule deer based on mandatory harvest report cards. This represents a 9% decrease in harvest from 2015(4,591) and is 15% higher than the previous five-year average of 3,650. Total hunter numbers were estimated at 10,492 for 2016 compared to 13,443 hunters for 2015. An average of 45% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 44% hunter success rate.

Information Requirements

The Department will explore various means of better quantifying over-winter mortality so that harvest recommendations are more responsive to changing populations.

Recent observed recruitment rates are consistent with increasing populations. A better understanding of factors affecting recruitment rates is needed.

Although habitat succession and change are occurring, it is unknown what specific impacts will occur to deer populations. Furthermore, it is unknown whether the aging of current mule deer habitat leads to ultimately less productive and nutritious vegetation.

Research to document the effect of doe harvest on population productivity, age structure of the population, and that effect on population size would be beneficial. This research would help improve our baseline knowledge of antlerless harvest and allow us to better manage mule deer populations for increased productivity.

Mule Deer Bannock PMU 9 (GMUs 56, 57, 70, 71, 73, 73A, 74, 75, 77, 78)

Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Increase	Increase
Hunter Days	>35,000	>50,000

Square Miles =	5,470	3-Year Averages	
% Public Land =	48%	Hunters per square mile =	2.25
Major Land Type =	Rangeland/Forest	Harvest per square mile =	1.06
		Success Rate =	36%



Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer								33,943		

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	54	59	54	56	61	76	68	76	70	
Buck:Doe	11	15	19	25	23	23	23	29	26	
Fawn Survival	0.38	0.38	0.55	ND	0.65	ND	ND	ND	ND	ND
Adult Doe Survival	0.83	0.69	0.96	0.73	0.89	0.91	0.79	0.89	0.89	

Note: Raw Fawn:Doe expressed as fawns per 100 does, Raw Buck:Doe expressed as bucks per 100 does

IPM Fawn Survival = overwinter fawn survival (December - May), IPM Adult Doe Survival = annual survival (June - May)

Harvest Statistics

	Deer Harvest				
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
2006	10,458	42,556	69	2,678	45%
2007	8,901	34,069	123	3,317	41%
2008	11,278	49,871	177	2,466	46%
2009	10,651	45,392	574	1,969	40%
2010	10,361	42,421	537	2,459	40%
2011	10,147	41,213	423	2,005	44%
2012	10,025	40,840	552	2,822	43%
2013	11,682	48,628	646	2,773	42%
2014	13,051	52,111	792	3,647	44%
2015	13,443	55,999	710	3,881	42%
2016	10,492	50,846	590	3,606	48%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
56	ND	ND	ND	1,710	1,133	700	1,101	1,357	ND	1,773
71	ND	ND	1,118	920	889	840	697	731	479	ND
73	ND	ND	1,865	3,009	1,510	1,880	2,130	3,169	1,943	ND
73A	ND	ND	1,533	2,100	2,016	1,734	1,121	1,168	1,852	ND
78	ND	ND	1,707	3,150	1,405	1,449	2,852	2,368	1,689	ND

Note: ND = no survey data available

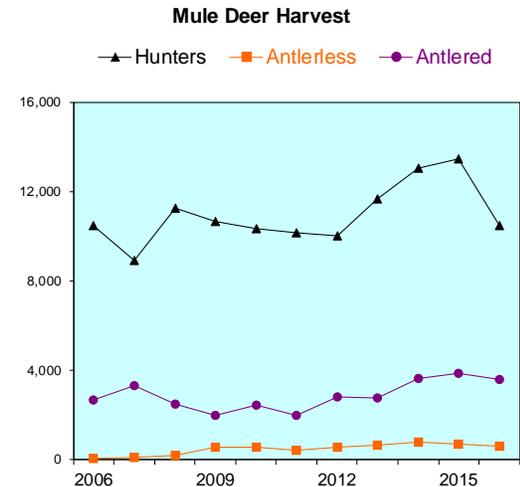
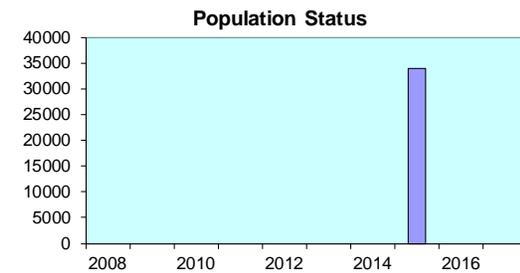


Figure 11. Bannock Mule Deer PMU Status and Objectives.

CARIBOU

PMU 10 (GMUs 66, 66A, 69, 72, 76)

Management Objectives

Deer populations in PMU 10 (Figure 12) will be managed to maintain or exceed 15 bucks:100 does post-season, and a minimum of 30% 4+ points in the harvest.

Historical Perspective

The mule deer population in PMU 10 has fluctuated widely since the mid-1800s. Osborne Russell (1914) did not mention mule deer in this area in the 1840s. Since he liked to hunt deer and noted the presence of other big game in the general area, it is likely deer were not common. Early homesteaders and trappers reported that deer were seen but were less numerous than buffalo, bighorn sheep, and elk. Deer numbers probably declined through the early 1900s, possibly due to unregulated harvest. By 1920, observations of deer were quite rare. Between 1920 and the early 1970s, deer numbers increased dramatically, interrupted briefly by significant winter mortality. Following a significant decline in numbers beginning in 1972, numbers again increased until the late 1980s. The population level attained during this second peak probably did not reach that attained during the 1950s - early 1970s.

Harvest management during the 1950s and 1960s was designed to reduce deer numbers in response to what was considered over-browsed winter ranges. Long general seasons with opportunity for extra deer tags predominated. Following the decline in the early 1970s, harvest management became more conservative with 2-4 week general seasons with varying amounts of either-sex opportunity offered. By the late 1980s, the deer population had increased to a point that a population reduction was desired. The years 1989 and 1990 were marked by four-week general either-sex seasons with extra deer tags available. The population then declined again following a severe winter in 1992-1993. Recently, the population has not recovered to the level of the long-term average. Hunting seasons over the years have been adjusted in an attempt to respond to obvious fluctuations in the population. GMUs 66 and 69 have supported one of the longest running late-season controlled buck hunts in the state (Appendix A). Permits for this hunt have extremely high appeal, but permit numbers have been reduced from a high of 200 permits in the 1980s to only 10 permits in 2005.

An apparent change in the winter distribution of mule deer has occurred, primarily in GMU 76. During the 1950s and 1960s, deer use of the Soda Front (Wood Canyon south to Montpelier) was extensive, while use of the Bear Lake Plateau and the Soda Hills (GMU 72) was minimal. Currently, the Bear Lake Plateau and the Soda Hills represent the two most significant winter ranges for mule deer in GMUs 72 and 76.

Major wintering areas in this PMU are: Soda Hills (GMU 72), Bear Lake Plateau (GMU 76) and the Tex Creek Winter Range (GMU 69). An unknown number of deer migrate to and winter in Wyoming and Utah.

Habitat Issues

PMU 10 represents the most productive habitats for mule deer in southeastern Idaho. Three main vegetation types predominate: sagebrush-grassland, aspen, and conifer. Other variations of these three main types that are important to deer include mixed brush communities, juniper, and mahogany. The current mix of vegetation cover types is a result of intensive grazing by livestock during the early 1900s and ongoing fire suppression efforts. These factors converted what was predominately perennial grass stands into shrublands. Given that current livestock grazing practices are much more conservative and designed to promote grass, and that current shrublands are aging, it is logical that quality mule deer habitat probably peaked earlier in the twentieth century. Additionally, the current conversion of aspen to conifer and replacement of mixed shrub and sagebrush communities by juniper probably will reduce habitat suitability for mule deer.

The USFS owns approximately 54% of the land in this PMU. The remaining 46% of private ground is predominately used for rangeland pasture, small grains, and hay production. Approximately 250 square miles of the area is Fort Hall Indian Reservation land. A significant portion of private land is now enrolled in CRP. When CRP was new, it was contributing substantially to the area's carrying capacity for deer during all seasons. Since the early 1990s, CRP has become a decadent monoculture of grass and is very undesirable deer habitat. Aspen communities provide valuable fawning habitat for mule deer and have declined in area and quality throughout the PMU. The Tex Creek WMA, partially owned and totally managed by the Department, provides 30,000 acres of prime winter habitat for mule deer, elk, and moose. This land was purchased to mitigate for habitat inundated or destroyed by Ririe, Palisades, and Teton dams. Unfortunately, much of the Tex Creek winter range burned in the Henrys Creek fire during the summer of 2016. This fire likely reduced the extent and quality of mule deer winter range at Tex Creek for the near future.

Depredation complaints are generally limited to periods of high deer populations. Predominant land uses of the publicly-owned lands include livestock grazing, timber management, recreation, and phosphate mining. Of particular concern is the encroachment of human activity, either intense recreational efforts (i.e., over-snow machine travel) and/or structural developments, in mule deer winter range.

Open habitat types combined with moderate road densities, and in some cases unrestricted ATV travel, probably result in a greater vulnerability standard for mule deer in this PMU.

Biological Issues

Recruitment rates, as evidenced by December/January fawn:doe ratios, have ranged from 65 to 80:100 over the past 5 years. It is expected that 66 fawns:100 does is adequate to maintain populations with normal winter mortality, while increased recruitment is necessary for population growth. Conversely, recruitment rates less than 66:100 are generally consistent with stable to declining populations.

A trend count flown in late 2003 in GMUs 66, 66A, and 69 resulted in an estimate of 2,475 total deer, which is well below the 3,340 estimated on the 1999 survey and the antlerless harvest threshold of 3,000. The trend area was flown again in 2005 resulting in an estimate of 1,532

total deer. This downward trend was of great concern. A survey was conducted in 2007 and a total of 3,110 deer were estimated. In the late winter of 2010 the PMU was sightability surveyed and 24,302 was the total estimated deer population. This is the first survey of the entire area and gave us a good baseline of information. This survey was repeated in the late winter 2013 where the total mule deer estimate was 21,585.

The winter of 2010-2011 was extremely tough on mule deer in the Caribou PMU with colder than normal temperature and deep snow measuring over 30 inches deep on the flat in Bear Lake County. Fawn survival was not measured but was estimated to be very low. Adult doe survival was the lowest measured ever in the state at 64%. This severe winter and associated mortality rates likely explain the decrease in estimated population size between 2010 and 2013.

Conversely, the 2012-2016 winters were mild where overall adult doe survival was measured at 98%, 95%, 88%, 75%, and 80%, respectively. The high adult doe survival coupled with minimal snow depths is expected to result in higher than average fawn survival. The winter of 2016-2017 was quite severe, likely causing the population to decline, fawn survival was estimated at 4% (all of these fawns were captured on the Tex Creek winter range).

Inter-specific Issues

Although livestock graze much of the mule deer range in this PMU, interactions of concern are relatively few and tend to be limited to localized areas. Of primary concern are livestock winter feedlot operations that over-concentrate deer during winter. Of concern are a few localized areas (riparian and winter range) of intense livestock pressure, particularly in GMUs 66, 66A, and 69.

Of greater concern than livestock interactions is the current trend of elk occupying mule deer winter range. Some winter ranges in this PMU do not lend themselves to niche separation by the two species and, therefore, either direct resource competition and/or social intolerance will likely impact mule deer numbers. During 2005 the deer population in GMU 66, 66A, and 69 declined to an all-time low of 1,532 estimated deer as the elk population increased to 5,200. A graduate student completed a project in 2008 on elk/mule deer competition and found that deer and elk competition varied between moderate and severe winters. During moderate winters deer did show increased stress hormones and increased spatial separation from elk, but during severe winters showed decreased stress hormone levels and decreased spatial separation (Atwood 2008). Over the past decade we have witnessed increases in elk numbers on the Soda Hills winter range, and are continuing to monitor changes in deer and elk populations in that area.

Predation Issues

Potentially major predators of mule deer in this PMU include black bears, mountain lions, coyotes, and bobcats. The black bear population is low, but appears to be increasing. Mountain lion and coyote populations are believed to have increased during the last 30 years. Occasional wolf activity does occur in the northern portion of this PMU, but has been inconsistent in recent years. It is unknown specifically what impact these changing predator systems are having on mule deer population dynamics.

Winter Feeding Issues

Emergency supplemental feeding of deer occurs approximately every three years. Primary areas include Soda Springs, Georgetown Canyon, Montpelier Canyon, the east shore of Bear Lake and St. Charles Canyon. Deer are fed by interested citizens every year in some areas. In many cases, emergency feeding is initiated after deer have been attracted to cattle feedlot operations or private citizens began feeding deer early in winter. Both of these circumstances could short-stop deer from reaching more suitable winter range and generally result in high over-winter mortality rates. The Department, working in conjunction with the Winter Feeding Advisory Committee, will discourage livestock operators and other private citizens from encouraging deer use of non-traditional food sources.

During the winter of 2010-2011 emergency winter feeding took place in GMU 76 in Bear Lake County. A half dozen volunteer feed sites operated for over 2 months. In the valley we used over 150 tons of deer pellets during the operation. During the winter of 2016-2017 emergency feeding sites for mule deer were established in GMUs 76, 72, and 69. Just over 3,000 deer were fed by staff and volunteers at 19 locations. These sites were operated for approximately 2 months.

Harvest

Total harvest in PMU 10 in 2016 was estimated at 3,731 mule deer based on mandatory harvest report cards. This represents a 4% decrease in harvest from 2015(3,878) and is 50% higher than the previous five-year average of 2,483. Total hunter numbers were estimated at 10,179 for 2016 compared to 12,331 hunters for 2015. An average of 40% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 38% hunter success rate.

Information Requirements

We have now finished both the baseline sightability survey for PMU 10 as described in the 2008 Mule Deer Management Plan as well as the most recent 2013 survey. We will continue to need composition and survival data for fawns and does.

Harvest information is also important data that we need to continue collecting and enhance the timeliness and the reporting percentage if possible. Harvest information is used for setting seasons on a bi-annual basis. The quality of that data is very important.

Many regions manage antlerless mule deer as part of their regular harvest by both youth either sex or controlled permit hunting. Research to document the effect of doe harvest on population productivity, age structure of the population, and that effect on population size would be beneficial. This research would help improve our baseline knowledge of antlerless harvest and allow us to better manage mule deer populations for increased productivity.

Literature Cited

Atwood, P. 2009. Interactions between mule deer and elk on winter range at the Tex Creek Wildlife Management Area, Idaho. Masters Thesis, Idaho State University.

Russell, O. 1914. Journal of a Trapper, 1834-1843. Syms-York, Boise, Idaho.

Mule Deer Caribou PMU 10 (GMUs 66, 66A, 69, 72, 76)



Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Increase	Increase
Hunter Days	>40,000	>50,000

Square Miles =	3,875	3-Year Averages	
% Public Land =	56%	Hunters per square mile =	2.87
Major Land Type =	Rangeland/Forest	Harvest per square mile =	1.26
		Success Rate =	32%

Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer		24,302				21,725				

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	62	64	51*	56*	77*	73*	65*	80*	77	
Buck:Doe	9	12	19*	18*	17*	18*	32*	27*	28	
Fawn Survival	0.32	0.29	0.51	ND	ND	ND	ND	ND	ND	0.04
Adult Doe Survival	0.81	0.80	0.96	0.64	0.98	0.95	0.88	0.75	0.80	

Note: Raw Fawn:Doe expressed as fawns per 100 does, Raw Buck:Doe expressed as bucks per 100 does

IPM Fawn Survival = overwinter fawn survival (December - May), IPM Adult Doe Survival = annual survival (June - May)

* These ratios were obtained from GMUs 72 and 76 only and does not include other GMUs within the PMU.

Harvest Statistics

Year	Hunters		Deer Harvest		
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
2006	8,703	43,859	73	1,771	38%
2007	6,689	33,010	134	2,571	27%
2008	9,441	51,870	150	1,554	31%
2009	8,483	42,883	200	1,401	30%
2010	8,510	39,480	399	1,703	33%
2011	8,583	43,118	274	858	39%
2012	8,017	38,290	382	1,585	40%
2013	8,946	42,608	432	1,916	30%
2014	10,849	48,787	516	2,576	35%
2015	12,331	56,290	637	3,241	40%
2016	10,179	53,515	806	2,925	46%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
69	ND	3,508	ND	2,331	2,730	2,475	ND	1,532	ND	3,110
72	ND	1,826	2,378	4,576	2,877	1,124	1,801	2,552	2,016	ND
76	ND	3,427	3,467	5,106	2,378	2,766	ND	3,531	3,363	ND

Note: ND = no survey data available

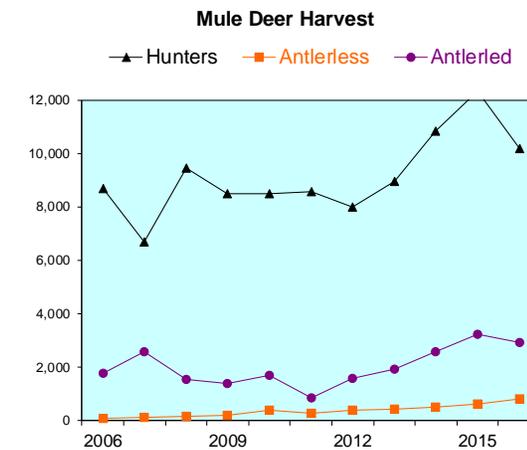
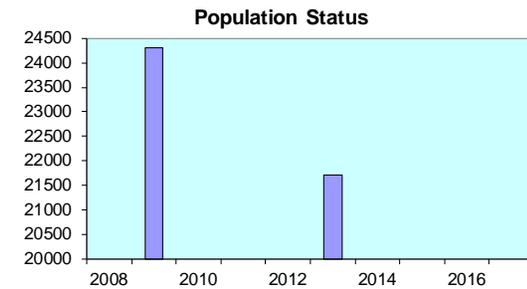


Figure 12. Caribou Mule Deer PMU Status and Objectives.

PALISADES

PMU 11 (GMUs 64, 65, 67)

Management Objectives

Objectives for Palisades (PMU 11, Figure 13) are to maintain a minimum of 15 bucks:100 does in post-season surveys and maintain a minimum of 30% 4+point and larger bucks in the general season harvest. Maintaining this population at a level where it does not cause depredations and require winter-feeding, particularly in Swan Valley and GMU 65, is an ongoing priority. The sightability survey conducted in February 2017 estimated 4,476 mule deer in this PMU.

Historical Perspective

Old records of mule deer in this PMU are sketchy and inconclusive; however, it is probable that they have always been present in unknown density. Early homesteaders reported that deer were scarce. Mule deer populations throughout the region increased in the 1940s and 1950s and remained high through the 1980s. Severe winters in 1988-1989 and 1992-1993 probably took much of the recruitment for those years. The population has rebounded to levels at or above the long-term average. A liberal general season extending 10 days into November was offered in these GMUs until 1990. The recent philosophy has been to move seasons (Appendix A) into October to reduce vulnerability of adult males during the rut. This has been successful in reducing deer harvest and also hunter satisfaction. This PMU offers most of what little backcountry hunting opportunity remains in southeast Idaho.

Habitat Issues

Abundant spring, summer, and fall habitat exists in this area but winter range is limited. Winter range has been lost to agriculture and is currently threatened by home site development. Opportunities to preserve or enhance winter range will be pursued. Winter range on slopes in the vicinity of the mouth of Rainey Creek appears to have suffered from years of overgrazing by elk and mule deer. The area between Table Rock Canyon and Kelly Canyon currently winters high concentrations of mule deer. Mature mountain mahogany stands throughout the PMU may be providing only limited forage in addition to precluding all but a sparse understory of other species. Some bench areas in the Black Canyon to Wolverine Canyon stretch appear to be converting from shrub-dominated to grass-dominated or a conifer community. Most winter range in Swan Valley has been lost to agriculture, brush removal, or development.

Biological Issues

Mule deer in PMU 11 are currently meeting management objectives, including those required to allow general antlerless harvest. Populations were at or near all-time highs prior to the severe 1988-1989 and 1992-1993 winters. Following a decline of unmeasured magnitude, they have recovered to at or above long-term average levels. Distribution has changed, particularly at Rainey Creek, where it was common to feed up to 500 deer through the 1987-1988 winter. Recently, there have been fewer than 200 fed at this location. Strategies designed to increase wintering elk in some parts of the area to offset elimination of the Rainey Creek feed-site will need to be carefully monitored to protect existing mule deer populations. Snowmobile activity may be precluding the use of traditional winter range in the Canyon Creek area.

Management objectives for this PMU are to maintain a minimum of 15 bucks:100 does post-season and 30% ≥ 4 points in the buck harvest. A December 2011 composition survey resulted in an estimate of 43 bucks:100 does. The high buck ratio may have been influenced by the late rutting activity that was observed in mid-December through mid-January. There were large bucks in the doe/fawn groups that were observed during the survey. The high doe mortality the previous winter may also have contributed to the ratio if the bucks did not succumb to winter mortality at a similar rate. The percent ≥ 4 points in the buck harvest from 2003-2013 averaged 47% annually. A trend count in 2006 resulted in an estimate of 2,911 total deer, which far exceeds the antlerless harvest threshold of 1,500 total deer. A complete sightability survey in 2010 generated an estimate of 5,182 deer. A complete sightability survey in 2017 generated an estimate of 4,476 deer which was lower than the 2010 estimate of 5,182. The temporal period between these two surveys resulted in significant population growth for most of the deer populations in southern Idaho. The lack of population growth in the Palisades PMU is surprising.

Although the Heise trend area population within this PMU is meeting objectives and appears to be performing very well, the loss of winter range in Swan Valley outside of the trend area has most likely resulted in a one-third overall reduction of the mule deer population in this PMU. Peripheral populations like these need to be monitored to determine the overall status of mule deer in the area.

The Heise winter range in GMU 67 has been the site of an annual winter fawn mortality study since 1998. From 2000-2010 fawn mortality has averaged 55% annually with a high of 92% in 2008 and a low of 8% in 2003. This data reflects the extreme variation in winter conditions on the Heise winter range. Doe survival averaged 90% annually between 2006 and 2010. We did not radio collar and monitor fawns after the winter of 2010 so there is not a survival estimate through May 2012. We did continue to monitor does and their 71% survival rate estimate through May 2011 was the lowest we have recorded there since we started monitoring doe survival in 2006. The effects of the long, harsh winter are evident in this low survival rate. We assumed from the doe survival rate and other rates in the region that the fawns also had a very low survival rate in this DAU. The low survival rate of does in this area prompted us to reduce harvest opportunity in this DAU in 2011, that opportunity was reinstated following 2 mild to moderate winters.

Inter-specific Issues

In addition to mule deer, this PMU supports an elk population and numerous moose. Domestic livestock extensively grazes portions of it. Inter-specific relationships are not monitored and are poorly understood. If the elk population is not carefully managed, conflicts with deer on winter range could develop. During the winter of 2010-2011, we did observe approximately 100 elk using the Heise mule deer winter range where we normally do not observe elk.

Predation Issues

There are no known unique or unusual predator issues affecting mule deer populations in this PMU.

Winter Feeding Issues

Mule deer have been fed during severe winters on an emergency basis below the Palisades Bench, near Heise, and in Canyon Creek. They were fed on a regular basis at the mouth of Rainey Creek along with elk. The elimination of feeding elk at that site has also resulted in the end of deer feeding. With new and planned home site developments occurring in Swan Valley, new residents will be tempted to bait or feed deer and elk. All such efforts will be discouraged.

Harvest

Total harvest in PMU 11 in 2016 was estimated at 460 mule deer based on mandatory harvest report cards. This represents a 2% increase in harvest from 2015(449) and is 58% higher than the previous five-year average of 290. Total hunter numbers were estimated at 1,728 for 2016 compared to 2,149 hunters for 2015. An average of 59% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 26% hunter success rate.

Information Requirements

Survey protocol was revised beginning in 2000-2001 and again in 2007-2008. Future plans include the continuation of composition and complete surveys utilizing sightability methodology, as specified by the current mule deer management plan.

Mule Deer Palisades PMU 11 (GMUs 64, 65, 67)



Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Maintain	Increase
Hunter Days	>7,500	>9,000

Square Miles =	994	3-Year Averages	
% Public Land =	52%	Hunters per square mile =	1.97
Major Land Type =	Rangeland/Forest	Harvest per square mile =	0.68
		Success Rate =	23%

Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer			5,182							4,476

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	67	88	83	65	73	74	ND	ND	67	
Buck:Doe	21	28	32	43	23	35	ND	ND	35	
Fawn Survival	0.29	0.53	0.67	ND						
Adult Doe Survival	0.88	0.73	0.78	0.71	0.91	0.90	0.89	0.86	0.80	

Note: Raw Fawn:Doe expressed as fawns per 100 does, Raw Buck:Doe expressed as bucks per 100 does

IPM Fawn Survival = overwinter fawn survival (December - May), IPM Adult Doe Survival = annual survival (June - May)

Harvest Statistics

			Deer Harvest		
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
2006	1,796	8,408	107	226	45%
2007	1,509	6,746	96	433	47%
2008	2,010	11,114	60	156	43%
2009	1,744	8,104	38	149	43%
2010	1,893	8,762	65	250	49%
2011	1,456	6,129	27	82	51%
2012	1,394	6,322	28	141	56%
2013	1,551	7,220	68	233	46%
2014	1,991	8,269	133	291	54%
2015	2,149	8,959	100	349	61%
2016	1,728	8,851	113	347	63%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
67	1,777	ND	ND	1,542	2,252	ND	2,503	ND	2,911	ND

Note: ND = no survey data available

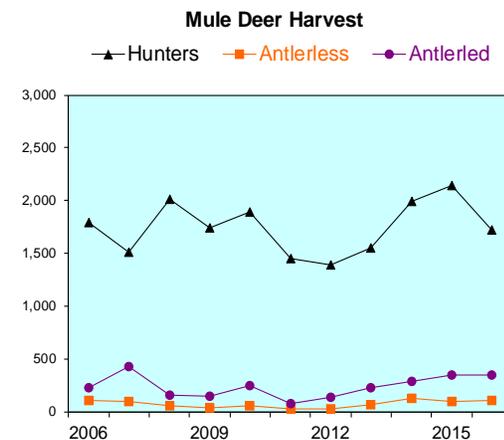
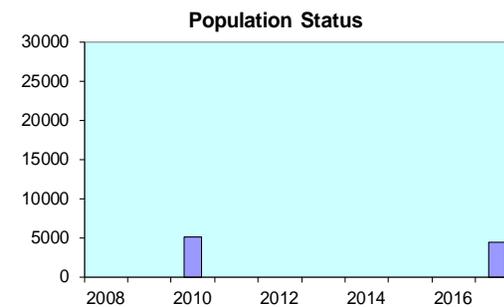


Figure 13. Palisades Mule Deer PMU Status and Objectives.

ISLAND PARK

PMU 12 (GMUs 60, 60A, 61, 62, 62A)

Management Objectives

Objectives for Island Park (PMU 12, Figure 14) are to maintain a minimum of 15 bucks:100 does in post-season surveys and maintain at least 30% 4+ bucks in the general season harvest. Conservative antlerless hunting opportunity in general hunts has limited management options. Controlled hunts have thus far influenced this population only slightly.

Historical Perspective

Since the early to mid-1980s, raw counts on Sand Creek winter range (GMU 60A) indicate that deer populations have at least doubled, steadily increasing from just over 1,300 deer in 1984 to 3,000 or more in 1996, 1997, and 2000. This population has historically been very susceptible to hard winters but is very productive and rebounds quickly. Populations have been built rapidly during periods without severe winter conditions only to crash with the next hard winter. Historically, these population reductions have occurred about every 4-6 years. The winter of 2001-2001 resulted in significant mortality. Due to this, populations were down from the high levels of the late 1990s to an estimate of 1,492 deer in 2003, but in 2004, they had already rebounded to 2,123. The winter of 2007-2008 had average to above average snow conditions. On the Sand Creek winter range, radio-collared fawns had a 55% mortality rate and does had a 10% mortality rate. In February 2008 a complete sightability survey was flown and generated an estimate of 2,397 mule deer (90% bound = 120). The winter of 2010-2011 was long and once again we saw low survival rates in this PMU for fawns (11%) and does (74%). A sightability survey was scheduled for February 2012 to generate the next population estimate. This survey did not happen because of mild weather conditions. We flew a complete survey of the Island Park PMU in 2014, the population estimate was 5,644. The Island Park estimate was 3,826, a 60% increase over the 2008 survey. Conversely, the Teton Canyon estimate was 1,818, a significant decrease from the 2008 estimate of 2,827.

Deer that winter on the Sand Creek winter range summer throughout GMUs 60, 61, 62A, and into Wyoming and Montana, resulting in a low deer density. Consequently, hunting pressure in these GMUs is low and dispersed. The only time hunting pressure is significant on this population is when early snow forces deer down onto their high-desert winter range during the general hunt. The best winter range in GMU 62 was first inundated by the Teton Dam and then more was destroyed by its failure. However, the Teton Canyon is still the most important winter range in GMU 62.

Habitat Issues

The gentle topography lodgepole pine communities of the Island Park caldera and the moderate to steeply-sloped Centennial Mountain Range with lodgepole pine and Douglas-fir communities dominate most deer summer range for this group of GMUs. Most of this summer range occurs on lands administered by USFS.

Winter range is extremely limited for this deer herd. Sand Creek winter range supports a vegetative complex typical of high-desert shrub-steppe dominated by sagebrush. Bitterbrush and

chokecherry are prominent on areas of stabilized sand; Rocky Mountain juniper is locally abundant. Land ownership consists of a checkerboard of state, BLM, and private property.

A 10,000-acre captive elk operation on Siddoway property has fenced off the majority of the South Juniper Hills and portions of the Big Grassy area. Much of this fenced-in property is historic mule deer winter range and is now unavailable to deer. No severe die-off occurred in response to the fence, but long-term effects remain to be seen. In addition, new developments being built in 2008 near the sand dunes are further limiting mule deer migration to the winter range.

A major habitat concern for this winter range is the continual loss of intact sagebrush stands throughout the area, particularly in the southern and western portions of the winter range. Efforts should be made to try and maintain as much of the sagebrush habitat in the southwest portion of the area as possible.

Biological Issues

Winter deer populations have been very high in GMU 60A. In the late 1990s, populations of 3,000-4,500 deer are the highest levels documented for this herd and are over double the antlerless harvest threshold of 1,500 total deer. The absence of a severe winter over nearly a decade during that time undoubtedly contributed to this increase.

Radio-collar information from 2007 to 2010 has confirmed that the majority of the mule deer in Teton Canyon summer in Wyoming. This confounds management because the deer often do not enter Idaho until after normal hunting seasons. Periodic severe winters may keep this population below a level where they cause depredations in winter or where people are providing them food. However, if additional population control is necessary, it may require cooperative management with Wyoming.

Surveys in the Teton River Canyon fluctuate based on severity of winter. The winter of 2007-2008 had average to above average snow accumulation. The extremely harsh snow conditions around Teton Canyon forced almost all the mule deer to winter in the canyon or on the adjacent rim if accessible.

In 2001, the Sand Creek trend area was flown as a green-up survey in late March. This green-up timed survey was a departure from historical counts that were conducted while deer were on winter range. The 2001 trend count resulted in an estimate of 1,332 deer, down from the 2,866 estimated the previous winter. It is believed that the 2001 estimate was not an accurate reflection of the status of this population, but an artifact of the timing of this survey. Deer were already widely dispersed and a significant component of the population was undoubtedly not accounted for on this survey. More recent surveys have been conducted when deer are still on winter range.

Recruitment data for this PMU indicate the productive nature of this herd. Since 2001, the fawn:doe ratio for the area has averaged 80 fawns per 100 does. The composition flight for the Island Park PMU in 2016 produced a fawn:doe:buck ratio of 73:100:24.

Since 2003, deer have been radio-collared on winter range in portions of PMU 12 (Sand Creek and Teton Canyon) to measure doe and fawn survival and gather information on distribution and migration routes. Fawn survival has ranged from a high of 84% in 2004 to a low of 18% in 2011. Doe survival has averaged 87% annually since 2006. Dispersal has been monitored and distribution is very widespread with animals summering from the north side of the Centennial Valley in Montana to the east side of Jackson Lake in Wyoming.

Inter-specific Issues

Although deer-elk interactions are not well understood, little evidence exists to support the notion of a negative relationship between mule deer, elk, and moose. White-tailed deer are found throughout most of the PMU but are relatively uncommon.

The new domestic elk operation within the deer winter range has created a situation where wild elk have been attracted to the operation and have started using deer winter range.

Sheep and cattle grazing occur throughout this group of GMUs, which could pose some competitive concerns, especially on winter range during drought years.

Predation Issues

Black bear densities appear to be low and stable in this group of GMUs. Mountain lions are extremely rare. Coyotes are common, especially on Sand Creek Desert winter range. Wolves recently introduced in Yellowstone National Park have become established in this group of GMUs, which could affect other predators and mule deer.

Winter Feeding Issues

No Department-sponsored feeding activities occur in this group of GMUs except under emergency situations. However, social pressure to feed deer arises during any winter of average or greater severity. During the winter of 2007-2008, the Department fed approximately 800 mule deer on the Sand Creek winter range due to harsh snow conditions.

Harvest

Total harvest in PMU 12 in 2016 was estimated at 1,490 mule deer based on mandatory harvest report cards. This represents a 4% increase in harvest from 2015(1,433) and is 72% higher than the previous five-year average of 866. Total hunter numbers were estimated at 3,999 for 2016 compared to 5,006 hunters for 2015. An average of 39% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 36% hunter success rate.

Information Requirements

Survey protocol was revised beginning in 2000-2001 and again in 2007-2008. Future plans include the continuation of composition and complete surveys utilizing sightability methodology, as specified by the current mule deer management plan.

Mule Deer Island Park PMU 12 (GMUs 60, 60A, 61, 62, 62A)



Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Increase	Increase
Hunter Days	>17,500	>20,000

Square Miles =	2,886	3-Year Averages	
% Public Land =	62%	Hunters per square mile =	1.58
Major Land Type =	Forest/Desert	Harvest per square mile =	0.83
		Success Rate =	30%

Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer	5,224						5,644			

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	64	82	79	73	70	72	ND	79	73	
Buck:Doe	29	23	28	31	28	31	ND	37	24	
Fawn Survival	0.35	0.51	0.6	0.18	ND	ND	ND	ND	ND	ND
Adult Doe Survival	0.87	0.78	0.86	0.74	0.98	0.92	0.96	0.89	0.87	

Note: Raw Fawn:Doe expressed as fawns per 100 does, Raw Buck:Doe expressed as bucks per 100 does

IPM Fawn Survival = overwinter fawn survival (December - May), IPM Adult Doe Survival = annual survival (June - May)

Harvest Statistics

Year	Deer Harvest				
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
2006	3,176	19,171	287	488	41%
2007	2,320	11,846	289	601	37%
2008	3,241	17,607	159	298	27%
2009	2,949	15,081	157	339	46%
2010	3,225	15,610	203	427	36%
2011	2,760	13,651	81	246	31%
2012	2,818	14,067	154	419	39%
2013	3,779	17,634	215	580	37%
2014	4,687	22,482	444	758	35%
2015	5,006	24,514	542	891	41%
2016	3,999	24,097	549	941	42%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
60A	4,484	ND	2,866	1,332	2,025	1,492	2,123	ND	1,881	ND
62	ND	ND	1,626	614	1,257	ND	ND	1,775	ND	1,340

Note: ND = no survey data available

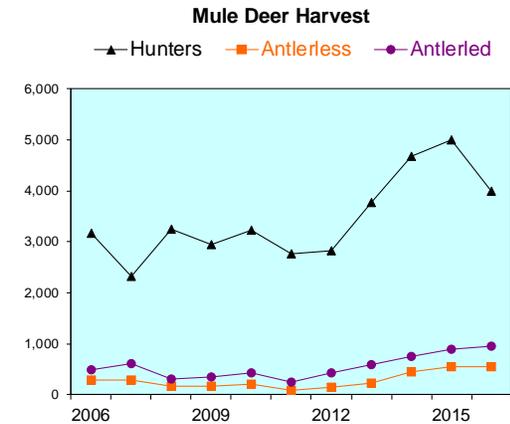
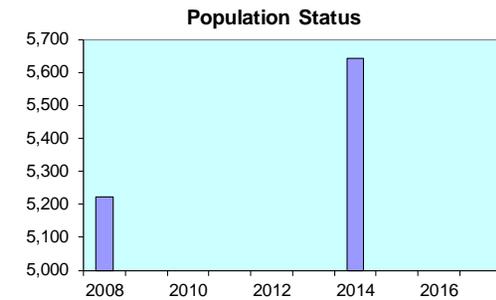


Figure 14. Island Park Mule Deer PMU Status and Objectives.

MOUNTAIN VALLEY

PMU 13 (GMUs 21A, 29, 30, 30A, 37, 37A, 51, 58, 59, 59A)

Management Objectives

Objectives for Mountain Valley (PMU 13, Figure 15) are to maintain ≥ 15 bucks:100 does in post-season surveys and $>25\%$ ≥ 4 -point bucks in the harvest.

Historical Perspective

Mule deer were scarce and harvests low for much of the early part of the twentieth century. By mid-century, mule deer had become the predominant big game animal. Once known for productive mule deer populations, particularly in the Pahsimeroi and Little Lost valleys, these GMUs yielded very large mule deer harvests in the 1950s and 1960s. By the 1970s, harvests had dropped by two-thirds as more conservative management strategies were implemented. Despite 2 decades of very conservative antlerless harvests and increasingly conservative buck seasons, mule deer populations have failed to return to their previous high densities and are stable at moderate levels.

Although deer herds declined well before any significant increase in elk numbers, current high elk densities may be contributing to suppressed deer populations. However, in GMUs 58, 59, and 59A where elk densities have also increased substantially, trend counts suggested that deer populations in the mid-2000s were at or slightly above late 1960s levels. Many of the deer, particularly in Lemhi Valley, migrate to higher-quality summer ranges in Montana, returning to Idaho winter ranges in November.

Habitat Issues

Much of the land in these GMUs is administered by BLM or USFS, with private lands mostly restricted to valley bottoms. Cattle ranching, livestock grazing, and recreation are dominant human uses of the landscape. PMU 13 is generally arid; forage production and deer harvest can be strongly influenced by growing-season precipitation. Deer depredations on agricultural crops are common in GMUs 29, 30, 30A, 37, and 37A and are especially pronounced in dry years. Depredations in GMUs 51, 58, 59, and 59A are limited.

Habitat ultimately determines deer densities and productivity. However, specific limiting factors within the habitat are poorly understood. In some areas, deer winter in mature stands of mountain mahogany that appear relatively stagnant and unproductive. Winter range shrub stands, specifically mountain mahogany, in parts of Little Lost Valley have been lost or degraded. Elk and livestock may have removed much of the mountain mahogany forage within reach of deer. In GMUs 29, 30, and 30A domestic livestock grazing in high forage quality riparian areas may limit available forage to mule deer on transitional and winter ranges. Forests are slowly encroaching into shrub and grassland communities. Spread of noxious weeds, such as knapweed and leafy spurge, could ultimately have significant impacts on winter range productivity.

Traditionally, deer in GMUs 58, 59, and 59A concentrate on winter ranges at the south end of the Beaverhead Range. Heavy snows in the late 1960s placed tremendous pressure on very narrow

portions of these GMUs, killing many browse plants. Winter range habitat condition is still poor to fair for many of the bitterbrush and mountain mahogany stands important to wintering deer. Mountain mahogany, the primary winter browse species, is still heavily hedged with little regeneration. Winter domestic sheep grazing is contributing to this overuse.

Biological Issues

PMU 13 contained 2 trend areas: Leadore (GMUs 30/30A) in Salmon Region and Reno Point (GMUs 58/59A) in Upper Snake Region. Total deer estimated in 2003 for both areas combined (2,563) fell slightly below the previous antlerless harvest threshold of 2,600 for the first time in several years, but rebounded to over 3,100 deer in 2005. A total abundance survey for PMU 13 was conducted in 2016 with a total population count of 20,730 total deer.

The 2016 composition survey produced a fawn:doe:buck ratio of 66:100:20. Adult doe survival has been above average over the past several years. The high levels of doe and fawn survival coupled with the increased fawn production may be in part due to the mild winters from 2012-2016.

Hunter participation has increased from an average of 4,480 hunters in the 1990s to an average of 5,592 hunters over the last 10 years. In 2015, 6,563 hunters hunted mule deer in PMU 13. From 2012-2014 hunter days were slightly under objective of 25,000. However, in 2015 the objective was achieved with 26,964 hunter days attributed to PMU 13. Harvest has declined from 2008-2012, but has slowly increased to the 2015 high of 1,758 bucks harvested. An average of 1,370 bucks has been harvested annually over the last 10 years. Percent of the buck harvest ≥ 4 points has been at or above objective ($>25\%$) since 2004. Buck ratios have exceeded management objective (minimum of 15 bucks:100 does post-season) in recent years.

Inter-specific Issues

Current high elk densities may be having some impact on the area's capacity to produce deer in all GMUs except 58, 59, and 59A. White-tailed deer, a potentially strong competitor, are mostly restricted to private agricultural lands along major riparian areas. In some limited areas, mountain goats and mule deer may be competing for the same mountain mahogany winter ranges. Pronghorn and bighorn sheep also share the range but generally overlap little with mule deer. Livestock rangeland grazing exists which is another potential source of competition, particularly in the moister summer range habitats and the southern winter ranges. Domestic livestock grazing, especially in riparian areas, may be direct competition for transitional and winter range forage for mule deer. However, the extent is currently unknown.

Predation Issues

Black bear densities appear to be low and stable. Mountain lion densities are low to moderate. Coyotes are common and have an unknown impact on deer populations in this area. Bobcats, red fox, and golden eagles also occur in the area, but are not thought to account for significant predation on deer. Wolf populations are present and relatively stable in PMU 13.

Winter Feeding Issues

Because this is an arid area with relatively little snowfall, winter-feeding has not occurred in these GMUs in recent years.

Harvest

Total harvest in PMU 13 in 2016 was estimated at 2,338 mule deer based on mandatory harvest report cards. This represents a 6% increase in harvest from 2015(2,211) and is 35% higher than the previous five-year average of 1,733. Total hunter numbers were estimated at 5,296 for 2016 compared to 6,563 hunters for 2015. An average of 34% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 42% hunter success rate.

Information Requirements

Impacts of elk on mule deer production and survival are suspected but not quantified. Better information is needed to identify appropriate deer densities that will maintain optimum productivity and harvest.

In winter 2005-2006, the Department placed radio collars on 17 adult deer in GMU 51. This was the first time deer were marked in this GMU and the data collected indicate that deer wintering in this GMU do not move very far to summer range. This is very unusual for this part of Idaho. Adult doe survival was 91% in 2015 and has average 87% over the previous 4 years.

Deer in GMU 30 were radio-marked in December 2003 and 2004 as part of the fawn monitoring project in Salmon Region. As suspected, some deer migrated to Montana summer ranges. In some cases, migration distances were significant. One collar was shed approximately 96 km north of the animal's winter range near the Continental Divide in the Anaconda-Pintlar Wilderness. More recent collar data from GMU 30 indicates that a large portion of the wintering deer population migrates to summer range in Montana. More information on summer range type, condition, and usage is needed to make inferences on the potential impact to mule deer production in this PMU.

Potential competition from grazing livestock in GMUs 29, 30, and 30A may be occurring. Better information is needed to identify the presence and extent of direct competition from domestic livestock, as well as indirect competition from elk foraging displaced by domestic grazing.

The mule deer population in GMU 37, though meeting objectives has the attention of hunters who want to see the GMU managed as a "Quality" GMU with habitat enhancements aimed at increasing overall deer numbers and productivity. In 2014, two mule deer does were collared with GPS collars and 5 more were collared in 2015 to track habitat use and analyze vital rates useful in developing appropriate management actions.

Mule Deer

Mountain Valley PMU 13 (GMUs 21A, 29, 30, 30A, 37, 37A, 51, 58, 59, 59A)

Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Maintain	Increase
Hunter Days	>20,000	>25,000

Square Miles =	4,988	3-Year Averages	
% Public Land =	87%	Hunters per square mile =	1.19
Major Land Type =	Forest/Rangeland	Harvest per square mile =	0.57
		Success Rate =	35%



Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer									20,730	

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	54	59	60	59	59	63	66	79	66	
Buck:Doe	11	13	16	19	15	24	22	26	20	
Fawn Survival	0.46	0.41	0.57	0.35	0.35	0.35	0.52	0.66	0.58	0.31
Adult Doe Survival	0.87	0.75	0.93	0.84	0.96	0.82	0.85	0.91	0.83	

Note: Raw Fawn:Doe expressed as fawns per 100 does, Raw Buck:Doe expressed as bucks per 100 does
 IPM Fawn Survival = overwinter fawn survival (December - May), IPM Adult Doe Survival = annual survival (June - May)

Harvest Statistics

	Deer Harvest				
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
2006	5,464	22,465	283	1,527	37%
2007	3,956	15,917	265	1,716	34%
2008	6,458	28,093	374	1,396	30%
2009	5,652	24,707	320	1,067	25%
2010	5,135	21,682	269	1,079	25%
2011	5,383	22,277	315	1,171	32%
2012	5,624	24,364	359	1,350	33%
2013	5,678	24,760	303	1,282	33%
2014	6,014	24,853	325	1,349	33%
2015	6,563	26,964	453	1,758	32%
2016	5,296	24,577	338	2,000	36%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
29	592	521	676	730	885	885	685	ND	ND	ND
30/30A	ND	1,411	1,792	1,453	1,156	1,156	734	805	1,350	1,084
51	ND	500	ND	ND	ND	ND	ND	ND	1,232	ND
58/59A	ND	ND	2,280	1,900	1,407	1,407	ND	2,323	ND	1,740

Note: ND = no survey data available

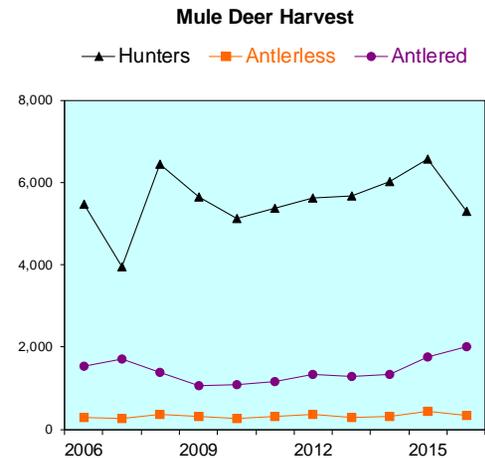
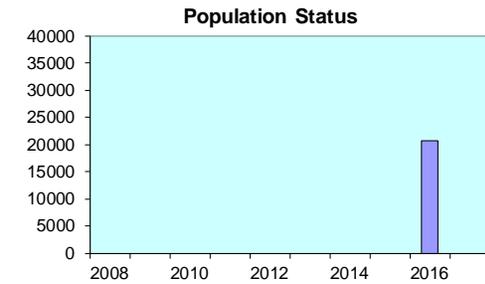


Figure 15. Mountain Valley Mule Deer PMU Status and Objectives.

SNAKE RIVER

PMU 14 (GMUs 38, 52A, 53, 63, 63A, 68, 68A)

Management Objectives

Given the low habitat potential for Snake River (PMU 14, Figure 16) to support high densities of deer and the limited ability to collect reliable population information, the management objective will be to maintain deer and not fall below 30% 4+ points in the antlered deer harvest.

Historical Perspective

The deer population probably has changed very little since historic times in this PMU. Accounts of trappers through this area in the mid-1800s indicated that buffalo, elk, pronghorn, and bighorn sheep were far more common than mule deer. Given the low densities of deer and low priority for deer in this PMU, little data is available to indicate what population trends have occurred through time.

This area contains the irrigated farmland and orchards in the Treasure Valley. There is some high desert habitat in the Snake River Birds of Prey area. The majority of the deer are associated with the Boise, Snake, and Payette River corridors and nearby orchards and vineyards.

It has been reported that mule deer were relatively abundant in GMU 53 around 1900. However, deer habitat was substantially altered with human settlement, which brought an increase in range fires and the development of large-scale irrigation projects. Today, more than half of GMU 53 is irrigated farmland. The northern portion of the GMU contains an extensive tract of land managed by BLM, primarily for livestock grazing. Much of BLM lands have been reseeded to crested wheatgrass, reducing their value for mule deer.

GMU 53 currently has a small resident deer population and cannot support many deer without unacceptable conflicts with agriculture. Depredation complaints from orchards in the Snake River Canyon are common. GMU 53 has some importance as winter range for mule deer from GMUs to the north. Movement of deer into GMU 53 during winter was first noted in the early 1980s following extensive fires and loss of sagebrush habitat in GMU 52A. The number of wintering deer varies considerably depending on winter severity and snow depths. During winter 1985-1986, more than 3,000 mule deer moved into GMU 53 and resulted in 54 depredation complaints. During the severe winter of 2001-2002, large numbers of deer moved into GMU 53, primarily east of Jerome, and resulted in a substantial number of deer-vehicle collisions on Interstate 84.

Harvest management in GMU 53 is currently designed to keep resident deer numbers low. Short-range weapon hunting on the west side of the GMU has been successful in minimizing complaints from orchard owners. On the east side of the GMU, a long archery season from 30 August through 19 December allows a substantial amount of hunting opportunity close to the Magic Valley Region's population centers. In 2001, the state record archery-harvested mule deer buck was taken in GMU 53. Harvest management in the remainder of the GMUs has been a general hunt format, except for GMUs 38, 63A and 68A, where human safety issues have warranted either archery or short-range weapon hunts (Appendix A).

Habitat Issues

This PMU is primarily comprised of dry desert shrub types, thus representing a low productivity area. Potential to support high numbers of mule deer is extremely limited. However, agriculture combined with riparian habitats along the Snake River in GMUs 63A and 68A can provide for higher populations.

The BLM administers the majority of public ground (approximately 56%) in PMU 14. Private ground makes up approximately 33% and the Idaho National Laboratory, Fort Hall Indian Reservation, and Craters of the Moon National Park combine for the remaining 11%. Most private ground is used for production of row crops and is situated along the Snake River floodplain. Both mule deer and white-tailed deer periodically create depredation concerns within agricultural zones.

Wildfires continue to play a big role with habitat throughout the PMU. In many cases, fire has replaced climax sagebrush stands with annual and perennial grasses. Large fires occurred in this area again in summer 2006.

Depredation complaints on orchards are common in GMU 38 and both depredation hunts and kill permits are issued on a regular basis. Several mule deer depredation complaints also occurred in GMUs 53, 68, and 68A during this reporting period.

Biological Issues

The majority of this PMU lacks potential to support good numbers of mule deer. No reliable population information is available to determine changes and/or trends in populations. Mule deer probably increase somewhat during favorable environmental conditions but can be drastically reduced during significant winter events. White-tailed deer comprise a small percentage of total deer in this area and are primarily restricted to riparian/agriculture habitats of the Snake River floodplain. No information exists as to trends in composition of mule deer versus white-tailed deer. The little movement information we have indicates deer have some rather complicated migration patterns within and in and out of this area.

Inter-specific Issues

Mule deer share the habitat with livestock, elk, pronghorn, and white-tailed deer. It is unknown what impacts an increasing elk population or sympatric whitetails may have on mule deer. It is doubtful that pronghorn have any impact on mule deer population parameters. Much of the Snake River floodplain is used to winter livestock and, in many cases, riparian shrub communities have been significantly degraded. Additionally, a mule deer's social intolerance for livestock may make much of the riparian habitats unavailable to mule deer during winter months.

Predation Issues

Coyotes and bobcats are the predominate predators of mule deer in this PMU. Trends in bobcat numbers are unknown; it is believed that coyotes have increased over the last 30 years. It is unknown whether coyotes are significantly impacting mule deer population dynamics.

Winter Feeding Issues

The winter of 2016-2017 was quite severe and several emergency winter feeding sites were established in this PMU. The Department will work closely with Regional Winter Feeding Advisory Committees to evaluate future supplemental feeding issues.

Harvest

Total harvest in PMU 14 in 2016 was estimated at 961 mule deer based on mandatory harvest report cards. This represents a 11% decrease in harvest from 2015(1,085) and is 7% higher than the previous five-year average of 900. Total hunter numbers were estimated at 3,453 for 2016 compared to 4,322 hunters for 2015. An average of 40% of the bucks harvested in these GMUs over the past three years (2014-2016) have been 4-point or larger with a 31% hunter success rate.

Information Requirements

Given the low potential for supporting high numbers of mule deer throughout this PMU, little population information would be warranted. However, some information would be valuable.

Many feel that illegal harvest of mule deer throughout much of this area poses a significant threat to populations (GMU 63, 68, and 68A). Efforts to substantiate or disprove this concern would prove valuable as resources allow.

Mule Deer Snake River PMU 14 (GMUs 38, 52A, 53, 63, 63A, 68, 68A)



Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Maintain	Maintain
Hunter Days	>12,000	>12,000

Square Miles =	10,160	3-Year Averages	
% Public Land =	57%	Hunters per square mile =	0.39
Major Land Type =	Desert/Agriculture	Harvest per square mile =	0.16
		Success Rate =	24%

Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer										

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	ND									
Buck:Doe	ND									
Fawn Survival	ND									
Adult Doe Survival	ND									

Note: Fawn:Doe expressed as fawns per 100 does, Buck:Doe expressed as bucks per 100 does
Fawn Survival = overwinter fawn survival (December - May), Adult Doe Survival = annual survival (June - May)

Harvest Statistics

	Deer Harvest				
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
2006	3,228	15,220	202	471	33%
2007	2,575	12,568	258	538	38%
2008	3,923	19,891	277	492	41%
2009	4,011	20,331	259	461	35%
2010	3,787	17,861	333	595	32%
2011	3,967	18,836	337	439	34%
2012	3,469	17,113	292	553	40%
2013	4,276	19,472	321	666	37%
2014	4,125	19,719	246	563	36%
2015	4,322	21,367	446	639	46%
2016	3,453	17,172	262	699	37%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Note: ND = no survey data available

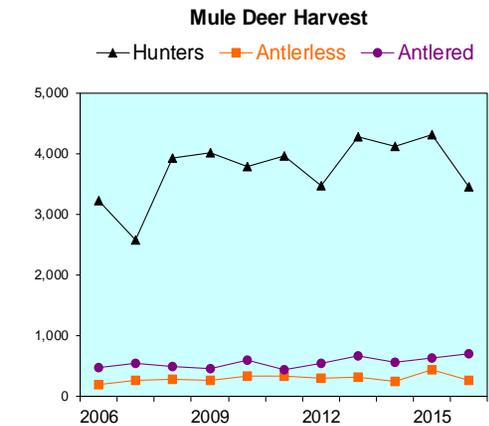
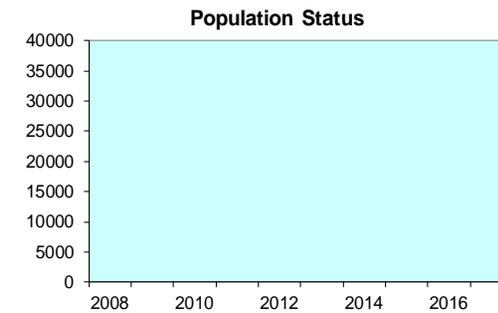


Figure 16. Snake River Mule Deer PMU Status and Objectives.

NORTH IDAHO

PMU 15 (GMUs 1, 2, 3, 4, 4A, 5, 6, 7, 8, 8A, 9, 10, 10A, 12, 15, 16, 16A, 17, 19, 20)

With the recent Mule Deer Management Plan revision and the conversion of the mule deer Analysis Areas to PMU's, some GMUs were not placed into a PMU because either the GMUs have low numbers of mule deer and are managed primarily for whitetails or are located in wilderness areas that result in most mule deer hunting pressure being incidental in nature. There are no plans to conduct aerial surveys in any of these GMUs to monitor mule deer populations. GMUs in this conglomeration, labeled North Idaho (PMU 15, Figure 17) have widely divergent demographic and habitat characteristics as well as highly variable season frameworks.

Management Objectives

Mule deer comprise less than 10% of the deer harvested in this PMU, although in some GMUs (7 and 9) mule deer may comprise over 50% of the deer harvested. Aerial surveys are not practical in most of these GMUs because mule deer are scarce and hiding cover is abundant. Aerial surveys are not conducted in other GMUs (16A, 17, 19 and 20) because of their remote wilderness setting and relatively little emphasis on targeting of mule deer by hunters. The only management objective that applies to this PMU under the current plan is to maintain hunter days at $\geq 25,000$. This was met with a 2014-2016 average of 30,170.

Historical Perspective

USFS records and the memories of long-term residents indicate big game, including mule deer, were relatively scarce in the early 1900s. Large-scale fires between 1910 and 1931 created large brush-fields favored by mule deer. This newly created habitat, in combination with a major predator reduction program beginning in the early 1920s, allowed sustained growth of mule deer, white-tailed deer, and elk populations. Despite a series of severe winters, mule deer populations continued to increase and by the mid-1950s, mule deer were estimated by USFS and Department biologists to outnumber white-tailed deer in the central part of the PMU.

Concern about over-browsed winter ranges and an overabundance of deer throughout the state, in general, led to aggressive management to reduce the deer population. By the early 1970s, this goal was accomplished and shorter seasons were authorized. Deer seasons in PMU 15 have traditionally allowed hunters to take either mule deer or white-tailed deer under the same tag; however, antlerless harvest is now restricted to white-tailed deer only in the Panhandle Region portion of this PMU.

GMUs 1, 4, 4A, 6, 7 and 9 are predominately timbered with the majority of ownership being private timber companies, IDL, or USFS. Timber harvest began in these GMUs during the early 1900s and increased dramatically in the 1970s. Until the 1930s, wildfire was the primary habitat disturbance mechanism in GMUs 4, 6, 7 and 9. Between 1900 and 1934, the majority of these GMUs were burned by wildfires. From the 1920s to 1990, thousands of miles of roads were built for timber harvest in GMUs 4, 6, 7 and 9. GMUs 2, 3 and 5 are predominately private ownership with significant areas of agricultural and/or residential development. The Snow Peak Wildlife Management Area in GMU 9 is co-managed by the Department and the USFS to provide back country recreational opportunities.

GMUs 10, 10A, 12, 15, and 16 are also predominately timberlands with the majority of ownership being private timber companies, IDL, or USFS. Most private ownership is at lower elevations along the breaks of Clearwater River. Timber harvest began in GMU 10A during the early 1900s and increased dramatically in the 1970s. In 1971, Dworshak Reservoir flooded approximately 45 miles of North Fork Clearwater River in GMU 10A and permanently removed thousands of acres of prime low-elevation big game winter range. Until the 1930s, wildfire was the primary habitat disturbance mechanism in GMUs 10, 12, and 16. Between 1900 and 1934, approximately 70% of the Lochsa River drainage was burned by wildfires. From the 1920s to 1990, thousands of miles of roads were built for timber harvest in GMUs 10A, 10, 12, 15, and 16. In 1964, most of the southern portion of GMU 12 was designated as part of the Selway-Bitterroot Wilderness.

GMUs 16A, 17, 19, and 20 represent much of Idaho's backcountry; much of the area is designated wilderness. With the rugged, remote terrain and difficult access, management control of deer herds has been difficult at best. The forces of weather, fire, and plant succession have ultimately played a much larger role in deer populations than efforts of wildlife managers. A mid-September to late November season (Appendix A) has been standard in the backcountry GMUs since the 1950s. Even today, much of the deer harvest is localized around access points such as roads and airstrips and much of the harvest is incidental to elk hunting.

Habitat Issues

Much of the land in PMU 15 is administered by USFS, with private lands mostly restricted to the valley bottoms. Recreation and timber management are the dominant human uses of the landscape in these GMUs. PMU 15 is a generally moist region with nearly continuous canopy coverage. Mule deer mix with white-tailed deer during winter, although there is a tendency for mule deer to winter at slightly higher elevations.

Much of the mule deer habitat in this area is the result of large fires during the early 1900s with some habitat created when large areas were block clear-cut during the 1960s. Currently, both influences have little effect on the landscape, and mule deer habitat can be expected to decline in quantity and quality as succession progresses, turning brush-fields back into timber.

Biological Issues

There is very little known about the ecology of mule deer in the heavily forested environments typical of much of this PMU. The timbered nature of the landscape, combined with the relative scarcity of mule deer concentrations, does not allow aerial surveys to be used to monitor mule deer populations in this area. The influence of hunting on mule deer population dynamics is believed to be minor, based on the minor influence of hunting measured on white-tailed deer populations in the same areas. The high percentage of ≥ 4 -point bucks in the antlered harvest (~50%) is consistent with this hypothesis.

Inter-specific Issues

White-tailed deer, mule deer, and elk have sympatric ranges throughout the year in PMU 15. Mountain goat and moose distribution overlaps that of mule deer in some areas. The effects of

inter-specific competition are unknown but are felt to be of minor consequence at existing population levels.

Predation Issues

Mountain lions, black bears, bobcats, coyotes, and wolves exist throughout the area. In the mid-1990s a major increase in the mountain lion population was detected, leading to increased public concern over the impacts of predation of future mule deer populations. High participation in mountain lion hunting led to record harvests during this period but has since declined. Current mountain lion numbers are assumed to be significantly lower than those found 10-15 years ago. Predation can be an important factor in the population dynamics of mule deer in this PMU. Radio-telemetry studies conducted in the Priest River Basin during the late 1980s and early 1990s indicated this was the case with white-tailed deer. Wolves reintroduced by USFWS in central Idaho in the mid 1990's have become well established in these GMUs. The addition of wolves will likely have an impact on black bear, mountain lion, and coyote populations. At some level, predation could benefit deer herds to the extent that it reduces elk competition and keeps deer herds below carrying capacity where they can be more productive. However, excessive levels of predation can also suppress prey populations to undesirably low levels. At this point, it is unclear what the net impact of predation will be with the new mix of large predators.

Winter Feeding Issues

No emergency winter-feeding has been undertaken since the 1996-1997 winter, when a small numbers of mule deer were fed. The most recent winters (2014-2016) had near normal temperatures and moisture levels, with much of the precipitation coming late (February – April) and in the form of rain at lower elevations. Consequently, there was no call for winter-feeding.

Harvest

Total harvest in PMU 15 in 2016 was estimated at 1,304 mule deer based on mandatory harvest report cards. This represents a 9% increase in harvest from 2015(1,196) and is 35% above the previous five-year average of 963. Total hunter numbers were estimated at 3,779 for 2016 compared to 4,930 hunters for 2015. An average of 46% of the bucks harvested in these GMUs over the past three years (2014-2016) have been ≥ 4 -point with a 32% hunter success rate.

Information Requirements

With the exception of check station information, the Department did not collect information specific to mule deer harvest in PMU 15 from 1979 to 1995. Hunter effort has only been documented since 1996. Good harvest data is of utmost importance here because aerial surveys are impractical due to heavy tree cover and small, scattered pockets of wintering mule deer. Basic ecological information is lacking on mule deer ecology in heavily timbered environments.

Mule Deer

North Idaho PMU 15 (GMUs 1, 2, 3, 4, 4A, 5, 6, 7, 8, 8A, 9, 10, 10A, 12, 15, 16, 16A, 17, 19, 20)



Management Objectives

	Short-Term Objective	Long-Term Objective
# of Deer	TBD	TBD
Pop. Goal	Maintain	Maintain
Hunter Days	>25,000	>25,000

Square Miles =	16,997	3-Year Averages	
% Public Land =	69%	Hunters per square mile =	0.27
Major Land Type =	Forest	Harvest per square mile =	0.09
		Success Rate =	26%

Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer										

Note: Estimates in red are based on information other than sightability surveys.

Population Parameters

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fawn:Doe	ND									
Buck:Doe	ND									
Fawn Survival	ND									
Adult Doe Survival	ND									

Note: Fawn:Doe expressed as fawns per 100 does, Buck:Doe expressed as bucks per 100 does

Fawn Survival = overwinter fawn survival (December - May), Adult Doe Survival = annual survival (June - May)

Harvest Statistics

			Deer Harvest		
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
2006	4,854	31,337	165	1,326	56%
2007	3,285	20,614	156	1,087	58%
2008	5,808	39,203	112	1,008	56%
2009	5,511	33,037	90	911	52%
2010	4,524	27,565	92	853	46%
2011	4,050	24,899	106	579	48%
2012	4,518	27,618	82	815	52%
2013	4,227	25,372	122	820	50%
2014	5,196	31,870	165	930	46%
2015	4,930	28,162	93	1,103	48%
2016	3,779	30,084	125	1,179	45%

Previous Trend Area Surveys

GMU	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Note: ND = no survey data available

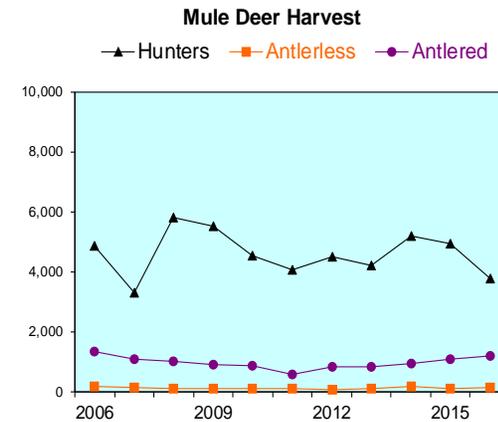
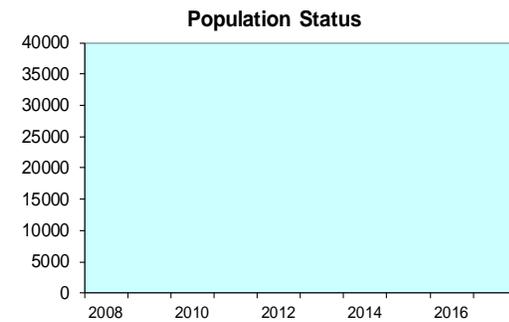


Figure 16. North Idaho Mule Deer PMU Status and Objectives.

Appendix A
IDAHO
2016 SEASON
MULE DEER RULES

2015 & 2016 BIG GAME Seasons & Rules



Controlled Hunt Application Periods

Deer, Elk, Pronghorn & Fall Black Bear: May 1 – June 5
Spring Black Bear: January 15 – February 15

Deer, Elk, Pronghorn Seasons: August 2015 - February 2016 & August 2016 - February 2017
Black Bear, Mountain Lion Seasons: August 2015 - June 2016 & August 2016 - June 2017
Gray Wolf Seasons: July 2015 - June 2016 & July 2016 - June 2017
Including Controlled Hunts for Deer, Elk, Pronghorn and Black Bear



First Edition, 2015



2015 & 2016 Deer Hunting Seasons

Hunters with valid Idaho licenses and tags in their possession can hunt mule deer and/or white-tailed deer.

How many deer can I harvest? In general, the answer is one deer per hunter per year. However, a few controlled hunts and depredation hunts offer the opportunity for hunters to harvest additional deer. Deer hunters also may buy leftover nonresident deer tags at the nonresident price to harvest a second deer. A hunter may take only one deer per valid legal tag in his or her possession.

Note: Residents or nonresidents may buy one unsold nonresident general season deer and elk tag at the nonresident price starting August 1, to be used as a second tag.

Youth hunt only: Some deer hunts are for youth only. See page 105 for more information.

Antlered deer: Deer with at least one antler longer than 3 inches. In "antlered only" seasons, or any hunt with point restrictions, antlers must accompany the carcass while in transit.

Antlerless deer: Deer without antlers or with antlers shorter than 3 inches may be taken in a season open for antlerless deer or either sex.

Two-point deer: Deer with no more than two points on one side, not including the brow point or tine, and at least one antler longer than 3 inches (as long as a deer has no more than two points on one antler, it may have multiple points on the other antler). A point is an antler projection that is at least 1 inch long and longer than the width of the projection.

Three-point deer: Deer having at least one antler with three or more points, not including the brow point or tine.

Species identification: In seasons restricted to mule deer only or white-tailed deer only, if the head is removed, the fully-haired tail must be left naturally attached to the carcass.

Archery and Muzzleloader Permits

Any person hunting in an "archery only" season, including controlled hunts, must have their license with archery permit validation.

Any person hunting in a muzzleloader only season, including controlled hunts must have their license with muzzleloader permit validation.

Nonresident Deer and Elk Tags

Nonresident deer and elk tags, **excluding** Nonresident Junior Mentored/DAV deer and elk tags, are valid to take a black bear, mountain lion or gray wolf instead of a deer or elk, if a season is open for that species, where and when the deer or elk tag is valid, and if there is an open deer or elk season in that same unit. See page 110.

Attention Deer Hunters!

Deer hunters may choose either a regular deer tag or a white-tailed deer tag. The regular deer tag is valid for any hunt listed under "2015 & 2016 Regular Deer Tag Seasons" on pages 8 - 13 and may be used to take a mule deer or white-tailed deer during those seasons.

The white-tailed deer tag is valid for white-tailed deer only, for any hunt listed under "2015 & 2016 White-tailed Deer Tag Seasons" on pages 15 - 18.

For information on Chronic Wasting Disease please see page 31.

Legal Deer in Two-Point Hunts



Spike Deer

Legal buck under 2-point regulations at least 1 antler is 3 inches or longer.



1 x 2 Point Deer

Legal buck under 2-point regulations.



2 x 2 Point Deer

Legal buck under 2-point regulations. Not legal in 3-point or 4-point hunts.



2 x 3 Point Deer

Legal buck under 2-point regulations. Also legal under 3-point regulations.

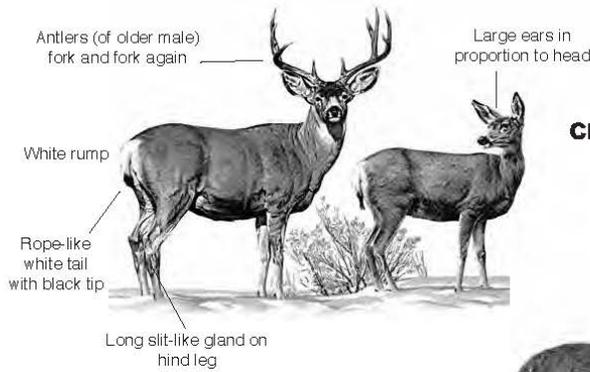


Point must be 1 inch or longer.

DEER

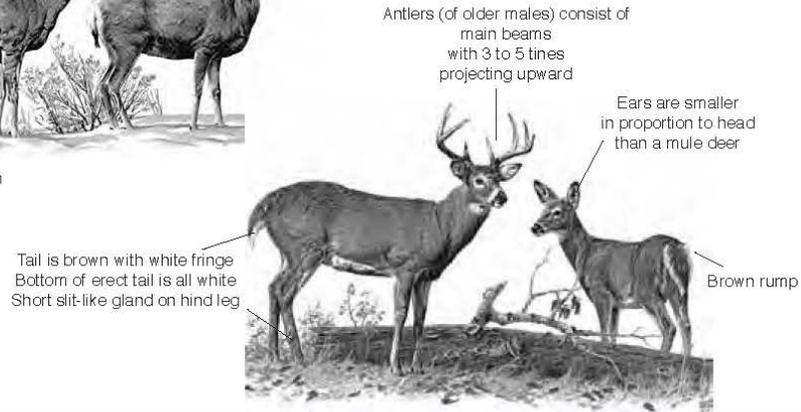
**REGULAR
DEER**

Characteristics of a mule deer



CAUTION!
Antlers on yearling buck white-tailed and mule deer may look similar.

Characteristics of a white-tailed deer



Definitions

- Antlered** — A deer with an antler or antlers at least 3 inches in length.
Antlerless — A deer without antlers or with antlers less than 3 inches in length.

Illustration by Robert Neaves courtesy of Montana Fish, Wildlife & Parks

2015 & 2016 Regular Deer Tag General Any Weapon Seasons			
Unit(s)	Antlered	Antlerless	Notes
1	Oct 10 - Oct 31 <i>(White-tailed deer only)</i>	Oct 10 - Dec 1 <i>(White-tailed deer only)</i>	
	Nov 1 - Dec 1		
2, 3, 4A, 5, 6	Oct 10 - Nov 9	Oct 10 - Dec 1 <i>(White-tailed deer only)</i>	<i>See note 1, Page 13</i>
	Nov 10 - Dec 1 <i>(White-tailed deer only)</i>		
4, 7, 9	Oct 10 - Nov 9	Oct 10 - Nov 9 <i>(White-tailed deer only)</i>	
8, 8A, 10, 10A, 12, 15, 16	Oct 10 - Nov 3	Oct 10 - Nov 3	
11, 11A	Oct 10 - Nov 3 <i>(White-tailed deer only)</i>	Oct 10 - Nov 3 <i>(White-tailed deer only)</i>	
13, 14, 18	Oct 10 - Nov 3 <i>(White-tailed deer only)</i>	Oct 10 - Nov 3 <i>(White-tailed deer only)</i>	<i>Very limited access, See note 1, Page 11</i>
16A, 17, 19, 20	Sep 15 - Nov 18	Sep 15 - Nov 18	

2015 & 2016 Regular Deer Tag General Any Weapon Seasons			
Unit(s)	Antlered	Antlerless	Notes
19A	Oct 10 - Oct 31	Oct 10 - Oct 31 <i>(Youth hunt only)</i>	
20A, 26, 27	Sep 15 - Oct 31	None	
21, 21A, 28, 29, 30, 36, 36A, 36B, 37A	Oct 10 - Oct 24	Oct 10 - Oct 31 <i>(Youth hunt only, Private land only)</i>	<i>See note 2, Page 11, Motorized Hunting Rule Applies in Units 29, 30, 36A, & 37A, See Pages 101 - 103</i>
22	Oct 10 - Oct 24 <i>(2-point deer only)</i>	Oct 10 - Oct 24 <i>(Youth hunt only)</i>	
23, 24, 25	Oct 10 - Oct 31	Oct 10 - Oct 31 <i>(Youth hunt only)</i>	<i>See note 3, Page 11</i>
30A	None	Oct 10 - Oct 31 <i>(Youth hunt only, Private land only)</i>	<i>Motorized Hunting Rule Applies, See Pages 101 - 103</i>
31, 32, 32A	Oct 10 - Oct 24	Oct 10 - Oct 24 <i>(Youth hunt only)</i>	<i>See notes 2 & 4, Page 11, Motorized Hunting Rule Applies in Units 32 & 32A, See Pages 101 - 103</i>
33, 34, 35	Oct 10 - Oct 31	None	
37	Oct 10 - Oct 17	Oct 10 - Oct 17 <i>(Youth hunt only, Private land only)</i>	<i>Motorized Hunting Rule Applies, See Pages 101 - 103</i>
39	Oct 10 - Oct 31	Oct 10 - Oct 31 <i>(Youth hunt only)</i>	
40, 41, 42	Oct 10 - Oct 24 <i>(2-point deer only)</i>	None	<i>See note 2, Page 11</i>
43	Oct 10 - Oct 31	Oct 10 - Oct 31 <i>(Youth hunt only)</i>	
46	Oct 10 - Oct 31	Oct 10 - Oct 31 <i>(Youth hunt only)</i>	<i>See notes 2 & 4, Page 11</i>
48, 49	Oct 10 - Oct 31	Oct 10 - Oct 31 <i>(Youth hunt only)</i>	<i>Motorized Hunting Rule Applies in Unit 49, See Pages 101 - 103</i>
50, 51, 56, 58, 59, 59A	Oct 10 - Oct 24	Oct 10 - Oct 24 <i>(Youth hunt only)</i>	<i>Motorized Hunting Rule Applies, See Pages 101 - 103</i>
52A	Oct 10 - Oct 31	Oct 10 - Oct 31 <i>(Youth hunt only)</i>	<i>Motorized Hunting Rule Applies, See Pages 101 - 103</i>
60, 61, 62, 62A, 64, 65	Oct 10 - Oct 24	Oct 10 - Oct 24 <i>(Youth hunt only)</i>	<i>See note 2, Page 11</i>
60A	Oct 10 - Oct 24	Oct 10 - Oct 24 <i>(Youth hunt only)</i>	<i>See note 5, Page 11</i>
66, 69	Oct 10 - Oct 24	Oct 10 - Oct 24 <i>(Youth hunt only)</i>	<i>Motorized Hunting Rule Applies, See Pages 101 - 103</i>
67	Oct 10 - Oct 24	Oct 10 - Oct 24 <i>(Youth hunt only)</i>	<i>See note 6, Page 11</i>

2015 & 2016 Regular Deer Tag General Any Weapon Seasons			
Unit(s)	Antlered	Antlerless	Notes
66A, 68, 71, 72, 73A, 74, 75, 76, 77	Oct 10 - Oct 24	Oct 10 - Oct 24 (Youth hunt only)	Motorized Hunting Rule Applies in Units 66A, 72, 75, 76 & 77, See Pages 101 - 103
70, 78	None	Oct 10 - Oct 24 (Youth hunt only)	Motorized Hunting Rule Applies, See Pages 101 - 103
73	None	Oct 10 - Oct 16 (Youth hunt only)	Motorized Hunting Rule Applies, See Pages 101 - 103

Notes:

1. Unit 13 has very limited access because of few roads and private property.
2. Short-range weapons **only** on C.J. Strike, Chester Wetlands, Montour Wildlife Management Areas, and Pahsimeroi Access Area.
3. Short-range weapons **only** in that portion of Unit 24 within the following boundary: Beginning in McCall at the junction of State Highway 55 and Boydston Street, then south on Boydston Street to West Valley Road, then west and south along West Valley Road and West Mountain Road to Cabarton Road, then north on Cabarton Road to State Highway 55, then north on State Highway 55 to Farm-To-Market Road, then north on Farm-To-Market Road to Elo Road, then west on Elo Road to State Highway 55, then north on State Highway 55 to the point of beginning.
4. Short-range weapons **only** on the islands in the Snake River.
5. Short-range weapons **only** in that portion of Unit 60A south and east of the North (Henrys) Fork Snake River, and that portion within 1 mile north and west of the North Fork Snake River.
6. Short-range weapons **only** in that portion of Unit 67 south and west of State Highway 26.



There is simply no better way to introduce a new hunter to the safe, ethical and responsible aspects of hunting than with the close supervision of an adult mentor.

Hunting Passport



Photo provided by Jim Boyle

Idaho's Hunting Passport is a component of Fish and Game's mentored hunting program. The Hunting Passport allows any first-time hunter, resident or nonresident, age 8 and older to try hunting for one year with an adult mentor without first having to complete an Idaho hunter education course.

Hunting Passport Highlights:

- Hunting Passports are only available to first time hunters. Those that have previously held a hunting license in any state are not eligible.
- Hunter Education certification is not needed to obtain a Hunting Passport. If an individual has completed a Hunter Education course but has not yet purchased a license, they are eligible for a Hunting Passport.
- The minimum age to hold a Hunting Passport is eight years of age; there is no maximum age.
- The Hunting Passport is a calendar year item just like a hunting license and expires on December 31 of the year in which it was obtained.
- Only one Passport can be purchased in a lifetime. To continue hunting after the Passport expires, completion of a hunter education course and license purchase is required.
- Hunting Passports are available at license vendors, online and Fish and Game regional offices.
- Cost is \$1.75.




fishandgame.idaho.gov

REGULAR DEER

2015 & 2016 Regular Deer Tag General Archery Only Seasons - Archery Permit Required			
Unit(s)	Antlered	Antlerless	Notes
1, 3, 4, 4A, 5, 6, 7, 9	Aug 30 - Sep 30	Aug 30 - Sep 30 <i>(White-tailed deer only)</i>	
	Dec 10 - Dec 24	Dec 10 - Dec 24 <i>(White-tailed deer only)</i>	
2	Aug 30 - Sep 30	Aug 30 - Sep 30 <i>(White-tailed deer only)</i>	<i>See note 1, Page 13</i>
	Nov 1 - Dec 1	Nov 1 - Dec 1 <i>(White-tailed deer only)</i>	<i>See note 2, Page 13</i>
	Dec 10 - Dec 24	Dec 10 - Dec 24 <i>(White-tailed deer only)</i>	<i>See note 1, Page 13</i>
8, 8A, 10, 10A, 11A, 12, 15, 19A, 21, 21A	Aug 30 - Sep 30	Aug 30 - Sep 30	
22	Aug 30 - Sep 30 <i>(2-point deer only)</i>	Aug 30 - Sep 30	
23, 24, 25, 36, 36B	Aug 30 - Sep 30	Aug 30 - Sep 30	
28	Dec 1 - Dec 31	Dec 1 - Dec 31	
29, 30, 30A, 32, 32A, 36A, 37, 37A	Aug 30 - Sep 30	Aug 30 - Sep 30	<i>Motorized Hunting Rule Applies, See Pages 101 - 103</i>
31, 33, 34, 35	Aug 30 - Sep 30	Aug 30 - Sep 30	
38	Aug 30 - Sep 30	Aug 30 - Sep 30	<i>See note 3, Page 13</i>
39	Nov 10 - Nov 30	Nov 10 - Nov 30	<i>See notes 4 & 5, Page 13, Part of unit closed</i>
40, 41, 42	Aug 30 - Sep 30 <i>(2-point deer only)</i>	Aug 30 - Sep 30	
43, 46, 52A	Aug 30 - Sep 30	Aug 30 - Sep 30	<i>Motorized Hunting Rule Applies in Unit 52A, See Pages 101 - 103</i>
47, 48, 49, 50, 51, 56, 57, 58, 59, 59A	Aug 30 - Sep 30	Aug 30 - Sep 30	<i>Motorized Hunting Rule Applies in Units 47, 49, 50, 51, 56, 58, 59 and 59A, See Pages 101 - 103</i>
55	Nov 25 - Dec 19	Nov 25 - Dec 19	
60, 60A, 62, 64, 65, 66, 67, 69	Aug 30 - Sep 30	Aug 30 - Sep 30	<i>Motorized Hunting Rule Applies in Units 66 & 69, See Pages 101 - 103</i>
	Nov 1 - Dec 19 <i>(White-tailed deer only)</i>	Nov 1 - Dec 19 <i>(White-tailed deer only)</i>	
61, 62A	Aug 30 - Sep 30	Aug 30 - Sep 30	
63	Aug 30 - Sep 30	Aug 30 - Sep 30	
	Nov 1 - Dec 19	Nov 1 - Dec 19	
66A, 68, 71, 72, 73, 73A, 74, 75, 76, 77, 78	Aug 30 - Sep 30	Aug 30 - Sep 30	<i>Motorized Hunting Rule Applies in Units 66A, 72, 73, 75, 76, 77 & 78, See Pages 101 - 103</i>

2015 & 2016 Regular Deer Tag General Muzzleloader Only Seasons - Muzzleloader Permit Required			
Unit(s)	Antlered	Antlerless	Notes
4, 7, 9	Nov 10 - Dec 1	Nov 10 - Dec 1 <i>(White-tailed deer only)</i>	
39	None	Sep 8 - Sep 30	

2015 & 2016 Regular Deer Tag General Deer Short Range Weapon Seasons			
Unit(s)	Antlered	Antlerless	Notes
38	Oct 10 - Oct 31	Oct 10 - Nov 24	<i>Very limited access, See note 3, Page 13</i>
45	Oct 10 - Nov 6	Oct 10 - Nov 6	<i>See note 6, Page 13, Motorized Hunting Rule Applies, See Pages 101 - 103</i>
53	Oct 10 - Nov 6	Oct 10 - Nov 6	<i>See note 7, Page 13, Motorized Hunting Rule Applies, See Pages 101 - 103</i>
63	Oct 10 - Oct 24	Oct 10 - Oct 24 <i>(Youth hunt only)</i>	

Notes:

1. Farragut State Park and Farragut Wildlife Management Area are **closed**.
2. Farragut State Park and Farragut Wildlife Management Area **only**.
3. That portion of Unit 38 within the Lake Lowell Sector of the Deer Flat National Wildlife Refuge is **controlled hunt only**.
4. **Archers caution:** An “any weapon” antlered elk hunt will be open at the same time in this unit.
5. **Area Closure:** That portion of Unit 39 within Ada County, and that portion of Unit 39 within the following boundary: Beginning at the intersection of State Highway 21 and the Middle Fork Boise River Road (Forest Road 268), east on Forest Road 268 to Cottonwood Creek-Thorn Creek Road (Forest Road 377), to South Fork of Thorn Creek to confluence of Thorn Creek, north and west on Thorn Creek to the confluence with Mores Creek, south and west along the center of Mores Creek including in the Mores Creek arm of Lucky Peak Reservoir to Highway 21 to the point of beginning is **closed**.
6. That portion of Unit 45 south of Interstate 84. The rest of Unit 45 is **controlled hunt only**.
7. That portion of Unit 53 west of U.S. Highway 93. Due to routing changes made to U.S. Highway 93, the eastern boundary for Unit 53 short range weapons hunt is: Beginning at the junction of U.S. Highway 93 and U.S. Highway 30 (east of Filer), north along Hwy 93 turning east at the junction of Poleline Road, continuing east to Blue Lakes Blvd, then north across the Perrine Bridge following U.S. Highway 93 to U.S. Highway 26 in Shoshone. The rest of Unit 53 is **controlled hunt only**.

Idaho's Mule Deer Initiative



Photo Courtesy John Stolzman

Mule Deer numbers across much of their range in Idaho have increased recently following multiple mild winters and good habitat conditions, but there's still work to do. The Mule Deer Initiative (MDI) continues to work with private landowners and land management agencies to:

- **Protect and improve habitat**
- **Improve mule deer numbers**
- **Provide a variety of hunting opportunities**



Photo Courtesy Randy Martinez



Getting things done for mule deer requires partnerships.

We're currently working with:

- The **Bureau of Land Management** to restore critical winter range in the Soda Hills and other areas across southern Idaho.
- The **Caribou-Targhee and Salmon-Challis National Forests** to improve and expand aspen stands which are critical during fawning.
- The **Sawtooth National Forest** to provide increased infrastructure to reduce motorized travel impacts on critical big game habitat.
- The **Idaho Transportation Department** to develop strategies to reduce deer-vehicle collisions.
- The **Farm Service Agency, Natural Resources Conservation Service, and hundreds of land owners** to improve thousands of private land acres for mule deer and other wildlife across southeast Idaho.



If you're interested in improving your property for mule deer, contact your regional Fish and Game office and ask them to put you in touch with MDI staff.



Photo Courtesy Bill London

fishandgame.idaho.gov/content/mdi

Submitted by:

Wayne Wakkinen
Regional Wildlife Manager

Clay Hickey
Regional Wildlife Manager

Rick Ward
Regional Wildlife Manager

Regan Berkley
Regional Wildlife Manager

Daryl Meints
Regional Wildlife Manager

Zach Lockyer
Regional Wildlife Manager

Curtis Hendricks
Regional Wildlife Manager

Greg Painter
Regional Wildlife Manager

Approved by: IDAHO DEPARTMENT OF FISH AND GAME


Toby Boudreau
Asst Chief, Bureau of Wildlife
Federal Aid Coordinator


Scott Reinecker, Chief
Bureau of Wildlife