

**IDAHO DEPARTMENT OF FISH AND GAME**

**Virgil Moore, Director**

**Project W-170-R-34**

**Annual Report**



**MULE DEER**

Study I, Job 2

July 1, 2010 to June 30, 2011

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December 2011  
Boise, Idaho





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**ANNUAL REPORT  
SURVEYS AND INVENTORIES**

<b>STATE:</b>	<u>Idaho</u>	<b>JOB TITLE:</b>	<u>Mule Deer Surveys and</u>
<b>PROJECT:</b>	<u>W-170-R-34</u>		<u>Inventories</u>
<b>SUBPROJECT:</b>	<u>1-7</u>	<b>STUDY NAME:</b>	<u>Big Game Population Status,</u>
<b>STUDY:</b>	<u>1</u>		<u>Trends, Use, and Associated</u>
<b>JOB:</b>	<u>2</u>		<u>Habitat Studies</u>
<b>PERIOD COVERED:</b>	<u>July 1, 2010 to June 30, 2011</u>		

**STATEWIDE**

**Summary**

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

Mule deer are primarily browsers, so most of their diet is composed of the leaves and twigs of shrubs and trees, particularly during winter. Grasses and forbs can be important dietary components, particularly during spring and early summer.

Winter range is a critical component of mule deer habitat. Mule deer are susceptible to high mortality during periods of prolonged deep snow and low temperatures. Winter range has long been recognized as an important habitat component, but our understanding has changed as we have learned more about how deer use it. In the 1950s and 1960s, most of our emphasis was on the food resources on winter range. This was reflected in plantings of bitterbrush and measurements of utilization of browse plants. It was obvious that the food resources of winter range were important, but it could not account for all the variation observed in winter range use.

Even under the best conditions, deer lose weight throughout winter. The best "winter range" a mule deer has is the fat stored in the body during spring, summer, and fall. The condition of a deer at the start of winter depends on the quality of habitat it occupies during the rest of the year. The main strategy of a mule deer in winter is to minimize energy loss and eat enough to prolong fat reserves. Deer commonly seek winter ranges where there is good thermal cover to minimize energy loss. Deer often become very sedentary during winter, moving as little as possible to conserve energy.

Although our view of winter range has changed, its importance has not. Cover, aspect, and elevation are recognized as crucial components, and during certain times, are more important than food. Human disturbance of deer on winter ranges causes them to move from favored sites

and waste precious energy. The size of winter range is important to allow for different snow conditions and fluctuations in deer populations.

Much of Idaho's historic mule deer winter range has been developed for other uses and is now occupied by man. Ranches, farms, subdivisions, and industry located in the foothills and at lower elevations have eliminated winter range. In many parts of Idaho, deer winter range is adequate for the "average" winter, but when severe winters occur, deer are forced to low elevations where they come into conflict with humans. Deer can damage standing and stored crops; most commonly hay, ornamental shrubs, trees, and orchards. Depredations by mule deer can be severe and, in many cases, is an important factor in determining the optimum size of a deer population.

Early spring is an important time of year for mule deer, and spring range is a key component of year-round habitat. Most winter-related mortality actually occurs in early spring. Fawns and old bucks are most likely to die of winter stress. Mortality of does is usually light, but their condition is particularly critical because they are entering the third trimester of pregnancy and development of the fetus taxes their resources. The quality and quantity of nutritious forage in spring (Apr-Jul) has a major effect on production and survival of fawns. The timing of spring green-up is also important. A winter-stressed deer needs good forage as soon as possible. Cold, late spring weather with late green-up can increase mortality and reduce production.

Summer-fall ranges are obviously important because this is where deer produce fat reserves that will allow survival through winter. Quality of summer-fall forage directly influences pregnancy and ovulation rates and, therefore, fawn production. Late fall is the last opportunity for deer to forage and store fat before moving to winter range. High-quality fall range is important for bucks because their body reserves are reduced by rutting.

Many of Idaho's mule deer are migratory and commonly travel long distances (20-100 miles) from summer range to winter range. Mule deer usually return to the same summer and winter ranges each year. Tagging and radio telemetry studies indicate that deer summering in the same area may go to different winter ranges, sometimes different game management units or different states. We have also found that deer wintering together can move to entirely different summer ranges. The migratory behavior of deer and the differential distribution of bucks and does complicate the measurement and interpretation of population parameters.

Given mule deer's fidelity for winter ranges, many of man's activities can disrupt or even eliminate migrations, forcing deer to winter on sub-optimal ranges that may increase their mortality rates. Interstate highways, deer-proof fences, and urbanization represent examples of activities that can disrupt migration patterns. Survival through winter is a tenuous balance between energy conservation and energy expenditure. Activities that increase energy expense likely increase over-winter mortality.

The structure of mule deer populations varies with habitat and population size. Populations at low density (below carrying capacity) tend to have high reproductive rates which allow for rapid

growth. Some populations stabilize at low density because they are susceptible to high mortality during unfavorable conditions. This is typical of populations in marginal habitat.

Populations at high density (near carrying capacity) tend to have low reproductive rates, and a stable age distribution. Population growth is slow, if it occurs at all. Annual production replaces annual mortality. This type of population is commonly found in stable, well-established habitat types, particularly climax forests. A wide spectrum of population structures is found between these two extremes.

Overall, mule deer populations statewide have declined since the 1950s and 1960s. It is unlikely that populations will ever increase to those levels again. Mule deer are best adapted to seral, transitional habitat types. Habitat succession is a continual and dynamic process, and those habitats best suited for mule deer cannot be expected to remain indefinitely or even be managed for on a large enough scale to have significant population effects. Recent population declines in parts of southern Idaho that were marked by the 1992-1993 winters are a natural process in mule deer dynamics. Populations are expected to increase given favorable environmental conditions. However, the long-term outlook for mule deer statewide is that of slowly diminishing habitat quantity and quality over time. Maintaining healthy populations with harvestable surplus is expected and will continue; however, populations reminiscent of the “good-old-days” are unrealistic.

The effect of harvest mortality is highly variable in mule deer. Generally, most annual mortality is not hunter-harvest related. Factors such as predation, malnutrition over winter, accidents, and disease are responsible for most deaths in mule deer populations. Therefore, population response tends to be independent of harvest. Exceptions include antlerless opportunity designed to stabilize or reduce populations and effects of hunter harvest on buck survival and age structure. Hunting seasons designed to offer significantly more opportunity for antlered deer than antlerless deer, or during periods when bucks are vulnerable (rut, winter range), can reduce the proportion of bucks and particularly older bucks in the population. Buck-only seasons will not limit population growth; however, they can affect the number of older bucks. The Idaho Fish and Game Commission (Commission) established a statewide minimum of 15 bucks per 100 does post-season, primarily as the minimum ratio that hunters would accept. It is unknown what the lower threshold value for buck:doe ratio is where negative impacts on production parameters would occur. However, we believe that the statewide minimum is above that necessary for adequate reproduction.

Proper harvest management for mule deer, given their relative independence to harvest effects, is to adequately monitor populations annually and be responsive to population changes. Liberal seasons can be applied during periods when populations are expanding rapidly and conservative seasons applied when environmental factors are limiting population growth.

This plan represents a statewide change in how we monitor mule deer populations. Historically, harvest parameters and periodic unit-wide surveys were conducted to assess population status. Beginning with this plan, we have 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 survival will allow us to track population status annually. Buck:doe:fawn ratios will continue to be collected annually in 12 of 15 PMUs.

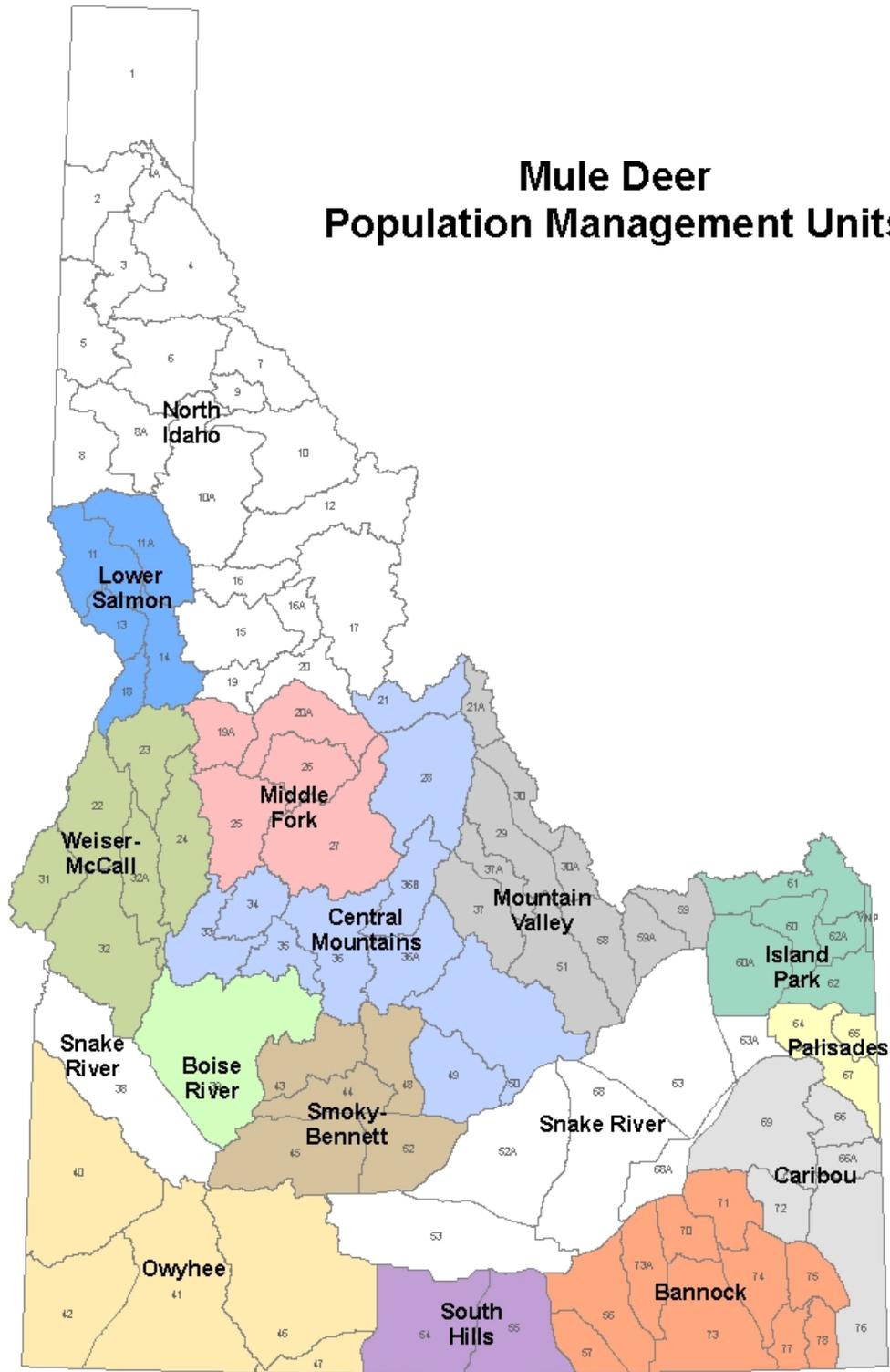
Antlerless harvest thresholds have been established for each of the trend areas (with few exceptions). These thresholds represent trend area population “goals.” We recognize mule deer populations are primarily a function of the environment rather than any direct Department action. These threshold values 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 allow. Determining whether to have antlerless seasons or the length of a season often results in controversy among hunters and between hunters and wildlife managers. To help reduce disagreement and 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.

# Mule Deer Population Management Units



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.

### DECISION MODEL

Population Level	Variable Score		
	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:

- |   |  |
|---|--|
| <p>1) Antlerless Harvest Threshold Value = 2000<br/>         Population Survey = 3000 deer observed<br/>         Animal Condition = good<br/>         Winter Severity = avg. 50% fawn mortality<br/>         Total Score = 15 + 5 + 5 = 25<br/>         Maximum Antlerless Framework = 21+ days</p> | <p>2) Antlerless Harvest Threshold Value = 2000<br/>         Population Survey = 1500 deer observed<br/>         Animal Condition = poor<br/>         Winter Severity = severe, 75% fawn mortality<br/>         Total Score = -5 + 0 + -5 = -10<br/>         Maximum Antlerless Framework = 0 days</p> |
|---|--|

## 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

		3-Year Averages
Square Miles =	84,437	Hunters per square mile = 1.3
% Public Land =	69%	Harvest per square mile = 0.4
Major Land Type =	Various	Success Rate = 34%

### 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.

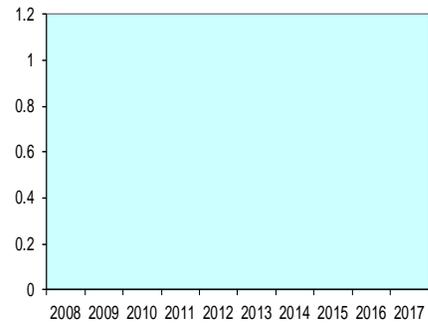
### Population Parameters

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Fawn:Doe	61	60	56	63	61	56	60			
Buck:Doe	17	16	19	21	22	16	15			
Fawn Survival	0.40	0.69	0.54	0.76	0.31	0.69	0.30	0.52	0.68	0.32
Adult Doe Survival	ND	ND	ND	ND	0.87	0.89	0.90	0.90	0.95	0.82

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
1988	148,600	978,000	19,238	41,508	
1989	142,400	1,089,800	28,670	43,650	
1990	154,500	1,188,000	18,677	33,197	
1991	146,500	1,810,000	15,433	26,790	
1992	109,770	866,000	14,725	26,679	44%
1993	128,000	835,000	8,884	15,863	44%
1994	133,063	655,000	5,833	18,599	44%
1995	134,722	691,800	4,713	16,478	43%
1996	124,795	616,500	5,028	19,318	48%
1997	147,244	503,400	3,437	17,737	38%
1998	116,771	803,055	2,393	19,656	38%
1999	121,364	667,898	4,695	19,955	33%
2000			5,000	20,100	
2001	112,320	779,879	3,800	19,600	26%
2002	124,200	761,851	5,463	17,607	33%
2003	136,200	532,044	6,332	19,605	42%
2004	146,500	698,165	6,332	19,605	38%
2005	94,800	399,708	6,746	24,128	38%
2006	91,644	419,892	6,476	22,084	38%
2007	69,421	299,998	6,562	24,207	38%
2008	95,258	461,478	5,574	17,729	38%
2009	91,706	420,977	6,271	17,792	36%
2010	90,539	400,990	6,664	18,589	36%

Note: Harvest data prior to 1998 does not include primitive weapon harvest.

Hunter numbers and hunter days prior to 2005 include white-tailed deer and mule deer hunters.

### Mule Deer Harvest

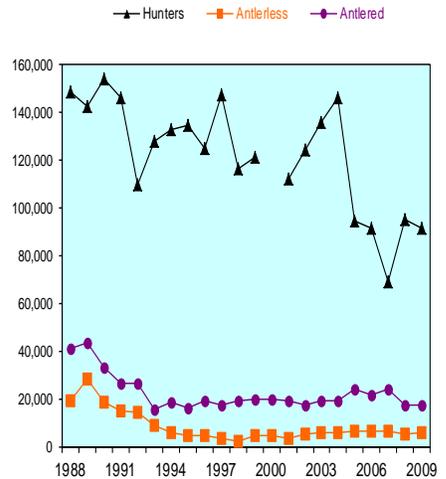


Figure 1. Mule Deer Analysis Statewide.

## LOWER SALMON

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

#### Management Objectives

Management objectives for PMU 1 (Fig 2) relate to the total number of deer (both a short-term objective and a long-term objective). PMU 1 has not been surveyed 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 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 5,902 hunter days over the last three years (2008-2010). Additionally, an average of 72% of the bucks harvested in these GMUs over the past three years (2008-2010) 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, 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. This fire alteration on the landscape is just now 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 provides thermal and hiding cover. During 2007, much of the Snake River face in GMU 11 was burned by wildfire. That same year, wildfires in GMU 13 and 18 also burned large tracts of wildlife habitat primarily on public lands.

## **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 2011, there have been a total of 9 mortalities, 5 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. Monitoring efforts for the presence of this louse are ongoing.

### **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 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**

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

### **Harvest**

Total harvest in PMU 1 in 2010 was estimated at 712 mule deer based on mandatory harvest report cards. This represents a 4% decrease in harvest from 2009 (741) and is 3% less than the previous five-year average of 733. Total hunter numbers were estimated at 1,134 for 2010 compared to 1,219 hunters for 2009. An average of 72% of the bucks harvested in these GMUs over the past three years (2008-2010) have been 4-point or larger with a 60% 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. GMUs 11 and 14 are the only GMUs within this PMU that have been flown for GMU-wide winter range surveys since 1994. 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 resultant re-prioritization have resulted in a lack of implementation of the recently adopted aerial survey schedule in this PMU to date.

## 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 =	0.33
Major Land Type =	Agriculture/Range	Harvest per square mile =	0.26
		Success Rate =	60%

### Population Status

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

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

### Population Parameters

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Fawn:Doe	52	58	47	63	ND	ND	ND	ND		
Buck:Doe	18	27	23	20	ND	ND	ND	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

	Hunters	Hunter Days	Deer Harvest		
			Antlerless	Antlered	% 4+ Points
1988	5,257	27204	469	1,135	
1989	6,214	33056	885	960	
1990	5,287	84353	235	851	
1991	6,045	81549	339	937	
1992	3,852	22570	144	729	
1993	10,896	77784	171	699	
1994	12,713	89177	57	721	
1995	11,417	78824	0	216	
1996	9,331	56895	140	831	
1997	8,930	41817	55	589	
1998	5,256	31699	20	329	
1999	4,722	30089	0	399	
2000			64	442	
2001	4,626	23634	105	441	
2002	7,445	34568	295	506	
2003	5,453	25183	89	373	68%
2004	6,580	33331	120	584	64%
2005	923	4,145	112	565	76%
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%

Note: Harvest data prior to 1998 does not include primitive weapon harvest.

Hunter numbers and hunter days prior to 2005 include white-tailed deer and mule deer hunters.

### Previous Trend Area Surveys

Unit	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

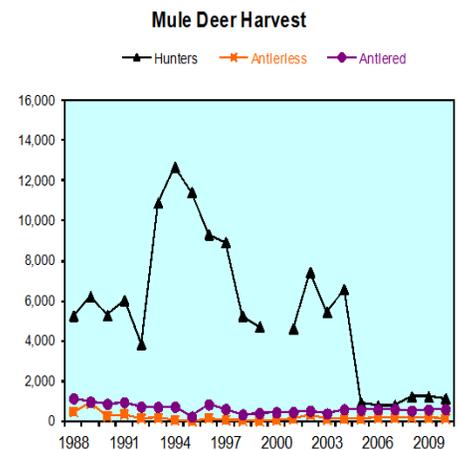
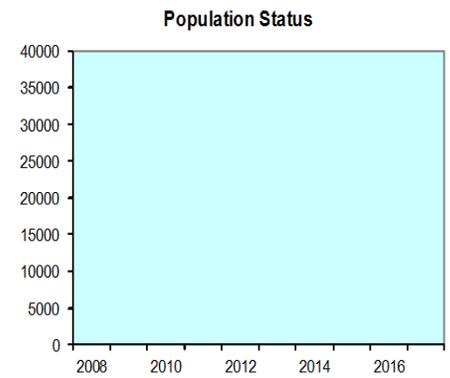


Figure 2. Mule Deer Data PMU 1.

## WEISER-MCCALL

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

#### Management Objectives

Objectives for PMU 2 (Fig 3) are to maintain buck harvest above 25%  $\geq 4$  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 as 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  $\leq 2$  point bucks to help meet “quality” management objectives.

#### Historical Perspective

These GMUs represent some major deer GMUs in 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 population lives near these GMUs. These GMUs provide deer hunting opportunity, but that opportunity has to be closely regulated to prevent over-harvest. This is particularly true for does throughout the area and for bucks in the open sagebrush habitats where they are more vulnerable.

#### Habitat Issues

The habitats 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 more private land than summer ranges. 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 were above 25% 4+ points (29%) in 2010. Aerial survey information indicates buck:doe ratios were above 15:100 (20) during winter 2010-2011. Over-winter fawn survival was 6% and doe survival was 83% during winter 2010-2011. In GMU 22, the December 2010 buck:doe ratio

was 26:100 compared to 10:100 in December 2007 before general harvest was restricted to  $\leq 2$  point bucks. Eighty percent of the bucks harvested in the GMU 22 2010 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. Competition among species is largely unknown.

### **Predation Issues**

Bobcats, coyotes, mountain lions, and black bears occur throughout the PMU. Additionally, in recent years the presence of wolves has been documented in all GMUs in PMU 2. Multiple wolf packs occupy GMUs 22, 23, 24, and 32A. The impact of these large predators on mule deer is largely unknown but under investigation.

### **Winter Feeding Issues**

Winter feeding has been fairly uncommon in these GMUs. Winter feeding occurred in Weiser and Brownlee Reservoir area during the severe winter of 1992-1993.

### **Information Requirements**

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 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

	Value	3-Year Averages
Square Miles =	5,116	
% Public Land =	56%	Hunters per square mile = 2.6
Major Land Type =	Rangeland	Harvest per square mile = 0.8
		Success Rate = 31%

### 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	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Fawn:Doe	58	49	75	83	55	46	70	62	63	
Buck:Doe	16	17	22	13	12	10	13	18	20	
Fawn Survival	0.65	0.80	0.20	0.44	0.66	0.68	0.33	0.86	0.47	0.06
Adult Doe Survival	0.92	0.90	0.88	0.89	0.93	0.84	0.84	0.96	0.98	0.83

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

	Hunters	Hunter Days	Deer Harvest		
			Antlerless	Antlered	% 4+ Points
1988	12,195	56,321	1,730	3,199	11%
1989	9,561	44,906	1,700	3,196	12%
1990	9,326	42,719	585	2,359	13%
1991	10,806	49,237	87	563	14%
1992	7,265	37,355	748	2,767	15%
1993	9,048	60,599	687	1,875	16%
1994	9,277	54,185	0	1,903	17%
1995	10,746	66,134	17	2,389	18%
1996	8,157	44,490	40	2,532	19%
1997	10,672	46,424	0	3,490	20%
1998	14,246	75,155	59	4,824	21%
1999	15,790	86,853	1,203	4,471	22%
2000			1,324	3,075	23%
2001	10,896	45,921	1,892	3,886	24%
2002	15,752	66,762	1,998	3,223	25%
2003	13,558	55,024	1,255	2,960	26%
2004	15,654	70,526	1,426	3,100	27%
2005	14,363	60,742	1,651	4,136	28%
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%

Note: Harvest data prior to 1998 does not include primitive weapon harvest.

Hunter numbers and hunter days prior to 2005 include white-tailed deer and mule deer hunters.

### Previous Trend Area Surveys

Unit	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

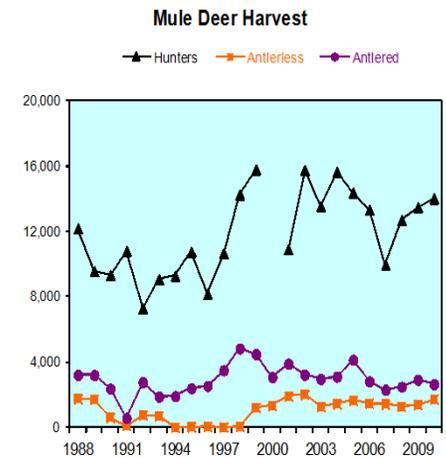
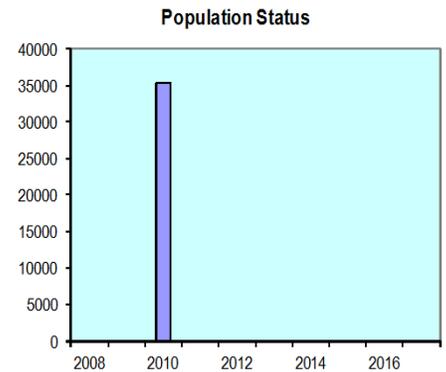


Figure 3. Mule Deer Data PMU 2

## MIDDLE FORK

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

#### Management Objectives

Objectives for PMU 3 (Fig 4) 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.

#### 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 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. 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.

Hunter harvest declined in 2008 from the 5-year average, but in 2010 hunter numbers and buck harvest increased slightly.

## **Habitat Issues**

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. For example, a 1965 helicopter trend count in GMU 27 resulted in a tally of 1,963 deer. The same area flown in 1968 resulted in 2,929 deer observed, while 2,133 deer were counted incidental to elk surveys in 1995. 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 four-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.

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

## **Inter-specific Issues**

Current 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, perhaps high, and appear to have increased in recent years, probably at least in part due to increased elk densities. 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 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 is with the new mix of large predators.

## **Winter Feeding Issues**

Winter feeding has not occurred in these remote GMUs.

## **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 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 =	0.5
Major Land Type =	Forest	Harvest per square mile =	0.13
		Success Rate =	26%



### Population Status

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

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

### Population Parameters

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Fawn:Doe	47	62		53		50	54	64	39	50
Buck:Doe	25	23		31		18	25	23	25	27
Fawn Survival	ND	ND	ND	ND	ND	ND	0.24	ND	ND	ND
Adult Doe Survival	ND	ND	ND	ND	ND	ND	0.80	0.95	0.98	0.95

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

	Hunters	Hunter Days	Deer Harvest		
			Antlerless	Antlered	% 4+ Points
1988	1,266	7,554	227	901	
1989	1,116	6,835	301	1,332	
1990	1,322	8,836	209	700	
1991	1,861	10,654	240	1,078	
1992	788	5,959	103	791	
1993	1,440	8,727	97	1,228	
1994	2,181	13,640	242	814	
1995	4,071	25,040	289	1,555	
1996	1,839	11,570	173	1,260	
1997	1,383	7,382	19	449	
1998	1,950	9,962	0	821	
1999	1,533	7,964	0	471	
2000			35	406	
2001	1,012	5,066	20	541	
2002	1,338	7,780	14	543	
2003	1,321	6,915	17	588	60%
2004	1,389	7,892	54	636	57%
2005	2,237	12,714	56	752	65%
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%

Note: Harvest data prior to 1998 does not include primitive weapon harvest.

Hunter numbers and hunter days prior to 2005 include white-tailed deer and mule deer hunters.

### Previous Trend Area Surveys

Unit	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

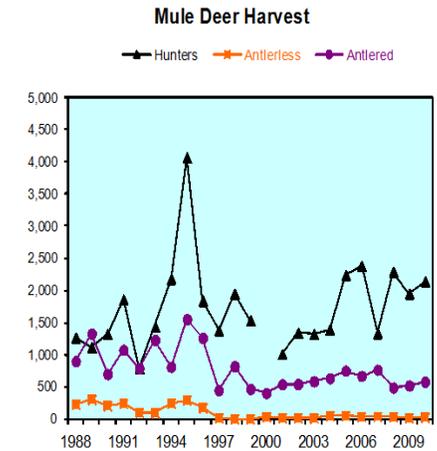
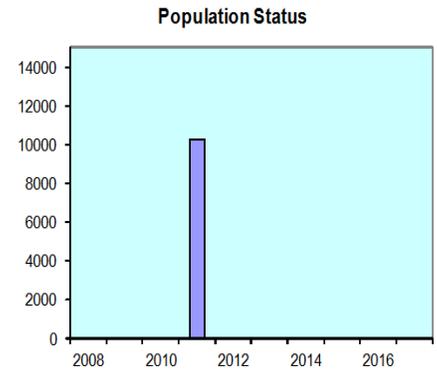


Figure 4. Mule Deer PMU 3.

## CENTRAL MOUNTAINS

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

#### Management Objectives

Objectives for PMU 4 (Fig 5) are to maintain  $\geq 15$  bucks:100 does in post-season surveys and  $>25\%$   $\geq 4$ -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 have dropped slightly from an average of 11,420 hunters harvesting 2,630 bucks annually during the 1990s to 10,550 hunters harvesting 2,360 bucks since 2000. Hunter numbers increased from 2007 to 2008 and then declined in 2009 and 2010. Buck harvest in 2010 was 1,923; approximately 440 less than the previous 10-year average.

#### Habitat Issues

Cattle ranching, livestock grazing, mining, timber harvest, 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.

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, such as knapweed and leafy spurge, 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. A total abundance survey was completed in 2011, yielding an estimate of 33,477.

Fawn production in PMU 4 had been increasing since a low of 45 fawns per 100 does in 2000 to a high of 67 fawns per 100 does in 2008. The fawn ratio was 62 fawns per 100 does in 2010. The buck ratio was 18 in 2010, similar to the previous year.

Fawn monitoring information for the 2010-2011 winter indicated fawn survival was lower than normal at 48% and adult doe survival fell to 87% within this PMU. Fawn survival fluctuates dramatically usually due to body condition going into winter and winter weather conditions.

## **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 produce 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 been reduced 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. 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. Reintroduction of gray wolves by USFWS has resulted in establishment of  $\geq 20$  packs in the 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.

## **Winter Feeding Issues**

Limited amounts of deer feeding occur about once per decade in the North Fork area. In the Garden Valley area (GMU 33), winter feeding occurs about 2 out of 5 years. During winter 2007-2008 winter feeding occurred during most of February and March. Minor private feeding activities also occur from time to time.

## **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 will not be conducted until 2011. Impacts of elk on mule deer production and survival are suspected, but not quantified. 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. 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 =	1.2
Major Land Type =	Forest/Rangeland	Harvest per square mile =	0.39
		Success Rate =	24%



#### 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	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Fawn:Doe	54	56	49	58	48	42	67	57	60	62
Buck:Doe	15	16	17	27	14	12	14	20	20	18
Fawn Survival	0.58	0.39	0.34	0.77	0.15	0.67	0.22	0.55	0.85	0.48
Adult Doe Survival	ND	ND	ND	ND	0.82	0.88	0.89	0.89	0.95	0.87

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
1988	11,185	58,514	1,248	4,298	
1989	9,648	51,224	1,461	4,428	
1990	11,571	66,657	1,025	3,437	
1991	12,751	67,337	1,247	3,955	
1992	10,064	57,686	1,040	3,458	
1993	10,048	63,811	634	1,532	
1994	11,915	69,870	572	2,471	
1995	13,128	85,303	407	2,333	
1996	11,009	61,582	475	3,019	
1997	11,759	63,731	196	1,796	
1998	11,398	64,171	156	2,238	
1999	10,558	58,838	183	2,083	
2000			229	2,328	
2001	8,578	35,122	682	2,374	
2002	11,559	52,611	808	1,891	
2003	10,631	44,640	462	2,030	27%
2004	12,483	56,309	757	2,255	32%
2005	11,757	55,684	592	3,241	37%
2006	11,400	54,025	551	2,820	33%
2007	7,748	33,936	635	2,866	34%
2008	10,906	52,965	666	2,005	34%
2009	9,876	46,447	476	1,777	35%
2010	9,406	42,439	517	1,923	30%

Note: Harvest data prior to 1998 does not include primitive weapon harvest.

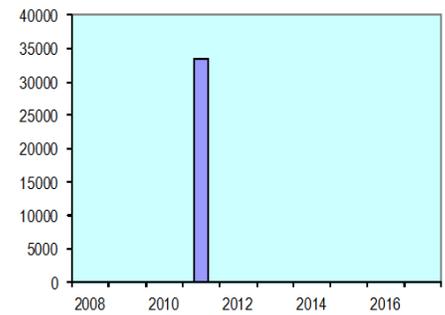
Hunter numbers and hunter days prior to 2005 include white-tailed deer and mule deer hunters.

#### Previous Trend Area Surveys

Unit	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
21	1,226	ND	1,104	1,284	459	1,273	2004	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

Population Status



Mule Deer Harvest

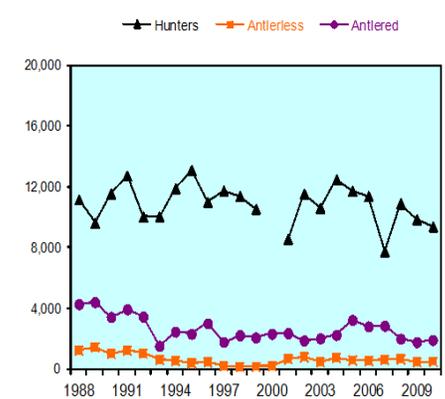


Figure 5. Mule Deer PMU 4.

## **BOISE RIVER**

### **PMU 5 (GMU 39)**

#### **Management Objectives**

Objectives for PMU 5 (Fig 6) are to maintain buck harvest above 30%  $\geq 4$  points and maintain buck:doe ratios from herd composition surveys above the statewide minimum of 15 bucks per 100 does.

#### **Historical Perspective**

This GMU represents one of the major deer GMUs 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 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 GMU 39. 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. Buck harvest parameters were 30% 4+ points in 2010. Aerial survey information indicates buck:doe ratios were above 15:100 objective during winter's 2010-2011 (17 bucks:100 does). Fawn:doe ratios were 76:100, slightly lower than our 2009 high of 86:100. 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 our allowable doe harvest threshold of 20,000 deer.

### **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 been high despite deep snows. Instead, it appears there may be carrying capacity issues as mule deer fawn survival was <50% during the very mild winter of 2007. Intensive livestock grazing is present on much of the range. Competition among species is largely unknown.

### **Predation Issues**

Bobcats, coyotes, mountain lions, and black bears occur throughout the PMU. More recently wolves occupy much of the area as there are  $\geq 7$  packs in GMU 39. 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 GMU. Winter feeding last occurred during winter 1992-1993.

### **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 and will occur every 5 years thereafter. 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

	Value	3-Year Averages	Value
Square Miles =	2,444	Hunters per square mile =	4.3
% Public Land =	76%	Harvest per square mile =	1.2
Major Land Type =	Forest/Rangeland	Success Rate =	21%



### 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	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Fawn:Doe	76	51	53	56	57	51	47	86	76	
Buck:Doe	14	15	13	28	16	12	14	25	17	
Fawn Survival	0.48	0.57	0.38	0.76	0.59	0.46	0.70	0.87	0.75	0.35
Adult Doe Survival	ND	ND	ND	ND	0.96	0.95	0.94	0.96	0.94	0.89

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
1988	10,203	47,386	945	2,688	
1989	9,408	41,772	1,762	3,422	
1990	10,851	45,032	967	2,367	
1991	11,459	48,815	1,176	2,437	
1992	9,415	45,851	1,781	2,265	
1993	7,286	39,987	514	997	
1994	7,782	44,354	0	1,400	
1995	8,400	45,964	0	1,579	
1996	7,783	39,991	77	2,271	
1997	7,935	37,649	0	2,186	
1998	8,163	43,038	33	1,897	
1999	8,951	44,822	831	1,923	
2000			694	2,039	
2001	7,650	31,258	904	2,104	
2002	9,606	40,829	946	1,750	
2003	9,075	38,020	747	1,664	23%
2004	11,477	50,920	1,063	2,234	35%
2005	10,381	42,288	1,065	2,313	29%
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%

Note: Harvest data prior to 1998 does not include primitive weapon harvest.

Hunter numbers and hunter days prior to 2005 include white-tailed deer and mule deer hunters.

### Previous Trend Area Surveys

Unit	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

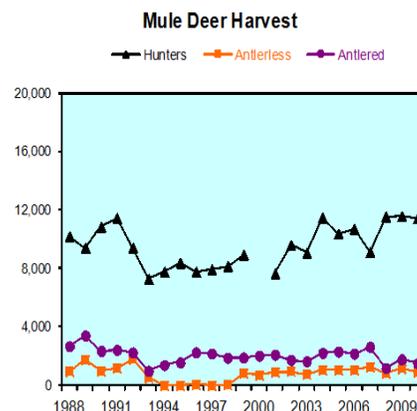
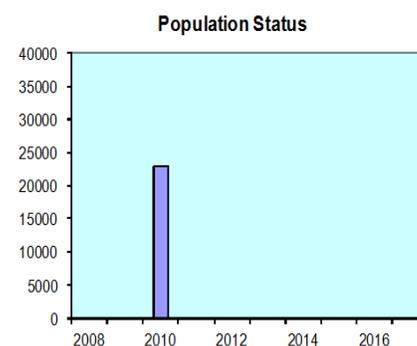


Figure 6. Mule deer PMU 5.

## **SMOKY-BENNETT**

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

#### **Management Objectives**

Deer populations 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 (Fig 7).

#### **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, 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 the most highly sought-after mule deer permits in Idaho. In 2010, drawing odds for the 75-permit October buck hunt was 3.2%. 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. Presently, antlerless harvest is used 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 mi<sup>2</sup> 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 of the northern portion of 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.

On Camas Prairie (GMUs 44 and 45), summer depredation problems on growing alfalfa are common during drought years. Twelve depredation problems involving mule deer were received during the reporting period (10 in GMU 45 and 2 in GMU 52).

### **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.

A complete aerial survey of winter ranges in PMU 6 was conducted during 6-14 February 2008 to obtain a total mule deer population estimate. The estimated population was  $10,700 \pm 201$  deer (90% bound). Within the King Hill trend area, there were an estimated 6,938 deer; 65% of the total. To provide data comparable to past trend area surveys that are typically conducted during green-up in mid-March, data were corrected to account for mortality of fawns and adult does resulting in mid-March estimate of 5,728 deer in the trend area. This estimate represents a 22% decline in trend area deer numbers from the 2007 level (Fig 7).

Herd composition survey data suggest a decline in reproductive performance measured in December from 85 fawns:100 does (1973-1992) to 64 fawns:100 does (1993-2010). In December 2010, a ratio of 58 fawns:100 does was observed ( $n = 1,026$ ). Observed recruitment rates since 1991 have ranged from 21% in 1993 to 42% in 1996 and have averaged 32%, sufficient to allow modest population increases. During winter 2008-2009, estimated overwinter fawn survival was 62% and doe survival was 94%. Antlerless permits for 2008 hunting seasons were reduced by 48% from 2,500 to 1,300 to allow for herd growth.

The observed December 2009 buck to doe ratio was 37 bucks:100 does, well above the objective of 20 bucks: 100 does (Fig 7).

### **Inter-specific Issues**

PMU 6 supports a substantial population of elk, moose, pronghorn, and at higher elevations, mountain goats. 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. 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.

### **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 radioed fawns and does will be monitored annually to provide survival estimates. Pre- and post-winter herd composition surveys will be conducted to monitor over-winter fawn mortality, recruitment rate, 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 =	1.3
Major Land Type =	Rangeland/Forest	Harvest per square mile =	0.61
		Success Rate =	47%



### Population Status

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

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

### Population Parameters

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fawn:Doe	56	61	69	51	84	69	71	59	58	60
Buck:Doe	42	24	34	33	38	34	31	29	37	22
Fawn Survival	ND	0.25	0.62							
Adult Doe Survival	ND	0.94	0.94							

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

	Hunters	Hunter Days	Deer Harvest		
			Antlerless	Antlered	% 4+ Points
1988	7,799	37,301	2,227	3,701	
1989	8,089	41,681	4,422	3,045	
1990	6,824	35,871	1,866	2,275	
1991	7,890	37,055	2,816	2,190	
1992	7,056	29,874	4,346	2,107	
1993	3,321	21,245	1,824	1,025	
1994	3,498	22,030	898	993	
1995	3,648	22,646	1,157	1,445	
1996	3,916	19,298	1,165	1,564	
1997	4,728	23,308	1,222	1,324	
1998	3,990	21,203	1,130	1,450	
1999	4,446	22,688	1,278	1,802	
2000			1,415	1,861	
2001	3,894	14,145	1,835	1,848	
2002	5,016	19,837	1,737	1,536	
2003	4,951	18,391	1,176	1,451	48%
2004	7,996	33,112	1,459	1,563	42%
2005	5,592	21,381	1,205	1,415	42%
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%

Note: Harvest data prior to 1998 does not include primitive weapon harvest.

Hunter numbers and hunter days prior to 2005 include white-tailed deer and mule deer hunters.

### Previous Trend Area Surveys

Unit	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

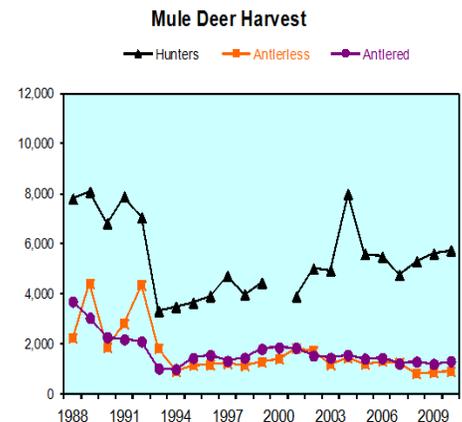
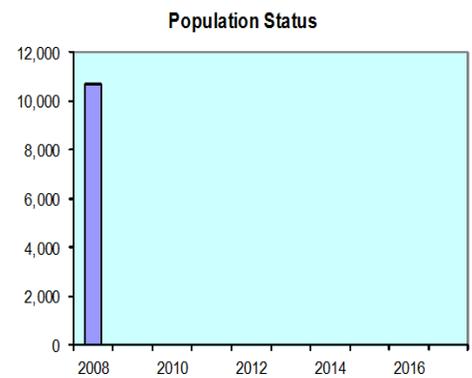


Figure 7. Mule Deer PMU 6

## OWYHEE

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

#### Management Objectives

Post-season buck:doe ratios for PMU 7 (Fig 8) 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%.

#### 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 very 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 very 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. The area 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 41 and 46. Burned areas have been reseeded with crested wheatgrass or have been invaded by cheatgrass and have little browse to support wintering deer. In recent years, fire rehabilitation efforts have included sagebrush in areas where deer habitat was a concern. In GMU 42, there has been a 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 from several thousand to a few hundred deer.

### **Biological Issues**

Very little mule deer aerial survey data exists for this PMU.

### **Inter-specific Issues**

Currently, elk populations are relatively small in this area. There are approximately 200 resident elk east of Highway 51 and about 500-600 elk on the west side of Owyhee County. 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. 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 unsanctioned winter-feeding and to identify any situations where feeding may be appropriate.

### **Information Requirements**

The primary data need for these GMUs is population information. Winter ranges contain some mixture of deer from Oregon/Idaho or Nevada/Idaho. Herds can be surveyed in winter, but status of these wintering animals needs to be allocated to the appropriate hunting season herds. This lack of population information on these important deer herds has been a concern to managers and will be addressed in the near future.

## 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	xx,xxx	xx,xxx

	3-Year Averages
Square Miles =	9,015
% Public Land =	85%
Major Land Type =	Desert/Rangeland
	Hunters per square mile = 0.47
	Harvest per square mile = 0.18
	Success Rate = 38%



### Population Status

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

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

### Population Parameters

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
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

	Hunters	Hunter Days	Deer Harvest		
			Antlerless	Antlered	% 4+ Points
1988	5,397	17,901	626	2,086	
1989	4,817	19,259	742	2,333	
1990	5,884	21,364	522	2,012	
1991	2,803	10,481	489	1,294	
1992	2,015	9,779	513	630	
1993	2,460	13,863	326	782	
1994	2,850	15,339	33	1,253	
1995	2,579	13,521	35	995	
1996	2,615	10,274	119	1,219	
1997	3,530	14,452	111	1,491	
1998	3,471	15,173	45	1,167	
1999	3,733	18,649	36	1,415	
2000			48	1,247	
2001	2,362	6,940	102	1,171	
2002	3,316	10,711	135	1,176	
2003	3,382	10,558	12	1,183	24%
2004	4,379	15,416	208	1,251	20%
2005	4,067	13,332	185	1,524	22%
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%

Note: Harvest data prior to 1998 does not include primitive weapon harvest.

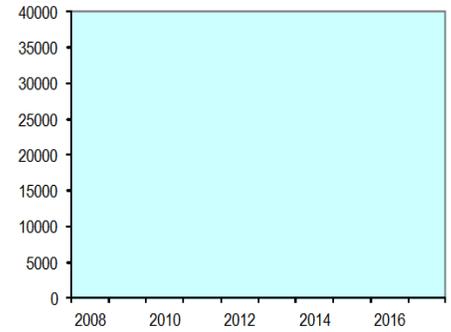
Hunter numbers and hunter days prior to 2005 include white-tailed deer and mule deer hunters.

### Previous Trend Area Surveys

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

Note: ND = no survey data available

Population Status



Mule Deer Harvest

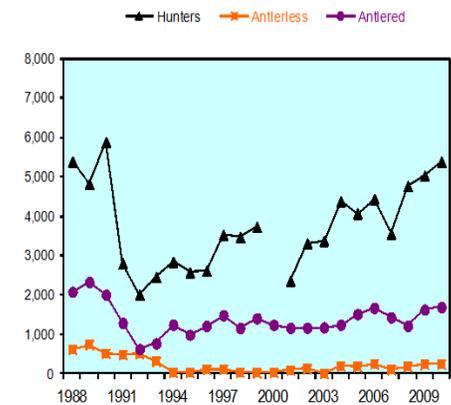


Figure 8. Mule deer PMU 7.

## **SOUTH HILLS**

### **PMU 8 (GMUs 54, 55)**

#### **Management Objectives**

Deer populations in PMU 8 (Fig 9) 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 (2010), 200 antlerless permits are available and a 400-permit youth either-sex hunt allows a small harvest of antlerless deer.

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 were no depredation complaints involving mule deer during the 2009-2011 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 (Fig. 9).

During the 2000 to 2009 winters, overwinter fawn survival ranged from 0.22 in 2009 to 0.85 in 2004 winter and averaged 0.59 (SE = 0.19,  $n = 10$ ). Annual estimated survival of adult does averaged 0.91 in 2008 and 2009 (Fig 9).

Pre-winter composition data indicate a loss of reproductive performance in these deer herd prior to winter. In Unit 54, from 1974-1992, a pre-winter ratio averaged 83 fawns per 100 does compared to 61 fawns per 100 does from 1993-2009. The buck to doe ratio in the PMU is meeting the objective of 25 bucks per 100 does (Fig 9).

## **Inter-specific Issues**

Elk, black bear, and bighorn sheep were eliminated from these GMUs during the late 1800s and early 1900s. Today, a small elk population exists in GMU 54 and a few resident elk occur in GMU 57. There are currently (2009) no competitive concerns with deer and elk. 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 may have played a role in slowing the recovery in deer herds. There are recent indications from mountain lion hunters and researchers that mountain lion populations have declined, probably in response to the reduced mule deer prey base. 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.

## **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.

## **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 =	1.24
Major Land Type =	Rangeland	Harvest per square mile =	0.48
		Success Rate =	39%



### Population Status

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

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

### Population Parameters

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fawn:Doe	59	56	52	66	69	50	46	54	58	60
Buck:Doe	23	26	16	30	29	28	25	16	27	25
Fawn Survival	0.63	0.59	0.80	0.85	0.73	0.45	0.69	0.39	0.22	0.81
Adult Doe Survival	ND	0.93	0.89	0.98						

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
1988	3,700	12,182	425	2,081	
1989	3,654	12,252	1,099	1,341	
1990	3,700	12,980	1,055	1,488	
1991	3,755	12,536	1,013	1,573	
1992	4,005	11,134	1,534	1,235	
1993	4,005	13,303	1,077	674	
1994	2,480	8,676	731	752	
1995	2,480	8,448	600	613	
1996	2,255	6,634	567	596	
1997	2,496	11,409	329	639	
1998	1,875	8,642	0	626	
1999	1,552	7,411	20	661	
2000			99	724	
2001	1,189	5,435	3	579	
2002	1,169	5,994	1	568	
2003	846		47	479	33%
2004	1,852	8,248	109	622	43%
2005	1,457	5,963	97	887	41%
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%

Note: Harvest data prior to 1998 does not include primitive weapon harvest. Hunter numbers and hunter days prior to 2003 include white-tailed deer and mule deer hunters.

### Previous Trend Area Surveys

Unit	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

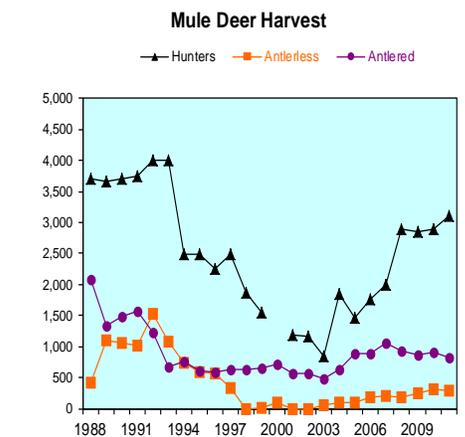
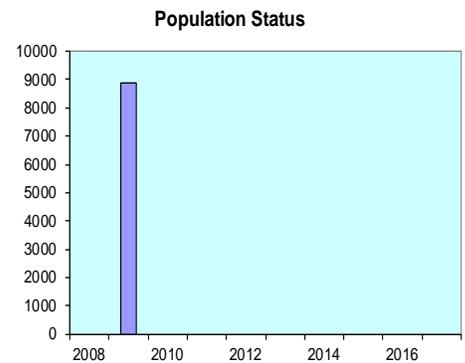


Figure 9. Mule deer PMU 8.

## **BANNOCK**

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

#### **Management Objectives**

Objectives for PMU 9 (Fig 10) 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 now has a buck:doe ratio of 32:100. The regulation will remain in GMU 73 for a few more years to properly monitor its effects and public support. GMU 70 was removed from the four-point regulation and placed in a controlled hunt with 175 permits from 10-31 October for the 2008 deer season.

Major wintering areas in this 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 productive 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. 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 believed 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 2010 -2011 was severe in portions of the Bannock PMU. Overall do mortality was 27% in the PMU. Snow depths exceeded 30 inches in GMU 78 and fawn survival was estimated to be extremely low. That loss in deer will likely be reflected in the harvest for several years.

### **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 major 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. 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 food for approximately 500 deer in several areas in GMU 73 over the past 5 years intermittently.

During winter 2010-2011 emergency winter feeding was conducted in GMU 78. We had as many as 12 feed sites in the unit 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.

### **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 either stable or slightly declining 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.

The population estimate for the PMU is essential to complete in order to provide a base line for the predictive models that are being built to help reduce our reliance on aerial survey data.

## 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

		3-Year Averages
Square Miles =	5,470	Hunters per square mile = 1.9
% Public Land =	48%	Harvest per square mile = 0.49
Major Land Type =	Rangeland/Forest	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	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fawn:Doe	71	65	65	44	58	56	49	54	59	
Buck:Doe	22	14	21	11	14	17	14	11	15	
Fawn Survival	0.76	0.30	0.89	0.50	0.73	ND	0.76	0.29	0.38	0.55
Adult Doe Survival	0.88	0.88	ND	ND	ND	ND	1.00	0.94	0.83	0.73

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
1988	20,245	84,724	4,719	8,336	
1989	22,813	104,488	7,866	9,938	
1990	22,421	103,390	7,304	7,318	
1991	18,463	79,026	3,471	5,279	
1992	13,134	64,131	1,907	4,531	
1993	11,811	74,376	1,202	1,709	
1994	6,514	34,867	541	1,461	
1995	4,508	26,007	197	1,233	
1996	7,245	37,326	300	1,895	
1997	8,009	39,243	9	1,789	
1998	7,743	41,047	0	1,964	
1999	9,396	50,034	34	2,786	
2000			56	2,751	
2001	9,813	37,067	589	3,566	
2002	12,510	54,905	218	2,105	
2003	10,080	36,303	41	2,332	29%
2004	11,343	2,104	38	2,060	35%
2005	10,525	43,199	23	2,521	43%
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%

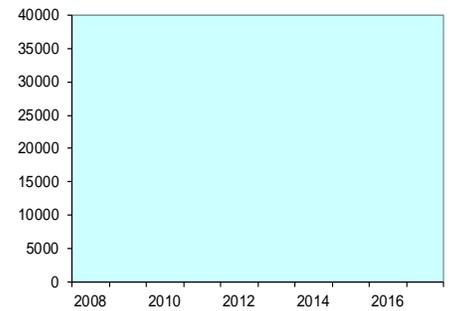
Note: Harvest data prior to 1998 does not include primitive weapon harvest. Hunter numbers and hunter days prior to 2000 include write-tailed deer and mule deer hunters.

### Previous Trend Area Surveys

Unit	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

Population Status



Mule Deer Harvest

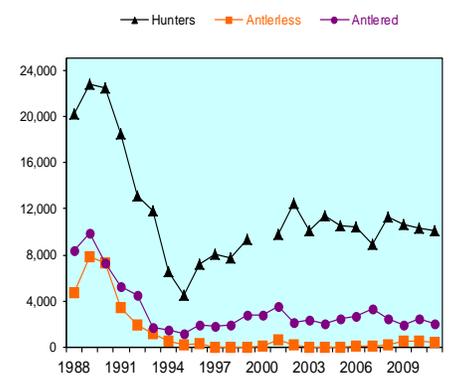


Figure 10. Mule Deer PMU 9.

## CARIBOU

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

#### Management Objectives

Deer populations in PMU 10 (Fig 11) 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 GMU 76.

Major wintering areas in this PMU are: Soda Hills (GMU 72), Bear Lake Plateau (GMU 76). 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.

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 54 to 66:100 over the past 5 years. It is believed 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.

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 inch 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%. Winter feeding sites were distributed in GMU 76 in Bear Lake County. This caused a decline in the mule deer population throughout the PMU.

### **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 minor concern are a few localized areas (riparian and winter range) of intense livestock pressure.

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 (Paul Atwood) recently completed his graduate project 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, we 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. 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.

### **Information Requirements**

We have now finished the baseline sightability survey for PMU 10 as described in the 2008 Mule Deer Management Plan. In 3 years we will need to complete this survey again. 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 an annual basis. The quality of that data is very important.

We need to start research to assess buck vulnerability. This would help us to better manage seasons and maintain buck:doe ratios within the objectives. This information would help us to better manage mule deer and specifically the buck component of the population.

Many regions manage antlerless mule deer as part of their regular harvest by both youth either sex or controlled permit hunting. We need to initiate research to document to effect of doe harvest on population productivity, age structure of the population and that affect on population size. The southeast region has had the most limited antlerless harvest and also has some of the lowest fawn:doe ratios and has seen the lowest increases since the winter of 1992/93. 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 =	2.2
Major Land Type =	Rangeland/Forest	Harvest per square mile =	0.42
		Success Rate =	19%



### Population Status

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

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

### Population Parameters

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fawn:Doe	68	61	55	52	66	59	60	62	64	
Buck:Doe	17	8	15	13	17	13	9	9	12	
Fawn Survival	0.75	0.08	0.76	0.56	0.56	0.36	0.84	0.22	0.32	0.62
Adult Doe Survival	ND	ND	ND	ND	ND	ND	0.86	0.90	0.89	0.64

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

Year	Deer Harvest				
	Hunters	Hunter Days	Antlerless	Antlered	% 4+ Points
1988	14,300	67,372	3,376	5,132	
1989	15,606	80,306	4,776	6,193	
1990	13,761	67,253	2,332	4,512	
1991	14,399	70,747	2,969	4,436	
1992	11,435	67,963	1,647	3,711	
1993	10,596	72,009	850	1,442	
1994	6,057	31,121	526	1,200	
1995	4,711	27,283	221	744	
1996	7,267	41,292	420	1,640	
1997	7,824	45,633	90	1,279	
1998	6,910	40,698	35	1,134	
1999	7,212	46,778	79	1,416	
2000			77	1,633	
2001	6,958	29,832	334	1,959	
2002	9,078	42,073	158	1,102	
2003	7,329	28,505	131	1,361	25%
2004	8,738	41,685	125	1,361	30%
2005	8,629	42,593	31	1,694	33%
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%

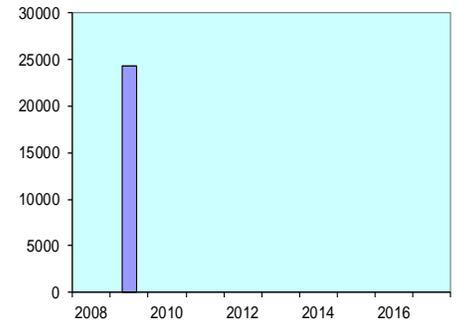
Note: Harvest data prior to 1998 does not include primitive weapon harvest. Hunter numbers and hunter days prior to 2000 include white-tailed deer and mule deer hunters.

### Previous Trend Area Surveys

Unit	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

Population Status



Mule Deer Harvest

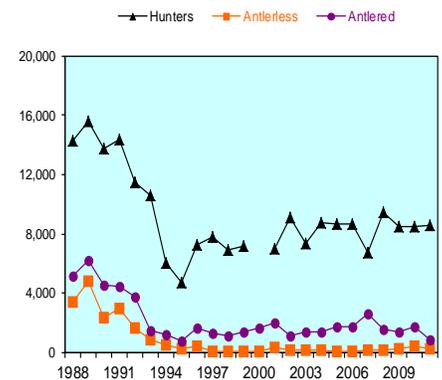


Figure 11. Mule Deer PMU 10.

## **PALISADES**

### **PMU 11 (GMUs 64, 65, 67)**

#### **Management Objectives**

Objectives for PMU 11 (Fig 12) 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 2010 estimated 5182 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%  $\geq 4$  points in the buck harvest. A 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  $\geq 4$  points in the buck harvest from 2003-2010 averaged 45% 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.

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 during the winter of 2011 so there is not a survival estimate through May 2011. We did continue to monitor does and their 71% survival rate estimate 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. The reduced fawn ratio in the Dec 2011 herd composition survey was also attributed to the difficult winter in 2010-2011, the surviving does were in poor condition and this affected the number of fawns that survived until December.

### **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.

### **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 =	1.71
Major Land Type =	Rangeland/Forest	Harvest per square mile =	0.21
		Success Rate =	12%



### 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	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fawn:Doe	62	76	73	96	ND	83	ND	67	88	
Buck:Doe	25	22	21	33	ND	39	ND	21	28	
Fawn Survival	0.74	0.36	0.92	0.54	0.68	0.16	0.64	0.08	0.52	0.75
Adult Doe Survival	ND	ND	ND	ND	ND	0.93	0.95	0.88	0.85	0.71

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
1988	2,456	10,844	438	894	
1989	2,206	9,936	450	555	
1990	2,216	12,382	249	484	
1991	2,159	10,860	182	405	
1992	1,261	6,801	133	356	
1993	1,537	10,833	74	225	
1994	1,368	7,084	129	209	
1995	1,018	6,887	51	159	
1996	1,370	9,054	139	154	
1997	1,696	9,161	33	196	
1998	1,663	8,433	26	125	
1999	1,360	7,611	34	128	
2000			26	226	
2001	1,264	5,075	78	206	
2002	1,641	7,116	66	152	
2003	1,496	5,429	64	212	47%
2004	2,206	10,406	70	206	45%
2005	1,757	8,323	123	313	46%
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%

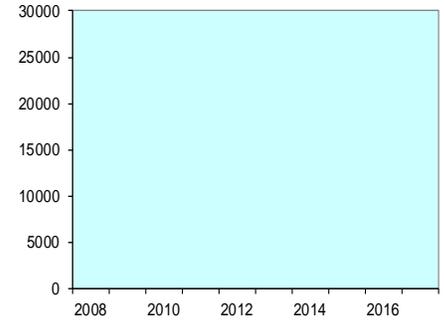
Note: Harvest data prior to 1998 does not include primitive weapon harvest.  
Hunter numbers and hunter days prior to 2005 include white-tailed deer and mule deer hunters.

### Previous Trend Area Surveys

Unit	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

Population Status



Mule Deer Harvest

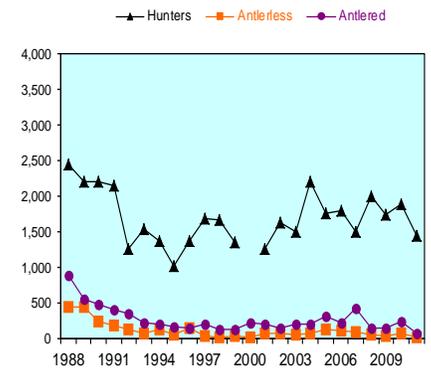


Figure 12. Mule Deer PMU 11.

## ISLAND PARK

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

#### Management Objectives

Objectives for PMU 12 (Fig 13) 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 is scheduled for February 2012 to generate the next population estimate.

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 5,000-acre captive elk operation on Siddoway property has fenced off the majority of the South Juniper Hills. Some of that 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.

## **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.

Trend counts 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 flown was 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 trend area indicate the productive nature of this herd. Since 2001, the fawn:doe ratio for the area has averaged 80 fawns per 100 does. The 2011 survey revealed a ratio of 73 fawns per 100 does. The lower fawn ratio was probably influenced by the 2010-2011 winter where we saw an increase in doe mortality. The poor condition of does following that winter could have influenced fawn survival and thus lowered the ratio we saw in December 2011.

The buck ratio (31:100) 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 influenced the ratio if the bucks and does did not succumb to winter mortality at a similar rate.

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 low of 11% in 2011 to a high of 84% in 2004. 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, IDFG fed approximately 800 mule deer on the Sand Creek winter range due to harsh snow conditions.

### **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
Major Land Type =	Forest/Desert	Harvest per square mile =	0.17
		Success Rate =	16%



### Population Status

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of Deer	5224									

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

### Population Parameters

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Fawn:Doe	79	73	92	75	99	79	ND	64	82	
Buck:Doe	24	19	21	21	43	31	ND	29	23	
Fawn Survival	ND	ND	ND	0.84	ND	ND	ND	0.24	0.52	0.67
Adult Doe Survival	ND	ND	ND	ND	ND	0.93	0.95	0.90	0.88	0.84

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

	Hunters	Hunter Days	Deer Harvest		
			Antlerless	Antlered	% 4+ Points
1988	4,243	19,936	737	1,338	
1989	2,986	14,803	770	527	
1990	3,441	15,291	508	507	
1991	3,146	14,396	435	967	
1992	2,420	11,679	279	497	
1993	2,159	13,411	141	331	
1994	3,050	16,931	514	727	
1995	2,508	15,896	172	426	
1996	2,522	16,200	463	480	
1997	2,719	13,050	738	363	
1998	3,760	21,098	362	538	
1999	3,940	23,200	328	466	
2000			477	573	
2001	2,692	10,868	517	572	
2002	3,095	14,123	530	386	
2003	2,321	8,812	317	328	30%
2004	5,063	27,411	347	461	33%
2005	3,725	19,882	349	456	32%
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%

Note: Harvest data prior to 1998 does not include primitive weapon harvest. Hunter numbers and hunter days prior to 2005 include white-tailed deer and mule deer hunters.

### Previous Trend Area Surveys

Unit	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

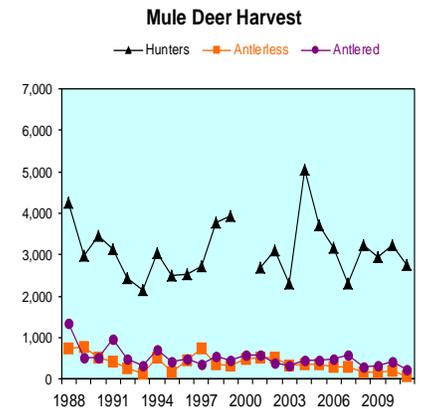
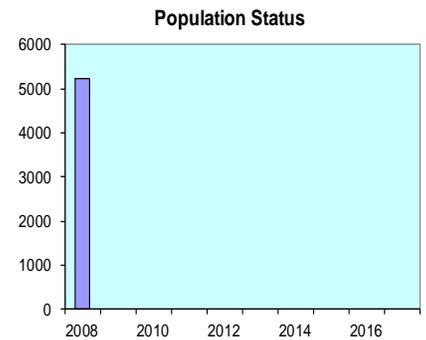


Figure 13. Mule Deer PMU 12.

## MOUNTAIN VALLEY

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

#### Management Objectives

Objectives for PMU 13 (Fig 14) are to maintain  $\geq 15$  bucks:100 does in post-season surveys and  $>25\%$   $\geq 4$ -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. 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 is scheduled for 2012.

The 2010 fawn ratio of 59 fawns per 100 does was unchanged from 2009, however 2010-2011 winter fawn survival was well below normal at 27% and adult doe survival was only 84%.

Hunter participation has increased from an average of 4,480 hunters in the 1990s to an average of 5,174 hunters in the 2000s. In 2010, 5,135 hunters hunted mule deer in PMU 13. Harvest increased from 2003-2007 before declining 2008-2010, with an average of 1,299 bucks harvested in the last 10 years. Percent of the buck harvest  $\geq 4$  points has been above objective (>25%) since 2004 and was at 25% in 2009 and 2010. Buck ratios have varied near the 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.

### **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. In 2010, there were  $\geq 7$  wolf packs using 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.

## **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 2006 and has ranged from 86% to 96% from 2006 to 2010.

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.

## 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 =	1.06
Major Land Type =	Forest/Rangeland	Harvest per square mile =	0.37
		Success Rate =	35%



#### 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	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Fawn:Doe	45	60	58	37	72	56	54	59	60	
Buck:Doe	10	11	11	12	23	19	11	13	16	
Fawn Survival	ND	ND	0.57	0.88	0.17	0.70	0.26	0.37	0.63	0.27
Adult Doe Survival	ND	ND	ND	ND	0.91	0.96	0.90	0.86	0.96	0.87

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
1988	5,144	24,856	629	2,200	
1989	5,120	27,463	961	2,458	
1990	5,730	26,705	776	2,077	
1991	5,489	24,113	1,504	1,914	
1992	3,189	19,959	351	1,279	
1993	3,740	26,361	290	981	
1994	4,633	26,566	569	1,832	
1995	3,968	25,240	339	966	
1996	4,805	27,200	455	1,542	
1997	5,196	26,432	186	984	
1998	4,187	20,835	49	1,167	
1999	3,860	19,249	27	1,001	
2000			84	1,413	
2001	3,826	13,534	223	1,196	
2002	5,550	21,266	215	1,214	
2003	4,791	16,959	192	1,036	29%
2004	5,721	25,390	109	1,114	38%
2005	5,144	22,054	181	1,642	36%
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%

Note: Harvest data prior to 1998 does not include primitive weapon harvest.

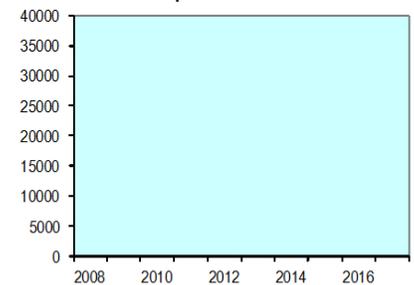
Hunter numbers and hunter days prior to 2005 include white-tailed deer and mule deer hunters.

#### Previous Trend Area Surveys

Unit	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

Population Status



Mule Deer Harvest

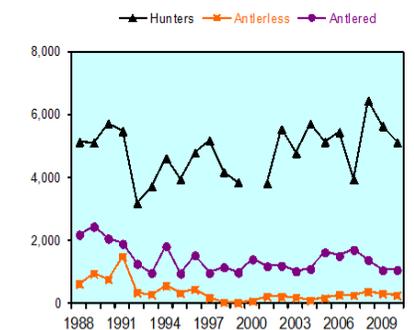


Figure 14. Mule Deer PMU 13.

## **SNAKE RIVER**

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

#### **Management Objectives**

Given the low habitat potential for PMU 14 (Fig 15) 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 (57%) in PMU 14. Private ground makes up 34% and the Idaho National Laboratory, Fort Hall Indian Reservation, and Craters of the Moon National Park combine for the remaining 12%. 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. Only 2 mule deer depredation complaints occurred in GMU 53 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**

Emergency supplemental feeding has not been conducted in the past few years. The Department will work closely with Regional Winter Feeding Advisory Committees to evaluate future supplemental feeding issues.

### **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.

## 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 =	0.08
		Success Rate =	21%



### 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	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
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
1988	2,086	8,462	467	709	
1989	1,499	6,675	289	559	
1990	2,178	8,789	349	553	
1991	1,920	8,551	189	282	
1992	1,799	8,581	297	365	
1993	1,322	7,269	140	194	
1994	1,318	7,772	115	289	
1995	1,023	5,579	102	255	
1996	1,383	8,350	18	177	
1997	2,213	13,060	35	512	
1998	2,861	16,392	127	366	
1999	3,880	22,335	254	580	
2000			174	356	
2001	2,854	9,431	286	492	
2002	3,117	14,679	231	357	
2003	3,294	12,690	192	332	24%
2004	4,233	21,237	236	372	35%
2005	2,914	12,208	194	487	30%
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%

Note: Harvest data prior to 1998 does not include primitive weapon harvest. Hunter numbers and hunter days prior to 2005 include white-tailed deer and mule deer hunters.

### Previous Trend Area Surveys

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

Note: ND = no survey data available

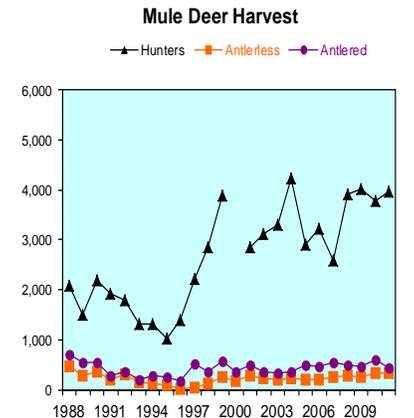
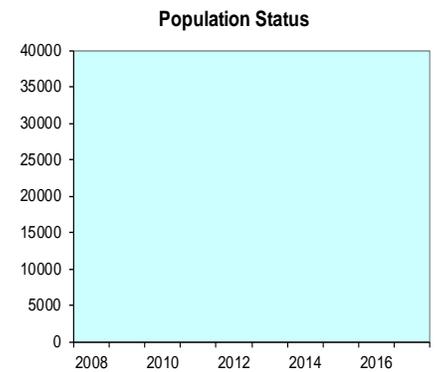


Figure 15. Mule Deer PMU 14.

## 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 PMU 15, 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 nearly 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 easily met with a 2008-2010 average of 33,268.

#### 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 IDFG and the USFS to provide backcountry 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. Mule deer depredations are nonexistent.

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  $\geq 4$ -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 number of mule deer were fed. The most recent winter (2010-2011) had above average temperatures and moisture levels, although much of the precipitation came 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 2010 was estimated at 945 mule deer based on mandatory harvest report cards. This represents a 6% decrease in harvest from 2009 (1,001) and is 19% below the previous five-year average of 1,160. Total hunter numbers were estimated at 4,524 for 2010 compared to 5,511 hunters for 2009. An average of 51% of the bucks harvested in these GMUs over the past three years (2008-2010) have been  $\geq 4$ -point with a 19% 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	<b>3-Year Averages</b>	
% Public Land =	69%	Hunters per square mile =	0.28
Major Land Type =	Forest	Harvest per square mile =	0.05
		Success Rate =	19%



#### Population Status

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

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

#### Population Parameters

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
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

Year	Hunters	Hunter Days	Deer Harvest		
			Antlerless	Antlered	% 4+ Points
1988	21,413	170,683	875	2,189	
1989	22,569	171,588	1,139	2,697	
1990	21,306	284,389	645	1,202	
1991	19,735	295,998	649	1,281	
1992	24,836	184,854	570	1,529	
1993	42,836	431,335	729	1,548	
1994	58,030	559,963	642	1,941	
1995	59,297	585,526	845	1,858	
1996	37,291	274,532	467	1,016	
1997	42,856	250,429	268	1,012	
1998	34,682	201,162	205	1,035	
1999	35,155	215,829	146	731	
2000			139	608	
2001	32,125	187,205	176	778	
2002	41,280	246,958	574	622	
2003	39,979	236,161	76	700	52%
2004	39,829	238,966	100	1,020	56%
2005	4,651	29,084	169	1,165	56%
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%

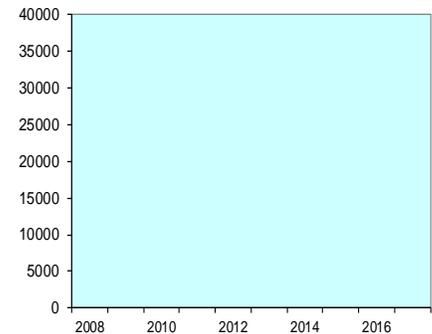
Note: Harvest data prior to 1998 does not include primitive weapon harvest.  
Hunter numbers and hunter days prior to 2003 include white-tailed deer and mule deer hunters.

#### Previous Trend Area Surveys

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

Note: ND = no survey data available

Population Status



Mule Deer Harvest

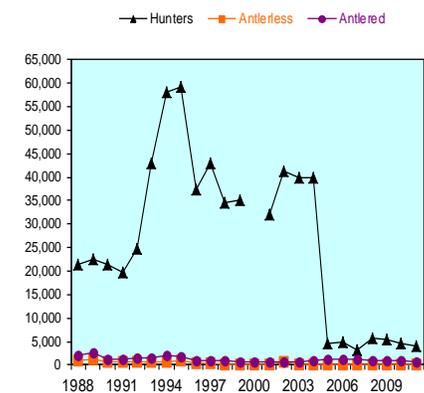


Figure 16. Mule Deer Data PMU 15.

**APPENDIX A**  
**IDAHO**  
**2010 SEASON**  
**MULE DEER RULES**

# IDAHO BIG GAME SEASONS AND RULES 2010



**Deer, Elk, Pronghorn**  
August 2010 - January 2011

**Black Bears, Mountain Lions**  
August 2010 - July 2011

Including Controlled Hunts for  
Deer, Elk, Pronghorn, and Black Bears



## 2010 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 1 deer per hunter per year. But 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 in 2010. A hunter may take only as many deer as he or she has legal tags for.

**Note:** Residents or nonresidents may buy one unsold nonresident general season deer and elk tag at the nonresident price starting August 28, to be used as a second tag.

**Youth hunt only:** Some deer hunts are for youth only. Only hunters 12-17 years of age with a valid license and tag may hunt antlerless deer in these hunts.

**Antlered deer:** Deer with at least 1 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 2 points on 1 side, not including the brow point or tine, and at least 1 antler longer than 3 inches. 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 1 antler with 3 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 Tag for Black Bear or Mountain Lion

Nonresident deer tags, **excluding** nonresident junior mentored deer tags, are valid to take a black bear or mountain lion, if a season is open for that species, instead of a deer where and when the deer tag is valid, and there is an open deer season in that same unit. See page 77.

### 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 "2010 Regular Deer Tag Seasons" on pages 9-13.

The white-tailed deer tag is valid for white-tailed deer **only**, for any hunt listed under "2010 White-tailed Deer Tag Seasons" on pages 14-17.

### 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

### 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 Heaves courtesy of Montana Fish, Wildlife & Parks

2010 Regular Deer Tag General Any-Weapon Seasons			
Unit(s)	Antlered	Antlerless	Notes
1	Oct 10 - Oct 31 <i>(White-tailed deer only)</i>	Nov 1 - Nov 9 <i>(White-tailed deer only)</i>	
	Nov 1 - Dec 1		
2, 3, 4A, 5, 6	Oct 10 - Nov 9	Nov 1 - Nov 9 <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	Nov 1 - 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 - Oct 16 <i>(White-tailed deer only)</i>	<i>Unit 13 has limited access</i>
16A, 17, 19, 20	Sep 15 - Nov 18	Sep 15 - Nov 18	
19A	Oct 10 - Oct 31	Oct 10 - Oct 31 <i>(Youth hunt only)</i>	
20A, 26, 27	Sep 15 - Oct 31	None	

2010 Regular Deer Tag General Any-Weapon Seasons - continued			
Unit(s)	Antlered	Antlerless	Notes
21, 21A, 28, 29, 30, 36, 36A, 36B, 37, 37A	Oct 10 - Oct 24	Oct 10 - Oct 31 (Youth hunt only, Private land only)	Motorized Vehicle Restriction in Units 29, 30, 36A, 37 & 37A, See notes 3 & 6, Page 11
22	Oct 10 - Oct 24 (2-point deer only)	Oct 10 - Oct 24 (Youth hunt only)	
23, 24, 25	Oct 10 - Oct 31	Oct 10 - Oct 31 (Youth hunt only)	See note 1, Page 11
30A	None	Oct 10 - Oct 31 (Youth hunt only, Private land only)	Motorized Vehicle Restriction, See note 6, Page 11
31, 32, 32A	Oct 10 - Oct 24	Oct 10 - Oct 24 (Youth hunt only)	Motorized Vehicle Restriction in Units 32 & 32A, See notes 2, 3, & 6, Page 11
33, 34, 35	Oct 10 - Oct 31	None	
39	Oct 10 - Oct 31	Oct 10 - Oct 31 (Youth hunt only)	
40, 41	Oct 10 - Oct 24 (2-point deer only)	Oct 10 - Nov 24 (Youth hunt only. Only in a small portion of these units)	Youth Hunt Area Restrictions: Only a small portion of Units 40 & 41 is open for harvest of antlerless deer. See notes 2, 3, & 7, Page 11 Antlerless hunt is Youth only.
42	Oct 10 - Oct 24 (2-point deer only)	None	
43	Oct 10 - Oct 31	Oct 10 - Oct 31 (Youth hunt only)	
46	Oct 10 - Oct 31	Oct 10 - Oct 31 (Youth hunt only)	See note 2, Page 11
48, 49	Oct 10 - Oct 31	Oct 10 - Oct 31 (Youth hunt only)	Motorized Vehicle Restriction, See note 6, Page 11
50, 51, 56, 58, 59, 59A	Oct 10 - Oct 24	Oct 10 - Oct 24 (Youth hunt only)	Motorized Vehicle Restriction, See note 6, Page 11
52A	Oct 10 - Oct 31	Oct 10 - Oct 31 (Youth hunt only)	
60, 61, 62, 62A, 64, 65	Oct 10 - Oct 24	Oct 10 - Oct 24 (Youth hunt only)	See note 3, Page 11
60A	Oct 10 - Oct 24	Oct 10 - Oct 24 (Youth hunt only)	See note 4, Page 11
66, 69	Oct 10 - Oct 24	Oct 10 - Oct 24 (Youth hunt only)	Motorized Vehicle Restriction, See note 6, Page 11
67	Oct 10 - Oct 24	Oct 10 - Oct 24 (Youth hunt only)	See note 5, Page 11
66A, 68, 71, 72, 73A, 74, 76	Oct 10 - Oct 24	Oct 10 - Oct 24 (Youth hunt only)	Motorized Vehicle Restriction in Units 66A & 76, See note 6, Page 11
70, 78	None	Oct 10 - Oct 31 (Youth hunt only)	Motorized Vehicle Restriction, See note 6, Page 11
73	None	Oct 10 - Oct 16 (Youth hunt only)	Motorized Vehicle Restriction, See note 6, Page 11

2010 Regular Deer Tag General Any-Weapon Seasons - continued			
Unit(s)	Antlered	Antlerless	Notes
75, 77	Oct 10 - Oct 24	Oct 10 - Oct 24 (Youth hunt only)	Motorized Vehicle Restriction, See note 6, Page 11

**Notes:**

- 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.
- Short-range weapons **only** on the islands in the Snake River.
- Short-range weapons **only** on C.J. Strike, Chester Wetlands, and Montour Wildlife Management Areas, and Pahsimeroi Access Area.
- Short-range weapons **only** in that portion of Unit 60A south and east of the North (Henry's) Fork Snake River, and that portion within 1 mile north and west of the North Fork Snake River.
- Short-range weapons **only** in that portion of Unit 67 south and west of State Highway 26.
- Motorized vehicle use as an aid to hunting for wildlife is restricted to established roadways open to motorized vehicle traffic capable of travel by full-sized automobiles – any motorized vehicle with a gross vehicle weight in excess of 1,500 pounds. See Page 70.
- Youth Hunt Area: Only that portion of Units 40 and 41 within the following boundary are open to youth antlerless hunting - starting at the Oregon border on the Snake River then upstream to the C.J. Strike Dam Road then south on C.J. Strike Dam Road to Highway 78 at Rim Rock High School, then east on Highway 78 to Highway 51, then south on Highway 51 to the Shoofly Cut-off Road, including the cultivated lands that lie within 2.5 miles south of the Shoofly Cutoff Road and 3.5 miles west of Highway 51, then west on the Shoofly Cut-off Road to the Mudflat Road, then north on the Mudflat Road to Highway 78, continue west on Highway 78 to the powerline that crosses the Snake River about 3 miles south of the Walter's Ferry Bridge at the 22.5 mile marker, then west along the powerline to the Oregon border, then north along the Oregon border to the Snake River, the point of beginning; **and** on cultivated fields in that portion of Unit 40 no more than 5 miles south or west of Highway 78. Map available at Southwest Region office and the Fish and Game Website at: <http://fishgame.idaho.gov/ifwis/huntplanner/download/pdf/HuntAreaMaps/937.pdf>

2010 Regular Deer Tag General Archery-Only Seasons Archery Permit Required			
Unit(s)	Antlered	Antlerless	Notes
1, 3, 4, 4A, 5, 6, 7, 9	Sep 6 - Sep 30	Sep 6 - Sep 30 (White-tailed deer only)	
	Dec 10 - Dec 16	Dec 10 - Dec 16 (White-tailed deer only)	
2	Sep 6 - Sep 30	Sep 6 - Sep 30 (White-tailed deer only)	See note 1, Page 13
	Nov 1 - Dec 1	Nov 1 - Dec 1 (White-tailed deer only)	See note 2, Page 13
	Dec 10 - Dec 16	Dec 10 - Dec 16 (White-tailed deer only)	See note 1, Page 13
8, 8A, 10, 10A, 11A, 12, 15, 19A, 21, 21A	Aug 30 - Sep 30	Aug 30 - Sep 30	
22	Aug 30 - Sep 30 (2-point deer only)	Aug 30 - Sep 30	

<b>2010 Regular Deer Tag General Archery-Only Seasons Archery Permit Required - continued</b>			
Unit(s)	Antlered	Antlerless	Notes
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 Vehicle Restriction, See note 5, Page 13</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 note 6, Page 13 Part of unit closed.</i>
40, 41, 42	Aug 30 - Sep 30 (2-point deer only)	Aug 30 - Sep 30	
43, 46, 52A, 54	Aug 30 - Sep 30	Aug 30 - Sep 30	
47, 48, 49, 50, 51, 56, 57, 58, 59, 59A	Aug 30 - Sep 30	Aug 30 - Sep 30	<i>Motorized Vehicle Restriction, See note 5, Page 13</i>
53	Aug 30 - Dec 19	Aug 30 - Dec 19	<i>See note 4, Page 13, Motorized Vehicle Restriction, See note 5, Page 13</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 Vehicle Restriction in Units 66 &amp; 69, See note 5, Page 13</i>
	Nov 1 - Dec 19 (White-tailed deer only)	Nov 1 - Dec 19 (White-tailed deer only)	
61, 62A, 63A	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, 70, 71, 72, 73, 73A, 74, 75, 76, 77, 78	Aug 30 - Sep 30	Aug 30 - Sep 30	<i>Motorized Vehicle Restriction in Units 66A, 70, 73, 75, 76, 77 &amp; 78, See note 5, Page 13</i>

<b>2010 Regular Deer Tag General Muzzleloader-Only Seasons Muzzleloader Permit Required</b>			
Unit(s)	Antlered	Antlerless	Notes
4, 7, 9	Nov 20 - Dec 1	Nov 20 - Dec 1 (White-tailed deer only)	
39	None	Sep 8 - Sep 30	<i>Motorized Vehicle Restriction, See note 5, Page 13</i>

2010 Regular Deer Tag General Deer Short-Range-Weapon Seasons			
Unit(s)	Antlered	Antlerless	Notes
38	Oct 10 - Oct 31	Oct 10 - Nov 24	See note 3, Page 13
53	Oct 10 - Oct 31	Oct 10 - Oct 31	See note 7, Page 13, Motorized Vehicle Restriction, See note 5, Page 13
63	Oct 10 - Oct 24	Oct 10 - Oct 24 (Youth hunt only)	

**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 **closed**.
4. That portion of Unit 53 east of U.S. Highway 93 is **open**.
5. Motorized vehicle use as an aid to hunting for wildlife is restricted to established roadways open to motorized vehicle traffic capable of travel by full-sized automobiles – any motorized vehicle with a gross vehicle weight in excess of 1,500 pounds. See Page 70.
6. **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**.
7. Short-range weapons **only** in that portion of Unit 53 west of U. S. Highway 93. Archery only east of U.S. Highway 93.

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## Deer Controlled Hunts

For details on controlled hunt rules and restrictions please see pages 73-76.

Hunters: Please check Controlled Hunt Area descriptions on pages 25-26. Hunt Areas may change annually.

<b>2010 Controlled Deer Hunts (15,351 Permits Plus Unlimited Permits)</b> <b>Antlered Deer</b>				
Hunt No.	Controlled Hunt Areas	Permits	Season Dates	Notes
1001	1* (see pg 25)	55	Aug 30- Dec 1	
1002	11	74	Oct 10 - Nov 3	<i>Mule deer only</i>
1003	11	35	Nov 10 - Nov 24	<i>Mule deer only</i>
1004	11A	63	Oct 10 - Nov 3	<i>Mule deer only, Limited access</i>
1005	13	200	Oct 10 - Nov 3	<i>See note 1, Page 24, Mule deer only</i>
1006	14	180	Oct 10 - Nov 3	<i>Mule deer only</i>
1007	18	120	Oct 10 - Nov 3	<i>Mule deer only</i>
1008	19A	10	Oct 10 - Nov 24	
1009	20A	Unlimited	Nov 1 - Nov 18	
1010	22	60	Nov 1 - Nov 24	
1011	23	25	Oct 10 - Nov 24	
1012	25	10	Oct 10 - Nov 24	
1013	26	Unlimited	Nov 1 - Nov 18	
1014	27	Unlimited	Nov 1 - Nov 18	<i>3-point or larger deer only</i>
1015	30A	30	Oct 10 - Oct 31	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1016	31	30	Oct 10 - Nov 24	
1017	32	40	Oct 10 - Nov 24	<i>See note 4, Page 24, Motorized Vehicle Restriction, See note 2, Page 24</i>
1018	32A	30	Oct 10 - Nov 24	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1019	36A	Unlimited	Oct 26 - Oct 31	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1020	39-1	199	Aug 15 - Sep 30	
1021	40-1	195	Nov 1 - Nov 24	
1022	41	100	Nov 1 - Nov 24	<i>See note 4, Page 24</i>
1023	42	74	Nov 1 - Nov 24	
1024	44-1	225	Sep 15 -Oct 31	
1025	45	75	Oct 15 - Oct 31	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1026	47-1	90	Oct 5 - Oct 31	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1027	47-2* (see pg 26)	10	Nov 15 - Nov 30	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1028	48	10	Nov 10 - Nov 24	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1029	49	10	Nov 10 - Nov 24	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1030	50-1	10	Oct 10 - Nov 30	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1031	52-1	50	Oct 15 - Oct 31	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1032	54	600	Oct 5 - Oct 31	
1033	54	20	Nov 15 - Nov 30	
1034	55	25	Aug 15 - Sep 24	
1035	55	450	Oct 5 - Oct 31	
1036	57	109	Oct 5 - Oct 31	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1037	57	10	Nov 15 - Nov 30	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1038	58* (see pg 26)	10	Oct 10 - Nov 30	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1039	60-1* (see pg 26)	50	Oct 10 - Nov 30	<i>See note 4, Page 24</i>
1040	62	30	Oct 10 - Nov 30	
1041	66	10	Oct 10 - Nov 30	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1042	67	40	Oct 10 - Nov 30	

**CONTROLLED  
DEER**

 <b>2010 Controlled Deer Hunts Antlered Deer - continued</b>				
Hunt No.	Controlled Hunt Areas	Permits	Season Dates	Notes
1043	69	10	Oct 10 - Nov 30	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1044	70	175	Aug 30 - Sep 30	<i>Archery only</i>
			Oct 10 - Oct 31	
1045	73	Unlimited	Oct 10 - Oct 16	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1046	78	200	Aug 30-Sep 30	<i>Archery only</i>
			Oct 10 - Oct 31	

 <b>2010 Controlled Hunts Antlerless Deer</b>				
Hunt No.	Controlled Hunt Areas	Permits	Season Dates	Notes
1047	22	350	Oct 10 - Oct 24	
1048	28-1	30	Sep 15 - Oct 31	
1049	31	350	Oct 10 - Oct 24	
1050	32	950	Oct 10 - Oct 24	<i>See note 4, Page 24, Motorized Vehicle Restriction, See note 2, Page 24</i>
1051	32A	375	Oct 10 - Oct 24	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1052	39-1	1200	Oct 10 - Oct 31	
1053	43	250	Oct 10 - Oct 31	
1054	44-1	250	Oct 10 - Nov 9	
1055	45	250	Nov 15 - Nov 30	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1056	48	50	Oct 10 - Oct 31	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1057	49	150	Oct 10 - Oct 31	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1058	50-2	150	Dec 1 - Dec 14	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1059	52-2	100	Nov 15 - Nov 30	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1060	54	100	Nov 1 - Nov 14	
1061	55	100	Nov 1 - Nov 14	
1062	56-1	100	Nov 15- Nov 30	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1063	60-1* (see pg 26)	50	Nov 1 - Nov 30	<i>See note 4, Page 24</i>
1064	76	100	Oct 10 - Oct 24	<i>Private land only, Very limited access, Motorized Vehicle Restriction, See note 2, Page 24</i>
1065	78	100	Oct 10 - Oct 24	<i>Private land only, Very limited access, Motorized Vehicle Restriction, See note 2, Page 24</i>

**CONTROLLED DEER**

 <b>2010 Controlled Hunts Either Sex Deer</b>				
Hunt No.	Controlled Hunt Areas	Permits	Season Dates	Notes
1066	60-2* (see pg 26)	400	Oct 5 - Nov 17	<i>See note 4, Page 24</i>
1067	62	100	Oct 5 - Nov 8	
1068	63A	50	Oct 5 - Nov 8	<i>Mule deer only, Short range weapons only</i>
1069	67	75	Oct 5 - Nov 8	

\* See controlled hunt area descriptions. This hunt includes other units or parts of other units.  
For details on controlled hunt rules and restrictions, please see pages 73-76.

 <b>2010 Controlled Hunts</b> <b>Archery-Only Deer - Archery Permit Required</b>				
Hunt No.	Controlled Hunt Areas	Permits	Season Dates	Notes
1070	22	25	Aug 30 - Sep 30	<i>Either sex</i>
1071	39-2	50	Nov 16 - Dec 16	<i>Either sex, See note 3, Page 24, Roads on Boise River WMA closed to Motorized Travel</i>
1072	40-2* (see pg 25)	25	Aug 15 - Sep 30	<i>Either sex</i>
1073	68A	Unlimited	Aug 30 - Dec 19	<i>Either sex</i>
	72		Dec 1 - Dec 19	<i>Antlered only, Motorized Vehicle Restriction, See note 2, Page 24</i>

 <b>2010 Controlled Hunts</b> <b>Youth Only Deer</b>				
Hunt No.	Controlled Hunt Areas	Permits	Season Dates	Notes
1074	11A	25	Oct 10 - Dec 31	<i>Either sex</i>
1075	28-1	10	Sep 15 - Oct 31	<i>Either sex</i>
1076	44-2* (see pg 26)	400	Nov 15 - Nov 30	<i>Antlerless only, Motorized Vehicle Restriction in Units 45 &amp; 52, See note 2, Page 24</i>
1077	47-3* (see pg 26)	400	Oct 5 - Oct 31	<i>Either sex, Motorized Vehicle Restriction in Units 47 &amp; 57, See note 2, Page 24</i>

**CONTROLLED  
DEER**

 <b>2010 Controlled Hunts</b> <b>Muzzleloader-Only Deer - Muzzleloader Permit Required</b>				
Hunt No.	Controlled Hunt Areas	Permits	Season Dates	Notes
1078	8A	25	Dec 2 - Dec 14	<i>Either sex, White-tailed deer only</i>
1079	10A	25	Dec 2 - Dec 14	<i>Either sex, White-tailed deer only</i>
1080	33* (see pg 25)	149	Nov 10 - Nov 30	<i>Antlered only</i>
1081	37* (see pg 25)	73	Nov 25 - Dec 9	<i>Antlered only, Motorized Vehicle Restriction, See note 2, Page 24</i>
1082	43	125	Oct 1 - Oct 9	<i>Either sex</i>
1083	45	30	Oct 1 - Oct 14	<i>Antlered only, Motorized Vehicle Restriction, See note 2, Page 24</i>
1084	51* (see pg 26)	100	Nov 1 - Nov 30	<i>Either sex, Motorized Vehicle Restriction, See note 2, Page 24</i>

\* See controlled hunt area descriptions. This hunt includes other units or parts of other units.  
For details on controlled hunt rules and restrictions, please see pages 73-76.

 <b>2010 Controlled Hunts</b> <b>Muzzleloader-Only Deer - Muzzleloader Permit Required - continued</b>				
Hunt No.	Controlled Hunt Areas	Permits	Season Dates	Notes
1085	52-3	50	Oct 15 - Nov 14	<i>Either Sex, Motorized Vehicle Restriction, See note 2, Page 24</i>
1086	52A	75	Nov 10 - Nov 24	<i>Either sex, Motorized Vehicle Restriction, See note 2, Page 24</i>
1087	56-2* (see pg 26)	50	Nov 1 - Nov 14	<i>Either Sex, Motorized Vehicle Restriction, See note 2, Page 24</i>
1088	61	Unlimited	Nov 11 - Dec 9	<i>Either sex</i>
1089	64* (see pg 26)	50	Nov 1 - Nov 30	<i>Either sex</i>

**CONTROLLED DEER**

 <b>2010 Controlled Hunts</b> <b>Extra Antlerless Deer</b>				
Hunt No.	Controlled Hunt Areas	Permits	Season Dates	Notes
1090	3X	50	Oct 10 - Dec 1	<i>Private land only, White-tailed deer only</i>
1091	8X	350	Aug 30 - Sep 30	<i>Archery only, White-tailed deer only</i>
			Oct 10 - Dec 31	<i>White-tailed deer only</i>
1092	8AX	350	Aug 30 - Sep 30	<i>Archery only, White-tailed deer only</i>
			Oct 10 - Dec 1	<i>White-tailed deer only</i>
			Dec 2 - Dec 14	<i>Muzzleloader only, White-tailed deer only</i>
			Dec 15 - Dec 31	<i>White-tailed deer only</i>
1093	10AX	400	Aug 30 - Sep 30	<i>Archery only, White-tailed deer only</i>
			Oct 10 - Dec 1	<i>White-tailed deer only</i>
			Dec 2 - Dec 14	<i>Muzzleloader only, White-tailed deer only</i>
1094	11AX* (see pg 25)	650	Aug 30 - Sep 30	<i>Archery only, Unit 11A only</i>
			Oct 10 - Dec 31	<i>Mule Deer or White-tailed Deer</i>
1095	15X* (see pg 25)	200	Aug 30 - Sep 30	<i>Archery only, White-tailed deer only, Unit 15 portion only</i>
			Oct 10 - Nov 20	<i>White-tailed deer only</i>
			Nov 21 - Dec 9	<i>Muzzleloader only, White-tailed deer only, Unit 16 portion only</i>
			Dec 5 - Dec 20	<i>Archery only, White-tailed deer only, Unit 15 portion only</i>
1096	21X* (see pg 25)	210	Sep 1 - Dec 31	<i>Short range weapons only, Private land only, Limited access</i>
1097	23X	100	Aug 15 - Sep 30	<i>Short range weapons only, White-tailed deer only</i>
			Oct 10 - Nov 3	<i>White-tailed deer only</i>
1098	32X	100	Aug 1 - Dec 31	<i>Limited access</i>
1099	36AX* (see pg 25)	140	Sep 1 - Dec 31	<i>Short range weapons only, Private land only, Limited access</i>

\* See controlled hunt area descriptions. This hunt includes other units or parts of other units.  
 For details on controlled hunt rules and restrictions, please see pages 73-76.

 <b>2010 Controlled Hunts Extra Antlerless Deer - continued</b>				
Hunt No.	Controlled Hunt Areas	Permits	Season Dates	Notes
1100	50X* (see pg 26)	1,200	Aug 30 - Sep 30	<i>Archery only, White-tailed deer only, Motorized Vehicle Restriction in Units 50, 51, 58, 59, 59A, 66 &amp; 69, See note 2, Page 24</i>
			Oct 10 - Oct 31	<i>White-tailed deer only, Motorized Vehicle Restriction in Units 50, 51, 58, 59, 59A, 66 &amp; 69, See note 2, 4, 5, &amp; 6, Page 24</i>
			Nov 1 - Dec 19	<i>Archery only, White-tailed deer only, Units 60, 60A, 62, 63, 64, 65, 66, 67 &amp; 69 only Motorized Vehicle Restriction in Units 66 &amp; 69, See note 2, Page 24</i>
			Nov 10 - Dec 9	<i>White-tailed deer only, Units 50, 51, 58, 59, 59A, 61, &amp; 62A only, Motorized Vehicle Restriction in Units 50, 51, 58, 59 &amp; 59A, See note 2, Page 24</i>
1101	63AX	300	Aug 30 - Sep 30	<i>Archery only, White-tailed deer only</i>
			Oct 10 - Oct 31	<i>Short range weapons only, White-tailed deer only</i>
			Nov 1 - Dec 19	<i>Archery only, White-tailed deer only</i>
1102	68AX	100	Aug 30 - Oct 31	<i>Archery only, Limited access</i>

**CONTROLLED  
DEER**

 <b>2010 Controlled Hunts Landowner Permission Required Extra Antlerless Deer</b>				
Hunt No.	Controlled Hunt Areas	Permits	Season Dates	Notes
1103	55X	30	Aug 15 - Sep 30	<i>See Page 76 for application information</i>

 <b>2010 Controlled Hunts Outfitter Allocation Deer - Antlered Deer Only</b>				
Hunt No.	Controlled Hunt Areas	Permits	Season Dates	Notes
1104	1* (see pg 25)	1	Aug 30- Dec 1	
1105	11	1	Oct 10 - Nov 3	<i>Mule deer only</i>
1106	11A	2	Oct 10 - Nov 3	<i>Mule deer only</i>
1107	13	37	Oct 10 - Nov 3	<i>Mule deer only</i>
1108	14	22	Oct 10 - Nov 3	<i>Mule deer only</i>
1109	18	9	Oct 10 - Nov 3	<i>Mule deer only</i>
1110	22	6	Nov 1 - Nov 24	
1111	33* (see pg 25)	1	Nov 10 - Nov 24	<i>Muzzleloader only</i>
1112	37* (see pg 25)	2	Nov 25 - Dec 9	<i>Muzzleloader only Motorized Vehicle Restriction, See note 2, Page 24</i>
1113	39-1	1	Aug 15 - Sep 30	

continued

\* See controlled hunt area descriptions. This hunt includes other units or parts of other units.  
For details on controlled hunt rules and restrictions, please see pages 73-76.

2010 Controlled Hunts Outfitter Allocation Deer - Antlered Deer Only -continued				
Hunt No.	Controlled Hunt Areas	Permits	Season Dates	Notes
1114	40-1	5	Nov 1 - Nov 24	
1115	42	1	Nov 1 - Nov 24	
1116	45	1	Oct 15 - Oct 31	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1117	47-3* (see pg 26)	1	Oct 5 - Oct 31	<i>Youth hunt only, Motorized Vehicle Restriction in Units 47, 56 &amp; 57, See note 2, Page 24</i>
1118	47-1	3	Oct 5 - Oct 31	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1119	50-1	1	Oct 10 - Nov 30	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1120	54	1	Oct 5 - Oct 31	
1121	55	1	Oct 5 - Oct 31	
1122	57	1	Oct 5 - Oct 31	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1123	70	1	Aug 30 - Sep 30	<i>Archery only</i>
			Oct 10 - Oct 31	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>
1124	78	7	Aug 30 - Sep 30	<i>Archery only</i>
			Oct 10 - Oct 31	<i>Motorized Vehicle Restriction, See note 2, Page 24</i>

**Notes:**

1. This hunt has very limited access because of few roads and private property.
2. Motorized vehicle use as an aid to hunting for wildlife is restricted to established roadways open to motorized vehicle traffic capable of travel by full-sized automobiles – any motorized vehicle with a gross vehicle weight in excess of 1,500 pounds. See Page 70.
3. Mandatory class required - Anyone drawing a deer controlled archery-only hunt permit for this hunt must satisfactorily complete a mandatory hunter education course. The course will be administered by the Southwest Region and will include the hunt boundaries and legal restrictions, and will emphasize proper hunter ethics. Bowhunter education required.
4. Short-range weapons **only** on CJ Strike, Chester Wetlands, and Montour Wildlife Management Areas, and all of Units 63 and 63A.
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.

**Outfitted controlled hunts:**

Before submitting an application for an outfitter-allocated controlled hunt, hunters must have a written agreement with an outfitter licensed in the hunt area. Successful applicants must hunt with an outfitter licensed for the hunt area. The outfitter must purchase the hunter's permit and tag by August 20. Successful applicants authorize Idaho Fish and Game to provide names and addresses to the outfitters licensed for that controlled hunt. For a list of licensed outfitters in the applicable controlled hunt area, a sample written agreement, and additional information contact the Idaho Outfitters and Guides Licensing Board at their website - [www.state.id.us/oglh](http://www.state.id.us/oglh) or by calling 208-327-7380.

\* See controlled hunt area descriptions. This hunt includes other units or parts of other units.  
For details on controlled hunt rules and restrictions, please see pages 73-76.

## Deer Controlled Hunt Area Descriptions

**Hunt Area 1**— All of Units 1, 2, 3, 4, 4A, 5, 6, 7 and 9.

**Hunt Area 3X** — Private lands within that portion of Unit 3 within the following boundary: Beginning at the intersection of Interstate 90 and Highway 95 in Coeur d'Alene, then north along Highway 95 to Forest Road 206 (Ohio Match Road), then east and south along Forest Road 206 to Forest Road 1535 at Burnt Cabin Summit, then south along Forest Road 1535 to Forest Road 499 at Fernan Saddle, then south along Forest Road 499 to Meyer's Saddle, then south and east along Meyer's Hill Road, to Wolf Lodge Creek Road, then south along Wolf Lodge Creek Road to Interstate 90, then west along Interstate 90 to Highway 95 in Coeur d'Alene, the point of beginning.

**Hunt Area 8X** — All of Unit 8.

**Hunt Area 8A** — All of Unit 8A.

**Hunt Area 8AX** — That portion of Unit 8A within one mile of private land. For the purpose of this hunt, "private land" does not include corporate timberlands.

**Hunt Area 10A** — All of Unit 10A.

**Hunt Area 10AX** — That portion of 10A within one mile of private land. For the purpose of this hunt, "private land" does not include corporate timberlands.

**Hunt Area 11** — All of Unit 11.

**Hunt Area 11A** — All of Unit 11A.

**Hunt Areas 11AX** — All of Unit 11A and that portion of Unit 14 north and west of U.S. Highway 95 and Whitebird Creek.

**Hunt Area 13** — All of Unit 13.

**Hunt Area 14** — All of Unit 14.

**Hunt Area 15X** — Within one mile of private land in the following areas: That portion of Unit 15 in the South Fork Clearwater River drainage downstream from and including the Earthquake Creek and Dump Creek drainages below milepost 12 on State Highway 14; and Unit 16 excluding the Selway River drainage.

**Hunt Area 18** — All of Unit 18.

**Hunt Area 19A** — All of Unit 19A.

**Hunt Area 20A** — All of Unit 20A.

**Hunt Area 21X** — Private land within Units 21, 21A, 28, 29, 30, and 30A.

**Hunt Area 22** — All of Unit 22.

**Hunt Area 23** — All of Unit 23.

**Hunt Area 23X** — That portion of Unit 23 within the Little Salmon River drainage, upstream from and including the Big Creek drainage on the east side, and upstream from but excluding the Mud Creek drainage on the west side.

**Hunt Area 25** — All of Unit 25.

**Hunt Area 26** — All of Unit 26.

**Hunt Area 27** — All of Unit 27.

**Hunt Area 28-1** — That portion of Unit 28 within the following boundary: Beginning on Williams Creek Road (Forest Road 21) at Shoup Bridge, then west on Forest Road 21 to Perreau Creek Road (Forest Road 27), then west and north on Forest Road 27 (approx. 7 miles) to Forest Road 26, then north and west on Forest Road 26 to Forest Road 020, then north on Forest Road 020 to Stormy Peak Road (Forest Road 023), then southeast on Forest Road 023 to U.S. Highway 93, then north on U.S. Highway 93 to the Salmon River, then south along the west bank of the Salmon River to the point of beginning.

**Hunt Area 30A** — All of Unit 30A.

**Hunt Area 31** — All of Unit 31.

**Hunt Area 32** — All of Unit 32.

**Hunt Area 32A** — All of Unit 32A.

**Hunt Area 32X** — That portion of Unit 32 within the following boundary: Beginning on Weiser River Road at the eastern edge of the City of Weiser, then east on Weiser River Road to Bear Creek Road, then southeast on Bear Creek Road to South Crane Road, then south on South Crane Road to Cove Road, then west on Cove Road to the eastern edge of the City of Weiser, then north along the eastern edge of the City of Weiser to the point of beginning.

**Hunt Area 33** — All of Units 33 and 35, and that portion of Unit 34 south and west of the Landmark-Stanley Road.

**Hunt Area 36A** — All of Unit 36A.

**Hunt Area 36AX** — Private land within Units 36A, 36B, 37 and 37A.

**Hunt Area 37** — All of Units 37 and 37A.

**Hunt Area 39-1** — All of Unit 39.

**Hunt Area 39-2** — That portion of Unit 39 within the following boundary: Beginning at a point 400 yards west of State Highway 21 at the Ada County Line, south and west on a line 400 yards west of State Highway 21 to Warm Springs Avenue, and west on a line 400 yards north of Warm Springs Avenue to the Highlands-Table Rock powerline, north and west on the Highlands-Table Rock powerline to State Highway 55, north on Highway 55 to the Ada County Line, and southeast on the Ada County Line to the point of beginning.

**Hunt Area 40-1** — All of Unit 40.

**Hunt Area 40-2** — All of Units 40, 41, and 42.

**Hunt Area 41** — All of Unit 41.

**Hunt Area 42** — All of Unit 42.

**Hunt Area 43** — All of Unit 43.

**Hunt Area 44-1** — All of Unit 44.

CONTROLLED  
DEER

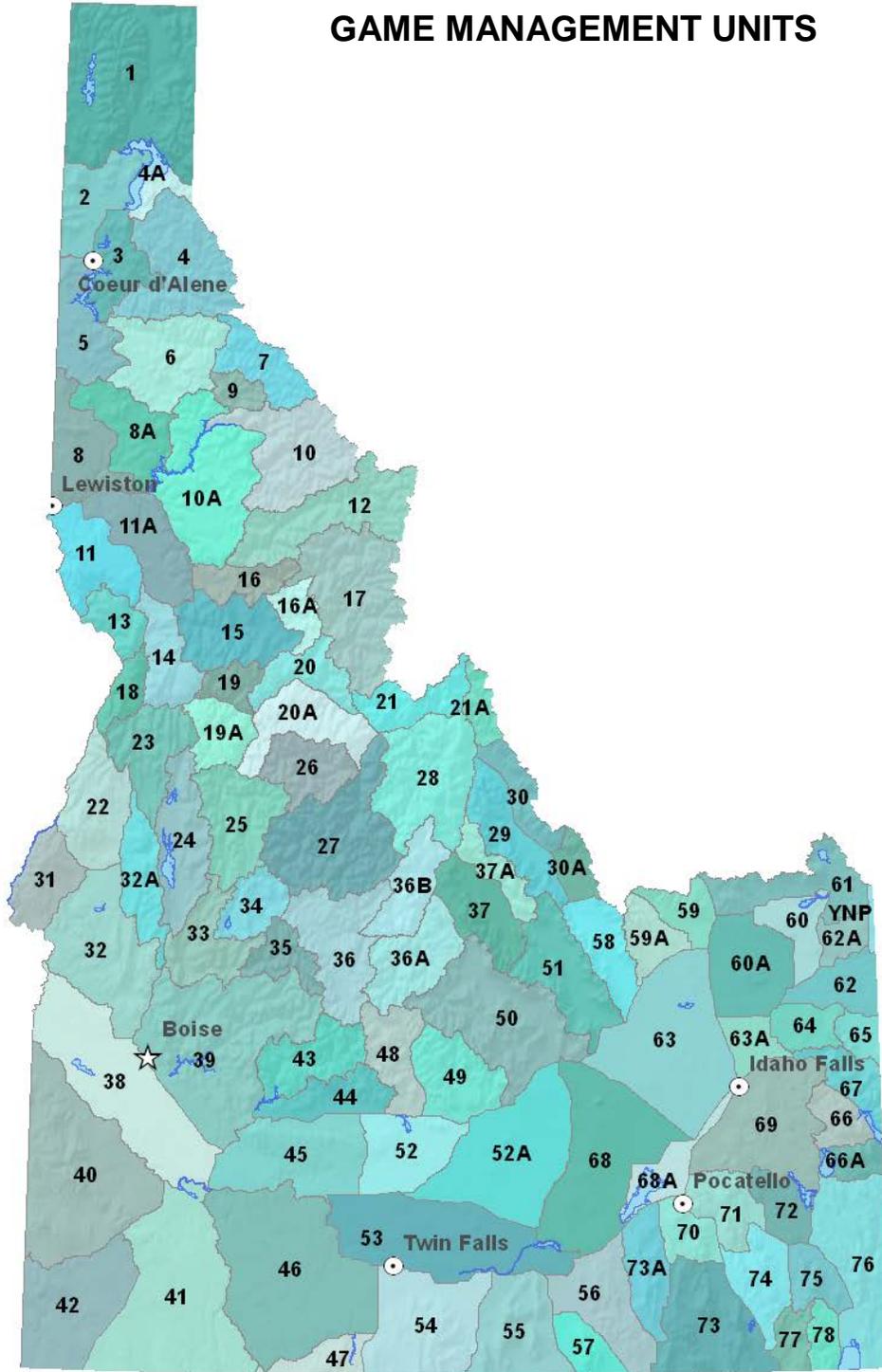
- Hunt Area 44-2** — All of Units 44, 45, and 52.
- Hunt Area 45** — All of Unit 45.
- Hunt Area 47-1** — All of Unit 47.
- Hunt Area 47-2** — All of Units 46 and 47.
- Hunt Area 47-3** — All of Units 47, 54, 55, and 57.
- Hunt Area 48** — All of Unit 48.
- Hunt Area 49** — All of Unit 49.
- Hunt Area 50-1** — That portion of Unit 50 west of U.S. Highway 93.
- Hunt Area 50-2** — All of Unit 50.
- Hunt Area 50X** — All of Units 50, 51, 58, 59, 59A, 60, 60A, 61, 62, 62A, 63, 64, 65, 66, 67, 69.
- Hunt Area 51** — All of Unit 51 and that portion of Unit 50 east of U.S. Highway 93.
- Hunt Area 52-1** — That portion of Unit 52 west of State Highway 75.
- Hunt Area 52-2** — All of Unit 52.
- Hunt Area 52-3** — That portion of Unit 52 east of State Highway 75.
- Hunt Area 52A** — All of Unit 52A. (Caution: See Craters of the Moon closure, page 65.)
- Hunt Area 54** — All of Unit 54.
- Hunt Area 55** — All of Unit 55. Most of the City of Rocks National Reserve is open to hunting. Information about hunting within the Reserve is available to permittees at Idaho Fish and Game offices and at the National Park Service office in Almo.
- Hunt Area 55X** — All of Unit 55. Most of the City of Rocks National Reserve is open to hunting. Information about hunting within the Reserve is available to permittees at Idaho Fish and Game offices and at the National Park Service office in Almo.
- Hunt Area 56-1** — All of Unit 56.
- Hunt Area 56-2** - All of Units 56 and 57.
- Hunt Area 57** — All of Unit 57.
- Hunt Area 58** — All of Units 58, 59, and 59A.
- Hunt Area 60-1** — All of Units 60, 62A and that portion of Unit 60A beyond one mile north and west of the North (Henrys) Fork of the Snake River.
- Hunt Area 60-2** — All of Units 60, 61, and 62A.
- Hunt Area 61** — All of Unit 61.
- Hunt Area 62** — All of Unit 62.
- Hunt Area 63A** — All of Unit 63A.
- Hunt Area 63AX** — All of Unit 63A.
- Hunt Area 64** — All of Units 64 and 65.

- Hunt Area 66** — All of Unit 66.
- Hunt Area 67** — All of Unit 67.
- Hunt Area 68A** — All of Unit 68A.
- Hunt Area 68AX** — All of Unit 68A.
- Hunt Area 69** — All of Unit 69.
- Hunt Area 70** — All of Unit 70.
- Hunt Area 72** — All of Unit 72.
- Hunt Area 73** — All of Unit 73.
- Hunt Area 76** — All of Unit 76.
- Hunt Area 78** — All of Unit 78.



# IDAHO

## GAME MANAGEMENT UNITS



Submitted by:

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Regional Wildlife Manager

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Steve Nadeau  
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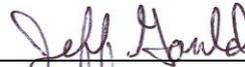
Daryl Meints  
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Approved by: IDAHO DEPARTMENT OF FISH AND GAME



Brad Compton  
Asst Chief, Bureau of Wildlife  
Federal Aid Coordinator



Jeff Gould, Chief  
Bureau of Wildlife

## **FEDERAL AID IN WILDLIFE RESTORATION**

The Federal Aid in Wildlife Restoration Program consists of funds from a 10% to 11% manufacturer's excise tax collected from the sale of handguns, sporting rifles, shotguns, ammunition, and archery equipment. The Federal Aid program then allots the funds back to states through a formula based on each state's geographic area and the number of paid hunting license holders in the state. The Idaho Department of Fish and Game uses the funds to help restore, conserve, manage, and enhance wild birds and mammals for the public benefit. These funds are also used to educate hunters to develop the skills, knowledge, and attitudes necessary to be responsible, ethical hunters. Seventy-five percent of the funds for this project are from Federal Aid. The other 25% comes from license-generated funds.

