IDAHO DEPARTMENT OF FISH AND GAME

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Surveys and Inventories

Statewide Report

ELK

Study I, Job 1

July 1, 2013 to June 30, 2014

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STATEWIDE REPORT

SURVEYS AND INVENTORY

JOB TITLE: Elk Surveys and Inventories

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

PERIOD COVERED: July 1, 2013 to June 30, 2014

STATEWIDE

Summary

Rocky Mountain elk are one of Idaho's premier big game animals. Elk are distributed throughout the state from the sagebrush-dominated deserts of the south to the dense cedar-hemlock forests of the north.

Unlike deer, elk populations may be highly influenced by harvest. Although not the case everywhere, most annual mortality of elk is associated with human harvest. Total elk harvest increased steadily through the 1980s and peaked in the mid 1990s. The goal of harvest management is to establish elk population objectives and establish harvest opportunities that are consistent with achieving or maintaining these population objectives. We established objectives for wintering populations of cows, total bulls, and adult (3.5+ pre-season) bulls (Figure 1). The state has been divided into 29 elk management zones (groupings of game management units), dependent upon habitat similarity, management similarity, and/or discrete populations. Objectives have been established for each zone. The Idaho Fish and Game Commission (Commission) adopted a statewide minimum objective of 10 adult bulls:100 cows pre-season. Total population objectives were chosen based on habitat potential, harvest opportunity, depredation concerns, inter-specific issues, population performance issues, and winter feeding issues.

We monitor population objectives in most elk management zones every 3-5 years. In addition to these winter surveys, we monitor harvest and antler point class in the harvest. Calf:cow ratio data collected during aerial surveys suggests declining recruitment in parts of the state. Declining recruitment rates can be explained by two hypotheses: 1) populations are at or near carrying capacity and density-dependent factors are regulating productivity, or 2) predation is playing a larger role in population dynamics. Conclusive evidence to determine which hypothesis is primarily affecting current population dynamics is difficult to obtain and only exists for a couple years and in specific areas.

Extensive wildfires in the early 20th century greatly improved habitat for elk by replacing heavily-forested habitats with shrub-fields. However, as these shrub-fields have aged and conifer reestablishment has occurred, habitat potential has been reduced. Elk populations in these areas probably represent the longest established population in the state and might be expected to show density-dependent effects first. In fact, populations in north-central Idaho generally have the lowest calf:cow ratios statewide. These observations are consistent with populations that are at or near carrying capacity.

Conversely, the primary potential predators of elk, including black bears, mountain lions, and wolves, have increased over the last couple of decades. An increase in predators reduces adult survival and recruitment rates. Previous research in north-central Idaho documented black bear and mountain lion predation as significant factors limiting recruitment rates. Additionally, survival rates of adult cow elk in Lolo Zone (GMUs 10 and 12) are below the threshold necessary for population stability or growth given existing recruitment rates. Wolf predation is the leading cause of mortality in this zone. Similar patterns in other zones suggest wolves may be having a limiting influence there as well.

It is likely that elk populations are influenced by a complex combination of habitat condition/characteristics and predator systems. It is also likely that temporal changes in weather patterns and precipitation affect the relative role of habitat and predators.

Elk Status & Objectives Statewide

Square Miles =	83,542	3-Year Averages	
% Public Land =	67%	Hunters per sq mi =	0.90
Major Land Type =		Harvest per sq mi =	0.19
		Success Rate =	21%
		%6+ Points =	33%

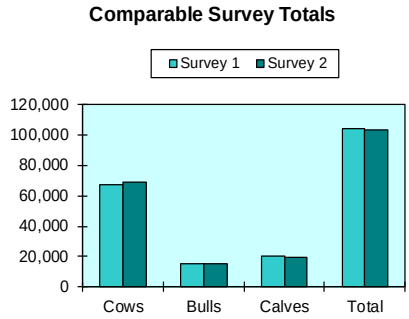
Winter Status & Objectives

Statewide	Current Status				Objective		
	Cows	Calves	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
Total	(70,000)	(20,500)	(17,100)	(9,200)	82,500	19,500	11,500
Bulls per 100 Cows			(24)	(13)		18-24	10 - 14

Note: Estimates within parentheses are based on information other than sightability surveys.

Population Surveys

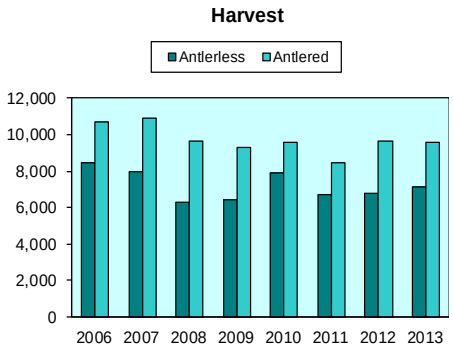
Statewide	Survey 1				Survey 2			
	Cows	Bulls	Calves	Total	Cows	Bulls	Calves	Total
Comparable Surveys Total	67,049	15,742	20,398	104,628	68,920	15,532	19,802	103,763
Per 100 Cows		23	30			23	29	

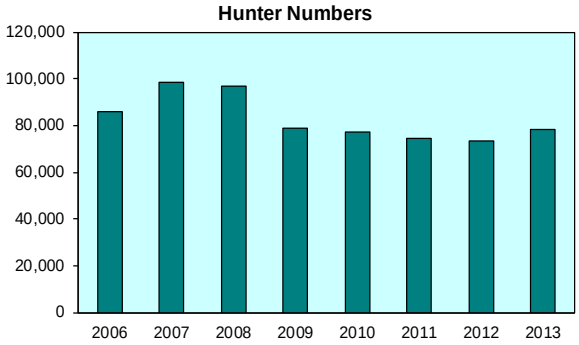


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	8,442	7,969	6,316	6,460	7,886	6,705	6,758	7,120
'A' Tag	2,735	2,423	2,053	2,317	3,154	2,334	2,460	2,250
'B' Tag	839	1,185	750	655	841	779	109	135
CH Tag	4,868	4,361	3,513	3,488	3,891	3,592	4,189	4,735
Antlered Harvest	10,732	10,932	9,678	9,328	9,584	8,434	9,635	9,562
'A' Tag	2,898	2,922	2,813	2,772	2,664	2,376	2,789	2,726
'B' Tag	5,972	6,182	5,228	4,788	5,132	4,361	4,868	4,741
CH Tag	1,862	1,828	1,637	1,768	1,788	1,697	1,978	2,095
Hunter Numbers	85,992	98,266	96,763	78,841	77,112	74,699	73,403	78,019
'A' Tag	30,086	38,245	37,589	29,165	28,644	27,598	28,548	29,197
'B' Tag	37,153	41,530	42,954	35,071	34,255	32,813	29,646	31,269
CH Tag	18,753	18,491	16,220	14,605	14,213	14,288	15,209	17,553
% 6+ Points	29	31	31	34	32	30	34	36

Note: % 6+ pts does not include spike-only harvest.





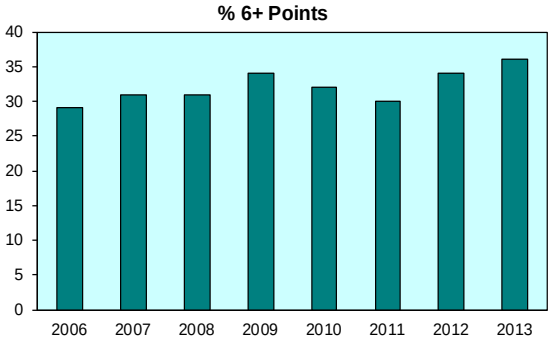


Figure 1. Statewide Elk Status and Objectives.

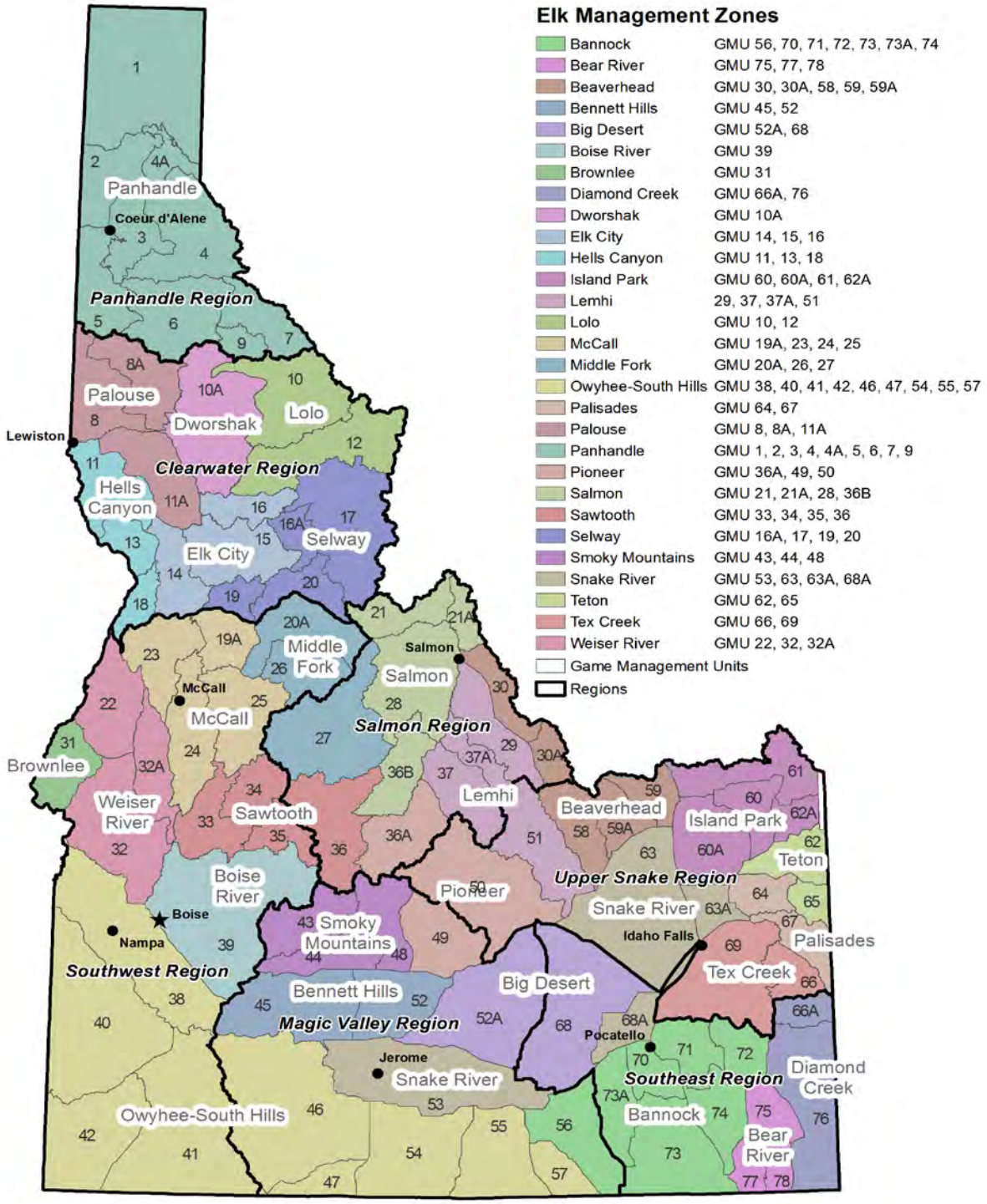


Figure 2. Statewide Elk Management Zones.

Panhandle Zone (GMUs 1, 2, 3, 4, 4A, 5, 6, 7, 9)

Management Objectives

Objectives for the Panhandle Zone (Figure 3) are to establish a population of 2,900-3,900 cows and 600-800 bulls, including 350-475 adult bulls, as measured via aerial surveys of the Panhandle Zone Bellwether Area. A herd composition survey was conducted during 2013 to assess elk recruitment in various Panhandle game management units (GMUs). Results of the survey indicated that calf numbers were below desired levels in portions of the St Joe River drainage (GMUs 6 and 7). Recruitment levels in GMU 4 were somewhat better but concerns of hunter movements and over all Zone harvest pressure resulted in major changes to the Panhandle Zone harvest strategies for the 2012 hunting seasons.

Historical Perspective

The Panhandle Zone is a large and diverse zone consisting of GMUs 1, 2, 3, 4, 4A, 5, 6, 7, and 9. Traditionally, the majority of elk habitat, elk numbers, and elk hunting activity occurred in GMUs 4, 4A, 6, 7, and 9. These GMUs are primarily composed of forested public lands and private timber companies and consistently recorded some of the highest hunter densities and elk harvest densities in the state. Expanding elk herds have recently increased hunter activities in GMUs 1, 2, 3, and 5, particularly in the agricultural areas of GMUs 3 and 5.

The Panhandle Region has essentially been managed as a "zone" since 1977, when the rest of the state eliminated general season cow harvest. The Panhandle Zone maintained general either-sex hunting opportunities with fairly consistent hunting seasons across most of the GMUs (Appendix A). From 1982-2003, a unique feature of the Panhandle Zone was a mandatory check of all elk harvested in the zone. Throughout this period, over 42,000 elk were reported via the Panhandle Mandatory Check program database. This database provided valuable information relevant to the elk population. Beginning with the 2004 season, harvest information for the Panhandle Zone was estimated by the statewide Mandatory Harvest Report system.

The 2013 elk hunting season in the Panhandle Zone remained restrictive by historical standards.

Habitat Issues

Elk numbers were very low in the Panhandle Zone around the early 1900s. Major landscape changes occurred as a result of stand-replacing fires beginning in 1910. Vast areas of timber were transformed into brush fields and early succession timber stands that provided ideal conditions for elk. Additionally, elk were imported from Yellowstone National Park by sportsmen in the 1940s and released in GMUs 1, 4, and 6. Elk populations increased, with periodic setbacks due to extreme winter conditions. While it is generally accepted that habitat conditions in traditional elk areas have declined in quality from better conditions in the 1950s and 1960s, pioneering of elk into new areas has allowed substantial growth. Elk habitat potential will likely decrease in the long term due to an absence of large-scale stand-replacing fire.

Much of the Panhandle Zone's forested habitat experienced extensive timber harvest during the 1980s and 1990s. While this high level of timber harvest created additional elk forage, the more important impact was the construction of logging roads that allowed hunters easy access to elk and increased elk vulnerability. High road densities and threats to large areas of elk security

continue to be a concern despite access management plans developed by land management agencies to address wildlife and watershed issues. Logging has since declined on federal lands but continues at a high rate on private timberlands. High road densities continue to put pressure on elk populations.

Biological Issues

The most significant impact to elk populations in the Panhandle is severe winter weather conditions that result in abnormally deep snow or delayed spring green up. Adult and particularly calf elk survival have been compromised as a result of severe winter conditions that drain body condition, reduce the availability of food and increase the impacts of predation.

Inter-specific Issues

Both white-tailed and mule deer occur in all areas of the zone. White-tailed deer are the predominant deer species and maintain high densities in the lower elevations of GMUs 1, 2, 3, 5, and 6. Mule deer numbers appear to be stable at much lower densities than whitetails and are found most frequently in the higher elevations of GMUs 1, 4, 6, 7, and 9. The moose population in the Panhandle Zone has expanded considerably over the past decade with the highest densities occurring in GMUs 1 and 2. Competitive interactions may exist among deer, moose, and elk; however, the form and extent of those relationships is presently unclear.

Predation Issues

Harvest levels of black bear and mountain lion indicate that both species are at fairly high population levels relative to recent historic numbers (20-40 years ago). In the 2013 harvest seasons both black bear and mountain lion seasons were extended in some GMUs and a second bear tag will be available for bear harvest in GMUs 6, 7 & 9. Research conducted in adjacent areas of Idaho and other states indicates that mountain lion and bear predation may have significant impacts, particularly on elk calves.

The 2013 Wolf Conservation and Management Progress Report states that the Panhandle Zone was occupied by 20 documented packs (including 4 Idaho border packs), 3 suspected packs, and 2 other documented groups during 2013. Eight border packs were tallied for Montana and 2 borders packs were tallied for Washington. Ninety-five wolves were harvested during the 2013-2014 wolf season which includes hunting and trapping. Fifty-three were killed using traps or snares.

Winter Feeding Issues

There were no organized efforts to feed elk during the winter of 2013 – 2014.

Information Requirements

Aerial surveys, both population estimates and herd composition surveys, are a valuable part of regional elk management, but must be considered in combination with other information sources. The homogenous, heavy-cover habitat that typifies the Panhandle Zone necessitates caution when interpreting elk sightability survey results.

Significant Events

The 2013-2014 winter saw fairly normal conditions relative to elk over-winter survival.

Harvest

The overall 2013 elk harvest in the Panhandle Zone estimated from hunter reports and corrected for non-response, was 2,288 elk. The estimated antlered elk harvest of 1,822 bulls consisted of 24% six-point or better bulls. This is indicative of a well-defined mature age class with adequate adult bulls for breeding purposes and to meet hunter desires. Four hundred sixty-six antlerless elk were harvested during the 2013 season. The overall hunter success rate for the Zone in 2013 was estimated at 15% with 30% of the harvest by Panhandle Zone hunters opting for the A tag.

Weather

The 2013-2014 winter was not extreme at any given time and was similar to the 2012-2013 winter. December and January snows created near normal conditions on most elk winter ranges. Lower than normal precipitation occurred during February and March creating more open conditions. Late winter snows in April and May brought the snow pack up to normal levels across the region and June rainfall levels were higher than normal. Over-winter conditions in the Panhandle likely did not contribute to higher than normal elk mortality during the 2013-2014 winter.

Population Surveys

The most recent Panhandle Zone Bellwether Area sightability survey was conducted in January 2009. Approximately 60 hours of helicopter time (Hughes 500 from Panhandle Helicopters) was utilized to survey 40 of the 108 available search units. Total elk observed (2,734) created a population estimate of 7,221 elk with a 90% confidence interval bound of 16.8% for this bellwether area. While the bull:cow ratio was 29 bulls per 100 cows, of particular concern was the calf:cow ratio of 15.3 calves per 100 cows. No sightability flights were attempted in 2013.

Composition flights were conducted in February 2014. Results appear in the table below. Low calf ratios continue to be a concern but have shown slight improvements in GMUs 4 and 7.

GMU	Total Elk classified	Calf:cow ratio (# calves :100 cows)
4	979	24.5
6	636	19.4
7	400	12.9

Special Projects

An effort to access cow survival was initiated in GMU 6 in 2011. Twenty-one elk were captured and fitted with VHF collars in this GMU between the towns of Avery and Calder in the St Joe River drainage. Monthly telemetry flights were conducted to estimate cow survival.

The study was expanded into GMUs 3 and 4 in 2013. Forty-five elk were fitted with GPS collars by Leading Edge Aviation. Elk are primarily monitored via satellite downloads. GPS collars

allow for better determination of survival rates because the collars will provide daily locations and send alerts when mortality is detected. Additionally, the daily locations can be used to develop seasonal habitat models that can be used to provide guidance to land management agencies relative to elk management.

From March 2011 through February 2012 there were 4 mortalities of the 21 radio-marked elk in GMU 6 producing a Pollock survival estimate of 81% (95% C.I. = .64 - .97). Survival rates for all collared elk in the Panhandle in 2014 was 89% (80% C.I. = .83-.94).

Significant Hunting Season Changes

In response to low calf recruitment, low adult cow survival and concerns about hunter movements, the Panhandle staff proposed significant changes to 2012 elk seasons. Following a series of very contentious public meetings the Commission approved the most restrictive elk seasons in modern times. All 2013 general seasons (any weapon, archery and muzzleloader) in the Panhandle Zone remain "bulls only" with cow harvest by tag in some GMUs.

Elk

Panhandle Zone (GMUs 1, 2, 3, 4, 4A, 5, 6, 7, 9)

Square Miles =	7,779	3-Year Averages	
% Public Land =	58%	Hunters per sq mi =	1.99
Major Land Type =	Forest	Harvest per sq mi =	0.30
		Success Rate =	15%
		%6+ Points =	25%

Winter Status & Objectives

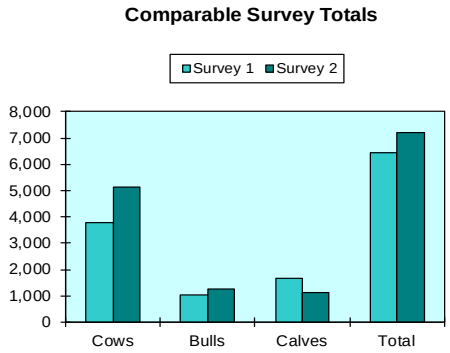
	Current Status				Objective		
Trend Area	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
	2009	5127	1256	538	2900 - 3900	600 - 800	350 - 475
Zone Total		**5127**	**1256**	**538**	**2900 - 3900**	**600 - 800**	**350 - 475**
Bulls per 100 Cows			**24**	**10**		**18-24**	**10-14**

Notes: The Panhandle Elk Trend Area includes parts of GMUs 4, 6, and 7.

Population Surveys

	Survey 1					Survey 2				
GMU	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
1	ND					ND				
2	ND					ND				
3	1993	367	74	118	559	ND				
4	1991	2,288	728	1,019	4,035	1997	2,009	666	409	3,084
4A	1994	121	17	36	174	ND				
5	ND					ND				
6	1993	1,214	740	394	2,348	2002	2,646	488	1,216	4,350
7	1998	1,044	541	150	1,735	2009	1,665	291	189	2,145
9	1998	598	108	24	730	*2004	241	57	70	368
Trend Area	**2006**	**3,775**	**1,015**	**1,660**	**6,451**	**2009**	**5,127**	**1,256**	**1,128**	**7,221**
Per 100 Cows			**27**	**44**				**24**	**22**	

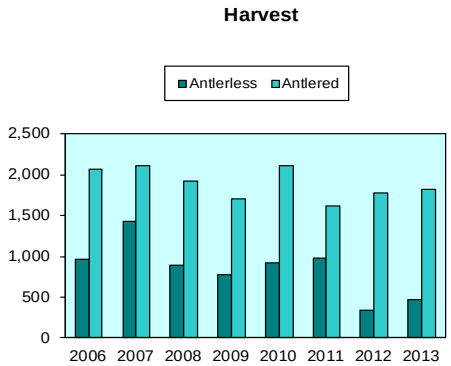
Note: ND = no survey data available.
* 2004 survey for GMU 9 is composition only - elk observed.

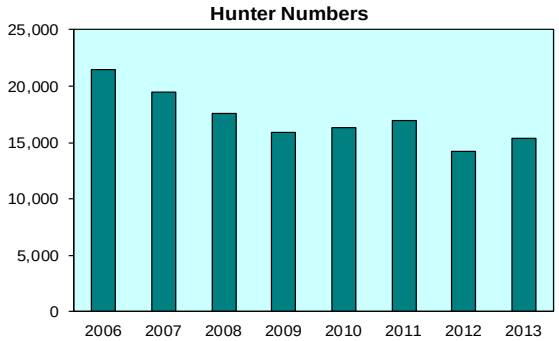


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	967	1,429	888	772	923	982	346	466
'A' Tag	107	175	141	76	139	197	0	0
'B' Tag	821	1,237	720	667	739	712	12	6
CH Tag	39	17	27	29	45	73	334	460
Antlered Harvest	2,062	2,115	1,923	1,711	2,105	1,619	1,778	1,822
'A' Tag	575	631	548	563	676	571	642	538
'B' Tag	1,483	1,480	1,375	1,109	1,429	1,046	1,015	1,177
CH Tag	4	4	0	3	0	2	121	107
Hunter Numbers	21,476	19,442	17,614	15,866	16,354	16,927	14,187	15,343
'A' Tag	6,505	4,813	4,326	4,223	4,371	4,551	4,141	4,361
'B' Tag	14,883	14,578	13,214	11,585	11,905	12,248	8,938	9,580
CH Tag	88	51	74	58	78	128	1,108	1,402
% 6+ Points	22	22	20	26	26	23	27	24

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





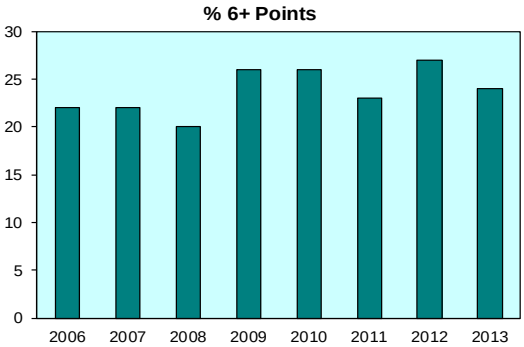


Figure 3. Panhandle Zone Elk Status and Objectives.

Palouse Zone (GMUs 8, 8A, 11A)

Management Objectives

Objectives for Palouse Zone (Figure 4) are to establish a population of 1,325 cows and 275 bulls, including 180 adult bulls, at ratios of 18-24 bulls:100 cows and 10-14 adult bulls:100 cows. The objectives, related to total population level (total elk numbers), were selected to represent a reasonable balance between depredation concerns and the desire to provide a reasonably large elk population. The objective for the number of adult elk represents the maximum number of elk that could be sustained under the circumstances.

The zone presently exceeds the cow abundance objective. The addition of early A-tag cow hunting opportunity and a January extra antlerless elk hunt (100 tags) have been offered to slow the growth of the cow elk population. Recently, adult bull abundance and ratios have improved to the point that most objectives are being met.

Historical Perspective

Historically, elk herds were scattered and numbers were low in this area. Few big game animals were found along Clearwater River by Lewis and Clark in the early 1800s, probably due in part to the dense, unbroken canopy of forest that covered the entire area. Wildfires burned over vast expanses near the beginning of the twentieth century, creating vast brush-fields that provided abundant forage areas for elk. Elk numbers increased following creation of these brush-fields, and elk numbers apparently peaked around 1950. Elk herds declined, however, through the latter part of that decade and the 1960s and 1970s, partially due to: 1) maturation of brush-fields and declines in forage availability; 2) logging and road-building activity that increased vulnerability of elk to hunters under the then more liberal hunting seasons; and 3) loss of some major winter ranges. In response to declines in elk numbers, an either-sex hunting regime was replaced in 1976 with an antlered-only general hunting season. Elk herds then began rebuilding.

Habitat Issues

This zone contains portions of the highly productive Palouse and Camas prairies. Dry-land agriculture began in this zone in the 1880s and continued until the 1930s. Large areas of native grassland existed to supply forage for the large numbers of horses and mules required to farm the area. With the development of the tractor and subsequent improvements, farming efforts intensified as equipment became more capable of handling the steep, rolling hills. Currently, virtually all non-forested land is tilled, and only small, isolated patches of perennial vegetation remain but are regularly burned or treated with herbicides. Elk numbers have only recently increased to levels that have provided significant hunting opportunities. Farmland in GMUs 8 and 8A provides high-quality elk forage, and as populations have grown, so have the number of crop depredation complaints. Farmers recall few elk problems until the last decade or so. Elk currently cause damage to grain, legumes, rapeseed, canola, and hay crops throughout this zone. Most of the crop damage occurs during summer months. Damage to conifer seedlings caused by elk is a concern where reforestation projects occur on elk winter range. Late-season antlerless elk controlled hunts have had limited success in controlling elk population growth and reducing the overall damage caused by elk. To help address depredation concerns, a green-field hunt was added to the A-tag hunt in 2004. This hunt is an antlerless hunt that runs from 1 August through 15 September within one mile of cultivated fields in Palouse Zone. Additionally, in 2008, a 1

January through 31 January extra antlerless elk hunt was added (100 X-tags) to reduce elk numbers in refuge areas, although was reduced to 55 in 2013 to shift harvest emphasis towards site-specific depredation hunts. In 2010 we added 3 days of cow hunting to existing bull seasons on the B-tag that is open on private lands (excluding corporate timberlands) to put further pressure on elk associated with crop depredations.

Timber harvest in the corporate timber, private timber, state land, and federal land areas of GMU 8A increased dramatically through the 1980s and 1990s, mostly to capture white pine mortality and respond to increased demand for timber products. This activity created vast acreages of early succession habitat, expanding elk habitat potential. Road construction associated with timber harvest is extensive in some areas. Road closures in some areas have significant potential to benefit elk through improved habitat effectiveness and reduced harvest vulnerability.

Biological Issues

Elk populations in this zone have increased over the last 30 years due to increased availability of agricultural crops, natural forage, and brush-fields (both on summer and winter range). Additionally, mild winters throughout the 1980s likely enhanced calf survival. To address increasing depredation problems during the last 10 years, liberal antlerless elk harvest opportunities have been offered.

The 2004 survey in GMUs 8 and 8A revealed substantial growth of the cow elk population (>50%), while bull abundance declined (-25%). The most recent survey (2009) showed continued increases in cow and bull numbers, to the point that bull objectives have been met.

Elk productivity in this zone is very high, with calf:cow ratios in the mid-40s or higher. This results in a resilient elk population and allows for a liberal season length and harvest.

Inter-specific Issues

The zone supports a substantial population of white-tailed deer, while mule deer are uncommon. The zone's moose population has expanded substantially over the past decade. Competitive interactions may exist among white-tailed deer, elk, and moose. However, the form and extent of those relationships is presently unclear.

Grazing by cattle occurs on almost all of the available pasture ground and poses some competitive concerns for elk, especially during drought years.

Predation Issues

Increasing mountain lion harvest over the last few years likely reflects increased mountain lion numbers in this zone. Black bear numbers have probably remained static. Wolves are typically absent in most of the zone but are becoming more numerous.

Winter Feeding Issues

Emergency winter feeding has not been conducted recently.

Information Requirements

Sightability estimates are needed periodically to monitor progress toward achieving population objectives. In addition, the information is valuable to assess population growth with respect to depredations and antlerless harvest levels.

Elk
Palouse Zone (GMUs 8, 8A, 11A)

Square Miles =	2,323	3-Year Averages	
% Public Land =	14%	Hunters per sq mi =	1.56
Major Land Type =	Agriculture	Harvest per sq mi =	0.38
		Success Rate =	24%
		%6+ Points =	22%

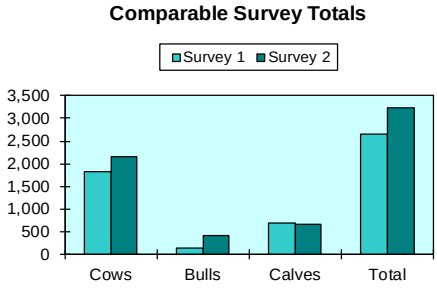
Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
8	2009	504	125	45	325 - 475	50 - 100	25 - 75
8A	2009	1,537	241	74	650 - 950	150 - 200	75 - 150
11A	2009	112	45	32	100 - 150	20 - 30	10 - 20
Zone Total		**2,153**	**411**	**151**	**1,075 - 1,575**	**220 - 330**	**110 - 245**
Bulls per 100 Cows			**19**	**7**		**18 - 24**	**10 - 14**

Population Surveys

	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
8	2004	404	54	218	676	2009	504	125	153	782
8A	2004	1,000	47	341	1,388	2009	1,537	241	489	2,267
11A	2002	410	47	147	604	2009	112	45	34	191
Comparable Surveys Total		**1,814**	**148**	**706**	**2,668**		**2,153**	**411**	**676**	**3,240**
Per 100 Cows			**8**	**39**				**19**	**31**	

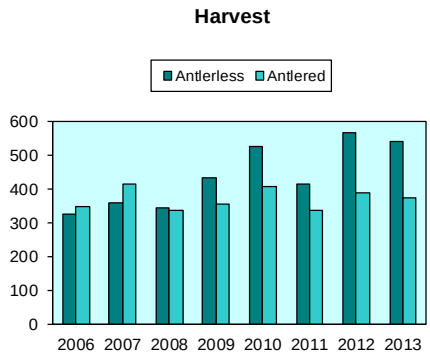
Note: ND = no survey data available.

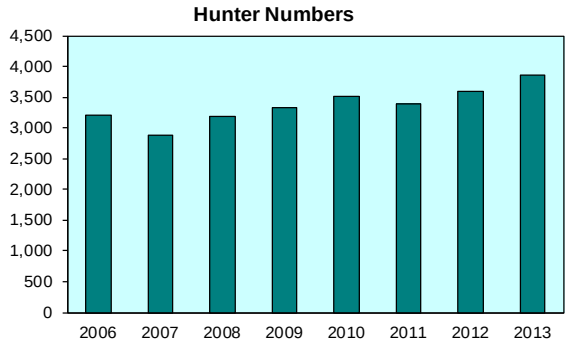


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	328	359	346	435	528	417	568	542
'A' Tag	182	172	142	166	236	126	235	214
'B' Tag	2	18	1	4	39	57	62	91
CH Tag	144	169	203	265	253	234	271	237
Antlered Harvest	347	415	339	356	408	336	390	374
'A' Tag	68	46	84	111	83	67	85	63
'B' Tag	278	365	251	236	322	264	305	306
CH Tag	1	4	4	9	3	5	0	5
Hunter Numbers	3,202	2,874	3,187	3,334	3,509	3,398	3,593	3,862
'A' Tag	1,141	852	1,003	982	1,015	947	1,115	1,080
'B' Tag	1,761	1,689	1,682	1,746	1,886	1,864	1,874	2,172
CH Tag	300	333	502	606	608	587	604	610
% 6+ Points	16	24	21.3	29	18	20	25	21

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





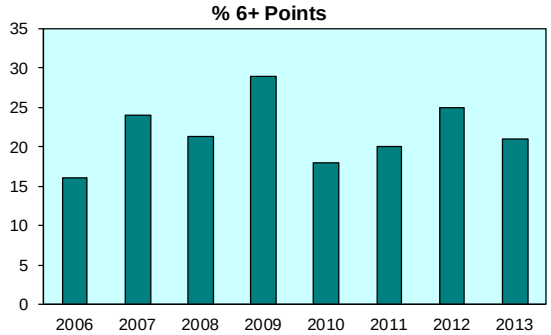


Figure 4. Palouse Zone Elk Status and Objectives.

Lolo Zone (GMUs 10, 12)

Management Objectives

Objectives for the Lolo Zone (Figure 5) are to maintain a population of 7,600 cows and 1,600 bulls, including 975 adult bulls at ratios of 18-24 bulls:100 cows and 10-14 adult bulls:100 cows, respectively.

Management of the Lolo Zone elk population and setting appropriate population objectives presents a serious quandary. Existing information suggests that both predation and density dependence (habitat limitations) could be causing low calf production and recruitment. If predation is the overwhelming factor, population goals should be set higher (e.g., 15,000 adult elk), and there should be little or no cow harvest. However, if density dependence is significant, goals should be set at a low level, and cow harvest should be at moderate levels (5-10%). Because both factors may be contributing significantly, the objectives were set at intermediate levels.

Historical Perspective

Historically, elk herds were scattered and numbers were low in this area. Few big game animals were found along Clearwater River by Lewis and Clark in the early 1800s, probably due in part to the dense, unbroken canopy of forest that covered the entire area. Wildfires burned over vast expanses near the beginning of the twentieth century, creating vast brush-fields that provided abundant forage areas for elk. Elk numbers increased following creation of these brush-fields, and elk numbers apparently peaked around 1950. Elk herds declined into the 1970s, partially due to: 1) maturation of brush-fields and declines in forage availability; 2) logging and road-building activity that increased vulnerability of elk to hunters under the then more liberal hunting seasons; and 3) loss of some major winter ranges. In response to declines in elk numbers, an either-sex hunting regime was replaced in 1976 with an antlered-only general hunting season. Elk herds then began rebuilding.

Habitat Issues

Land ownership within this zone is almost entirely publicly-owned forest. The southern portion of the zone is within the Selway-Bitterroot Wilderness Area. Historically, habitat productivity was high in this zone. However, habitat productivity has decreased following decades of intensive fire suppression. Approximately one-third of the zone has good access for motorized vehicles with medium road densities. The remaining portion has low road densities with good trails contributing to medium-to-low big game vulnerability. Aside from damages to reforestation projects, there are no elk depredation concerns in this zone.

Until the 1930s, wildfires were the primary habitat disturbance mechanism in this zone. Between 1900 and 1934, approximately 70% of the Lochsa River drainage was burned by wildfires. Between 1926 and 1990, over 1,900 km of roads were built in this area to access marketable timber. State Highway 12 along the Lochsa River was completed in 1962 and became the primary travel corridor. In 1964, most of the southern portion of GMU 12 was designated as part of the Selway-Bitterroot Wilderness.

Biological Issues

Poor calf recruitment since the late 1980s, winter losses in 1996-1997, and recent population declines in GMUs 10 and 12 have contributed to dramatically decreasing elk herds within this zone. Predation by wolves has been a factor in recent steep declines. Currently, elk numbers in the zone are well below objective; however, bull:cow ratios are high due to extreme losses in cow numbers.

Winter 1996-1997 was marked by severe conditions, including extremely deep snow exceeding 200% of average snow-pack in some areas. These conditions apparently caused higher-than-normal winter mortality, leading to a dramatic decline in the GMU 10 population (-48%). In addition, a survey was conducted in GMU 12 during winter 1996-1997 and those results suggested a 30% decline at that time. This data, in combination with overwhelming anecdotal information, suggests that catastrophic winter losses occurred in GMUs 10 and 12.

Calf productivity and/or recruitment have declined substantially since the late 1980s. Prior to that, winter calf:cow ratios often exceeded 30:100 and occasionally exceeded 40:100. From 1989-1999, ratios dwindled continuously down to levels below 10:100. This level of recruitment is inadequate to sustain natural mortality in the absence of hunting. Between 2002 and 2004, population surveys and composition surveys revealed recruitment levels between 27 and 30 calves:100 cows in GMU 12, and 19-26 calves:100 cows in GMU 10. However, the 2005 age composition surveys showed declines from recent levels. Most notable was the decline in GMU 12 where there were 13.9 calves per100 cows. The 2010 aerial survey for the Lolo zone showed a 57% decline from the 2006 survey, from 5,098 elk to 2,178. Calf:cow ratios for GMU 10 and 12 were estimated at 17.4 calves:100 cows and 6.9 calves:100 cows respectively.

Preliminary results from current research efforts suggest that both nutrition and predation may be potential causes of low calf recruitment levels. Since 2011, calf survival rates have been increasing, and recently peaked at 88% (n=19) in 2014. This increase may be due to several factors including mild winter conditions and reductions in wolf numbers. Additional work conducted in an experimental framework has also shown wolves to be a major factor.

To address low recruitment levels, declining bull numbers, and 1996-1997 winter losses, the Department capped B-tag numbers at 1,600 and closed cow elk controlled hunts beginning with the 1998 hunting season. This B-tag cap level represented a 60-65% reduction in any-bull rifle hunting opportunity. In 2010 the B-tag quota was further reduced to 1,088 and A-tag quota of 404 imposed. However, with declining elk numbers, hunter participation rates are declining and tags are not selling out. Currently, low recruitment and low adult cow survival remain a concern in this zone. Without changes in survival in these demographic groups, the objectives in this zone will not be achieved in the foreseeable future.

Inter-specific Issues

Both GMUs support small white-tailed deer populations, few mule deer, and moderate-density moose populations. Moose populations increased moderately over the past 20 years, but more recently growth may have stalled. Grazing by cattle occurs to a limited extent in the northwestern corner of GMU 12 on a U.S. Forest Service (USFS) allotment.

Predation Issues

In most of the Clearwater Region, mountain lion harvest levels have decreased over the last decade. Anecdotal data would indicate lion populations have followed suit in the Lolo Zone. Black bear harvest remained somewhat stable through the last two decades, averaging between 100 and 150 bears per year until 1998, when greatly liberalized seasons led to dramatic increases in harvest. However, black bear population performance remains well above plan objectives. Wolf packs are well-established throughout the zone and appear to be stable or increasing. Current research indicates wolves having increased impacts on elk demographics and the leading cause of mortality of adult cows and calves ≥ 6 months.

Winter Feeding Issues

Emergency winter feeding has not been conducted recently.

Information Requirements

The level of the Lolo Zone B-tag cap, and any future changes in the cap, are dependent upon cow survival and recruitment levels. In addition to data collected as part of the ongoing elk/predator study in the zone, complete sightability surveys will be conducted frequently to evaluate population performance. Results from the elk/predator study may provide insight that could direct management in subsequent years.

Elk
Lolo Zone (GMUs 10, 12)

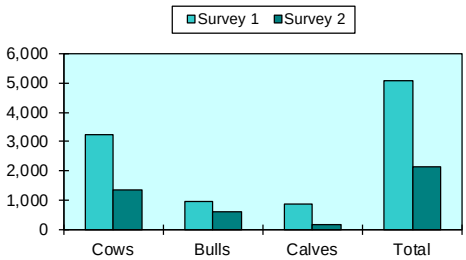
Square Miles =	2,373	3-Year Averages	
% Public Land =	97%	Hunters per sq mi =	0.26
Major Land Type =	Forest	Harvest per sq mi =	0.04
		Success Rate =	15%
		%6+ Points =	43%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
10	2010	824	461	447	4,200 - 6,200	900 - 1300	500 - 750
12	2010	534	133	124	1,900 - 2,900	400 - 600	225 - 350
Zone Total		**1,358**	**594**	**571**	**6,100 - 9,100**	**1,300 - 1,900**	**725 - 1,200**
Bulls per 100 Cows			**44**	**42**		**18 - 24**	**10 - 14**

Population Surveys

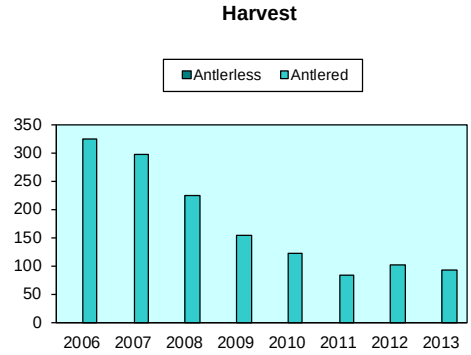
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
10	2006	2,276	504	669	3,449	2010	824	461	144	1,429
12	2006	978	475	196	1,649	2010	534	133	38	705
Comparable Surveys Total		**3,254**	**979**	**865**	**5,098**		**1,358**	**594**	**182**	**2,134**
Per 100 Cows			**30**	**27**				**44**	**13**	

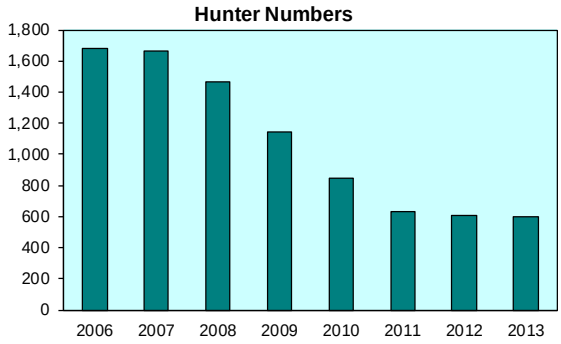


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	0	0	0	0	0	0	0	0
'A' Tag	0	0	0	0	0	0	0	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	0	0	0	0	0	0	0	0
Antlered Harvest	324	298	224	155	123	83	101	94
'A' Tag	74	86	78	43	27	9	16	26
'B' Tag	250	212	146	112	96	74	85	68
CH Tag	0	0	0	0	0	0	0	0
Hunter Numbers	1,680	1,662	1,462	1,147	844	629	607	596
'A' Tag	474	500	411	317	266	156	123	140
'B' Tag	1,206	1,162	1,051	830	578	473	484	454
CH Tag	0	0	0	0	0	0	0	2
% 6+ Points	30	41	34	41	52	49	39	41

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





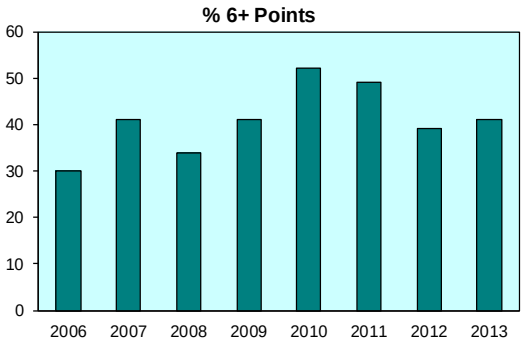


Figure 5. Lolo Zone Elk Status and Objectives.

Dworshak Zone (GMU 10A)

Management Objectives

Objectives for Dworshak Zone (Figure 6) are to establish a population of 3,600 cows and 750 bulls, including 425 adult bulls at ratios of 18-24 bulls:100 cows and 10-14 adult bulls:100 cows. Elk populations in the Dworshak Zone remain stable, despite the addition of wolves to this zone and relatively high elk harvest. This elk population remains productive and offers considerable opportunity for elk hunters.

The zone cow harvest strategy was modified for the 2000 hunting season to address over-harvest. The current goal is a harvest of 90-110 cow elk, which would allow the population to reach objectives over time. B-tag sales were capped beginning with the 2002 hunting season to allow the zone to move toward bull and adult bull objectives.

Historical Perspective

Historically, elk herds were scattered and numbers were low in this area. Few big game animals were found along Clearwater River by Lewis and Clark in the early 1800s, probably due in part to the dense, unbroken canopy of forest that covered the entire area. Wildfires burned over vast expanses near the beginning of the twentieth century, creating vast brush-fields that provided abundant forage areas for elk. Elk numbers increased following creation of these brush-fields, and elk numbers apparently peaked around 1950. Elk herds declined into the 1970s, partially due to: 1) maturation of brush-fields and declines in forage availability; 2) logging and road-building activity that increased vulnerability of elk to hunters under the then more liberal hunting seasons; and 3) loss of some major winter ranges. In response to declines in elk numbers, an either-sex hunting regime was replaced in 1976 with an antlered-only general hunting season. Elk herds then began rebuilding.

Habitat issues

Dworshak Zone consists of GMU 10A, which is three-fourths timberland and one-fourth open or agricultural lands and is bisected by canyons leading to the Clearwater River. The first wave of timber harvest in this zone occurred during the early 1900s and consisted mostly of removing the most valuable timber species and largest trees. During the 1970s, timber harvest increased fairly dramatically, and new roads provided access to previously inaccessible areas. In 1971, Dworshak Reservoir flooded approximately 45 miles of the North Fork Clearwater River corridor with slack water and permanently removed thousands of acres of prime, low-elevation winter range for big game. During the early 1970s, only a few hundred elk were observed wintering along the river under the predominantly old-growth cedar hemlock forest. The timberland is owned predominantly by Potlatch Corporation, Idaho Department of Lands (IDL), and USFS. Access is very good throughout the zone and timber harvest occurs on most available timber ground. High open and closed road densities contribute to high elk vulnerability and low habitat effectiveness. During the 1980s and 1990s, timber harvest occurred on almost all available state and private land as demand for timber and management of these lands intensified. Despite the reservoir, extensive logging along the river corridor improved winter range in this GMU. South aspect forests were cleared to provide timber products and inadvertently provided quality winter range.

Depredations have increased on agricultural land within the past 10 years in this zone due to increases in both deer and elk populations and changes in land ownership that reduced hunting opportunities. Elk cause damage to grain, legumes, and hay crops within the south-central portion of this zone during summer months. Occasional damage to stored hay, silage, and winter wheat occurs during winters with heavy snow accumulation. Damage to conifer seedlings by elk is a concern in the remaining portions of this zone where reforestation projects overlap with elk winter range. Controlled antlerless elk seasons have been successful in reducing the overall level of damage in this zone.

Biological Issues

Historically, GMU 10A has supported a productive elk population. From 1992-1996, recruitment averaged 34 calves:100 cows. From 1997-1999, recruitment dropped to an average of 19 calves:100 cows. However, the 2001 and 2007 sightability surveys revealed increases in recruitment at 30 calves:100 cows and 26 calves:100 cows, respectively. The most recent survey in 2011 showed an increase in cow numbers from 2007 (3235-4280) and no change in calf numbers, resulting in a decrease in recruitment at 20 calves:100 cows in 2011 from 26 calves:100 cows in 2007. Bull numbers remain below objective and showed further decline in 2011. Concerns over low recruitment and low bull numbers might precipitate future hunting season changes and prioritize the need for a sightability survey to evaluate population status.

Inter-specific Issues

GMU 10A supports a substantial white-tailed deer population, few mule deer, and a small moose population. The white-tailed deer population has increased dramatically over the past 20 years. Significant competitive interactions between white-tailed deer and elk may exist. However, the form and extent of those relationships is presently unclear.

Significant livestock grazing on rangeland in the southeastern portion of the zone impacts elk habitat potential. Most of that grazing occurs on habitats used exclusively during winter months. Additionally, range allotments are present on summer and winter habitat on USFS, IDL, and Potlatch Corporation lands elsewhere in the zone.

Predation Issues

Predator numbers, mountain lions in particular, have increased to high levels in the recent past. In GMUs 8, 8A, 10, 10A, 11, and 11A combined, mountain lion harvest levels increased steadily from 1991 (43 lions) to a peak in 1997 (149 lions). Elk harvest subsequently declined over this same timeframe. Anecdotal observations suggest this trend in harvest was related to a similar trend in mountain lion populations. Black bear harvest has increased slowly and recently stabilized. However, harvest levels remain below 2000-2010 bear management plan objectives. The long-term increase in mountain lion and bear populations may be adversely affecting elk population performance. However, there is inadequate information to objectively assess those potential impacts. Wolves are established within Dworshak Zone. Currently, at least 4 packs inhabit the Dworshak Zone for the majority of the year and 9 packs inhabit the zone periodically (i.e., these packs spend time in other management zones).

Winter Feeding Issues

Emergency winter feeding has not been conducted recently.

Information Requirements

Sightability surveys will be needed periodically to evaluate population performance relative to plan objectives. Composition surveys may be conducted to evaluate potential changes in recruitment.

Elk
Dworshak Zone (GMU 10A)

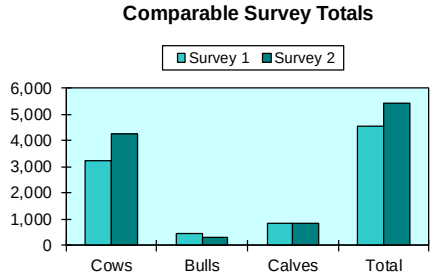
Square Miles =	1,555	3-Year Averages	
% Public Land =	49%	Hunters per sq mi =	2.05
Major Land Type =	Forest	Harvest per sq mi =	0.37
		Success Rate =	18%
		%6+ Points =	17%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
10A	2007	3,236	477	140	2,900 - 4,300	600 - 900	350 - 500
Zone Total		**3,236**	**477**	**140**	**2,900-4,300**	**600 - 900**	**350 - 500**
Bulls per 100 Cows			**15**	**4**		**18 - 24**	**10 - 14**

Population Surveys

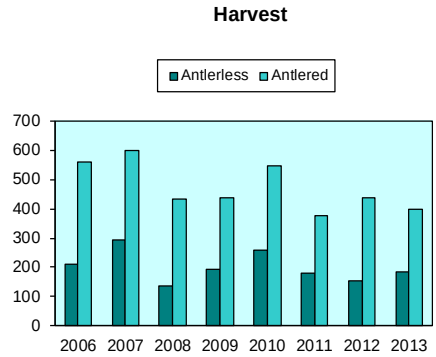
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
10A	2007	3,236	477	848	4,561	2011	4,280	315	850	5,445
Comparable Surveys Total		**3,236**	**477**	**848**	**4,561**		**4,280**	**315**	**850**	**5,445**
Per 100 Cows			**15**	**26**				**7**	**20**	

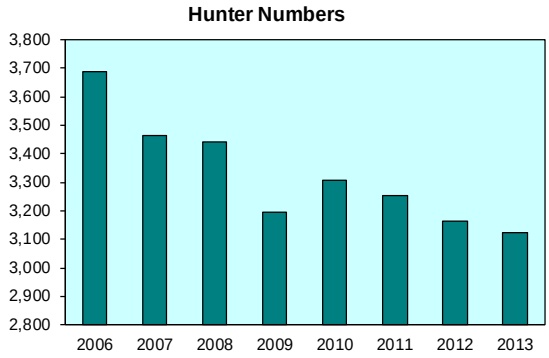


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	210	293	136	192	258	182	154	186
'A' Tag	177	256	99	158	192	127	105	124
'B' Tag	4	4	1	3	16	6	1	6
CH Tag	29	33	36	31	50	49	48	56
Antlered Harvest	558	600	433	439	548	377	438	399
'A' Tag	137	142	80	99	122	85	96	91
'B' Tag	420	458	353	340	424	292	342	307
CH Tag	1	0	0	0	2	0	0	1
Hunter Numbers	3,687	3,464	3,443	3,194	3,309	3,255	3,164	3,123
'A' Tag	1,467	1,280	1,205	1,049	1,052	1,058	997	1,010
'B' Tag	2,177	2,139	2,185	2,114	2,184	2,123	2,092	2,028
CH Tag	43	45	53	31	73	74	75	85
% 6+ Points	14	16	22	31	17	19	16	16

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





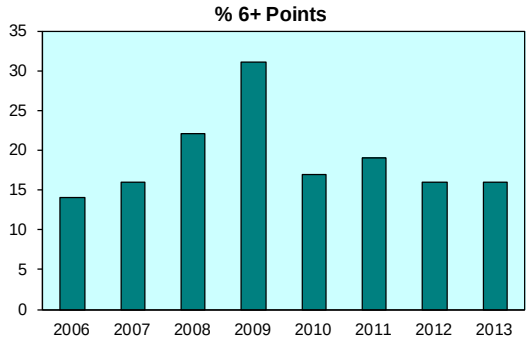


Figure 6. Dworshak Zone Elk Status and Objectives.

Hells Canyon Zone (GMUs 11, 13, 18)

Management Objectives

Objectives for Hells Canyon Zone (Figure 7) are to establish a population of 1,950 cows and 525 bulls, including 325 adult bulls at a ratio of 25-29 bulls:100 cows and 14-18 adult bulls:100 cows. Currently all population objectives are being met or exceeding for the Hell's Canyon Zone except for bull:cow and adult bull:cow ratio's (22 bulls:100 cows and 13 adult bulls:100 cows, respectively) in GMU 11. Tag levels were increased in 2009 in all GMUs to slow or cap growth. Antlerless seasons were restructured in GMUs 11, 13, and 18 in 2013 to increase cow harvest in response to low calf recruitment rates. Bull tags were reduced in 2013 in GMU 11 in response to a decrease in adult bulls estimated during the 2013 survey.

Historical Perspective

Historically, elk herds were scattered and numbers were low in this area. Few big game animals were found along Clearwater River by Lewis and Clark in the early 1800s, probably due in part to the dense, unbroken canopy of forest that covered the entire area. Wildfires burned over vast expanses near the beginning of the twentieth century, creating vast brush-fields that provided abundant forage areas for elk. Elk production in areas adjacent to this GMU increased around the turn of the century, and elk repopulated this zone by the 1960s. Elk herds declined into the 1970s, partially due to: 1) maturation of brush-fields and declines in forage availability; 2) logging and road-building activity that increased vulnerability of elk to hunters under the then more liberal hunting seasons; and 3) loss of some major winter ranges. In response to declines in elk numbers, an either-sex hunting regime was replaced in 1976 with an antlered-only general hunting season. Elk herds then began rebuilding.

Habitat Issues

Habitat productivity varies widely throughout the zone from steep, dry, river-canyon grasslands having low annual precipitation to higher elevation forests with good habitat productivity and greater precipitation. Late succession forest cover types have become fragmented within the zone. Many grassland cover types have been invaded by various weeds and non-native grasses, including cheatgrass and yellow star thistle. Road density is moderate, and access is restricted in many areas. This results in medium to low vulnerability of big game to hunters.

Historically, sheep and cattle ranchers and miners homesteaded the canyon lands in this zone, while prairie land was settled by farmers. Around the turn of the century, northern GMU 11 was under intensive use for dry-land agriculture and fruit orchards. Many resort cabins were built near and around the town of Waha. Later, many cabins were built along the mail stage route from Lewiston to Cottonwood via Soldiers Meadows and Forest. A mill was built in Winchester, along with numerous smaller mills on Craig Mountain, and the forested portion of Craig Mountain was extensively logged. The forests were frequently high-graded, and the existing forests still show the scars. In addition, past improper grazing practices severely degraded many meadow areas and allowed invasion of noxious weed species on dryer sites.

This zone contains large tracts of both private and publicly-owned land. GMU 11 is mostly private land except for Craig Mountain Wildlife Management Area (CMWMA) along the Snake and Salmon rivers. The CMWMA consists of two major management units: the Billy Creek

(16,123 acres), which was obtained between 1971 and 1983; and the Peter T. Johnson Mitigation Area (59,991 acres), which was acquired in 1995 as partial mitigation for Dworshak Reservoir. GMU 13 has been mostly under private ownership since settlement and is managed mostly for agriculture and livestock. Historically, sheepherders ran their flocks in the canyons of GMU 18, and some logging occurred in the forested areas of this GMU. GMU 18 is two-thirds public land with the remaining in private ownership located at lower elevations along Salmon River. The majority of Hells Canyon Wilderness Area, which was designated as such in 1975, is in GMU 18.

Depredations have increased during the past 10 years in this zone due to increases in white-tailed deer and elk populations. Elk cause damage to grain, legumes, hay, and rangeland forage. Cultivated crops are the primary concern in the north, while livestock forage is the primary concern in the remaining portion of this zone. Controlled antlerless elk seasons have had limited success in reducing the overall damage.

Biological Issues

Elk hunting in this zone is offered only on a controlled-hunt basis. Across the zone, sightability survey data indicate that cow and bull elk are stable, with declining calf recruitment. Bull:cow ratios during the 2009 and 2013 surveys were 27 and 29, respectively. Calf:cow ratios declined from 26 calves:100 cows in 2009 to 21 calves:100 cows in 2013.

Since 1991, elk populations have grown rapidly in the Hell's Canyon Zone. Cow populations have increased from 865 in 1991 to 3633 in 2013. Bull elk populations have also shown tremendous growth, increasing from 299 bulls in 1991 to 1059 bulls in 2013. However, during the 2013 there were 184 fewer calves estimated and calf recruitment decreased to 21 calves:100 cows. In order to address a potential density-dependence issue, an additional 150 cow tags were added (total 525) to the 2013 hunt and bull tags were reduced from 151 to 80. In addition, a collaborative research project commenced in November of 2013 to investigate elk nutrition and pregnancy rates. Preliminary results from the CMWMA in GMU 11 showed that 10 of 20 cows captured (18 collars deployed including 1 yearling) were lactating while average body fat was 5.3% (range of 2.7−7.4%) suggesting cows were in poor body condition coming onto winter range and potentially a nutritional deficiency on summer range. Average body mass for these same animals (based on girth) was 214 kg (range of 208−226 kg). Estimates derived from CMWMA are equivalent to the lowest levels observed in elk sampled during a similar study throughout the Pacific Northwest (Cook et al. 2013). Continuation of this research and subsequent population surveys will help direct management to maintain a growing elk herd in the Hells Canyon Zone.

Inter-specific Issues

Grazing by cattle is gradually decreasing in the zone due to reductions in USFS and Bureau of Land Management (BLM) allotments, along with land ownership shifting from private to public. Mule deer populations have declined dramatically, possibly alleviating any competitive relationships that may have existed with elk, although it is doubtful that any such effects would be significant.

Predation Issues

Predation is not believed to be a driving factor of elk populations within the Hells Canyon Zone. Mountain lion harvest had previously been declining since 2008 when 28 lions were harvested, although recently harvest has been increasing, peaking at 30 lions in 2013. Across the Clearwater Region, GMUs 11, 13, and 18 is the lowest quality bear habitat and likely has the lowest bear densities due to its hot and arid climate. Yet, black bear harvest has continued to increase slightly in GMUs 11, 13, and 18 when compared to the previous 3-year average. There has been 1 documented wolf pack in the southern end of GMU 18, although presence is likely seasonal.

Winter Feeding Issues

Emergency winter feeding has not been conducted recently.

Information Requirements

Sightability surveys will be required periodically across the zone to evaluate population performance relative to plan objectives. Continued monitoring through the Clearwater Basin Collaborative elk project will help to direct management of the zone in addition to sightability survey population estimates.

Elk
Hells Canyon Zone (GMUs 11, 13, 18)

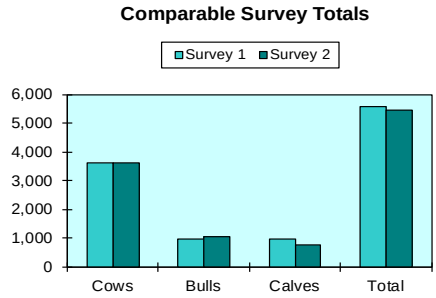
Square Miles =	1,389	3-Year Averages	
% Public Land =	94%	Hunters per sq mi =	1.23
Major Land Type =	Forest/Rangelai	Harvest per sq mi =	0.49
		Success Rate =	39%
		%6+ Points =	42%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
11	2013	1,008	211	134	600 - 900	150 - 250	100 - 150
13	2013	823	265	149	500 - 700	100 - 150	50 - 100
18	2013	1,798	572	402	500 - 700	150 - 225	100 - 150
Zone Total		**3,629**	**1,048**	**685**	**1,600 - 2,300**	**400 - 625**	**250 - 400**
Bulls per 100 Cows			**29**	**19**		**25 - 29**	**14 - 18**

Population Surveys

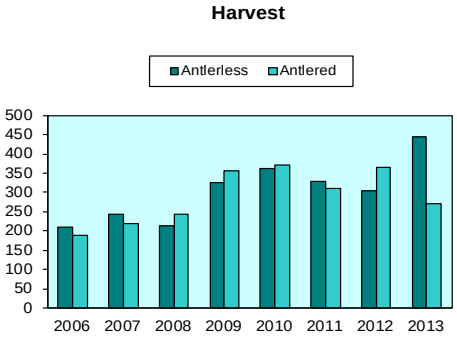
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
11	2009	969	367	228	1,564	2013	1,008	211	175	1,394
13	2009	1,346	212	335	1,893	2013	823	265	225	1,313
18	2009	1,327	394	402	2,123	2013	1,798	572	380	2,750
Comparable Surveys Total		**3,642**	**973**	**965**	**5,580**		**3,629**	**1,048**	**780**	**5,457**
Per 100 Cows			**27**	**26**				**29**	**21**	

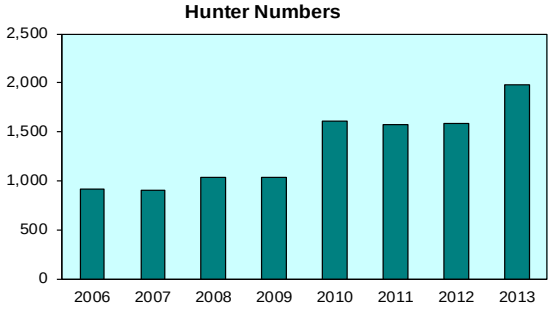


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	211	243	214	327	362	328	304	445
'A' Tag	0	0	0	0	0	0	0	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	211	243	214	327	362	328	304	445
Antlered Harvest	190	220	243	356	370	309	366	270
'A' Tag	0	0	0	0	0	0	0	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	190	220	243	356	371	309	366	270
Hunter Numbers	915	902	1,034	1,034	1,605	1,572	1,580	1,979
'A' Tag	0	0	0	0	0	0	0	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	915	902	1,034	1,525	1,605	1,572	1,580	1,979
% 6+ Points	53	53	48	51	47	39	42	47

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





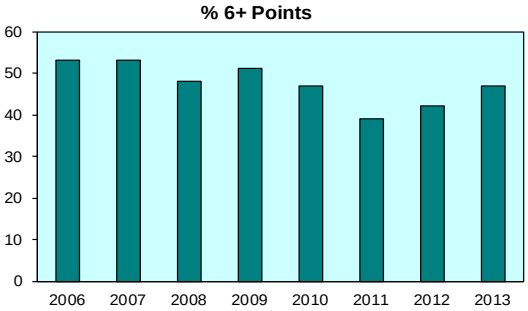


Figure 7. Hells Canyon Zone Elk Status and Objectives.

Elk City Zone (GMUs 14, 15, 16)

Management Objectives

Objectives for Elk City Zone (Figure 8) are to establish a population of 3,900 cows and 850 bulls, including 475 adult bulls at ratios of 18-24 bulls:100 cows and 10-14 adult bulls:100 cows. The current cow harvest management strategy has allowed that segment of the population to achieve its objective in 2008. B-tag sales were capped beginning with the 2002 hunting season to allow the bull segment of the population to reach objectives in 2008.

Historical Perspective

Historically, elk herds were scattered and numbers were low in this area. Few big game animals were found along Clearwater River by Lewis and Clark in the early 1800s, probably due in part to the dense, unbroken canopy of forest that covered the entire area. Wildfires burned over vast expanses near the beginning of the twentieth century, creating vast brush-fields that provided abundant forage areas for elk. Elk numbers increased following creation of these brush-fields, and elk numbers apparently peaked around 1950. Elk herds declined into the 1970s, partially due to: 1) maturation of brush-fields and declines in forage availability; 2) logging and road-building activity that increased vulnerability of elk to hunters under the then more liberal hunting seasons; and 3) loss of some major winter ranges. In response to declines in elk numbers, an either-sex hunting regime was replaced in 1976 with an antlered-only general hunting season. Elk herds then began rebuilding.

Habitat Issues

The prairie regions of this zone were converted to agriculture and ranching by early settlers. In 1862, gold was discovered near the current location of Elk City in GMU 15. After the readily available gold was depleted, miners turned to dredging activities where rivers ran through meadows. Crooked, American, and Red rivers were channelized and rerouted several times during the extraction processes, which continued commercially until the 1950s. Logging began with mining activities to supply wood for the mines, but in the 1940s, logging activities became commercial and resulted in an extensive network of roads throughout a large portion of this zone. In 1964, with the passage of the Wilderness Act, a small portion of GMU 16 was designated as a part of the Selway-Bitterroot Wilderness. In 1978, portions of GMUs 14 and 15 were included in the Gospel Hump Wilderness.

Land ownership in this zone is approximately 80% public with the remaining 20% private. The privately-owned portions are at lower elevations along the Clearwater and Salmon rivers. Approximately 8% of this zone is wilderness. Habitat productivity is relatively high in comparison to most other Clearwater Region big game GMUs. Productive conifer forests with intermixed grasslands characterize the majority of this zone. Many forested areas have become overgrown with lodgepole pine and fir due to fire suppression during the past 40 years. Both open and closed road densities are high within the zone, contributing to significant big game vulnerability during hunting seasons along with relatively high illegal harvest throughout the year. Noxious weeds, especially yellow star thistle and spotted knapweed, have increased within the past 15 years and in some areas, are out-competing grasses and forbs on important elk habitats.

Depredations have increased within the past 10 years in this zone due to increases in both deer and elk populations and changes in land ownership that reduce hunting opportunities. Livestock operators are concerned with elk use of pasture and rangeland forage during spring months prior to release of livestock on these grounds. Some damage to grain crops occurs during summer. Several past fencing projects have helped to reduce concerns of elk damaging stored hay during winters with heavy snow accumulation.

Biological Issues

Across the zone, cow elk numbers are stable to slightly increasing while numbers of bull elk are increasing. Bull:cow ratios ranged between 12.9 and 13.6 on the 2000 surveys. In 2002, a cap of 1,790 B-tag hunters was initiated. The most recent surveys in GMUs 14 and 15 have shown increasing cow elk numbers.

Historically, calf recruitment in GMUs 14 and 15 has been high, averaging 38 calves:100 cows from 1987-1993. However, the 2000 surveys revealed recruitment of 25 calves:100 cows, suggesting that a decline in recruitment, similar to surrounding areas, may be occurring. This trend in low calf recruitment continued in 2008 surveys. Chronic low recruitment is a concern in GMU 16, which averaged 19 calves:100 cows from 1990-2000 and fell to 17 in 2008. An aerial survey was scheduled to be completed during 2013 in the Elk City zone. Due to inadequate weather conditions and dispersed elk herds, surveys were postponed in this GMU until favorable conditions for aerial surveys were present. In absence of a complete survey, a comprehensive survey was flown in GMU 15. Calf recruitment continued to be low in 2013 at 22 calves:100 cows and followed low recruitment rates from 2006 and 2008 in GMU 15. A large forest fire in GMU 14 that occurred in 2012, the resulting improved forage quality may have wintered elk that traditionally wintered in GMU 15, potentially depressing calf recruitment estimates.

Inter-specific Issues

Livestock graze much of this zone on both private and public land. On private land on the west side of GMUs 14 and 16, competition with domestic livestock may be significant, especially during winter.

Predation Issues

Mountain lion harvest in this zone peaked a decade ago. Anecdotal information suggests a decrease in mountain lion abundance. Black bear harvest has likewise increased over the past decade. Harvest is currently between 80 and 90 bears annually, and recently spiked to 119 in 2013. Wolves are well established in the zone. Pack activity has been confirmed in all 3 GMUs.

Winter Feeding Issues

Emergency winter feeding has not been conducted recently.

Information Requirements

All 3 GMUs should be surveyed periodically to evaluate population performance relative to plan objectives. Due inadequate conditions for an aerial survey in 2013, a complete survey should be completed in following years when favorable conditions are present.

Elk

Elk City Zone (GMUs 14, 15, 16)

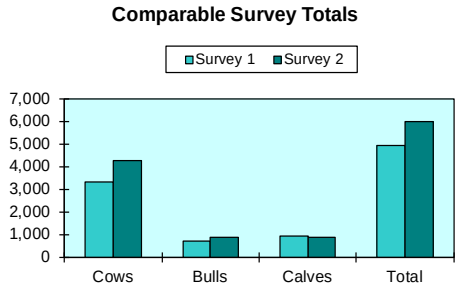
Square Miles =	1,838	3-Year Averages	
% Public Land =	82%	Hunters per sq mi =	1.22
Major Land Type =	Forest	Harvest per sq mi =	0.25
		Success Rate =	20%
		%6+ Points =	22%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
14	2008	2,402	419	262	1,400 - 2,000	300 - 450	150 - 250
15	2008	965	169	126	950 - 1,450	200 - 300	100 - 175
16	2008	897	275	239	800 - 1200	175 - 250	100 - 150
Zone Total		**4,264**	**863**	**627**	**3,150 - 4,650**	**675 - 1,000**	**350 - 575**
Bulls per 100 Cows			**20**	**15**		**18 - 24**	**10 - 14**

Population Surveys

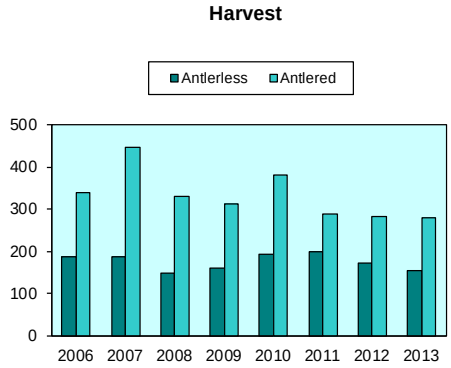
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
14	2004	1,478	439	499	2,416	2008	2,402	419	573	3,394
15	2006	929	127	205	1,261	2008	965	169	148	1,282
16	2000	927	120	200	1,247	2008	897	275	154	1,326
Comparable Surveys Total		**3,334**	**686**	**904**	**4,924**		**4,264**	**863**	**875**	**6,002**
Per 100 Cows			**21**	**27**				**20**	**21**	

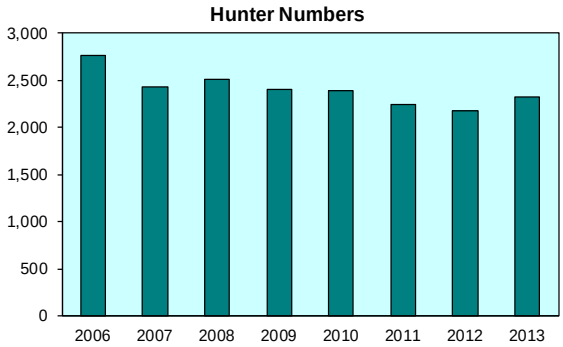


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	186	186	148	160	194	199	173	155
'A' Tag	144	124	94	110	111	126	73	86
'B' Tag	1	3	0	2	2	1	2	2
CH Tag	41	59	54	48	80	72	98	67
Antlered Harvest	338	446	330	313	380	289	282	281
'A' Tag	54	52	62	34	32	23	29	47
'B' Tag	282	394	268	278	348	266	252	234
CH Tag	2	0	0	1	0	0	1	0
Hunter Numbers	2,764	2,438	2,512	2,402	2,398	2,245	2,173	2,321
'A' Tag	939	789	868	749	732	638	627	666
'B' Tag	1,760	1,576	1,565	1,584	1,544	1,493	1,414	1,529
CH Tag	65	73	79	69	122	114	132	126
% 6+ Points	30	20	40	37	28	20	20	27

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





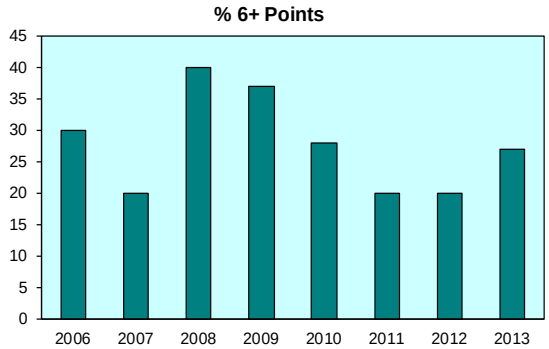


Figure 8. Elk City Zone Elk Status and Objectives.

Selway Zone (GMUs 16A, 17, 19, 20)

Management Objectives

Objectives in Selway Zone (Figure 9) are to establish a population of 6,100 cows and 1,650 bulls, including 975 adult bulls at ratios of 25-29 bulls:100 cows and 14-18 adult bulls:100 cows.

Like the Lolo Zone, management of the Selway Zone elk population and setting appropriate population objectives presents a serious quandary. Calf recruitment has declined substantially and remains low (~17 calves per 100 cows). Existing information suggests that both predation and density dependence (habitat limitations) could be causing this decline. If predation is the overwhelming factor, population goals should be set higher, and there should be little or no cow harvest. However, if density dependence is significant, goals should be set at a low level, and cow harvest should be at moderate levels (5-10%). Because both factors may be contributing significantly, objectives were set at intermediate levels.

Antlerless seasons were closed in 1998 to compensate for poor recruitment and 1996-1997 winter mortality. B-tag sales were capped at 1,255 in 2000; they were reduced further to 1,067 for the 2008 season and 7 days cut from the end of the B-tag season. Also in 2008, the A-tag sales were capped at 647.

Historical Perspective

Historically, elk herds were scattered and numbers were low in this area. Few big game animals were found along Clearwater River by Lewis and Clark in the early 1800s, probably due in part to the dense, unbroken canopy of forest that covered the entire area. Wildfires burned over vast expanses near the beginning of the twentieth century, creating vast brush-fields that provided abundant forage areas for elk. Elk numbers increased following creation of these brush-fields, and elk numbers apparently peaked around 1950. Elk herds declined into the 1970s, partially due to: 1) maturation of brush-fields and declines in forage availability; 2) logging and road-building activity that increased vulnerability of elk to hunters under the then more liberal hunting seasons; and 3) loss of some major winter ranges. In response to declines in elk numbers, an either-sex hunting regime was replaced in 1976 with an antlered-only general hunting season. Elk herds then began rebuilding.

Habitat Issues

Habitat productivity varies throughout the zone from high-precipitation, forested areas along the lower reaches of Selway River to dry, steep, south-facing ponderosa pine and grassland habitat along Salmon River. Many areas along Salmon River have a good mix of successional stages due to frequent fires within the wilderness. Fire suppression within portions of the Selway River drainage has led to decreasing forage production for big game. Road densities are low, contributing to low vulnerability for big game. Noxious weeds, especially spotted knapweed, have encroached upon many low-elevation areas of elk winter range.

Due to the rugged and remote nature of this zone, human impacts have been very limited. In 1964, almost all of GMU 17 and a small portion of GMU 16A were included in the Selway-Bitterroot Wilderness. Most of GMU 19 became part of the Gospel Hump Wilderness in 1978, and in 1980, part of GMU 20 was included in the Frank Church River-of-No-Return Wilderness.

Historically, IDFG has been involved with collaborative efforts such as the Clearwater Basin Elk habitat Initiative (1998), the Clearwater Summit (2003), the Clearwater Elk Collaborative (2003) and most recently, the Clearwater Basin Collaborative (2008). These collaborative efforts have supported increased fire frequency and more liberal "let burn" policies. From 2006 to 2009, 50,911 acres were burned from prescribed fire on lands administered by the Nez Perce-Clearwater National Forests. These prescribed burns should complement acres recently impacted by natural fires (large fires burned in GMUs 12, 17, and 20 during the summers of 2012 and 2013).

Biological Issues

Sightability survey data, collected in this zone from 1987-2001, revealed declining numbers of adult elk and declining recruitment. Declining calf recruitment was initially detected in GMUs 16A and 17 in 1995 surveys. Winter 1996-1997 was marked by severe conditions, including extremely deep snow exceeding 200% of average snow-pack in some areas. These conditions apparently caused higher-than-normal winter mortality leading to a significant decline in the GMU 16A and 17 herds. Survey data in 1999 suggested a 27% decline in adult elk over both GMUs. Composition surveys in GMU 17 during 2002 and 2003, and a sightability survey in 2004 revealed stable, low recruitment at 16 calves:100 cows, but in 2005 it declined to 11.0 calves:100 cows. In GMU 16A, the 2004 sightability survey revealed higher recruitment than in 1999.

Low calf recruitment was not observed in GMUs 19 and 20 until 1996. Survey data in 2001 suggested a significant decline in GMU 20 elk, but a significant increase in GMU 19 elk. However, fire activity during summer/fall 2000 may have been responsible for significant changes in elk distribution among GMUs 19, 19A, 20, and 20A. The 2007 sightability survey showed declines in total numbers in all the Selway Zone GMUs and further declines in recruitment in GMUs 16A and 17.

Inter-specific Issues

The zone supports small, isolated white-tailed deer populations, low-density mule deer populations, and moderate-density moose populations. Moose have increased moderately over the past 20 years. Grazing by cattle is virtually nonexistent.

Predation Issues

Selway Zone mountain lion harvest has remained static over the past decade. Black bear harvest is likewise stable. Wolf harvest has been minimal as well (7 wolves harvested by sportsmen, 1 wolf harvested by IDFG control actions) during the 2012-2013 season although increased to 16 (10 hunter harvest, 5 trapper harvest, 1 control action) during the 2013-2014 season. In this zone, it is doubtful that harvest levels reflect population trend but rather reflect the remote, rugged nature of the habitat which, in combination with little access, precludes significant mountain lion, bear, or wolf harvest. Recent trends in mountain lion and bear populations are questionable. Wolves are well established in this zone. Existing information suggests the presence of several packs. However, better information is needed.

Winter Feeding Issues

Emergency winter feeding has not been conducted recently.

Information Requirements

Aerial surveys should be conducted periodically to obtain adequate information to evaluate population performance relative to plan objectives. Better information is needed on wolf numbers, pack distribution, and impacts on elk in this zone.

Elk

Selway Zone (GMUs 16A, 17, 19, 20)

Square Miles =	2,527	3-Year Averages	
% Public Land =	100%	Hunters per sq mi =	0.31
Major Land Type =	Forest	Harvest per sq mi =	0.06
		Success Rate =	19%
		%6+ Points =	48%

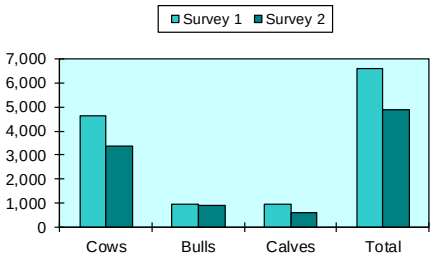
Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
16A	2007	389	105	64	650 - 950	175 - 250	100 - 150
17	2007	1,526	466	384	2,400 - 3,600	650 - 975	375 - 575
19	2007	977	237	179	1,050 - 1,550	300 - 400	150 - 250
20	2007	489	126	99	800 - 1,200	200 - 325	125 - 200
Zone Total		**3,381**	**934**	**726**	**4,900 - 7,300**	**1,325 - 1,950**	**750 - 1,175**
Bulls per 100 Cows			**28**	**21**		**25-29**	**14 - 18**

Population Surveys

	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
16A	2004	457	96	130	683	2007	389	105	63	557
17	2004	2,076	486	332	2,894	2007	1,526	466	153	2,145
19	2001	1,508	240	394	2,142	2007	977	237	241	1,455
20	2001	596	138	120	854	2007	489	126	132	747
Comparable Surveys Total		**4,637**	**960**	**976**	**6,573**		**3,381**	**934**	**589**	**4,904**
Per 100 Cows			**21**	**21**				**28**	**17**	

Comparable Survey Totals

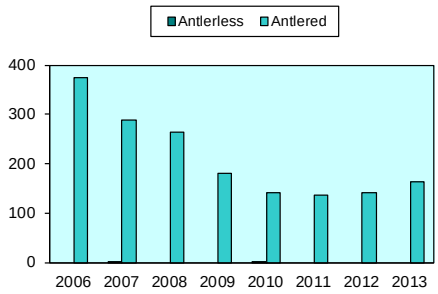


Zone Harvest Statistics

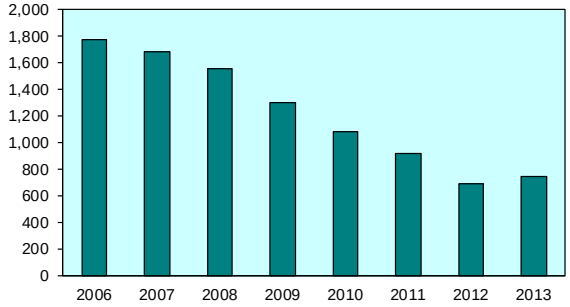
	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	0	1	0	0	1	0	0	0
'A' Tag	0	0	0	0	0	0	0	0
'B' Tag	0	1	0	0	1	0	0	0
CH Tag	0	0	0	0	0	0	0	0
Antlered Harvest	374	289	263	181	141	137	141	163
'A' Tag	100	74	47	41	16	18	35	36
'B' Tag	274	215	216	140	125	119	106	127
CH Tag	0	0	0	0	0	0	0	0
Hunter Numbers	1,775	1,690	1,555	1,302	1,085	924	690	747
'A' Tag	631	580	548	377	196	211	170	168
'B' Tag	1,144	1,110	1,007	925	889	713	520	575
CH Tag	0	0	0	0	0	0	0	4
% 6+ Points	42	49	48	66	54	56	39	50

Note: % 6+ pts does not include spike-only harvest. ND = no data available.

Harvest



Hunter Numbers



% 6+ Points

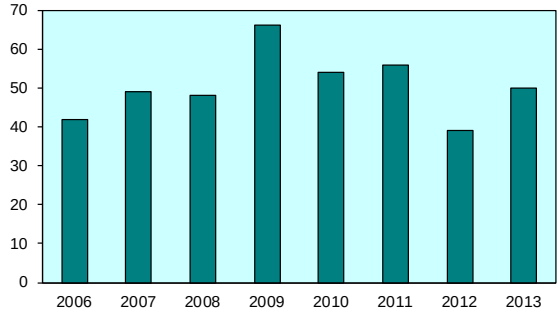


Figure 9. Selway Zone Elk Status and Objectives.

Sawtooth Zone (GMUs 33, 34, 35, 36)

Management Objectives

Objectives for Sawtooth Zone (Figure 10) include maintaining a population of ≥3,800 cows and ≥790 bulls, including ≥465 adult bulls in the wintering population in this zone. Bull:cow and adult bull:cow ratios will be managed at 18-24 bulls:100 cows and 10-14 adult bulls:100 cows, the statewide minimums. Summer elk numbers in GMU 36 were reduced to near objectives during the late 1990s. A harvest of ≥750 bulls each year is desired, but this goal has been unattainable this decade and is unlikely to occur in the near future based on current status of this elk herd. At current recruitment rates, harvest of ≤250 bulls is sustainable. These objectives reflect a balance between the desire for a relatively large, elk population for hunting and viewing, and concerns about feeding elk during winter.

Historical Perspective

Both mule deer and elk herds were over-harvested for hides and meat for mining camps in the mid-to-late 1800s. Lack of big game in the area resulted in the Idaho Legislature establishing the South Fork Game Preserve (now GMU 35) in 1909. This was the first game preserve in Idaho and remained in place until 1977. No hunting was allowed in the preserve until 1945. Deer populations increased rapidly. The elk herd increased to >1,000 by 1940 and approximately 2,000 by the early 1950s. Elk populations started rebounding in the late 1970s and peaked at a high of 7,200 elk in the early 1990s. The most recent sightability survey conducted in January 2013, estimated about 4,600 elk in the zone.

Sawtooth Zone is a popular destination for elk hunters from the Boise and Magic Valley areas. Hunter numbers declined to approximately 3,000 in 2009. They have further declined to about 2,000 the last couple of years. Antlerless harvest has been about 40 to 50 and antlered harvest has held at right around 300.

Zone quotas on tags were implemented in 2009. Tag reductions were phased in over a 3-year period, and leveled off at ~1,500 B-tags, and ~550 A-tags. These numbers equate to a 46% reduction from 2008 tag numbers.

Habitat Issues

More than 90% of the land in the zone is managed by the USFS. Access ranges from heavily roaded conditions in the Garden Valley area to the roadless Frank Church River-of-No-Return Wilderness and Sawtooth National Recreation Area. Hunters are able to select hunting conditions from wilderness to logged/roaded situations. In several areas, road densities are very high and access management programs could provide more area with less motorized access to address elk vulnerability issues. However, limiting motorized vehicle access has been met with great resistance from land management agencies, organized motorized groups, and other State agencies with different priorities and objectives.

Habitat conditions on winter range have been an important consideration since the early 1930s. Reports by USFS and National Park Service biologists described degraded conditions of winter range in 1932. There have been numerous attempts to improve habitat on winter range, but none of them have shown significant success. Currently, most south and west-facing slopes along the

south fork of the Payette River are largely infested by rush skeleton weed, severely reducing the value of thousands of acres of important winter range for elk and deer.

Elk have caused damage to several ranches (primarily cattle and small horse feeding operations) in the Garden Valley area during the early and mid-2000s. During spring, elk concentrate on new forage growth on private rangeland in the Garden Valley area. However, the Department has received none to few spring depredation complaints (usually for fence damage, not range) inthe last 6 years. Very limited winter range in the Stanley area has been impacted by non-migratory elk that are being fed through the winter by locals. However, this wintering herd has been reduced from nearly 500 animals to only about 20-40 by 2012. In previous years, portions of local summer range were also noticeably impacted by elk. However, recent elk densities and distribution patterns do not appear to be cause for concern.

Biological Issues

Following a regional trend, south of Salmon River, this elk population had increased dramatically until recent declines. Calf recruitment in the past has been high; however, fluctuations in calf:cow ratios over the last few years are common. The 2013 sightability survey documented improvement in both calf:cow and bull:cow ratios over those observed in 2009. Calf ratios of 46:100 were documented during a comp survey in 2014.

Inter-specific Issues

The Garden Valley area has been a significant wintering area for mule deer. In the early 1940s, estimated winter deer populations were from 5,000-12,000. The elk population consisted of <2,000 animals. From 1964 to the late 2000s it was estimated that mule deer numbers did not exceed 2,000 and there were approximately 5,500 elk wintering in the area. In recent years the ratio of deer and elk has shifted. In 2013 3,600 elk were estimated on the winter range. Mule deer were surveyed in January 2010, and approximately 4,500 deer were estimated in GMUs 33 and 35. Deer populations may have responded positively to fewer elk. Livestock grazing has been significantly reduced over the last 60 years, however, domestic sheep grazing in localized areas (Middle Fork Payette drainage) have reduced habitat quality by removing nearly all the understory vegetation in localized areas.

Predation Issues

Black bear, wolf, and mountain lion populations are well established in Sawtooth Zone. Recent sightability surveys indicate a decline in the elk population, and the 2009 survey indicated calf survival was extremely low. According to recent Department research, wolf predation was a leading source of mortality for 6 month and older elk calves and cows in the Sawtooth Zone. Neonate survival has not been researched but if black bear have an impact it would be during the spring on neonates. Lion predation occurs year-round but magnitude of impact is not well understood.

Current calf:cow ratios have fluctuated widely over the last few years and remain a concern at this time. Calf:cow ratios well below normal ranges for this elk herd were documented in 2008 and 2009, but improved in 2010 following a wolf hunting season and mild winter. Just as important, winter survival rate of calves improved in 2010 which resulted in an estimated end of

winter calf:cow ratio of 31:100. In 2011, early-winter calf:cow ratios were again improved, however winter survival rate of calves was low and the estimated calf:cow ratio at the end of winter was 19:100. Thirty-eight calves:100 cows were documented in early 2013, double from what was observed in 2009. Calf ratios of 46:100 were documented during a comp survey in early 2014 and high winter survival rate of calves was documented. Improvements in calf survival coupled with higher early-winter calf:cow ratios are occurring at the same time that wolf numbers are being reduced through regulated wolf hunting. Impacts of wolves on elk population dynamics have been a significant issue for elk management in this zone, and will continue to be monitored very closely. The Department has developed, approved, and implemented a predation management plan for the Sawtooth Elk Zone.

Twenty calf elk and 1 cow elk were captured in March 2014. This effort will allow managers to monitor survival of 6-month old calves to full recruitment into the population. The cow elk will supplement existing radio-collars to monitor survival and aid in the management of this elk herd.

Winter Feeding Issues

Sawtooth Zone has been a focal point for winter feeding since the 1930s. Severe winter mortality occurred on a regular basis starting in 1932 when 93 dead elk were found and 1,800 dead deer were buried along South Fork Payette River. Winter feeding programs for mule deer started shortly thereafter. Within a few years, elk were consuming more feed than mule deer. Now, feeding takes place approximately 2 out of every 5 winters.

There has been no evidence of Brucellosis in elk at any of the feed sites. The major concern is for feeding mule deer on limited deer winter range in Garden Valley. When mule deer are fed, elk quickly take over feed sites and exclude deer. This requires establishment of elk feeding sites to allow deer access to sufficient feed. Additionally, elk and deer have different nutritional needs, and pellets formulated for one species, may not provide adequate nutrition for the other. Native range has the capability to support the current elk herd in nearly all situations. There is considerable public demand for feeding elk. This demand is both for public concern about the welfare of the herd and to develop an elk feeding sleigh ride as a tourist attraction.

In the past two decades, occasional winter feeding has allowed a wintering elk herd to become established in the Stanley area, where historically they could not survive severe winters. The herd grew to 500-1,000 animals and severely impacted the small amount of natural winter range available. More recently, antlerless hunting that targeted the wintering population reduced numbers to a much lower level. Fewer than 40 elk remain in Stanley Basin during winter.

Information Requirements

Migratory patterns of elk are largely unknown. Two bull elk collared near Lowman had interesting movement patterns. One traveled to the Trinity Mountains, and another wandered to the Mayfield area. Both bulls spent time in the North and Middle Forks of the Boise River. Information about impacts of several large fires in the last 10 years on calving, summer, or winter ranges is needed. Potential impacts of the new mix of large predators are being studied by Department researchers, but more information is needed to determine how all the predators and prey interact in the zone. Inventory and mapping of current range of rush skeleton weed on

summer and winter habitats is desirable and understanding the impacts on carrying capacity will be important.

Elk
Sawtooth Zone (GMUs 33, 34, 35, 36)

Square Miles =	2,541	3-Year Averages	
% Public Land =	97%	Hunters per sq mi =	0.78
Major Land Type =	Forest/Ramgela	Harvest per sq mi =	0.14
		Success Rate =	18%
		%6 + Points =	30%

Winter Status & Objectives

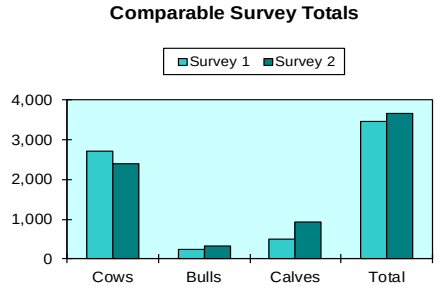
	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
33	2013	1,617	166	64	2,500 - 3,700	500 - 800	300 - 450
34	ND				0	0	0
35	2009	1,045	63	14	300 - 500	50 - 100	25 - 75
36	2009	34	22	4	250 - 350	50 - 75	30 - 50
Zone Total		**2,696**	**251**	**82**	**3,050 - 4,550**	**600 - 975**	**355 - 575**
Bulls per 100 Cows			**9**	**3**		**18 - 24**	**10 - 14**

Note: ND = no survey data available.

Population Surveys

	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
33	2009	1,617	166	314	2,097	2013	1,336	231	484	2,051
34	ND					ND				
35	2009	1,045	63	192	1,300	2013	1,050	81	440	1,571
36	2009	34	22	3	59	ND				0
Comparable Surveys Total		**2,696**	**251**	**509**	**3,456**		**2,396**	**324**	**926**	**3,646**
Per 100 Cows			**9**	**19**				**14**	**39**	

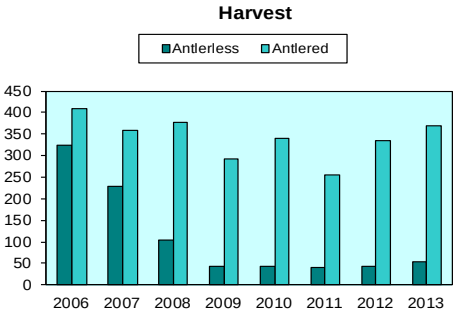
Note: ND = no survey data available.

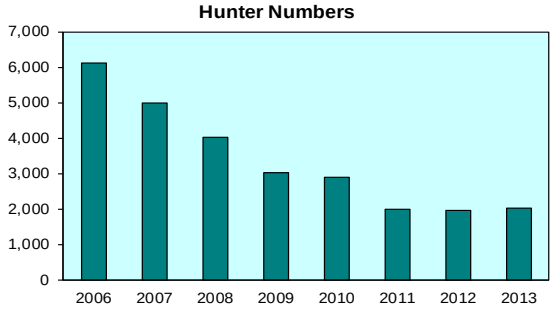


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	324	229	104	42	44	40	42	54
'A' Tag	269	159	15	7	14	9	17	27
'B' Tag	2	1	10	2	0	0	0	1
CH Tag	53	69	79	33	30	31	25	26
Antlered Harvest	410	358	376	292	339	254	334	369
'A' Tag	108	94	68	68	56	47	60	75
'B' Tag	295	260	304	219	268	195	268	279
CH Tag	7	4	4	5	15	12	6	15
Hunter Numbers	6,100	4,999	4,037	3,010	2,892	1,987	1,963	2,022
'A' Tag	2,792	1,990	952	683	656	543	511	518
'B' Tag	3,096	2,769	2,550	2,231	2,118	1,336	1,344	1,381
CH Tag	212	240	535	96	118	108	108	123
% 6+ Points	25	27	28	32	23	26	32	31

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





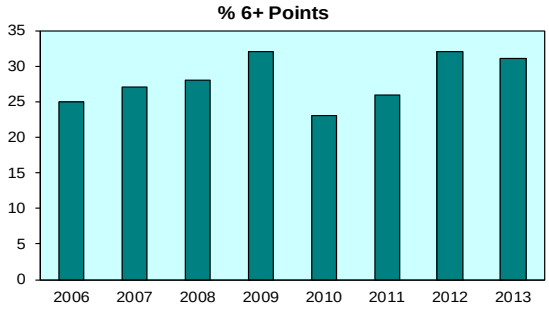


Figure 10. Sawtooth Zone Elk Status and Objectives.

Owyhee-South Hills Zone (GMUs 38, 40, 41, 42, 46, 47, 54, 55, 57)

Management Objectives

The objective in Owyhee-South Hills Zone (Figure 11) is to provide additional hunting opportunity commensurate with the increased elk population. Harvest management will emphasize the opportunity to harvest a mature bull.

The 9 GMUs within this zone vary substantially in their potential to sustain elk populations under current biological and socio-political constraints. Management will retain enough flexibility to allow adjustments of elk numbers to address issues that may arise. In GMU 54, surveys will be initiated to provide data on which to assess population status.

Historical Perspective

During the late 1800s, elk in Owyhee-South Hills Zone were nearly eliminated because of unrestricted hunting and conflicts with the area's growing livestock industry. Elk from Yellowstone National Park were transported via railway and released near Murphy, ID in the 1950's. Elk densities remained low throughout the twentieth century but began to increase in the 1990s. Recently, ingress from the rapidly growing northern Nevada elk population and natural reproduction have contributed to herd growth. In 2002, there was an estimated 850 elk in the zone.

Efforts by the Nevada Division of Wildlife (NDOW) to reestablish elk in the northern portion of that state have been very successful. Elk are expanding their range into suitable habitats in Nevada and Idaho that have not had resident elk for nearly a century. Translocations have been used to hasten the growth in elk numbers. Since the mid-1980s, 523 elk have been released into five areas in northern Nevada (Elko County). The overall Nevada population in 2002 was estimated to be 2,260 head with a management cap of 4,480 elk.

As per the 2014-2024 Idaho Elk Management Plan, the Owyhee-South Hills Zone will be split into two elk management zones to better address management issues in the two zones, respectively.

GMUs 38, 40, 41, and 42 – While an elk is occasional documented in GMU 38, it is rare and elk are not likely to establish or be encouraged to establish this GMU due to agricultural practices.

During the 1970s, a few hundred elk inhabited GMUs 40 and 42. By the mid-1990s, this elk herd had increased to about 600 head and was estimated in 2002 having approximately 450 head. Elk in GMUs 40 and 42 are suspected of using winter ranges in Oregon. One elk calf tagged in Baker, Oregon, was harvested as an adult near Murphy, Idaho, over 175 miles away. In January 2013, NDOW radio-collared 3 cow elk near Hat Peak south of GMU 42. One of these elk migrated to Juniper Mountain for the summer/fall.

In GMU 41, elk that winter east of Highway 51 move south to summer ranges in Nevada, although an increasing number are staying in GMU 41 year-long. Most of these elk originated from a reintroduction program conducted by NDOW and the Rocky Mountain Elk Foundation

(RMEF) in the Bruneau River drainage in Nevada. One of the released elk was harvested in GMU 46 southwest of Castleford, Idaho, over 50 miles from the Nevada release site.

Over 400 elk were documented during an airplane flight in the Triangle area of GMU 40 and along the East Fork Owyhee River of GMU 42 in February 2010. During the flight an additional 200-300 were seen by officers south of the East Fork, but were not located due to poor snow conditions. Approximately 300 elk were observed on a fixed-wing flight in February 2011 west of the Bruneau River in GMU 41. This flight was curtailed due to poor weather. Local ranchers estimate this herd at approximately 500 elk. In January 2014, NDOW counted 3,111 elk in Nevada Units 061/071 alone, including 1,411 in GMU 41 in Idaho. They observed an additional 383 in Paiute Basin of GMU 42 in Idaho.

GMUs 46, 47, 54, 55, and 57 - Elk numbers in these GMUs were very low throughout the 1900s. Elk sightings were considered uncommon and management emphasized providing quality mule deer hunting opportunities. In 1916, the Department reintroduced 19 elk (17 cows, two bulls) into GMU 54. Following the release, elk numbers increased only slightly. In 1950, there were approximately 60 elk wintering in GMU 54. Hunting seasons were authorized from 1963-1966 (5-15 tags) but were discontinued because of low success. In 1990, the Magic Valley RMEF chapter proposed releasing elk into GMU 54 to establish a larger, huntable resident elk population. Since ingress of elk from Utah and Nevada was beginning to occur at that time, it was decided to allow elk numbers to increase naturally without translocations. Although reliable estimates of elk numbers are currently unavailable, the population in GMUs 46, 47, 54, 55, and 57 in 2002 was estimated between 250 and 350 elk, exceeding the 1998 objective. Elk hunting was authorized in GMUs 46, 47, and 54 in 2002 with 15 either-sex archery tags, 15 any-weapon antlered tags, and 15 any-weapon antlerless tags. Similar hunting seasons were authorized for 2003 through 2005 with the antlerless hunt tag level increased from 15 to 40 tags.

Because these GMUs have not traditionally been managed to maintain a resident elk population, the Department scoped 3 possible management scenarios with the public between December 2001 and February 2002. These scenarios were 1) do not allow an elk population to become established; 2) allow slow, carefully monitored growth of the elk herd to allow timely and effective responses to issues or conflicts that might arise; and 3) maximize elk population growth. Of the 230 people surveyed on the issue, 7% favored Scenario 1, 52% favored Scenario 2, and 41% favored Scenario 3. Hunters overwhelmingly favored the establishment of a resident elk population. Ranchers were split between Scenarios 1 and 2 and expressed concerns about the potential for elk to compete with livestock for forage on public and private grazing lands. Specifically, ranchers were concerned about elk use on private meadows in August and September and possible future reductions in Animal Unit Months (AUMs) on federal lands because of elk.

Habitat Issues

Owyhee-South Hills Zone is comprised of 9 GMUs, which have varying degrees of potential for supporting elk populations. Habitat quality varies considerably between GMUs, as does the potential for depredation problems.

The BLM manages most of the elk habitat in Owyhee County. However, small parcels of private property include habitats that receive substantial elk use. The number of Landowner Appreciation Program (LAP) tags was increased from 10% to 25% of allocated tags in GMUs 40 and 42 to provide landowners the opportunity to harvest some of the elk that utilize their property, and to garner landowner support for elk, and hopefully increase public access for elk hunting.

Juniper encroachment is a concern in portions of GMUs 40 and 42. While juniper does provide screening cover, it generally reduces habitat quality for elk and other wildlife. A large wildfire on Juniper Mountain in GMU 42 in 2007 created ideal habitat by removing the juniper overstory. The habitat has recovered beautifully and bunch grasses, bitterbrush, ceonothus, and a wide variety of forbs are now thriving. Elk and other wildlife use of this area has increased since this burn occurred. The BLM has plans to use prescribed fire to remove Juniper on the west side of Juniper Mountain, which will greatly enhance the habitat and benefit elk. They are running into opposition from environmentalists on their prescribed fire proposal, however. In other areas of GMUs 40 and 42, on both private and public land, efforts are underway to cut and lay juniper, or to masticate juniper. These efforts are showing promise and will benefit elk and other wildlife.

In GMUs 46, 47, 54, 55, and 57, USFS and BLM manage most of elk habitat. Habitat conditions are currently suitable for supporting substantially higher numbers of elk. A large amount of sagebrush, bitterbrush, and mountain shrub-dominated habitats preferred by mule deer have been altered by fire, improving elk habitat suitability. However, high road densities, the open character of habitat, and depredations are important issues that will ultimately help determine elk management objectives.

Biological Issues

Because elk densities have traditionally been low in this zone, surveys have not been conducted to provide data on population dynamics. Elk objectives are not derived from aerial surveys due to expansive land area, dispersed groups of elk, poorly defined winter range, difficult winter access, and interstate migratory patterns. Anecdotal information suggests these populations are increasing, but accurate estimates of population size are unavailable. Increases in elk numbers over the next 5-10 years are inevitable from natural reproduction and continued ingress of elk from Nevada. Although elk numbers in some GMUs currently exceed population objectives established in 1998, no major biological issues have been identified.

Inter-specific Issues

Owyhee-South Hills Zone has traditionally had a large population of mule deer, although deer numbers have declined during the past decade from changes in habitat and effects of drought and severe winters. The current elk population is not believed to have any impact on mule deer numbers.

Conflicts between elk and livestock have had a major influence on elk management in portions of Owyhee County. Concentration of elk on private land holdings in western Owyhee County has occasionally created a depredation problem. Landowners' major concerns are damage to fences and loss of private rangeland forage. Depredations that occur will be aggressively dealt with by the Department in a timely manner as specified in Idaho Code (36-1108) and

Department policy. The Department will work closely with private landowners to avoid development of chronic problems. On federal lands, any resource damage attributed to elk will be jointly evaluated by the Department and managing agency.

Elk were observed in the lower East Fork Owyhee River and Deep Creek in April 2008. Approximately 100 elk were observed along the East Fork Owyhee between Deep Creek and the Oregon border from a plane in February 2010.

Predation Issues

Mountain lion is the the primary predator of elk in this zone. Predation is presently not a major factor limiting growth of these elk populations, nor is it anticipated to become a concern.

Winter Feeding Issues

There has been no winter-feeding of elk in this zone recently. Elk numbers will not be maintained at a higher level than can be supported by available winter habitat. Unsanctioned feeding by private individuals will be strongly discouraged. In the event that emergency feeding is necessary, elk will be reduced to resolve the problem.

Information Requirements

To effectively manage elk in this zone, airplane equipped with Infra-red will be tested to determine efficacy of such flights to monitor elk abundance and distribution in GMUs 40, 41 and 42. Current estimates are based on reports from ranchers, biologists, and hunters, but better data will be necessary for management of anticipated higher numbers.

Management Implications

GMUs 40 and 42 have gained a reputation of producing large bulls. Consequently, 6 or 7 Super Tag hunters annually hunt during the early rifle hunt in the Owyhee and typically outnumber the controlled hunt permittees (5 tags). Changing the hunt opening day from 30 August to 25 September does not appear to have the desired effect of limiting participation from the Super Tag hunters. Additional measures may need to be taken to maintain the quality of this excellent hunt and keep trophy quality up to the standards that hunters desire for this hunt.

A new bull hunt was added to GMU 41 in 2010. Landowners who controlled access to the best elk habitat were very skeptical of this hunt because they didn't want to hassle with hunters (10 permits). They were concerned about slob hunters, trespass, fence damage from hunters and elk chased by hunters, and off-road use of ATVs. They finally agreed on a temporary basis and the situation is being monitored annually. A cow hunt has not been implemented because of the previous stated concerns from the landowners in the area.

Elk

Owyhee - South Hills Zone (GMUs 38, 40, 41, 42, 46, 47, 54, 55, 57)

Square Miles =	13,739	3-Year Averages	
% Public Land =	71%	Hunters per sq mi =	0.05
Major Land Type =	Desert/Rangelan	Harvest per sq mi =	0.01
		Success Rate =	28%
		%6+ Points =	83%

Winter Status & Objectives

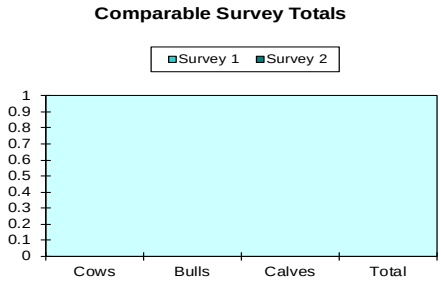
	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
38		0	0	0	0	0	0
40		150	40	25	125 - 175	20 - 40	15 - 25
41		155	45	20	25 - 75	5 - 15	5 - 10
42		175	70	40	150 - 200	25 - 50	15 - 25
46		10	5	3	5 - 15	1 - 10	1 - 5
47		20	10	5	15 - 25	1 - 10	1 - 5
54		150	50	30	20 - 30	1 - 10	1 - 5
55		75	25	10	15 - 25	1 - 10	1 - 5
57		20	10	5	15 - 25	1 - 10	1 - 5
Zone Total		**755**	**255**	**138**	**370 - 570**	**55 - 145**	**40 - 85**
Bulls per 100 Cows			**34**	**19**		**18 - 24**	**10 - 14**

Note: Estimates within parentheses are based on information other than sightability surveys.

Population Surveys

	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
38	ND					ND				
40	ND					ND				
41	ND					ND				
42	ND					ND				
46	ND					ND				
47	ND					ND				
54	ND					ND				
55	ND					ND				
57	ND					ND				
Comparable Surveys Total		**0**	**0**	**0**	**0**		**0**	**0**	**0**	**0**
Per 100 Cows										

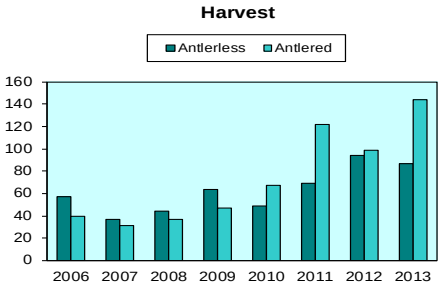
Note: ND = no survey data available.

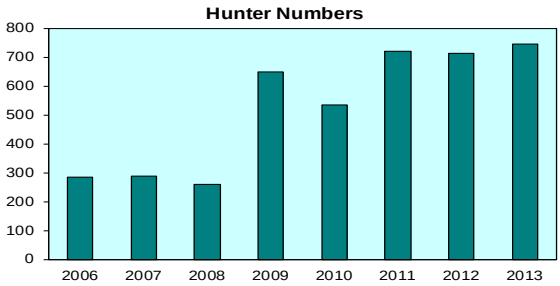


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	57	37	44	64	49	69	94	87
'A' Tag	0	0	0	14	4	8	13	0
'B' Tag	0	0	0	0	1	0	0	0
CH Tag	57	37	44	50	45	61	81	87
Antlered Harvest	40	31	37	47	67	122	99	144
'A' Tag	0	0	0	0	0	0	0	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	40	31	37	47	67	122	99	144
Hunter Numbers	284	287	260	648	534	720	714	744
'A' Tag	0	0	0	375	198	260	219	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	284	287	260	273	336	460	495	744
% 6+ Points	60	81	73	77	91	77	91	82

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





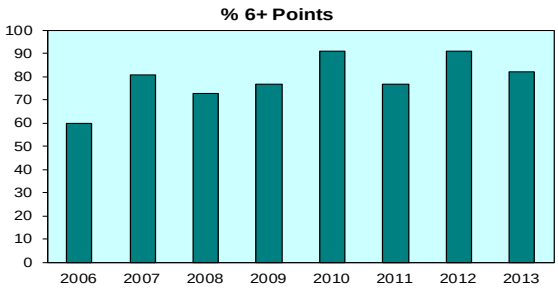


Figure 11. Owyhee-South Hills Zone Elk Status and Objectives.

Boise River Zone (GMU 39)

Management Objectives

Objectives for Boise River Zone (Figure 12) are to maintain a population of 3,200-4,800 cows and 650+ bulls, including 375+ adult bulls. Management in the southern and west portion e of the zone has been focused on addressing significant landowner concerns about elk depredation. Landowner permission hunts seem to have been very effective at reducing landowner complaints about elk in past years in the Horseshoe Bend area, but tensions are high in Mayfield. Currently, this zone is meeting objectives for elk.

Historical Perspective

Near the turn of the century, elk herds in Boise River drainage were heavily harvested for hides and meat for mining camps in the area. Sparse elk herds in Idaho were bolstered with translocated elk from the Yellowstone area in the late 1930s. Relatively liberal either-sex seasons were maintained in this zone until the early 1970s, suppressing the herds well below habitat potential. In 1975, bulls-only hunting was implemented. Since then, the wintering herd has increased to over 7,000 head.

The interest in elk hunting in Boise River Zone increased along with growth in the elk population. Boise River is one of the most popular elk zones in the state with approximately 4,500 hunters. This zone may be increasing in popularity due partly to the decline in the elk herd in the Sawtooth Zone, and tag quotas may need to be considered in the future.

Habitat Issues

Boise River Zone includes 2,455 square miles of excellent elk habitat. The conditions range from wilderness situations in Sawtooth National Recreation Area to the heavily roaded areas near Boise. Boise National Forest manages the majority of summer habitat occupied by elk.

There are large areas of private land on the west side of the zone in the Horseshoe Bend area. Historically, landowners in this area have suffered significant damage to hay crops and private rangeland, especially in spring, although these depredation concerns have subsided in recent years. On the south side of the zone, winter and spring concentrations of elk have been in conflict with livestock operations, primarily on rangeland, but occasionally with crops. In one instance a field of feed corn was left standing because the moisture content was too high to harvest. This situation led to a depredation conflict with elk and resulted in some elk mortality from consuming this forage which they were not well suited to digest at that time of year. The urban sprawl of subdivisions and five-acre homesites in the foothills around Boise has led to significant conflicts with wintering elk. The loss of winter range and conflicts with homeowners may be one of the most serious factor limiting elk populations in Boise River Zone.

Several large wildfires have converted shrub lands to grasslands and may have improved some wintering conditions for elk. The effects of wildfire in summer and transition ranges have generally improved conditions for elk. Additionally, rush skeletonweed has infested many of the lower southwest-facing slopes and poses a serious threat to elk winter range. Skeletonweed is likely to have long-term implications and considering there is no known chemical containment, will reduce the carrying capacity of habitat for elk.

Biological Issues

The implementation of bulls-only hunting and a series of mild winters in the late 1980s increased elk survival in this zone. Calf recruitment is fair to good with a ratio of 28-50 calves per 100 cows, although calf numbers have been on the low end of the range for several years. Bull harvest exceeded the potential for bull calf recruitment through much of the 1990s. For example, in 1997, 664 bulls were harvested and an estimated 550 bull calves were recruited. Seasons (Appendix A) were adjusted in 2002 to move the general bull hunt out of the period of overlap with general deer season with the hope of reducing bull harvest to below replacement potential. In 2003, only 369 bulls were harvested. However, hunters have apparently adapted to the new season timing, and bull harvest levels have increased and are near previous levels.

During winter 2003-2004, 90 elk fell through the ice while attempting to cross the Mores Creek arm of Lucky Peak Reservoir. Extensive effort was made to haze elk away from the crossing area until the ice was sufficiently thick. Additionally, 30 elk fell through ice near the mouth of Willow Creek while attempting to cross Arrowrock Reservoir in winter 2005-2006.

Inter-specific Issues

Boise River Zone is also one of the top mule deer hunting GMUs in Idaho. Except for weed expansion, other recent changes to habitat have favored elk. Winter survey flights show the separation of wintering deer and elk. Mule deer are not using some of the wintering areas they used when elk numbers were lower.

Predation Issues

Black bear and mountain lion populations are well established and apparently stable in Boise River Zone. The mountain lion population is well above levels of the 1950s. Wolves were reintroduced in Idaho in 1995. On occasion, wolves ventured into the GMU during 1995-2002. By the end of 2006, wolves from 5-7 packs had occupied portions of the Boise River zone. Wolf hunts in recent years has kept the wolf population in check within the Boise River zone.

Winter Feeding Issues

Winter feeding sites were maintained along Middle Fork Boise River for both deer and elk through the 1950s. The only elk winter feeding that has taken place in the last 10 years has been around subdivisions to bait elk away from problem areas. Native range has the capability to support the current elk herd in nearly all situations.

Information Requirements

This large zone contains both winter and summer range for this elk herd. The current sightability surveys provide excellent information on the status of the entire herd. Due to urban sprawl and housing development demands in the foothills near Boise, better information and mapping of winter ranges and migration corridors are needed to help mitigate and address this issue. Noxious weed inventory and mapping on winter and summer ranges are also needed to deal with and combat the spreading concern of weed invasion and subsequent loss of critical wildlife habitat.

During sightability surveys in February 2011, over 2,600 elk were located between Interstate 84 and the South Fork Boise River. It is speculated that heavy snow accumulations in the high country (and possibly pressure from wolves) have pushed elk lower in recent years than what was previously documented. Additional depredation complaints have also arisen with an increasing number of elk wintering on private rangelands in the area, largely beginning in 2006 but increasing every year since. Changes in distribution and migration patterns have been noted in GMUs 43-45, and it is documented that some of these elk are wintering in the Danskins. In March, 2009, 13 elk were captured via aerial-darting from a helicopter and radio-collared. Elk dispersed from winter range in April, and only 4 of the 13 radio-marked elk spent the summer in GMU 39. These elk were located in the Fall Creek drainage only a few miles from the GMU 43 boundary, coincidentally. Elk have migrated up to 50 miles from the capture site, and presently, 4 elk are in GMU 45, 3 elk are in GMU 44, and 2 elk are in GMU 43. This radio-collaring effort allowed us to determine where elk wintering in the Danskins spent the summer and where located during the hunting season. Information gained from this telemetry study will help to allocate appropriate tag number among zones and will help address depredation problems.

In the future, it would be beneficial to survey Boise River and Smokey Bennett Zones concurrently to avoid double-counting or missing elk that could annually shift winter range based on winter severity.

Management Issues

A landowner permission hunt in the Horseshoe Bend area was cancelled in 2009 at the request of landowners. They reported slob hunting, trespassing, ATV's driving cross country, hunters cutting fences, and other unethical behavior from hunters. The local landowners felt that the hunters were causing more trouble and hassle than the elk. This same scenario played out in the Mayfield area in 2009 on the general season bull hunt. Large concentrations of elk moved onto this low elevation country before elk season. Hunters were chasing elk on ATVs, taking ill-advised shots at large groups of elk, cutting fences and chasing elk through fences, trespassing, and a myriad of other unsportsmanlike conduct. Ethical hunters and landowners were dismayed with the behavior of hunters and asked Fish and Game to address the situation. The Mayfield/Danskin area was subsequently removed from the general season hunt and a controlled either-sex hunt was added to the area. A landowner permission hunt was added to the Mayfield area to address chronic depredation issues for the 2011 season. This hunt runs from 1-31 December. An additional LPH hunt was added in January 2014 with 50 tags.

While the Boise River Zone is meeting objectives for elk, overall numbers and bull numbers estimated during winter aerial surveys include elk migrating from other zones. Because calf ratios have been on the lower end of normal for several years, and cow survival rates were estimated at 85% during 2005-2008, antlerless tags were reduced from 800 to 650 in hunt areas 39-1 and 39-2 1n 2013.

The 2011 estimated elk population in the Boise River zone (7,275) is the highest documented. In March 2011, at least 39% (2,621elk) of all elk observed in the zone were found in the Mayfield area. In 2000, only 422 elk were observed near Mayfield, which represents 10% of all elk surveyed in the zone that year. Mathematical inferences based on the 2009 telemetry effort

suggest over 1,800 elk wintering in Mayfield may be spending the hunting season outside of Unit 39. The extent of the zone overlap and migration is in need of further research.

Landowner tensions flared in 2013-2014 largely as a result of the Elk and Pony Complex fires. The fires created landowner anxiety over loss of forage on private and public rangeland for livestock, federal agency action that required two-year rest of their public grazing allotments to allow for forage recovery, and landowner fear of increased elk depredations. Fortunately, the winter was extremely mild and relatively few elk spent the winter in Mayfield. Tensions remained high as landowners and the Department differed over the total number of elk observed in the area; the Department's estimated 600-700 based on weekly fixed-wing flights and ground observations. Further, both the media and elected officials were more actively engaged in the issue than normal. To assist landowners, the Department made several changes to the elk season framework, including elimination of the January LPH (at landowner request) and extending the December LPH to 1 Oct – 31 Dec and increasing tags from 100 to 300. Additionally, resources were repositioned to provide technical assistance to landowners, create range rehabilitation and range improvement projects for wildlife and livestock, and help mitigate for elk depredations.

Elk

Boise River Zone (GMU 39)

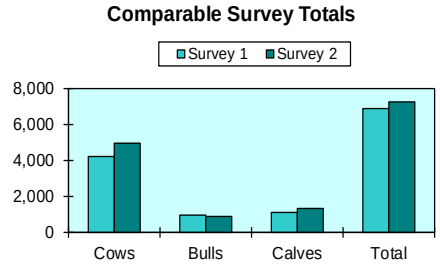
Square Miles =	2,444	3-Year Averages	
% Public Land =	76%	Hunters per sq mi =	1.90
Major Land Type =	Forest/Rangeland	Harvest per sq mi =	0.33
		Success Rate =	18%
		%6+ Points =	24%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
39	2011	4,971	916	355	3,200 - 4,800	650 - 950	375 - 575
Zone Total		**4,971**	**916**	**355**	**3,200 - 4,800**	**650 - 950**	**375 - 575**
Bulls per 100 Cows			**18**	**7**		**18 - 24**	**10 - 14**

Population Surveys

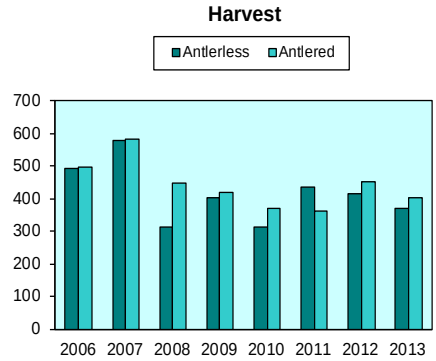
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
39	2008	4,216	962	1,106	6,901	2011	4,971	916	1,388	7,275
Comparable Surveys Total		**4,216**	**962**	**1,106**	**6,901**		**4,971**	**916**	**1,388**	**7,275**
Per 100 Cows			**23**	**26**				**18**	**28**	

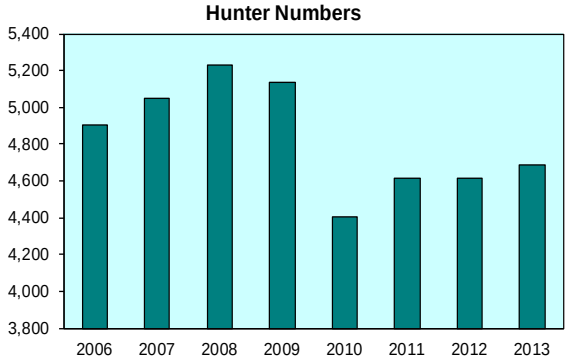


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	494	577	313	403	313	434	417	369
'A' Tag	93	104	67	86	89	99	88	4
'B' Tag	2	5	2	3	6	1	2	9
CH Tag	399	468	244	314	219	334	327	356
Antlered Harvest	497	581	446	420	369	362	452	404
'A' Tag	21	4	7	5	7	5	8	12
'B' Tag	459	560	432	393	340	325	419	380
CH Tag	17	17	7	22	22	32	25	12
Hunter Numbers	4,904	5,047	5,228	5,137	4,407	4,616	4,617	4,687
'A' Tag	814	798	914	887	882	915	868	382
'B' Tag	2,895	3,061	3,343	3,300	2,718	2,750	2,882	3,099
CH Tag	1,195	1,188	971	950	807	951	867	1,206
% 6+ Points	17	23	31	16	18	22	25	24

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





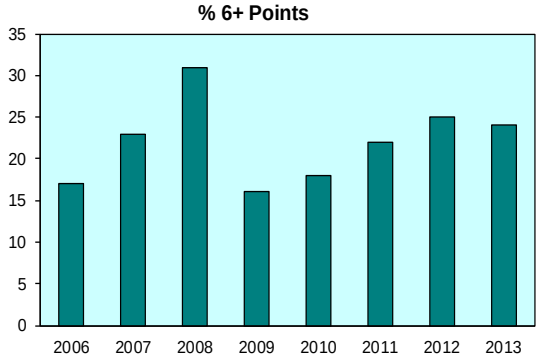


Figure 12. Boise River Zone Elk Status and Objectives

McCall Zone (GMUs 19A, 23, 24, 25)

Management Objectives

Objectives for McCall Zone (Figure 13) are to maintain a population of ≥3,075 cow and ≥665 bull elk, including ≥375 adult bulls. This zone will be managed to produce statewide minimums for bull:cow ratio (18-24 bulls:100 cows) and adult bull:cow ratio (10-14 adult bulls:100 cows). The total population objective draws a balance among concerns about depredation damage, the desire for a reasonably large elk population, and concern about habitat-carrying capacity. Overall bull numbers and bull:cow ratios can be expected to decrease, but remain above the statewide minimums. The decrease in bulls will be due to increased hunter numbers and harvest as the zone absorbs some hunters displaced from other zones. Increases in road density will also affect elk vulnerability in the near future. Harvest mortality is not expected to increase in this zone initially; however, as management changes in other zones displace hunters, harvest rates may need to be adjusted.

Historical Perspective

Elk were abundant in McCall Zone prior to European settlement in the late 1800s. The proliferation of mining due to the gold rush in the late 1800s and early 1900s led to widespread slaughter of these animals to supply meat and hides for mining camps. As a result, elk became increasingly rare to see, and at one time were thought to be eliminated from the area. Remnant populations relegated to the more remote rugged portions of the zone survived. Translocation of elk from Yellowstone to places in McCall Zone such as New Meadows occurred in the late 1930s. Liberal either-sex hunting seasons kept population numbers of elk suppressed well into the 1970s. The implementation of bulls-only hunting in 1976 spurred an increase in elk populations in McCall Zone. This increase has continued to the present day peaks in elk populations.

Habitat Issues

Over 70% of McCall Zone is in public ownership and management. Little Salmon River and North Fork Payette River valley bottoms comprise most private ownership. Private land in this zone is predominantly agricultural or rural subdivision in nature.

Timber harvest and livestock grazing affect habitat change on public lands on the west side of McCall Zone. Wildfire or prescribed burning influence habitat alteration on lands on the east side of the zone. Several large fires have burned in this zone in the last decade. A balance exists among early, mid, and late successional habitat stages that are used by elk in summer. Winter ranges occur primarily on public ground. Federal land management agencies (USFS and BLM) have active prescribed burning programs that should maintain good winter range habitat for elk in McCall Zone. Noxious weed invasion, specifically from spotted knapweed (*Centaurea maculosa*) and yellow starthistle (*Centaurea solstitialis*), is a threat to winter ranges in Little Salmon River and Salmon River drainages of GMU 23. Elk/human conflicts occur during summer and fall months when elk enter agricultural fields in the valley bottoms to forage.

Road building and its subsequent negative effect on elk vulnerability is a habitat concern facing this elk population. Road densities are estimated at less than 0.25 miles per square mile in GMUs 19A and 25. Road densities in GMUs 23 and 24 are estimated at greater than 2.5 miles

per square mile. Active timber harvest programs are anticipated to dramatically increase these road densities in the near future.

Biological Issues

The McCall Zone elk population performed well from the mid-1980s to early 1990s. Since then, calf production has declined from 30+ calves:100 cows to poor (≤20 calves:100 cows) zone-wide. Bull:cow ratios still remain at or above statewide minimum goals. An aerial survey was conducted in GMU 23 during the month of February, 2012, to ascertain if the low calf ratios were contributing to an accelerated decline in elk numbers. A total of 2,859 elk was estimated, which was 10% greater than that estimated in February 2010. A calf ratio of 15 calves per 100 cows was estimated, indicating that poor calf survival is still a concern for this area.

Inter-specific Issues

Elk must compete zone-wide primarily with mule deer and to a lesser extent with white-tailed deer. Extensive domestic sheep and cattle grazing occur on elk range in the western part of the zone. A small number of bighorn sheep occupy a portion of rugged country less favored by elk in the northeast portion of the zone. The competitive effect of these species on one another is largely unknown.

Predation Issues

Black bear and mountain lions are prevalent in McCall Zone. Bears are at a moderate but stable level, and mountain lions were thought to be at the highest number in recent history; however, anecdotal information indicates this species may be declining. There is no evidence as to the extent these species prey on elk in this zone. Wolves, introduced in Idaho's backcountry in 1995, are now well established in this zone. Predation by wolves may be a contributing factor to the declining calf:cow ratios.

Winter Feeding Issues

The remote location of most winter range in this zone precludes large-scale winter-feeding. In severe winters, some feeding has occurred in GMU 24. The Goldfork bait site was established in 1985 to bait elk out of winter livestock feeding operations. The Department no longer has any involvement in this operation.

Information Requirements

Carrying capacity of winter ranges is unknown. This information is needed to identify appropriate elk densities that will maintain optimum productivity and harvest. Impacts of 3 potential predators on elk production is largely unknown. Information is lacking on the migration routes and patterns of elk in this zone.

Elk

McCall Zone (GMUs 19A, 23, 24, 25)

Square Miles =	2,984	3-Year Averages	
% Public Land =	82%	Hunters per sq mi =	1.79
Major Land Type =	Forest	Harvest per sq mi =	0.28
		Success Rate =	16%
		% 6+ Points =	31%

Winter Status & Objectives

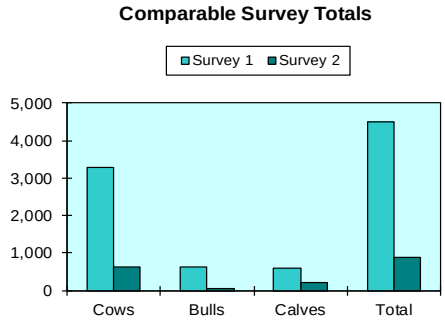
	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
19A	2010	973	211	184	750 - 1,150	150 - 250	100 - 150
23	2013	627	46		1,050 - 1,550	225 - 325	125 - 175
24	ND				0	0	0
25	2010	382	123	114	700 - 1,000	150 - 225	75 - 125
Zone Total		**1,982**	**380**	**298**	**2,450 - 3,700**	**525 - 800**	**300 - 450**
Bulls per 100 Cows			**19**	**15**		**18 - 24**	**10 - 14**

Note: ND = no survey data available.

Population Surveys

	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
19A	2010	973	211	144	1,328	ND				0
23	2010	1,937	282	388	2,607	2013	627	46	219	892
24	ND					ND				
25	2010	382	123	74	579	ND				0
Comparable Surveys Total		**3,292**	**616**	**606**	**4,514**		**627**	**46**	**219**	**892**
Per 100 Cows			**19**	**18**				**7**	**35**	

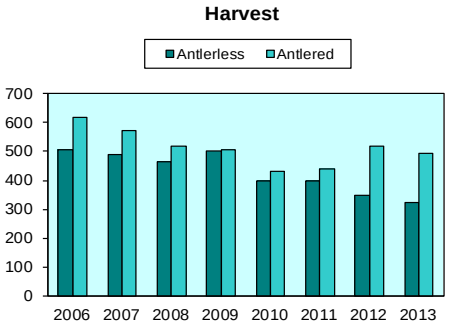
Note: ND = no survey data available.

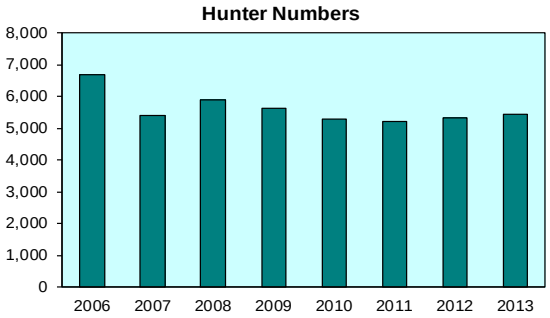


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	505	489	465	503	398	400	347	325
'A' Tag	201	177	164	219	195	210	183	174
'B' Tag	3	20	9	1	2	0	1	5
CH Tag	301	292	292	283	201	190	163	146
Antlered Harvest	620	573	518	508	433	439	520	494
'A' Tag	207	184	216	194	151	133	177	187
'B' Tag	397	376	287	299	281	300	337	303
CH Tag	16	13	15	15	2	6	6	4
Hunter Numbers	6,708	5,393	5,888	5,627	5,308	5,207	5,340	5,461
'A' Tag	2,795	1,880	2,167	2,215	2,113	2,081	2,098	2,159
'B' Tag	2,848	2,508	2,695	2,425	2,608	2,544	2,727	2,823
CH Tag	1,065	1,005	1,026	987	587	582	515	479
% 6+ Points	35	38	28	31	33	32	29	33

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





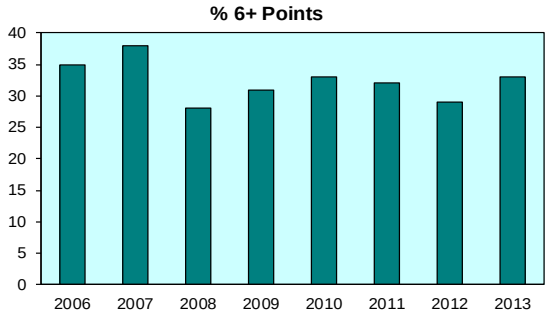


Figure 13. McCall Zone Elk Status and Objectives.

Middle Fork Zone (GMUs 20A, 26, 27)

Management Objectives

Objectives for Middle Fork Zone (Figure 14) are to maintain GMUs 20A and 26 at current herd levels of approximately 2,100 cows and increase bull numbers from the current 270 to approximately 650. If future elk surveys do not reveal a change in productivity and bull:cow ratios, a reassessment of management objectives may be necessary. The objective in GMU 27 is to reduce cow numbers to approximately 2,400 cows and increase bulls to approximately 650. Herds will be managed to maintain 25-29 bulls:100 cows postseason, which translates to 14-18 adult bulls:100 cows.

Historical Perspective

Elk were in low abundance in Middle Fork Zone through the early part of the twentieth century. As has occurred over much of the west, elk herds expanded dramatically since the mid-1970s. Today, Middle Fork Zone winters about 4200 elk. Approximately 4,000 people were hunting elk in Middle Fork Zone through 1997. Caps on hunter numbers have reduced participation to <3,000 hunters since 1998 with less than 1,000 in the last couple of years. Seasons (Appendix A) traditionally have been general hunts from mid-September to mid-late November for any bull. Much of the hunting pressure and harvest, particularly for mature bulls, has come during September. Bull harvest has increased the last couple of years, but the percent of 6 point or better bulls in the harvest dropped off by >10% in 2013. In recent years, emphasis on antlerless opportunity has been reduced. However, even with liberal antlerless elk hunting opportunities and seasons, harvest has consistently been <3% of the antlerless segment of the herd.

Habitat Issues

Habitat ultimately determines elk densities and productivity. Over past decades, fire suppression contributed to conifer encroachment on forage-producing areas. Recent large wildfires have partially reversed this trend and enhanced elk habitat. Present management policies that allow fire a larger role in wilderness ecosystems will benefit elk habitat and elk over the long run. However, the spread of noxious weeds such as knapweed and rush skeletonweed could ultimately have significant negative impacts on winter and summer range productivity.

Biological Issues

Elk populations in GMUs 20A and 26 have performed poorly over the past 10-15 years. Calf production remains poor at 8 calves per 100 cows. At least partly as a consequence of low calf recruitment, bull:cow ratios have also been less than desirable (12 bulls:100 cows). The 2011 elk sightability helicopter surveys indicate that elk population estimates in GMUs 20A and 26 have declined 46% and 70%, respectively, when compared to 2006 survey results. Sightability elk surveys in GMU 27 show similar trends with 3,736 elk estimated in February 2006, and 2,791 in February 2011. Calf production in GMU 27 fell through the same period (from 24 calves:100 cows in 2006 to 14:100 in 2011), and bull:cow ratios remained static at 14 bulls:100 cows.

Inter-specific Issues

Past elk densities may have negatively impacted habitat capacity for deer and on deer productivity. Elk could also have an impact in some of the less rugged grassland areas used by bighorn sheep and mountain goats. Domestic livestock grazing is minimal in this zone.

Predation Issues

Black bear densities appear to be low to moderate. Mountain lion densities are at least moderate, perhaps high, and appear to have increased in recent years, probably partly due to increased elk densities. Coyotes are common, but not known to have much impact on elk populations. Wolves reintroduced by USFWS are well established in these GMUs. The addition of wolves will likely impact bear, mountain lion, and coyote populations. At some level, predation may benefit elk herds to the extent that it keeps elk herds below habitat carrying capacity, where they can be more productive. This is particularly true for this zone, where antlerless elk harvest by hunters has been insignificant. However, excessive levels of predation on elk calves 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

Winter feeding has not occurred in these remote big game GMUs.

Information Requirements

Impacts of elk on mule deer production and survival are suspected but unknown. The most productive elk herds are those maintained at a level below carrying capacity. Better information is needed to identify appropriate elk 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, making it difficult to develop effect habitat enhancement projects or evaluate the influence of wildfire on population performance.

Elk
Middle Fork Zone (GMUs 20A, 26, 27)

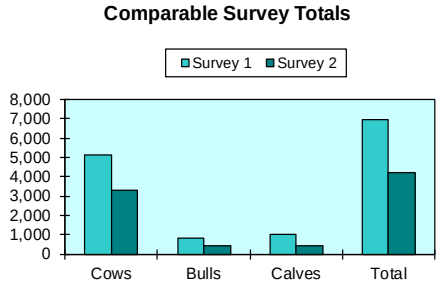
Square Miles =	2,885	3-Year Averages	
% Public Land =	100%	Hunters per sq mi =	0.27
Major Land Type =	Forest	Harvest per sq mi =	0.06
		Success Rate =	22%
		% 6+ Points =	42%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
20A	2011	886	109	81	1,050 - 1,550	250 - 400	150 - 250
26	2011	314	32	32	900 - 1,300	200 - 350	150 - 200
27	2011	2,141	321	163	1,900 - 2,900	500 - 800	300 - 450
Zone Total		**3,341**	**462**	**276**	**3,850 - 5,750**	**950 - 1,550**	**600 - 900**
Bulls per 100 Cows			**14**	**8**		**25 - 29**	**14 - 18**

Population Surveys

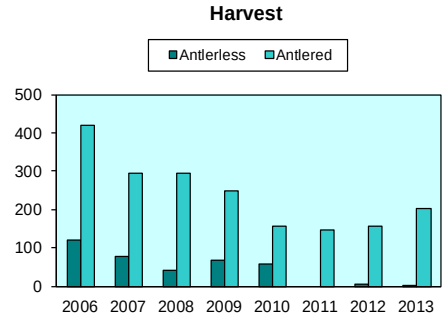
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
20A	2006	1,498	219	255	1,972	2011	886	109	71	1,066
26	2006	990	152	128	1,270	2011	314	32	20	366
27	2006	2,649	463	624	3,736	2011	2,141	321	329	2,791
Comparable Surveys Total		**5,137**	**834**	**1,007**	**6,978**		**3,341**	**462**	**420**	**4,223**
Per 100 Cows			**16**	**20**				**14**	**13**	

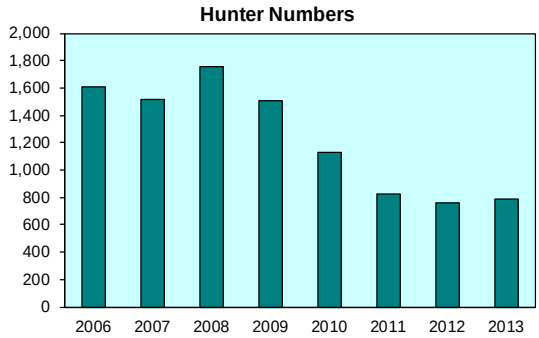


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	119	78	42	67	57	0	6	2
'A' Tag	118	77	42	67	55	0	3	1
'B' Tag	1	1	0	0	2	0	3	0
CH Tag	0	0	0	0	0	0	0	1
Antlered Harvest	419	296	295	250	158	145	155	203
'A' Tag	112	93	61	65	50	38	43	63
'B' Tag	307	203	234	185	108	107	112	140
CH Tag	0	0	0	0	0	0	0	0
Hunter Numbers	1,611	1,512	1,752	1,511	1,133	821	757	792
'A' Tag	647	654	706	588	471	285	197	213
'B' Tag	964	858	1,046	923	662	536	560	578
CH Tag	0	0	0	0	0	0	0	1
% 6+ Points	43	40	42	49	56	44	50	34

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





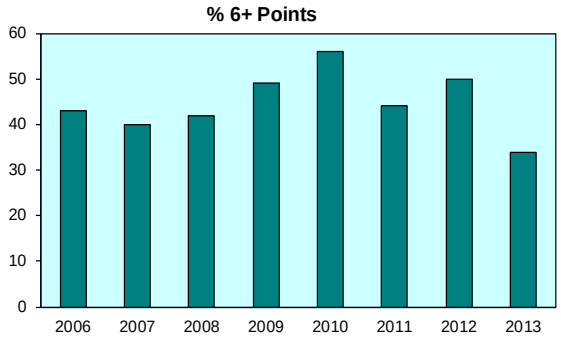


Figure 14. Middle Fork Zone Elk Status and Objectives.

Weiser River Zone (GMUs 22, 32, 32A)

Management Objectives

The goal for Weiser River Zone (Figure 15) is to reduce cow elk population levels to 2,700+ elk. Most antlerless elk reduction will occur in GMUs 22 and 32. The total population objective draws a balance between the concern about depredation damage and the need to sustain a reasonably large elk population. In the short term, reduction of antlerless elk will result in an increase in controlled antlerless elk tags. As herds are reduced and population levels are stabilized, tag levels will decrease. This zone will be managed to produce statewide minimums for bull:cow ratio (18-24 bulls:100 cows) and adult bull:cow ratio (10-14 adult bulls:100 cows). A large decrease in harvest mortality will be necessary to increase bull numbers in this zone. A postseason population of ≥550 bulls, including ≥315 adult bulls, is the objective for this zone. A harvest of 400+ bulls can be sustained each year.

Historical Perspective

Elk were present in Weiser River Zone prior to European settlement in the mid-1800s. Native Americans hunted elk for food in Weiser River drainage. Proliferation of mining due to the gold rush in the late 1800s and early 1900s probably led to year-round slaughter of these animals to supply meat and hides for mining camps. Subsequent intensive livestock grazing denigrated habitat in the zone. Translocation of elk from Yellowstone to places in McCall Zone on the periphery of Weiser River Zone occurred in the late 1930s to bolster sagging elk populations. Regulated livestock grazing began during the same era. Transient elk from these populations probably repopulated Weiser River Zone. Liberal either-sex hunting seasons kept population numbers of elk suppressed well into the 1970s. GMU 22 became a controlled either-sex hunt in 1971 and reopened to general bulls-only hunting in 1977. The implementation of bulls-only hunting spurred an increase in elk populations in Weiser River Zone.

The elk population in the agricultural area of the west half of GMU 32 consisted of transient elk prior to 1980. Following several hard winters, elk herds started moving into this area. Most elk were there in winter, and a few groups of elk became year-round residents. The population of elk in Weiser River Zone reached its sociological tolerance level in the early 1990s.

Habitat Issues

About 60% of GMUs 22 and 32A and 20% of GMU 32 is in public ownership and management. Private land predominates the western portion of GMU 32 and the Weiser River valley of GMUs 22 and 32A. Agricultural products are primarily dry-land grazing, grain production, and hay fields.

Timber harvest, livestock grazing, and prescribed fires are the most significant land uses affecting habitat change in this zone. Most forested habitat is in the early to mid-successional stage. Winter ranges occur primarily on public ground in GMU 22, but mostly on private ground in GMUs 32 and 32A. Noxious weed invasion, such as yellow starthistle and whitetop (*Cardaria draba*), is a threat to winter range habitat. Andrus WMA in the southwest portion of GMU 22 is managed for elk and mule deer winter range and encompasses about 8,000 acres. Extensive road building from past timber harvest and mining activities contribute to high vulnerability of elk during hunting seasons in this zone. The inherent lack of security cover and

openings created from timber harvest compound elk vulnerability. Active timber harvest programs are anticipated to increase these road densities in the near future.

Elk/human conflicts occur during summer and fall months in GMUs 22 and 32A when elk enter agricultural fields in valley bottoms to forage. Resident elk in GMU 32 have caused landowners concern about damage to fences, fall-plowed fields, row crops, and alfalfa hay fields. In the recent past, the Department has paid an average of $13,000 per year for damage in this area.

Biological Issues

Through the 1980s and 1990s, Weiser River Zone was a highly productive elk population. Calf production averaged well over 40 calves:100 cows. Burgeoning elk populations and dry summers have probably contributed to the more recent decline to fair productivity of 30 calves:100 cows. Bull:cow ratios are low (17 bulls:100 cows) due to high vulnerability of the open-canopied, heavily-roaded habitat. Even with good calf production, harvest of bulls is typically at or exceeding production.

Inter-specific Issues

Elk compete zone-wide with mule deer for habitat. Intensive domestic sheep and cattle grazing occur over most of the zone. The competitive effect of these species on one another is largely unknown.

Predation Issues

Black bear and mountain lions occur in moderate to high numbers in Weiser River Zone. There is no indication that predation is having an impact on elk calf recruitment or survival of elk in this zone. Wolves have colonized the zone but are not a significant mortality factor at this time. Coyotes are common, but are not known to have much effect on elk populations.

Winter Feeding Issues

Winter feeding takes place on an irregular basis in Weiser River Zone. Most elk feeding operations have been initiated to bait elk away from livestock feeding operations.

Information Requirements

Carrying capacity of winter ranges is unknown. This information is needed to identify appropriate elk densities, which will maintain optimum productivity and harvest. Information is lacking on migration routes and patterns of elk in this zone and interaction with elk in the adjacent Brownlee Zone. A full survey of these interacting herds is needed for these zones. Knowledge of inter-specific competition is needed.

Elk

Weiser River Zone (GMUs 22, 32, 32A)

Square Miles =	2,895	3-Year Averages	
% Public Land =	51%	Hunters per sq mi =	2.35
Major Land Type =	Rangeland/Fore	Harvest per sq mi =	0.52
		Success Rate =	22%
		%6+ Points =	25%

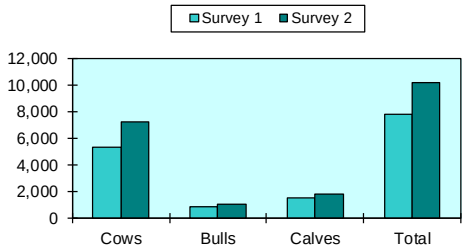
Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
22	2013	2,671	446	92	1,100 - 1,700	250 - 350	125 - 200
32	2013	4,504	650	134	325 - 475	50 - 100	40 - 60
32A	2013	286	20	0	700 - 1,100	150 - 200	75 - 125
Zone Total		**7,461**	**1,116**	**226**	**2,125 - 3,275**	**450 - 650**	**240 - 385**
Bulls per 100 Cows			**15**	**3**		**18 - 24**	**10 - 14**

Population Surveys

	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
22	2007	1,666	215	543	2,424	2013	2,671	446	750	3,867
32	2007	3,000	609	770	4,379	2013	4,504	650	1,061	6,215
32A	2007	706	85	258	1,049	2013	286	20	83	389
Comparable Surveys Total		**5,372**	**909**	**1,571**	**7,852**		**7,273**	**1,073**	**1,867**	**10,213**
Per 100 Cows			**17**	**29**				**15**	**26**	

Comparable Survey Totals

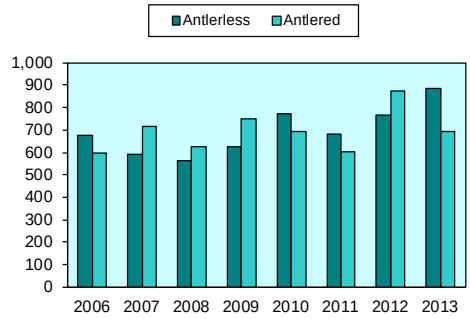


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	674	592	566	628	772	680	767	887
'A' Tag	134	79	76	116	178	152	180	150
'B' Tag	0	1	1	1	11	0	9	2
CH Tag	540	512	489	511	583	528	578	735
Antlered Harvest	597	714	628	748	696	603	876	694
'A' Tag	140	105	128	167	157	121	167	150
'B' Tag	437	594	480	566	538	482	708	543
CH Tag	20	15	20	15	1	0	1	1
Hunter Numbers	5,831	5,691	5,913	5,960	6,097	6,187	6,406	7,811
'A' Tag	1,465	1,215	1,245	1,339	1,526	1,564	1,625	1,788
'B' Tag	2,557	2,683	2,708	2,737	2,631	2,696	2,876	3,154
CH Tag	1,809	1,793	1,960	1,884	1,940	1,927	1,905	2,869
% 6+ Points	17	26	28	27	23	23	26	26

Note: % 6+ pts does not include spike-only harvest. ND = no data available.

Harvest



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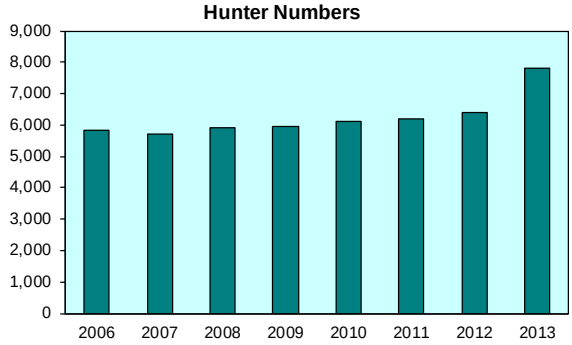


% 6+ Points

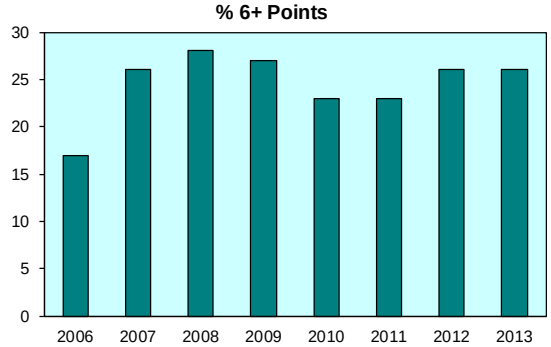


Figure 15. Weiser River Zone Elk Status and Objectives.

Brownlee Zone (GMU 31)

Management Objectives

Objectives for Brownlee Zone (Figure 16) are to maintain a population of ≥700 cow and ≥140 bull elk, including ≥75 adult bulls. This zone will be managed to produce statewide minimums for bull:cow ratio (18-24 bulls:100 cows) and adult bull:cow ratio (10-14 adult bulls:100 cows). The total population objective draws a balance between concerns about depredation damage and the need to sustain a reasonably large elk population. A harvest of 30-50 bulls per year by tag is expected to be maintained. Intense controlled antlerless hunting and animal displacement have this population below current objectives. Controlled hunt harvest opportunity will remain similar to current levels until this population increases again. General hunting opportunity was increased with the implementation of a spike-only A-tag season in 1998. This opportunity was eliminated in 2001. General antlerless or any-bull hunting opportunity is unlikely, due to inherent vulnerability of elk in this habitat.

Historical Perspective

Elk were present in Brownlee Zone prior to European settlement in the mid-1800s. Native American tribes hunted elk for food in Weiser River drainage. As in other areas in Idaho, proliferation of mining due to the gold rush in the late 1800s and early 1900s probably led to year-round slaughter of these animals to supply meat and hides for mining camps. Subsequent heavy livestock grazing denigrated habitat in the zone. Translocation of elk from Yellowstone to places in Weiser River and McCall zones occurred in the late 1930s to bolster dwindling elk populations. Regulated livestock grazing occurred during the same era. Transient elk from these populations probably repopulated Brownlee Zone. Liberal either-sex hunting seasons kept population numbers of elk suppressed well into the late 1960s. GMU 31 was closed to elk hunting in 1968. The GMU reopened to controlled hunting in 1976. Protected by conservative bull-only tags, this elk population expanded rapidly in the late 1980s. This population reached its sociological tolerance level in the early 1990s.

Habitat Issues

About 50% of Brownlee Zone is in public ownership and management. Private land predominates southern and eastern portions of the GMU. Agricultural products are primarily dry-land grazing and hay fields. Higher elevations are timbered; lower elevations are primarily shrub-steppe or desert.

Timber harvest, livestock grazing, and prescribed fires are the preponderant methods affecting habitat change in this zone. Most forested habitat is in the early to mid-successional stage. Winter ranges occur primarily on public ground. Noxious weed invasion, such as yellow starthistle and whitetop, is a threat to winter range habitat. Andrus WMA is managed for elk and mule deer winter range and comprises about 8,000 acres in the northwest part of the zone. Elk/human conflicts occur during summer and fall months when elk enter agricultural fields in valley bottoms to forage.

Extensive road building from past timber harvest and mining activities contribute to high vulnerability of elk during hunting seasons in this zone. The inherent lack of security cover and openings created from timber harvest compound elk vulnerability. Active timber harvest programs are anticipated to increase these road densities in the near future.

Biological Issues
Since the mid-1980s, elk populations in this zone have performed well. Calf production is good, at or near 30:100 cows on average. Elk have not reached their habitat potential in this zone but have reached a threshold of tolerance among user groups concerned.

Inter-specific Issues
Elk compete zone-wide with mule deer for habitat. Most of the zone is also managed for intensive domestic sheep and cattle grazing. The competitive effect of these species on one another is largely unknown.

Predation Issues
Black bear and mountain lions occur in low to moderate numbers in Brownlee Zone. There is no evidence these species have an effect on the elk population in this zone. Coyotes are common but are not known to effect elk populations.

Winter Feeding Issues
Winter feeding in Brownlee Zone is an extremely rare event. Winter feeding occurred on a limited basis in close proximity to domestic livestock feeding operations during the severe winter of 1992-1993.

Information Requirements
Carrying capacity of winter ranges is unknown. This information is needed to identify appropriate elk densities, which will assist with maintenance of optimum productivity and harvest. Information is lacking on migration routes and patterns of elk in this zone and interaction with elk in the adjacent Weiser River Zone. Knowledge of inter-specific competition is needed.

Elk
Brownlee Zone (GMU 31)

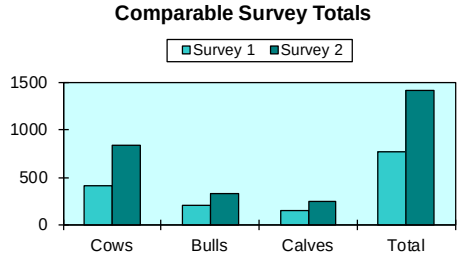
Square Miles =	598	3-Year Averages	
% Public Land =	50%	Hunters per sq mi =	1.09
Major Land Type =	Rangeland/For	Harvest per sq mi =	0.28
		Success Rate =	24%
		%6+ Points =	60%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
31	2013	841	333	199	550 - 850	125 - 175	50 - 100
Zone Total		**841**	**333**	**199**	**550 - 850**	**125 - 175**	**50 - 100**
Bulls per 100 Cows			**40**	**24**		**18 - 24**	**10 - 14**

Population Surveys

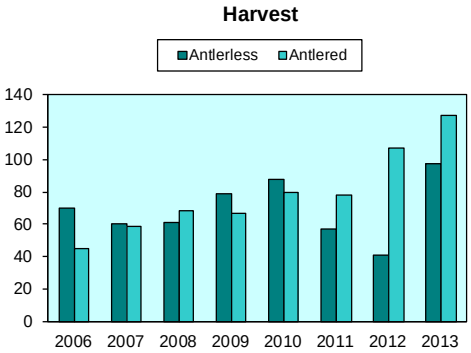
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
31	2007	412	206	159	777	2013	841	333	249	1423
Comparable Surveys Total		**412**	**206**	**159**	**777**		**841**	**333**	**249**	**1423**
Per 100 Cows			**50**	**39**				**40**	**30**	

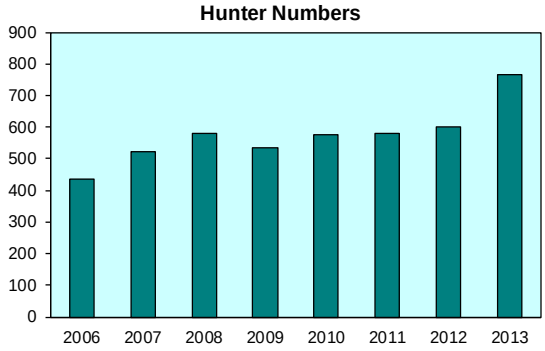


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	70	60	61	79	88	57	41	97
'A' Tag	4	5	6	17	9	8	3	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	66	55	55	62	79	49	38	97
Antlered Harvest	45	59	68	67	80	78	107	127
'A' Tag	20	32	39	34	47	52	74	78
'B' Tag	0	0	0	0	0	0	0	14
CH Tag	25	27	29	33	33	26	33	35
Hunter Numbers	435	522	581	534	577	582	601	765
'A' Tag	183	259	292	315	347	353	392	380
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	252	263	289	219	230	229	209	385
% 6+ Points	51	68	60	53	61	62	50	66

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





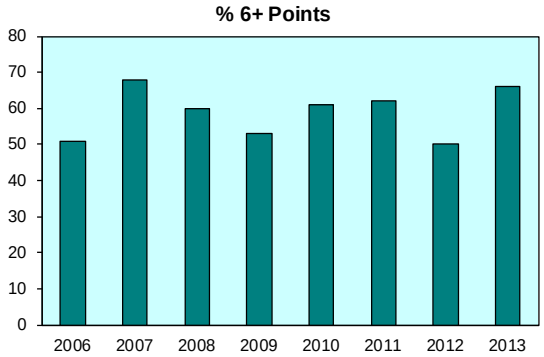


Figure 16. Brownlee Zone Elk Status and Objectives.

Pioneer Zone (GMUs 36A, 49, 50)

Management Objectives

Objectives for Pioneer Zone (Figure 17) are to increase elk herds to slightly higher levels (about 3,350-5,050 cows and 1,100-1,700 bulls) to maintain herd productivity yet minimize potential impacts on mule deer. This zone will continue to be managed to produce high bull:cow ratios (30-35 bulls:100 cows postseason) and many mature bulls (18-22 bulls ≥three years old:100 cows).

Historical Perspective

Elk abundance was low in Pioneer Zone through much of the twentieth century. These GMUs have been managed for decades under conservative controlled hunt strategies. As has occurred over much of the west, elk herds expanded dramatically since the mid-1970s. Today, the Pioneer Zone winters approximately 9,700 elk.

Following adoption of the dual-tag zone system in 1998 between 3,500 and 4,000 people have typically hunted in Pioneer Zone each year. However, hunting opportunity was reduced in 2009, following helicopter surveys that indicated declining bull numbers and bull:cow ratios that were below objectives. In 2009, hunter numbers declined, and approximately 1,800-2,000 people have hunted the Pioneer Zone annually between 2009 and 2012. This number increased dramatically in 2013 to 3,100 hunters. Harvest has followed suit and has increased over the last 3 years. The controlled bull hunts in this zone have become very desirable; any-weapon permits are in high demand and difficult to draw. The area's reputation for mature bulls has also made this zone a very attractive archery hunt. The percent of 6 point or larger bulls in the harvest increased 10% over the preceding 4 years.

Habitat Issues

Cattle ranching, livestock grazing, and recreation are dominant human uses of the landscape in the Pioneer Zone. The zone is in a generally arid region where forage production can be strongly influenced by growing season precipitation. During drought years, high-elevation mesic habitats are more heavily utilized by elk while low-elevation riparian areas and wet meadows are more heavily utilized by cattle. Elk depredations on agricultural crops are common and are especially pronounced in dry years.

In some areas, elk winter in mature stands of mountain mahogany. 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.

Recent housing developments in the Big Wood River drainage in GMU 49 have severely reduced winter elk habitat. Continued development on remaining winter ranges will reduce elk carrying capacity in the GMU. Changes in land ownership in GMU 50 are making it difficult to manage depredation problems.

Biological Issues

Elk numbers in the Pioneer Zone have increased since the mid-1970s and have remained relatively stable during the past decade. Recruitment measured through sightability surveys indicate most populations are reproducing at moderate to high levels (30-40 calves:100 cows).

An aerial survey conducted in the Pioneer Zone during January 2008 indicated a ratio of 33 calves:100 cows based on a total of 1,139 calves and 3448 cows observed. Bull:cow ratios were lower than in previous surveys at 25 bulls:100 cows (n = 845 bulls). Because of this, the spike hunt portion of the general A Tag elk hunt was eliminated throughout the zone in 2009. As a result, hunter numbers in the general hunt dropped from around 1,400 to around 900 in 2009. The aerial survey conducted in the Pioneer Zone in 2013 indicated an increase in both the calf:cow ratio and bull:cow ratio of 39:100 and 37:100, respectively. Despite the continued absence of a spike hunt component to the general A tag, hunter numbers in the general hunt increased to about 1,600 in 2013.

Inter-specific Issues

Current high elk densities may be having some impact on wintering deer in portions of this zone.

When elk numbers are high, as they are currently, livestock operators often perceive elk as competing with livestock for range forage and impacting riparian areas. However, elk generally remove a minor portion of forage compared to livestock, and elk tend to use different habitats and different forage species than livestock.

Predation Issues

Black bear densities appear to be low and stable in Pioneer Zone. Mountain lion densities are low to moderate and appear to have increased in recent years, probably partly due to increased elk densities. Coyotes are common, but not known to have much impact on elk populations. Wolves reintroduced by USFWS in central Idaho in 1995 are established in Pioneer Zone. They may become a significant factor in elk distribution and population demographics and may displace other predators through competitive interactions. Reports by hunters and observations by Department personnel suggest that wolf activity may be changing behavior patterns of elk in this area.

Winter Feeding Issues

No Department-sponsored feeding facilities exist in this zone; however, artificial feeding of elk by private citizens in GMU 49 has occurred frequently over the past 20 years. Education measures undertaken to reduce this activity have met with some success. Efforts need to continue to give non-sanctioned feeders a better understanding of problems associated with artificially-fed elk.

Information Requirements

Impacts of elk on mule deer winter range are likely occurring and may be a limiting factor for mule deer populations. The most productive elk herds are those maintained at a level below carrying capacity. Better information is needed to identify appropriate elk densities that will maintain optimum productivity and harvest. Additionally, if wolves become a significant factor in elk ecology, better information regarding impacts to hunting opportunity would be beneficial.

Elk
Pioneer Zone (GMUs 36A, 49, 50)

Square Miles =	3,202	3-Year Averages	
% Public Land =	82%	Hunters per sq mi =	0.76
Major Land Type =	Rangeland	Harvest per sq mi =	0.26
		Success Rate =	34%
		%6+ Points =	49%

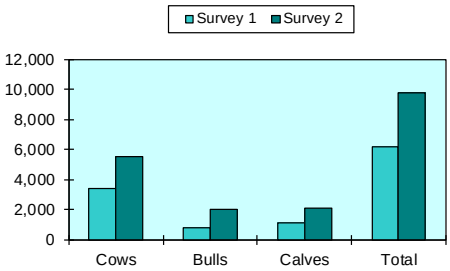
Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
36A	2013	2,028	909	529	1,050 - 1,550	300 - 500	200 - 300
49	2013	1,655	498	57	1,350 - 2,050	500 - 700	300 - 400
50	2013	1,868	642	152	950 - 1,450	300 - 500	200 - 300
Zone Total		**5,551**	**2,049**	**738**	**3,350 - 5,050**	**1,100 - 1,700**	**700 - 1,000**
Bulls per 100 Cows			**37**	**13**		**30 - 35**	**18 - 22**

Population Surveys

	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
36A	2008	1,346	421	320	2,087	2013	2,028	909	711	3,648
49	2008	1,228	260	541	2,029	2013	1,655	498	583	2,736
50	2008	874	164	278	2,114	2013	1,868	642	859	3,369
Comparable Surveys Total		**3,448**	**845**	**1,139**	**6,230**		**5,551**	**2,049**	**2,153**	**9,753**
Per 100 Cows			**25**	**33**				**37**	**39**	

Comparable Survey Totals

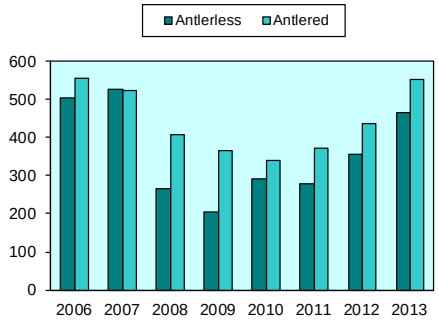


Zone Harvest Statistics

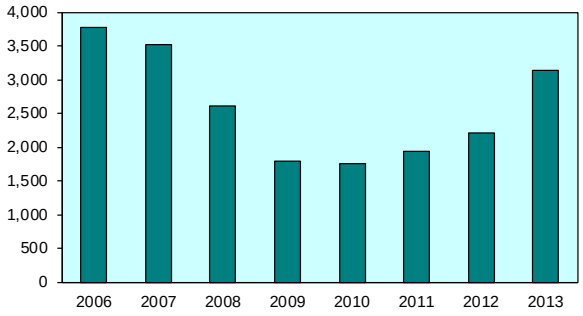
	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	505	527	266	204	293	280	357	465
'A' Tag	29	44	34	37	34	54	84	125
'B' Tag	0	0	0	0	4	0	0	0
CH Tag	476	483	232	167	259	226	273	340
Antlered Harvest	557	523	407	366	339	371	437	554
'A' Tag	238	223	214	142	122	168	201	211
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	319	300	193	224	217	203	236	343
Hunter Numbers	3,765	3,514	2,617	1,800	1,754	1,942	2,203	3,131
'A' Tag	1,571	1,309	1,401	880	827	1,013	1,218	1,666
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	2,194	2,205	1,216	920	927	929	985	1,465
% 6+ Points	30	44	30	43	44	46	44	54

Note: % 6+ pts does not include spike-only harvest. ND = no data available.

Harvest



Hunter Numbers



% 6+ Points

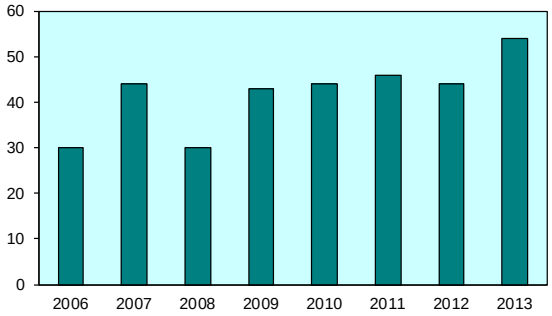


Figure 17. Pioneer Zone Elk Status and Objectives.

Smoky Mountains Zone (GMUs 43, 44, 48)

Management Objectives

Objectives in Smoky Mountains Zone (Figure 18) are to establish a population of 1875-2800 cows and 600-900 bulls, including 380-575 adult bulls, at ratios of 30-35 bulls:100 cows and 18-22 adult bulls:100 cows. The management objective balances depredation concerns in GMU 44 and the desire to provide the maximum elk population the habitat can sustain. The adult bull objective was selected to maximize bull quality in controlled hunts and provide sufficient adult bulls to sustain quality elk populations. Current bull:cow ratios and adult bull:cow ratios are meeting objectives while the overall population is below objective.

Historical Perspective

Accounts from trappers and miners in the 1870s and 1880s indicate that elk occurred in the zone but were not as numerous as deer. Excessive use by livestock during the late 1800s and early 1900s severely damaged the Boise River and Big Wood River watersheds and reduced the area's ability to support high numbers of elk. Additionally, heavy unregulated hunting by miners, market hunters, and local settlers drastically reduced big game populations during the late 1800s. By 1905, it was difficult to find camp meat. Elk had been all but eliminated and deer observations were rare in the Boise River Basin and Big Wood River drainage.

In 1915, a reintroduction effort began with a release of elk from Yellowstone National Park into the Boise River drainage just above Arrowrock Dam. In 1930, the elk population in the Soldier Mountain area was estimated at 135 head. Reintroduction efforts continued in 1935 and 1936 with elk releases near Ketchum in the Big Wood River drainage. Elk populations increased steadily during the 1950s and 1960s, and controlled hunts were used to manage the harvest. Supplemental winter feeding of elk by the Department and private interests has occurred in this zone since the initial releases.

Habitat Issues

Primary spring, summer, and fall habitats throughout the zone are managed by USFS, and winter ranges are a mixture of USFS, BLM, and private lands. Suitable winter ranges in GMUs 43 and 44 are limited, and reintroduced elk did not learn or develop migration routes to lower-elevation sites. Because of this, nearly-annual supplemental feeding occurred through the mid-2000s to maintain populations at or near current levels. In GMU 43, the South Fork Boise River corridor is critical for elk that winter in the GMU. In GMU 44, much of the habitat elk might use during the winter is on private land, and depredations are a concern. In GMU 48, most of the best winter habitat exists on private land in drainage bottoms near residential areas. A substantial loss of winter range to residential development has occurred in GMU 48, and continued loss of winter range is a serious concern, as the human population in that GMU continues to grow.

Habitat productivity has probably improved on federal lands in recent years because of reductions in domestic sheep grazing and re-growth of shrubs in areas with timber harvest. However, suppression of fire throughout much of this century has likely resulted in declining elk habitat quality. Many aspen communities are decadent and/or are being replaced by conifer species and would benefit from fire. Additionally, in some areas, ponderosa pine-dominated communities would benefit from fire to reduce high densities of Douglas fir in the stands.

Spotted knapweed has become established in the zone and threatens habitat productivity and diversity in several localized areas.

For many years, depredations have been very limited in most of this zone, with the only real problems arising near urban areas where wintering elk find exposed horse hay or ornamental shrubs. However, over the past several winters, depredation complaints have increased in GMUs 44 and 48. The presence of several radio-collared elk on the Camas Prairie and Bennett Hills during winter suggests that many elk are moving away from the feed sites along the South Fork Boise River and onto what was likely historic winter habitat in GMU 44.

In GMU 43, high road densities from past timber harvest activities have increased elk vulnerability during hunting seasons (Appendix A). Seasonal road closures have been instituted by USFS to increase elk escapement and mitigate for high road densities. However, over-snow recreational pursuits (snowmobiling, backcountry skiing, summer home access) potentially pose a serious threat to wintering elk and could hamper the Department's ability to achieve population goals.

Biological Issues

Elk populations have been increasing steadily since their reintroduction in the 1930s. Mild winters in the 1980s and early 1990s enhanced calf survival and increased population growth rates. Liberal antlerless harvest throughout that period has begun to stabilize population growth.

Recently, data from sightability surveys and herd composition surveys at feed sites indicate that most populations are reproducing at sustainable levels (≥30 calves:100 cows). An aerial survey conducted in January 2009 indicated that overall elk numbers were below objective for the Smoky Zone. Because of this, and because the 2009 elimination of general any-weapon opportunity in the Pioneer Zone may have displaced hunters to the Smoky Zone, the Smoky Zone was capped at 726 tags for the 2010-2013 hunting season.

The January 2009 survey resulted in estimates of 42 calves:100 cows, and 32 bulls:100 cows in the Smoky Zone, based on totals of 1,560 cows,655 calves, and 502 bulls observed. Calf:cow and bull:cow ratios vary somewhat by GMU within the Smoky Zone, with bull: cow ratios as low as 26 bulls: 100 cows in GMU 48, but at 34 bulls: 100 cows in GMU 43. Calf ratios range from 39 calves:100 cows in GMU 43 to 44 calves: 100 cows in GMU 48. Previous years' data suggest even wider variation in calf:cow ratios among Smoky Zone GMUs. No determination has been made as to the cause of the differences in calf production within different parts of the zone. During 2010 and 2012 Bennett Hills deer and elk surveys, several elk radio-collared at South Fork Boise River feed sites were observed in GMU 45, suggesting that some elk that previously wintered in the Smoky Mountain Zone may now be wintering in the Bennett Hills Zone. This relatively new migration may contribute to observed low winter survey numbers in the Smoky Mountain Zone.

Inter-specific Issues

The zone supports a substantial population of mule deer, numerous moose, and, at higher elevations, mountain goats. The relationship between deer and elk is presently unclear but is not believed to be a significant issue in this zone. Historically, most elk have remained within the

zone during winter whereas most deer migrate to winter ranges in GMUs 45 and 52; this has minimized potential competition during critical winter months. However, Smoky Mountain Zone elk are increasingly using GMUs 45 and 52 during winter, which may warrant close monitoring to ensure that elk do not begin to outcompete deer on winter range in these GMUs.

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

Predation Issues

Black bear populations have remained relatively static over time. Mountain lion numbers probably increased in the late 1980s and early 1990s following increases in mule deer and elk populations and have likely declined some since then. Wolves have become established in the zone and are a factor in elk population dynamics. In addition, wolf activity may affect elk activity patterns and seasonal use areas, particularly during winter months. Radio-telemetry data has shown that many elk that traditionally wintered in the South Fork Boise River drainage have begun moving to lower-elevation winter habitat in GMUs 44, 45, and 52. Wolves may be a factor in prompting these new seasonal movement patterns. The effect of wolves on black bears and mountain lions through competitive interactions is poorly understood.

Winter Feeding Issues

Winter feeding of elk by private entities, particularly in the Big Wood River Valley (GMU 48), is a contentious issue. During the 1990s and early 2000s, it was not unusual for 700-1,000 elk to be fed at up to 11 different private feed sites in GMUs 44 and 48. In recent years the Department has worked closely with private feeders to eliminate unneeded feed sites. During the 2011-2012 winter, approximately 200 elk were fed at a private feed site in Timber Gulch.

There are 4 Department-sanctioned feed sites located in GMU 43. Historically, feeding has occurred at all or some of the sites in 3 of every 4 years. Since 2009, none of these feed sites have been active and all have been previously or are in the process of being decommissioned. Elk radio-collared at GMU 43 feed sites during winter have been located in GMUs 44 and 45 during winter months, suggesting that these elk may be beginning to migrate out of the South Fork Boise River drainage during winter. A comprehensive survey that includes GMUs 43, 44, 48, 45, 52, and 39 within a single season may be warranted to better understand current elk dynamics in this area and is planned for early 2015.

GMU 48 has one Department-sanctioned feed site in the Warm Springs Creek drainage. It is not necessary to sustain the population but was set up to shortstop elk before they enter developed winter ranges in the town of Ketchum. The private feeding operations in the valley are a symptom of growth and the changing demographics of the populace of the Ketchum-Sun Valley area. Most private feeding operations take place regardless of whether feeding is warranted. Department personnel continue to work with private feeders to discourage feeding activity and explain the pitfalls of feeding in or near a suburban area. As a result of such discussions, Department staff worked with the owner of one private feed site near Ketchum to trap and transplant 108 elk during January and February 2006. These elk were moved from Ketchum to 1

of 3 release sites: most calves were moved to the Department's Bullwhacker feed site up Warm Springs Creek, one group of 19 cows was moved to Bennett Mountain (GMU 45), and the remaining cows and calves were relocated to the Big Desert (GMU 52A). Only a few elk were left at the private feed site near Ketchum. Since the trapping effort, elk wintering near Ketchum have been utilizing native forage and have not caused problems within nearby residential areas.

Information Requirements

More detailed information is needed on 1) effects of concentrating elk for feeding purposes (i.e., are diseases present in fed elk and what is the relationship between feeding and low observed calf ratios), 2) movement patterns of fed elk to improve harvest management, 3) more frequent sightability surveys to monitor population trends and age and sex ratios, and 4) potential causes for observed changes in winter movements and habitat use in the South Fork Boise River drainage and GMUs 44, 45, and 39. In addition to improving harvest management, population surveys and movement studies are important to our discussions with local political factions regarding development in and around critical elk wintering areas.

Elk

Smoky Mountains Zone (GMUs 43, 44, 48)

Square Miles =	1,861	3-Year Averages	
% Public Land =	79%	Hunters per sq mi =	0.74
Major Land Type =	Forest	Harvest per sq mi =	0.22
		Success Rate =	31%
		%6+ Points =	47%

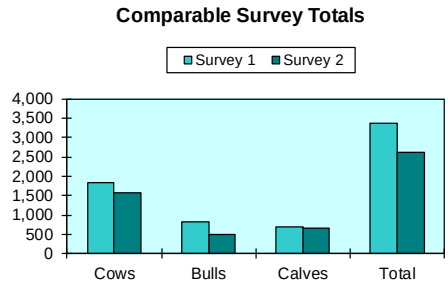
Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
43	2009	547	187	137	1,350 - 2,000	425 - 650	275 - 400
44	2009	57	65	57	150 - 250	50 - 75	30 - 50
48	2009	956	250	129	375 - 550	125 - 175	75 - 125
Zone Total		**1,560**	**502**	**323**	**1,875 - 2,800**	**600 - 900**	**380 - 575**
Bulls per 100 Cows			**32**	**21**		**30 - 35**	**18 - 22**

Note: 2004 - Unit 48 ground survey: 40 calves:100 cows (n=626 elk observed)

Population Surveys

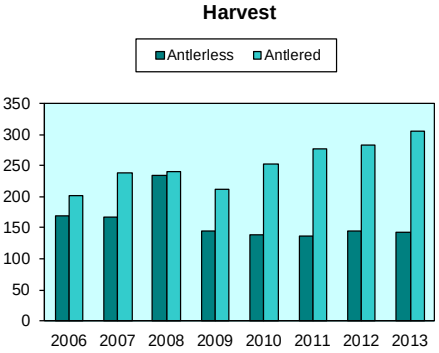
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
43	2002	867	420	241	1,528	2009	547	187	214	948
44	2002	250	138	94	482	2009	57	65	23	145
48	2006	732	267	368	1,367	2009	956	250	418	1,537
Comparable Surveys Total		**1,849**	**825**	**703**	**3,377**		**1,560**	**502**	**655**	**2,630**
Per 100 Cows			**45**	**38**				**32**	**42**	

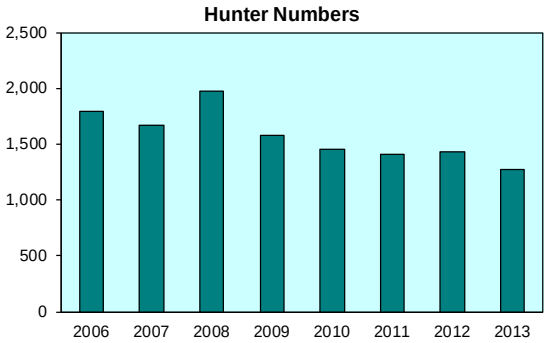


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	169	167	234	144	139	137	145	143
'A' Tag	9	4	8	12	11	11	11	11
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	160	163	226	132	128	126	134	132
Antlered Harvest	201	239	241	213	253	278	283	305
'A' Tag	78	70	77	93	92	116	124	132
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	123	169	164	120	161	162	159	173
Hunter Numbers	1,795	1,670	1,974	1,574	1,452	1,410	1,430	1,271
'A' Tag	812	587	749	848	665	672	681	559
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	983	1,083	1,225	726	787	738	749	712
% 6+ Points	36	44	41	52	47	43	49	48

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





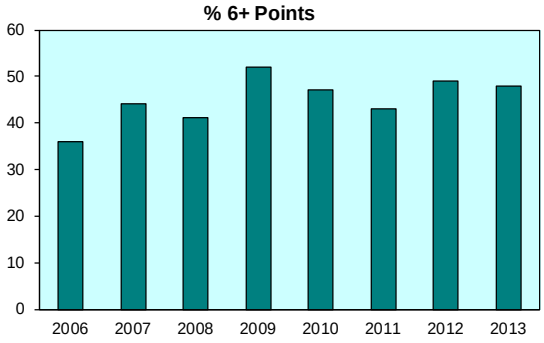


Figure 18. Smoky Mountains Zone Elk Status and Objectives.

Bennett Hills Zone (GMUs 45, 52)

Management Objectives

Objectives for Bennett Hills Zone (Figure 19) are to maintain a population of ≥350 cows and ≥155 bulls, including ≥55 adult bulls, at ratios of 18-24 bulls:100 cows and 10-14 adult bulls:100 cows.

Historical Perspective

Elk were extirpated from Bennett Hills Zone by the early 1900s as a result of unregulated hunting and habitat depletion from excessive livestock use. The re-colonization of Bennett Hills Zone by elk was slow, following the reintroduction of elk into south-central Idaho (Arrowrock Reservoir in 1915, Warm Springs Creek west of Ketchum in 1935 and 1936). During the late 1940s, elk numbered less than 50 head in GMU 45 and less than 15 head in GMU 52. The zone is currently believed to winter 700-1,000 elk.

In GMU 45, general five-day either-sex elk hunts were held in the western portion of the GMU from 1943-1953. There were no elk seasons in GMU 45 from 1954-1963 and 1971-1978. GMU 52 was closed to all elk hunting from 1943-1978.

In 1965, 36 elk (9 bulls, 19 cows, 9 calves) trapped in GMU 48 were released in GMU 52 about one mile south of Magic Reservoir. By the late 1970s, the population had increased to an estimated 235 head and depredation problems occurred on wheat and alfalfa fields from approximately 120 elk that summered in the Johnson Hill area. Early controlled firearms hunts and archery seasons were implemented in 1979 to reduce depredation concerns. In 1980, the management objective was to reduce depredations and increase the elk population to 300 head. The 1986-1990 Elk Management Plan established a goal of about 400 elk for GMUs 45 and 52 combined. Since depredation problems were minimal and the elk population relatively small, aerial surveys were not conducted in Bennett Hills Zone until 1999 to monitor the elk population.

Habitat Issues

Bennett Hills Zone encompasses roughly 3,700 square miles; 8% is managed by USFS, 67% is managed by BLM, 5% is administered by IDL, and 27% is private land. Most of GMU 52 and the southern portion of GMU 45 are primarily arid semi-desert dominated by sagebrush-grass. Mount Bennett Hills in the northern portion of GMU 45 is a low range of mountains or high plateau consisting of sagebrush-grass and mixed mountain shrub communities with small pockets of aspen and Douglas fir on northern exposures and more mesic sites. The Camas Prairie on the north side of the zone is primarily private land used for pasturing livestock and growing grass, alfalfa hay, wheat, and barley.

Livestock grazing is the primary land use in the zone. There are competitive concerns during drought years when forage utilization by cattle is higher.

Private interests own or control access to important summer and fall habitats. This has been a subject of much concern by hunters unable to gain access to areas they wish to hunt. Several elk ranching operations have recently been established in GMU 45 bringing concerns of potential loss of genetic integrity of wild elk and possible transmission of disease to wild populations.

Biological Issues

Elk populations in this zone have increased over the last 30 years as a result of reintroduction, conservative harvest management, and improved livestock grazing practices. The 1999 sightability survey indicated populations are reproducing at sustainable levels (24 calves:100 cows) and bull ratios are considerably higher than required to maintain the population (58 bulls:100 cows). In 2008, 927 elk were observed during a February mule deer survey. This number was much higher than expected, and prompted an aerial survey for elk in 2010. During the 2010 survey, 567 elk were observed, with 42 calves and 28 bulls per 100 cows (n = 333 cows 140 calves and 94 bulls). These survey numbers suggest that elk numbers in the Bennetts fluctuate considerably during the winter. Some Smoky Zone elk may move to the Mayfield area (GMU 39) during the winter, and winter conditions undoubtedly affect elk distribution in GMUs 45 and 39. A comprehensive survey that includes GMUs 39, 43, 44, 48, 45 and 52 within a single season may be warranted to better understand current elk dynamics in this area and is planned for early 2015. However, because GMU 45 is a significant mule deer winter range, continued monitoring of elk numbers is warranted, as high elk densities may begin to pose competitive conflicts with deer in some parts of the zone.

During January 2006, 19 cow elk were trapped from the Ketchum area and released on Bennett Mountain. This relatively small group of elk is unlikely to have significant impacts on the elk population in the Bennett Hills Zone. The Ketchum trap site will be monitored in upcoming years to evaluate whether elk return to Ketchum or winter near their release site.

Inter-specific Issues

This zone winters nearly all of the mule deer from GMUs 43, 44, 45, 48, and 52, and for this reason, mule deer will be given management priority over elk whenever conflicts are identified. Although, competitive concerns are currently minimal; the elk population has grown rapidly in recent years, and has begun to overlap some mule deer winter habitat. Several pronghorn also winter in the zone, but there is little overlap of habitat.

Livestock grazing, primarily cattle, occurs throughout federal and state-administered lands and on most of the private land that is not farmed. Specific conflicts between livestock grazing and elk have not been identified.

Predation Issues

Two or 3 mountain lions and about 15 black bears are taken by hunters in this zone annually, all in GMU 45. There has been no noticeable change in bear or mountain lion numbers in recent years.

Winter Feeding Issues

Winter feeding has not been conducted in this zone recently and is not an issue.

Information Requirements

Additional aerial surveys for elk are needed to better monitor current objectives, population status, and winter distribution in relation to mule deer.

Elk
Bennett Hills Zone (GMUs 45, 52)

Square Miles =	2,120	3-Year Averages	
% Public Land =	66%	Hunters per sq mi =	0.32
Major Land Type =	Rangeland	Harvest per sq mi =	0.15
		Success Rate =	48%
		%6+ Points =	63%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
45	2010	420	120	39	225 - 325	50 - 75	35 - 50
52		(75)	(25)	(15)	50 - 100	10 - 20	5 - 10
Zone Total		**(375)**	**(200)**	**(165)**	**275 - 425**	**60 - 95**	**40 - 60**
Bulls per 100 Cows			**(58)**	**(44)**		**18 - 24**	**10 - 14**

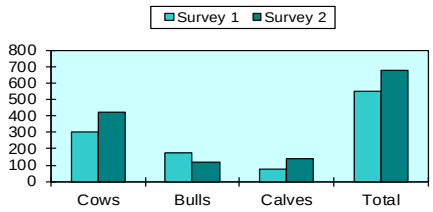
Note : Estimates within parentheses are based on information other than sightability surveys.

Population Surveys

	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
45	1999	300	175	73	548	2010	420	120	140	680
52	ND					ND				
Comparable Surveys Total		**300**	**175**	**73**	**548**		**420**	**120**	**140**	**680**
Per 100 Cows			**58**	**24**						

Note: ND = no survey data available.

Comparable Survey Totals

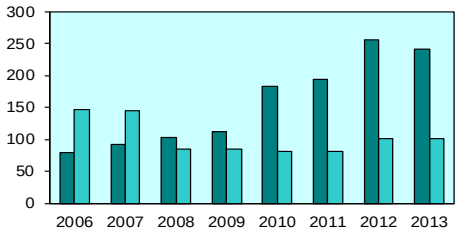


Zone Harvest Statistics

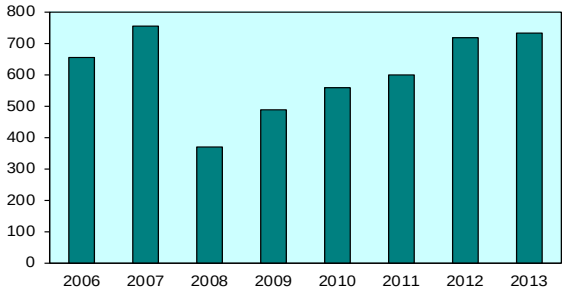
	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	79	93	104	113	184	194	256	241
'A' Tag	0	3	33	30	54	52	62	59
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	79	90	71	83	130	142	194	182
Antlered Harvest	147	145	86	86	82	81	102	102
'A' Tag	43	47	1	0	0	0	0	0
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	104	98	85	86	82	81	102	102
Hunter Numbers	655	755	370	487	557	597	716	732
'A' Tag	307	370	99	128	149	135	182	182
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	348	385	271	359	408	462	534	550
% 6+ Points	24	36	40	59	45	52	63	71

Note: % 6+ pts does not include spike-only harvest. ND = no data available.

Harvest



Hunter Numbers



% 6+ Points

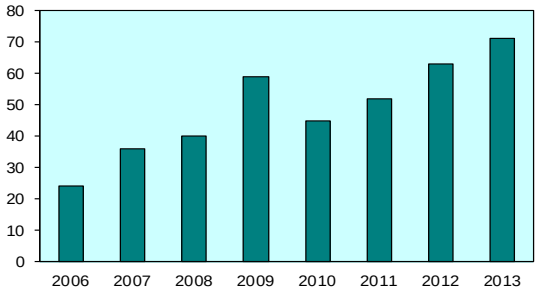


Figure 19. Bennett Hills Zone Elk Status and Objectives.

Big Desert Zone (GMUs 52A, 68)

Management Objectives

Objectives for Big Desert Zone (Figure 20) are to maintain a wintering elk population of 120-200 cows and 25-45 bulls, including 15-25 adult bulls. Although no population survey estimate exists for this zone, field reports indicate that current total numbers may exceed objectives.

Historical Perspective

The elk population in Big Desert Zone has increased substantially from early historical records. Accounts of trappers through this area in the mid-1800s suggest that, although elk were common, buffalo, bighorn sheep, and pronghorn were far more numerous. Unregulated harvest of the late 1800s and early 1900s likely reduced populations to relatively low levels.

Elk hunting in Big Desert Zone began in 1983 with 30 either-sex tags for GMU 63. Since that time, elk numbers and tag numbers have increased substantially. In 2001, Big Desert Zone was reduced from 6 GMUs (52A, 53, 63, 63A, 68, 68A) to 2 GMUs (52A, 68). Between 2001 and 2007, all elk tags in the Big Desert Zone were issued on a controlled hunt basis. Beginning in 2008, an archery-only general elk hunt was authorized in this zone.

Habitat Issues

Big Desert Zone represents some of the least productive habitat found in eastern Idaho. Comprised of mostly dry desert shrub habitat types, Big Desert Zone provides limited summer range for elk.

The BLM administers the majority of public ground (67% of total area) in Big Desert Zone. Private ground makes up 24%, state endowment lands 4%, and other federal agencies (National Park Service, USFWS, Atomic Energy Commission) make up about 5%.

A number of water guzzlers have been developed primarily for nongame, upland game, and pronghorn within Big Desert Zone. Although the impacts to other wildlife are unknown, elk have permanently destroyed some guzzlers and can prematurely dry up storage tanks.

Wildfires continue to play a big role with habitat throughout Big Desert Zone. In many cases, fire has replaced sagebrush stands with perennial grasses, theoretically improving habitat conditions for elk.

Biological Issues

With the exception of a few Idaho National Laboratory (INL) aerial surveys generally covering the northeast corner of the zone, population surveys have not been conducted in Big Desert Zone. Therefore, estimates for recruitment and total numbers are based on other data.

During January 2006, 62 elk (51 cows, 10 calves, one spike bull) were trapped from the Ketchum area and released north of Minidoka near Bear Trap Cave on the border between GMUs 52A and 68. The Ketchum trap site will be monitored in upcoming years to evaluate whether elk return to Ketchum or winter near their release site.

Over the past few years, depredation issues have increased in the southern portion of GMU 52A. Because of this, new hunts have been implemented in this area to better target depredating elk. Close monitoring of elk depredations will continue, and additional hunts may be implemented or amended to continue to address this issue.

Inter-specific Issues

Livestock, mule deer, and pronghorn are the primary ungulates sharing range with elk in Big Desert Zone. We are unaware of significant concerns regarding elk competition for forage with livestock. It is unknown what, if any, impacts an increasing elk population may have on pronghorn or mule deer.

Predation Issues

Coyotes are the predominant large predators within this zone. However, they are not believed to be a significant factor in elk population dynamics.

Winter Feeding Issues

Emergency supplemental feeding of elk has not been conducted recently. The relatively inaccessible nature of this zone in winter and generally limited snowfall preclude many concerns for winter feeding.

Information Requirements

The greatest data need for Big Desert Zone is reliable population data that provide estimates of abundance, composition, recruitment, and distribution data that would assist in developing effective harvest and depredation control strategies.

Elk

Big Desert Zone (GMUs 52A, 68)

Square Miles =	3,553	3-Year Averages	
% Public Land =	80%	Hunters per sq mi =	0.13
Major Land Type =	Range/Agricultu	Harvest per sq mi =	0.03
		Success Rate =	26%
		%6+ Points =	61%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
52A		(60)	(20)	(15)	45 - 75	10 - 20	5 - 10
68		(100)	(20)	(20)	75 - 125	15 - 25	10 - 15
Zone Total		**(160)**	**(40)**	**(35)**	**120 - 200**	**25 - 45**	**15 - 25**
Bulls per 100 Cows			**(43)**	**(24)**		**18 - 24**	**10 - 14**

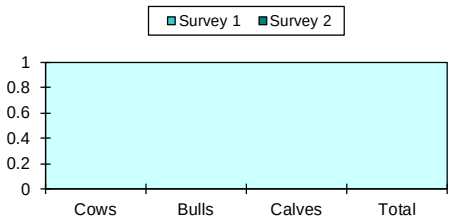
Note : Estimates within parentheses are based on information other than sightability surveys.

Population Surveys

	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
52A	ND					ND				
68	ND					ND				
Comparable Surveys Total		**0**	**0**	**0**	**0**		**0**	**0**	**0**	**0**
Per 100 Cows										

Note: ND = no survey data available.

Comparable Survey Totals

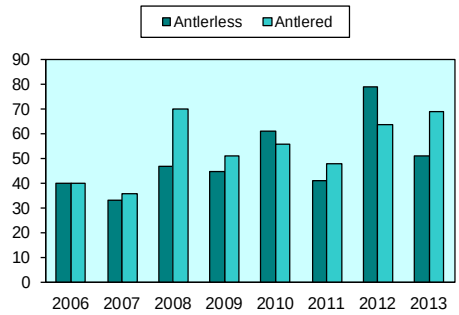


Zone Harvest Statistics

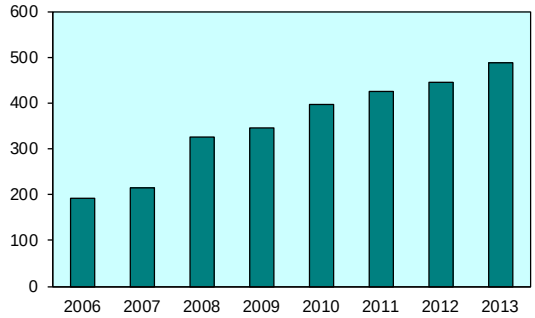
	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	40	33	47	45	61	41	79	51
'A' Tag	0	0	2	0	6	3	5	3
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	40	33	45	45	55	38	74	48
Antlered Harvest	40	36	70	51	56	48	64	69
'A' Tag	0	0	22	12	13	10	13	23
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	40	36	48	39	43	38	51	46
Hunter Numbers	191	216	327	345	396	425	444	489
'A' Tag	0	0	93	96	150	105	116	159
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	191	216	234	249	246	320	328	330
% 6+ Points	60	64	55	46	61	64	62	57

Note: % 6+ pts does not include spike-only harvest. ND = no data available.

Harvest



Hunter Numbers



% 6+ Points

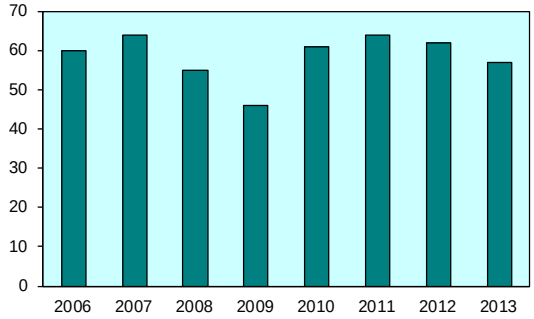


Figure 20. Big Desert Zone Elk Status and Objectives.

Snake River Zone (GMUs 53, 63, 63A, 68A)

Management Objectives

Objectives for Snake River Zone (Figure 21) are to maintain a wintering elk population of 25-35 cows and 5-10 bulls, including 1-5 adult bulls. Although no population survey estimate exists for this zone, field reports combined with INL surveys indicate that current numbers exceed objectives. The low population objective is necessary to alleviate significant depredation concerns in GMUs 53 and 63. Aggressive harvest rates will be necessary to achieve population objectives.

Historical Perspective

The elk population in Snake River Zone has increased substantially from early historical records. Accounts of trappers through this area in the mid-1800s suggest that, although elk were common, buffalo, bighorn sheep, and pronghorn were far more numerous. It is likely that the unregulated harvest of the late 1800s and early 1900s reduced populations to relatively low levels.

Snake River Zone (GMUs 53, 63, 63A, 68A) was contained within Big Desert Zone (GMUs 52A, 68) from the beginning of the zone system in 1998 through 2000.

Elk hunting in Snake River Zone began in 1983 with 30 either-sex tags for GMU 63. Since that time, elk numbers and harvest opportunity have increased substantially.

Habitat Issues

Snake River Zone represents some of the least suitable habitat found in eastern and southern Idaho. Comprised of mostly agriculture and dry desert shrub habitat types, Snake River Zone provides limited summer range for elk.

The BLM administers the majority of public ground in Snake River Zone. Other primary ownership includes private and INL ground. The INL, which is largely non-hunted, provides daytime refuge for several hundred elk that forage on private cropland at night. Efforts will continue to improve management options available to the Department for elk on INL.

A number of water guzzlers have been developed primarily for nongame, upland game, and pronghorn within Snake River Zone. Although the impacts to other wildlife are unknown, elk have permanently destroyed some guzzlers and can prematurely dry up storage tanks.

Wildfires continue to alter large swaths of habitat throughout Snake River Zone. In many cases, fire has replaced sagebrush stands with perennial grasses, theoretically improving habitat conditions for elk.

Biological Issues

With the exception of a few INL aerial surveys, population surveys have not been conducted in Snake River Zone. Therefore, estimates for recruitment and total numbers are based on other data. Given the relatively rapid increase in elk observed over the last 15 years, it is believed that production is high. In recent years, depredation issues have increased in the portions of GMU 53

near the border of GMU 52A. Recruitment rate are likely high in the Snake River Zone, so maintaining population objectives will require high harvest rates.

Inter-specific Issues

Livestock, mule deer, and pronghorn are the primary ungulates sharing the range with elk in Snake River Zone. We are unaware of significant concerns regarding elk competition for forage with livestock. It is unknown what, if any, impacts an increasing elk population may have on pronghorn or mule deer.

Predation Issues

Coyotes are the predominant large predator within this zone. However, they are not believed to be a significant factor in elk population dynamics.

Winter Feeding Issues

Emergency supplemental feeding of elk has not been conducted recently. The relatively inaccessible nature of this zone in winter and generally limited snowfall preclude many concerns for winter feeding.

Information Requirements

The greatest data need for Snake River Zone is reliable population data that provides estimates of abundance, composition, recruitment, and distribution data that would assist in developing effective harvest and depredation control strategies.

Elk

Snake River Zone (GMUs 53, 63, 63A, 68A)

Square Miles =	4,618	3-Year Averages	
% Public Land =	43%	Hunters per sq mi =	0.28
Major Land Type =	Agriculture	Harvest per sq mi =	0.04
		Success Rate =	13%
		%6+ Points =	35%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
53		(60)	(20)	(15)	0	0	0
63		(200)	(100)	(50)	25 - 35	5 - 10	1 - 5
63A		(0)	(0)	(0)	0	0	0
68A		(0)	(0)	(0)	0	0	0
Zone Total		**(260)**	**(120)**	**(65)**	**25 - 35**	**5 - 10**	**1 - 5**
Bulls per 100 Cows			**(46)**	**(25)**		**18 - 24**	**10 - 14**

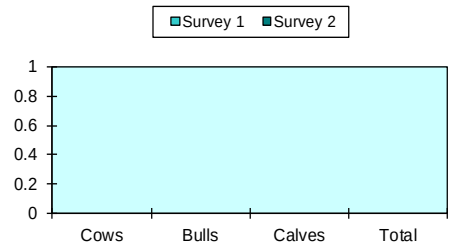
Note: Estimates within parentheses are based on information other than sightability surveys.

Population Surveys

	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
52A	ND					ND				
53	ND					ND				
63	ND					ND				
63A	ND					ND				
68	ND					ND				
68A	ND					ND				
Comparable Surveys Total		**0**	**0**	**0**	**0**		**0**	**0**	**0**	**0**
Per 100 Cows										

Note: ND = no survey data available.

Comparable Survey Totals

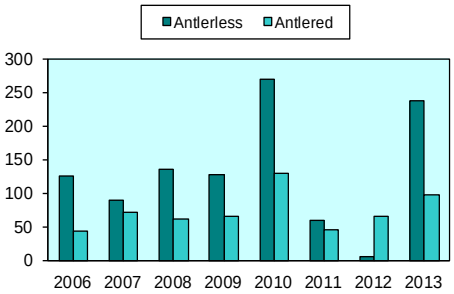


Zone Harvest Statistics

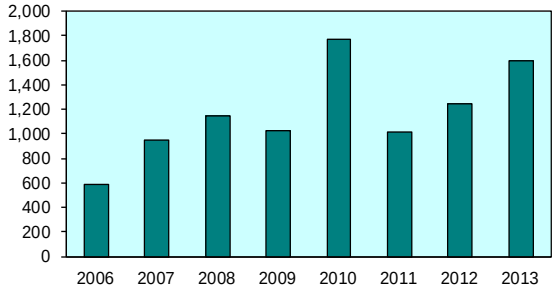
	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	126	90	136	127	270	60	5	237
'A' Tag	122	87	129	125	262	55	0	135
'B' Tag	0	0	0	0	0	0	0	97
CH Tag	4	3	7	2	8	5	5	5
Antlered Harvest	44	72	61	65	130	45	66	97
'A' Tag	44	72	61	65	130	45	65	97
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	0	0	0	0	0	0	1	0
Hunter Numbers	590	951	1,143	1,029	1,773	1,018	1,249	1,591
'A' Tag	579	932	1,126	1,013	1,726	985	1,214	1,582
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	11	19	17	16	47	33	35	9
% 6+ Points	18	49	18	25	41	24	36	40

Note: % 6+ pts does not include spike-only harvest. ND = no data available.

Harvest



Hunter Numbers



% 6+ Points

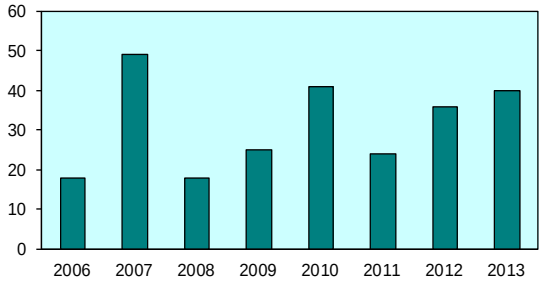


Figure 21. Snake River Zone Elk Status and Objectives.

Bannock Zone (GMUs 56, 70, 71, 72, 73, 73A, 74)

Management Objectives

Objectives for Bannock Zone (Figure 22) are to maintain a wintering elk population of 510-745 cows and 125-165 bulls, including 60-110 adult bulls. Although no population estimate exists for this zone, field reports, combined with incidental observations from deer surveys, indicate that current numbers are in the range of the objectives. Harvest appears to be balanced with productivity and the overall conflict issues are low. Maintain the current level of harvest will be the short term goal.

Historical Perspective

According to the Pocatello Deer-Elk Herd Management Plan (1945), in the early 1900s, elk were not found in the area and "deer were a rarity." In 1916-1917, 35 elk were transported by train from Gardiner, Montana, and released west of Pocatello. Counts in the 1930s and 1940s found 500-600 elk. By 1950, elk were reported to be spreading into the Elkhorn Mountain and John Evans Canyon areas (GMU 73), Blackrock (GMU 71), and Crystal and Midnight creeks (GMU 70).

In a 1940 report, Ted Trueblood said, "Elk (in this area) are a liability and a problem; deer would be an asset."

Elk hunts were first offered in the zone in 1933. Elk numbers declined in the 1950s due to "over-hunting by whites and Indians," and seasons were closed. Permit hunts were offered in some GMUs between 1962 and 1968. Populations remained at very low levels into the late 1980s. Since that time, elk have expanded throughout the Bannock Zone, but are generally found in small groups with a sporadic distribution.

Habitat Issues

The topography of Bannock Zone (3,125,000 acres) is characterized by low, north-south mountain ranges separated by broad valleys. Elevations range from 4,000-9,000 feet. Mountains support mixed conifer/aspen stands on north slopes and mountain brush/grass communities on southern exposures. Juniper and mountain mahogany are common on lower slopes. Valleys are agricultural with large expanses of grain, pasture, and hay. Grazing, logging, and urbanization are additional factors affecting habitats in the zone.

Land ownership is 55% private, 30% federal, 5% state, and 10% Indian reservation. Access is widespread with few areas more than one mile from some type of road.

Winter range consists of windswept ridges, Conservation Reserve Program (CRP) acreage, and other agricultural fields. Depredation damage complaints from private landowners have been stable.

Biological Issues

Calf recruitment rates have not been measured in this zone. All incidental information indicates a highly productive herd. Newly colonizing populations without any known competition tend to

have high recruitment rates. Given that recruitment is probably high, high harvest rates will be necessary to achieve population objectives.

Inter-specific Issues

The concurrent increase in numbers of elk and decrease in mule deer on some winter ranges has raised concerns about possible competition for forage and/or social intolerance. Livestock operators in several areas have complained about increasing elk use of forage on public land grazing allotments and private lands.

Predation Issues

Mountain lions are the major natural predators of elk in the zone and are judged to be at moderate levels in most areas; however, expanding populations of elk do not indicate that predation is significantly impacting numbers. Coyotes are quite common but not believed to be a major predator of elk. Black bears exist at extremely low levels within the zone and, therefore, are not an important source of mortality for elk. There are no known wolf packs in the zone, however we receive the occasional public wolf observation report.

Winter Feeding Issues

Emergency supplemental feeding of elk has not been conducted in the zone.

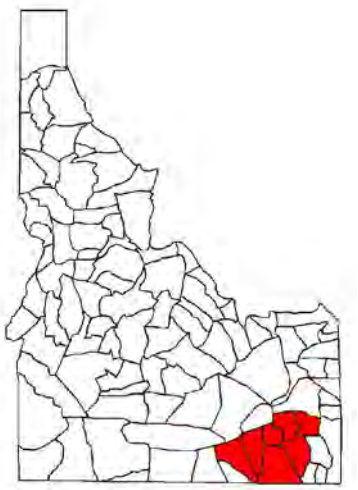
Information Requirements

Elk tags have been stable over the past 5 years. A greater level of precision in estimating elk numbers and population change (recruitment) would help in determining appropriate levels and types of hunting to help achieve population objectives.

Elk

Bannock Zone (GMUs 56, 70, 71, 72, 73, 73A, 74)

Square Miles =	4,646	3-Year Averages	
% Public Land =	36%	Hunters per sq mi =	0.36
Major Land Type =	Rangeland/Agri	Harvest per sq mi =	0.05
		Success Rate =	15%
		%6+ Points =	61%



Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
56		(125)	(75)	(50)	100 - 150	30 - 50	20 - 30
70		(100)	(40)	(25)	50 - 75	5 - 15	5 - 10
71		(50)	(20)	(20)	50 - 75	5 - 15	5 - 10
72		(300)	(100)	(60)	50 - 75	5 - 15	5 - 10
73		(150)	(50)	(30)	100 - 150	20 - 30	10 - 20
73A		(10)	(5)	(5)	10 - 20	1 - 5	1 - 5
74		(300)	(100)	(60)	150 - 200	25 - 35	15 - 25
Zone Total		**(1,035)**	**(390)**	**(250)**	**510 - 745**	**125 - 165**	**61 - 110**
Bulls per 100 Cows			**(38)**	**(24)**		**18 - 24**	**10 - 14**

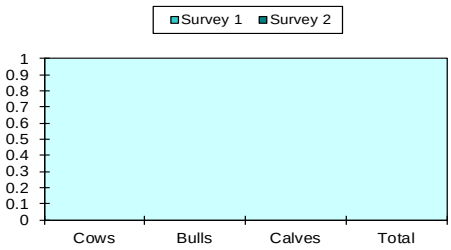
Note: Estimates within parentheses are based on information other than sightability surveys.

Population Surveys

	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
56	ND					ND				
70	ND					ND				
71	ND					ND				
72	ND					ND				
73	ND					ND				
73A	ND					ND				
74	ND					ND				
Comparable Surveys Total		**0**	**0**	**0**	**0**		**0**	**0**	**0**	**0**
Per 100 Cows										

Note: ND = no survey data available.

Comparable Survey Totals

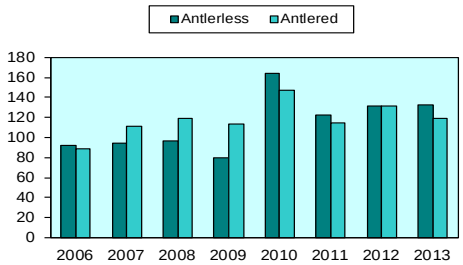


Zone Harvest Statistics

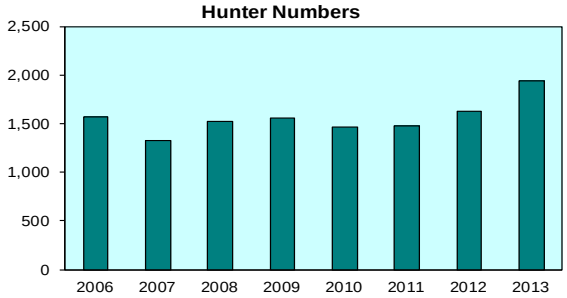
	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	92	94	97	80	164	122	131	133
'A' Tag	87	85	89	66	127	93	98	84
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	5	9	8	14	37	29	33	49
Antlered Harvest	89	111	119	114	147	115	132	119
'A' Tag	29	42	36	49	58	46	77	48
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	60	69	83	65	89	69	55	71
Hunter Numbers	1,564	1,329	1,520	1,562	1,467	1,479	1,626	1,944
'A' Tag	1,220	975	1,145	1,179	1,117	1,135	1,294	1,525
'B' Tag	0	0	0	0	0	0	0	
CH Tag	344	354	375	383	350	344	332	419
% 6+ Points	48	44	35	40	51	58	63	61

Note: % 6+ pts does not include spike-only harvest. ND = no data available.

Harvest



Hunter Numbers



% 6+ Points

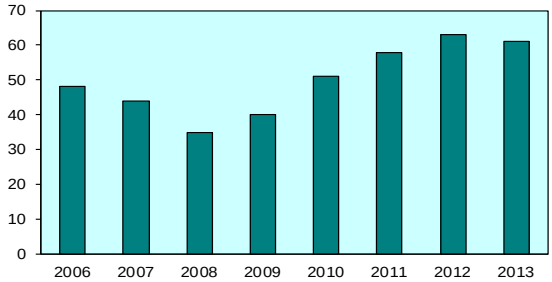


Figure 22. Bannock Zone Elk Status and Objectives .

Diamond Creek Zone (GMUs 66A, 76)

Management Objectives

Objectives for Diamond Creek Zone (Figure 23) are to maintain a wintering elk population of 1,300-1,960 cows and 400-600 bulls, including 255-365 adult bulls. Limited amounts of suitable winter range in GMU 66A preclude significant increases in the wintering population for that GMU. Although GMU 76 could support a higher wintering population, it would be at the expense of significant depredation concerns and increases in elk occupying mule deer winter ranges. The most recent aerial survey (2013) indicates the population is below objectives for cows.

Historical Perspective

The elk population in Diamond Creek Zone has increased dramatically from early historical records. Accounts of trappers through this area in the mid-1800s suggest that although elk were common, buffalo and bighorn sheep were far more numerous. Undoubtedly, the unregulated harvest of the late 1800s and early 1900s maintained at or reduced populations to relatively low levels. By 1952, elk were believed to be numerous enough to warrant the first hunting season with 250 tags for either-sex elk in GMUs 66, 66A, and 69. An aerial survey of GMU 76 during February 1952 resulted in 193 elk observed with a total population estimate of 230. Elk in GMU 66A are primarily migratory and winter with elk in GMUs 66 and 69. The first hunt in GMU 76 began in 1964 with 75 either-sex tags.

As the elk population grew, so did hunting opportunity. Although this zone has primarily been managed via controlled hunt tags, several general hunting seasons have occurred since regulated harvest began. Between 1955 and 1959, general hunts were held in GMUs 66, 66A, and 69 varying between a three-day antlered-only to a 10-day either-sex season. Again in 1968 and 1969, nine-day antlered-only general seasons were offered. The last general hunting opportunity in GMU 66A occurred in 1975 with a three-day antlered-only season.

The most recent population survey (2013) estimated a total of 2,352 elk in GMU 76. This total represents an increase over the 2009 estimate. Historically, elk in GMU 76 summered and wintered within the GMU; however, as populations have increased, there has been use of wintering areas outside the GMU.

In efforts to deal with depredations and potential human safety issues on highways, the Department has instituted extra tags for elk “conditioning” in late winter. These hunts are in December and designed to make private land and areas near highways as unattractive as possible for problem elk herds. They proved to be a success in the 2005 season; however, hunts did not continue into January and elk came back off public lands and returned to old habits. The Department has continued the hunts in 2006 and added some hunts for the month of January to continue pressure, forcing elk to stay on public lands. In 2007 controlled elk hunts were dropped 30% to 400 tags. Further reductions in elk tags occurred in 2009 and 2010. Reductions were made in cow tags to 300 late season cow tags (an additional 100 tag reduction), and further reduced cow tags and split them by GMU, 700 tags in GMU 76 and 300 tags in GMU 66A. Archers were also reduced from an average of 2,100 per year to a fixed number of 1,836 per year, with 45% of these tags allocated to non-residents. In 2010 the trophy bull tags were

decreased from 50 to 35, and the archery quota was maintained at 1,836. The number of controlled tags offered and the quota for archers remained unchanged during the 2012 and 2013 seasons.

Habitat Issues

Diamond Creek Zone represents some of the most productive habitat found in southeastern Idaho. Three main vegetation types predominate: sagebrush-grassland, aspen, and conifer. Past habitat-use research indicates that aspen habitat types are highly preferred, especially during non-snow periods. Fire suppression efforts and intensive livestock grazing in the past have resulted in increased shrub and conifer cover with a reduction in the aspen component since historical times.

Approximately 65% of the land in the Diamond Creek Zone is publicly owned, primarily USFS. The 35% private land is used for rangeland pasture and small grain and hay production. Depredation complaints have generally increased in the last decade. Predominate land uses of the publicly-owned ground include livestock grazing, timber management, recreation, and phosphate mining. Approximately 35% of the known U.S. reserves of phosphate ore are located in Diamond Creek Zone.

Open habitat types combined with moderate road densities (0.7-2.3 miles/square mile) and, in some cases, unrestricted ATV travel result in a relatively high vulnerability standard for elk in Diamond Creek Zone.

The Diamond Creek Zone has rich veins of elemental phosphate within its boundaries. This has been and continues to be a habitat concern given the number of forested tracks converted into grassland, and the number of mines in operation and that will be created over the next 30 years. Additionally, the impact of elk feeding on these sites with high selenium concentrations in the forage is not entirely understood.

Biological Issues

Calf:cow ratios (44:100 in the 2013), as measured during aerial surveys, indicate a healthy, productive herd in the Diamond Creek Zone. High calf:cow ratios are consistent with growing populations that are not heavily influenced by density-dependent factors. Given these high levels of recruitment, relatively high harvest rates of antlerless elk are necessary to stabilize populations. Additionally, liberal bull harvest rates can be sustained by high recruitment rates.

Inter-specific Issues

Although both livestock and elk numbers within Diamond Creek Zone are high, there appears to be little concern by livestock operators of competition for grass. However, localized concerns do exist for livestock over utilization during dry years with drought conditions and on ridge-tops (primarily sheep utilization) used by wintering elk.

During the mid-1900s, GMU 76 supported a high population of mule deer with relatively few elk. Important mule deer wintering areas included Brown's Canyon to Yellowjacket Creek, east of Henry, Stump Creek, Crow Creek, and the Soda Front from Wood Canyon to Dingle. Today,

these winter ranges are predominately occupied by elk. It is unknown whether habitat changes and/or competition (resource or social intolerance) have led to this change. However, there appear to be areas with suitable deer winter range vegetation that are only occupied by elk. Extensive populations of wintering mule deer are not expected to occur with current distribution and numbers of elk in this zone.

Predation Issues

Potentially major predators of elk in Diamond Creek Zone include black bears and mountain lions. The black bear population is extremely low and probably has remained unchanged for many years. Mountain lions are believed to have increased during the last 30 years. However, current recruitment rates and other elk population parameters suggest this increased mountain lion population is not having a significant effect. Coyotes are common but not believed to be a significant predator on elk. There are no known wolf packs in the zone, however wolves have been observed in the zone and public wolf observation reports are not uncommon.

Winter Feeding Issues

Emergency supplemental feeding of elk has been provided during 5 winters since 1981 in Diamond Creek Zone. Numbers of animals fed have ranged from 200-880. Recurrent emergency feeding areas include near Freedom, Thomas Fork Valley, Crow Creek, Stump Creek, Banks Valley and Bischoff Canyon. Additionally, it is believed that some elk summering in this zone migrate to annual winter feed grounds in adjacent Wyoming. During 1985, 122 elk were trapped near Stump Creek and translocated elsewhere. On-site testing for Brucellosis resulted in no positive responses. However, during 1992-1993, a group of 300 wintering elk in Idaho and Wyoming along the Thomas Fork Valley were trapped and marked in Wyoming. One out of the 40 elk tested showed a positive Brucellosis response.

Information Requirements

Recently (during the mid to late 2000s), observed changes in winter distribution of elk in the Diamond Creek Zone has occurred, and reasons for these shifts are poorly understood. Possible explanations include a population that has reached habitat fill, habitat change resulting in less suitable winter range, and/or random behavioral response to differing environmental conditions. A better understanding of the processes involved in winter range selection would aid in a better ecological understanding of elk in this zone and lead to more responsive management actions.

The Diamond Creek Zone continues to be an extremely popular area for archery hunting because of higher than average hunter success rates and elevated percentages of 6+ points in the harvest. Currently, there is growing interest surrounding the effectiveness of archers as technological advancements improve the amount of wounding loss that occurs, and maintaining adequate opportunities for both archery and any-weapon sportsmen. It will be essential that the Department continues to obtain accurate and timely harvest estimates in Diamond Creek for effective management.

Elk
Diamond Creek Zone (GMUs 66A, 76)

Square Miles =	1,659	3-Year Averages	
% Public Land =	60%	Hunters per sq mi =	1.91
Major Land Type =	Forest	Harvest per sq mi =	0.47
		Success Rate =	25%
		%6+ Points =	43%

Winter Status & Objectives

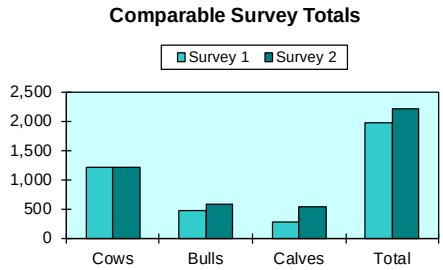
	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
66A		(50)	(25)	(20)	40 - 60	15 - 25	5 - 15
76	2008	1,205	478	285	1,260 - 1,900	385 - 575	250 - 350
Zone Total		**1205**	**478**	**285**	**1,300 - 1,960**	**400 - 600**	**255 - 365**
Bulls per 100 Cows			**40**	**24**		**30 - 35**	**18 - 24**

Note: Estimates within parentheses are based on information other than sightability surveys.

Population Surveys

	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
66A	ND					ND				
76	2009	1,205	478	285	1,968	2013	1,218	583	534	2,220
Comparable Surveys Total		**1,205**	**478**	**285**	**1,968**		**1,218**	**583**	**534**	**2,220**
Per 100 Cows			**40**	**24**				**48**	**44**	

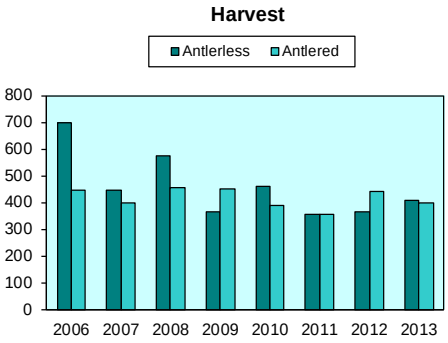
Note: ND = no survey data available.

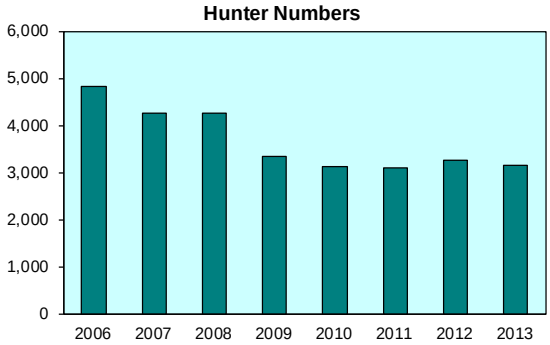


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	698	448	573	364	461	358	364	408
'A' Tag	66	63	69	65	74	70	54	87
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	632	385	504	299	387	288	310	321
Antlered Harvest	446	400	458	449	389	357	442	397
'A' Tag	201	196	272	301	250	237	285	234
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	245	204	186	148	139	120	157	163
Hunter Numbers	4,823	4,256	4,251	3,326	3,125	3,088	3,266	3,136
'A' Tag	2,228	2,092	2,050	1,805	1,692	1,673	1,836	1,745
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	2,595	2,164	2,201	1,521	1,433	1,415	1,430	1,391
% 6+ Points	34	51	40	46	40	28	54	43

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





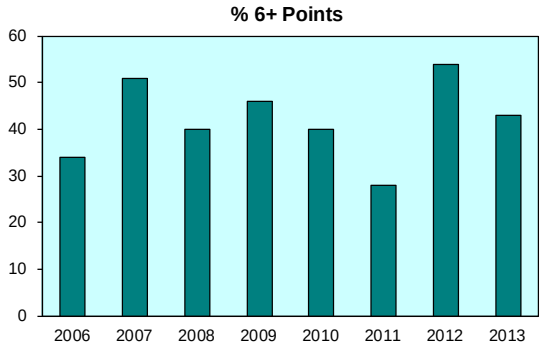


Figure 23. Diamond Creek Zone Elk Status and Objectives

Bear River Zone (GMUs 75, 77, 78)

Management Objectives

Objectives for Bear River Zone (Figure 24) are to maintain a wintering elk population of 400-600 cows and 80-120 bulls, including 45-75 adult bulls. Although this zone could support a higher wintering population, it would be at the expense of significant depredation concerns and increases in elk occupying mule deer winter ranges. The most recent aerial survey (2010) indicates that the population has increased since 2006 with bull numbers nearly meeting objective, and cow numbers meeting objective.

Historical Perspective

The elk population in Bear River Zone has increased substantially from early historical records. Accounts of trappers through this area in the mid-1800s suggest that although elk were common, buffalo and bighorn sheep were far more numerous. Undoubtedly, the unregulated harvest of the late 1800s and early 1900s maintained at or reduced populations to relatively low levels.

Elk hunting in this zone began in the 1940s with controlled either-sex hunts, was closed for several years, and started up again in 1956 with general hunts for either-sex. GMU 75 was closed on and off through the 1960s. From 1968 through 1975, all GMUs were open to general either-sex hunting. Starting in 1976 through the present, all GMUs have been open for general antlered-only opportunity. In 1984 and 1985, a few either-sex tags were offered along with the antlered-only hunt. Since 1986, antlerless-only tags have generally increased.

Prior to the late 1970s, the vast majority of elk that summered in this zone wintered in Utah. Since that time, elk wintering in this zone have dramatically increased.

Habitat Issues

Bear River Zone represents some of the highest productive habitat found in southeastern Idaho. Three main vegetation types predominate: sagebrush-grassland, aspen, and conifer. Past habitat-use research indicates that aspen habitat types are highly preferred, especially during non-snow periods. Fire suppression efforts and/or intensive livestock grazing in the past has resulted in increased shrub and conifer cover with a reduction in the aspen component since historical times.

The USFS administers the majority of public ground (49% of total area) in this zone. Predominant land uses of public ground include livestock grazing, timber management, and recreation. Private ground makes up the remaining 51% and is used primarily for rangeland pasture and small grain and hay production. Since most of the potential elk winter range is privately held, depredation concerns have been significant. Several stackyards have been developed in order to alleviate some of the depredation concerns. The urban sprawl of subdivisions and small-acreage home-sites in this zone has also led to significant conflicts with wintering elk. The loss of winter range and conflicts with producers are the primary considerations limiting elk populations in Bear River Zone.

Because of relatively high amounts of conifer cover, Bear River Zone represents some of the best security cover found in southeastern Idaho. Increased use of ATVs and increases in road development will raise vulnerability standards in this zone.

Biological Issues

Calf:cow ratios, as measured during aerial surveys, increased from 24:100 in 2006 to 34:100 in 2010. A recruitment rate of approximately 25 calves per 100 cows is necessary to maintain elk populations and allow moderate levels of harvest.

Inter-specific Issues

The elk population in this zone has caused conflict with several livestock operations in the foothills. The main sources of concern are damage to fences and loss of hay, grain, and private rangeland forage.

Bear River Zone is also a highly productive mule deer area. Recent habitat changes appear to be favoring elk. Although these GMUs do show some niche separation during winter between elk and deer, recent observations indicate that elk are beginning to occupy suitable deer winter range.

Predation Issues

Potentially major predators of elk in Bear River Zone include black bears and mountain lions. The black bear population is extremely low. Mountain lions are believed to have increased during the last 30 years. However, current recruitment rates and other elk population parameters suggest this increased mountain lion population is not having a significant effect. Coyotes are common but not believed to be a significant predator on elk. We have occasional public wolf observation reports in the zone, but we have no known wolf packs.

Winter Feeding Issues

Emergency winter feeding of elk only occurs periodically in this zone. The last effort occurred during winter 1983-1984 with two sites in each of GMUs 75 and 77. An unknown but substantial number of elk are believed to migrate and winter in Utah, with some known to use the feeding operation at Hardware Ranch. We did have some problems with elk on haystacks during the 2010-2011 winter and had one feeding operation in GMU 78 and one in GMU 77.

Information Requirements

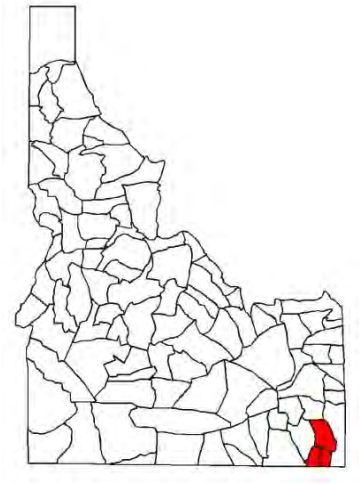
An unknown but substantial number of elk are believed to migrate and winter in Utah. A better understanding of these numbers would benefit management recommendations.

Historically, harvest estimates from this zone have suffered from small sample size. The need exists for better precision of these parameters.

Elk

Bear River Zone (GMUs 75, 77, 78)

Square Miles =	887	3-Year Averages	
% Public Land =	52%	Hunters per sq mi =	1.79
Major Land Type =	Forest	Harvest per sq mi =	0.34
		Success Rate =	19%
		%6+ Points =	33%



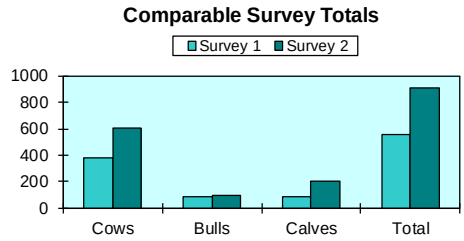
Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
Zone	2010	606	98	58	200 - 300	40 - 60	25 - 35
Zone Total		**606**	**98**	**58**	**400 - 600**	**80 - 120**	**45 - 75**
Bulls per 100 Cows			**16**	**10**		**18 - 24**	**10 - 14**
Zone Total		**1,212**	**212.17**	*****	**400 - 600**	**80 - 120**	**45 - 75**
Bulls per 100 Cows			**14***	*****		**18 - 24**	**10 - 14**

* Adult bull numbers were unable to be obtained due to later flight time and some antler shed had occurred.

Population Surveys

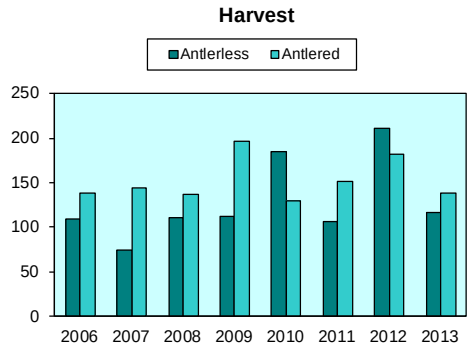
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
Zone	2006	379	91	91	561	2010	606	98	205	909
Comparable Surveys Total		**379**	**91**	**91**	**561**		**606**	**98**	**205**	**909**
Per 100 Cows			**24**	**24**				**16**	**34**	

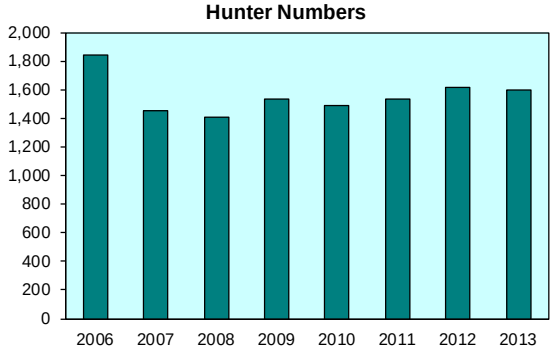


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	110	75	111	113	185	106	211	117
'A' Tag	104	70	102	102	168	106	202	112
'B' Tag	0	1	2	1	15	0	7	2
CH Tag	6	4	7	10	2	0	2	3
Antlered Harvest	138	144	137	196	130	152	182	139
'A' Tag	24	39	31	67	41	47	42	36
'B' Tag	105	94	92	116	80	93	123	90
CH Tag	9	11	14	13	9	12	17	13
Hunter Numbers	1,839	1,456	1,407	1,533	1,493	1,532	1,619	1,600
'A' Tag	1,005	770	755	845	798	880	973	1,056
'B' Tag	750	643	617	610	650	614	601	500
CH Tag	84	43	35	78	45	38	45	44
% 6+ Points	19	31	30	40	24	23	41	32

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





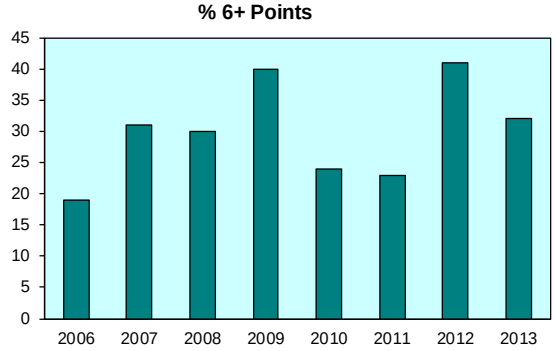


Figure 24. Bear River Zone Elk Status and Objectives.

Island Park Zone (GMUs 60, 60A, 61, 62A)

Management Objectives

Objectives for the Island Park Zone (Figure 25) are to maintain a wintering elk population of 1,200-1,800 cows and 400-575 bulls, including 250-375 adult bulls. Currently, elk wintering on the Sand Creek winter range in GMU 60A are within objective for cows but below objective for bulls and adult bulls. In the past, obtaining adequate harvest on this population was difficult due to its migratory nature and the fact that significant portions of the herd spend fall in Yellowstone National Park and Harriman State Park where they are safe from harvest. During the early 2000's, weather during hunting season was adequate enough to get a good harvest, and we likely harvested the population harder than planned. Bull:cow ratios are difficult to measure for the hunted portion of the population, again, because they are inflated by those animals which avoid hunting. Additionally, a portion of the harvestable fall elk population in the Island Park Zone (particularly in GMU 61) migrates to winter ranges in Montana, and therefore is not counted as part of the Sand Creek sightability surveys in GMU 60A. The Island Park Zone currently provides the widest array of hunting opportunity available, including archery, centerfire, and muzzleloader seasons; early and late hunting; and controlled any-bull and either-sex hunts.

Historical Perspective

Elk have been present, in varying numbers, in portions of the Island Park Zone throughout recorded history. There has been a general elk season in all or part of Fremont County since 1882. This undoubtedly is the longest running general hunting opportunity in the state. During much of the early twentieth century, these hunts were based upon elk populations summering in Yellowstone National Park.

In the late 1940s, elk were first observed wintering on high desert habitats of GMU 60A, with 582 wintering elk recorded in 1952. These wintering populations varied from about 700 to 1,200 elk until the mid-1970s, at which time the elimination of general either-sex elk hunting resulted in a rapidly increasing winter population. The population peaked in the winter of 1999-2000, when 4,134 elk were estimated on Sand Creek winter range.

General bull hunting was restricted to spikes-only in 1991 in response to an accelerated timber harvest program on Targhee National Forest that resulted in poor bull escapement and low bull:cow ratios. Antlerless elk hunting opportunity has been managed through controlled hunts and, beginning in 1993, tags have been offered for any-bull hunting opportunity throughout the Island Park Zone.

Habitat Issues

Most elk summer range in the Island Park Zone occurs on USFS lands and is dominated by gentle topography lodgepole pine communities. Douglas fir stands are common on sloped sites. Timber management practices from 1970-1990 severely altered habitat in the Island Park Zone. In the mid-1970s, approximately two-thirds to three-fourths of the merchantable lodgepole pine stands on the Targhee National Forest were classified as dead or dying due to a mountain pine beetle infestation. Consequently, the USFS dramatically accelerated timber harvest. The result was an extensive network of roads and clear-cuts, which reduced elk habitat effectiveness and greatly increased elk vulnerability. Implementation of road and area closures in some areas and

increasing security cover from continued forest regeneration will continue to help offset some of these effects into the future.

The 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. Land ownership consists of a checkerboard of state, BLM, and private property. Cooperative use-trade agreements have benefited the elk population. Agricultural encroachment and suburban developments continue to threaten winter range in the Island Park Zone.

There are a number of domestic elk ranching and, specifically, "shooter bull" operations in this area. These operations pose several threats to wild elk including loss of available habitat behind fences, obstruction of migration routes with fences, possible disease sources, and possible genetic introgression from escapees. In 2003, a 5,000-acre domestic elk operation was constructed on South Juniper Hill. This operation is on the fringe of historic elk winter habitat but has attracted elk to the area because of domestic elk inside the fence and put elk on top of historic deer winter range next to the fence. In 2005, construction was completed on a new pen on Big Grassy, which is the core of the traditional elk winter range. This pen is estimated to enclose 16 square miles of prime elk and moose winter habitat. An unknown number of domestic elk were placed in the pen in the middle of 2,000-3,000 wintering wild elk. These pens reduce potential carrying capacity of the winter range, and could pose other problems for the Island Park Elk herd.

Biological Issues

Until recently, winter elk populations had been increasing steadily in Island Park Zone since they were first noticed on the Sand Creek Desert in the late 1940s. A total of 582 were recorded in 1952. This total climbed steadily to the 4,134 elk counted in 2000 and then decreased to 3,246 in 2002 and 1,748 in 2006. Significant reductions in hunter opportunity (both to the general season and controlled hunts) were made after the 2006 survey. The population has apparently responded to these changes, as there were 2,512 elk estimated during the 2010 sightability survey.

Recruitment measured through sightability surveys indicates the moderately productive nature of the herd, with calf:cow ratios typically in the 30-35 calves:100 cows range. Bull:cow ratios have rebounded markedly since the implementation of spike-only general hunting in 1991. Bulls:100 cows ratios have ranged from 40-68. It should be noted, however, that these totals are buttressed by an unknown segment of the population that spends summer and fall in Harriman State Park and Yellowstone National Park. These animals are largely un-harvested, being subjected to hunting pressure only while migrating to winter range.

An unknown segment of the harvestable fall population, primarily in GMU 61, migrates to winter ranges in Montana. These animals are likely available for harvest during at least a portion of the Island Park seasons, but are not in Idaho during sightability surveys. During spring 2009, the Department initiated a research project designed to assess newborn elk calf survival, document seasonal movements, and determine wintering destination for elk summering in GMU 61. The first year's calf capture effort (2009) was focused around Henry's Lake in GMU 61. Thirty-eight calves were collared around Henry's Lake, as far west as Icehouse Creek. Early calf

survival (birth through 3 months of age) was 90% for the collar calves. Survival of calves through April of 2010 was 83%. Four calves died during monitoring: 1 mountain lion predation, 1 probable black bear predation, and 2 of unknown cause (i.e., not enough evidence to determine cause). Most (>90%) of the collared calves remained in Idaho during all of the Island Park Zone elk hunting seasons, while 2 calves ventured into Montana during the latter part of the general season. Of the 10 calves that retained their collars throughout the winter migration, 6 migrated to winter ranges in Montana (from the ID-MT border to as far north as Moose Creek in the Madison Valley), 3 wintered along the west side of Henry's Lake (Duck Creek), and 1 migrated to the traditional Island Park winter range on the Sand Creek desert (wintered east of Hamer). The calf that migrated to the Sand Creek desert was collared in the east end of the Shotgun Valley (Icehouse Creek), while all of the calves collared around Henry's Lake stayed around the lake or moved to Montana. The year two effort (2010) focused in the western portion of 61 (Centennial Mountains), from Icehouse Creek to I-15. Department personnel collared 42 newborn calves in the study area during the spring of 2010, with a good distribution of collared calves from east to west. The movements and survival of these calves will be monitored through the spring of 2011, and a final project report to be completed during the summer-fall of 2011.

During the winter of 2008-2009, 39 elk were translocated from GMU 74 (near Swan Lake) to winter range in GMU 60A (Egin-Hamer Road). These elk were a repeat depredation problem in GMU 74. All of the elk tested negative for Brucellosis prior to the translocation.

Domestic elk operations located in this zone present a significant risk of impacting wild herds. Many of these operations are shooter bull based with large pens and are within occupied elk range. This leads to significant opportunity for domestics to contact wild elk through the fence or by escape. This presents risk of disease transmission and genetic introgression.

Inter-specific Issues

Unfortunately, little evidence exists to evaluate the potential relationships between elk, mule deer, and moose in the Island Park Zone. White-tailed deer are scattered throughout the Island Park Zone mainly along riparian corridors, and appear to be expanding their range within the Zone. Heavy grazing/browsing by deer, elk, and moose may alter Columbian sharp-tailed grouse habitats.

Domestic sheep and cattle grazing occur throughout the Island Park Zone which could pose some competitive concerns for elk, especially on winter range during drought years.

Predation Issues

Black bear densities appear to be moderate and stable in the Island Park Zone. Grizzly bear numbers are increasing and their range seems to be expanding westward in the Zone. Mountain lions are relatively rare. Coyotes are common, especially in the winter range portion of Island Park Zone, but are not known to have much impact on elk populations. Wolves introduced by the USFWS in Yellowstone National Park have become established in the Island Park zone, which could affect other predators and this elk population.

Winter Feeding Issues

No Department-sponsored elk feeding activities occur in the Island Park Zone except under emergency situations. Agricultural encroachment on Sand Creek winter range increases risk of elk depredations on stored crops, especially under adverse winter conditions. Some feeding by private citizens, resulting in the short-stopping of elk, has occurred on Ashton Hill. Educational efforts need to continue to give non-sanctioned feeders a better understanding of problems associated with artificially-fed elk.

During the winter of 2007-2008, approximately 800 mule deer were fed on an emergency basis at Sand Creek WMA. No elk were observed on this feed line during the operation, but elk were observed in the vicinity. During the very end of the winter of 2008-2009, the Department baited (10-15 bales of hay) a small group of elk (approximately 12) away from Ashton. The elk had been feeding on a hay stack and were staying in close proximity to the highway. The baiting was used to move them away from the highway, decreasing the public safety risk. Also during the winter of 2008-2009, approximately 200 elk wintered above the Sand Creek ponds. These elk had essentially become "trapped" in the area as snow accumulated quickly on the desert to the west. The Department was poised to supply these elk with supplemental feed if conditions warranted it, but the decision was made that conditions for these elk were satisfactory and the elk were not fed. No feeding or baiting occurred during winter 2010-2011.

Conversion of elk winter range into agricultural fields and domestic elk farms will likely increase depredation problems within this zone. These elk are now migrating west to the Hamer area during moderate to severe winters. This area has been almost completely converted to agricultural fields and offers very little for wintering elk. The department has resorted to depredation hunts in this area as thousands of elk depredate hundreds of widely scattered haystacks. Periodically, agricultural producers dump excess potatoes in the Sand Creek Desert, and elk have been observed wintering on these sites.

Information Requirements

Sightability estimates are needed periodically to monitor this elk population. Also, better knowledge of summer/fall spatial distribution of this elk herd could improve our ability to achieve harvest objectives. In addition, this information is valuable to assess the effectiveness of the travel management policy on the Targhee National Forest. A better understanding of interstate movements of the Island Park elk, particularly those moving to winter ranges in Montana, could improve our harvest management and allow us to better tailor our season structure to facilitate interstate elk management cooperation. The ongoing elk calf survival and movements study in GMU 61 should improve our understanding of this populations movements and harvest availability.

Elk
Island Park Zone (GMUs 60, 60A, 61, 62A)

Square Miles =	2,394	3-Year Averages	
% Public Land =	70%	Hunters per sq mi =	1.03
Major Land Type =	Forest/ Rangeland	Harvest per sq mi =	0.22
		Success Rate =	22%
		%6+ Points =	34%

Winter Status & Objectives

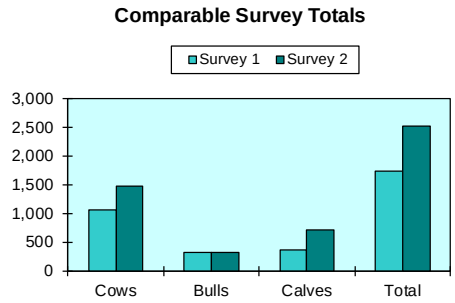
	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
60	ND				0	0	0
60A	2010	1,476	313	190	1,200 - 1,800	400 - 575	250 - 375
61	ND				0	0	0
62A	ND				0	0	0
Zone Total		**1,476**	**313**	**190**	**1,200 - 1,800**	**400 - 575**	**250 - 375**
Bulls per 100 Cows			**21**	**13**		**30 - 35**	**18 - 22**

Note: ND = no survey data available.

Population Surveys

	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
60	ND					ND				
60A	2006	1,069	315	364	1,748	2010	1,476	313	722	2,512
61	ND					ND				
62A	ND					ND				
Comparable Surveys Total		**1,069**	**315**	**364**	**1,748**		**1,476**	**313**	**722**	**2,512**
Per 100 Cows			**29**	**34**				**21**	**49**	

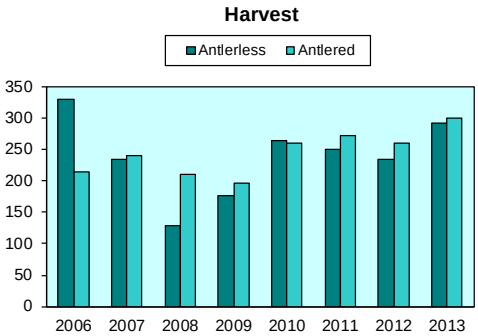
Note: ND = no survey data available.

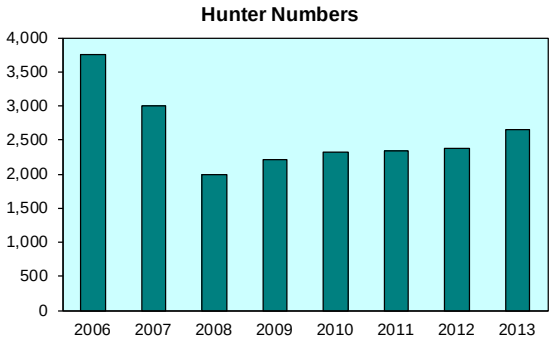


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	330	235	128	176	265	250	234	293
'A' Tag	67	76	51	82	86	55	103	84
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	263	159	77	94	179	195	131	209
Antlered Harvest	214	241	211	196	260	273	260	301
'A' Tag	110	151	157	132	146	158	184	164
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	104	90	54	64	114	115	76	137
Hunter Numbers	3,760	2,994	1,990	2,208	2,321	2,337	2,378	2,653
'A' Tag	2,403	1,579	1,441	1,515	1,516	1,501	1,657	1,887
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	1,357	1,415	549	693	805	836	721	766
% 6+ Points	24	30	46	39	38	23	32	47

Note: % 6+ pts does not include spike-only harvest.





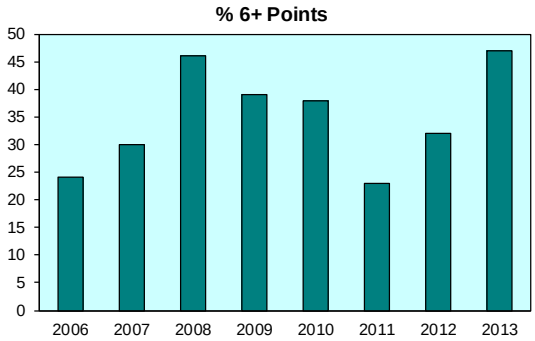


Figure 25. Island Park Zone Elk Status and Objectives.

Teton Zone (GMUs 62, 65)

Management Objectives

Objectives for Teton Zone (Figure 26) are to maintain 150-250 cows and 35-55 bulls, of which 15-35 should be adult bulls. This represents approximately a 17% reduction from 1996 levels and is designed to eliminate artificial feeding operations at Victor, Conant Creek, and Felt as directed by the Wildlife Brucellosis Task Force Report and Recommendations to the Governor (September 1998). Following elimination of feeding, the population will be allowed to recover to the extent it can be supported on natural forage. Population manipulation will be accomplished primarily through public hunting; however, capture and translocation may be used if hunting is unsuccessful in achieving objectives.

Radio collar information suggests that well over half of the elk in this zone spend spring, summer, and fall in Wyoming or Yellowstone National Park. They often do not enter Idaho until after the general hunting seasons are over. This presents a difficult challenge for management. These migratory elk provide little opportunity for Idaho hunters, particularly in the eastern portion of GMU 65 where they cause depredation problems during winter.

Historical Perspective

Reports of elk in the 1800s and early 1900s are imprecise and inconclusive for this area; however, it is likely elk were present. General either-sex hunting was allowed until the mid-1970s. At that time, over-harvest became a concern and the format was changed to allow 5 days of general hunting for bulls only. Hunting for antlerless elk was restricted to permits. Winter range in the zone has always been limited by elevation and associated deep snows, and by agricultural development. The elk population was relatively stable through the 1980s with 50-60 animals wintering in the Game Creek/Moose Creek area, 30-40 animals wintering along Teton River in the basin, 40-50 animals being fed at a ranch on Conant Creek, and approximately 100 elk wintering in and adjacent to Teton River and its tributaries north of State Highway 33. Elk populations increased dramatically in the 1990s. The surveys conducted during the winters of 2000-2001 and 2005-2006 estimated 337 and 371 total elk, respectively. However, the most recent survey produced an estimate of 210.

Habitat Issues

Although extensive logging and roading on national public lands over the last 3 decades has reduced elk habitat effectiveness and elk security, ample summer range remains. True winter range has always been limited in this zone due to high elevations and associated deep snows and severe temperatures. A large area of winter range in the western portion of GMU 62 has been converted to agriculture. Some of this land is now enrolled in the CRP program. Elk winter range was lost to the construction and subsequent failure of the Teton Dam, although the greatest habitat loss associated with that event was deer habitat. Recently, urban sprawl, particularly in the east portion of GMU 65, has crept up the hillsides and reduced much of what limited winter range existed in that portion of the zone. Additionally, recent increases in winter recreation (snowmobiles and skiing) likely reduce suitable winter range.

Biological Issues

The most pressing biological issues in this zone relate to the overall size of the wintering population in GMUs 62 and 65. The Teton Basin population (GMU 65) has increased over the past 10 years and consists of 2 groups. One herd winters east and south of Victor. It is estimated the winter range in the area could support 50-60 animals. Addressing overpopulation through harvest is difficult in this area because many of the animals are in Wyoming until late winter. The other group winters along the Teton River in Teton Basin. They have increased to 130 animals and pose a major depredation threat under normal winter conditions. This herd could potentially be controlled with hunting, as they most likely move to the Teton Basin from the Big Hole Mountains.

There are two groups of elk that have been historically fed in GMU 62. The Department has undergone many strategies to move or redistribute these elk through hunting. These animals have been fed during winter on private ranches at Teepee Creek and Conant Creek. Both feed grounds have been eliminated. As both a brucellosis control method and to comply with Commission policy, annual feeding operations should be eliminated. These feed grounds likely short-stopped elk that historically migrated further to the west during the winter. These elk summer in Wyoming and in the Bechler Meadows area of Yellowstone National Park.

Domestic elk operations in this zone present a significant risk to wild herds. Many of these operations are shooter bull-based, with large pens within occupied elk range. This leads to significant opportunity for domestics to contact wild elk through the fence or by escape. This presents risk of disease transmission and genetic introgression. This occurred in the Teton Zone in August of 2006 when approximately 160 domestic elk escaped from the Chief Joseph hunting preserve. Many of the elk were destroyed by hunter and agency personnel but an unknown number are still at large.

Inter-specific Issues

This zone contains a good mule deer population, a significant white-tailed deer population in Teton Basin, and a strong moose population. The area is grazed extensively by domestic livestock. Inter-specific relationships among these species and elk are not monitored and are poorly understood. There is concern over elk herds establishing winter use in traditional mule deer winter range in Teton Canyon.

Predation Issues

Black bear densities appear to be moderate and stable in Teton Zone. Mountain lions are relatively rare. Coyotes are common, but are not known to have much impact on elk populations. Grizzly bear numbers are increasing and the range seems to be expanding southward in the Zone. Wolves introduced by USFWS in Yellowstone National Park in 1995 have become established, which could affect elk. Three established wolf packs have territories that are at least partially within the Teton Zone (Biscuit Basin, Bitch Creek, and Chagrin River [WY]).

Winter Feeding Issues

Winter feeding has occurred at several locations in this zone on a regular basis. Continued annual feeding at these sites is in direct conflict with Commission policy and creates opportunities for brucellosis transmission. Observations during the 2000-2001 aerial survey indicated that most elk in this zone were associated with private feeding operations. Observations during the 2005-2006 aerial survey indicate that many elk were still associated with private feeding in this zone but many were more spread out on smaller residential feed sites in the Teton Valley. During the winter of 2007-2008, most elk in the Teton Valley were concentrated at a Department sanctioned bait site along the Teton River (see below). A description of the history of each feed site follows.

Victor - A herd of approximately 50 elk traditionally wintered in the foothills east and south of Victor. Around 1990, a landowner began feeding this elk herd, which has grown each year and now numbers approximately 200 animals. The Department has rejected all requests to feed elk or establish a permanent feed ground at this site. Permanent stack yards, panels, and hazing have been employed to combat depredations at this site. A large damage payment was made to a nursery in the vicinity, which was then fenced at significant expense. The Department provided hay to this operation on two winters, which were deemed to be emergency cases.

Conant Creek - In the late 1950s, a private landowner began feeding approximately 20 elk on upper Conant Creek. Over the years, the Department has provided this landowner hay to bait the elk away from stored hay and cattle. The number of elk increased and in the interim, the Department tried to work with the landowner to solve the problem with options other than feeding. All such efforts were rejected and the landowner had successfully enlisted the support of politicians and sportsmen in continuing the feeding. Things changed in 2002 when the cattle herd tested positive for brucellosis. Since then, the cattle herd has been destroyed, a fence has been built to keep elk out of the feeding grounds, and no elk have been fed there.

Teepee Creek (Felt) - A landowner on Teepee Creek began feeding elk in the early 1990s. There are approximately 150 elk habituated to this operation. The Department has provided panels to the landowner to protect haystacks but has not provided any feed. During the winter of 2007-2008, a few elk were inadvertently fed in a horse corral but they seemed to disperse from the site later in the season. It is believed this and the Conant Creek operation have short-stopped elk from migrating to winter ranges further west.

During the winter of 2003-2004, the Department and the Winter Feeding Advisory Committee sponsored emergency feeding of 60 elk in the Packsaddle area and 80 elk east of Victor due to harsh winter conditions. During the winter of 2007-2008, the Department baited approximately 130 elk to a feed site along the Teton River in the Teton Valley. It is believed that most of the wintering elk in the Teton Valley were visiting this bait site. A total of 23 tons of hay were fed over a 71-day period. Approximately 80 elk were fed along the Teton River during the 2010-2011 winter. These efforts were designed to limit the potential for disease transmission between elk and cattle by baiting elk away from livestock feeding areas.

Information Requirements

A comprehensive inventory of winter range in this zone is needed to fully accomplish the objective of ending all winter feeding. The condition of some winter ranges may provide an opportunity for enhancement for elk, perhaps through seeding, burning, or changes in livestock management. As part of this, an assessment of the location, quality, and remaining terms of enrollment of the area's CRP lands is essential if the fed populations in this zone are to become self-sufficient. Continued work with private landowners in the Zone to secure stored crops and winter feed lots is also important to segregate wintering elk and cattle. Additionally, information on snowmobile use of these lands is needed. If the lands are to be made available to elk, snowmobiles should be discouraged.

Elk
Teton Zone (GMUs 62, 65)

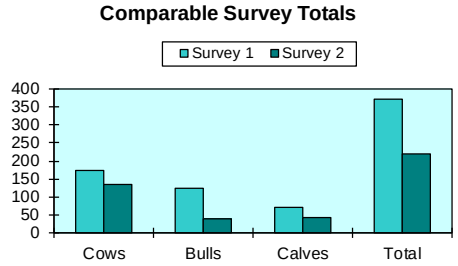
Square Miles =	715	3-Year Averages	
% Public Land =	26%	Hunters per sq mi =	0.69
Major Land Type =	Agriculture	Harvest per sq mi =	0.10
		Success Rate =	15%
		%6+ Points =	41%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
62	2006	82	88	72	100 - 150	20 - 30	10 - 20
65	2006	91	37	23	50 - 100	15 - 25	5 - 15
Zone Total		**173**	**125**	**95**	**150 - 250**	**35 - 55**	**15 - 35**
Bulls per 100 Cows			**72**	**55**		**18 - 24**	**10 - 14**

Population Surveys

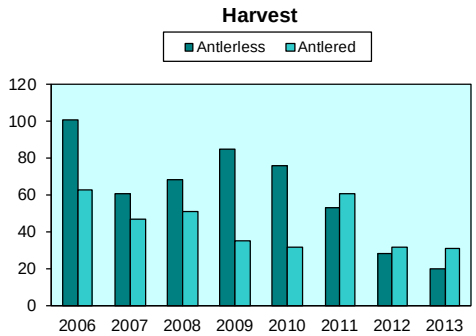
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
62	2006	82	88	38	208	2011	65	7	20	92
65	2006	91	37	35	163	2011	70	34	24	128
Comparable Surveys Total		**173**	**125**	**73**	**371**		**135**	**41**	**44**	**220**
Per 100 Cows			**72**	**42**				**30**	**33**	

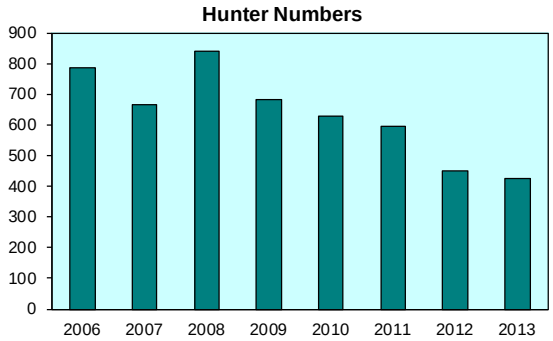


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	101	61	68	85	76	53	28	20
'A' Tag	19	28	44	75	60	34	12	9
'B' Tag	0	0	1	0	0	0	2	0
CH Tag	82	33	23	10	14	19	14	11
Antlered Harvest	63	47	51	35	32	61	32	31
'A' Tag	17	8	7	9	8	11	4	10
'B' Tag	22	17	21	8	6	24	17	10
CH Tag	24	22	23	18	18	26	11	11
Hunter Numbers	785	666	839	681	628	597	451	425
'A' Tag	326	268	396	438	372	363	202	200
'B' Tag	166	145	131	104	108	66	104	89
CH Tag	293	253	312	139	148	168	145	136
% 6+ Points	44	39	56	57	40	39	37	48

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





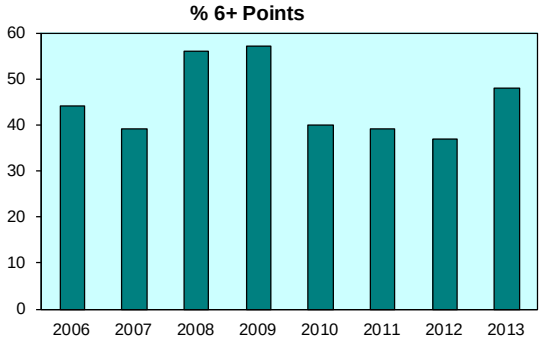


Figure 26. Teton Zone Elk Status and Objectives.

Palisades Zone (GMUs 64, 67)

Management Objectives

Objectives for the Palisades Zone (Figure 27) are to maintain 400-600 cows and 125-200 bulls, of which 75-125 should be adult bulls. An aerial survey conducted during 2009 indicated that the population is at objective for cows and total bulls, and above objective for adult bulls. Current and future management efforts will be consistent with eliminating the artificial feeding operation that was conducted at Rainey Creek, as directed by the Wildlife Brucellosis Task Force Report and Recommendations to the Governor (Sept. 1998). Following elimination of annual feeding, the population will be allowed to recover to the extent it can be supported on natural forage, particularly on winter ranges northwest of Dry Canyon. Population manipulation will be accomplished primarily through public hunting; however, capture and translocation could also be employed. This zone offers most of what little semi-backcountry hunting opportunity remains in eastern Idaho.

Historical Perspective

Reports of elk in the 1800s and early 1900s are imprecise and inconclusive for this area; however, it is likely elk were present. General either-sex hunting was allowed until the mid-1970s. At that time, over-harvest became a concern and the format was changed to allow 5 days of general hunting for bulls only. Hunting for antlerless elk was restricted to permits. Elk damage to haystacks in Swan Valley dates back to the mid-1950s, corresponding with a loss of winter range from inundation by Palisades Reservoir on the South Fork of Snake River. In the mid-1970s, the Department began feeding elk in Rainey Creek to bait them away from livestock feeding operations. This activity continued until 2005 and involved approximately 150 animals. The Department does not plan to feed elk again at Rainey Creek. The elk population wintering in this zone has increased gradually over the last 3 decades.

Habitat Issues

Abundant spring, summer, and fall habitat exists in this zone. Winter range is limited and is more characteristic of mule deer habitat than elk habitat. Most elk winter range has been lost to agriculture and inundation by Palisades Reservoir, and is currently threatened by proposed housing developments. Potentially important winter ranges in the northern portion of the zone (Grandview Point) are now nearly vacant, likely due to displacement of elk by snowmobile activity. Winter range shrub communities on slopes in the vicinity of the mouth of Rainey Creek appear to have suffered from years of overgrazing by elk and mule deer. Mature mountain mahogany stands throughout the zone may be providing only limited forage, in addition to precluding all but a sparse understory of other species.

Biological Issues

The most pressing biological issues in this zone are related to the winter feeding of elk and the condition of available winter range for elk. The elk herd wintering in Rainey Creek, about 150 animals, has a documented brucellosis exposure rate exceeding 25%, based on testing of >100 individuals. Late hunts have had limited success in reducing this population. Until 2005, a program was implemented to capture and remove all positive-testing female animals and translocate negative testing animals to winter ranges northwest of Dry Canyon. This program

was discontinued after 2005 and the Department has discontinued all feeding in Rainey Creek. Although a significant number of elk continue to use the Rainey Creek drainage during the winter, elk were more dispersed throughout the drainage, and adjacent areas, during the 2009 survey than they were during feeding operations prior to 2005. The Department goal is to keep wintering elk and cattle separated in Swan Valley using exclusionary devices (i.e., paneling, fencing) and hazing.

Domestic elk operations in this zone present a significant risk to wild elk herds. Many of these operations are shooter bull-based, with large pens in occupied elk range. This provides significant opportunity for domestic elk to contact wild elk through the fence or by escape. This situation creates a risk of disease transmission and genetic introgression.

Inter-specific Issues

In addition to elk, the Palisades Zone is home to an important mule deer population, a strong moose population, and is grazed extensively by domestic livestock. Inter-specific relationships among these species and elk are not well-monitored and are poorly understood. Competition between elk and mule deer is probably occurring in the immediate vicinity of Rainey Creek, where both species were frequently fed from the mid-1970s through 2005. There is also concern over wintering elk herds are using traditional mule deer winter range in the Heise area.

Predation Issues

Black bear and mountain lions are common in this zone. Hunters in this elk zone have reported seeing black bears consistently. Coyotes are common, especially on the winter range, but are not known to have much impact on elk populations. Wolves introduced by USFWS in 1995 have established a territory in GMU 67, which could affect elk populations. There have been several confirmed grizzly bear sightings in this elk zone although it is not known whether these bears were moving through the area or consistently use the GMU's that make up the Palisades elk zone.

Winter Feeding Issues

In the late 1970s, a rancher near Irwin began feeding cattle near the mouth of Rainey Creek and along the USFS boundary. Concurrently, large areas of browse in the area were being converted to agriculture. The combination of these factors resulted in elk damaging stored hay and taking advantage of the livestock feed-lines. The Department resolved these conflicts by baiting the elk up into Rainey Creek. It is the Department's intent to eliminate all but emergency feeding of elk in this zone. This should also reduce any brucellosis-related concerns.

During the 2007-2008 winter, the Department baited approximately 125 elk to a site above Swan Valley on Pine Creek bench to prevent human safety concerns along Highway 26. A total of 24 tons of hay were fed over a 68-day period for this operation. Also during the 2007-2008 winter, Department personnel used snow machines to push elk away from livestock operations in Swan Valley on numerous occasions. The region responded to numerous complaints about elk-cattle interactions and elk-hay interactions during the winter 2010-2011; although no feeding or baiting activities were initiated.

Information Requirements

A comprehensive inventory of winter range in this zone is needed. Although some winter range in the Zone has been lost forever (e.g., areas flooded by Palisades Reservoir), the condition of some winter ranges may provide opportunities for habitat enhancement for elk, perhaps through burning or changes in livestock management. As part of this, an assessment of the location, quality, and remaining terms of enrollment of the area's CRP lands will be needed.

Elk

Palisades Zone (GMUs 64, 67)

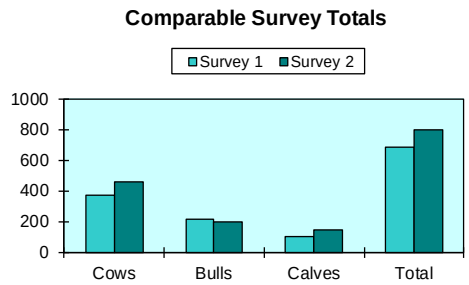
Square Miles =	771	3-Year Averages	
% Public Land =	58%	Hunters per sq mi =	1.24
Major Land Type =	Forest/ Agriculture	Harvest per sq mi =	0.20
		Success Rate =	16%
		%6+ Points =	61%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
64/65w/67	2009	461	195	153	400 - 600	125 - 200	75 - 125
Zone Total		**461**	**195**	**153**	**400 - 600**	**125 - 200**	**75 - 125**
Bulls per 100 Cows			**42**	**33**		**30 - 35**	**18 - 22**

Population Surveys

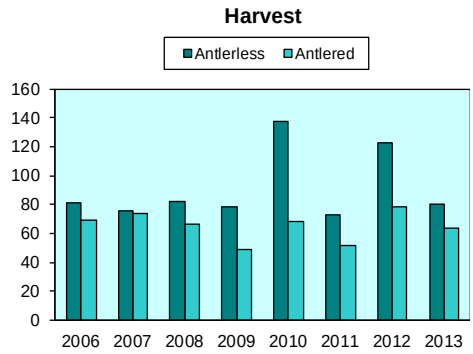
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
64/65w/67	2004	375	214	99	688	2009	461	195	141	797
Comparable Surveys Total		**375**	**214**	**99**	**688**		**461**	**195**	**141**	**797**
Per 100 Cows			**57**	**26**				**42**	**31**	

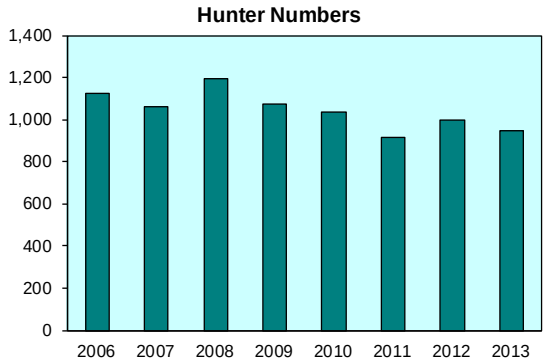


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	81	76	82	78	138	73	123	80
'A' Tag	80	74	72	71	106	62	99	55
'B' Tag	1	1	0	0	0	0	0	1
CH Tag	0	1	10	7	32	11	24	24
Antlered Harvest	69	74	66	49	68	52	78	64
'A' Tag	29	17	11	12	12	14	19	12
'B' Tag	40	52	51	31	41	31	50	46
CH Tag	0	5	4	6	15	7	9	6
Hunter Numbers	1,125	1,064	1,192	1,076	1,034	915	996	949
'A' Tag	801	703	750	692	676	601	699	583
'B' Tag	324	310	345	295	266	220	195	251
CH Tag	0	51	97	89	92	94	102	115
% 6+ Points	27	63	45	59	29	54	54	75

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





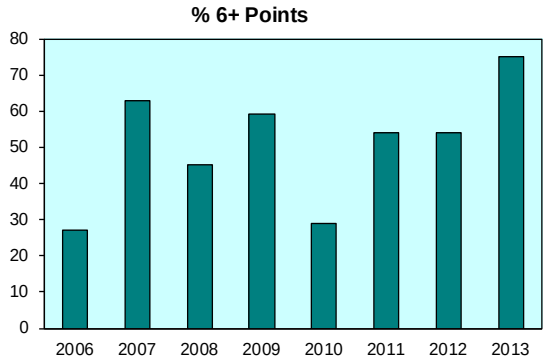


Figure 27. Palisades Zone Elk Status and Objectives.

Tex Creek Zone (GMUs 66, 69)

Management Objectives

Objectives for the Tex Creek Zone (Figure 28) are to winter 2,000-3,000 cows and 425-625 bulls, of which 250-350 should be adult bulls. The most recent aerial survey information, winter of 2012-2013, indicates that cows, bulls, and adult bulls are all within objective. However, a large number of elk that summer in GMU 66A (Diamond Creek Zone) winter in the Tex Creek Zone and objectives differ between the zones, therefore managing harvest and opportunity has been problematic. Management of Tex Creek elk should be coordinated with management of GMU 66A (Diamond Creek Zone). Depredation problems will be solved using hunting as a first option.

Historical Perspective

Elk were present in the Tex Creek Zone during the late 1840s, as reported by Osborne Russell in Journal of a Trapper (1914). According to residents of the area, elk were rarely seen during the early twentieth century. The elk population increased during the 1940s and by the mid-1950s depredation complaints on winter wheat were common. The first modern hunt was implemented in 1952 and consisted of 50 permits. Beginning in 1955, general hunting was allowed and has continued in some form to the present.

The elk population continued to grow through 2005, when the population was estimated at 5,200. Controlling growth of the Zone's elk population has driven harvest strategies during this period. Recently, historical over-harvest of bulls and under-harvest of cows has been addressed with implementation of the dual-tag zone system with general antlerless hunts and increased antlerless tags on late controlled hunts. Recent aerial surveys conducted in 2007, 2010, and 2013 estimated the population at 4,066, 3,831, and 3885 elk, respectively.

Habitat Issues

Habitat throughout the Tex Creek Zone is, or has the potential to be, highly productive. The fertile, mineral rich soils of the area produce diverse plant communities including sagebrush-grasslands, extensive aspen patches, and cool moist conifer stands primarily on north- and east-facing slopes. Terrain is generally mild and much of the private land in the area is dry-farmed with cereal grains. Nearly half of the zone is private land with the balance of public lands administered by USFS, BLM, IDL, and the Department. A significant portion of the private land is CRP-enrolled and is contributing substantially to the area's carrying capacity during all seasons. Tex Creek WMA, partially owned and totally managed by the Department, provides 30,000 acres of prime winter habitat for elk, mule deer, and moose in the zone. This land was purchased to mitigate for habitat inundated or destroyed by the Ririe, Palisades, and Teton Dams.

Biological Issues

From a biological perspective, elk in GMUs 66-69 (Tex Creek Zone) and 66A (Diamond Creek Zone) should be managed as one population, in the same zone. The Tex Creek elk are productive and their future management will be heavily influenced by the need to control this population. Placing all seasonal ranges of these elk in the same zone would be appropriate to accomplish this objective.

Due to concern over total wintering elk numbers in GMU 69 being too high for the area and their impacts on the local mule deer herd, the antlerless hunt was restructured in 2004. The hunt was moved from 21 October - 7 November to 15 - 30 November. The objective of this change was to harvest more cows, especially those migrating into GMU 69 from GMU 66A. The hunt was successful in harvesting more cows but brought about some unethical hunter behavior. The later season, combined with some very unusual early storms and a lack of hunting pressure in late October and early November, brought large herds of elk onto winter range before the hunt opened. This left elk vulnerable and some hunters acted inappropriately. The hunt was successful at harvesting more elk, but even with the larger harvest, the herd was still estimated to be 5,200 animals in a post-hunt aerial survey. In 2005, the hunt was changed back to a 21 October opener but still remained open until 30 November. The season structure was changed again in 2013. The rifle portion of the A tag was shortened from 5 weeks to 3. The season now runs Oct 22 thru Nov 16. The statewide elk management plan was revised in 2013. As part of this revision an elk hunter survey indicated that elk hunters would like elk populations to be higher. The region was given direction to increase elk populations in those zones where they thought that increases were feasible and responsible; Tex Creek was identified as one of those zones.

Domestic elk operations in this zone present a significant risk to wild elk herds. Many of these operations are shooter bull-based, with large pens in occupied elk range. This provides significant opportunity for domestic elk to contact wild elk through the fence or by escape. This situation creates a risk of disease transmission and genetic introgression.

Inter-specific Issues

The Tex Creek Zone supports an important mule deer population. During the winter of 1992-1993, this deer population sustained significant mortality and did not recover as hoped. During the winters of 2005-2006 and 2007-2008, this population, along with other eastern Idaho mule deer populations, again sustained significant fawn mortality due to severe and extended winter conditions. The area also supports a strong moose population and is grazed extensively by domestic livestock. In the past, mule deer and elk appeared to be spatially separated on winter range and there were no known conflicts between elk and moose; however, relationships among these species were not monitored or well understood. A graduate student research project was initiated in 2005 to explore elk and mule deer competition in the Willow Creek Canyon complex (Atwood 2009). This study found that elk and mule deer tended to segregate during mild winters, but that elk moved down onto traditional mule deer winter ranges during severe winters. Although elk ranges during the severe winter entirely encompassed the deer winter range, the winter diets of the species remained fairly segregated, suggesting minimal dietary competition. In addition, elk presence did not significantly affect mule deer movements, diets, and stress levels. More research is needed to address mule deer and elk competition on summer and transitional ranges.

Predation Issues

Black bear densities appear to be low and stable in this zone. Mountain lions are common. Coyotes are also common, especially on the winter range, but are not known to have much impact on elk populations. Wolves introduced by USFWS in 1995 have moved through the area,

which could affect elk. The one established pack in this Zone (Fall Creek) was removed by USDA-Wildlife Services in the summer of 2009 due to repetitive livestock depredations. There are currently no documented wolf packs in this Zone, although several unverified reports have been filed with the Department about 1-2 wolves in GMUs 66 and 69. A few grizzly bears have been reported in GMU 66 by elk and deer hunters..

Winter Feeding Issues

Elk are not fed in this zone except on an emergency basis, which occurred during the winters of 1988-1989, 1992-1993, and 2003-2004. Because of the zone's proximity to known brucellosis-infected herds in Wyoming and Idaho, it is extremely critical that feeding on anything less than a genuine emergency basis be avoided. Large round bales of grass-alfalfa hay have been left in the field on Tex Creek WMA periodically to attract elk to the area and hold them on that winter range.

During winter 2003-2004, approximately 2,000 elk crossed Willow Creek and many were very close to Iona Hill. After a few elk were killed on the railroad tracks close to Iona, the Department decided to drive the elk back to Tex Creek WMA and bait them there with hay to keep them away from town and potential trouble. The operation required two driving operations and feeding ~76 tons of hay to over 1,400 elk. The elk were successfully held until the end of winter.

During the winter of 2007-2008, significant snow pack and extended winter conditions caused approximately 300 elk to move down along the Highway 26 corridor south of Ririe, creating human safety concerns along the roadway. An additional 80 elk moved down along roadways in east Ammon. On numerous occasions Department personnel used snow machines to push these elk groups to the south and east away from roadways. During the winter of 2008-2009, approximately 400 elk moved down near Highway 26 south of Ririe. On one occasion, Department personnel used snowmobiles to push these elk south and east away from the highway. As many as 1,000 elk moved down near Hwy 26 between Clark Hill and Iona during the winter of 2010-2011. The region dealt with dozens of complaints and depredation calls that were associated with these groups of elk but winter feeding was not initiated.

Information Requirements

In 1978, 1979, and 1980, the Department conducted radio-telemetry studies of elk wintering on Tex Creek WMA, the results of which indicated these elk summered primarily in GMUs 66 and 66A with some summering in GMUs 69 and 76. This work was duplicated in 1998-1999 and 2005-2009 with results showing similar trends in distribution and movement. All data on the movements and distribution of Tex Creek Zone elk should be fully analyzed, along with the movements and distribution of Diamond Creek Zone (GMUs 66A and 76) elk, to re-evaluate the management strategy for these intertwined populations.

Literature Cited

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

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

Elk
Tex Creek Zone (GMUs 66, 69)

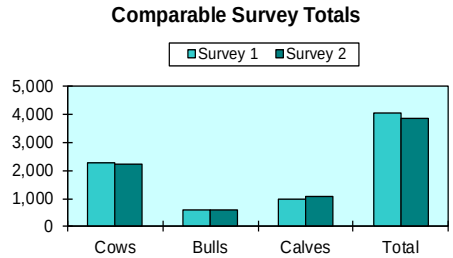
Square Miles =	1,796	3-Year Averages	
% Public Land =	36%	Hunters per sq mi =	2.12
Major Land Type =	Agriculture/Ran	Harvest per sq mi =	0.36
		Success Rate =	17%
		%6+ Points =	29%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
66/69	2013	2,214	583		2,000 - 3,000	425 - 625	250 - 350
Zone Total		**2,214**	**583**	**0**	**2,000 - 3,000**	**425 - 625**	**250 - 350**
Bulls per 100 Cows			**26**	**0**		**18 - 24**	**10 - 14**

Population Surveys

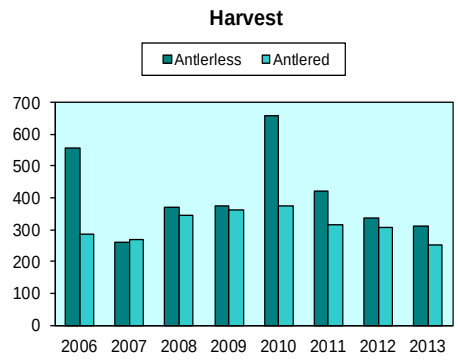
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
66/69	2010	2,277	577	974	4,066	2013	2,214	583	1,088	3,885
Comparable Surveys Total		**2,277**	**577**	**974**	**4,066**		**2,214**	**583**	**1,088**	**3,885**
Per 100 Cows			**25**	**43**				**26**	**49**	

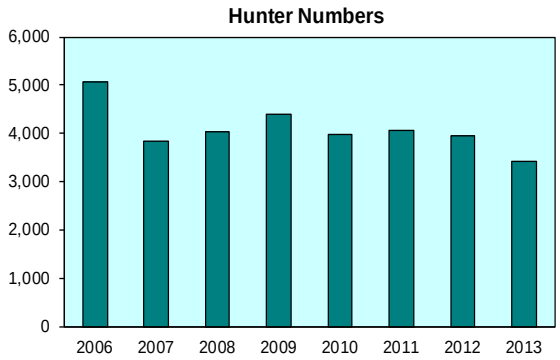


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	558	261	369	374	659	421	338	312
'A' Tag	397	257	348	366	619	402	316	278
'B' Tag	2	1	1	0	6	1	4	8
CH Tag	159	3	20	8	34	18	18	26
Antlered Harvest	285	268	345	364	375	316	308	253
'A' Tag	72	62	65	93	103	52	79	70
'B' Tag	196	202	228	247	266	255	218	174
CH Tag	17	4	52	24	1	9	11	9
Hunter Numbers	5,067	3,836	4,019	4,402	3,985	4,055	3,960	3,422
'A' Tag	3,409	2,672	2,617	3,043	2,686	2,825	2,829	2,244
'B' Tag	979	1,120	1,115	1,123	1,162	1,077	975	1,013
CH Tag	679	44	287	236	137	153	156	165
% 6+ Points	26	25	34	38	26	27	30	32

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





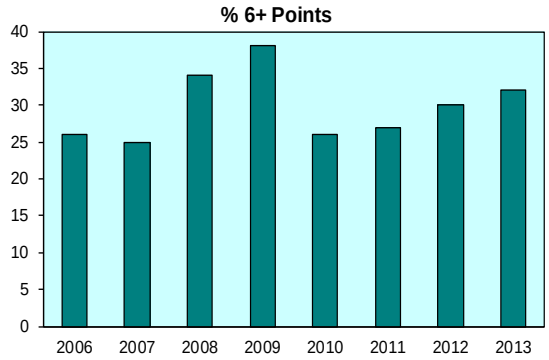


Figure 28. Tex Creek Zone Elk Status and Objectives.

Salmon Zone (GMUs 21, 21A, 28, 36B)

Management Objectives

Objectives for Salmon Zone (Figure 29) are to stabilize the cow elk populations in GMUs 28 and 21A at current levels and increase cows in GMUs 21 and 36B. Objectives are to increase the bull population across all of the Salmon Zone. To stimulate and maintain herd productivity, balance depredation concerns with a reasonably large elk population, and minimize potential impacts on mule deer, a five-year period of herd reduction totaling about 33% of previous numbers was accomplished in GMU 21 in the late 1990s. Antlerless harvest was increased beginning in 2005, but then reduced in all GMUs for 2008 seasons because of a significant reduction in elk numbers across the zone. A quota was established for Salmon Zone B-tags because the 2010 survey showed continued decline in cow and bull numbers. Salmon Zone will continue to be managed to produce general hunting opportunity and 10-14 mature bulls:100 cows postseason.

Historical Perspective

Although present from the time of the first white explorers and trappers, elk were in low abundance in Salmon Zone through much of the twentieth century. From 1917 until the 1940s, parts of GMUs 28 and 36B were designated as no hunting "game preserves." Sixty-two elk from Yellowstone Park were released in Panther Creek drainage (GMU 28) in 1937. As has occurred over much of the west, elk herds have expanded dramatically since the mid-1970s. Today, Salmon Zone winters approximately 7,700 elk. Aggressive antlerless harvest from 1992 to the late 1990s stabilized and reduced rapidly growing herds in GMUs 21 and 21A, and may have reduced growth rates in the other 2 GMUs. Declining calf recruitment and bull:cow ratios in recent years suggest that elk herds may have reached undesirable densities that contributed to declining populations.

About 3,000 people have participated in rifle hunts and 300 in archery hunts (Appendix A) in Salmon Zone in recent years, harvesting approximately 100-400 cows and 500-700 bulls annually.

Habitat Issues

Cattle ranching, livestock grazing, mining, timber harvest, and recreation are the dominant human uses of the landscape in Salmon Zone. Elk depredations on agricultural crops are localized, but are especially pronounced in dry years.

In some areas of Salmon Zone, elk winter in mature stands of mountain mahogany that appear relatively stagnant and unproductive. Forests are slowly encroaching into shrub and grassland communities. Spread of noxious weeds such as knapweed and rush skeleton weed could ultimately have significant impacts on winter range productivity.

A large-scale forest fire occurred in the western portion of GMU 28 in 2000. Fires removed forest canopy in large tracts, creating conditions for increased elk forage production.

Biological Issues

Aerial surveys in 1992 and 1994 found exceptionally high winter elk densities in GMU 21A, a migratory herd shared by Idaho and Montana. Winter range concerns in Idaho and depredation concerns in Montana prompted significant increases in antlerless hunting in both states with a goal of reducing the herd to 2,000-2,500 wintering elk. The average total antlerless harvest increased from about 100 animals to about 300 animals, and by 2000, the herd was reduced to approximately 1,800 animals. Similar reductions occurred in GMU 21; total winter elk numbers dropped to 1,550 during surveys in 2001. Antlerless elk harvest was discontinued in GMUs 21 and 21A in 2000. The population in GMU 21A dramatically increased by 2005, reaching 3,345 animals. Therefore, antlerless harvest was implemented in the 2005 season. However, by 2008 numbers fell again to the top of objective levels and antlerless harvest was reduced for 2008. GMU 21A continued to see a slight decline in the cow population and a drop of almost half of the bulls between 2008 and 2010. The cow population in GMU 21 decreased to numbers seen in the early 2000s and is currently the only GMU in the Salmon Zone below the cow objective level, but bull numbers dropped by more than half between 2008 and 2010.

GMUs 28 and 36B experienced major population increases (57% and 30%, respectively) through the 1990s, despite modest increases in antlerless harvest. Antlerless harvest was reduced after 2000, particularly in GMU 28, in response to low calf:cow ratios. Total population in GMU 36B had been stable, but the sex ratio has become more skewed toward females. In contrast, cow numbers in GMU 28 reached record high numbers in 2005 and exceeded objectives by 1,000 animals. As a group, these GMUs were only moderately productive, averaging 30-35 calves:100 cows during the 1990s; production has declined and become erratic in recent years. Zone-wide, we observed 25 calves:100 cows in 2010. The decline in productivity in Salmon Zone as elk numbers increased is worrisome. Partly as a result of this modest productivity and partly because they are relatively accessible general hunt GMUs, GMUs 28 and 36B have weak bull:cow ratios (12-14 bulls per 100 cows). By 2008, numbers in GMU 36B fell 55% to below objective levels for both cows and bulls and levels in GMU 28 fell by 34%, prompting severe reductions in antlerless harvest. The 2010 survey revealed that GMU 36B cow population was within the bottom of the objective range and bull numbers had increased slightly, but remained below the objective level. However, both the cow and bull population in GMU 28 continued to decline despite minimal antlerless harvest. Quotas were implemented in 2010 for rifle bull tags in the Salmon Zone in order to decrease bull harvest and begin to bring the bull population back into management objective range.

Inter-specific Issues

This zone contains the majority of the most productive deer GMUs in Salmon Region; parts of GMUs 21, 21A, 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 may be particularly pronounced during severe winters when deep snow moves elk down onto deer winter ranges. Similar problems may also occur with bighorn sheep, but the amount of habitat overlap is much less.

Predation Issues

Black bear densities appear to be moderate in Salmon Zone. Mountain lion densities are at least moderate and may have declined in recent years. Coyotes are common, but not known to have much impact on elk populations. At least four packs of wolves have become established in GMU 28 since reintroduction by the USFWS in 1995. Other packs are resident in GMUs 21A, 21, and 36B. The addition of wolves will likely have an impact on black bear, mountain lion, and coyote populations. At some level, predation could benefit elk herds to the extent that it keeps elk 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, it is unclear what the net impact of predation is with the new mix of large predators.

Winter Feeding Issues

Aside from an occasional small private feeding activity and a few elk fed incidental to the rare deer feeding operations, elk have not been deliberately fed recently in Salmon Zone.

Information Requirements

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

Elk

Salmon Zone (GMUs 21, 21A, 28, 36B)

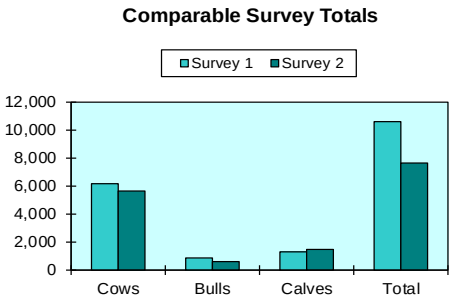
Square Miles =	2,651	3-Year Averages	
% Public Land =	95%	Hunters per sq mi =	0.89
Major Land Type =	Forest	Harvest per sq mi =	0.23
		Success Rate =	26%
		%6+ Points =	20%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
21	2010	1,012	89	69	1,200 - 1,800	250 - 350	150 - 225
21A	2010	1,776	173	98	1,200 - 1,800	250 - 350	150 - 225
28	2010	2,084	241	150	1,500 - 2,300	325 - 475	175 - 275
36B	2010	756	103	63	700 - 1,100	150 - 250	75 - 125
Zone Total		**5,628**	**606**	**380**	**4,600 - 7,000**	**975 - 1425**	**550 - 850**
Bulls per 100 Cows			**11**	**7**		**18 - 24**	**10 - 14**

Population Surveys

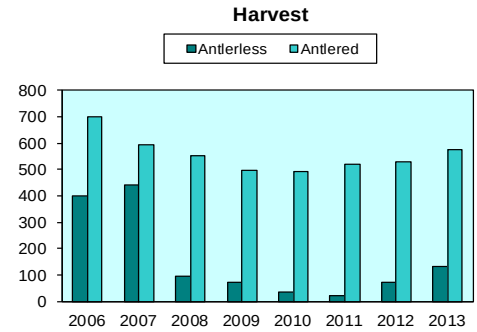
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
21	2008	1,429	184	240	1,853	2010	1,012	89	164	1,265
21A	2008	1,854	345	485	3,345	2010	1,776	173	500	2,449
28	2008	2,219	297	480	4,547	2010	2,084	241	531	2,856
36B	2008	680	58	128	866	2010	756	103	237	1,096
Comparable Surveys Total		**6,182**	**884**	**1,333**	**10,611**		**5,628**	**606**	**1,432**	**7,666**
Per 100 Cows			**14**	**22**				**11**	**25**	

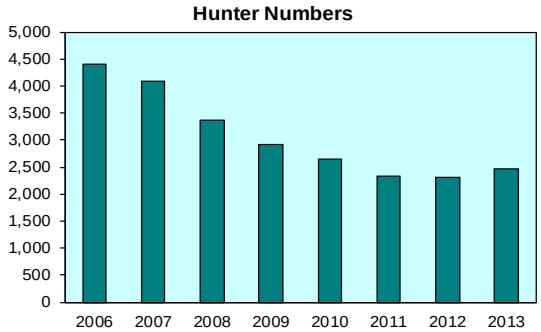


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	401	442	97	73	36	23	71	133
'A' Tag	93	104	64	62	21	9	14	80
'B' Tag	1	9	1	1	0	1	5	1
CH Tag	307	329	32	10	15	13	52	52
Antlered Harvest	698	594	554	499	491	520	531	575
'A' Tag	26	26	60	27	25	32	18	17
'B' Tag	659	555	489	471	459	488	513	557
CH Tag	13	13	5	1	8	0	0	1
Hunter Numbers	4,397	4,094	3,375	2,918	2,656	2,330	2,308	2,477
'A' Tag	452	532	430	387	254	266	178	357
'B' Tag	3,302	2,837	2,876	2,514	2,341	2,042	2,058	2,041
CH Tag	643	725	69	17	61	22	72	79
% 6+ Points	27	22	22	19	27	18	22	19

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





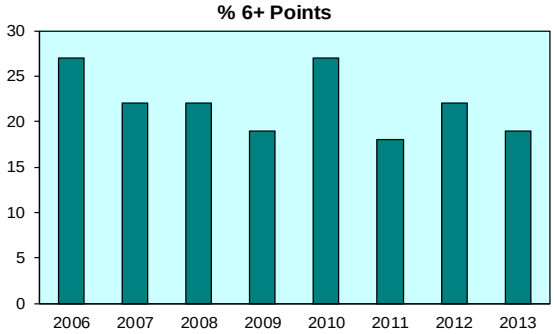


Figure 29. Salmon Zone Elk Status and Objectives.

Lemhi Zone (GMUs 29, 37, 37A, 51)

Management Objectives

Objectives for Lemhi Zone (Figure 30) are to reduce the elk population to approximately 2,000 cows and 650 bulls. Harvest objectives designed to reduce elk numbers in Lemhi Zone through 2007 were moderately successful. The reduction was intended to stimulate and maintain herd productivity, balance depredation concerns with maintaining a reasonably large elk population, and minimize potential impacts on mule deer. Herds will be managed to maintain 10-14 mature bulls:100 cows in GMU 37, 14-18 mature bulls:100 cows in GMU 51, and 18-22 mature bulls:100 cows in GMUs 29 and 37A.

Historical Perspective

Elk abundance was low in Lemhi Zone through much of the twentieth century. Most of the zone has been managed for decades under very conservative controlled hunt strategies. In 1993, GMU 51 changed from general any-bull harvest to general hunting for spike bulls with controlled any-bull tags. As has occurred over much of the west, elk herds have expanded dramatically from the mid-1970s through the 1990s. Today, Lemhi Zone winters approximately 4,800 elk, a reduction of 1,800 from recent highs but still 800 more than during the mid 1990s.

About 1,400 people each year participated in rifle hunts in Lemhi Zone through the late 1990s. However, with increases in controlled and general antlerless elk opportunities, hunter numbers have increased to approximately 2,500 per year. Conservative bull harvest management has produced exceptional bull:cow ratios and a reputation for large mature bulls. The percent of 6 point bulls or better in the harvest jumped 10% in 2013 over the preceding 7 years. Controlled bull hunts in this zone have become very desirable; rifle tags are much in demand and difficult to draw. The area's reputation for many mature bulls has also made this zone a very attractive archery hunt; up to approximately 1,300 people have participated in recent years, 40-50% of them in GMU 29 alone.

Habitat Issues

Cattle ranching, livestock grazing, and recreation are dominant human uses of the landscape in Lemhi Zone. The zone is in a generally arid region where forage production can be strongly influenced by growing season precipitation. During drought years, high elevation mesic habitats are more heavily utilized by elk, while low elevation riparian areas and wet meadows are more heavily utilized by cattle. Elk depredations on agricultural crops are common and are especially pronounced in dry years. Expanded irrigated agriculture, passage of legislation authorizing depredation payments, and legislation authorizing depredation hunts combined with increasing elk populations have led to more depredation complaints in GMU 51.

In some areas of Lemhi Zone, elk winter in mature stands of mountain mahogany which appear relatively stagnant and unproductive. In other areas, elk winter on open sagebrush-grassland ridgetops. 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

In 1992, GMUs 29 and 37A contained strongly-performing elk populations; a base of 1,200 cows was producing 600 calves and 600 bulls. By 1998 and into 2003, the herd had increased to over 1,700 cows, but was still only producing 600 calves. This loss in productivity may have been related to higher-than-desirable elk densities. Between 2007 and 2011 the number of cows decreased to 1300 while maintaining about 600 calves. Through intensive antlerless harvest, the herd in GMU 37 was significantly reduced. Harvest was reduced beginning in 2003 as the herd neared desired levels. This herd is still over objective for both cows and bulls.

Inter-specific Issues

Although historically Lemhi Zone supported high deer densities, the zone currently has relatively modest deer populations. Current high elk densities may be having some impact on deer productivity.

When elk numbers are high, as they are currently, livestock operators often perceive elk to be strong competitors for range forage. However, elk generally remove a minor portion of forage compared to livestock.

Predation Issues

Black bear densities appear to be low and stable in Lemhi Zone. Mountain lion densities are low to moderate and appear to have increased in recent years in GMUs 29, 37, and 37A, probably partly due to increased elk densities. Coyotes are common, but not known to have much impact on elk populations. Wolf densities are low to moderate throughout the zone and do not appear to be impacting elk productivity.

Winter Feeding Issues

Because this is an arid area with relatively little snowfall, winter feeding has not occurred recently in Lemhi Zone.

Information Requirements

Impacts of elk on mule deer production and survival are suspected but unknown. The most productive elk herds are those maintained at a level below carrying capacity. Better information is needed to identify appropriate elk densities that will maintain optimum productivity and harvest. Better information on elk migration patterns is also needed, particularly between GMU 37 and GMU 36A.

Elk
Lemhi Zone (GMUs 29, 37, 37A, 51)

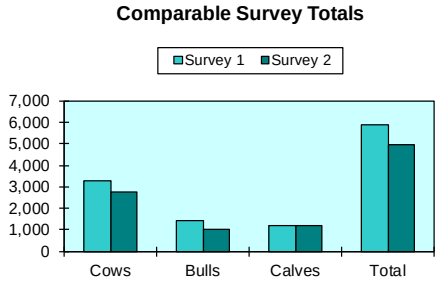
Square Miles =	2,703	3-Year Averages	
% Public Land =	89%	Hunters per sq mi =	0.88
Major Land Type =	Rangeland/Fore	Harvest per sq mi =	0.31
		Success Rate =	35%
		%6+ Points =	44%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
29/37A	2011	1,381	562	323	1,000 - 1,600	300 - 500	200 - 300
37	2011	614	246	153	150 - 250	30 - 50	20 - 30
51	2011	758	197	118	500 - 700	125 - 200	75 - 125
Zone Total		**2,753**	**1,005**	**594**	**1,650 - 2,550**	**455 - 750**	**295 - 455**
Bulls per 100 Cows			**37**	**22**		**30 - 35**	**14 - 18**

Population Surveys

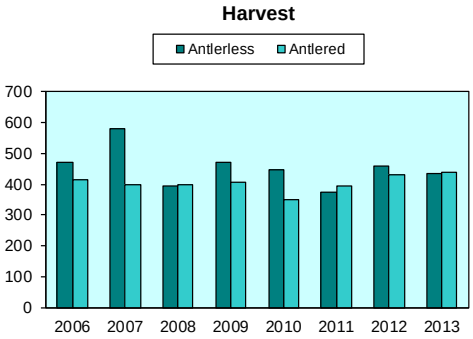
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
29/37A	2007	1,834	614	630	3,078	2011	1,381	562	590	2,533
37	2007	691	349	290	1,330	2011	614	246	315	1,175
51	2003	737	479	281	1,497	2011	758	197	301	1,256
Comparable Surveys Total		**3,262**	**1,442**	**1,201**	**5,905**		**2,753**	**1,005**	**1,206**	**4,964**
Per 100 Cows			**44**	**37**				**37**	**44**	

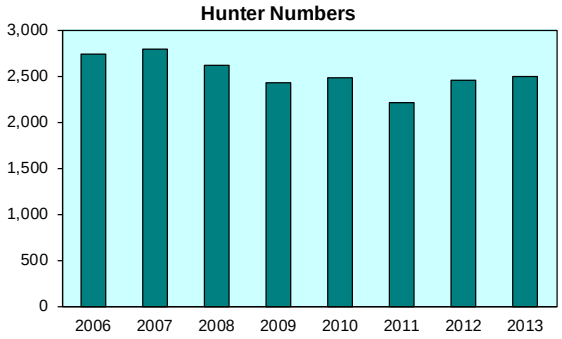


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	473	580	394	472	447	373	459	437
'A' Tag	149	208	82	125	129	95	132	142
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	324	372	312	347	318	278	327	295
Antlered Harvest	416	397	397	408	352	393	431	440
'A' Tag	149	119	149	125	123	158	145	172
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	267	278	248	283	230	235	286	268
Hunter Numbers	2,734	2,796	2,610	2,430	2,482	2,203	2,451	2,496
'A' Tag	1,329	1,230	1,162	1,043	1,102	1,104	1,313	1,359
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	1,405	1,566	1,448	1,387	1,380	1,099	1,138	1,137
% 6+ Points	33	43	35	38	41	41	39	51

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





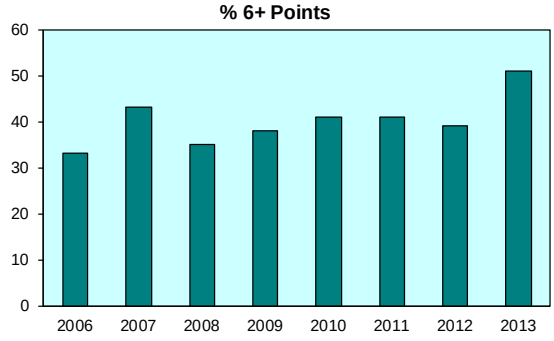


Figure 30. Lemhi Zone Elk Status and Objectives.

Beaverhead Zone (GMUs 30, 30A, 58, 59, 59A)

Management Objectives

Objectives for Beaverhead Zone (Figure 31) are to maintain GMUs 58, 59, and 59A at current herd levels (about 1,300 cows and 350 bulls) and to maintain elk densities in GMUs 30 and 30A at approximately 1,250 cows and 325 bulls. Herds will be managed to maintain 14-18 mature bulls:100 cows in GMUs 58, 59, and 59A and 18-24 mature bulls:100 cows in GMUs 30 and 30A. To maintain herd productivity, balance depredation concerns with maintaining a reasonably large elk population, and minimize potential impacts on mule deer, a five-year period of herd reduction totaling about 40% was recommended in GMUs 30 and 30A during the late 1990s. Surveys in 2004 indicated populations were at or slightly below objective levels. Accordingly, cow harvest was reduced to maintain relatively high productivity and stabilize herd size. Surveys in 2009 revealed that cow numbers were at the upper end of the objective range.

Historical Perspective

Elk abundance was low in Beaverhead Zone through much of the twentieth century. In fact, elk numbers were apparently low enough that a few elk from Horse Prairie and Yellowstone National Park were translocated to GMUs 30 and 30A around 1918. GMUs 30 and 30A were closed to hunting through the 1940s, managed as general hunts during the 1950s, and changed to general hunts with harvest quotas in the 1960s. Since 1970, GMUs 30 and 30A have been managed under very conservative controlled hunt strategies. Controlled antlerless hunts were initiated in GMUs 59 and 59A in 1979 and in GMU 58 in 1988. In 1991, GMUs 58, 59, and 59A changed from general any-bull management to general hunting for spike bulls with controlled any-bull tags. As has occurred over much of the west, elk herds have expanded dramatically since the mid-1970s. Today, Beaverhead Zone winters approximately 4,000 elk and supports 1,800-2,000 hunters annually. Both hunter numbers and total harvest trended upward between 2009 and 2013.

Many elk in this zone, particularly in GMUs 30 and 30A, spend winter in Idaho and migrate to summer ranges in Montana. Traditionally, elk in GMUs 58, 59, and 59A summered in Idaho and wintered in Montana; however, since the early half of the 1980s, more elk are wintering in Idaho. In recent years, high elk densities have become a controversial issue with landowners and livestock grazers in both states.

Habitat Issues

Cattle ranching, livestock grazing, and recreation are dominant human uses of the landscape in Beaverhead Zone. The zone is in a generally arid region where forage production can be strongly influenced by growing season precipitation. During drought years, high elevation mesic habitats are more heavily utilized by elk while low elevation riparian areas and wet meadows are more heavily utilized by cattle. Elk depredations on agricultural crops are common and are especially pronounced in dry years in GMUs 30, 30A, and along Medicine Lodge Creek.

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. Elk wintering on windswept ridgetops in GMUs 59 and 59A are periodically subject to *Oxytropis* poisoning.

Biological Issues

The elk population in GMU 30 experienced very high growth rates through the mid-1990s, despite attempts to increase antlerless harvest and considerable depredation hunt activity. GMUs 30A, 58, 59, and 59A show relatively stable populations. The most recent population survey indicates that calf production is increasing and bull:cow ratios are stable.

Inter-specific Issues

Although historically Beaverhead Zone supported high mule deer densities, the zone currently has relatively moderate deer populations. Current high elk densities may be having some impact on deer populations and/or winter range.

When elk numbers are high, as they are currently, livestock operators often perceive elk to be strong competitors for range forage. However, elk generally remove a minor portion of the forage compared to livestock. During some winters, elk move into GMU 63 and cause haystack depredations in the Monteview, Cedar Butte, and Beaver Creek areas.

Predation Issues

Black bear densities appear to be low and stable in Beaverhead Zone. Mountain lion densities are low to moderate and appear to have increased in recent years in GMUs 30 and 30A, probably partly due to increased elk densities. Coyotes are common, but not known to have much impact on elk populations. Wolf densities are relatively low and do not appear to be impacting elk populations.

Winter Feeding Issues

Because this is an arid area with relatively little snowfall, winter feeding has not occurred recently in Beaverhead Zone.

Information Requirements

Impacts of elk on mule deer production and survival are suspected but unknown. The most productive elk herds are those maintained at a level below carrying capacity. Better information is needed to identify appropriate elk densities that will maintain optimum productivity and harvest.

Elk
Beaverhead Zone (GMUs 30, 30A, 58, 59, 59A)

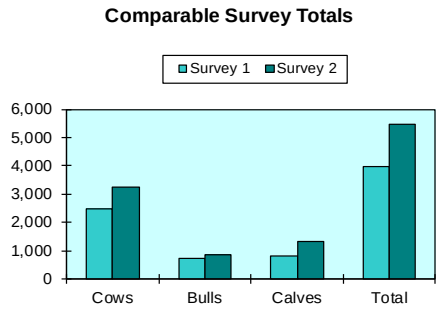
Square Miles =	2,037	3-Year Averages	
% Public Land =	85%	Hunters per sq mi =	1.00
Major Land Type =	Rangeland	Harvest per sq mi =	0.37
		Success Rate =	37%
		%6 Points=	42%

Winter Status & Objectives

	Current Status				Objective		
Unit	Survey Year	Cows	Bulls	Adult Bulls	Cows	Bulls	Adult Bulls
30	2009	1,380	369	216	800 - 1,200	250 - 350	150 - 250
30A	2009	142	161	128	200 - 300	40 - 60	25 - 35
58	2009	824	180	91	400 - 600	100 - 175	50 - 100
59/59A	2009	911	152	60	650 - 950	150 - 250	100 - 150
Zone Total		**3,257**	**862**	**495**	**2,050 - 3,050**	**540 - 835**	**325 - 535**
Bulls per 100 Cows			**26**	**15**		**25 - 29**	**14 - 18**

Population Surveys

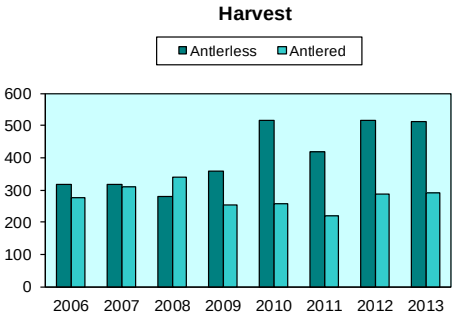
	Survey 1					Survey 2				
Unit	Year	Cows	Bulls	Calves	Total	Year	Cows	Bulls	Calves	Total
30	2004	1,272	381	413	2,066	2009	1,380	369	524	2,273
30A	2004	178	122	61	361	2009	142	161	58	361
58	2005	676	130	200	1,006	2009	824	180	351	1,355
59/59A	2005	341	73	123	537	2009	911	152	400	1,463
Comparable Surveys Total		**2,467**	**706**	**797**	**3,970**		**3,257**	**862**	**1,333**	**5,452**
Per 100 Cows			**29**	**32**				**26**	**41**	

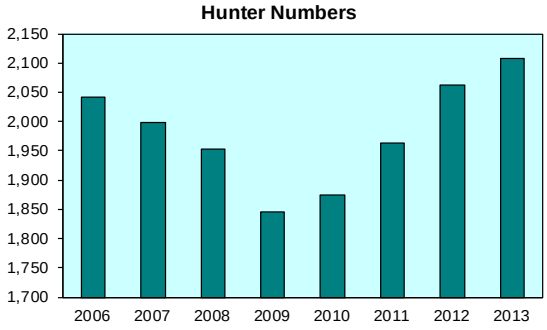


Zone Harvest Statistics

	2006	2007	2008	2009	2010	2011	2012	2013
Antlerless Harvest	317	316	280	358	517	419	515	514
'A' Tag	82	103	82	152	175	171	191	192
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	235	213	198	206	342	248	324	322
Antlered Harvest	276	310	341	253	256	221	286	293
'A' Tag	166	177	233	119	118	113	137	137
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	110	133	108	134	138	108	149	156
Hunter Numbers	2,041	1,999	1,952	1,845	1,874	1,963	2,063	2,107
'A' Tag	1,357	1,300	1,308	1,123	1,082	1,099	1,233	1,229
'B' Tag	0	0	0	0	0	0	0	0
CH Tag	684	699	644	722	792	864	830	878
% 6+ Points	26	26	42	38	46	39	42	45

Note: % 6+ pts does not include spike-only harvest. ND = no data available.





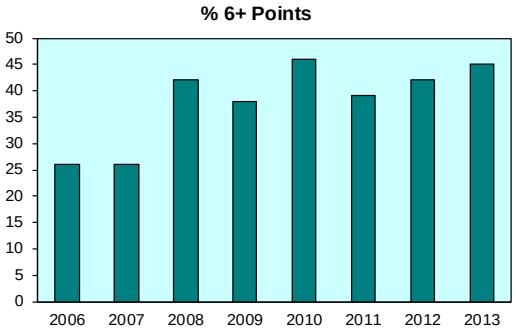


Figure 31. Beaverhead Zone Elk Status and Objectives.

Appendix A

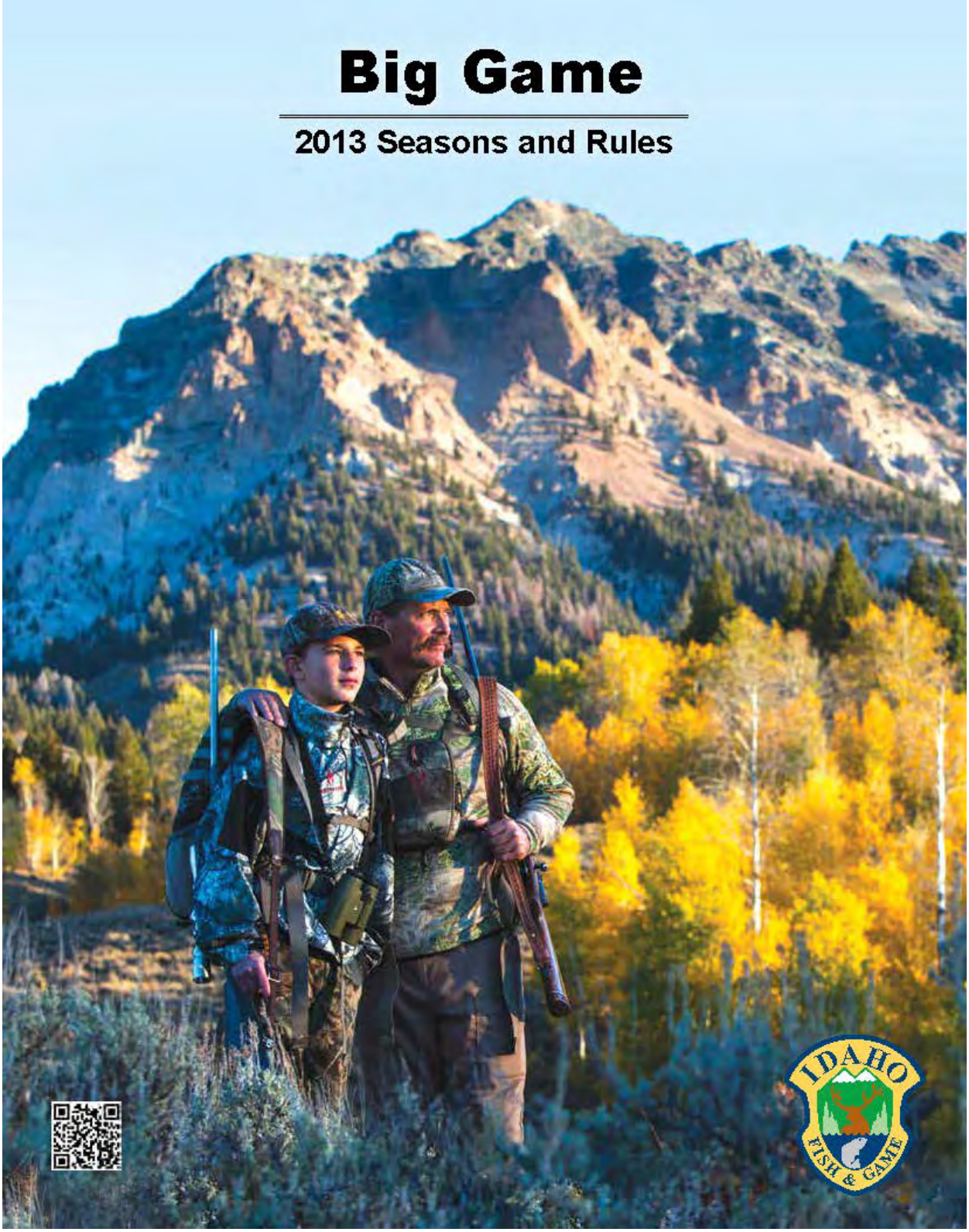
IDAHO

2013 SEASON

ELK RULES

Big Game

2013 Seasons and Rules



Elk Management Planning Process

Idaho Fish and Game is revising its elk management plan.

We want your help!

The revised 10-year plan will be based on hunter preferences and current elk numbers. The plan will include objectives and strategies for each of the elk management zones in Idaho.

Sign up for e-mail updates on the Fish and Game website, or contact local Fish and Game wildlife managers.

Get Involved:

Track the elk planning progress online.

http://fishandgame.idaho.gov/elkplanning

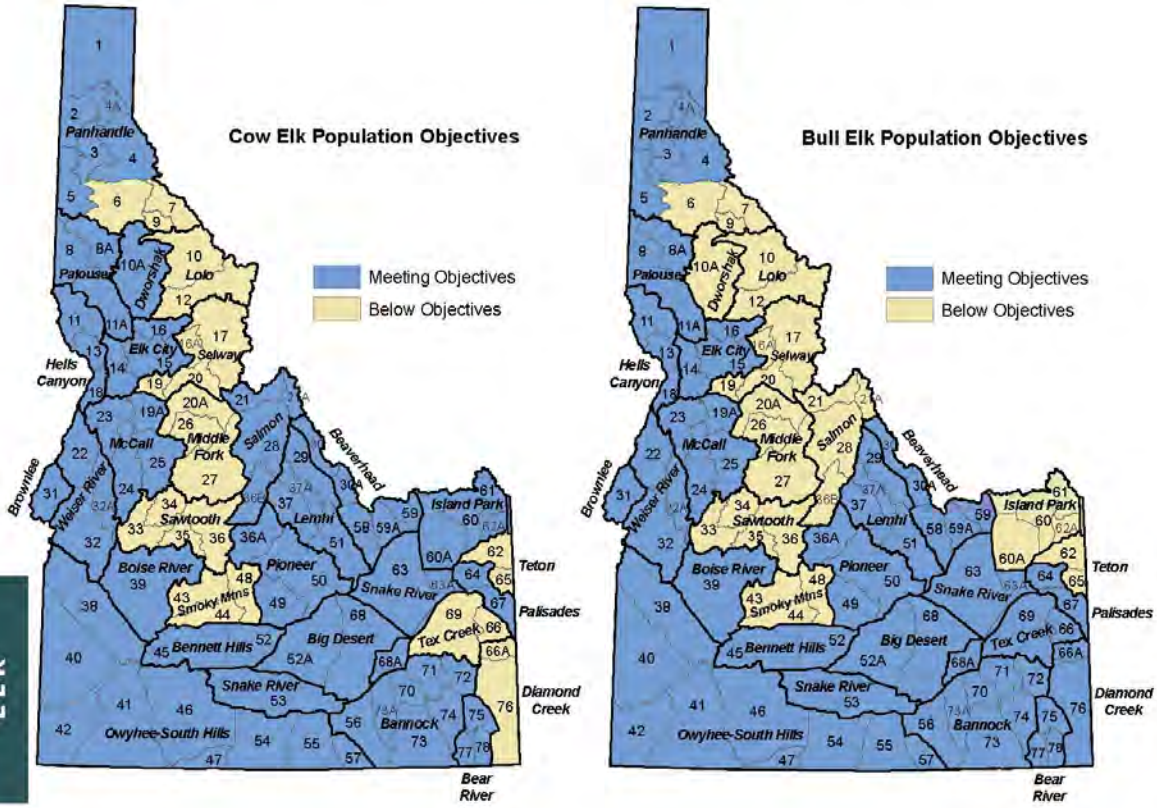
Planning Timeline:

DATES:	DISCUSSION:
April – May, 2013	• Regional elk plan public open-house meetings. • Second public survey. • Online chat to discuss the plan.
June 2013	• Incorporate public input into proposed elk plan.
July - August 2013	• Draft elk plan to F&G Commission. • Draft elk plan out for public comment.
August - November, 2013	• Incorporate public comments into final plan. • Present plan to F&G Commission.
January – February, 2014	• Develop elk season proposals and gather public comment.

Educate Yourself & Get Involved, Because Idaho's Wildlife Belongs to you.

2013 Elk Population Status by Elk Zone

http://fishandgame.idaho.gov/cms/hunt/elk/



ELK

Elk populations are constantly changing in response to weather, predation, land management, fire events, invasive species and development. To maintain elk hunting experiences desired by sportsmen, the Idaho Department of Fish and Game must manage herd sizes within desired ranges, provide high quality hunting opportunities, maintain availability of general hunts, and minimize agricultural conflicts, by adjusting hunting seasons and hunter numbers. Fish and Game also works closely with land owners and managers to ensure high quality elk habitat is found throughout the state.

Currently, elk herds meet or exceed management objectives in 20 of 29 elk management zones, and provide hunting opportunities ranging from mature bulls to extra cow hunting opportunities to meet objectives. In the remaining 9 zones, Fish and Game is working hard to improve elk survival to allow elk herds to meet objectives, including cutting back on some hunts and implementing programs to reduce predation.

Changing conditions and management challenges are part of the landscape, but with responsive management and more than 100,000 elk, Idaho continues to provide a variety of elk hunting opportunities desired by sportsmen.

For additional information on elk management objectives and hunter success rates, please visit our website at: http://fishandgame.idaho.gov/cms/hunt/elk/

2013 Elk Hunting Seasons

Elk hunting is managed in 29 elk zones. In addition, Fish and Game has established a two-tag system to offer elk hunters the most general season choices. Hunters may select one zone and choose either an "A tag" or a "B tag" for that zone. A few zones offer only an A tag.

In general, A tags provide more opportunity for muzzleloader and archery hunters, and B tags provide more opportunity for centerfire rifle hunters.

Controlled hunts, allocated by random drawing, also are available in most of the state. Any person who receives a controlled hunt tag for elk is prohibited from hunting in any other elk hunt, **except** for depredation hunts, extra antlerless elk hunts or by buying a leftover nonresident elk tag, if available.

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

Antlered elk: Only elk with at least one antler longer than 6 inches may be taken in any season which is open for antlered elk only. In antlered seasons, including spike-only, antlers must accompany the carcass while in transit.

Antlerless elk: Only elk without antlers or with antlers shorter than 6 inches may be taken in any season which is open for antlerless elk only.

Spike elk: Only elk with no branching on either antler and at least one antler longer than 6 inches may be taken in any season which is open for spike elk only. A branch is an antler projection at least 1 inch long and longer than the width of the projection.

Brow-tined elk: Only elk having at least one antler with a visible point on the lower half of the main beam which is 4 inches or greater in length may be taken in any season open for brow-tined elk only.

ELK

Archery & Muzzleloader Permits

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

Resident Youth General Elk Tag

Resident youth elk hunters who purchase a general season elk zone tag while they are between ages 12 and 17, inclusive, may participate in any A or B tag elk season within the specified zone, regardless of whether they purchased an A tag or B tag. All other season, weapon restrictions, and commission rules apply. Controlled hunts are excluded.

Nonresident Deer and Elk Tags

Nonresident deer and elk tags, **excluding** nonresident junior mentored deer and elk tags, are valid to take a black bear, mountain lion or gray wolf instead of a deer or elk, if a season is open for that species, where and when the deer or elk tag is valid, and if there is an open deer or elk season in that same unit. See page 98.

For information on Chronic Wasting Disease please see Page 36.

Legal in spike elk hunts

Spike Elk

One antler must be at least 6 inches or longer. (Not legal in brow-tined elk hunts.)

Not legal in spike elk hunts or brow-tined elk hunts

Branch antlered bull (or larger)

Not legal for spike-only hunts if branched point is longer than 1 inch.

Antler branch is a projection 1 inch or more in length.

Legal in brow-tined elk hunts

Caution - Archers: "Any weapon" antlerless elk hunts will be open on or within one mile of private fields on which cultivated crops are currently growing, in all or parts of the following zones: Palouse, Salmon, Weiser, Lemhi, Beaverhead, Pioneer, and Smoky Mountain. Additionally, an any-weapon controlled hunt occurs from August 3 - September 15 in a portion of Unit 48 (see Hunt No. 2108, page 56). Please use appropriate caution.

Panhandle Zone (Units 1, 2, 3, 4, 4A, 5, 6, 7, 9)				
	September	**October**	**November**	**December**
A Tag	**Archery only** — antlered **only** Sep 6 - Sep 30	**Any weapon** — antlered **only** Oct 25 - Oct 29	**Muzzleloader only** — antlered **only** Unit 4 **only** Nov 20 - Dec 1	**Archery only** — antlered **only** Dec 10 - Dec 16
B Tag	**Archery only** — antlered **only** Sep 6 - Sep 12	**Any weapon** — antlered **only** Oct 10 - Oct 24		

Palouse Zone (Units 8, 8A, 11A)				
	August/September	**October**	**November**	**December**
A Tag	**Any weapon** — antlerless **only** Near cultivated fields outside National Forest System Boundary, See Note 2, Page 51 Aug 1 - Sep 15 **Archery only** — any elk Aug 30 - Sep 30 **See archers caution Page 40**			**Muzzleloader only** — spike or antlerless Unit 8A **only** Dec 2 - Dec 9 See Note 1, Page 51
B Tag	**Archery only** — spike or antlerless Aug 30 - Sep 14	**Any weapon** — antlered **only** Oct 10 - Oct 24 **Any weapon** — any elk Oct 15 - Oct 21 Private Lands **only**, excluding corporate timber lands		

Hells Canyon Zone (Units 11, 13, 18) — Controlled Hunts Only	
A Tag	**No A Tags in this Zone — See Controlled Hunts**
B Tag	**No B Tags in this Zone — See Controlled Hunts**

ELK

Lolo Zone (Units 10, 12)

	August/September	October	November	December
A Tag	**Archery only** — antlered **only** Aug 30 - Sep 30			
	Note: 404 A Tag Quota Available First-Come, First-Served. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			
B Tag		**Any weapon** — antlered **only** Oct 10 - Nov 3		
	Note: 1,088 B Tag Quota Available First-Come, First-Served. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			

Dworshak Zone (Unit 10A)

	August/September	October	November	December
A Tag	**Archery only** — any elk Aug 30 - Sep 30			**Muzzleloader only**— spike or antlerless Dec 2 - Dec 5 Spike **only:** Dec 6 - Dec 14
B Tag	**Archery only** — spike or antlerless Aug 30 - Sep 14	**Any weapon** — antlered **only** Oct 10 - Nov 3		
	Note: 2,380 B Tag Quota Available First-Come, First-Served. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			

Elk City Zone (Units 14, 15, 16)

	August/September	October	November	December
A Tag	**Archery only** — any elk Unit 15 **only** Aug 30 - Sep 30		**Muzzleloader only**— spike or antlerless Unit 14 & 16 **only** Nov 21 - Dec 9	**Archery only** — any elk Unit 15 **only** Dec 5 - Dec 20
B Tag	**Archery only** — spike or antlerless Unit 15 **only** Aug 30 - Sep 14	**Any weapon** — antlered **only** Units 15 & 16 **only**: Oct 10 - Nov 3 Unit 14 **only**: Oct 10 - Oct 24		
	Note: 1,790 B Tag Quota Available First-Come, First-Served. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			

Selway Zone (Units 16A, 17, 19, 20)				
	September	**October**	**November**	**December**
A Tag		**Any weapon** — antlered **only** Oct 1 - Oct 31		
	Note: 647 A Tag Quota Available First-Come, First-Served. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			
B Tag	**Any weapon** — antlered **only** Sep 15 - Sep 30		**Any weapon** — antlered **only** Nov 1 - Nov 11	
	Note: 1,067 B Tag Quota Available First-Come, First-Served. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			

Middle Fork Zone (Units 20A, 26, 27)				
	September	**October**	**November**	**December**
A Tag		**Any weapon** — Units 20A & 26: antlered **only** Unit 27: brow-tined bulls **only** Oct 1 - Oct 31		
	Note: 1,551 A Tag Quota Available On First-Come, First-Served Basis. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			
B Tag	**Any weapon** — Units 20A & 26: antlered **only** Unit 27: brow-tined bulls **only** Sep 15 - Sep 30		**Any weapon** — Units 20A & 26: antlered **only** Unit 27: brow-tined bulls **only** Nov 1 - Nov 18	
	Note: 1,636 B Tag Quota Available First-Come, First-Served. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			

Salmon Zone (Units 21, 21A, 28, 36B)				
	August/September	**October**	**November**	**December**
A Tag	**Any weapon** — antlerless **only** Units 21A & 28 **only**; Aug 1 - Sep 30 Near cultivated fields outside National Forest System Boundary, See Note 2, Page 51			**Archery only** — any elk Unit 28 **only** Dec 1 - Dec 31
	Archery only — any elk Units 21, 21A & 36B **only** Aug 30 - Sep 30 **See archers caution Page 40**			
B Tag		**Any weapon** — antlered **only** Oct 15 - Nov 8		
	Note: 2,507 B Tag Quota Available First-Come, First-Served. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			

ELK

Weiser River Zone (Units 22, 32, 32A)				
	August/September	**October**	**November**	**December**
A Tag	**Any weapon** — antlerless **only** Units 22 & 32A **only**: Aug 15 - Sep 30 Outside National Forest System Boundary **only**, See Note C below, Extremely Limited Access			
	Archery only — any elk Aug 30 - Sep 30 See Note A below, **See archers caution Page 40,** Motorized Hunting Rule Applies in Units 32 & 32A, See Pages 91-92			
	Any weapon — antlerless **only** Unit 32 **only**: Aug 1 - Nov 30 Please obtain permission to hunt private land before buying this tag! See Note B below, Extremely Limited Access. Motorized Hunting Rule Applies, See Pages 91-92			
B Tag		**Any weapon** — antlered **only** Oct 25 - Nov 3 Motorized Hunting Rule Applies in Units 32 & 32A, See Pages 91-92 Short range weapons **only** on Montour WMA		

Note A - Closed area: That portion of Unit 32 west of the following boundary: Beginning at the Unit 32/38 boundary at Emmett, then north on Highway 52 to the Van Dussen Road, then north on the Four Mile Road to the Unit 32/32A boundary is **closed**.

Note B - Open area: That portion of Unit 32 west of the following boundary: Beginning at the Unit 32/38 boundary at Emmett, then north on Highway 52 to the Van Dussen Road, then north on the Four Mile Road to the Unit 32/32A boundary. Most elk are on private property in this area.

Note C - Open areas: That portion of Unit 22 that lies outside National Forest System Boundary and drains into the Weiser River, upstream from and including the Hornet Creek drainage and downstream from and including the West Fork Weiser River drainage but excluding the entire Lost Creek Drainage. That portion of Unit 32A that lies outside National Forest System Boundary and drains into the Weiser River upstream from and including the Middle Fork Weiser River drainage and downstream from but excluding the East Fork Weiser River drainage. Most elk are on private property in this area. The National Forest System Boundary is a legislatively set boundary - it is not necessarily the boundary of Forest Service property. State, private, and other lands within the National Forest System Boundary are not open to hunting during this season. (Please refer to a U.S. Forest Service map for the location of this boundary.)

McCall Zone (Units 19A, 23, 24, 25)				
	August/September	**October**	**November**	**December**
A Tag	**Short range weapons only** — antlerless **only** Units 23 & 24 **only** Outside National Forest System Boundary, See Note B below Aug 15 - Sep 30	**Any weapon** — spike **only** Short range weapons **only** within described boundaries in Unit 24, See Note A below Oct 5 - Oct 14	**Muzzleloader only** — antlerless **only** Units 23 & 24 **only** Outside National Forest System Boundary, See Note B below Nov 10 - Nov 30	
	Archery only — any elk Aug 30 - Sep 30			
B Tag		**Any weapon** — antlered **only** Oct 15 - Nov 3 Short range weapons **only** within described boundaries, See Note A below.		

Note A - 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 Boydstun Street, then south on Boydstun 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.

Note B - You may hunt only outside the National Forest System Boundary. The National Forest System Boundary is a legislatively set boundary - it is not necessarily the boundary of Forest Service property. State, private, and other lands within the National Forest System Boundary are not open to hunting during this season. (Please refer to a U.S. Forest Service map for the location of this boundary.)

ELK

Lemhi Zone (Units 29, 37, 37A, 51)

	August/September	October	November	December
A Tag	**Any weapon** — antlerless **only** Units 29 & 51 **only**: Aug 1 - Sep 15 Near cultivated fields outside National Forest System Boundary, See Note 2, Page 51, Motorized Hunting Rule Applies, See Pages 91-92		**Muzzleloader only** — antlerless **only** Nov 25 - Dec 9 Motorized Hunting Rule Applies, See Pages 91-92	
	Archery only — any elk Aug 30 - Sep 30 **See archers caution Page 40,** Motorized Hunting Rule Applies, See Pages 91-92		**Any weapon** — spike **only** Units 37 & 51 **only** Nov 1 - Nov 7 Motorized Hunting Rule Applies, See Pages 91-92	
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Beaverhead Zone (Units 30, 30A, 58, 59, 59A)

	August/September	October	November	December
A Tag	**Any weapon** — antlerless **only** Unit 30 **only**: Aug 1 - Sep 30 Near cultivated fields outside National Forest System Boundary, See Note 2, Page 51, Motorized Hunting Rule Applies, See Pages 91-92	**Muzzleloader only** — antlerless **only** Oct 15 - Oct 31 Motorized Hunting Rule Applies, See Pages 91-92		
	Archery only — any elk Aug 30 - Sep 30 **See archers caution Page 40,** Motorized Hunting Rule Applies, See Pages 91-92			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Brownlee Zone (Unit 31)

	August/September	October	November	December
A Tag	**Archery only**— any elk Aug 30 - Sep 30			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Sawtooth Zone (Units 33, 34, 35, 36)				
	August/September	**October**	**November**	**December**
A Tag	**Archery only** — any elk Aug 30 - Sep 30			
	Note: 566 A Tag Quota Available First-Come, First-Served. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			
B Tag		**Any weapon** — antlered **only** Oct 15 - Nov 8		
	Note: 1,526 B Tag Quota Available First-Come, First-Served. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			

Pioneer Zone (Units 36A, 49, 50)				
	August/September	**October**	**November**	**December**
A Tag	**Any weapon** — antlerless **only** Unit 36A **only**: Aug 1 - Sep 30 Near cultivated fields outside National Forest System Boundary, See Note 2, Page 51, Motorized Hunting Rule Applies, See Pages 91-92		**Muzzleloader only** — antlerless **only** Nov 1 - Nov 14 Units 36A & 50 **only** Motorized Hunting Rule Applies, See Pages 91-92	
	Archery only — any elk Aug 30 - Sep 30 **See archers caution Page 40,** Motorized Hunting Rule Applies, See Pages 91-92			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Owyhee – South Hills Zone (Units 38, 40, 41, 42, 46, 47, 54, 55, 57) — Controlled Hunts Only				
	August/September	**October**	**November**	**December**
A Tag	**No A Tags in this Zone — See Controlled Hunts**			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

ELK

Boise River Zone (Unit 39)

	September	October	November	December
A Tag			**Archery only** — any elk Nov 10 - Nov 30 See Note 3, Page 51	
B Tag			**Any weapon** — antlered **only** Nov 1 - Nov 9 Portion of Unit **closed**, See Note 4, Page 51	

Smoky Mountain Zone (Units 43, 44, 48)

	August/September	October	November	December
A Tag	**Archery only** — any elk Units 43 & 48 **only** Aug 30 - Sep 30 **See archers caution Page 40**		**Any weapon**— spike **only** Nov 1 - Nov 7	
	Note: 726 A Tag Quota Available First-Come, First-Served. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Bennett Hills Zone (Units 45, 52)

	September	October	November	December
A Tag	**Muzzleloader only** — antlerless **only** Sep 1 - Sep 14 Motorized Hunting Rule Applies, See Pages 91-92			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Big Desert Zone (Units 52A, 68)

	August/September	October	November	December
A Tag	**Archery only** — any elk Aug 30 - Sep 30			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Snake River Zone (Units 53, 63, 63A, 68A)

	August/September	October	November	December
A Tag	**Archery only** — any elk Unit 68A **only:** Aug 1 - Sep 30	**Any weapon** — antlerless **only** Unit 63 **only**: Sep 1 - Dec 31 Short range weapons **only** on Mud Lake WMA		
	Any weapon — any elk Unit 63 **only:** Aug 1 - Aug 31 Short range weapons **only** on Mud Lake WMA	**Short range weapons only** — antlerless **only** Unit 63A **only:** Sep 1 - Dec 31		
	Short range weapons only — any elk Unit 63A **only:** Aug 1 - Aug 31	**Archery only** — antlerless **only** Unit 68A **only:** Oct 1 - Dec 31		
	Short range weapons only — any elk Unit 53 **only:** Aug 1 - Dec 31 Motorized Hunting Rule Applies, See Pages 91-92			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Island Park Zone (Units 60, 60A, 61, 62A)

	August/September	October	November	December
A Tag	**Archery only** — any elk Aug 30 - Sep 30	**Any weapon** — spike **only** Oct 15 - Oct 28 Short range weapons **only** on Chester Wetlands WMA	**Muzzleloader only** — spike or antlerless Unit 61 **only** Nov 11 - Dec 9	
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Teton Zone (Units 62, 65)

	August/September	October	November	December
A Tag	**Archery only** — any elk Aug 30 - Sep 30	**Any weapon** — antlerless **only** Oct 22 - Oct 31		
B Tag	**Archery only** — spike or antlerless Aug 30 - Sep 14	**Any weapon** — antlered **only** Oct 15 - Oct 21		

Palisades Zone (Units 64, 67)

	August/September	October	November	December
A Tag	**Archery only** — any elk Aug 30 - Sep 30	**Any weapon** — antlerless **only** Oct 22 - Nov 16		
B Tag	**Archery only** — spike or antlerless Aug 30 - Sept 14	**Any weapon** — antlered **only** Oct 15 - Oct 21		

ELK

Tex Creek Zone (Units 66, 69)

	August/September	October	November	December
A Tag	**Archery only** — any elk Aug 30 - Sep 30 Motorized Hunting Rule Applies, See Pages 91-92	**Any weapon** — antlerless **only** Oct 22 - Nov 16 Motorized Hunting Rule Applies, See Pages 91-92		
B Tag	**Archery only** — spike or antlerless Aug 30 - Sep 14 Motorized Hunting Rule Applies, See Pages 91-92	**Any weapon** — antlered **only** Oct 15 - Oct 21 Motorized Hunting Rule Applies, See Pages 91-92		

Bannock Zone (Units 56, 70, 71, 72, 73, 73A, 74)

	August/September	October	November	December
A Tag	**Archery only** — any elk Aug 30 - Sep 30 Motorized Hunting Rule Applies in Units 56, 70 & 73, See Pages 91-92	**Any weapon** — antlerless **only** Units 70, 71, 72, 73, 73A & 74 **only** Oct 25 - Nov 15 Motorized Hunting Rule Applies in Units 70 & 73, See Pages 91-92	**Muzzleloader only** — antlerless **only** Units 56, 70, 71, 73, 73A & 74 **only** Nov 16 - Nov 30 Motorized Hunting Rule Applies in Units 56, 70 & 73, See Pages 91-92	
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Bear River Zone (Units 75, 77, 78)

	August/September	October	November	December
A Tag	**Archery only** — any elk Aug 30 - Sep 30 Motorized Hunting Rule Applies, See Pages 91-92	**Any weapon** — antlerless **only** Oct 25 - Nov 15 Motorized Hunting Rule Applies, See Pages 91-92		**Muzzleloader only** — antlerless **only** Dec 1 - Dec 31 Motorized Hunting Rule Applies, See Pages 91-92
B Tag	**Archery only** — spike or antlerless Aug 30 - Sep14 Motorized Hunting Rule Applies, See Pages 91-92	**Any weapon** — antlered **only** Oct 15 - Oct 24 Motorized Hunting Rule Applies, See Pages 91-92		
	Note: 550 B Tag Quota Available First-Come, First-Served. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			

Diamond Creek Zone (Units 66A, 76)

	August/September	October	November	December
A Tag	**Archery only** — any elk Aug 30 - Sep 30 Motorized Hunting Rule Applies, See Pages 91-92			
	Note: 1,836 A Tag Quota Available First-Come, First-Served. Capped tags go on sale for Residents 7/10/2013 and Nonresidents 12/1/2012.			
B Tag	**No B Tags in this Zone — See Controlled Hunts**			

Elk Controlled Hunts

For details on controlled hunt rules and restrictions please See pages 94-97.

Hunters: Please check Elk Controlled Hunt Area descriptions on pages 61-64. Hunt Areas may change annually.

2013 Controlled Elk Hunts (19,427 Tags Plus Unlimited Tags) **Antlered Elk**				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2001	11-1	80	Oct 10 - Nov 3	
2002	18-1	225	Oct 10 - Nov 3	
2003	19A	5	Oct 1 - Oct 14	
2004	23-1	5	Oct 1 - Oct 14	
2005	29	180	Oct 1 - Oct 24	*Motorized Hunting Rule Applies, See Pages 91-92*
2006	30	75	Nov 1 - Nov 30	*Motorized Hunting Rule Applies, See Pages 91-92*
2007	30-1[a] (see pg 62)	30	Oct 1 - Oct 14	*Motorized Hunting Rule Applies, See Pages 91-92*
2008	31-1	50	Oct 15 - Nov 8	
2009	36A-1[b] (see pg 63)	63	Oct 1 - Oct 31	*Motorized Hunting Rule Applies, See Pages 91-92*
2010	36A-2[a] (see pg 63)	117	Oct 1 - Oct 31	*Motorized Hunting Rule Applies, See Pages 91-92*
2011	37	65	Oct 1 - Oct 24	*Motorized Hunting Rule Applies, See Pages 91-92*
2012	37A	70	Oct 1 - Oct 24	*Motorized Hunting Rule Applies, See Pages 91-92*
2013	40[a] (see pg 63)	5	Sep 25 - Oct 14	
2014	40[a] (see pg 63)	50	Oct 15 - Nov 24	
2015	41[b] (see pg 63)	10	Nov 1 - Nov 15	*Very limited access*
2016	41[b] (see pg 63)	10	Nov 16 - Nov 30	*Very limited access*
2017	43	10	Sep 25 - Oct 10	
2018	43	90	Oct 15 - Nov 9	
2019	44-1	10	Sep 25 - Oct 10	
2020	44-1	140	Oct 15 - Nov 9	
2021	45[a] (see pg 63)	100	Oct 1 - Oct 31	*Very limited access,* *Motorized Hunting Rule Applies, See Pages 91-92*
2022	46[a] (see pg 63)	10	Oct 15 - Nov 9	*Motorized Hunting Rule Applies in Unit 47,* *See Pages 91-92*
2023	46[a] (see pg 63)	15	Dec 5 - Dec 31	*Motorized Hunting Rule Applies in Unit 47,* *See Pages 91-92*
2024	48-1	10	Sep 25 - Oct 10	
2025	48-1	115	Oct 15 - Nov 9	
2026	49	10	Sep 25 - Oct 10	*Motorized Hunting Rule Applies, See Pages 91-92*
2027	49	200	Oct 15 - Nov 9	*Motorized Hunting Rule Applies, See Pages 91-92*
2028	50-1[b] (see pg 63)	100	Oct 15 - Oct 31	*Motorized Hunting Rule Applies, See Pages 91-92*
2029	51	10	Oct 1 - Oct 14	*Motorized Hunting Rule Applies, See Pages 91-92*
2030	51	125	Nov 1 - Nov 30	*Motorized Hunting Rule Applies, See Pages 91-92*
2031	52A[a] (see pg 63)	75	Oct 1 - Nov 30	
2032	54	15	Oct 15 - Oct 31	
2033	55-1[b] (see pg 64)	25	Oct 15 - Nov 9	*Motorized Hunting Rule Applies in Unit 56,* *See Pages 91-92*
2034	58-1[a] (see pg 64)	75	Nov 1 - Nov 30	*Motorized Hunting Rule Applies, See Pages 91-92*

continued

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions, please see pages 94-97.

2013 Controlled Hunts Antlered Elk - continued				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2035	60-1[a] (see pg 64)	30	Oct 1 - Oct 14	
2036	60-2[a] (see pg 64)	100	Nov 1 - Nov 30	
2037	61	50	Nov 1 - Nov 10	
2038	66A-1[a] (see pg 64)	35	Oct 1 - Oct 14	*Motorized Hunting Rule Applies, See Pages 91-92*
2039	66A-1[a] (see pg 64)	300	Oct 15 - Oct 24	*Motorized Hunting Rule Applies, See Pages 91-92*
2040	70[a] (see pg 64)	25	Oct 1 - Oct 14	*Motorized Hunting Rule Applies in Units 70 & 73; See Pages 91-92*
2041	70[a] (see pg 64)	200	Oct 15 - Oct 24	*Motorized Hunting Rule Applies in Units 70 & 73, See Pages 91-92*
2042	75[a] (see pg 64)	25	Oct 1 - Oct 14	*Motorized Hunting Rule Applies, See Pages 91-92*

2013 Controlled Hunts Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2043	3-1[b] (see pg 61)	50	Dec 1 - Dec 31	*Private land **only**, Portion of Unit **only***
2044	5-2[b] (see pg 61)	50	Dec 1 - Dec 31	
2045	8-1[a] (see pg 61)	50	Oct 20 - Nov 13	
2046	8-1[a] (see pg 61)	75	Nov 21 - Dec 31	
2047	8-2[a] (see pg 61)	100	Oct 20 - Nov 13	
2048	8-2[a] (see pg 61)	150	Nov 21 - Dec 31	
2049	10A[b] (see pg 61)	25	Aug 1 - Sep 15	
2050	10A[b] (see pg 61)	50	Dec 10 - Dec 31	
2051	11-1	150	Oct 1 - Oct 9	
2052	11-1	200	Oct 10 - Oct 24	
2053	11-1	175	Nov 10 - Nov 24	
2054	11-2[b] (see pg 61)	125	Aug 1 - Sep 15	*Very limited access*
2055	11A	150	Oct 20 - Dec 31	*Very limited access*
2056	13	250	Oct 10 - Nov 3	*Very limited access, Private Land*
2057	14-1[b] (see pg 61)	15	Aug 1 - Sep 15	*Very limited access*
2058	14-2[b] (see pg 61)	60	Dec 10 - Dec 31	
2059	16[b] (see pg 61)	50	Dec 10 - Dec 31	
2060	18-1	150	Oct 10 - Nov 3	
2061	18-2[b] (see pg 61)	50	Dec 1 - Dec 31	
2062	19A	25	Oct 15 - Nov 8	
2063	22-1[b] (see pg 61)	500	Oct 1 - Oct 12	
2064	22-1[b] (see pg 61)	400	Oct 13 - Oct 24	
2065	22-1[b] (see pg 61)	250	Oct 25 - Nov 3	
2066	22-2[b] (see pg 61)	100	Oct 1 - Oct 14	

continued

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions, please see pages 94-97.

2013 Controlled Hunts Antlerless Elk - continued				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2067	22-3	200	Nov 10 - Nov 30	
2068	23-2[b] (see pg 62)	50	Oct 1 - Oct 14	
2069	23-2[b] (see pg 62)	30	Oct 15 - Nov 8	
2070	23-3[b] (see pg 62)	75	Oct 5 - Nov 5	*Very limited access*
2071	23-3[b] (see pg 62)	25	Dec 1 - Dec 31	*Very limited access*
2072	23-4[b] (see pg 62)	40	Oct 15 - Nov 8	*Very limited access*
2073	23-4[b] (see pg 62)	25	Dec 1 - Dec 31	*Very limited access*
2074	24-1[b] (see pg 62)	150	Oct 15 - Nov 8	
2075	24-2[b] (see pg 62)	75	Oct 15 - Nov 8	
2076	29	70	Nov 1 - Nov 20	*Motorized Hunting Rule Applies, See Pages 91-92*
2077	30	160	Dec 1 - Dec 15	*Motorized Hunting Rule Applies, See Pages 91-92*
2078	31-1	200	Oct 1 - Oct 14	
2079	31-1	100	Oct 15 - Nov 9	
2080	32-1[b] (see pg 62)	150	Oct 1 - Nov 3	*Very limited access,* *Short range weapons **only** on Montour WMA,* *Motorized Hunting Rule Applies, See Pages 91-92*
2081	32-1[b] (see pg 62)	250	Nov 4 - Nov 30	*Very limited access,* *Short range weapons **only** on Montour WMA,* *Motorized Hunting Rule Applies, See Pages 91-92*
2082	32A-1	250	Oct 1 - Oct 12	*Motorized Hunting Rule Applies, See Pages 91-92*
2083	32A-1	250	Oct 13 - Oct 24	*Motorized Hunting Rule Applies, See Pages 91-92*
2084	32A-1	250	Oct 25 - Nov 3	*Motorized Hunting Rule Applies, See Pages 91-92*
2085	32A-1	150	Nov 10 - Nov 30	*Motorized Hunting Rule Applies, See Pages 91-92*
2086	32A-2[b] (see pg 62)	50	Dec 1 - Dec 30	*Motorized Hunting Rule Applies, See Pages 91-92*
2087	36A-1[b] (see pg 63)	5	Nov 15 - Nov 30	*Motorized Hunting Rule Applies, See Pages 91-92*
2088	36A-2[a] (see pg 63)	75	Nov 15 - Nov 30	*Motorized Hunting Rule Applies, See Pages 91-92*
2089	36B[b] (see pg 63)	20	Aug 1 - Aug 30	*Near cultivated fields outside National Forest Boundary, See note 2, Page 51*
2090	36B[b] (see pg 63)	20	Sep 1 - Oct 14	*Near cultivated fields outside National Forest Boundary, See note 2, Page 51*
2091	36B[b] (see pg 63)	20	Oct 15 - Nov 20	*Near cultivated fields outside National Forest Boundary, See note 2, Page 51*
2092	36B[b] (see pg 63)	20	Nov 21 - Dec 31	*Near cultivated fields outside National Forest Boundary, See note 2, Page 51*
2093	37	60	Oct 15 - Oct 31	*Motorized Hunting Rule Applies, See Pages 91-92*
2094	37	60	Nov 1 - Nov 20	*Motorized Hunting Rule Applies, See Pages 91-92*
2095	37-1[a] (see pg 63)	75	Aug 1 - Sep 30	*Near cultivated fields outside National Forest Boundary, See note 2, Page 51,* *Motorized Hunting Rule Applies, See Pages 91-92*
2096	37A	90	Nov 1 - Nov 20	*Motorized Hunting Rule Applies, See Pages 91-92*
2097	39-1[b] (see pg 63)	350	Oct 5 - Oct 31	
2098	39-2[a] (see pg 63)	300	Oct 5 - Oct 31	

continued

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions, please see pages 94-97.

2013 Controlled Hunts Antlerless Elk - continued				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2099	40[a] (see pg 63)	125	Oct 15 - Nov 24	
2100	44-1	90	Nov 10 - Nov 30	
2101	45[a] (see pg 63)	150	Oct 1- Nov 30	*Very limited access, Motorized Hunting Rule Applies, See Pages 91-92*
2102	46[a] (see pg 63)	25	Oct 15- Nov 9	*Motorized Hunting Rule Applies in Unit 47, See Pages 91-92*
2103	46[a] (see pg 63)	20	Nov 15 - Nov 30	*Motorized Hunting Rule Applies in Unit 47, See Pages 91-92*
2104	46[a] (see pg 63)	20	Dec 1 - Dec 14	*Motorized Hunting Rule Applies in Unit 47, See Pages 91-92*
2105	46[a] (see pg 63)	20	Dec 15 - Dec 31	*Motorized Hunting Rule Applies in Unit 47, See Pages 91-92*
2106	48-2[b] (see pg 63)	90	Oct 15 - Nov 9	
2107	48-3[b] (see pg 63)	90	Oct 15 - Nov 9	
2108	48-4[a] (see pg 63)	65	Aug 3 - Sep 15	
2109	49	125	Oct 15 - Oct 31	*Motorized Hunting Rule Applies, See Pages 91-92*
2110	49	125	Nov 1 - Nov 14	*Motorized Hunting Rule Applies, See Pages 91-92*
2111	49	120	Nov 15 - Nov 30	*Motorized Hunting Rule Applies, See Pages 91-92*
2112	50-2[b] (see pg 63)	200	Dec 1 - Dec 15	*Motorized Hunting Rule Applies, See Pages 91-92*
2113	50-3[b] (see pg 63)	200	Dec 1 - Dec 15	*Motorized Hunting Rule Applies, See Pages 91-92*
2114	51	150	Oct 15 - Nov 3	*Motorized Hunting Rule Applies, See Pages 91-92*
2115	51	150	Dec 10 - Dec 31	*Motorized Hunting Rule Applies, See Pages 91-92*
2116	52A[a] (see pg 63)	150	Oct 10 - Nov 30	
2117	54[a] (see pg 64)	20	Oct 15- Nov 9	
2118	55-2[a] (see pg 64)	5	Oct 15 - Nov 9	
2119	56-2[b] (see pg 64)	35	Aug 1 - Aug 29	*Motorized Hunting Rule Applies, See Pages 91-92*
2120	56-3[b] (see pg 64)	50	Oct 1 - Nov 30	*Motorized Hunting Rule Applies, See Pages 91-92*
2121	58-2	250	Nov 1 - Nov 30	*Motorized Hunting Rule Applies, See Pages 91-92*
2122	59[a] (see pg 64)	200	Nov 1 - Nov 30	*Motorized Hunting Rule Applies, See Pages 91-92*
2123	60-2[a] (see pg 64)	150	Nov 1 - Nov 30	
2124	61	100	Nov 1 - Nov 10	
2125	66A-2	300	Oct 25 - Nov 15	*Motorized Hunting Rule Applies, See Pages 91-92*
2126	67[b] (see pg 64)	75	Oct 22 - Dec 14	*Very limited access, Portion of Unit* ***only***
2127	76-1	700	Oct 25 - Nov 15	*Motorized Hunting Rule Applies, See Pages 91-92*
2128	76-2[a] (see pg 64)	100	Nov 16 - Dec 31	*Motorized Hunting Rule Applies, See Pages 91-92*

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions, please see pages 94-97.

2013 Controlled Hunts Either Sex Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2129	1	400	Sep 6- Sep 30	*Archery **only***
			Oct 10 - Oct 24	*Any weapon*
2130	2	100	Sep 6- Sep 30	*Archery **only***
			Oct 10 - Oct 24	*Any weapon*
2131	3-2	300	Sep 6- Sep 30	*Archery **only***
			Oct 10 - Oct 24	*Any weapon*
2132	5-1	300	Sep 6- Sep 30	*Archery **only***
			Oct 10 - Oct 24	*Any weapon*
2133	11-2[b] (see pg 61)	10	Aug 1 - Sep 15	*Very limited access*
2134	13	335	Oct 10 - Nov 3	*Very limited access*
2135	39-4[b] (see pg 63)	75	Nov 1 - Nov 9	*Very limited access*
2136	62-2[a] (see pg 64)	150	Nov 1 - Nov 30	

2013 Controlled Hunts Youth Only - Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2137	29	15	Oct 1 - Nov 20	*Motorized Hunting Rule Applies, See Pages 91-92*
2138	30	15	Nov 1 - Dec 15	*Motorized Hunting Rule Applies, See Pages 91-92*
2139	36A	25	Oct 1 - Dec 15	*Motorized Hunting Rule Applies, See Pages 91-92*
2140	37	25	Oct 1 - Nov 20	*Motorized Hunting Rule Applies, See Pages 91-92*
2141	44-2[a] (see pg 63)	150	Nov 10 - Nov 30	*Motorized Hunting Rule Applies in Units 45 & 52, See Pages 91-92*
2142	50-1[b] (see pg 63)	100	Oct 15 - Oct 28	*Motorized Hunting Rule Applies, See Pages 91-92*
2143	60-1[a] (see pg 64)	50	Oct 15 - Oct 28	
2144	66[a] (see pg 64)	100	Oct 22 - Nov 30	*Motorized Hunting Rule Applies, See Pages 91-92*

2013 Controlled Hunts Landowner Permission Required - Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2145	30A-2[b] (see pg 62)	35	Aug 1 - Oct 14	*Motorized Hunting Rule Applies, See Pages 91-92, See Page 97 for application information*
2146	31-2[b] (see pg 62)	400	Aug 1 - Dec 31	*See Page 97 for application information*
2147	32-2[b] (see pg 62)	100	Aug 1 - Aug 29 Oct 5 - Dec 31	*Motorized Hunting Rule Applies, See Pages 91-92, See Page 97 for application information*
2148	39-3[b] (see pg 63)	100	Dec 1 - Dec 31	*See Page 97 for application information*

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions, please see pages 94-97.

2013 Controlled Hunts Archery Only Elk - Archery Permit Required				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2149	18-1	75	Aug 30 - Sep 30	*Antlered **only***
2150	45[a] (see pg 63)	15	Sep 15 - Sep 30	*Antlered **only**, Motorized Hunting Rule Applies, See Pages 91-92*
2151	46[a] (see pg 63)	6	Aug 30 - Sep 20	*Antlered **only**, Motorized Hunting Rule Applies in Unit 47, See Pages 91-92*
2152	54	10	Aug 30 - Sep 20	*Antlered **only***
2153	55-2[a] (see pg 64)	5	Aug 30 - Sep 20	*Antlered **only***

2013 Controlled Hunts Muzzleloader Only Elk - Muzzleloader Permit Required				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2154	11-1	50	Nov 25 - Dec 4	*Either sex*
2155	22-3	150	Dec 1 - Dec 31	*Antlerless **only***
2156	24-3	50	Dec 1 - Dec 20	*Antlerless **only***
2157	30A-1	30	Nov 1 - Nov 30	*Either sex, Motorized Hunting Rule Applies, See Pages 91-92*
2158	32A-3[b] (see pg 62)	150	Dec 1 - Dec 31	*Antlerless **only**, Motorized Hunting Rule Applies, See Pages 91-92*
2159	33-1[a] (see pg 62)	50	Nov 10 - Nov 30	*Antlerless **only***
2160	33-2[a] (see pg 62)	50	Nov 10 - Nov 30	*Antlered **only***
2161	39-5	500	Sep 8 - Sep 30	
2162	46[a] (see pg 63)	10	Sep 25 - Oct 10	*Antlered **only**, Motorized Hunting Rule Applies in Unit 47, See Pages 91-92*
2163	54	5	Sep 25 - Oct 10	*Antlered **only***
2164	55-2[a] (see pg 64)	5	Sep 25 - Oct 10	
2165	61	200	Nov 11 - Dec 9	*Either sex*
2166	62-1[a] (see pg 64)	25	Oct 1 - Oct 9	*Either sex*
2167	64[a] (see pg 64)	50	Oct 1 - Oct 9	*Either sex*
2168	66[a] (see pg 64)	50	Oct 1 - Oct 9	*Either sex, Motorized Hunting Rule Applies, See Pages 91-92*

2013 Controlled Hunts Landowner Permission Required EXTRA Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2169	45X[b] (see pg 63)	75	Aug 1 - Oct 31	*Private land **only**, See Page 97 for application information*
2170	45X[b] (see pg 63)	25	Nov 1 - Dec 31	*Private land **only**, See Page 97 for application information*

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions, please see pages 94-97.

2013 Controlled Hunts Landowner Permission Required EXTRA Antlerless Elk - continued				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2171	49X[a] (see pg 63)	200	Aug 1 - Oct 31	*Private land **only**,* *See Page 97 for application information*
2172	49X[a] (see pg 63)	100	Nov 1 - Dec 31	*Private land **only**,* *See Page 97 for application information*
2173	54-1X[a] (see pg 64)	20	Aug 1 - Sep 30	*Private land **only**,* *See Page 97 for application information*
2174	56X[b] (see pg 64)	35	Aug 1 - Aug 29	*Motorized Hunting Rule Applies, See Pages 91-92,* *See Page 97 for application information*

2013 Controlled Hunts Extra Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2175	18X[b] (see pg 61)	150	Oct 10 - Nov 3	*Very limited access*
2176	18X[b] (see pg 61)	150	Nov 4 - Nov 30	*Very limited access*
2177	52AX[a] (see pg 63)	50	Aug 1 - Aug 29	
2178	52AX[a] (see pg 63)	50	Oct 1 - Nov 30	
2179	54-2X[b] (see pg 64)	350	Aug 1 - Dec 31	

2014 Controlled Hunts Extra Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2250	8X[a] (see pg 61)	55	Jan 1 - Jan 31	*See note 1, Page 59*
2251	63X[b] (see pg 64)	50	Jan 1 - Feb 15	*Short range weapons **only** on* *Mud Lake Wildlife Management Area,* *See note 1, Page 59*

2014 Controlled Hunts Landowner Permission Required EXTRA Antlerless Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2252	39X[b] (see pg 63)	50	Jan 1 - Jan 30	*Very limited access, See note 1, Page 59* *See Page 97 for application information*

Note:

1. These are 2014 hunts. Hunters must purchase a 2014 hunting license before they can pick up these tags. Hunting licenses for 2014 will go on sale December 1, 2013.

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions, please see pages 94-97.

2013 Controlled Hunts Outfitter Allocation Elk				
Hunt No.	**Controlled Hunt Areas**	**Tags**	**Season Dates**	**Notes**
2180	11-1	5	Oct 10 - Nov 3	*Antlered **only***
2181	13	15	Oct 10 - Nov 3	*Either sex*
2182	18-1	9	Oct 10 - Nov 3	*Antlered **only***
2183	29	7	Oct 1 - Oct 24	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 91-92*
2184	36A	3	Oct 1 - Dec 15	*Antlerless **only**, **Youth hunt only**,* *Motorized Hunting Rule Applies, See Pages 91-92*
2185	36A-1[b] (see pg 63)	3	Oct 1 - Oct 31	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 91-92*
2186	36A-2[a] (see pg 63)	6	Oct 1 - Oct 31	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 91-92*
2187	37	2	Oct 1 - Oct 24	*Antlered **only***
2188	37	3	Oct 1 - Nov 20	*Antlerless **only**, **Youth hunt only***
2189	37A	5	Oct 1 - Oct 24	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 91-92*
2190	43	4	Oct 15 - Nov 9	*Antlered **only***
2191	45[a] (see pg 63)	3	Oct 1 - Oct 31	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 91-92*
2192	49	8	Oct 15 - Nov 9	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 91-92*
2193	50-1[b] (see pg 63)	4	Oct 15 - Oct 31	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 91-92*
2194	54	1	Aug 30 - Sep 20	*Antlered **only**, Archery **only***
2195	54	1	Sep 25 - Oct 10	*Antlered **only**, Muzzleloader **only***
2196	58-1[a] (see pg 64)	2	Nov 1 - Nov 30	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 91-92*
2197	61	1	Nov 1 - Nov 10	*Antlered **only***
2198	62-2[a] (see pg 64)	15	Nov 6 - Nov 30	*Either sex*
2199	66A-1[a] (see pg 64)	2	Oct 1 - Oct 14	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 91-92*
2200	66A-1[a] (see pg 64)	12	Oct 15 - Oct 24	*Antlered **only**,* *Motorized Hunting Rule Applies, See Pages 91-92*

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.oglb.idaho.gov or by calling 208-327-7380.

[a] This hunt includes other units or parts of other units. See controlled hunt area descriptions.
[b] This hunt includes only a portion of this unit. See controlled hunt area descriptions.
For details on controlled hunt rules and restrictions, please see pages 94-97.

Submitted by:

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